

Logistics and the Fall– Unpacking Civilization Collapse Through Two Lenses

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The study of civilization collapse has gained significant attention since the 1980s, largely due to researchers like Joseph Tainter and Jared Diamond. Tainter explores how increasing societal complexity leads to higher management costs, ultimately causing collapse when marginal returns diminish, including in areas like logistics. In contrast, Diamond investigates various drivers of collapse, particularly environmental factors, and highlights that societies often fail when they cannot adapt their supply chains to challenges such as environmental degradation and climate crises. While Tainter views logistics as a fundamental aspect of societal complexity, Diamond includes it within his broader analysis of the causes of collapse. Despite this, it is unfortunate that the topic remains largely overlooked in supply chain management research. This paper seeks to fill that gap by demonstrating that logistical failures play a critical role in the collapse of civilizations, linking historical patterns to current vulnerabilities in modern, interconnected systems. By examining these past cases, the contribution underscores the need for resilient logistics in avoiding similar outcomes today.

Keywords: civilization collapse, history, Jared Diamond, Joseph Tainter, logistics, vulnerability

INTRODUCTION

The collapse of civilizations has long been a theme explored by numerous intellectuals, notably historian Arnold Toynbee (1987 [1934-1961]) in his monumental 12-volume work *A Study of History*. One of the most famous statements on the subject, however, comes from the French writer Paul Valéry (2016 [1919]), who, in the aftermath of the devastating WWI, wrote: “We civilizations now know ourselves to be mortal” (in French: “*Nous autres civilisations, nous savons maintenant que nous sommes mortelles*”). Collapse refers to a complex process in which an organized human society experiences a rapid and substantial breakdown of its social, economic, and political structures (Yoffee and Cowgill, 1988; Johnson, 2016; Middleton, 2017; Liu, 2024). This phenomenon typically manifests in institutional disintegration, drastic population decline, loss of territorial control, economic fragmentation, and often, cultural and technological regression. A compelling illustration is found in Oreskes and Conway’s (2013) dystopian scenario of the Great Collapse of 2074, which blends science fiction with historical knowledge and current socio-economic and geopolitical trends.

Since the late 1980s, the theme of civilization collapse has gained momentum, largely influenced by two North American scholars: Joseph Tainter, born in 1949, Professor of Anthropology at Utah State University, and Jared Diamond, born in 1937, Professor of Geography at the University of California, Los

Angeles. Both researchers have published landmark books that explicitly reference “collapse” in their titles (Tainter, 1988; Diamond, 2005), offering extensive historical analyses of its causes and consequences. Surprisingly, Diamond’s work does not build upon Tainter’s, underestimating the value of cumulative knowledge in shaping high-impact ideas (Wang et al., 2017). Nonetheless, despite their differing approaches, both authors share a common goal: to understand why once prosperous and powerful societies disintegrated. They focus then on two key elements:

- On the one hand, a sharp increase in societal complexity. As socio-political, economic, and administrative structures grow more intricate over time, the costs of maintaining these systems rise accordingly. Eventually, societies encounter diminishing marginal returns, where the benefits gained from further investments in complexity no longer offset the escalating costs, potentially leading to collapse. This issue is further exacerbated by the fact that societies face multiple challenges, each requiring ever more complex institutional responses—a source of heightened vulnerability.
- On the other hand, a progressive environmental degradation. Societies must balance their use of natural resources with the environment’s ability to regenerate, and mismanaging this balance results in rising costs, such as those associated with extracting and exploiting new resources under increasingly inefficient conditions. Diamond (2005) places environmental degradation at the center of his analysis, focusing particularly on the over-exploitation of natural resources—such as deforestation, soil depletion, and overfishing—which leads to ecological crises that can hasten collapse.

Of course, these two key elements are not the only causes of collapse. Often, collapse results from the convergence of multiple factors, pushing societal complexity beyond what a society can effectively manage. These factors include invasions, economic crises, social unrest, and natural disasters, which interact to intensify pressures on social and economic systems. In other words, the interplay of interconnected forces can push societies to critical tipping points, leading to collapse, as history has shown. A parallel can easily be drawn with the contemporary world, which is grappling with a major environmental crisis (e.g., California’s mega-fires due to climate change), recurring trade confrontations (such as the U.S.–China trade war), and even military conflicts with severe consequences (like Russia’s invasion of Ukraine). Additionally, global pandemics, such as COVID-19, have exposed the precariousness of health and economic systems (Yu et al., 2022), highlighting how susceptible modern societies remain when multiple crises converge and overwhelm capacities. Rapid technological advancements and the overexploitation of natural resources further amplify these vulnerabilities, creating unprecedented challenges that test the resilience of complex societies and their ability to adapt under strain.

A substantial amount of academic research has been dedicated to the issue of collapse, particularly societal collapse (for a literature review, see Brozović [2023] and Roman [2023]). In contrast, the role of logistics, specifically logistical failures, has received far less attention. In various recent crises, the fragility of many supply chains has become evident, threatening global trade and, more critically, leading to severe public consequences—such as the inability to distribute essential goods or medical supplies where they are most needed. Beyond health-related issues, geopolitical tensions, natural disasters, and fluctuating resource availability also demonstrate how logistical failures can disrupt essential services and economic stability. The lack of focus on logistical failures in discussions of civilization collapse is a gap this paper seeks to address by examining the works of Tainter (1988) and Diamond (2005). The aim is to provide a logistics-oriented interpretation of both authors’ analyses, identifying the logistical dimensions of civilization collapse, even though neither Tainter (1988) nor Diamond (2005) explicitly address supply chains in their work. The ultimate objective is to underscore the importance of resilient logistics in maintaining societal stability amidst increasing global complexity.

SYSTEMIC PERSPECTIVE

The collapse of human societies is a recurring phenomenon in history, often characterized by the disintegration of once-powerful structures and the dissolution of complex systems. Tainter (1988) delves

deeply into the mechanisms underlying these civilization collapses, proposing a multidisciplinary analysis. He focuses particularly on the increasing costs associated with societal complexity and how these costs can reach a critical point, beyond which the marginal benefits of complexity no longer justify the investments required to maintain it. Although Tainter (1988) does not explicitly address the logistical dimension in his analysis, his work provides valuable insights into the crucial role that supply chain organization plays in the stability of complex societies. Indeed, these societies rely heavily on sophisticated logistical networks, encompassing both physical infrastructures and information systems. Even today, complex human societies remain vulnerable to logistical failures, making effective resource management essential to mitigate the risk of collapse (Good and Reuveny, 2009). The capacity to adapt logistics to changing circumstances—such as resource shortages, trade disruptions, and environmental shifts—is therefore critical in sustaining the resilience of modern societies amidst increasing global interdependencies.

FIGURE 1
PROFESSOR JOSEPH TAITER



Source: By courtesy of J. Tainter

Impact of Failing Logistics

According to Tainter (1988), the collapse of human societies is a recurrent phenomenon in history; once-mighty empires and civilizations, such as the Roman Empire, the Maya, and the Han dynasty, have collapsed spectacularly, often leaving behind significant cultural and material traces along with disintegrated power structures. Tainter (1988) explores the mechanisms of civilization collapse through a multidisciplinary analysis that integrates anthropology, history, economics, and complex systems theory. Although he does not directly address the logistical dimension, his analysis provides crucial insights into how the organization and disorganization of supply chains significantly impact the stability of complex societies. Indeed, such societies depend on sophisticated networks to manage the production, distribution, and supply of resources, encompassing both physical infrastructure (roads, canals, warehouses) and information systems (writing, accounting). Adopting a systemic perspective, Tainter (1988) highlights that increasing complexity leads to higher costs associated with maintaining these supply chains.

In the Roman Empire, for instance, territorial expansion necessitated the construction of roads, fortifications, and garrisons, as well as administrative systems to manage distant provinces. Moreover, controlling vast frontiers and managing armies required immense resources in terms of food, equipment, and personnel. Tainter (1988) emphasizes that human societies must allocate increasing resources to defend against invasions and internal unrest. When these expenditures are not balanced by economic gains, they lead to logistical tensions that can become unsustainable; external pressures thus play a significant role in the collapse of complex societies. In the case of the Roman Empire, the constant threat from barbarian tribes and Germanic incursions demanded costly investments—such as the construction and maintenance of

defensive walls like Hadrian's Wall and fortresses throughout the empire. When the empire's logistical capabilities could no longer support these defensive efforts, invaders were able to penetrate its borders more easily, accelerating the process of collapse.

Logistics: A Cornerstone of Societal Stability

However, it would be simplistic to restrict the logistical issue solely to the material and human resources required for conquering new territories, even though this aspect is significant, as demonstrated by China's Belt and Road Initiative launched in 2013 (Khanal and Zhang, 2024). In fact, the organization of supply chains is also an "internal" matter for human societies, playing a crucial role, with failures in this area contributing to the process of collapse. The disruptions may manifest in various forms, such as the mismanagement of agricultural resources or breakdowns in trade networks, ultimately undermining economic stability. Such logistical shortcomings create ripple effects that compromise societal resilience, emphasizing the need for effective supply chain management in maintaining the integrity of complex civilizations. Tainter (1988) employs two examples to support his argument:

- The Maya civilization, often subject to drastic climatic variations, faced significant challenges in maintaining their logistical networks as their cities grew increasingly complex. When the Maya's logistical capacities were overwhelmed by environmental demands and demographic pressures, it led to a rapid disintegration of their governance structures, undermining their ability to coordinate resources and maintain political cohesion. This breakdown weakened trade routes, disrupted essential supplies, and accelerated the civilization collapse.
- Similarly, in ancient Rome, supplying grain to a city as large as Rome was a monumental logistical undertaking, involving fleets of ships, intricate storage and distribution networks, and a complex bureaucracy. During the reign of Emperor Augustus (27 BC–14 AD), Rome's population reached around one million, according to accounts by Suetonius and Augustus. Any disruption in these logistical operations had devastating effects, undermining social cohesion and political stability.

The example of ancient Rome is not unique; even today, complex human societies rely on agro-industry to feed their growing urban populations. The ability to produce, store, and deliver food is essential for political stability and to prevent the disintegration of the socio-economic order. However, as the most fertile lands are fully exploited, societies must turn to marginal, less productive, and increasingly distant areas, which in turn requires greater logistical resources. According to Tainter (1988), beyond the specific case of Rome, the collapse of the Roman Empire was closely linked to the exorbitant costs associated with managing roads, which were essential for trade (Tainter, 2014). Ultimately, a critical point is reached when the costs of maintaining logistical infrastructure exceed the benefits they provide. Initially, investments in logistical infrastructure yield significant efficiency gains, but as trade networks expand and grow more complex, the costs of maintenance, repair, and protection rise exponentially. This situation leads to vulnerabilities, as disruptions in supply chains can have cascading effects, impacting not only food availability but also economic stability, social cohesion, and overall resilience in the face of challenges.

Tainter's (1988) argument ultimately centers on the tension between centralization and decentralization in logistics management. Centralized systems allow for more effective coordination and strategic allocation of resources, but they can also fall prey to bureaucratic inefficiencies. In contrast, decentralized systems may be more adaptive and resilient at the local level, yet they often lack the coordinated response necessary to handle large-scale crises. The collapse of the Roman Empire exemplifies this tension; the division between the Eastern and Western Roman Empires in 395 marked a significant turning point (Ward-Perkins, 2005). As the empire fragmented, local authorities increasingly assumed responsibility for logistics management. However, in the absence of effective centralized coordination, these local efforts frequently became redundant or inefficient, exacerbating food distribution issues. Tainter's (1988) analysis underscores that human societies must continuously evaluate and adjust their logistical systems to avoid the pitfalls of excessive complexity and unsustainable costs.

MULTIDIMENSIONAL PERSPECTIVE

Diamond (2005) explores the multifaceted factors that contribute to the collapse of societies throughout history, building on his earlier work examining why some human societies have dominated others (Diamond, 1997). His analysis of collapse encompasses a wide range of causes, including environmental, economic, social, and political factors. However, he has faced criticism from Libertarians for allegedly neglecting the role of free-market institutions, which are thought to reduce friction in the allocation of scarce resources (Brätland, 2010), a viewpoint that is highly debatable. While Diamond (2005) does not explicitly address logistics in his case studies, it remains a significant underlying theme, particularly regarding transport infrastructures that support agriculture and broader commercial activities. He concludes that societies that fail to manage logistics effectively in the face of various infrastructural and environmental challenges are the most likely to face collapse. This highlights the necessity for robust logistical planning and adaptability, as well as the importance of integrating sustainable practices within economic frameworks to enhance resilience against potential disruptions and crises.

FIGURE 2
PROFESSOR JARED DIAMOND



Source: By courtesy of J. Diamond

From Logistical Sophistication to Collapse

Diamond (2005) provides a comparative analysis of the collapses of various ancient and contemporary societies, identifying four main factors that contribute to collapse: environmental damage, climate change, hostile neighbors, and trade tensions. Although logistics is often implicit in his analysis, it plays a central role in each of these factors, as it relates to a society's ability to manage resources, maintain infrastructure, and sustain trade and communication networks. Trade is crucial for the prosperity and stability of human societies, and effective supply chain management is essential for the networks that facilitate the transport of goods, storage infrastructures, and information systems. Successful logistics management ensures that essential resources are available when and where they are needed, thereby preventing scarcity and mitigating potential crises. Diamond (2005) highlights the case of the Incas, whose impressive logistics relied on a vast network of roads and tambos (supply stations) to support their expansive empire, enabling efficient movement of people and merchandise across diverse terrains.

These logistical systems enabled the Incas to manage resources efficiently and maintain rapid communication across their vast empire. However, with the arrival of Spanish conquistadors and the introduction of smallpox, the Incas were unable to adapt quickly to these new epidemiological threats; their sophisticated logistics proved inadequate to prevent the collapse of their civilization. In contrast, Diamond (2005) notes that Tokugawa-era Japan (1600–1868) avoided collapse through careful resource management and effective trade policies. The Tokugawa shogunate established a period of internal peace and economic

stability by tightly regulating trade and maintaining a resilient logistical infrastructure. Well-maintained roads, bridges, and river transport systems facilitated internal trade and met urban supply demands. Similarly, during the Song dynasty (960–1279), China excelled in supply chain management by developing an advanced system of canals for transport and warehouses for merchandise storage. These innovations enabled China to prosper until the Mongol invasions, which ultimately led to its collapse.

Ecocide and Logistics

One of the recurring themes in Diamond's (2005) book regarding the collapse of human societies is the catastrophic management of the natural resources they rely on. He illustrates how deforestation, soil depletion, overfishing, and other forms of environmental degradation can precipitate collapse. This mismanagement often stems from short-term thinking and a lack of foresight regarding the long-term consequences of resource exploitation. Logistics can facilitate the extraction of resources without regard for sustainability, aligning with the well-known "tragedy of the commons" described by Hardin (1968) in the late 1960s. This "predatory" logistics refers to a society's technical capabilities to extract, transport, and utilize natural resources without limits, often at the expense of the environment. The unchecked exploitation of these resources can lead to diminished ecosystems, threatening not only the resources themselves but also the societies dependent on them. Among the many compelling examples discussed by Diamond (2005), two are particularly instructive and widely publicized, yet also subject to scientific debate, as highlighted by Morris (2005), Hunt (2006), and Merico (2017):

- The Anasazi, a pre-Columbian civilization in the southwestern United States, relied heavily on wood for construction and fuel. As their population grew, the demand for wood exceeded the regenerative capacity of local forests. This deforestation led to soil erosion and decreased agricultural production. The logistics of wood supply, which involved transporting resources over increasingly long distances, became unsustainable and contributed to the collapse of Anasazi society.
- The Polynesians of Easter Island similarly over-exploited trees for firewood, tools, and the construction of the famous moai statues, resulting in complete deforestation. Without trees, the inhabitants could no longer build canoes for deep-sea fishing, severely limiting their food supply. This logistical failure precipitated a social crisis that ultimately led to the decline of Easter Island civilization; by 1877, the population had plummeted to just 111, compared to 15,000 in the 16th century.

According to Diamond (2005), environmental degradation—sometimes referred to as "ecocide"—is exacerbated by climatic variations that impact ecosystems, exemplified by the increasing frequency of mega-fires around the globe (Ferreira-Leite et al., 2015). This issue is particularly relevant considering recent IPCC reports. However, Diamond (2005) demonstrates that throughout history, climate change has played a crucial role in civilization collapse. The logistics of agricultural activities, including irrigation, crop rotation, and the management of food surpluses (or shortages), are severely affected by climatic fluctuations. The Viking settlements of the Greenland Norse civilization provide a pertinent example. Established in the 10th century, they thrived on agriculture and animal husbandry in a relatively favorable climate. However, the onset of the Little Ice Age in the 14th century brought colder temperatures that made agriculture increasingly challenging. The Greenland Vikings failed to adapt their agricultural logistics to these new conditions, continuing to rely on European farming methods that were no longer suitable, while neglecting to adopt the subsistence techniques of the neighboring Inuit (Sadowski, 2020). This misalignment resulted in declining food production, recurring famines, and ultimately the abandonment of their settlements.

COMPARATIVE ANALYSIS

Tainter (1988) and Diamond (2005) have made significant strides in our understanding of civilization collapse. Both scholars have clearly identified the mechanisms at play, allowing for potential applications to today's industrial society. Their analyses not only reveal the vulnerabilities inherent in complex societies

but also suggest valuable lessons for contemporary civilization, especially regarding resource management and sustainability. To address an overlooked aspect, this paper aims to highlight the role of logistical failures in the collapse of human societies, a subject that has been minimally addressed in previous works, if at all (Centeno et al., 2023). A critical reading of Tainter (1988) and Diamond (2005) reveals that while logistics management is not the primary focus of their analyses, it plays a crucial role in their arguments, albeit in different ways. The differences can be summarized as follows:

- Tainter (1988) presents logistics as a crucial component of societal complexity. In his analysis, logistics is one of the many systems that human societies develop to manage their operations. As societies become more complex, the management of their supply chains also evolves, becoming increasingly sophisticated and costly, which leads to diminishing marginal returns. Initially, investments in logistics yield significant benefits in terms of mobility and efficiency in the delivery of goods. However, over time, the costs of maintaining and enhancing supply chains escalate faster than the benefits, contributing to the risk of collapse. This situation arises when all systems within a society, including logistics, become unsustainable due to diminishing returns. In essence, logistics is intertwined with the broader issues of excessive complexity and rising costs.
- Diamond (2005) places a somewhat more explicit emphasis on logistics as a key factor in civilization collapse, integrating it into a broader analysis of critical natural resource management. Multiple factors interact to influence the stability of a society, and logistics occupies a central role. For instance, inefficient supply chain management can exacerbate environmental degradation or hinder effective responses to climate change. According to Diamond (2005), collapse ultimately occurs when societies fail to adapt their logistical networks to the challenges they encounter. For instance, inadequate maintenance of transport infrastructures can isolate communities, restrict trade, and worsen food crises. Diamond (2005) illustrates this point with examples where the failure of logistical systems directly contributed to collapse, such as the Vikings of Greenland and the Polynesians of Easter Island.

To sum up, Tainter (1988) adopts a theoretical, systemic perspective, viewing logistics as an integral component of societal complexity. He emphasizes the diminishing marginal returns of complexity as a fundamental cause of collapse, with logistical failure being just one symptom of these diminishing returns. In contrast, Diamond (2005) takes an empirical, multidimensional approach, examining specific cases of collapse in which logistics plays a crucial role. According to Diamond (2005), supply chain failure can directly precipitate collapse, often exacerbated by interactions with other economic and geopolitical factors. Effective prevention requires proactive management of supply chains, sustainable resource and infrastructure planning, and adaptable institutional responses to environmental and social crises. In Tainter's (1988) view, prevention focuses primarily on balancing the costs and benefits of complex systems, including logistics, while emphasizing the need for strategic foresight and long-term planning to avert potential crises. This comprehensive understanding of logistics enhances our ability to mitigate risks associated with societal collapse.

The primary value of Tainter's (1988) and Diamond's (2005) contributions lies in their critical insights for averting the potential collapse of today's industrial civilization, which Kaczynski's (1998) radical manifesto deemed inevitable due to its complex technical and organizational nature. Tainter (1988) advocates for reducing social and economic complexity by simplifying institutional structures and promoting more cost-effective, resilient solutions, particularly in the organization of supply chains. In contrast, Diamond (2005) emphasizes a proactive approach to resource management, aiming to minimize environmental impact—especially concerning logistical choices—and advocating for adaptive strategies to address climate change, as illustrated by the coal supply chain in South Africa analyzed by Mathu (2017). Diamond (2005) also underscores the importance of collective governance, asserting that societies must be willing to modify their behaviors and institutional frameworks to ensure long-term survival. By fostering collaboration and integrating diverse perspectives, societies can better navigate the challenges posed by complexity and environmental degradation, ultimately creating more sustainable futures for themselves.

The two perspectives converge in their shared concern for promoting genuine political action to regulate and control market forces, which, if left unchecked, can lead to civilization collapse. On one hand, it is crucial for national and supranational political authorities to enforce sustainable and optimized management of natural resources to prevent their depletion. This includes the preservation of forests, soils, water, and animal species, which are vital for biodiversity. Political action must establish rules that penalize waste and encourage reverse logistics and recycling processes, a focus that has been recognized since the early 2010s (Sun, 2010). On the other hand, creating mandatory “strategic reserves” and significantly funding genuine eco-design innovation policies are essential for fostering infrastructure resilience, preparing societies to adopt new solutions when existing ones become unviable. Additionally, enhancing public awareness and education about sustainability practices can empower citizens to engage in eco-friendly behaviors. The critical question remains whether national and supranational political authorities can look decades ahead to address future challenges, especially when citizens often demand immediate solutions to pressing personal issues.

CONCLUSION

The study of civilization collapse, while deeply rooted in human history, has gained renewed significance in today’s context, characterized by increasingly acute environmental, economic, and geopolitical crises. Research is also underway to assess the risks of collapse associated with the proliferation of new technologies, particularly regarding the use of artificial intelligence, leading to questions such as: can a superintelligent AI precipitate our civilization’s collapse? (Akah, 2022). The analyses of Tainter (1988) and Diamond (2005) offer a systemic and multidimensional understanding of the causes of societal collapse, while implicitly highlighting the critical role of logistics in these processes. Although neither Tainter (1988) nor Diamond (2005) explicitly addresses supply chain issues in their works, logistics emerges as a cornerstone of societal stability and a potential driver of instability. By examining historical patterns and contemporary challenges, we gain valuable insights into how logistical systems can mitigate—or amplify—the vulnerabilities that lead to collapse. For instance, during pandemic crises (Cote, 2022), inadequate supply chain management can exacerbate societal fragilities, emphasizing the importance of effective resource allocation and strategic planning in maintaining resilience.

According to Tainter (1988), the collapse of human societies is fundamentally linked to the increasing complexity of social, economic, and political systems; recent modeling by Schunck et al. (2024) supports this perspective. As this complexity escalates, societies must invest more resources to counteract entropic effects, eventually reaching a critical point where the resources expended outweigh the benefits gained. Tainter (1988) introduces logistics as a fundamental aspect of this complexity: as societies expand territorially and develop, the establishment and maintenance of transport and communication networks become increasingly costly. Thus, logistics is not merely a technical challenge or an operational concern, but also a reflection of the high complexity inherent in human societies. Furthermore, the interdependence of logistical systems and social stability underscores the fragility of these networks; disruptions can have cascading effects, amplifying vulnerabilities within society. At a certain juncture, efforts to sustain and enhance supply chains cease to yield significant productivity gains, contributing to societal collapse.

Diamond (2005) adopts a broader, multidimensional approach, integrating environmental, social, and economic factors in his historical analysis of various civilization collapses. He emphasizes the interdependence between logistics and natural resource management, illustrating how inefficient or failing supply systems can exacerbate environmental issues or hinder responses to climate change, despite ongoing scientific debates in this area (Abate, 1994; Hunt and Elliott, 2005; Budja, 2015). Diamond’s (2005) central argument posits that logistical performance plays a critical, though sometimes underestimated, role in a society’s ability to adapt to the challenges it faces. He concludes that effective supply chain management can help a society navigate crises, while logistical failures can trigger processes of collapse. Moreover, Diamond (2005) highlights that the proactive integration of innovative logistical strategies can significantly enhance resilience, enabling societies to respond more effectively to unexpected disruptions. While Tainter

(1988) sees logistics as an aspect of societal complexity, Diamond (2005) regards it as an essential tool for effective resource management, essential for long-term sustainability and stability.

In conclusion, while logistics management is not central to the analyses of Tainter (1988) and Diamond (2005), it plays a significant role in the collapse of human societies. Logistics serves as both an indicator of societal complexity and a crucial factor in resilience to external challenges. In today's context—characterized by increasing globalization of trade flows and a steady stream of economic and geopolitical crises—an in-depth understanding of logistical issues provides insights that can help prevent the pitfalls that led to the collapse of ancient civilizations. For researchers in management science, it is essential to pursue innovative solutions that maintain a balance between resource management and the resilience of social, economic, and political systems, drawing lessons from history. Additionally, it is vital to educate successive generations of students about the risks of civilization collapse associated with a “business as usual” mindset (Besley and Peters, 2020). The gravest mistake would be to assume that the contemporary world is so unique—especially regarding globalized supply chain management—that it is irrelevant to consider the experiences of the distant past when drawing important recommendations for today and tomorrow.

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