Journal of Research Administration
Society of Research Administrators International

MAJOR DETERMINANTS OF LOGISTICS COST OF MANUFACTURER EXPORTERS IN DUBAI

S. Akilan
Research Scholar, Department of International Business and Commerce, Alagappa University, Karaikudi-630004, Tamilnadu India.

M. Gurupandi
Associate Professor, Department of Commerce, Alagappa University, Karaikudi-630004, Tamilnadu India, gurupandi80@gmail.com

ABSTRACT

International trade involves the exchange of products and services across international borders. It includes the exchange of capital between the nations as well. The present paper find out the major determinants of logistics cost of manufacturer exporters in Dubai. The researcher analyse the various determinant factors that are responsible for manufacturer exporters in the study area. This paper identifies Nature of business, Size of company, Human factor, Range of commodity, Property of product, Infrastructure, Tax and tariff, Currency exchange, Customs clearance, Law and regulation, Demand variability of logistic Services, Cultural difference in payment, delivery and corporate culture, Application of information and communication technology, Cost of ICT, Warehouse and inventory management, Inventory model, One-stop service, Service capacity , Alliance and cooperation , Real-time information sharing and Outscoring strategy are the major determinant drivers relevant for manufacturer exporters in Dubai. Opinion and responses are received from 289 merchant exporters in the study area. In this paper ANOVA and Rank Correlation was used for this study.

Key Words: Logistics Cost, Major Determinants, Manufacturer Exporters

1. INTRODUCTION

International trade involves the exchange of products and services across international borders. It includes the exchange of capital between the nations as well. Global trade involves multi-parties and thus the participation of multiple nations makes it even more vibrant and equally complicated. However, it cannot be refuted that in many countries, the contribution of foreign trade represents the major share of their respective GDP. International Trade practices played a pivotal role in pushing globalization and Dubai is highly determined to derive the maximum out of the international trade and tourism sector. Dubai is riding high on its commitment to make it a *'numero uno'* tourist destination in the world in the years to come as its oil deposits cease to exist and may not continue to safeguard its economy in the future. The stupendous skyscrapers, mega malls, and a long list of 'first of its kind' investment projects implemented by the Dubai government are testimony to their commitment. At this juncture, it is important to remember that the central idea behind all the infrastructure projects is nothing but to improve the international trade and tourism in Dubai. Over the past decades, international trade agreements and an array of regional trade

integration blocs have contributed significantly to curtailing the tariff-based barriers to international trade. Not limited to the above, the helping hand-rendered by the ports and ocean shipping as facilitators of international trade cannot be overshadowed. Moreover, a country's international trade performance is crucial in determining the country's overall productivity, as it decides the fate of attracting foreign investments. Inefficiency in the logistics front leads to a rise in the cost of doing business and in turn plummet the potential for both the international and domestic market integration.

2. REVIEW OF LITERATURE

Bokor (2010) in his bid to ascertain the determinants of logistics cost and the concomitant calculation methodology, reiterated the relative importance of Analytical Hierarchical Process (AHP) model with a determined focus on establishing a concrete theoretical fabric on the cost driving factors in the logistics sector.

Combes *et al.*,(2016) in their research analysis developed a model in urban logistics context with the optimal distribution centre serves a focus point in fixing the cost function by carefully scrutinizing the problems along with the few associated assumptions.

Edirisinghe & Jayathilake (2017) in their paper argued that customs plays a pivotal role in augmenting logistics performance in a phenomenal way. The researcher expounded that the economic achievements of Sri Lanka is expected from five major hubs namely, *viz* Maritime, Aviation, Commercials, Knowledge and Energy Hubs.

Havenga et al., (2017) in their research substantiated that the collaboratively challenging congestions in the port, problem of bureaucratic delay and hinterland feeder system will expose new avenues for the stakeholders.

Katsela & Pålsson, (2020) in their case-based research approach highlighted the burgeoning issue of attaining lucrative city logistics ingenuities. By means of diligently exploring the determinants such as concomitant cost structure, revenue variables and the economies of scale in Sweden, the researchers presented a detailed cost-benefit analysis through a six month pilot programme.

Kovtun & Yushchenko (2021) in their investigation critically evaluated the prospects and potential of Ukraine in green energy export sector. This study is carried out against the backdrop of ever-increasing cost of silver owing to the inability of the mining companies in catering to the growing demand in the market place.

3. STATEMENT OF THE PROBLEM

The manufacturer exporters are facing a different set of challenges. To achieve cost competitiveness, they have to effectively manage an array of activities such as facilities management, vendor management, human resources management, operations management, quality control, warehouse and distribution management, cargo and maritime logistics management, etc., to name a few. Despite the above-mentioned challenges, the biggest advantage that the manufacturer exporter can exploit over the merchant exporter is the economies of scale.

Venturing into large scale manufacturing, they can take an array of formative steps in cutting down the unit cost of the product that they produce. If the product is having the capability to fulfil the expectations of the foreign customer, they can certainly expand their profit margin to a greater extent by effectively supplying them the goods. In other words, they are at liberty to levy premium pricing for their product to a foreign customer, whereas the same sophistication is not conducive for many of the merchant exporters owing to rigorous competition. The general problems faced by manufacturer exporters revolve around the outbound logistics arena. Issues relating to vehicle routing, cargo handling, port-management, multi-modal transit risk, containerization, export-import documentation procedure-related challenges, customs clearance, packing credits, bank guarantees and letter of credit-related issues, insurance, unusual delay in tracking and tracing consignments, non-availability of necessary cold storage facilities in ports, infrequent shipping and above all unforeseen uncertainties and timely delivery of goods to the foreign customers.

4. OBJECTIVES OF THE STUDY

- To examine the major determinants of logistics cost of manufacturer exporters of Dubai.
- To suggest recommendations to the exporters and policy makers based on the present investigation.

5. METHODOLOGY

The present study is based on primary data. The manufacturer exporters who are exporting goods from Dubai have been the respondents of the study. For the collection of primary data, a well-structured interview schedule was given to the respondents to record their responses on the **major determinants of logistics cost** adopted by the manufacturer exporters for reducing logistics cost. The study is based on field survey with a structured interview schedule. The researcher personally met the manufacturer exporters to collect the required data. Proportionate random sampling technique has been adopted to select the respondents. Totally 9812 manufacturer exporters are available in Dubai. Out of which the personally respondents met 262 manufacturer exporters. The data collected for the study was analysed using SPSS package version 26 and Microsoft Excel 2016 and in this paper Analysis of variance, Post hoc test and Rank analysis was used.

(a) Major Determinants of Logistics Cost of Manufacturer Exporters

In this section, the major determinants of logistic cost of the manufacturer exporters are studied in detail. There are two subsections and in the first sub section, the opinion of the respondents on the determinants of the logistic costs based on their business profile is analysed using appropriate statistical tools and in the second sub section the overall major determinants of logistic cost of the manufacturer exporters irrespective of the business profile is found out using descriptive statistics and ranking. In this sub section, first ANOVA is used to find out whether there is any difference in opinion among the different business groups (comparison of means

recorded by the respondents) and then a detailed rank analysis is carried out using the mean score obtained in order to identify the major determinants of the logistic cost based on the business profile.

Table No 1 ANOVA – Opinion on the Determinants of Logistics Cost Based on Size of the Company

H_0: There is no significant difference on the determinants of logistic cost with respect to size of the company

Opinion	Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Nature of business	Between Groups	28.257	3	9.419	3.670	.013
	Within Groups	662.201	258	2.567		
	Total	690.458	261			
Size of company	Between Groups	4.220	3	1.407	.891	.446
	Within Groups	407.185	258	1.578		
	Total	411.405	261			
Human factor	Between Groups	2.072	3	.691	.408	.748
	Within Groups	437.184	258	1.695		
	Total	439.256	261			
Range of commodity	Between Groups	23.861	3	7.954	4.466	.004
	Within Groups	459.513	258	1.781		
	Total	483.374	261			
Property of product	Between Groups	2.572	3	.857	.568	.636
	Within Groups	389.218	258	1.509		
	Total	391.790	261			
Infrastructure	Between Groups	10.793	3	3.598	2.108	.100
	Within Groups	440.367	258	1.707		
	Total	451.160	261			
Tax and tariff	Between Groups	4.164	3	1.388	.850	.468
	Within Groups	421.302	258	1.633		
	Total	425.466	261			
Currency exchange	Between Groups	2.806	3	.935	.486	.692

	Within Groups	496.049	258	1.923		
	Total	498.855	261			
Customs clearance	Between Groups	8.024	3	2.675	1.291	.278
	Within Groups	534.434	258	2.071		
	Total	542.458	261			

Source: ***Primary data***

The estimated significance value of almost all the statements reveals that the respondents are of the same opinion with regard to the determinants of the logistics cost since the calculated significance value is greater than 0.05, implying that the null hypothesis is accepted except for three determinants namely, Nature of business [0.013], Range of commodity [0.004], Alliance and cooperation [0.005] wherein the calculated p-value is less than 0.05 implying the null hypothesis rejected. This implies that the respondents significantly differ in opinion with respect these determinants. Rank analysis is performed to identify the major determinants based on size of the company.

H_0: There is no significant difference on the determinants of logistic cost with respect to volume of annual sales

Opinion	Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Nature of business	Between Groups	8.788	4	2.197	.828	.508
	Within Groups	681.670	257	2.652		
	Total	690.458	261			
Size of company	Between Groups	4.502	4	1.125	.711	.585
	Within Groups	406.903	257	1.583		
	Total	411.405	261			
Human factor	Between Groups	7.418	4	1.855	1.104	.355
	Within Groups	431.838	257	1.680		
	Total	439.256	261			
Range of commodity	Between Groups	.904	4	.226	.120	.975
	Within Groups	482.470	257	1.877		
	Total	483.374	261			
Property of product	Between Groups	8.671	4	2.168	1.454	.217
	Within Groups	383.119	257	1.491		

	Total	391.790	261			
Infrastructure	Between Groups	5.715	4	1.429	.824	.511
	Within Groups	445.445	257	1.733		
	Total	451.160	261			
Tax and tariff	Between Groups	7.921	4	1.980	1.219	.303
	Within Groups	417.545	257	1.625		
	Total	425.466	261			
Currency exchange	Between Groups	10.138	4	2.534	1.333	.258
	Within Groups	488.717	257	1.902		
	Total	498.855	261			
Customs clearance	Between Groups	3.740	4	.935	.446	.775
	Within Groups	538.718	257	2.096		
	Total	542.458	261			

Source: ***Primary data***

By looking at the estimated significance value of all the statements it is clear that the respondents are of the same opinion with regard to all the determinants of the logistics cost since the calculated significance value is greater than 0.05, implying that the null hypothesis is accepted. Therefore it is revealed that there is no significant difference in opinion on the determinants of the logistics cost with respect to the volume of sales. Now, rank analysis is performed to identify the major determinants based on the volume of sales.

Table No 4

Rank Analysis – Determinants of Logistics Cost Based on Volume of Annual Sales

Determinants of Logistics Cost	Less than AED 1 million		AED 1 to 5 million		AED 5 to 10 million		AED 10 to 25 million		Above AED 25 million	
	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
Nature of business	3.42	9	3.46	6	3.22	15	3.01	19	3.02	9
Size of company	3.85	1	3.6	5	3.42	5	3.41	5	3.54	4
Human factor	3.69	5	3.24	13	3.69	1	3.46	4	3.63	1
Range of commodity	3.38	12	3.3	9	3.25	14	3.19	14	3.22	7
Property of product	2.69	21	3	20	3.16	17	3.11	16	3.37	5
Infrastructure	3.42	9	3.36	7	3.33	9	3.07	17	3.06	8
Tax and tariff	3.08	16	3.7	1	3.38	7	3.54	2	3.55	3
Currency exchange	3.73	2	3.68	2	3.33	9	3.21	13	3.56	2
Customs clearance	3.46	7	3.04	19	3.11	20	3.24	11	3.23	6

Source: ***Primary data***

The major determinants of logistics costs based on the volume of annual sales is given below. **Less than AED 1 million:** With respect to this group, the major logistics costs are as follows: Size of company [Mean: 3.85; Rank:1], Currency exchange [Mean: 3.73; Rank:2], Demand variability of logistic Services [Mean: 3.73; Rank: 2], Outscoring strategy [Mean: 3.73; Rank: 2], and Human factor [Mean: 3.69; Rank:5]. **AED 1 to 5 million:** With respect to this group, the major logistics costs are as follows: Tax and tariff [Mean: 3.7; Rank:1], Currency exchange [Mean: 3.68; Rank:2], Outscoring strategy [Mean: 3.68; Rank: 2], Human factor [Mean: 3.62; Rank: 4], and Size of company [Mean: 3.6; Rank:5

Table No 5

ANOVA – Opinion on the Determinants of Logistics Cost Based on Years of Experience

H_0: There is no significant difference on the determinants of logistic cost with respect to years of experience in exports

Opinion	Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Nature of business	Between Groups	4.484	2	2.242	.846	.430
	Within Groups	685.974	259	2.649		
	Total	690.458	261			
Size of company	Between Groups	2.820	2	1.410	.894	.410
	Within Groups	408.584	259	1.578		
	Total	411.405	261			
Human factor	Between Groups	10.910	2	5.455	3.298	.039
	Within Groups	428.346	259	1.654		
	Total	439.256	261			
Range of commodity	Between Groups	1.282	2	.641	.344	.709
	Within Groups	482.092	259	1.861		
	Total	483.374	261			
Property of product	Between Groups	.779	2	.390	.258	.773
	Within Groups	391.011	259	1.510		
	Total	391.790	261			
Infrastructure	Between Groups	.082	2	.041	.023	.977
	Within Groups	451.079	259	1.742		
	Total	451.160	261			
Tax and tariff	Between Groups	.255	2	.127	.078	.925

	Within Groups	425.211	259	1.642		
	Total	425.466	261			
Currency exchange	Between Groups	1.154	2	.577	.300	.741
	Within Groups	497.701	259	1.922		
	Total	498.855	261			
Customs clearance	Between Groups	1.052	2	.526	.252	.778
	Within Groups	541.406	259	2.090		
	Total	542.458	261			

Source: ***Primary data***

The estimated significance value of all the statements reveals that the respondents are of the same opinion with regard to the determinants of the logistics cost since the calculated significance value is greater than 0.05, implying that the null hypothesis is accepted except for one particular determinant namely, Human factor [0.039]wherein the calculated p-value is less than 0.05 implying the null hypothesis rejected. This implies that the respondents significantly differ in opinion with respect this particular determinant. Rank analysis is performed to identify the major determinants based on years of experience of the company in exports.

Table No 7

ANOVA – Opinion on the Determinants of Logistics Cost Based On the Type of Industry

H_0: There is no significant difference on the determinants of logistic cost with respect to type of industry

Opinion	Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Nature of business	Between Groups	11.049	4	2.762	1.045	.385
	Within Groups	679.409	257	2.644		
	Total	690.458	261			
Size of company	Between Groups	4.694	4	1.173	.741	.564
	Within Groups	406.711	257	1.583		
	Total	411.405	261			
Human factor	Between Groups	7.113	4	1.778	1.058	.378
	Within Groups	432.142	257	1.681		
	Total	439.256	261			
Range of commodity	Between Groups	3.728	4	.932	.499	.736
	Within Groups	479.646	257	1.866		
	Total	483.374	261			
Property of product	Between Groups	4.896	4	1.224	.813	.518
	Within Groups	386.894	257	1.505		
	Total	391.790	261			

Infrastructure	Between Groups	3.163	4	.791	.454	.770
	Within Groups	447.998	257	1.743		
	Total	451.160	261			
Tax and tariff	Between Groups	6.816	4	1.704	1.046	.384
	Within Groups	418.649	257	1.629		
	Total	425.466	261			
Currency exchange	Between Groups	13.122	4	3.281	1.736	.143
	Within Groups	485.733	257	1.890		
	Total	498.855	261			
Customs clearance	Between Groups	2.080	4	.520	.247	.911
	Within Groups	540.378	257	2.103		
	Total	542.458	261			

Source: **Primary data**

By looking at the estimated significance value of all the statements it is clear that the respondents are of the same opinion with regard to almost all the determinants of the logistics cost since the calculated significance value is greater than 0.05, implying that the null hypothesis is accepted except for Application of information and communication technology [0.046] wherein p-value is less than 0.05.

Table No 9

ANOVA – Opinion on the Determinants of Logistics Cost Based on Export Destination

H_0: There is no significant difference on the determinants of logistic cost with respect to export destination

Opinion	Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Nature of business	Between Groups	1.256	4	.314	.117	.976
	Within Groups	689.202	257	2.682		
	Total	690.458	261			
Size of company	Between Groups	1.987	4	.497	.312	.870
	Within Groups	409.418	257	1.593		
	Total	411.405	261			
Human factor	Between Groups	11.368	4	2.842	1.707	.149
	Within Groups	427.888	257	1.665		
	Total	439.256	261			
Range of commodity	Between Groups	5.537	4	1.384	.744	.563
	Within Groups	477.838	257	1.859		

	Total	483.374	261			
Property of product	Between Groups	3.963	4	.991	.657	.623
	Within Groups	387.827	257	1.509		
	Total	391.790	261			
Infrastructure	Between Groups	12.432	4	3.108	1.821	.125
	Within Groups	438.728	257	1.707		
	Total	451.160	261			
Tax and tariff	Between Groups	3.364	4	.841	.512	.727
	Within Groups	422.101	257	1.642		
	Total	425.466	261			
Currency exchange	Between Groups	11.093	4	2.773	1.461	.214
	Within Groups	487.762	257	1.898		
	Total	498.855	261			
Customs clearance	Between Groups	.480	4	.120	.057	.994
	Within Groups	541.978	257	2.109		
	Total	542.458	261			

Source: ***Primary data***

The estimated significance value of all the statements reveals that the respondents are of the same opinion with regard to all the determinants of the logistics cost since the calculated significance value is greater than 0.05, implying that the null hypothesis is accepted.This implies the respondents are of the same opinion with the determinants of logistics cost based on the export destination, revealing the export destination does not affect the logistic costs.

Table No 11

Descriptive Statistics – Major Determinants of Logistics Cost

Determinants of Logistics Cost	N	Mean	Std. Deviation	Rank
Nature of business	262	3.19	1.626	17
Size of company	262	3.52	1.255	2
Human factor	262	3.53	1.297	1
Range of commodity	262	3.25	1.361	12
Property of product	262	3.11	1.225	19
Infrastructure	262	3.22	1.315	14
Tax and tariff	262	3.49	1.277	3
Currency exchange	262	3.45	1.383	4
Customs clearance	262	3.19	1.442	16

Law and regulation	262	3.21	1.577	15

Source: ***Primary data***

A detailed understanding with respect to the determinants of logistics cost of the manufacturer exporters based on the business profile has already been given in the previous subsection. Now, the major determinants of logistics cost of manufacturer exporters across business profile are the following; Human factor [Mean: 3.53; Rank:1], Size of company [Mean: 3.52; Rank:2], Tax and tariff [Mean: 3.49; Rank: 3], Currency exchange [Mean: 3.45; Rank: 4], Outscoring strategy [Mean: 3.44; Rank: 5], Cost of ICT [Mean: 3.42; Rank: 6], and Alliance and cooperation [Mean: 3.38; Rank: 7].

CONCLUSION

This paper will be helpful in identifying the major determinants of the logistics cost with respect to industry as whole thereby enabling the readers to get a comprehensive understanding of the logistics cost determinant. The exporters should consider adoption of artificial intelligence and machine learning to automate the logistics system which in turn will enhance the operational performance of the logistics system. Also, automation will lead to reduction of inventory and increase in the efficiency of the logistics system. Another major determinant of the logistics cost structure is the foreign exchange reserves. Hence, the companies who engage in international trade, should engage in some form of arrangements as memorandum with clients who are abroad to eliminate the risks associated with the foreign exchange. Regulating, automating and optimizing manual processes can reduce staff requirements, centralize production operations to lower-cost areas and create a more proactive approach to ensuring customer satisfaction, all while providing scale and controlling costs. With an automated, cost-effective transportation and logistics system, a company can implement major strategic changes to provide visibility, reduce costs and increase customer service levels. Plus the emergences of cloud-based technologies have made this considerably easier/more affordable than ever before; so even small companies can take advantage.

REFERENCES

1. Bokor, Z. (2010). Cost drivers in transport and logistics. Periodica Polytechnica Transportation Engineering, 38(1), 13–17. https://doi.org/10.3311/pp.tr.2010-1.03.

2. Combes, F. (2016). A theoretical analysis of the cost structure of urban logistics. ILS 2016 - 6th International Conference on Information Systems, Logistics and Supply Chain, Section 3, 1–8.

3. Havenga, J., Simpson, Z., & Goedhals-Gerber, L. (2017). International trade logistics costs in South Africa: Informing the port reform agenda. Research in Transportation Business and Management, 22, 263–275. https://doi.org/10.1016/j.rtbm.2016.08.006.

4. Katsela, K., & Pålsson, H. (2020). Viable business models for city logistics: Exploring the cost structure and the economy of scale in a Swedish initiative. Research in Transportation Economics, April, 100857. https://doi.org/10.1016/j.retrec.2020.100857.

5. Kovtun, N., & Yushchenko, N. (2021). Logistics models of modernization of distribution and transmission systems for the development of Ukraine as an exporter of green energy. MATEC Web of Conferences, 339, 01018. https://doi.org/10.1051/matecconf/202133901018.

6. Martí, L., Puertas, R., & García, L. (2014). The importance of the Logistics Performance Index in international trade. Applied Economics, 46(24), 2982–2992. https://doi.org/10.1080/00036846.2014.916394.

7. Martin, P., & Rogers, C. A. (1995). Industrial location and public infrastructure. Journal of International Economics, 39(3–4), 335–351. https://doi.org/10.1016/0022-1996(95)01376-6.

8. Mitra, S., & Thorpe, M. (2010). Government policy, clusters and the "Dubai model." International Journal of Globalisation and Small Business, 4(1), 73–91. https://doi.org/10.1504/IJGSB.2010.035332.

9. Nagurney, A., Yu, M., Floden, J., & Nagurney, L. S. (2014). Supply chain network competition in time-sensitive markets. Transportation Research Part E: Logistics and Transportation Review, 70(1), 112–127. https://doi.org/10.1016/j.tre.2014.07.001.

10. Notteboom, T. E., & Rodrigue, J. P. (2005). Port regionalization: Towards a new phase in port development. Maritime Policy and Management, 32(3), 297–313. https://doi.org/10.1080/03088830500139885.

11. Notteboom, T. E., & Winkelmans, W. (2001). Structural changes in logistics: How will port authorities face the challenge? Maritime Policy and Management, 28(1), 71–89. https://doi.org/10.1080/03088830119197.

12. Park, Y. H., & Jeong, Y. S. (2016). An empirical analysis on the performance of the third-party logistics in the Korean exporter. Journal of Korea Trade, 20(1), 97–114. https://doi.org/10.1108/JKT-03-2016-006.

13. Purohit, H., & Kumar, V. (2013). Supply Chain Risk Evaluation: Understanding the Technical Risks from the Perspectives of Dubai Logistics Supply Chain Companies. Asia-Pacific Journal of Management Research and Innovation, 9(3), 291–303.

https://doi.org/10.1177/2319510x13519366.

14. Ranieri, L., Digiesi, S., Silvestri, B., & Roccotelli, M. (2018). A review of last mile logistics innovations in an externalities cost reduction vision. Sustainability (Switzerland), 10(3), 1–18. https://doi.org/10.3390/su10030782.

15. Saldanha, J. P., Tyworth, J. E., Swan, P. F., & Russell, D. M. (2009). Cutting Logistics Costs With Ocean Carrier Selection. Journal of Business Logistics, 30(2), 175–195. https://doi.org/10.1002/j.2158-1592.2009.tb00118.x.

16. Slack, B., & Frémont, A. (2005). Transformation of port terminal operations: From the local to the global. Transport Reviews, 25(1), 117–130. https://doi.org/10.1080/0144164042000206051.

17. Torbianelli, V. A., & Mazzarino, M. (2010). Optimal logistics networks: The case of italian exports to russia. Transition Studies Review, 16(4), 918–935. https://doi.org/10.1007/s11300-009-0115-9.

18. Wang, D. F., Dong, Q. L., Peng, Z. M., Khan, S. A. R., & Tarasov, A. (2018). The green logistics impact on international trade: Evidence from developed and developing countries. Sustainability (Switzerland), 10(7), 1–19. https://doi.org/10.3390/su10072235.s

19. Zhang, K. H. (2015). What drives export competitiveness? The role of fdi in chinese manufacturing. Contemporary Economic Policy, 33(3), 499–512. https://doi.org/10.1111/coep.12084.

20. Zhao, X., & Tang, Q. (2009). Analysis and Strategy of the Chinese Logistics Cost Reduction. International Journal of Business and Management, 4(4), 188–191. https://doi.org/10.5539/ijbm.v4n4p188.

21. Ziadah, R. (2018a). Constructing a logistics space: Perspectives from the Gulf Cooperation Council. Environment and Planning D: Society and Space, 36(4), 666–682. https://doi.org/10.1177/0263775817742916.

22. Ziadah, R. (2018b). Transport Infrastructure and Logistics in the Making of Dubai Inc. International Journal of Urban and Regional Research, 42(2), 182–197.