

The Standardized Amphora: Cornerstone of Logistics Management in the Roman Empire

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The role of amphorae in the trade and economic integration of the Roman Empire has been widely studied in economic history. These standardized vessels facilitated the transport of wheat, beer, and olive oil across provinces, supported by an efficient logistical infrastructure of delivery methods and warehouses. Much like the 20th-century shipping container, amphorae simplified handling and reduced costs. By drawing historical parallels, the author highlights how ancient logistical innovations inform contemporary supply chain management, as challenges in tracking, flow optimization, and reliability persist. Exploring historical solutions offers fresh perspectives for strategy research, suggesting that two millennia-old practices can inspire modern decision-making. Ultimately, this article urges researchers and practitioners to view history as a source of insight for addressing today's supply chain challenges. Examining ancient logistics may reveal sustainable and effective options that foster resilience and adaptability in an ever-changing global market. Understanding past innovations can help develop strategies to mitigate contemporary supply chain disruptions and enhance long-term efficiency.

Keywords: amphora, history, logistics, optimization, Roman empire, shipping container, supply chain

INTRODUCTION

Amphorae, the terracotta vessels used extensively across the ancient Mediterranean, first emerged as early as the 15th century BC and gradually became crucial to the development of trade within the Roman Empire (Twede, 2002). These vessels were designed to transport essential goods, including beer, olive oil, garum (a fermented fish sauce), wheat, and raw materials such as metals, decorative stones, and dyes (Boisseuil *et al.*, 2021). Amphorae met the demands of a rapidly growing economy from 27 BC until the empire's decline in the 5th century AD. Their wide range of uses and stackable design, ideal for ships' holds, make amphorae a compelling example of logistical innovation—an area rarely explored in management studies, with few notable exceptions (James, 2020). However, their standardized form played a critical role in optimizing supply chain management across vast territories, particularly in transport, handling, and storage. Furthermore, the durability and modularity of these vessels allowed them to be easily repurposed in various commercial settings. In short, amphorae were more than mere containers; they symbolized Rome's commercial and logistical power.

The importance of amphorae in interprovincial trade cannot be overstated. These vessels supported a vast network of transactions that extended far beyond present-day Italy to encompass all the provinces of the Roman Empire. The movement of goods helped strengthen economic and cultural connections between

these regions, fostering the growth of a unified and robust imperial economy (Temin, 2006). Perhaps less widely recognized, amphorae also influenced culinary and dietary practices. The foodstuffs they transported gradually shaped the eating habits not only of Romans but also of provincial populations. Olive oil, for instance, was more than just a food product; it was central to Roman gastronomy, used for cooking, preservation, and even body care. Wine and beer, likewise, were integral to celebrations and social rituals, illustrating how amphorae were more than utilitarian objects—they were powerful conduits of culture and conviviality. Amphorae played a role in unifying cultural practices across the Roman Empire by facilitating the blending of local identities and spreading common customs.

The main objective is to examine the role of amphorae in ancient supply chains and compare them to modern shipping containers. This is an important question that warrants in-depth investigation, which is currently lacking in the literature, as it illuminates the historical impact of logistical innovations on economies and underscores the relevance of today's key concepts such as tracking, cost reduction, flow optimization, and the standardization of industrial processes. The originality of this article lies in its analysis of how amphorae contributed to the territorial expansion of the Roman Empire over several centuries, generating cumulative knowledge on the foundations of supply chain efficiency and logistical integration strategies. The suggested comparative approach encourages researchers to explore how other ancient civilizations employed similar practices in future studies (Paché, 2023). In this regard, it offers a valuable analytical perspective on the evolution of supply chains and the factors that have favored trade over a long period in globalization.

Amphorae are vital instruments of Roman imperial power, playing a central role in the empire's economic, social, and cultural development. Their study provides valuable insights into the mechanisms that drove the Roman Empire's expansion and extraordinary longevity, cementing their status as emblematic ancient civilization artifacts. This article is organized as follows: The first section explores the design and production of amphorae, with a focus on their standardization and adaptability to various types of merchandise. The second section delves into the logistical methods associated with amphora usage, underscoring their contribution to the commercial organization of the Roman Empire. The third section draws parallels between amphorae and modern shipping containers, illustrating the enduring influence of Roman logistical practices on contemporary systems. Finally, the fourth section discusses this study's theoretical and managerial implications and proposes avenues for future research to further illuminate the often-overlooked logistical significance of amphorae.

LOGISTICS FOR A UNIFIED TRADING SPACE

Amphorae were an asset to the Roman Empire, not only for their crucial logistical function but also for the geographical diversity of their production. Figure 1 depicts several amphora formats, each suited to specific uses, with capacities reaching up to 30 liters (for an in-depth iconographic analysis of these formats, see Grace [1979]). The standardization of amphorae was closely linked to the decentralization of their production across various Roman provinces (Egri, 2006), enhancing the efficiency of the supply chain. Production workshops were strategically located near agricultural and port regions, which helped reduce transport costs and facilitated the export of goods. For instance, Dressel 20 amphorae, commonly used for olive oil, were produced in large quantities in Baetica (present-day Andalusia, Spain). This region supplied a significant portion of the olive oil consumed throughout the empire. With its favorable climate, Baetica emerged as a major economic center (González Tobar, 2022). The amphorae produced there were then transported to Mediterranean ports, embarking on long-distance journeys to Rome and other key provincial cities.

FIGURE 1
SOME AMPHORAE USED IN THE ROMAN EMPIRE



Source: Saint-Raymond Museum of Toulouse (2022).

The mass production of amphorae reflects an early form of industrialization, drawing parallels to the principles of Taylorism and Fordism in the early 20th century. Thousands of amphorae were produced in single workshops, ensuring consistency in quality and capacity and standardized formats that facilitated transport, handling and storage (Peacock, 1977). Each amphora typically bore an inscription indicating the producer, origin, and date, which enabled precise tracking of merchandise (Berni Millet, 2012) and aided in the organization of Roman taxation. These inscriptions, known as *tituli picti* (Vargas, 2021), were essential to the imperial administration for tax collection, regulation of trade flows, and control over the vast logistical network spanning the empire. This system enabled efficient physical distribution to meet both economic and military needs by ensuring a steady supply even to the empire's most remote regions (Fulford, 1992). Consequently, this mass production method significantly impacted the economic and social dynamics of the time, directly shaping commercial practices and inter-regional exchanges within the Roman Empire.

Although this issue is rarely addressed in logistics management studies, which often focus on the military logistics of the Roman Empire (Remesal Rodriguez, 2002; Ascef *et al.*, 2014; Serrano *et al.*, 2023; Olshanetsky, 2024), amphorae were essential to establishing stable, organized trade networks. These networks could only develop through the reliable and efficient transport of commodities over long distances. From this perspective, amphorae contributed significantly to the emergence of a large-scale market economy within the Roman Empire, facilitating the regular supply to urban centers and the efficient redistribution of agricultural and manufactured surpluses among the various provinces. This advanced logistical system relied on rigorous organizational strategies (Kessler and Temin, 2007), incorporating clearly defined storage and delivery protocols, and it heavily utilized slave labor for handling processes (Tran, 2013). In short, amphorae were more than mere storage vessels; they were central to a powerful exchange system, showcasing the ingenuity with which Rome structured supply chains to support its territorial expansion.

In addition to managing the flow of commodities, Roman amphorae also provide crucial information for ensuring their tracking (Ozcáriz Gil *et al.*, 2020). The *tituli picti* mentioned earlier contains details about how commodities were transported and the routes taken, including points of origin and destination. For instance, some olive oil amphorae from Baetica bear markings that indicate specific routes, suggesting they were intended for locations and/or imperial officials. These inscriptions reveal a sophisticated organization of commercial circuits, with the destination of goods meticulously planned and monitored. Numerous archaeological studies of amphorae recovered from shipwrecks and warehouses have uncovered the diversity of trade routes. Wine amphorae found in the British Isles and along the Danube demonstrate that even regions far from Rome maintained close ties with the capital. This evidence supports the notion that

the Roman Empire functioned as a unified trading space, where merchandise exchange thrived thanks to exceptional logistical capabilities.

For researchers in economic history, the analysis of amphorae offers the advantage of identifying abrupt fluctuations in trade as the Roman Empire experienced growth and decline. For instance, a decrease in the number of amphorae in certain regions may indicate economic crises or political upheavals, while a surge in the production and distribution of oil or wine amphorae signals increased prosperity in each area (Temin, 2013). Geographic variations in amphora presence allow historians to track the rise and fall of economic centers. The study of amphorae and their associated logistics illuminates the Roman economy's dynamics and the merchants' commercial strategies. The inscriptions and markings on amphorae not only help reconstruct the trade routes and networks of the period, but also provide a clear picture of the economic integration within the Roman Empire, highlighting its advanced transport and warehousing techniques (Cheung, 2021).

TRANSPORT AND STORAGE CONDITIONS

Maritime transport was central to the Roman Empire's economy for economic and political reasons (Carreras and de Soto, 2013), and the use of standardized amphorae significantly enhanced its efficiency. The *navis onerariae* served as the primary means of transport in the Mediterranean. These large merchant ships could carry cargoes of several hundred tons or more, an exceptional feat for the time. Their design addressed specific logistical needs: hulls were expanded to accommodate vast quantities of merchandise, and holds were reinforced to support the weight of amphorae stacked upon one another. The design of *navis onerariae* optimized space utilization, with dedicated compartments ensuring cargo stability during voyages that could last several weeks (Ericsson, 1984). These ships were typically equipped with both sails and oars, enabling them to navigate efficiently in varying conditions, whether under the wind or in calm waters (Parker, 1992). The capacity of these merchant vessels, measured in *modii* (a Roman unit of volume), could reach several thousand amphorae per crossing, underscoring their essential role in maritime trade.

Once the amphorae were unloaded at a port, they were transported overland primarily via a network of paved roads, engineered to facilitate the rapid movement of goods. These roads, such as the famous *Via Appia*, connected major ports to inland towns and administrative centers (Sparavigna and Baldi, 2016). Waterways provided an efficient alternative for commodities destined for regions far from the main roads. The Tiber River, for example, allowed amphorae unloaded at the port of Ostia (in present-day Italy) to be transported directly to Rome. In contrast, the Rhône River in Gaul (in present-day France) facilitated trade between Mediterranean ports and inland areas. Imperial agents stationed at the main ports were responsible for overseeing the arrival of cargo and inspecting amphorae for their contents, origin, and compliance with regulations. This meticulous inspection process was crucial for maintaining order and ensuring a smooth, secure flow of goods throughout the Roman Empire, which relied on these supplies to feed its major cities and provide essential products. This sophisticated logistical organization underscores the importance of reliable supply chains, which were vital to the economic prosperity and political stability of the Roman Empire over the centuries.

After being delivered to their destination towns, amphorae were stored in *horrea* (see Figure 2) (Rickman, 2002). These warehouses played a strategic role in stock management and the regulation of trading activities. From an operational perspective, the organization of *horrea* was meticulously planned to meet the specific needs of Roman logistics: the galleries were spacious, allowing for efficient movement of people, and the storage areas were equipped with innovative ventilation systems to preserve perishable goods (Ferrándiz, 2023). Additionally, *horrea* served as regulatory hubs where political authorities monitored the volume of incoming and outgoing products and ensured their quality. The Roman Empire boasted numerous *horrea* in cities, as well as along rivers and at ports. Among the most renowned were the *horreum Galbana*, the *horrea* of Trajan, and the *horrea* of Alexandria; these structures exemplified a highly sophisticated logistics management model for their time, incorporating innovative practices that have indirectly influenced contemporary warehousing practices.

FIGURE 2
OSTIA HORREUM



Source: Photograph by Jean-Pierre Dalbéra (2011).

The *horreum* Galbana, located near Rome's River port on the Tiber, is one of the largest warehouse complexes in Roman history (Virlovet, 2006). Covering more than 225,000 m²—comparable in size to Amazon's largest current warehouses (Reese and Allison, 2023)—it stored impressive quantities of olive oil, wheat, garum, and beer to supply the capital. The site of the *horreum* Galbana is notable for its meticulous construction and innovative logistical features, including a drainage system that ensured optimal storage conditions. Inscriptions found on amphorae and inventory documents indicate that stocks in this warehouse were carefully monitored and verified, highlighting an advanced level of merchandise flow management. Ultimately, the *horreum* Galbana played a crucial role in supplying Rome as part of the *annona*, a food supply program designed to provide wheat free of charge—or at reduced prices—to the urban population to maintain social peace (Bernard, 2016). This large-scale wheat storage ensured that the capital's food needs were met, even in times of crisis.

Trajan's *horrea*, located in Ostia at the mouth of the Tiber, served as the primary gateway for merchandise destined for Rome. This complex, built under Emperor Trajan in the early 2nd century AD, is one of the most representative examples of port warehouses from that period (Stöger, 2011), and is still partially visible today. Notable for their sophisticated organization and optimized handling of goods, Trajan's *horrea* were designed around large rectangular courtyards, lined with storage cells where commodities were sorted and stored. Wide doors facilitated the passage of carts, streamlining unloading and loading operations. The site's proximity to the port played a crucial logistical role, reducing transit times to Rome and ensuring continuous supplies. Archaeological examinations of the site have enhanced the knowledge of the logistical organization of Roman warehouses and the exceptional security of their operations. In fact, Trajan's *horrea* were equipped with highly advanced security features for their time, including iron doors and a complex locking system—reflecting the high value of the merchandise contained in the amphorae.

Finally, the *horrea* of Alexandria serve as an exemplary case, as the city was one of the key logistical nodes in the unified trading space mentioned earlier. Its port, one of the busiest in the Mediterranean, housed an impressive *horreum* where commodities from the Orient, Africa, and other Mediterranean regions were stored. Alexandria's *horrea* was central in supply chains for exotic products such as spices, wheat, textiles, and perfumes. These warehouses functioned as “hubs” for redistribution to Italy and other provinces, ensuring a smooth flow of goods over long distances. The proximity of the Nile provided direct access to Egyptian waterways, facilitating the export of goods even under sometimes unfavorable climatic conditions

(Bransbourg, 2017). The Roman Empire relied heavily on Egyptian wheat to feed its urban populations, particularly in Rome, which could number up to a million inhabitants (Mattingly and Aldrete, 2000). The *horrea* of Alexandria were specially designed to receive and store massive quantities of grain in optimal preservation conditions, thus meeting the food and commercial needs of the entire Mediterranean basin.

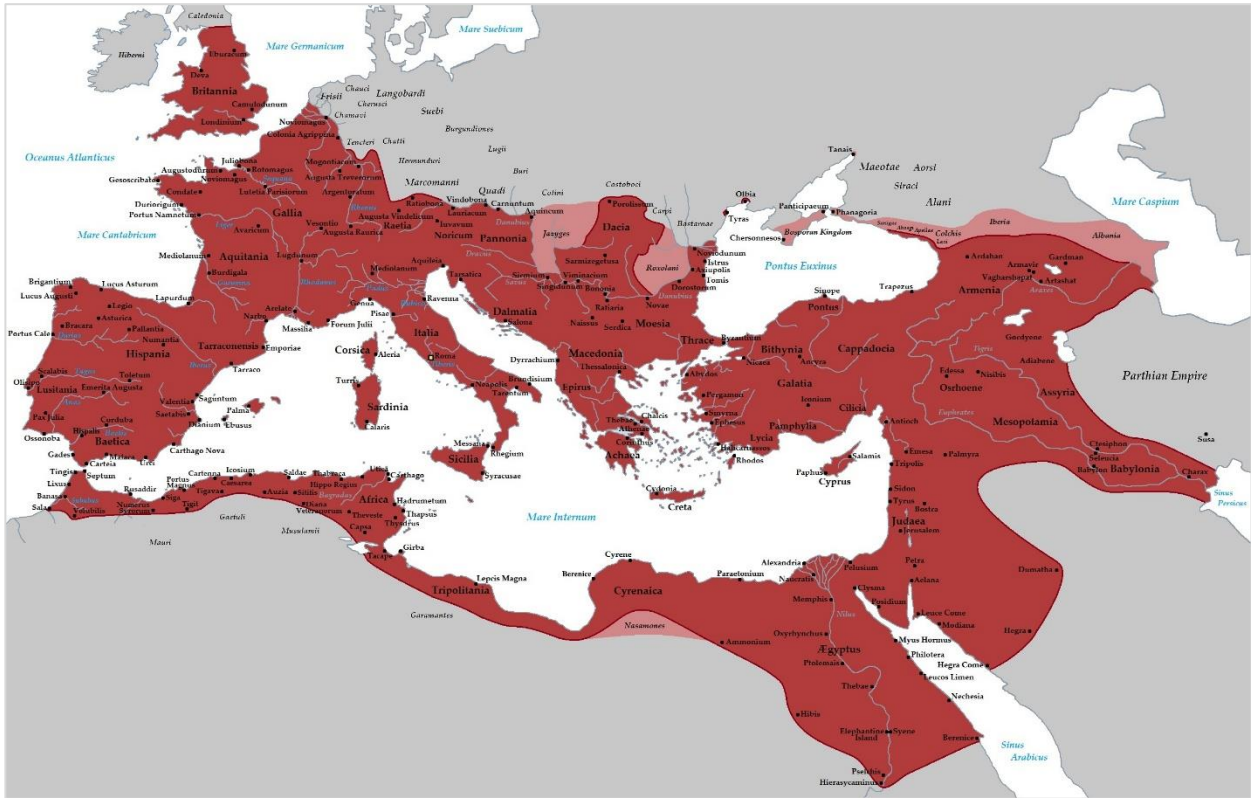
FROM AMPHORA TO SHIPPING CONTAINER

In summary, the standardization of amphorae transcended their function as mere vessels for transporting goods; it established a logistical infrastructure that strengthened the economic stability of the Roman Empire and facilitated the expansion of trade within its territories. Amphorae production was systematically organized not only to meet the demand for delivering products such as beer, wheat, and olive oil but also to ensure that these commodities remained accessible in even the most remote regions under Roman control (see Figure 3). As underlined by Peña (2021), the low manufacturing costs associated with amphorae—typically produced in terracotta at specialized workshops—and their reusability significantly reduced packaging expenses. This affordability encouraged small producers to participate in interprovincial trade, stimulating the rural economy and creating a consistent demand for essential consumer goods. Additionally, amphorae served as standardized units of measurement, providing a reliable basis for assessing the value of traded goods. This standardization led to a homogenization of prices and increased transparency in transactions, facilitating the circulation of essential commodities and sustaining the market's dynamism throughout the Roman Empire.

In the history of international trade, few logistical revolutions have had as profound an impact as the introduction of the amphora in the Roman Empire, and it can be compared to the advent of the shipping container in the 20th century (Gallimore, 2018). Although separated by millennia, these two types of vessels share several key characteristics. Notably, both the Roman amphora and the shipping container established a powerful standard for the delivery of merchandise. The typical shape of the amphora, which is generally tapered with a pointed base and two handles, was specifically designed for efficient transport on ships and within *horrea*, optimizing space utilization. When stacked in the holds of ships, amphorae provide stability and can be loaded in large quantities, mirroring the logistical massification achieved by modern shipping containers (20-foot or 40-foot). Introduced in the 1950s, the shipping container has completely transformed international trade by enabling multimodal transport (by sea, rail, and road). Like the amphora, the shipping container maximizes loading capacity, reduces transport costs, and accelerates port handling times.

Both the amphora and the shipping container share the advantage of optimizing goods handling, significantly reducing logistical costs. In the Roman Empire, standardized amphorae facilitated rapid sorting and efficient storage in *horrea*, while their straightforward inventory processes streamlined transactions and accelerated international trade. Similarly, shipping containers have revolutionized modern handling practices (Notteboom and Rodrigue, 2008). Introducing equipment such as cranes and elevators has dramatically reduced loading and unloading times at ports. Thanks to their standardized dimensions, shipping containers can be seamlessly transferred between different modes of transport without requiring intermediate unloading, thereby minimizing the risk of loss or damage to goods. This uninterrupted routing enhances the efficiency of contemporary supply chains, fostering global trade, boosting economic competitiveness, and supporting long-term sustainable growth across various sectors, including manufacturing and retail. The Panama Canal is a prime example of these ongoing transformations, where the container plays a pivotal role (Cope III *et al.*, 2016).

FIGURE 3
THE ROMAN EMPIRE AT ITS GREATEST EXTEND IN 117 AD



Source: Tataryn document (2014).

Finally, the convergence between the amphora and the shipping container can be seen in their profound influence on the dynamics of globalization. In the Roman Empire, amphorae symbolized commercial prosperity, facilitating large-scale exchanges between provinces (Hitchner, 2008), accelerating economic integration, and promoting social and cultural cohesion across Roman territories. In contrast, the shipping container serves as the logistical backbone of “global value chains” (Gereffi, 2011), enabling companies to easily globalize their production processes and distribute their products worldwide while optimizing costs and lead times, thus creating economies of scale. As Levinson (2016) eloquently points out, international trade now heavily relies on the shipping container—the iconic “box”—which has become a key element in the success of the neoliberal model that emerged in the 1980s, paving the way for unprecedented trade expansion and fostering economic interdependence among nations. This evolution has transformed the production and trading of commodities, making markets increasingly interconnected and complex while reshaping traditional economic dynamics.

DISCUSSION

Inspired by Giurdanella’s (2024) work, which underlines the importance of adopting a historical perspective on managerial practices in the fashion industry, our investigation—situated at the intersection of logistics management and economic history—highlights the crucial role of amphorae in facilitating the flow of goods within the Roman Empire, drawing a compelling parallel to the modern shipping container. Amphorae were far more than mere storage vessels; they represented a sophisticated system of exchange that enabled Rome to efficiently organize its expansive international trade network. These vessels were central to a forward-thinking supply chain that contributed significantly to the economic prosperity of the

Roman Empire. Beyond ensuring the delivery of goods, amphorae also supported their seamless movement across provinces. Their standardized design optimized transport, handling, and storage operations fostering uniform commercial practices throughout the empire. As a result, amphorae symbolize far more than a rudimentary precursor to shipping containers; they exemplify an era when logistical innovation was a key driver of the extraordinary territorial expansion that followed the Punic Wars (Sampson, 2016).

Contributions

One of the major contributions of this article is the recognition of the amphora as a pivotal element in Roman Empire supply chains, a role often overlooked in traditional studies that prioritize military logistics (Roth, 1999). The various amphora formats, through their design and application, were instrumental in the formation of a globalized economy, emerging two millennia before the concept of contemporary global value chains. By examining how amphorae facilitated trade throughout the Roman provinces, this article underlines that supply chain management in the Roman Empire was not merely functional but the result of strategic foresight (Lacey and Lacey, 2022). This strategy focused on optimizing the distribution of essential resources across vast territories to support a population of nearly 70 million at the empire's height. In the city of Rome alone, annual consumption reached approximately 420,000 tons of cereals, 150,000 hectoliters of olive oil, and between 1.5 and 2.2 million hectoliters of wine (Virlovet, 2017). The amphorae's capacity for efficient stacking and long-distance delivery enabled the establishment of a unified trading space, which in turn sustained the economic power of Rome for centuries.

The methods used to produce, transport, and store amphorae reveal the existence of advanced logistical practices for their time. Though deeply rooted in history, these practices resonate surprisingly well with contemporary lean supply chain management systems. The standardization of amphora formats facilitates sorting and storage in the *horrea*, enabling better tracking of commodities and significantly reducing logistical costs. The resources saved were redirected to other uses, particularly for military purposes, which likely contributed to the prolonged period of Roman dominance over the Mediterranean. Such a sophisticated logistical organization demonstrates a keen analysis of supply chains and strategic management of associated resources, as highlighted by Djaoui's (2017) analysis of the Rhône Delta port system. The study of the amphora thus reveals a trading dynamic based on a thorough knowledge of routing needs and underscores the ingenuity and adaptability of management methods in response to the economic and social demands of the time.

Theoretical and Managerial Implications

From a theoretical perspective, the article strongly emphasizes the importance of incorporating a historical viewpoint when examining modern supply chains. This approach fosters a deeper comprehension of the dynamics and principles underlying logistical practices' evolution over time. The parallel drawn between the amphora and the shipping container underscores the significance of two key concepts—standardization and flow optimization—that are central to contemporary business logistics. Despite being separated by millennia, these two objects share common characteristics that illustrate how standardizing dimensions and formats can greatly enhance transport and storage efficiency. This leads to a unique reflection on the management methods employed by ancient civilizations, where each type of packaging was specifically designed to address distinct needs and ensure optimal resource utilization. The result is a reduction in losses and maximized profitability, which remains relevant even in the 21st century; thus, one might invoke a concept of “*historical mimicry*” that future research could further explore.

From a managerial perspective, the lessons learned from amphora management in the Roman Empire can be effectively applied to contemporary businesses, particularly regarding supply chain optimization. For example, the tracking processes that were crucial to the efficient operation of Roman logistics continue to be a vital concern for manufacturers and large retailers as they work to meet growing demands for transparency in their supply chains. It is widely recognized that the adoption of modern flow-tracking technologies, such as blockchain, boosts consumer confidence. Interestingly, a parallel can be drawn to the amphora, which represented enhanced reliability in Mediterranean trade during its era. This perspective establishes a foundation for a comprehensive examination of how historical insights can shed light on

current and future supply chain challenges. It underscores the importance of a multidisciplinary approach that leverages history to foster innovation and develop effective solutions tailored to today's global value chains. This connection between the past and present enhances our analytical capabilities and offers valuable insights for strategic decision-making.

Limitations and Research Avenues

However, this investigation has several limitations. First, it primarily focuses on the Roman Empire, overlooking other ancient civilizations that also developed complex logistical systems, such as pre-Columbian cultures, which had their own practices and innovations regarding transporting and storing commodities. Second, the study relies partly on archaeological and historical data that are often incomplete or open to interpretation, which constrains the conclusions that can be drawn. Third, while the analogies between amphorae and shipping containers are insightful, they should be approached with caution due to the significant differences in historical and technological contexts. It would be beneficial to examine how other factors, such as cultural and environmental influences, shape supply chains and provide a more nuanced perspective. This broader analysis would enable comparisons with the infrastructure and organizational strategies that developed concurrently to ensure the efficiency of trade networks.

To deepen the understanding of both ancient and modern logistics, three avenues of research are worth exploring: (1) a comparative study of the logistical organization across different civilizations, which could provide new insights into the evolution of logistical practices over time; (2) an investigation of contemporary warehousing and transport technologies that incorporates historical lessons to inspire innovations in supply chain management; and (3) an analysis of the socio-cultural impacts of logistical organization, particularly in relation to the fall of the Western Roman Empire in the 5th century, to better understand the social and economic dynamics that contributed to the emergence of centrifugal forces. These three research avenues should enhance current studies in logistics management by examining the fragility, anti-fragility, and resilience of supply chains. This examination will focus on how adaptation to technological, geopolitical, and cultural changes influences sustainability and the capacity to absorb external shocks, thereby ensuring continuity of operations.

CONCLUSION

The proposed exploration of amphorae in the context of the Roman Empire extends far beyond a mere historical analysis. It emphasizes the fundamental principles underpinning today's strategic corporate behavior and efficient supply chain management. As essential logistical tools, amphorae were central to establishing and developing trade networks that sustained the Roman power for nearly five centuries. Their meticulously planned design and usage illustrate key concepts of logistical efficiency as they are theorized, taught, and practiced in the 21st century. In an era where globalization and the complexity of supply chains are commonplace, the lessons drawn from amphora usage provide valuable insights for optimizing contemporary business logistics. These historical insights remind us that logistical innovation is not merely a response to immediate needs but a critical element for the sustainability and long-term success of international trade.

The role of amphorae in the Roman economy is particularly significant for the field of strategic management. It is essential to understand how efficient supply chains can facilitate transport, handling, and storage of goods and enhance social and cultural cohesion across a vast territory. Amphorae, as symbols of this dynamic, demonstrate that logistics extends beyond mere management of material flows; it is integral to structuring human societies. Today's top managers can glean valuable insights from the way the Romans implemented innovative logistical strategies to effectively serve their economic and social objectives. This historical perspective underscores the necessity of an integrated, systemic approach that considers not only operational processes but also logistical decisions' societal and environmental impacts. In the context of modern neoliberal globalization, this approach is crucial for ensuring sustainability and resilience for future generations.

Our investigation opens the door to broader questions that extend beyond the specificities of the logistics field. Drawing a parallel between amphorae and shipping containers prompts reflections on the evolution of trade practices and how innovations in logistics have shaped commodity exchanges throughout history. This perspective emphasizes the importance of a systemic approach to explore international trade networks, whether ancient or contemporary. Moreover, the analysis highlights the connections between business logistics and other disciplines such as economics, sociology, and archaeology, facilitating a deeper knowledge of the dynamics of sustainable development. It reveals how logistical decisions impact human interactions and economic flows over time. In summary, this article demonstrates that economic success often stems from a robust, strategically designed logistical infrastructure capable of meeting the needs of a growing population while promoting increasingly intense global interconnectivity in a borderless world.

Researchers, practitioners and students alike are likely to better understand the economic, social, and cultural implications of amphora use in the Roman Empire. The amphora was much more than a mere vessel for transporting goods; it served as the centerpiece of a complex trade network that enabled the efficient distribution of resources across vast and diverse territories. Often overlooked in studies of Antiquity, logistics was fundamental to the exchange systems underpinning prosperity, extending beyond military conquests. As a result, readers should feel better equipped to tackle contemporary challenges in supply chain management, recognizing that the principles of standardization, optimization, and tracking have deep historical roots. This exploration also demonstrates how ancient logistical innovations can inform modern practices, highlighting the connection between the past and the future. Ultimately, this serves as a vibrant call to view history as a source of inspiration for addressing strategic management challenges in theory and practice.

To achieve this, a constructive dialogue must be established between two scientific communities—historians and management researchers—to avoid serious anachronisms and foster meaningful interdisciplinary collaboration and exchange. What succeeds in one cultural context may not automatically translate to another without appropriate modifications, emphasizing the importance of adapting solutions to unique historical and cultural conditions. The introduction of amphorae gave the Roman Empire an effective solution to its logistical challenges, particularly those arising from its gradual territorial expansion and diverse territorial needs. Similarly, the adoption of the shipping container in the era of globalization may have been driven by comparable mechanisms. The hypothesis advanced here is that such parallels are plausible, but further research grounded in robust case studies is essential to confirm this claim. Only through the accumulation of detailed and specific evidence on the application of amphorae to logistics management during the Roman Empire can we identify meaningful convergences between the supply chains of Antiquity and those of the modern era.

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