

ANALYSING OMAN SUPPLY CHAIN PRACTICES VERSUS GLOBAL BEST PRACTICES

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ABSTRACT

This research is about, “Analysing Oman supply chain practices versus global best practices.” Researchers used the survey questionnaire method as well as observation, interviews and literature review in this research. Findings reveal that supply chain facilities like ports, airports, roads and a modern Customs and Excise Department, which fully embraces e-government and is strategically linked to all importers and exporters as well as critical trade and related government departments, needed improvement in Oman. It was found that critical skills, ports, Customs and investment infrastructure in Oman needed to be improved as well as processing and turnaround time to match best practice elsewhere. Research output was also low. A One Stop Shop was there but not fully operationalised to cover all transactions.

Key Words: Risk Management, Efficiency, Logistics and Supply Chain Management (LSCM), Supply Chain Management (SCM).

1.0 INTRODUCTION

Oman is the jewel of the Middle East and the GCC strategically located on the Strait of Hormuz in the Arabian Peninsula and heavily involved in supply chain operations. Supply Chain Management (SCM) was the critical driver of value for the modern organization. It dealt with virtually any type of goods and services which kept organisations and government ticking. Oman is a very dynamic and futuristic country and always tries to adopt best practices across the board. Its supply chain facilities span ports, airports (many new airports are under construction throughout the country, while existing ones are under refurbishment and upgrading), roads, a modern Customs and Excise Department which fully embraces e-government and is strategically linked to all importers and exporters as well as critical trade and related government departments. In their study Grubic, et al, (2010), said although empirical studies showed that supply chain integration was associated with high levels of business and operational performance, some authors argued that there was no need to pursue total end-to-end supply chain integration and different or relationship-by-relationship approaches were needed. Supply chain management integrates supply and demand management within and across companies, (Slone, Dittmann & Mentzer, 2010). This confirms the value of being an expert in both marketing and supply chain for better results. Supply chain was a business like any other business and standard business concepts and success factors applied, and this included investment criteria in logistics and related firms. The secret is easy of doing business, investment incentives, regulatory requirements, business turnaround, peace and security, low corruption levels, reception and hospitality, quality of life, a tolerant culture, availability of skilled

labour, support industries, a business conscious, efficient and business friendly government, low taxes, free market, fair competition, supply market, predictable policies, entertainment, fast customs clearance, a viable support services sector, cheap land, low crime rate, rule of law, transparency and good returns (ROI).

The USA has always had a five factor development strategy which helped them conquer the whole world economically and dominate global economic affairs and these were:- superior education system, infrastructure, highly skilled immigration promotion, research and development and lastly appropriate national regulations, and said the USA had to ensure a steady supply of highly skilled immigrants in science, engineering and technology, among many critical disciplines (Friedman & Mandelbaum, 2011). The USA is well known for recruiting the best students and faculty from all over the world into its universities and on graduating granting them citizenship after a certain time frame working in America. This strategy was rare and frowned upon in many countries saying it caused cultural contamination, destroyed national identity and changed national demographics completely, yet it was the best strategy to outsmart other countries in innovation and new product development, and was most difficult to copy. That created the greatest concentration of brainpower in the world in the USA and created the world's largest economy and juggernaut.

The latest supply innovation of the Oman Government is the Oman Wind Power Project, Water Desalination Plants in various locations in the country, the new planned Railway Project, Khazaen Logistics City, Duqm Port, Ibri Logistics Cluster and Sohar Shipping Complex, among others. Oman is country with a leadership that loves Oman and does everything to promote the country's progress and prosperity. Very few countries have done what Oman has done for its people within such a short space of time (48 years – 1970-2018). Omanis can walk shoulders high mesmerised by their phenomenal success.

Supply chain excellence drove shareholder value and controlled the heartbeat of the firm, which was the fundamental flow of materials and information from suppliers through the firm to its customers, and customer requirements needed to guide all operations, (Dittmann, 2013). The researcher would add that supply chain was also mandated to ensure security of payment and collect all payments by suppliers using fool proof risk free payment methods. In fact no transaction was complete without payment, the very purpose of business – business was not a charity, practitioners needed to know that. Logistics Clusters are driven by six factors namely:- favourable geography, supporting infrastructure, supportive/efficient government, education/research/innovation, collaboration and value added services (like life sciences companies, advanced manufacturing, clean-tech energy and information technology), (Sheffi, 2014). The researchers would include efficient and corruption free Customs & Excise Department and clean business friendly government. SCM provides an essential back up for successful marketing effort, efficiency, branding, image, repeat business, customer loyalty, customer satisfaction and reputation. It is very important to have customer-oriented marketing channels and these are channels in which the design objectives are set predominantly on the basis of the requirements of customers and where all activities performed and the type of entity is the most suitable for the customer, (Panda & Sahadev, 2012). They went further and said level of service required by target customers from a particular channel must be recorded across certain well-acknowledged features of service for the product category. Were all supply chain personnel customer driven and dedicated to serving customers in a religious way?

Oman is a very ambitious country in terms of innovation, global trade, supply chain and logistics, education, research, localization of jobs and industrialization but faces a myriad of challenges as it marches on with modernization and these are to do with quality and fitness of some college/university graduates to labour market requirements, employability of graduates, playing underdog to Qatar, UAE and Saudi Arabia in regional and global trade, low oil prices, slow diversification, localization of jobs or Omanisation and finally attracting FDI in the fierce and brutal Gulf Cooperation Council (GCC) and global competition (*Refer to Appendices 1-4 and Figure 1*). Research output is also very low compared to UAE, Qatar and Saudi Arabia because of low funding, high teaching loads in universities and a poor incentive system for researchers (low prizes and other incentives), three well-known enemies and obstacles to any effective research agenda.

These difficult obstacles need to be addressed carefully once and for all for this dynamic country to continue its unassailable advance in world trade and industrialisation. Procurement leaders were confronting a whole new generation of challenges as they execute global procurement, and these were:- managing disperse global teams, while ensuring common standards and processes, expanding sourcing into new and more complex categories, ensuring supplier compliance to corporate and regulatory standards across jurisdictions, developing suppliers and encouraging innovation, particularly in emerging markets, ensuring supply security and avoiding supply disruptions and getting visibility into, and mitigating, supplier risks, (Pierce, 2012). One needed to know the gravity of each industry by industry in Oman and field research would uncover that. Oman's biggest advantages and strengths were its strategic global location to world trade routes, hospitality, peace and tranquillity, friendliness, natural entrepreneurship by most of its citizens, excellent international relations and positive country of origin effect which tops the GCC, if not the Asian continent.

In dealing with globalization, a logistician needs to be able to integrate, communicate, and analyze from an international perspective, perform financial analysis, maintain good industry and customer relations, exhibit strong people skills, stay healthy, and understand laws and regulations, (Wu, et al, 2013). He said industry believed that cross-functional marketing skills were critical and emphasized the importance of risk and financial management. That is the missing dimension for most SCM practitioners. Marketing is the wealth creation process and the source of money for any organization and cannot be ignored at all. In fact SCM managers need to know marketing strategy just as good as marketing managers – it is not an option. Without marketing an organization hits the dead end. Degrees in supply chain of the future need to include Marketing Strategy as a course/module in the final year, which is not the case with most supply chain degrees now, thus short changing society.

New jobs do not come from government bail outs of companies, or big firms but new innovative start-up companies, which come from smart, creative, inspired risk takers, and America had surpassed the world in new start-ups through getting more of these people by improving its schools and importing more of them through recruitment of talented immigrants and giving them citizenship, (Friedman & Mandelbaum, 2011). He said when intelligent creative people were combined with free markets, freedom and a good government magic happened in terms of creation of new products, innovation and economic growth.

1.1.2 Purpose of the research and problem statement

The purpose of this research is to contribute to the success of Oman Vision 2040 and diversification into logistics, and advance critical ideas to drive this plan forward. This research would be long term lasting five years, and would be in phases. This paper would be the first one in this first year.

Oman is working to establish a solid logistics industry throughout the country as part of Oman Vision 2040 to diversify the Oman economy and industry beyond the oil driven model. The country has achieved phenomenal progress in logistics but more still needed to be done. The major logistics clusters are in Muscat, Salalah, Sur, Duqm, Ibri and Nizwa and these face many teething problems which have to be solved as the exercise progresses. Some of the challenges are the critical shortage of local skilled labour in supply chain, the absence of a railway system (still on the drawing board), infrastructure deficiencies (opening and connecting the country is still work-in-progress), customs delays, the appetite of staying in Muscat by most Omanis which makes it difficult to attract them to other new smaller logistics clusters like Duqm and Ibri, the slow operationalization of the One Stop Shop Concept throughout the country, cumbersome new business registration procedures, the difficulties of getting women candidates to work in logistics due to its odd working hours (including weekends and evenings, logistics is not an 8.00-5.00pm job as cargo moves non-stop 24 hours a day, 7 days a week and 365 days a year), some women who have no cars cannot work 8.00am-5.00pm as relatives who work in government and have cars have to pick them up at 2.30pm which is the time government employees finish work every day (that causes dislocations as logistics firms working hours are 8.00-5.00pm), the requirement to work in the interior where most logistics are done feeding the ports/firms with exports and imports, and lastly the high labour turnover of graduate trainees for logistics firms (40%) as they chase jobs with government (where conditions are much better and working hours are much less plus there were the added benefits of job security, guaranteed advancement, training and development, less pressure and lastly the sweet possibility of overseas scholarships at prestigious Western universities) and rich multinational corporations and oil companies (with rich pickings in high salaries and benefits).

On one side companies have to comply with Omanisation targets (localization of jobs policy) while there is a high labour turnover of recruited graduate trainees which causes huge dislocations in operations and wasted effort as trainees desert firms once they get better jobs elsewhere. It was a catch 22 situation for logistics firms with no immediate solution. Some would argue that the logistics industry must stop being crybabies as the rest of the economy was equally affected and simply soldiered on without so much noise. In any case when any company loses employees to other companies they have to address the reasons/root causes for losing labour to stem an exodus.

Sometimes there would also be unreasonable expectations from recruited graduate trainees regarding progression to senior managerial positions where graduates wanted senior management positions on appointment, whereas experience to run the logistics industry comes gradually and over many years in the field as it is very complex, sophisticated and governed by a complex web of national and international laws, diverse customs and languages, different time zones and subject to different holidays, and lastly subject to different weather patterns and natural hazards and natural disasters. It was one of the most difficult industries on earth linking firms, government and nations in a delicate matrix of trade, politics and economics. Moreover Oman will be competing for investment, markets and talent with regional powerhouses United Arab Emirates and Saudi Arabia in the GCC as well as facing global competition. American professors Friedman and Mandelbaum

said that countries did not decline because of big mistakes but it was many small mistakes in policies and strategies which cumulatively did maximum damage to the economy. This warning needed to be heeded by national economic planners in any country. Research is required to inform government, industry and society about correct policies, alternatives, opportunities, risks and pitfalls. This paper contributes critical research to this national ethos and debate.

1.1.2 Supply chain problems

The supply chain and logistics industry has faced a myriad of problems since 2008 ranging from overcapacity, dead and slow moving stocks, bankruptcy, liquidations, supply dislocations, non-payment, default, terrorism, idle plant and equipment, saturation, distortions, market fluctuations, retrenchments, firm closures, consolidations, inertia, panic and emergency of powerful strategic alliances and monopolies and cartels. Oman faces natural disasters like hurricanes and flooding regularly and these do affect smooth supply chain management negatively. Reduced supply chain vulnerability to risks arose through horizontal collaboration amongst producers, and vertical collaboration with the processor and retailer, (Leat, Revoredo-Giha, 2013). Producers improved market and price security. For the processor and retailer the collaboration generated greater security of supply of an assured quality, improved communication with suppliers, and reduced demand risk as they could assure consumers on quality and product provenance. The stages that are involved from the placing of an exports order to the delivery of goods to the buyer need to be professionally executed so that the organization can avoid losses which might cost the firm's very existence, loss of customers, reputation and goodwill, cancellation of operating license, specification of the firm and its directors or managers and at worst heavy jail terms for breaching the Customs & Exchange Control Regulations as well as the Immigration Regulations. Performance metrics measurement was central to good supply chain management and these are:- control (which allows managers to evaluate and control the performance of resources they manage, communication (to communicate performance to internal and external stakeholders) and finally improvement (which shined a light on actual versus expected performance in order to take corrective action where need be, (McKeller, 2014).

Despite a myriad of payment mechanisms as a result of innovation in international trade, the Letter of Credit (LC) is still a viable commercial product and that parties will need to be knowledgeable and skilled enough to keep abreast of dynamic changes on law and policy relating to usage and practice of LCs. Short of that parties could be vulnerable to risk exigencies inherent in international trade they sought to eliminate by subscribing to the LC, (Mugarura, 2014, 246-264). Security of payment is a major strategy required for security of payment but one needs to be knowledgeable about the mechanics of various payment methods including LCs, which are very complicated and tricky. Fool proof methods are required as failure to secure payment can result in bankruptcy or huge losses, especially on big contracts. Many managers have lost their jobs or have been send to jail for long periods for fraud or negligence or both. Another study by (Mellat-Parast, (2013), suggested that quality management facilitated cooperative learning and improved inter-organizational learning processes. It said at the supply chain level, it enhanced supply chain satisfaction and supply chain performance. Therefore TQM was central to SCM and distribution excellence. Appendices 1-4 include questions about the quality of some graduates in Oman. How is excellence possible with teething problems in universities and colleges?

1.1.3 Shipping dynamics

The function of shipping is the conveyance of goods from where their utility is low to a place where it is higher. The biggest risks in shipping are demurrage charges through delays, war, fire, piracy, damage and destruction to goods, sinking of vessels and fraud by employees in positions of authority. These need to be managed carefully. What makes global sourcing different from domestic sourcing are a number of issues which are to do with:- additional costs, multiple sets of laws, multiple currencies, longer lead times, language and cultural differences (do Oman Logistics and SCM degrees include key foreign languages as is the case in the first world as a way of bridging the language and cultural divide?), multimodal transportation and payment methods which are more complex for cross border sourcing, (Dominick & Lunney, 2012). As global supply chains compete in an increasingly complex and rapidly changing business environment, supply chain responsiveness has become a highly prized capability, (Williams, Roh, et al, 2013, 543-554). He said to increase responsiveness, supply chain managers often seek information that provides greater visibility into factors affecting both demand and supply and findings indicate that a strategy for achieving supply chain responsiveness requires a dual-pronged approach that aligns increased visibility with extensive information processing capabilities from internal integration.

Factors that influence a shipper's choice of transport mode are basically based on the total product concept enhancing all the constituencies of distribution. These include reliability, frequency, cost, transit time, capital tied up in stock, quality of service, packaging, warehouse charges, permits and licenses, import duty and insurance. Anecdotal evidence continues to suggest that many firms in emerging economies (EEs) lack innovation, (Sun & Lee, 2013). Relations with customers in international business are normally strained or damaged through problems with delivery hence the need to do as much research in this area and try to pre-empt potential problems and maintain good relations with customers, (Grubic, et al (2010). In their study they said although empirical studies showed that supply chain integration was associated with high levels of business and operational performance relationship-by-relationship approaches were also needed.

Most of the problems with shipping are to do with unqualified and inexperienced personnel who do not know the full technical processes to get goods to clients spanning the globe. These mistakes can be quite costly in terms of demurrage charges, damage to goodwill, reputation and credibility. Clients do not want excuses for not delivering as they have obligations downstream too and can face legal penalties and rejection of cargo. Firms which do not invest in strategic skills through recruitment of diploma and degree holders in supply chain continuously were inviting trouble like dislocations, the bull whip effect, disappointments, lost customers, conflicts, misdirected cargo, lost goods, theft, mistrust, lost confidence, damage to image and reputation, penalties from Customs, law suits, damaged goods, wrong documents, demurrage charges, frustrations, poor efficiencies, possibility of jail terms, licence cancelation, poor profits or none, high prices, high costs, environmental pollution and the ultimate closure of the business. Mishra, Modi and Animesh (2013), say inventories represent an important strategic resource for firms, with implications for shareholder wealth. They find that as such, firms expend considerable effort in managing their inventories efficiently. Their results also reveal that firms' IT capability directly reduces their stock market risk and enhances their stock market returns. Taken together, these findings, along with the conceptual model that they advance, have important research and managerial implications. Therefore IT capability greatly improves inventory management and firm profitability. How many Oman firms are ICDL compliant? Government of Oman has gone a long way and trained all its employees to be IT compliant.

Shah (2015), warned procurement practitioners and industrialists saying the ten major challenges future leaders in procurement would face were:- Focus on strategic relationships, continuously looking for new markets, global supply chain risk, exchange rate volatility, political instability, integrate risk management in sourcing, using free trade agreements and tax havens, using of big data and analytics, technological innovation and finally having the right skills and influencing skills which means working collaboratively with other experts in and outside your organization. How prepared were Oman organisations in these aspects?

2.0 OBJECTIVES AND RESEARCH QUESTIONS

The objectives of this research are to:-

- a. Establish logistics and supply chain issues in Oman;
- b. Establish global best practice in logistics and supply chain;
- c. Identify Oman's position in the world of logistics and supply chain;
- d. Establish the institutions and practices that are required for Oman to excel;
- e. Recommend what needs to be done for Oman to maximize logistics and supply chain operations and exploit opportunities available to it.

The research questions to be answered by this research were:-

- a. What are the logistics and supply chain issues facing Oman?
- b. What is global best practice in logistics and supply chain?
- c. What is Oman's position in the world of logistics and supply chain?
- d. What are the institutions and practices that are required for Oman to excel?
- e. What recommendations needed to be advanced to Oman to maximize logistics and supply chain operations and exploit opportunities available to it?

2.1.1 Research methodology

Three research methods were used for data collection for triangulation and these are observation, survey questionnaires and comprehensive literature review. Observation was considered the key research method where researchers have been seeing logistics activities first hand and recording their observations. A survey method was good for research where people related issues and factual information as well as remotely collecting data from large numbers of people, and was cheap, (Bhattacharjee, 2012). Observation was considered suitable since all three researchers work in Oman and have access to companies, support institutions and government ministries and see all these issues in action over long periods of time. In observation the researchers could also talk to people on the ground to clarify issues, and they were able to record feelings and emotions as things happened. Two of the researchers were local people and Omani citizens who have each more than twenty years' logistics industrial experience. Observations on the ground were rich, captivating and objective. The three methods ensured complete outreach, triangulation of findings and exhaustion/saturation of facts before conclusions are reached. That would ensure credibility of findings. Unfortunately not many questionnaires were answered except just five. For that reason no statistics have been provided in findings as that was impossible given the few responses received. The responses were combined with observation findings to consolidate findings. That was a small limitation in the research, but was countered by having two other research methods. A pilot survey and data cross referencing was done with respondents to ensure validity and reliability. Ten well established companies

were interviewed as part of observation, on how they viewed the logistics landscape in Oman and way forward.

3.0 LOGISTICS CLUSTERS

Many logistics clusters have educational institutions created specifically to meet the needs and schedules of logistics operations, including deep integration of education with cluster operations. Some cluster operations have invested in specialized university facilities to support their logistics mission and upgrading their capabilities through partnerships with international centres of excellence, (Sheffi, 2014). China has universities of supply chain focusing on servicing and growing this huge sector. There are many big advanced countries which have adopted the same strategy. The rise of public higher education in the 20th century has closely paralleled the Industrial Revolution, creating a different kind of scientific, technological, and organizational model for leading institutions into the new millennium in science, technology, and engineering, (Martin & Samels, 2012). From this narrative it becomes clear that colleges and universities have to do targeted recruitments to recruit top industrial managers, technologists, engineers and designers into their systems to engender a culture of industrial compliance. These will be fused with pure academics to enrich academic debates, practices and embracing of reality. Who knows industrial requirements better than someone who has been there? A galaxy of pure academics only for any institution is now considered a dangerous liability and a mismatch with industrial expectations. Is this not one of the reasons why Oman industry is complaining about graduate non-compliance with labour market requirements and expectations? Mixed recruitments are the trend in the developed world now. If colleges, universities and governments say a person must have a minimum of two years teaching experience to be allowed to teach in higher education, where does one get teaching experience if one is not afforded the opportunity to teach or train how to teach? Countries like the UK have very good open systems where they systematically absorb highly experienced managers from industry into academia to tap into their strategic experience to enrich their lectures and service delivery to students. Their academic staff are a fusion of pure academics and top ex-industrial practitioners which makes for very rich lectures and university experience for students.

The academics from industry have the nuts and bolts of what makes industry tick. Pure academics have global best practices through research. That fusion of pure academics and ex-industrial managers produces magic and excitement in class. Managers and officer with at least five years of working in industry should be admitted into academia on the basis of that experience rather than teaching experience. With austerity and so many retrenchments in many countries globally, countries would be doing themselves good by absorbing these highly experienced managers and officers into academia and make good use of their accumulated expertise and experience to train and educate strategic human resources for the country. Employing them also solves a bigger problem for government, which is the dreaded curse of unemployment, which no government ever wants as it is toxic and tormenting. The employed would wean their family members from social welfare thus relieving government of another burden at a time governments have shrinking budgets. Employment creates the feel good factor and restores personal dignity, trust and confidence in government whilst eliminating the psychosomatic and traumatising dependency syndrome, and dreaded poverty and its punishing effects.

Organizations monitor factor-markets for strategic inputs that directly contribute to the firms' unique advantage, (Ellram, Tate & Feitzinger, 2013). Thus, managers may be unaware of essential supporting inputs that bundle with strategic inputs to sustain the organization's success.

They concluded that increasingly, supply chain resources are part of that strategic bundle of resources essential for achieving the firm's competitive advantage. Sheffi explained why does Singapore handled a fifth of the world's maritime containers and half of the world's annual supply of crude oil (Sheffi, 2014). He said the answer was mostly in logistics clusters as centres of excellence. There was more to it like rule of law, efficiency of Customs Department, IT, e-government, easy of doing business, quality of life, work ethic, attitude and commitment of the people, strategic skills availability, taxation, institutions, economic stability, national image, track record, geography and other factors. Transparent, reliable efficient institutions and rule of law were important than ever before for risk-taking and innovation, and national wealth, power and economic opportunity provided for citizens was not a distinction that is bestowed to last forever like an honorary degree, but must be earned continually like a basketball player's batting average, (Friedman & Mandelbaum, 2011). This was a stark warning to all countries to avoid complacency. Each country had to check that its institutions had a no nonsense business and service culture, and that none became an enclave and hideout for lazy uncommitted workers.

Firms deploying a network strategy frequently adopt a relationship marketing orientation necessitating that they cultivate close relationships with independent firms performing business functions on their behalf, (Pass, et al, 2012). Firms using shipping and other SCM agents in Oman could benefit from this research as they work with shippers, insurance firms, banks, transporters, warehousemen, customs brokers and others. But how does one explain a situation where business is down, like now with low oil prices and austerity everywhere, when service providers are desperate for business? Does it really matter whether they are treated well or not, surely they will just still stick with the firm? Literature does not cover this aspect and reality.

3.1.1 Analysis

Trust is not possible without high quality products (TQM) and honesty. This then calls for the study of principles of TQM as part of a firm's CRM efforts. But does one really need to visit all one's customers. MNCs the world over have never visited some of their small and medium size customers but those customers give them repeat business, trust them, have commitment and satisfaction because of their high quality, good prices, monopoly positions, reliability, brand reputation, resources, production and distribution capabilities, multicultural disposition and sometimes bribery of top management. Yes visits are important but not always. Some industries are blocked markets like the armaments industry where politics rather than normal market factors prevail. Literature does not explain this.

Islamic Arabic countries simply prefer to deal with other Arabic and Islamic countries for cultural reasons as brethren plus it is a language comfort zone but this is not addressed by literature. It is a way to support other Islamic countries. That is why Oman does most of its business in the Middle East.

4.0 THE CUSTOMS & EXCISE DEPARTMENT

There is another very strategic institution facilitating supply chain in any country, and that is the Department of Customs & Excise. The changing role of a customs authority in the 21st century is that it is looked at as a trade promotion and trade facilitation agency of government rather than a rigid regulator just going after money and compliance. Any agreement reached to enhance customs cooperation should include a change in governance including the approach to education of customs professionals and there are benefits of cooperation among customs

administrations in achieving a common approach to compliance and the associated competencies, (Libing, 2016). Oman will need to learn lessons from this as it moves to exploit its many trade agreements. The main players in the customs, shipping and logistics business are:- importers, exporters, bankers, insurers, export credit insurers, transporters, shipping /forwarding/customs clearing agents, universities and colleges, research institutions, trade promotion organizations (TPOs), Government Ministries dealing with foreign trade and NGOs like World Bank, United Nations, European Union, GCC, World Customs Union and others. Customs authorities around the world are incorporating risk management strategies into their procedures in the context of achieving their two main goals: ensuring compliance with customs laws and regulations by the efficient control of the cross-border movement of goods, passengers, and transport means; and accelerating economic growth by facilitating foreign trade and investment, (Davaa & Namsrai, 2015). They said that kind of control system required risk probability-based customs inspection. With the advent of terrorism the world over inspections using fool proof electronic means are now necessary. People as well as cargo needed thorough screening to shut out saboteurs and their nefarious activities and undesired products like drugs and smuggled goods. Criminals were on the prowl globally and had to be dealt a heavy blow and exposed by good systems. Oman has a water tight anti-smuggling system which has hit many potential criminals really hard and landed them in prison or had to pay heavy fines. The Oman government must be congratulated for this good system which is protecting national interest and shutting out illegal drugs, expired medicines and expired foods, and all undesirable products.

Logistics clusters depend on supportive government in terms of public infrastructure, paying for and maintaining and regulating the use of key infrastructure assets such as roads, railways, canals, ports and airports and user friendly regulations on land use, infrastructure use, conveyance operations and trade do promote logistics clusters. The Singapore government is renowned for both high efficiency and low corruption, an ill affecting many governments in the world, (Sheffi, 2014). There are lessons for Oman here as it works towards establishment of world class logistics clusters as engines to drive the economy and as diversification measures. Oman is lucky to be one of the countries used as global examples of having the lowest corruption levels in the world. Business ethics is deep rooted here as well as respect for rule of law.

The customs and shipping activity is a complex web of so many well connected and highly influential interest groups and players whose activities and functions take years to unravel and understand fully. International customs practices are changing rapidly where customs authorities are becoming more and more facilitators rather than regulators of business. Their traditional role remains but there is a strong slant towards business facilitation and promotion. The reason is simple – the wealth of nations comes from trading and business activities rather than from the government. A paper by (Chang, et al (2013), found that partner relationships, information sharing, and supply chain integration can represent the processes through which e-procurement contributes to supply chain performance. They say supply chain integration has the highest standardized total effect on supply chain performance; compared to partner relationships and information sharing, supply chain integration has more influences on supply chain performance.

Therefore supporting and facilitating business improves national economic development and welfare and naturally increases tax inflows into the fiscus; it is a win-win situation. Firms invest in countries where there are less barriers to doing business, central of which are the customs and immigration systems. Perfecting customs practices is one sure way of attracting and retaining

investment. In contemporary business environments, the ability to manage operational knowledge is an important predictor of organizational competitiveness, (Setia & Patel, 2013). He went further that organizations invest large sums in various types of information technologies (ITs) to manage operational knowledge. Because of their superior storage, processing and communication capabilities, ITs offer technical platforms to build knowledge management (KM) capabilities.

The modern customs professional is now expected to be bilingual in key foreign languages, e-literate, have top of the range international customs expertise, be a product of a credible business school and have specialized in business at degree level and have international exposure and disposition. It is now imperative for governments to focus their recruitment in an international perspective in order to get the best. Supply chain activities cover everything from product development, sourcing, production, and logistics, as well as the information systems needed to coordinate these activities, (Handfield, 2013). From this explanation it becomes clear that SCM is central to firm efficiency, survival and competitiveness as well as governmental service excellence. He said the concept of Supply Chain Management is based on two core ideas. The first is that practically every product that reaches an end user represents the cumulative effort of multiple organizations. These organizations are referred to collectively as the supply chain. The second idea is that while supply chains have existed for a long time, most organizations have only paid attention to what was happening within their “four walls.” Few businesses understood, much less managed, the entire chain of activities that ultimately delivered products to the final customer. The result was disjointed and often ineffective supply chains.

Four crucial SCM security management dimensions were identified: facility and cargo management; accident prevention and processing; information management; and partner relationship management, Yang and Wei, (2013, 74-85). Container shipping firms can improve safety and customs clearance performance by focusing security management efforts on facility and cargo management, accident prevention and processing, information management, and partner relationship management. Oman firms largely survive on imports and exports therefore managing this aspect of SCM is crucial to avoid stock blackouts and penalties. The rampant and regular road accidents in Oman are a real risk and cost to SCM operations and must be managed carefully.

Key functions which must be carefully managed for success and profitability in SCM and operations were outlined by (Slone, et al, 2010):-

- In-stock percentage
- Customer line fill rate
- Lead time
- On-time delivery from vendor or supplier to customer
- Outbound fill rate rate
- Order forecast accuracy
- Inventory turns

The researcher would add that all this must be accompanied by comprehensive and continuous marketing research, loss control and risk management, efficient production management, waste

minimization, TQM, R & D and NPD. Thieving employees should always be referred to the police for prosecution as a deterrent. Thieves have only one suitable place – jail/prison.

5.0 THE DYNAMICS OF THE SERVICES SECTOR IN OMAN AND GLOBALLY

In a research paper on immigrant labour to find to what extent the observed location pattern is driven by network effects or by traditional location factors, like the structure and behaviour of the local labour market, housing market, public goods, and local tax rates the researchers found out evidence of a very strong network effect, (Ukrayinchuk & Jayet, 2010). It concludes that this network effect is a very important location factor and implies that a location may attract current immigrants mainly because it attracted previous immigrants, even if the traditional location factors are not a source of attractiveness. Good examples abound in Oman and the GCC where large numbers of Indians, Egyptians, Pakistanis, Philipinos, Chinese, British, American, South African, Tanzanian and Sudanese immigrants/expatriates are found in Oman and the GCC, attracted by their kith and kin. One's own nationals are a natural comfort zone and less conflict is experienced and cooperation is at its maximum. Practices, language, culture, food, leisure activities and rites and rituals unite the team. Marriages may be easier too for the young and aspiring immigrants without the need to go back home.

Services have a direct impact on the competitiveness of the goods sector, (Kunaka, et al, 2013). The article illustrated the importance of logistics services, their trade dimension and how regulatory issues act as perhaps one of the most significant barriers to competitiveness. The customs professional is expected to understand the political dynamics in different countries as well as the cultures and religions and their influence on product consumption, business dynamics, negotiations and business etiquette. A qualified world class customs professional is a panacea for any country's international business efforts just as a doctor is a necessity for a hospital and an engineer for an engineering company. The customs professional requires three qualities:- diploma/degree level education in business/supply chain/languages, relevant experience and international exposure/travel experience. There is an additional requirement nowadays and this is the ability to design and plot an annual budget and Strategic Plan. Higher education had become the basic education of the knowledge economy. Yet in transitioning, emerging and developing countries, resources for higher education, and indeed higher educational systems themselves, remained inadequate, (Alon & McIntyre, 2013). Urgent action was needed to expand and diversify the supply of educational avenues to meet the fast rising demand. What is the reality on SCM skills in Oman – a shortage as this is a new area without few graduated students. Education was the foundation of economic strength this century, and stability and prosperity of the 21st century international order will be maintained or lost in the classrooms of America's public schools, (Friedman & Mandelbaum, 2011). The assertion here is that the quality of national education system/output determines national competitiveness and economic prosperity. Where does Oman stand in regards to its education system (refer to appendices 1-4)? Great strides had been achieved by Oman in education. The country was a desert state in 1970 and from there onwards has been making leaps and bounds to a highly respected modern state that it is now.

7.0 FIELD RESEARCH

Field research was done for good reasons. (Egbert & Sanden, 2014), quoting Davies, said Davies decried researchers hit and run tactics, where research was done but industry practitioners,

who were on the ground and had current happenings on the ground, were ignored. (Egbert, et al, 2009) agreed that it took time and context to understand patterns and environments and that practitioners should always be consulted regardless of the paradigm through which the research was viewed. The researchers felt that this paper had to be complemented with solid field research to unearth realities on the ground, deep seated feelings, rules and regulations and their effect on SCM in Oman. Various institutions were consulted including logistics and shipping companies, shipping agencies and customs clearing agencies. Questionnaires, observation and face to face interviews were done. Survey questionnaires were sent to 100 respondents but response rate was quite disappointing as only five respondents answered the questionnaire but with comprehensive answers as these were senior managers in supply chain portfolios. Observation was done by the team of researchers at twenty logistics companies in Muscat. Thorough observation compensated for the poor survey questionnaire response. Let it be known that the biggest logistics firms are found in Muscat the capital of Oman, and most had their head offices there too.

Other researchers can include the Customs Department and the Ministry of Industry and Commerce as well as The Oman Chamber of Commerce and Industry in future research.

The following was a summary of findings from field research with Oman industrialists and observation:-

- a. Turnaround timelines, customs clearance procedures and turnaround, tracking and inspection facilities needed to be improved to meet global best practice;
- b. There is limited connectivity between ports and airports compared to other GCC countries;
- c. There is a critical shortage of supply chain qualified and experienced labour. This was a result of the late introduction of supply chain programmes at colleges and universities, and is the major reason for teething challenges being experienced in the logistics industry in Oman across the board as well as low research output in this area;
- d. Freight handling capacity, especially at ports, is not enough for projected growth in domestic production and trade;
- e. Localising infrastructure in specific industries would be beneficial to emerging industries;
- f. GCC countries were investing heavily in infrastructure and Oman was lagging behind but also investing in the sector;
- g. There was a tendency where cargo was routed to and from Oman ports rather than using Oman ports. That cost a lot of business opportunities.
- h. Oman has not operationalized the One Stop Shop Concept fully, which is disadvantaging the country in fast investment processing and operationalization when compared to United Arab Emirates which takes a very short time. A comparison of ease of doing business issues would give a clearer picture:-

TRADE COMPARISON TABLE

TRADE FACTOR	OMAN	UNITED ARAB EMIRATES	SINGAPORE
GDP 2016 IN US\$	66.29 billion	348.7 billion	297 billion
Number of offices to visit when investing	13. One stop shop is not yet fully operational. Is still in its infancy.	One Stop Shop Concept is 100% operational (all processing under one roof)	One Stop Shop Concept is 100% operational (all processing under one roof)
Investing processing period (setting up a new business)	About 3 days to one month or more depending on project and risk associated with the project.	One day to 7 days only, depending on size, complexity and risk of the project.	24 hours
Cost of processing fees	High	Low	Low
Port handling facilities	Capacity low	Maximum capacity and very fast	Maximum capacity and very fast
Congestion at ports	Common (especially at Sohar Port), and delays at borders by road, especially on imports (mostly the border with Saudi Arabia). Imports can take 3 days to one week mostly, but up to 3 weeks at worst.	No congestion and speedy processing	No congestion and speedy processing
Research output at universities	Very low.	Very high	Very high
University Technology Parks	Still in their infancy	Heavily used and well established	Heavily used and well established

Figure 1: Own research
World Bank Country Reports 2017
United Nations Country Trade Reports 2017
WTO Country Trade Reports 2017

DISCUSSION OF FINDINGS

This section discusses findings from literature review and field research.

The integration of seaports into supply chains has a positive impact on both the effectiveness and the efficiency of seaport performance. In addition, antecedents to seaport supply chain integration are identified; these suggest that a strong orientation to supply chain integration within a port operating company enables the company to adopt and implement a strategy that integrates functions within the port and with other upstream and downstream organisations, (Woo,

et al, 2013). But Customs regulations still remain very important for state security reasons as well as immigration control, promotion of investment (FDI), tourism and international business. Now there is a new area altogether - health tourism, where countries like Malaysia, UAE and Hong Kong are making billions of dollars from health tourists, people coming for specialized, advanced medical services and specialized medical education. This is now an international niche market targeting the upper niche of the income brackets – celebrities, presidents, politicians, sports persons, business persons, the rich and famous and the opinion leaders of this world with plenty of disposable incomes. Where does Oman stand in this regard?

There is a new world challenge which is the new serious threat of international terrorism, drug trafficking and human trafficking which customs authorities must regulate, control and try to shut out of their countries. Maximising benefit out of Customs is mainly done through trade facilitation, lobby and advocacy. Otsuki, et al, (2013), carried out a study to discuss the progress and challenges of South Asia in trade liberalization and facilitation, and to quantitatively demonstrate the potential benefits of trade facilitation in South Asia and their findings indicated gains to the region were estimated to be US\$31 billion in 2007 and \$26 billion in 2010 if South Asia and the rest of the world raised levels of trade facilitation halfway to the world average. This study demonstrates the importance of trade facilitation as an instrument for expansion of trade both within South Asia and with the rest of the world, as well as policy recommendations regarding the priority area for reform. The main trade facilitation players are government and industry associations. The types of issues that are most important to the public differ from the types of issues that lobbyists bring to the attention of government officials, (Kimball, et al, 2012). This could be explained by the interests of the firm – having supportive infrastructure, local support industries, business friendly legislation, trade agreements, good international relations, efficient business friendly bureaucracy, less red-tape, e-government, low taxes, low corruption levels in the country, property rights, availability of skills and good colleges/universities to support industry, peace, maximizing profit and market share whilst society has other priorities like affordable prices, product quality, environmental protection, job creation, job security no matter what, quality of life, anti-dumping, national pride among others. Striking a balance is difficult.

SCM management is not a haven for non-performers. It is not a sin or wrong to fire non-performers for the good of customers, the companies, intermediaries and government which gets maximum taxation and job creation from high performing firms and no other. Lazy and uncommitted employees are thieves who get a salary that they do not deserve. They are stealing value from the firm as they get salaries for doing nothing or for damaging operations. Image, integrity and reputation are rooted in commitment and performance of all employees. A culture of laziness and theft should never be tolerated without exception.

Logistics performance cannot be maximised as long research output from universities is low. Research drives and leads operations. On research findings from field on research revealed that research prizes were required which competed well with regional peers like UAE where the highest annual research prize given to the best researcher was OMR100 000 while in Oman it was OMR1500. In Germany it was US\$2 million while in the USA it was US\$5 million. Research output was closely linked to research funding and research prizes as researchers were economic animals giving the best to the biggest bidder naturally. Countries with higher research prizes motivated researchers to do much more research than those which paid less. The results in terms of research output in each country are instructive and bear evidence to this argument. This is simple

common sense economics. The USA has the highest research prizes for professors/researchers and had the highest research output. 3rd world and developing countries paid less and also had much less research output. Off course other factors like staffing, teaching loads, sabbatical and contact leave, annual leave entitlements, class sizes, funding, national higher education and research policies, management commitment to research and research infrastructure come into play too. Nevertheless prizes were right at the top of the agenda for any successful research and innovation drive. This is food for thought in Oman and other NICs.

7.0 CONCLUSIONS

Countries should continue to build university faculties focusing on shipping/supply chain, build airports, roads, railway systems, fuel pipes, telecommunications, dams, canals, electricity power stations, and support industries in one location, vehicle fleets, aero planes, commercial ships and other infrastructure as well as skills to support the development of world class supply chain/shipping systems. No industry can succeed without an accompanying supportive university to give a continuous flow of highly skilled labour and to share international research experiences to pre-empt technology, breakthrough industry practices, opportunities and threats head on. Trade related government ministries also need the same kind of skilled labour to drive government policy in the right direction. Oman needs to rump up degree level education, supporting and funding more research in that area and wrapping up infrastructure development, which it has been unpacking in the whole country. The future is bright for Oman no doubt and many jobs will be created.

8.0 RECOMMENDATIONS

Considering the foregoing we recommend as follows in Oman:-

- a. Companies and government ministries needed to recruit logistics and supply chain graduate trainees as a long term strategic development plan to ensure a flow of high calibre high breed labour to service industrial needs long term. If industry is asking for experienced personnel it must be reminded that experience does not come from a supermarket shelf like groceries but must be given by the same companies themselves through recruitment and training of fresh graduates. The companies themselves are the solution. Moreover local labour so trained is permanent and does not go anywhere like expatriates, but will serve the country permanently thus creating a huge network and payback effect. It is also reduces external remittances required if expatriate labour is employed thereby positively contributing to stabilisation and balancing of Balance Of Payments (BOP). This exercise also ensures compliance with government Omanisation or job localisation policy and resonates well with society, government and graduating students throughout the country. It also solves unemployment, poverty, misery and the dependency syndrome and releases much needed government resources for other national programmes rather than supporting unemployed graduates and their families. An employed graduate also supports the rest of the family and frees government from that burden. It also gives the graduate personnel trust, dignity and confidence in the economy and country, as well as their families. Graduate employment also increases tax revenues and aggregate demand for government and companies as the graduates spends their salaries in the economy. Increased aggregate demand creates even more employment and fresh investment with a multiplier effect on the economy. Increased government revenues strengthen government and expand government financial muscle to the natural benefit of the national economy through more public programmes and

- projects. This is the natural route to go. The Oman government can now create a jobs galore and bid farewell to local unemployment.
- b. More smart partnerships between industry, academia and government are required;
 - c. More infrastructure development and localization of SCM skills in the form of Omanisation;
 - d. Hold more workshops on shipping and forwarding to train industrialists and share ideas on industrial realities;
 - e. Consolidate the Oman Logistics Association and establish a secretariat to support industry and speak with one voice for effective lobby and advocacy.
 - f. The port authorities at Sohar Port in Sohar and the Ministry of Industry & Commerce should address the concerns of players in the shipping industry expeditiously to smooth out operations and eliminate any unnecessary delays, congestion, demurrage charges and inconvenience to the shipping industry and downstream industries.
 - g. Oman must operationalize the One Stop Shop Concept to make investment as investor friendly as possible and reduce investment processing fees to match regional competitors.
 - h. Technology Parks needed to be ramped up and operationalized with full funding.
 - i. Financing of research must be increased in Oman to meet the 3% of GDP which is the standard for most developed countries. Research prizes are required which compete well with regional peers like UAE where the highest annual research prize given to the best researcher is OMR100 000 while in Oman it is OMR1500. In Germany it is US\$2 million while in the USA it is US\$5 million. Academics and researchers are human beings and economic animals who always ask the question, "What is in it for me?" Low research prizes and incentives discourage research maximisation. That has been proven the world over.
 - j. Labour needed to be given more free movement by eliminating NOCs (No Objections Certificates) as is the case in UAE and rest of the GCC. This would provide health competition and position Oman in line with GCC trends. Removal of NOCs would automatically punish companies with bad conditions of service to reform their remuneration and conditions of service package as they are deserted by skilled labour. Once freed like this the labour market can automatically help government in improving and perfecting conditions of service, thus freeing Ministry of Manpower from salary and conditions based grievance issues. That time can better be spend on job creation and competitiveness measures which are more important for the nation naturally. Employers who fear losing employees to better paying companies do not need protection, but should improve their bad conditions of service which drive away good competitive employees. It is well known in human resources and economic theory that people always run away from employers to other companies escaping unacceptable conditions of service like low salaries, overworking, stressful working environment, bullying bosses and an unsupportive frustrating environment. Why should such employers who do this be protected anywhere in the world or else they simply need to change their conditions of service for the better, which is good for employees, government and society? They do not need any legal protection at all.

FUTURE RESEARCH

Research in this area is quite virgin and more research is definitely required. Since full throttle diversification took off in Oman recently, the researchers believe that this break-through research will inspire other researchers to explore many related sub-areas like logistics clusters in the Arabic sphere given the unique culture here, skills development and logistics clusters, partnerships with academia, technology parks in logistics clusters, port operations, Customs reform, operationalising the One Stop Shop Concept in Oman, government policies and logistics clusters and maximising investment in logistics clusters. These are clear candidates for future and further research in Oman.

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APPENDICES**Appendix 1**

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