



International Journal of Multidisciplinary Research and Growth Evaluation.

Supply Chain Challenges and their Impact on Business Improvement in Oman

Hamda Mohammed Al Balushi ^{1*}, Ibtisam Salim Al Qassabi ², Asaad Mubarak Elshareef ³

¹⁻³ Oman college of management and technology, Oman

* Corresponding Author: **Hamda Mohammed Al Balushi**

Article Info

ISSN (online): 2582-7138

Volume: 06

Issue: 03

May-June 2025

Received: 19-04-2025

Accepted: 12-05-2025

Page No: 1128-1137

Abstract

This research deals with the subject of supply chain challenges and their impact on improving business in the Sultanate of Oman. Two companies were used, namely the Natural Gas Company as an example and Asyad Company. This study focuses on the challenges facing the supply chain and the impact of these challenges on improving business in the Sultanate of Oman and all the obstacles facing the supply chain by discussing some solutions and recommendations. This research aims to identify all the challenges facing the company in the professional environment. The supply chain in the business environment, where information was obtained from the company from two companies in the real business environment, tips and recommendations that may help solve these challenges.

DOI: <https://doi.org/10.54660/IJMRGE.2025.6.3.1128-1137>

Keywords: supply chain, business improvement

Introduction

In a globalized economy, a robust and efficient supply chain is quintessential for any business. Oman is looking to expand its supply chain infrastructure to harness business opportunities because of its geographical location and growing economy. However, Omani businesses face several challenges that impact their overall operational efficiency, competitiveness, and achieving sustainable growth. Some of these issues include operational supply chain inefficiencies, high logistical costs, import reliance, regulatory complexities, and external disruptions from global supply chain crises or economic downturns.

For Omani businesses, the overreliance on international suppliers poses a significant risk, exposing them to delays, currency changes, and potential geopolitical conflicts. Additionally, Oman's burgeoning logistics sector still faces challenges relating to infrastructure development, customs, and technological adoption. These issues undermine operational effectiveness, leading to higher costs, reduced customer satisfaction, and lower business retention rates. Furthermore, the impacts of the COVID-19 pandemic and shifts in the global economy have emphasized the need for more agile supply chains in Oman.

Problem statement:

Supply chain management is important for business success. But several firms in Oman struggle to grow and operate efficiently. Problems like high transportation expenses, logistical problems, regulatory barriers, and large dependencies on imports worsen the situation for Oman businesses trying to improve performance. Moreover, international disruptions, such as geo-political tensions and the COVID-19 pandemic, have highlighted these issues further Oman's supply chain systems. These problems increase the costs, delays, and lack of competitiveness while damaging business sustainability and the economic development of the country.

Even with the persistent attempts to improve the logistics and trade infrastructure in Oman, businesses cannot manage their supply chains optimally. These issues and their impact on business enhancement require thorough exploration. This study aims to identify core supply chain problems and evaluate their impact as well as provide strategic recommendations to improve efficiency, resiliency, and sustained growth of the business in Oman.

The objectives of the Study:

The purpose of this study is to investigate Oman's supply chain issues and how they affect company development.

The study's particular goals are to:

1. Identify the main supply chain issues that Omani companies confront and examine how they affect their competitiveness and operational efficiency.
2. To evaluate the dangers of Oman's reliance on imports and how they affect the viability of businesses.
3. To offer tactical suggestions for enhancing supply chain administration, lowering dangers, and fostering sustained company expansion in Oman.
4. To assess how government regulations and policies contribute to Oman's supply chain issues.

Need of the study:

Oman Vision 2040 focuses on the economic and commercial developments witnessed by the Sultanate of Oman and specifically pays great attention to the logistics aspect, especially in light of the efforts made to diversify sources of income. Companies are required to focus on challenges and issues and work to solve them or at least reduce their impact, as the benefit of the research lies in analyzing the main challenges facing Omani companies in supply chain management and then evaluating the impact of those challenges on their commercial performance.

Literature Review**Introduction:**

The supply chain covers all the steps, individuals, and technologies related to the manufacturing and selling of a product or service. Supply chains and international trade rely on each other because they keep business running smoothly, offering goods and services at times when they are needed by the market. They also meet customer demands. If managed properly, a well-organized supply chain will streamline business processes and serve as a competitive edge for the organization. Supply chains comprise logistics (transportation planning), sourcing (selection of suppliers), procurement (acquisition of goods), manufacturing (producing goods from raw materials), distribution (delivery of products to consumers), and returns (handling of defective products). All these components are interrelated and essential for smooth execution of any business activities.

Supply Chain Models:

Supply chain models provide the strategic structure for how businesses organize the movement of goods, services, and information from suppliers to customers. Supply chain models have evolved significantly over time to meet global challenges, technology, and evolving consumer needs.

Traditional vs. Modern Models:

A traditional supply chain moves in a sequential manner (transporting, ordering, shipping, and delivering to the customer) and relies on forecasted estimating instead of actual data, which makes it much slower and less efficient.

On the other hand, modern supply chains are less sequential and more integrated. They rely on more sophisticated technology like cloud computing, artificial intelligence, and data analytics, which gives them the capability of making decisions in real time and having full visibility of the supply chain. For example, Walmart has a data driven supply chain that provides real time insight into inventory, so they can

restore inventory sooner—this reduces the risk of carrying excess stock.

Just-in-Time (JIT) vs. Just-in-Case (JIC):

The Just-in-Time, or JIT, strategy revolves around reducing inventory carrying costs by obtaining it only at the time it is needed in the production process. The JIT system eliminates waste and enhances operational productivity. Toyota is a prime example as they have achieved greater efficiency in their manufacturing processes using the JIT system. The JIT model does have some vulnerabilities such as supply of goods being interrupted, for example during the COVID 19 pandemic. The pandemic caused delays in inventory for many manufacturing companies.

Conversely, the Just-in-Case or JIC approach involves mitigating supply chain disruptions by maintaining higher levels of inventory. Despite the JIC model's advantages to buffer supply chain disturbances and crises, they can lead to excessive costs. Such is the case with pharmaceutical companies frequently utilize JIC to ensure they have medicines on-hand, even if their suppliers experience delays.

Technology in Supply Chain**Role of AI, IoT, blockchain, and data analytics:**

- Artificial Intelligence (AI) enhances decision-making by analyzing huge volumes of data to forecast demand, optimize inventory, and identify potential disruptions. For example, Amazon uses AI to recommend stock levels, forecast customer demand, and automate ordering processes in its warehouses.
- Internet of Things (IoT) involves connecting physical objects—trucks, machines, and containers—to the internet to monitor and track performance in real time. This allows for greater visibility and efficiency. Maersk, a shipping behemoth globally, uses IoT sensors to monitor container conditions during shipping, so that cargo is not damaged, and losses are avoided.
- Blockchain is a transparent and secure way of tracing products as they travel along the supply chain. It prevents fraud, authentication, and enhances traceability. For instance, IBM and Walmart partnered to use blockchain to track the origin of food products so that sources of contamination can be quickly determined in the event of food recalls.
- Data analytics allows companies to analyze patterns, identify inefficiencies, and make informed decisions. Predictive analytics can forecast market trends and customer behavior, facilitating better planning and less wastage.

Automation in warehousing and logistics:

Automation is transforming warehouse and logistics processes by minimizing labor requirements, speeding up operations, and improving accuracy. Conveyor belts and robotic arms are now commonplace in larger fulfillment centers along with Automated Guided Vehicles (AGVs). Amazon Robotics is a good case where robots bring product shelves to human hands for easier picking. DHL has also automated sorting machinery and is testing drones for last-mile deliveries, further automating the process and enhancing efficiency.

Supply Chain Software (e.g., ERP, SCM Systems):

Software systems play an important role in enabling and

controlling supply chain activities:

- Enterprise Resource Planning (ERP) software merges multiple business activities like inventory control, purchasing, accounting, and production into one interface. An ERP system consolidates and unifies different operational views and provides a framework for real-time decision-making.
- Supply Chain Management (SCM) software deals with the management of the movement of products, services, and data within the supply chain. SCM software enables demand planning, supplier relations, order management, and transportation management.

Many industries are increasingly adopting the ERP and SCM solutions from SAP, Oracle, and Microsoft Dynamics to enhance visibility in the supply chain, cut costs, and optimize processes.

Global supply chains:

Sustainability and ethics have emerged as the new cornerstones of contemporary supply chain management due to growing social and environmental concerns. Nowadays, companies are held responsible for the ethical treatment of the environment and all living things in addition to providing products in an efficient manner. A sustainable and ethical supply chain generates profits while preserving the environment and society, building long-term trust with buyers and shareholders.

Green logistics and carbon footprint reduction

Green logistics is the process of mitigating the impact of transportation, warehousing, and other distribution processes on the environment. This may include reduction of fuel through route optimization, use of hybrid and electric vehicles, and energy-efficient appliances in warehouses.

UPS, for instance, uses routing software that helps save millions of gallons of fuel each year. They are not the only ones as DHL is investing in electric delivery trucks and carbon-neutral shipping. Many other companies are attempting to cut down on packaging waste and use recyclable or biodegradable materials.

How companies manage disruptions

Supply chains were put to the test during the COVID-19 pandemic because of its tremendous impact on a global scale alongside other shock events. The pandemic alone caused factories to lay off workers, stores to close, shipping ports to remain blocked, and a looming lack of workers. In response to the pandemic, businesses were forced to shift their approaches by moving production to a closer location, setting up new supply chains, or digitally improving visibility with new technologies.

Strategic Initiatives and Policy Implications

What has been studied already highlights the importance of integrated approaches focusing on the development of trade policy and supply chain. Oman needs to digitalize as well as construct and build human capital to remain competitive in global trade. Also, clearly defined asymmetric FTAs can facilitate integration into the global value chains with reason to diversify and strengthen the economy.

Impact of lean and agile supply chain practices on organizational performance

Adresi *et al.* (2022) analyzes the impacts of supply chain strategies on the productivity of industrial firms in Oman. Using a sample of 130 respondents the study concluded that lean management greatly improves the organization's overall performance while agile management must work in different ways to gain competitive advantage. The study has also called for implementing lean practices to improve the manufacturing sector's efficiency and performance in Oman.

Lean supply chain practices in Oman's oil and gas sector

Al Saadi and Amuthakkannan (2024) studied the impact that lean supply chain practices have on the effectiveness of procurement operations within Oman's oil and gas industry. The findings emphasized that delivery of supply chain services is enhanced through value stream mapping. Moreover, the adoption of lean practices has an indirect effect on the supply chain and financial performance, which implies that there are potential savings and simplification of processes within the oil and gas sector after employing lean methods.

Green supply chain management in the oil and gas industry

Al-Manaiyah (2024) analyzed the effect of green supply chain management (GSCM) practices on the environmental performance of Oman's oil and gas industry. The results showed that internal environmental management supports the implementation of GSCM activities like purchasing and manufacturing. On the other hand, the direct impact of both green purchasing and green manufacturing on environmental performance was negligible, whereas customer collaboration had a slight positive impact. These findings underline the challenges regarding the implementation of GSCM practices and their diverse impacts on environmental performance.

Diversification into metal trading

To move beyond oil and gas, Oman started trading in metals. Oman's state-owned mining company, Minerals Development Oman (MDO), has started resuming copper mining from the Lasail mine after pausing for 30 years. MDO is also seeking commodity trading contractors for possible collaboration to streamline Oman's uncoordinated chromite and gypsum export operations.

Predictions and Innovations for the Future of Supply Chain Management

- **More Automation:** Automation will remain an integral piece of supply chains, as companies will incorporate more robots, autonomous vehicles and artificial intelligence-driven processes. More warehouses will utilize robotic arms, autonomous guided vehicles (AGVs) or drones to sort, pick or deliver. Labor costs will increase significantly while also expediting time.
- **Predictive Future Supply Chain:** Predicting future supply chains will significantly occur using big-data analysis and artificial intelligence (AI). AI will assist organizations forecast demand accurately by utilizing available real-time data from any source,

such as the weather, customers' activities, or market trends and predicting demand accurately well in advance to make timely decisions and/or minimize waste. Predictive maintenance powered by AI will proactively keep equipment and machines in working condition by predicting when they will fail.

- **Visibility and Transparency in the Supply Chain:** Blockchain will provide even greater visibility, with consumers, suppliers, and manufacturers all able to track products in real time from point of origin to delivery. This will not only provide efficiency but also support the growing consumer demand for transparency on sourcing and sustainability for products.
- **Smart Contracts:** Blockchain-enabled smart contracts will automate the process of supplier-manufacturer agreements, significantly reducing paperwork, delays, and disputes. Self-executing contracts based on Blockchain technology will support compliance and facilitate more efficient transactions across global supply chains.

How AI, Robotics, and Sustainable Practices Will Shape the Future

- **Artificial Intelligence (AI):** AI will become even more mainstreamed in supply chain decision-making, from optimizing routes of delivery trucks to dynamically optimizing inventory based on forecasted demand. Since AI provides detailed insights into operations and behavior of customers, it will help companies make more efficient as well as enlightened decisions, leading to costs and wastage being reduced.
- **Robotics:** Warehouse and distribution center robotics will continue to evolve, allowing faster and more accurate picking, packing, and sorting. Autonomous robots and drones will also revolutionize last-mile delivery, improving speed and reducing human labor. For instance, retailers like Amazon and JD.com are already piloting drone deliveries, which could become a common sight in the near term.
- **Sustainable Practices:** As environmental concern grows; sustainability will be the key driver to develop supply chains.

Companies will increasingly emphasize green logistics, including electric transport and routing optimization to reduce carbon emissions. Closed-loop supply chains, with the emphasis on recycling and reducing waste, will become the standard in sectors like fashion, electronics, and vehicles. Companies like IKEA and Patagonia are already shifting to the circular approaches by selling goods made from recycled materials and encouraging their customers to return used items for renovation. In addition, carbon-neutral shipping and renewable energy utilization in the manufacture and shipping will be essential as companies implement global sustainability goals, including the Paris Agreement targets. With the changing technologies and trends, supply chains will become smarter, efficient, and agile in response to shifting consumer needs and the Earth's requirements. The focus will shift from simplistic cost savings to creating lasting value through innovation, sustainability, and agility.

Data collection and interpretation

When gathering data, only secondary processes are employed. We obtained knowledge via reading e-books,

researching scientific topics, and searching Google and the Internet for past interviews. Government reports, publications written by qualified scholars, and observations made in supply chain institutions are all trustworthy sources of information.

Secondary Data

Secondary data is collected from a variety of sources, including government publications, medical journals, online databases, and previous studies. These resources provide accurate and reliable information to back up the study's primary data collection.

Data collection

Data gathering is the process of methodically collecting information from various sources for analysis, research, or other purposes is called data collection. It is necessary to make informed decisions, offer insights, and encourage progress in a range of fields. Observations, tests, web scraping, social media monitoring.

Improvement of business in Oman

Asyad company profile

Khalil bin Ali Al Balushi, CEO of ASYAD Group, pointed out that the group has achieved a qualitative accomplishment for the Omani seafarers working in the maritime services sector ferry, and ports sign and boats sign in all ports of the Sultanate. (Al-Makhmari&other,2021)

ASYAD owns other subsidiaries such as ASYAD Express, which delivers door-to-door to 220 countries worldwide. Direct delivery takes place within 24 hours in the Gulf countries and 24 to 72 hours in other countries. ASYAD reaches the air cargo facilities at Muscat International Airport from the ASYAD Express fulfillment center. ASYAD also enjoys reliable transportation within the network from receipt to delivery. ASYAD has focused on improving its operations in dedicated warehouses for receiving inventory and managing storage, then completing all orders such as receiving, packing, labeling, dispatching and delivery, with tracking of all shipments. The challenges that ASYAD has faced in the growth of the company and its diversity have made it a leading company in providing logistics services today, as the company has an e-commerce fulfillment center and good packaging solutions, warehousing solutions, direct local delivery to the customer's address and international delivery to the customer's address. (Al-Makhmari&other,2021)

In this section, all data related to Asyad Company will be discussed regarding the topic of business improvement in the Sultanate of Oman, as the main topic of this research is the challenges of the supply year and its impact on business improvement in the Sultanate of Oman. The focus will also be on all the results obtained in this section, what are the supply chain processes used in Asyad and how these processes affect business improvement in the Sultanate of Oman. In this context, the spotlight will be on the profits achieved by Asyad Company and all operations for three years.

Asyad annual report

According to ASYAD's annual report, total assets were valued at US\$4.1 billion, with total revenues at US\$1.2 billion. ASYAD also has major ports in Salalah, Sohar, and Al Ghubrah, as well as warehouses. ASYAD owns six ferries,

four 187 buses, seventy-eight vessels, and employs more than 10,000 people. The company now serves 12 countries with a

mail and express network. (ASYAD | ANNUAL REPORT,2023)

Table 1

category	2022	2023	Note
Revenues	1.15	12	5% growth
Net profit	116.8	121.5	4% growth
Compound annual growth rate (CAGR)	-	21%	Significant improvement
Number of projects in the dry dock	221 projects	230 projects	4% increase
Number of projects in the dry dock (TEUs)	5.2 million	4.6 million	slight decrease
Container handling volume	6.500 ship	6.877 ship	5% increase
Number of ships arriving at ports	222,100	8% growth	Increase in percentage
Passenger transport by ferry	85.000	4% growth	Increase in percentage
Transporting vehicles by ferry	15,000	57% growth	big jump
Freight transport by ferry	Türkiye Jordan, Qatar, Saudi Arabia, UAE Kuwait	Britain, Belgium France, Morocco Egypt, Bahrain	Continuous expansion
Number of countries added to express mail	-	9 companies	New expansion
Number of contracted regional distribution companies	-	611 clients	Growth index
Number of active customers	602.4	2.68 billion dollars	71% increase
Foreign direct investment in free zones	Best ship management company	Peace and Security Award	Continuing to excel
Achievements and Awards	-	Launching the warehouse management system and barrier and crane management systems	Clear contribution
Contributing to supporting small and medium enterprises (SMEs)	-	496 institutions with a value of \$44 million	Clear contribution

Interpretation for the above table

We note from the table that the ASYAD Group has witnessed a remarkable improvement in 2022 at several levels, including financial and operational. On the financial side, the company's revenues increased from \$1.15 billion in 2022 to \$1.2 billion, a growth rate of 5%. The company also achieved net profits of \$121.5 million in 2023, compared to \$116.8 million in 2022, an increase of 4%. A compound annual growth rate of 21% also appeared for the first time, reflecting the rapid and sustainable growth in revenues and profits since the company's establishment. On the operational level, the number of projects implemented in the dry dock increased from 221 to 230, a growth of 4%. Regarding the volume of container handling, a slight decrease was recorded, from 5.2 million TEUs in 2022 to 4.6 million in 2023.

In terms of vessel reception, ASYAD ports received 6,500 vessels in 2022, increasing to 6,877 vessels in 2023. This appears to have achieved a growth of 5%. The Maritime Passenger Transport Services Certificate also showed an 8% increase in the number of passengers transported by ferries, with a 4% growth in the number of vehicles and a 57% increase in the volume of goods transported by ferries. This reflects a significant improvement and growth in the performance of maritime logistics services. ASYAD has also expanded its express mail network, adding new countries every year, which supports international expansion, as for foreign investments, the volume of foreign direct investments in the free economic zones increased from about \$1.56 billion in 2022 to \$2.68 billion in 2023, a significant increase of 71%. ASYAD also contracted with nine new international companies to manage regional distribution, and 611 active clients were registered during 2023, which indicates an expansion of the client base. In terms of awards, ASYAD

won the Best Ship Management Company Award in 2022, and in 2023 it won the Peace and Security Award within the Marti Time Standard Awards, thus reflecting ASYAD's excellence in operational performance and in security and safety.

Technically, ASYAD achieved remarkable progress in 2023 by launching modern management systems, such as the Warehouse Management System and the Barrier Management System, which helped boost operational performance. The company also contributed economically by supporting 496 small and medium-sized enterprises (SMEs) with a value of \$44 million, enhancing in-country value. These combined indicators confirm that 2023 was a year of growth, digital transformation, and operational excellence compared to 2022.

Analysis of the table

ASYAD financial performance 2023

Net revenue increased by five percent, from \$1.15 billion in 2022 to \$1.2 billion in 2023. Net profit increased by four percent, from \$116.8 million in 2022 to \$121.5 million in 2023. ASYAD's CAGR is 21%, with revenue growth since the company's inception and profit growth of 73%. This demonstrates the company's improved business performance and the logistical challenges it has faced, enabling it to reach this level.

In terms of quality, health, safety, security and environment, ASYAD has achieved more than 38+ million working hours and received the regional award for safety and security at the Maritime Standard Awards in 2023. ASYAD also signed an eight-year agreement with Oman Natural Gas Company to charter two LNG carriers, which generate a direct and indirect local value of more than US\$519 million, and to

share the charter of 34 vessels to operate them in the spot markets. (ASYAD | ANNUAL REPORT,2023).

ASYAD financial performance for 2022

ASYAD's financial performance in 2022 included a 24% increase in revenue compared to 2021, and a 46% increase in profit levels compared to 2021. Shareholders' equity grew by 79% in 2022. Agreements were signed to build two LNG carriers for global expansion and to meet local demand. The regional branch of ASYAD Shipping was established in Singapore to ensure its commercial presence in the world's largest shipping hub. ASYAD Shipping Company reported a

13% increase in container handling volumes in 2022 compared to 2021. ASYAD Shipping Company also won the Best Ship Management Company award. ASYAD chartered an additional 32 vessels during 2022. As for the dry dock, the company received 221 projects in 2022, and dry dock productivity increased by 28%. The company's financial performance resulted in a net profit of \$1.5 billion. 12 million Omani riyals, Oman Post Asyad Express expanded the Asyad network to six new countries, namely Turkey, Jordan, Qatar, Saudi Arabia, the UAE, and Kuwait. Asyad Express's average daily shipments increased by 50% in 2022.

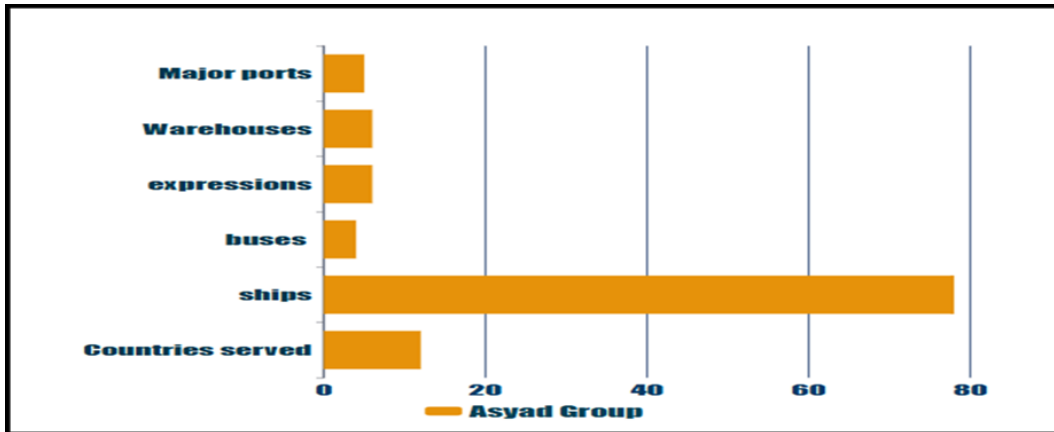


Fig 1

Asyad launched 102 postal outlets and was ranked first globally in international express mail services. (Al Mazroui

&other,2022)

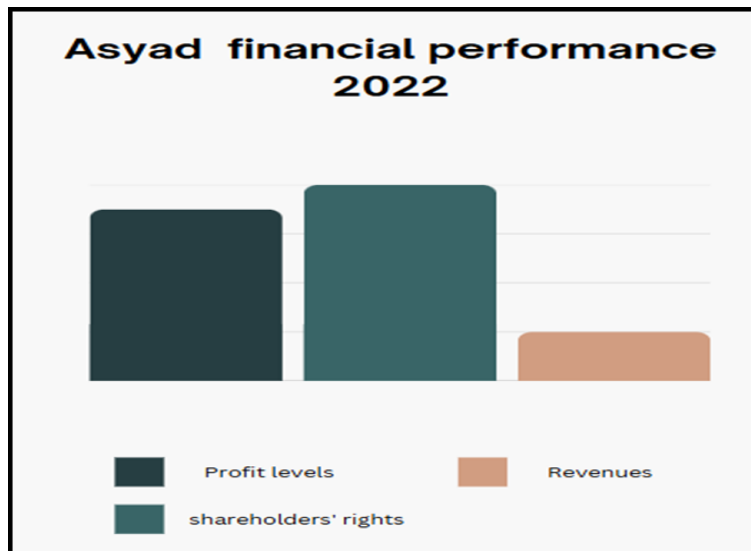


Fig 2: Asyad financial performance 2022

The bar chart shows the distribution of Asyad Group's property services in several logistical fields. The drawing shows that the group owns much equipment, about 75 ships, which is the largest element it owns compared to the rest of the categories. This indicates the strength of Asyad Marine's fleet and its great interest in maritime transport. Asyad Group serves about 15 countries, which indicates the company's international and regional spread. It also owns a much smaller number of buses. As for warehouses and main ports, a close percentage appears, reflecting the group's focus on maritime services, which primarily ensures its logistical strategy.

Oman LNG company profile

Oman LNG is a cornerstone of the Sultanate of Oman's energy sector and a world leader in the global liquefied natural gas (LNG) market. Incorporated in 1994 and headquartered in Muscat, the company operates a modern LNG plant in Qalhat, near Sur, which has made Oman a significant exporter of natural gas. With a production capacity of 10.5 million metric tons per annum (MTPA), Oman LNG is a powerful contributor to the world's increasing energy needs, supplying high-quality LNG to long-term partners in Asia, Europe, and beyond. The

company is a joint venture between the government of Oman (on behalf of the Energy Development Oman and Oman

reports of the years (2021, 2022, 2023) of Oman LNG. The table is designed to focus on critical metrics metrics for analysis, including financial performance, operational achievements, sustainability efforts, and corporate governance.

Annual reports of Oman NLG

The provided table shows the key information from 3 annual

Table 2

Category	2021	2022	2023
Financial Performance	- Revenue: \$3.28B - NIAT: \$886M - Corporate Tax: \$169M	- Revenue: \$5.77B - NIAT: \$1.97B - Corporate Tax: \$336M	- Revenue: \$4.9B - NIAT: \$1.5B - Corporate Tax: N/A
LNG Production	- 10.6 MTPA - 163 cargoes	- 11.5 MTPA (highest ever) - 176 cargoes	- 11.5 MTPA (exceeded capacity) - 173 cargoes
Plant Reliability	95.5%	97.6%	95%
Omanisation Rate	91%	93.6%	96%
Health & Safety	- 10M LTI-free man-hours - 5M LTI-free (Power Project)	- 16M LTI-free man-hours - 40M km driven safely	- 21M LTI-free man-hours - 43.34M km driven safely
In-Country Value (ICV)	- 11% SME spend - 55% Omanisation in ICV contracts	- 13% SME spend (\$33M) - 88% local supply chain spend (\$232M)	- 16% SME spend - 87% local supply chain spend - 73% Omanisation in site contracts
Sustainability	- 1st carbon-neutral LNG cargo - \$9.9M SIP contribution	- Net Zero strategy - \$2.5M for Sur Public Park - \$2.63M community projects	- COP28 participation - Road Safety Institute - National Autism Centre
Governance	- 14 Board members - Focus on COVID-19 resilience	- Shareholder agreements extended beyond 2024 - GHG strategy	- New shareholder agreements signed - 10-year gas supply deal with IGC
Key Milestones	- Cyclone Shaheen relief (\$6M) - Debottlenecking project completed	- 3000th LNG cargo milestone - National Autism Centre	- 30th anniversary - Youth Centre in South Sharqiyah

Analysis of the table

Financial Performance

Trend: Revenue peaked in 2022 at \$5.77B, then dipped in 2023 to \$4.9B. NIAT (Net Income After Tax) followed the same trend, peaking at \$1.97B in 2022, then decreasing in 2023.

Impact on Business

The surge in 2022 indicates healthy global consumption or spending. The drop in 2023 might reflect costlier spending or industry regression. All these variables impact investment potential, financial stability, dividends, and overall financials.

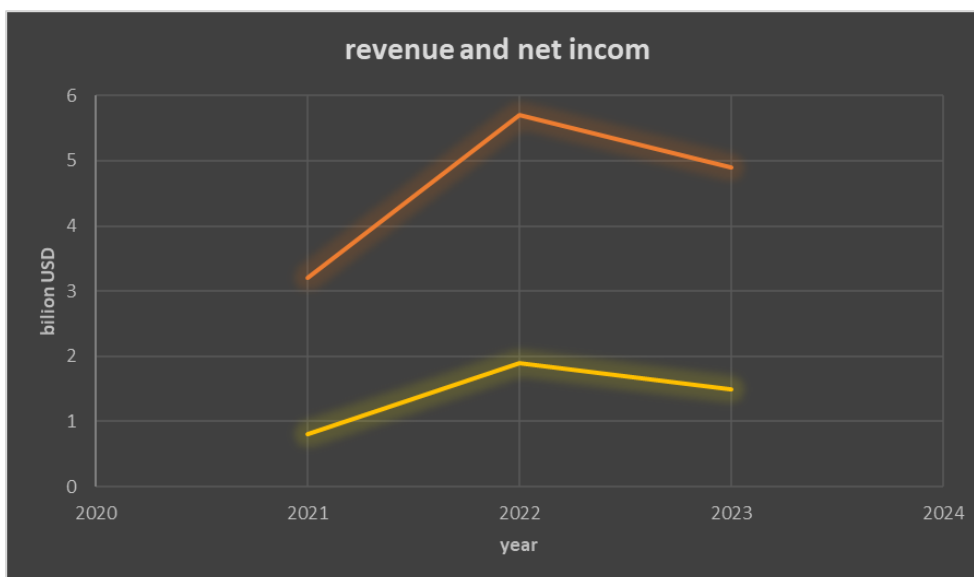


Fig 3: The chart shows financial growth peaking in 2022

LNG Production

Trend: Steady increase from 10.6 MTPA (2021) to a record 11.5 MTPA (2022 and 2023).

Impact on Business

Sustained high production enhances reputation and export commitments. Reaching/exceeding capacity two years in a row indicates strong operational capability but could strain infrastructure over time.

Plant Reliability

Trend: Peaked at 97.6% in 2022 but dropped slightly to 95% in 2023.

Impact on Business

High reliability ensures uninterrupted production and delivery. A dip, even minor, could indicate maintenance needs or aging infrastructure, possibly affecting efficiency and safety.

Omanisation Rate

Trend: Steady growth from 91% (2021) to 96% (2023).

Impact on Business

Reflects commitment to national employment goals. Enhances public and governmental support but requires ongoing training and development to maintain skill levels.

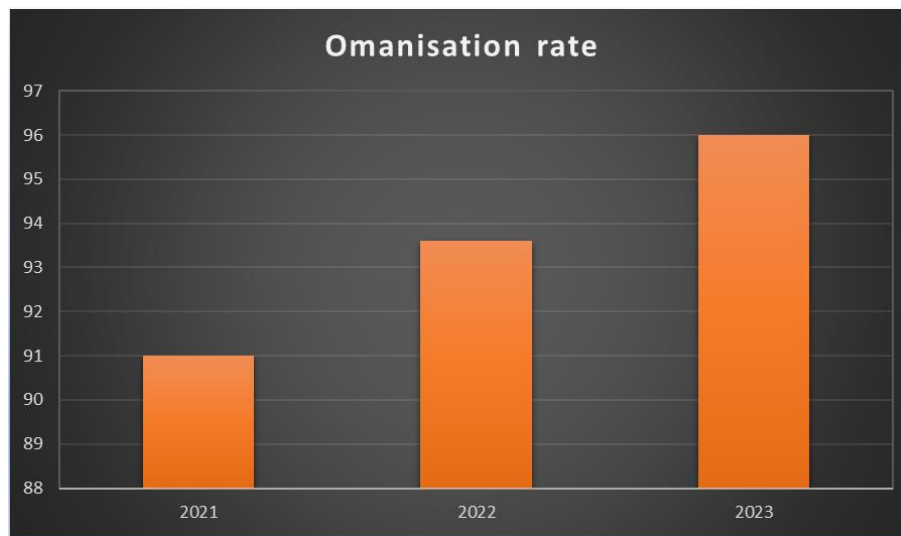


Fig 4: A steady rise, which means there is an investment in the local force development.

Health & Safety (HSE)

Trend: There is a marked surge in LTI free man hours (10M in 2021 and 21M in 2023) as well as safe kilometers driven.

Impact on Business

Positive workforce safety culture fosters, operational risk, insurance costs, and downtime, enhancing welfare and corporate image.

In-Country Value (ICV)

Trend: Increasing SME spend (from 11% to 16%) and strong local value add to the supply chain (up to 88% in 2022).

The impact of Oman LNG on the improvement of businesses in Oman

Oman LNG continues to positively impact various businesses and extend benefits to the economy of Oman. Here is an analysis of how the Oman company expanded and expanded growth of adjacent sectors and businesses.

Strengthening the local supply chain

- How: Oman LNG has provided local suppliers contracts totaling more than \$232M and had over 87-88% of the local suppliers comprising the supply chain by 2023.
- Effect: There was reliable supply from local manufacturers, contractors, and service providers which greatly enhanced their income and their economic condition.
- Improved Performance: Local businesses were able to

secure seasonal contracts which helped them to further enhance the level of operations, hire more staff, and invest in capacity and quality upgrades

Boosting SMEs through In-Country Value (ICV)

- How: SME spending grew from 11% in 2021 to 16% in 2023.
- Effect: These small companies gained new opportunities through competitive auctions as well as progressive contracts in the energy Market enabled them to grow further.
- Improved Performance: These SMEs were able to access new markets, receive enhanced peer guidance, technical skills, and financial resources

Workforce development and omanisation

- How: Oman LNG contributed to building a local skilled workforce by increasing Omanisation to 96%.
- Effect: Workers trained and experienced at Oman LNG often relocated to or worked in partnership with other industries and shared their knowledge, leading to a positive transfer of work culture.
- Improved Performance: This increased the average talent level in all areas, including engineering, logistics, health, and safety.

Indirect economic multipliers

- How: Oman LNG's high revenues and community investments helped circulate funds in the region (for

example, in 2021 Oman LNG provided \$9.9M for community support).

- Effect: These provided greater disposable income and business activity, thus increasing housing, retail, hospitality, and service demand.
- Improved Performance: These areas received indirect expansion due to the strong community involvement and financial performance of the company.

Infrastructure and social investments

- How: The completion of several projects such as Sur Public Park, Youth Centre, and Road Safety Institute aided the cities and towns.
- Effect: The enhanced infrastructure raised the local standard of living and was an attractive quality for businesses, skilled personnel, and better talent.
- Improved Performance: The region surrounding Oman LNG became increasingly pro-business which is good for investment retention and talent retention.

Knowledge & Technology Transfer

- How: Oman LNG's safety and sustainability practices, as well as technology investments, were adopted by partners and contractors due to the company's operational excellence.
- Effect: Local engineering, logistics, and service businesses increased their performance and international competitiveness.
- Improved Performance: The firms became more capable and efficient to compete for projects unrelated to the LNG industry.

Analysis of research questions

1. What are the main supply chain issues that Omani companies confront, and how do they affect their ability to compete and operate efficiently?

Omani companies must grapple with a plethora of debilitating supply chain restrictions, seriously undermining their competitiveness and operational efficiencies. A fundamental problem is the sparse infrastructure such as roads and warehouses which increases transportation costs and delays. Moreover, over-reliance on imports poses significant global supply risk, undermining business continuity and escalating operational and input costs. Despite improvements, customs and regulatory bottlenecks still impact on the pace and reliability of trade across borders. The thin local supplier network stifles flexibility and nurtures dependency on foreign vendors. This cluster of factors, compounded by the lack of skilled workers in the logistics and supply chain sphere, leads to underperforming planners and executors. In addition, many companies are reluctant to utilize advanced digital technologies resulting in decreased real-time inventory monitoring, analytics-enabled decision making, and agile supply chain strategies. Collectively, these factors increase the cost of doing business in Oman and diminish the competitive edge of Omani companies in the regional and global markets.

Findings and Recommendations

Findings

Asyad company

The results of this study reveal that ASYAD Group faced several challenges in its supply chain. However, these challenges did not hinder its progress, but rather served as a

major impetus for improving the business chain in the Sultanate of Oman. These challenges prompted the company to invest in advanced logistics solutions, build a strong infrastructure, and adopt modern technologies that contributed to raising the efficiency of operations. ASYAD also focused on developing national competencies in the fields of maritime transport and logistics services, which helped prepare a qualified workforce capable of dealing with all the complex challenges in this sector. It also demonstrates ASYAD's strategic response to these challenges, such as establishing centers for fulfilling orders, improving warehousing operations, and expanding international delivery services, and its ability to transform these obstacles into ambitious opportunities. These initiatives have contributed to enhancing the company's performance and consolidating its position in the Sultanate of Oman as a competitive logistics hub. "The importance of the supply chain lies in its ability to monitor tasks, organize the chain, and then discover errors and shortcomings in each process." (Christopher,2023)

1. Transforming challenges into growth opportunities:

Asia faced challenges in managing its trucking operations and geographic expansion, but it used this as a catalyst to improve performance and expand operations internationally.

2. Improving financial performance as a result of overcoming challenges:

Given the complexities of global supply chains, Asyad achieved a 5% revenue growth and a 4% profit growth, reflecting the company's ability to adapt and evolve.

3. Strategic infrastructure investments: In response to operational challenges, the company established the region's first floating dock and increased its warehouse capacity in Salalah by 16%, enhancing its logistics readiness.

4. Enhancing operational efficiency through technology:

Challenges in tracking shipments and delivery prompted Asia to develop fulfillment centers and use digital systems to ensure speedy completion and accurate delivery.

5. Diversifying transportation methods to ease supply chain pressure: The company executed 2,000 shipments by land, air, and sea, demonstrating its ability to address supply chain bottlenecks.

6. Focus on service quality and operational excellence: As a result of the impact of challenges on service levels, Asia has improved customer experience, becoming the world's leading express mail service provider and second in customer experience.

7. Expanding the international network to address regional challenges: The company added 12 new countries to its postal network, helping it overcome challenges associated with distribution limits and limited markets.

8. Building long-term relationships and partnerships to overcome market disruptions: Through an eight-year operating agreement for two gas carriers, Asiad ensures long-term operational stability that mitigates the impact of market fluctuations.

9. Commitment to safety: Asiad has achieved 38 million accident-free working hours, demonstrating that Asiad has not allowed challenges to impact the strength of its work environment and employee safety. “Attention to health and safety in supply chains is considered very important in business management, as health and safety and its practices help in organizing and protecting the work environment in the supply chain.” (Boyer,2024)

LNG company

1. From the financial performance of the LNG Company, revenues peaked in 2022 at US\$5.77 billion, declining to US\$4.9 billion in 2023. This trend is mirrored by net income after tax. The results reflect the impact of the LNG Company's financial performance on global natural gas market dynamics. This decline in revenue in 2023 reflects a market correction or price fluctuations, indicating the need for financial adjustment.
2. The results confirm a steady increase in production, reaching 11.5 million tons per year in 2022 and 2023. The results confirm that the company's efforts to maximize its production capacity reflect its strength and strong market demand. However, continued high production could strain infrastructure levels if it does not continue to reinvest.
3. From the factory reliability model, reliability decreased from 97.6% in 2022 to 95% in 2023. This result confirms that the percentage remains very high, but the decrease indicates the possibility of some problems, maintenance, or equipment aging. This leads to proactive investment in upgrades to maintain performance.
4. The insurance rate increased from 91% in 2021 to 96% in 2023. The results demonstrate strong alignment with national employment targets and reflect the effective development of local talent, but require continued investment in training and skills development.
5. LNG is monitoring health, safety, and environment (HSE) across its supply chain, with work-related injury-free hours doubling from 10 million to 21 million. This result confirms the strong safety performance in the supply chain, which reduces operational risks and enhances a positive reputation.
6. SME spending increased from 11% to 16%, and the value of the local power supply chain peaked at 88%. This confirms that Oman Natural Gas Company has significantly contributed to local economic growth by activating contracts and supporting SMEs, which enhances the continuity of services for companies.
7. Local supply chain contracts exceeded US\$232 million, which has helped improve SMEs and the insurance initiative in the local business environment.

References

1. Al Abbadi MSM, Qureshi MI, Yasir M, Khan N. Assessing challenges and opportunities in optimizing logistics and supply chain performance in Oman. *Academy of Entrepreneurship Journal*. 2021;27:1-22.
2. Mirza MN, Pourzolfaghar Z, Shahnazari M. Significance of scope in project success. *Procedia Technology*. 2022;9:722-729.
3. Al-Makhmari AKM, Al Yaqoobi HH, Slimi Z. A study on attracting local and international investments and improving an integrated logistics system allows local products to reach global markets. *European Journal of*

Business and Management Research. 2022;6(4):215-229.

4. ASYAD | ANNUAL REPORT 2023 [Internet]. Asyad.om. 2023 [cited 2025 Apr 23]. Available from: <https://www.asyad.om/who-we-are/about-asyad/annual-report-2023>
5. Al Mazroui TSS, Al Alawi MMS, Al Wahaibi KSH, Al Amri BBS, Thottoli MM. Maturity of digital transformation in the shipping industry: a case study among enterprises in Gulf Cooperation Council (GCC) countries. *Kapal: Jurnal Ilmu Pengetahuan dan Teknologi Kelautan*. 2024;20(1):115-123.
6. ASYAD |2022 ANNUAL REPORT [Internet]. Asyad.om. 2022 [cited 2025 Apr 23]. Available from: <https://asyad.om/ar/who-we-are/about-asyad/asyad-group-annual-report-2022>
7. Zainul Abideen A. Evaluating disruption management strategies for freight logistics in Oman: a simulation modeling approach. *Evaluating Disruption Management Strategies for Freight Logistics in Oman: A Simulation Modeling Approach*. 2023.
8. asyadshipping.com [Internet]. Asyad Shipping Company. 2025 [cited 2025 Apr 23]. Available from: <https://asyadshipping.com/>
9. Awashreha R, Hamida A, Mohamedb BE, Al Farsia H. Uncertain supply chain management. *Uncertain Supply Chain Management*. 2024.
10. Al Rashdi ASH, Alemu AE, Rahman NSF. Uncertainties and risk on SMEs sustainability in Oman: a logistics perspective. *UNCERTAINTIES AND RISK ON SMEs SUSTAINABILITY IN OMAN: A LOGISTICS PERSPECTIVE*. 2025.
11. Oman LNG [Internet]. Oman LNG official website. [cited 2025 Apr 23]. Available from: <https://omanlng.co.om/>