THE EFFECT OF CORONAVIRUS (COVID-19) ON ALEXANDRIA'S PORT INCOME

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Abstract -
Since its emergence in December 2019, the COVID-19 virus has spread to every continent on earth. Countries are racing to slow down the spread of the disease. The pandemic is still ongoing, global efforts are Marat honing to comprehend the virus biology, epidemiology, natural history, and eventually applying the sound control measures promptly. The study was carried out to demonstrate the epidemiological distribution and modeling of the novel Coronavirus (COVID-19) epidemic in Alexandria's Ports.

Keywords - Alexandria's Ports, Covid 19, Egypt.

I. INTRODUCTION

COVID-19 engulfed the world in a matter of months, threatening the health and lives of millions of people worldwide. Subsequently, the spread of the virus has seen major threats to excluded communities in the Global... Prior to the COVID-19 outbreak, Egypt's economy had made considerable improvements in its macroeconomic position. To preserve this progress as much as possible and minimize the coronavirus' impact on the economy, the government has taken a number of measures.

Due to the restrictions on movement of people, reduced flights and port closures, crew rotations have come to a halt, leaving tens of thousands of seafarers stuck on ships. Instead of returning home, seafarers are asked to continue working and sail on to new destinations. Some port authorities force vessels to spend a 14-day quarantine period at anchor before entering the port, a situation often worsened by problems in providing the ship with fresh food supplies. A prolonged stay on board may result in one or more seafarer's certificates expiring, in turn rendering the vessel's safe manning certificates inadequate and compromising its ability to sail. With many vessels out of service due to operational limitations, lack of cargo or crew, maritime companies must adjust their operations and limit costs. The resulting job redundancies concern both on-board and shore staff. Ship inspections (unless done remotely) and the renewal of ship certificates, especially if requiring dry-docking, have practically stopped. Economic impacts are felt across the whole fleet, with the exception of oil tankers, which are much in demand due to low crude prices. Passenger transport has been hit hard. All cruise ship companies operating in Europe have suspended sailings and many ferry services are on hold or reduced to cargo-only. Cruise ships that were denied docking in ports of some countries had to return to their 'home port'.

The Coronavirus pandemic is the defining global health crisis of our time. Since its emergence in late 2019, the virus has spread to every continent. Countries are racing to slow the spread of the disease by testing and treating patients, carrying out contact tracing, limiting travel, quarantining citizens, and cancelling large gatherings such as sporting events, concerts, and schools. The pandemic is moving like a wave—one that may yet crash on those least able to cope. However, COVID-19 is much more than a health crisis. By stressing every one of the countries it touches, it has the potential to create devastating social, economic and political crises that will leave deep scars. Ports, another vital element of supply chains, have adopted measures to preserve workers' health and limit the spread of the virus while ensuring the continuity of port operations, in particular the manning of critical services in port. This analysis will produce a comprehensive understanding of the sustainable integrated approach in port This approach is consistent with the three primary goals of this research. Using an integrative comprehensive approach, The first and foremost goal of this research is to provide guidelines, based on an empirical study of the integrated approach .The second goal of the research is to generate an evaluative framework regarding the covid 19 and ports. The third goal of this research is to clarify the dynamic relationship between ports and covid (19).
The researchers appreciate the situational analysis of COVID -19 pandemic and prospects in Egypt. The results of which can be translated into sound policy and decision-making. Therefore, this study was conducted to discuss the effect of covid19 on ports .

Methods:
Data Collection Method:
To achieve the aims of this work, the researchers depend on designing a questionnaire form, which directed to some managers and employees in Alexandria ports in various areas in Alexandria's ports.

The Design of the Questionnaire:
A crucial part of good research design concerns making sure that the questionnaire design addresses the needs of the research and will collect the precise data that is required to answer the research questions and achieve the research objective. The questions in questionnaire are produced based on a literature review and particular destination characteristics. The survey questionnaire was designed in Arabic, the native language in Egypt, and then translated into English. A questionnaire is designed to achieve the aims of the research.

The structured questionnaire was divided into six sections including:

Section 1. Impact on the world and Egyptian economy.
Section 2. Impact on the rising price of trading goods inside the port
Section 3. Impact on the customs prices duties inside the port
Section 4. Impact on the timing of shipping and unloading
Section 5. Impact on the movement of ships inside the port
Section 6. Impact on the of goods inside the port

II. SAMPLE STRUCTURE

Population
Different researchers have defined a population in different ways. For example, Veal (1997) defines a population as the total category of subjects, which is the focus of attention in a particular research project. The population is simply all the members of the group that the researcher is interested in (Burgess, 2001). The target population of this study is 11.

Response Rate:

Distributed questionnaires	50
Received questionnaires	11
Response rate	5.5%

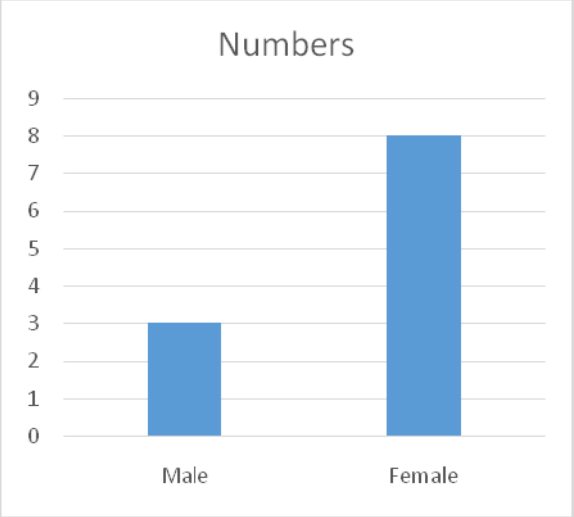
III. SAMPLING TECHNIQUES

After recognizing the most appropriate data collection techniques, the upcoming step was to choose whom the data would be collected from or the participants. Most social researchers face the fact that the required data cannot be collected from everyone who is in the category being researched. As a result, these researchers depend on getting responses from a part of the whole (Fayed, 2002).

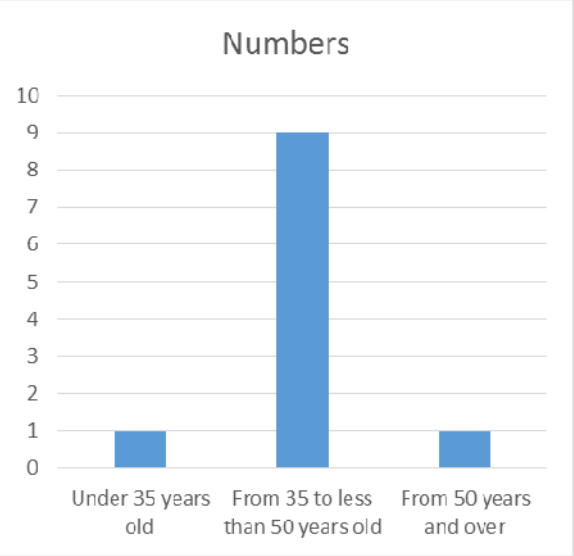
The Random sampling technique is utilized in this research to sampling and involves the selection of people or events literally 'at random'. This type of sampling guarantees equal opportunities for each participant to be selected. The survey requires a sample of respondents to reply to a number of questions that have been previously determined as relevant to the research.

Results:

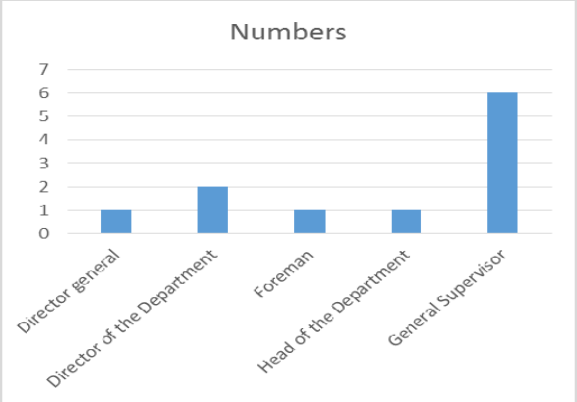
Gender	Male	Female
Numbers	3	8



Age	Under 35 years old	From 35 to less than 50 years old	From 50 years and over
Numbers	1	9	1



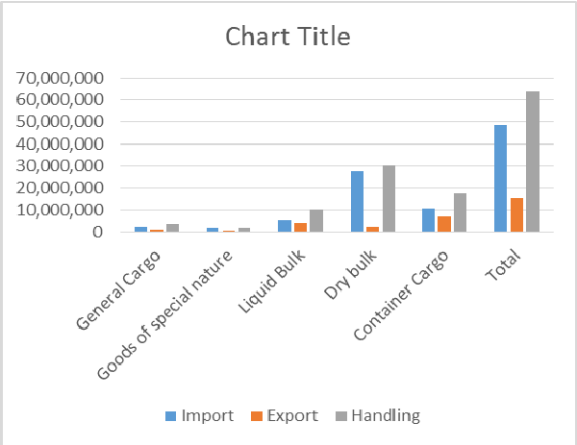
Job Title	Director general	Director of the Department	Foreman	Head of the Department	General Supervisor
Numbers	1	2	1	1	6



Ship type	Import	Export	Handling
General Cargo	2,641,586	1,157,714	3,799,300
Goods of special nature	2,170,113	758	2,170,871
Liquid Bulk	5,780,719	4,456,904	10,237,623
Dry bulk	27,689,891	2,549,860	30,239,751
Container Cargo	10,401,153	7,077,447	17,478,600
Total	48,683,462	15,242,683	63,926,145

Table 1:
Total Number of Import and Export for Cargo in Alexandria's ports (2018/2019)

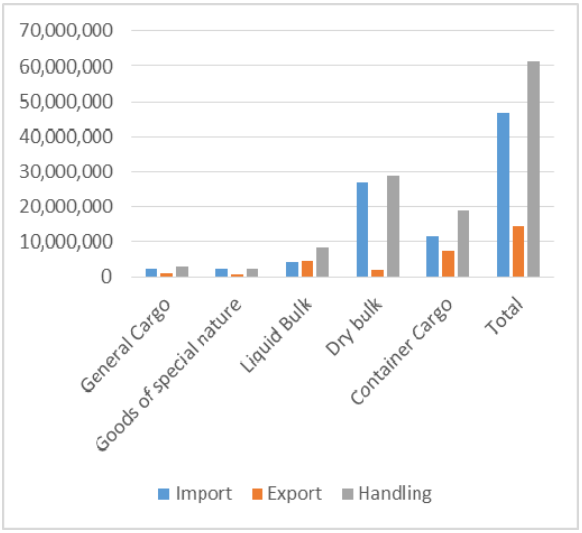
This table shows number of exports and imports for cargo and as seen from the table that Egypt imports is larger than exports.



Ship type	Import	Export	Handling
General Cargo	2,138,952	740,443	2,879,395
Goods of special nature	2,181,463	1,942	2,183,405
Liquid Bulk	4,120,279	4,363,667	8,483,946
Dry bulk	26,853,625	1,973,176	28,826,801
Container Cargo	11,402,418	7,439,660	18,842,078
Total	46,696,737	14,518,888	61,215,625

Table 2:
Total Number of Import and Export for Cargo in Alexandria's ports (2019/2020)

As we can see from this table that the number cargo has decreased in comparison with last year, which has been affected by covid 19, but also some of the cargo imports and exports have increased.

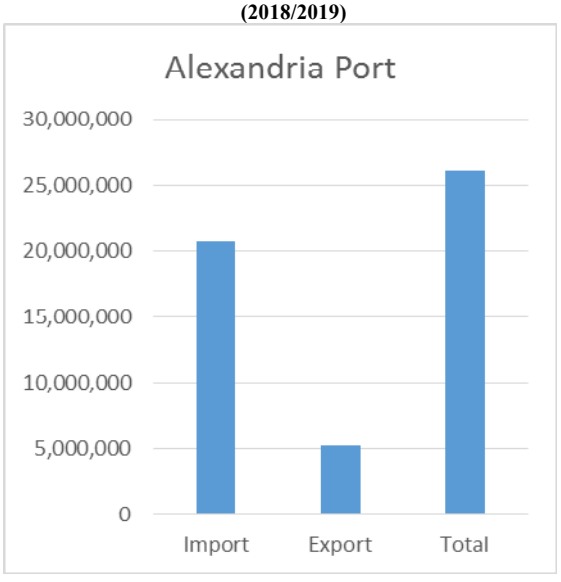


Difference between table 1 and table 2:

Ship type	Comparison of last year (%)	
	Import	Export
General Cargo	-19,0	-36,0
Goods of special nature	0,5	156,2
Liquid Bulk	-28,7	-2,1
Dry bulk	-3,0	-22,6
Container Cargo	9,6	5,1

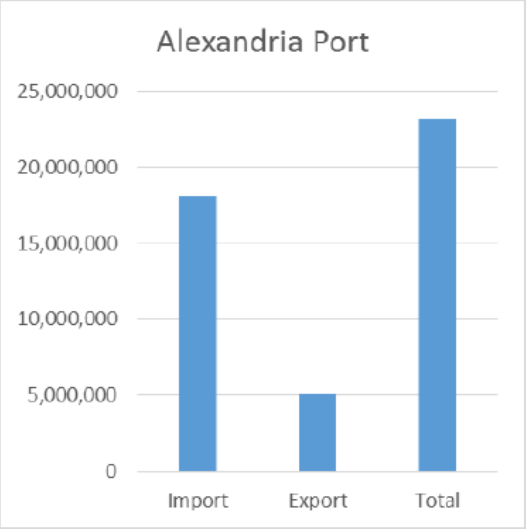
Statement	Alexandria Port
Import	20,807,948
Export	5,199,809
Total	26,007,757

Table 1
Total import and export (tons) of un contained goods (2018/2019)



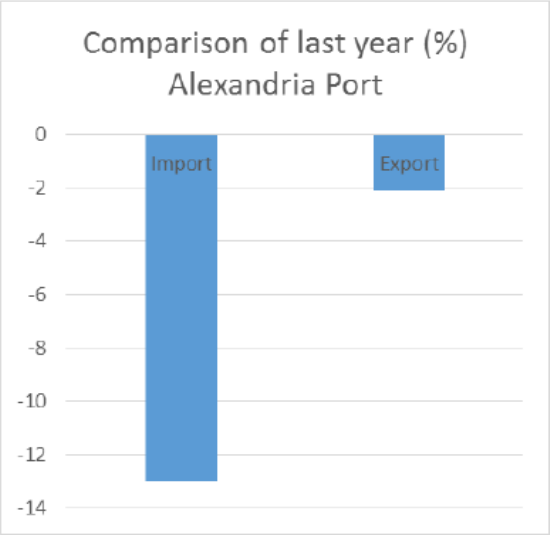
Statement	Alexandria Port
Import	18,058,012
Export	5,092,826
Total	23,150,838

Table 2
Total import and export (tons) of UN contained goods (2019/2020)



Difference between table 1 and table 2:

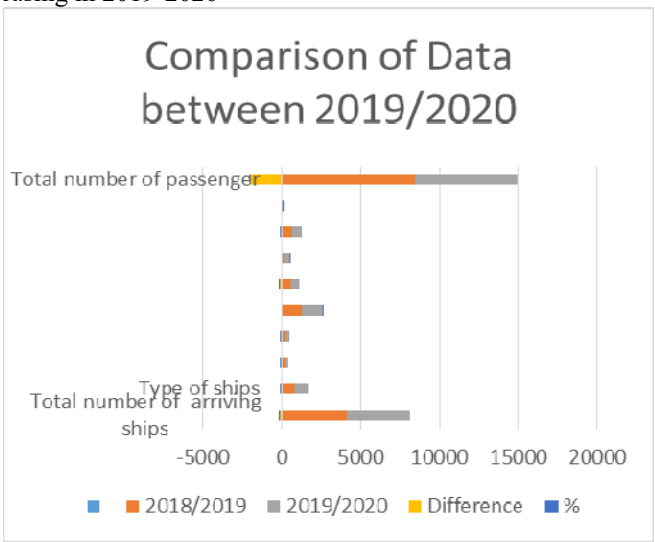
Statement	Comparison of last year (%)
	Alexandria Port
Import	-13
Export	-2.1



Comparison of Data between 2019/2020

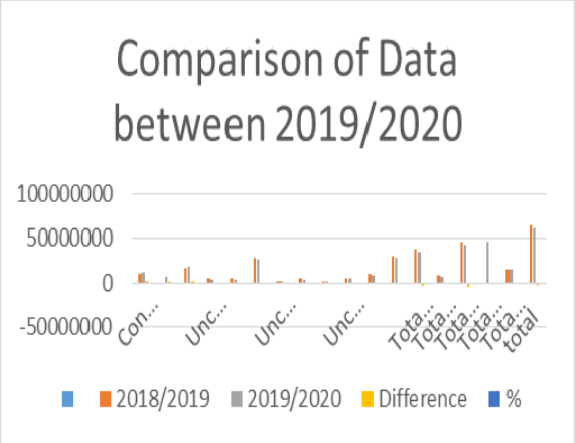
Statement		2018/2019	2019/2020	Difference	%
Total number of arriving ships		4146	4004	-142	-3
Type of ships	General ships	848	817	-31	-4
	Goods of special nature	248	219	-29	-12
	passenger	264	246	-18	-7
	Container ships	1273	1312	39	3
	Bulk liquid ships	606	517	-89	-15
	others	230	260	30	13
	Bulk dry ships	671	625	-46	-7
	Tourism ships	6	8	2	33
Total number of passenger		8457	6503	-1954	-23

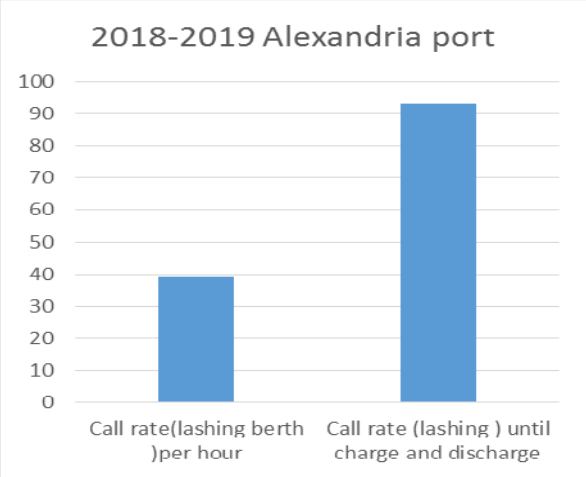
According to this table as seen, that number of ships in 2018-2019 was bigger than 2019-2020.but the container and the tourism were increasing in 2019-2020



Comparison of Data between 2019/2020

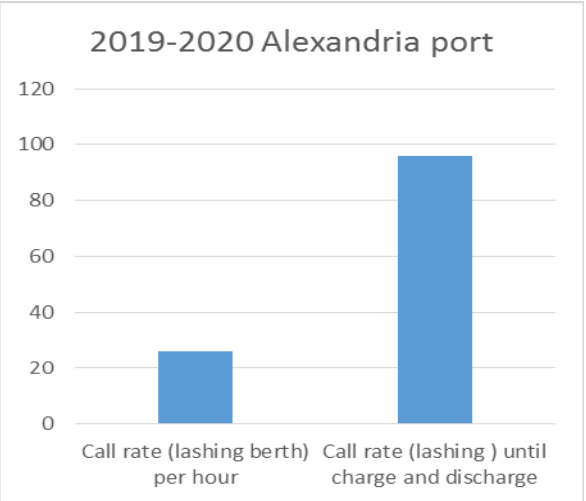
Statement		2018/2019	2019/2020	Difference	%
Containers	Import containers	10,401,153	11,402,418	1,001,265	9.6
	Export containers	7,077,447,	7,439,660	362,213	5.1
	Handling containers	17,478,600	18,842,078	1,363,478	7.8
Uncontained goods (Import)	General cargo	4,811,699	4,320,415	-491,284	-10.2
	Liquid bulk	5,780,719	4,120,279	-1,660,440	-28.7
	Dry Bulk	27,689,891	26,853,625	-836,266	-3.0
Uncontained goods (export)	General cargo	1,158,472	742,385	-416,087	-35.9
	Liquid bulk	4,456,904	4,363,667	-93,237	-2.1
	Dry Bulk	2,549,860	1,973,176	-576,684	-22.6
Uncontained goods (Handling)	General cargo	5,970,171	5,062,800	-907,371	-15.2
	Liquid bulk	10,237,623	8,483,946	-1,753,677	-17.1
	Dry Bulk	30,239,751	28,826,801	-1,412,950	-4.7
Total Uncontained goods (Import)		38,282,309	35,294,319	-2,987,990	-7.8
Total Uncontained goods (export)		8,165,236	7,079,228	-1,086,008	-13.3
Total Uncontained goods (Handling)		46,447,545	42,373,547	-4,073,998	-8.8
Total import cargo		48.683,462	46,696,737	-1,986,725	-4.1
Total export cargo		15,242,683	14,518,888	-723,795	-4.7
total		63,926,145	61,215,625	-2,710,520	-4





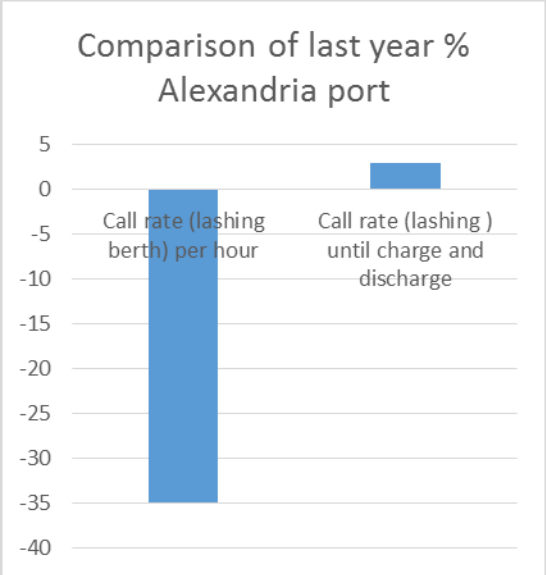
Vessel occupancy and waiting indicator (2018-2019)-(2019-2020)

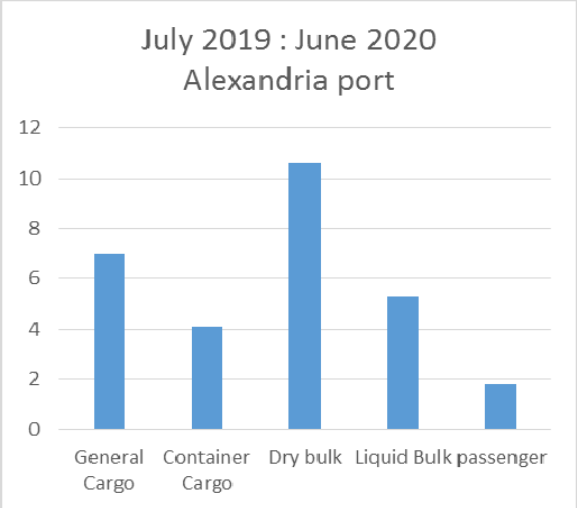
2018-2019	
Statement	Alexandria port
Call rate(lashing berth)per hour	39
Call rate (lashing) until charge and discharge	93
2019-2020	
Statement	Alexandria port
Call rate (lashing berth) per hour	26
Call rate (lashing) until charge and discharge	96



Statement	Comparison of last year %
	Alexandria port
Call rate (lashing berth) per hour	-35
Call rate (lashing) until charge and discharge	3

Ship type	July 2019 : June 2020
	Alexandria port
General Cargo	7
Container Cargo	4.1
Dry bulk	10.6
Liquid Bulk	5.3
passenger	1.8

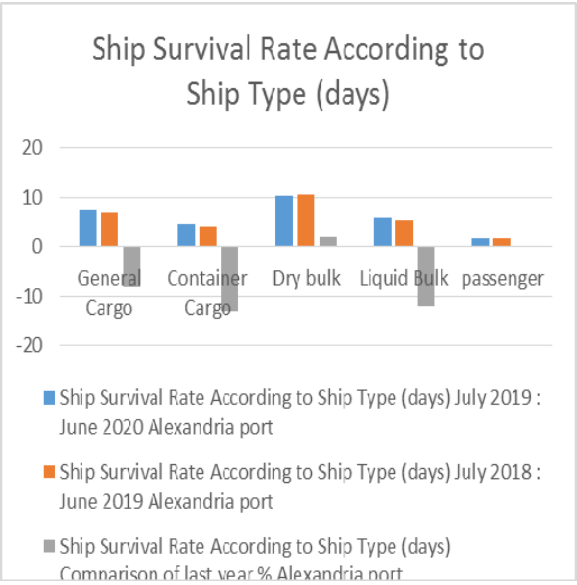




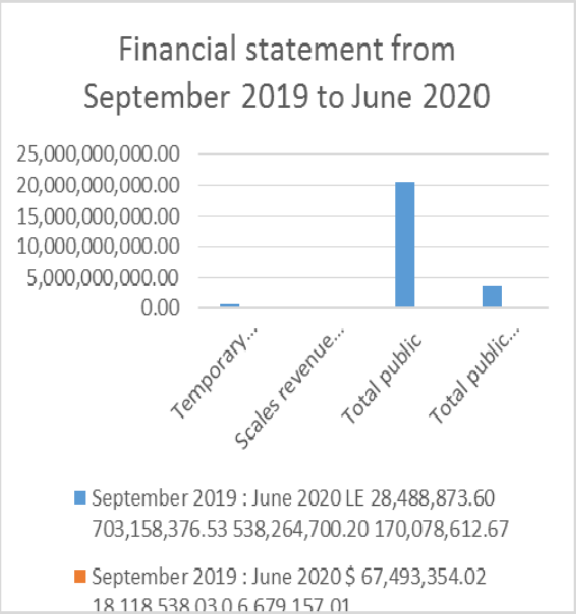
Financial statement from September 2019 to June 2020

Ship Survival Rate According to Ship Type (days)

Ship type	July 2019 : June 2020	July 2018 : June 2019	Comparison of last year %
	Alexandria port	Alexandria port	Alexandria port
General Cargo	7.60	7.00	-8
Container Cargo	4.70	4.10	-13
Dry bulk	10.40	10.60	2
Liquid Bulk	6.00	5.30	-12
passenger	1.80	1.80	0



Statement	September 2019 : June 2020	
	LE	$
Ships revenue	28,488,873.60	67,493,354.02
Cargo revenue	703,158,376.53	18,118,538.03
Residence revenue	538,264,700.20	0.00
Annual land revenue	170,078,612.67	6,679,157,01
Temporary land revenue	614,749,470.17	12,751,684.32
Scales revenue and other decisions	0.00	0.00
Total public	2,0564,740,033.17	105,042,733.38
Total public revenue in pounds (various according to the exchange rate from month to month)	3,727,935,330.75	



The situation of COVID-19 pandemic in Egypt as compared to other parts of the world is promising. The transmission rate is smaller than the recovery rate with no exponential growth. Mitigation efforts of Egypt had succeeded in delaying the peak of the curve after the seventh week of first exposure.

Egypt is one of the countries, alongside China, to flatten the curve of new infections of COVID-19 pandemic. Egypt has done so without huge outbreaks, without China's draconian restrictions on speech and movement, or economically damaging lockdowns like those in Europe and the United States.

Much rather be ahead of the curve than behind it. To explain, Egypt did not underestimate the problem since the first reported case in Egypt on 8 February, knowing well that COVID-19 is inevitable and started to deal early, to limit transmission and increase recovery.

Limiting transmission in Egypt was difficult without the mitigation procedures of the government as the household and social contact is high (three contacts, as the household number is four in Egypt).

WHO COVID-19 technical mission in Egypt on March 5 concluded that the government in allocating additional dedicated human and financial resources needed to contain the outbreak has made considerable efforts. Progress has been made in expanding the number of peripheral laboratories that are now able to test for COVID-19 and in engaging overall laboratory capacities.

The mission also added that Egypt's strong disease surveillance system and contact tracing efforts have proven effective in *controlling, managing sporadic,* and clusters of cases before they can spread. In addition, the Ports are areas that are attached to a sea, ocean or river by connecting waterway and are essentially considered as entities.

They are equipped with infrastructure and technical facilities of any kind that allow them to manage the load type for which they are specialized. Its basic function is to provide shelter to a different extent to ships, allowing the transfer of goods from one means of transport to another. They also function as node link between sea and land and are a clear example of intermodality. The ports are managed under a complex legal concept and managed through an organizational model that mostly generates the need for convergence of the public and private sectors.

IV. CONCLUSION

Although the epidemic situation in Egypt is not alarming so far, strengthening all the mitigation efforts and regulations of the country with following all the WHO recommendations is necessary for the present time to keep the exposure probability as well as the transmission rate as low as possible.

It has been confirmed by the present investigation, the most common type of port is the seaport, where stands out the size "medium". The projection of the global freight market makes predict that the fleet of container ships will be increased in number and volume in the coming years.

More studies are needed by utilizing the huge raw data as well as secondary data of COVID-19 pandemic in research. Due to the dynamic nature of the pandemic, more and continuous epidemiological models are needed for forecasting and preparedness in different scenarios.

RECOMMENDATIONS

COVID-19-related prevention guidance, return conditions, hygiene and social distancing measures, as well as advice on what is expected from their side and how port protocols may change to adapt to new coronavirus conditions.

- Consider requesting employees to fill out triage forms (following local legislative guidance) to be able to track employees in the case of infection.
- Encourage employees to wear a mask during their commuting time to and from work (mandatory in the case of use of public transport).
- Keeping an absolute social distance of minimum 1.5m. Adherence to social distancing in a safe working environment should take precedence in all risk assessments for activities inside the office and outside in the port operational environment,

with appropriate mandatory PPE instructions where required.

- Maximum use time for a single facemask, if deployed, should not exceed 4 hours.
- Consider limiting use of indoor meeting rooms – only if strictly necessary and at maximum of half its capacity, especially where ventilation is limited.
- Continue existing restrictions on visitors and/or external meetings as well as international travel.
- Reporting protocols with clear instructions for employees who have returned to the office but who then start suffering from COVID-19 symptoms.
- Some ports may decide to test their employees prior to the return to office or establish partnerships with testing labs. Other ports may decide to try and identify the most vulnerable colleagues and map out a plan to minimize risk to their health.

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