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EDITORIAL

The editorial board of IJ-**BAS** are pleased to introduce the second volume and the first issue to 2022 year of the "International Journal of Business Analytics and Security" (IJBAS). The IJBAS is published by **GAF-TIM**, the Global Academic Forum on Technology, Innovation and Management.

International Journal of Business Analytics and Security (IJBAS) is a dynamic resource for scholars and practitioners who engage in business analytics and security and related topics. IJBAS's main objective is to track developments in business analytics and security as they relate to handling diverse difficult scenarios. By publishing peer-reviewed, original, and high-quality papers, the BAS journal aims to serve as a forum for the presentation and discussion of the essential theories underlying general business management methods, strategies, and practices. Peer-reviewed articles and research papers are published in the (IJBAS) that is expanding rapidly in order to empower and engage all academics and scholars globally to provide them with a reliable platform for publishing their research papers that disseminate innovation and knowledge. In order to meet the demands of businesses today, IJBAS is committed to expressing the most recent academic research, both theoretical and practical, in the fields of innovation and technology. IJBAS encourages and offers solutions to help researchers, scholars, businesses and organizations make frequent, quicker, wiser decisions in real time.

The inaugural of volume2, issue1, of IJBAS includes ten articles. In this issue, the opening with transportation reliability impact on economic growth. Moreover, it discusses over mobile e-learning management system effect on process performance. More emphasis on transportation flexibility impact on economic growth. Another stress given to blockchain technology and crisis management: the case of covid-19. While highlighting transportation accessibility effect on economic growth. On the other hand, a demonstration over effectiveness of e-learning adoption impact on education system during the covid-19. Also, transportation security effect on economic growth presented. Area of has been discussed. Then social media on customer behavior during the covid-19 highlighted. The transportation reliability on supply chain efficiency demonstrated. Finally, covid-19 on the mental health of frontline healthcare workers has been discussed. Int. J. BAS appreciates all the support that it is receiving from all members as well as from its readers.

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IMPACT OF TRANSPORTATION RELIABILITY ON ECONOMIC GROWTH AT UAE'S MARITIME INDUSTRY

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ABSTRACT

A dependable transportation system continuously provides clients with a range of predictable journey times. The reliability of the transportation system is one of the key performance objectives of various management and operating systems that have a huge impact on nation's economy. In order to evaluate the transportation reliability and its impact on economic growth, time should be taken into account when planning for crises and calamity recovery. This research helps to find out the UAE's economic growth rate and impact of transportation reliability through prior literature, research articles, journals and latest research reports.

Keywords: *Transportation Reliability, Econimic Growth, Maritime Industry UAE.*

1. INTRODUCTION

Good transportation investment lowers the cost of moving goods and people. This improves economic efficiency, which may be quantified as the amount of goods and services produced for

every dollar spent by the private and public sectors. And improved living conditions are a result of higher efficiency [1], [2]. Efficiency should be a major consideration when considering the significance of spending on transportation because it is a crucial element of economic development [3]. It is critical to focus on expanding efficiency while policymakers work to achieve other significant long-term transportation goals, such as improving protection, energy independence, and environmental sustainability [4], [5]. The transportation industry is a crucial source of income and a widely used tool for production because of the extensive use of infrastructure. This is especially true in the current global context, where economic prospects have quickly been linked to human mobility, shipping, and even telecommunications [6]–[8]. The quantity and effectiveness of transportation infrastructure and the rate of economic growth are dependable. In general, tightly connected networks and high density transportation systems are associated with high rates of growth [9]. Because transportation networks are efficient, they provide resources and benefits on the economic and social fronts that help to boost revenue in a good way by increasing consumer access, creating jobs, and driving up spending [10], [11]. The objective to focus on this factor can contribute to the research for academics and professional areas. Books, journals, literature and research articles on UAE economy are best source to assess the significance of transportation reliability.

2. THEORITICAL FRAMEWORK

2.1. Transportation Reliability

Transportation reliability reflects the quality and variability of travel time. Variables reflective of travel time performance represent quality and predictability of travel. A secure transportation infrastructure offers consistent travel times for its consumers [12]–[14]. The reliability of transportation services is one of the key success results and areas for development across transportation networks [15]. Management and procedures techniques aim to achieve a range of organizational goals including reducing non-recurring disruptions, reducing prolonged delays related to accidents and job zones, and improving transit on-times [16]–[20]. It is reported that more than half of the congestion faced by passengers is induced by conditions, traffic accidents, job zones and special events [21]–[23]. Strategies to increase the degree of continuity of activities by the method of consistently defining and solving the root causes of delay [24]–[26].

Transportation period knowledge significantly changes the transportation process [27]. Reliability is evident in transportation period owing to the system's complex actions and what specific system parameters are [28]–[30]. The maritime industry has been studied less than the road and rail modes, so there is still much to be done in this region [31]–[33]. In maritime perspective, describes the transportation reliability as time required for some of the operations from loading at source harbor until it's offloading at the destinations and so the return route [34], [35].

2.2. Economic Growth

A rise in the output of goods and services during a specific time period is referred to as economic growth. The computation must account for inflation's effect in order to be as accurate as possible [36]–[39]. Global affluence is generating more income for businesses [40]–[42]. As a consequence, equity values are increasing [43]–[45]. This offers corporations money to spend to recruit more workers. In recent decades, the shipping or maritime sector has made a major impact to the global economy.

2.3.Maritime Industry in UAE

The power of the maritime industry in the UAE resides in its strategic role as a logistics hub in the Middle East, and its major shipping companies continue to expand year-on-year. Emirate form the UAE. Dubai remains a huge maritime center, but other emirates still make a significant addition of their own to the shipping market. The UAE profits from its crucial geographical position that links the Red Sea, the Indian subcontinent and East Africa.

The port run by DP World, Jebel Ali, is the busiest port in the Arab World and the ninth world's largest ports in the world. Upwards of 5,500 firms are estimated to operate in Dubai throughout the maritime industry, helping the economy with 76,000 workers. In 2018, relative to the year before, Dubai's GDP rose by 1.9 percent and the storage and transportation sector is estimated to contribute 12 percent to GDP. The shipping and logistics industries are crucial to the economic development of the UAE.

As the UAE's maritime trading center covering general and bulk freight, containers and increasing roll-on/roll-off traffic, the Abu Dhabi ports have even shown continuous progress. Investment is pouring into the modern naval shipyard at Khalifa Port. Fujairah is yet another maritime center in

the UAE, and Abu Dhabi Ports will experience further expansion of its infrastructure, include widening of berths and increased storage facilities, which are reported to require 500 million dirhams of expenditure.

A variety of large ship operators, including subsidiaries of foreign owners, are hosted by the UAE. In the UAE, the offshore industry is weathering the storm comparatively better than in some other areas of the world, with vessel utilization rates higher than the world average in the area. For a variety of offshore ship operators, the UAE remains a significant hub. The government of the UAE has sustained its initiatives and priorities to establish conditions for the development of the sector and to render the UAE an increasingly significant maritime center.

The "Maritime Review by 2015" published by UNCTAD reveals that almost 80 per cent of global volume trade in goods has been achieved across ports and shipping routes. The maritime transport sector provides a major contribution to the wellbeing and prosperity of nations, contributing about $380 billion a year by freight prices alone to the global economy. Around the same period, the overall volume of maritime transport grew gradually last year, hitting 9,84 billion tons in 2014. Standing at the crucial intersection of inland and coastal trade, the container port is a critical link between various types of transport and a central point in the transport chain. For an economy, maritime transport not only guarantees the import of limited resources required for manufacturing operations, but also encourages the exporting of excessive resources, that builds up further revenue for the country. Maritime trade is also a central element in economic globalization. Container transport, in particular, has been the most critical form of transport in international commerce and a modern window for the growth of global economic ties and trade.

3. LITERATURE REVIEW

3.1. Impact of Transportation Reliability on Economic Growth

The interface among investing in transport and economic growth has wide implications that go beyond the simple function of transporting commodities and citizens from one location to another [33], [46]–[48]. While there is no question that transport is important to the functioning of the commercial economy, there is still a great deal to be learned as to how an effective transport infrastructure will increase the efficiency of the economy [49]–[51]. Transportation often plays a

wider position in influencing infrastructure and the environment [52]–[55]. Economic issues over the next generation will progressively concentrate on the influence of travel on where people reside [56] and where enterprises are located; and on the impact of those position decisions on patterns of land use, pollution of urban transport networks, utilization of natural capital, air and water quality, and living standard [57]–[59]. Issues of urbanization, soil management, and air and water quality have now made their way to the center of policy discourse at the national and local level [60]–[62]. In order to make wise choices, policy makers must be prepared with the best available knowledge and insight on the relationships between these different variables [63]–[65].

Good expenditure in transport reduces the expense of transporting people and commodities [66], [67]. This raises economic efficiency, which can approximately be calculated as the production of products and services per dollar of private and public spending [68]–[71]. And increased efficiency contributes to better living conditions [72], [73]. Because efficiency is a core component of economic development, it should be of significant concern when determining the importance of transport spending [74]–[78]. It is important to concentrate on improving efficiency even as policymakers aim to fulfill other important long-term transport goals, such as improving protection, energy independence and environmental sustainability [79], [80]. High productivity expenditure in transport improves mobility and decreases pollution, while improving economic well-being. Short-term employment growth, although crucial to economic development, does not allow one to neglect the longer-term outlook [81]–[84]. High productivity expenditure in transport improves mobility and decreases pollution, while improving economic well-being [85], [86].

3.2.Relationship between Transportation Reliability and Economic Growth

Governments, companies and people make a lot of infrastructure spending and choices on the usage of transport every day [87]. Place and planning policies are often strongly affected by transport [88]. People also use travel data to make these choices [89], [90]. Are there some general transport and economic development metrics that should be routinely established and that will usually allow both parties to make transport-related decisions?

The relationship between transport and the economy is quite complicated and confused [91]. Transportation is a large industry with major direct and indirect impacts on industrial productivity and economic growth [92]–[94]. The transport industries the operation of transport facilities, the manufacturing of automobiles and the development of infrastructure are, in themselves, main

economic activities [95]. Transportation is the expense, to a greater or lesser degree, of practically any other product or service in the economy. Transport is an enabler of commercial development and a facilitator of foreign exchange [96]. Transportation is a predictor of economic activity: it may be a leading indicator in certain situations, since human activities initiate monetary operations [97]–[100]. Transportation is a result of economic development, inasmuch as goods have to be transported to customers. Some of these associations are simply circular: transport influences economic conditions and economic conditions affect transport [101]–[103]. In addition, many of these partnerships are changing with shifts in technology, economic growth, regional changes and several other influences [104].

3.3.Influence of Transportation Reliability in Economic Growth

The creation of transport networks usually occurs in a socio-economic sense. Although development initiatives and plans appear to concentrate on physical capital, human capital considerations have been better balanced in recent years [105]–[107]. Given the relative value of physical versus human resources, growth cannot take place without engaging as facilities cannot stay successful without proper service and maintenance [108], [109]. Around the same period, commercial operations cannot be carried out without an infrastructure foundation [110]–[112]. The strongly transactional and service-oriented operations of many transport practices illustrate the dynamic partnership between its physical and human resource needs. Successful logistics, for example, depends on technology and management experience [113], [114].

Due to the extensive usage of infrastructure, the transport sector is an essential source of revenue and a common tool used for production [115]–[118]. This is especially true in the current global context, where economic prospects have quickly been linked to human mobility, shipping, and even telecommunications [119], [120]. The quantity and effectiveness of transportation infrastructure and the rate of economic growth are directly correlated [121], [122]. High levels of growth are typically coupled with tightly connected networks and high density transportation systems [123]–[126]. As transport networks are effective, they offer economic and social resources and advantages that contribute to positive increased income such as greater consumer access, jobs and increased expenditure [127]. There may be financial expenses associated with inadequate transportation systems, such as reduced or lost opportunities and a lower standard of living [128], [129].

3.4.UAE Transportation Reliability and Economic Growth at Maritime Industry

For decades, Dubai has been established as a trading city, a successful trading post in the Gulf area. The first stage of the establishment of a transport and logistics cluster started in the 1960s [130]. Initially, the creek was dredged to satisfy the trade in crude; but, by the 1970s, the government understood the need to diversify the economy outside oil [131]–[134].

Focusing on improving Dubai's core strengths in terms of position and historical heritage as a trade center for the area, Sheik Zayed provided orders in 1976 for the development of Jebel Ali Port, the largest man-made port in the world and the largest port in the Middle East [135]–[137]. Jebel Ali Port has guided the growth of maritime transport to and from the UAE, and also the production of major shipping and transshipment operations, shipbuilding, repair and maintenance facilities [138], [139]. Until that time, India, Iran and Eastern Africa were the main trade partners of the UAE.

3.5.General Research Model

Figure 1: Conceptual Research Model

4. DISCUSSION

Dubai has positioned itself as one of the most renowned shipping centers worldwide over the past two decades and has been a significant region in the international maritime industry. The maritime sector in Dubai is large and also wide, consisting of more than 5,600 firms listed in some 13,000 operations, ranging from shipbuilding, cargo logistics and dry bulk storage to port management and maritime engineering and dredging services. The maritime sector actually contributes some 7% to GDP, almost doubling to about US$ 7.3 billion, relative to US$ 3.9 billion in GDP in 2015. The business also accounts for about 3.3 percent of the employment in the Emirates, with around

76,200 workers employed in the maritime industry. The largest share of maritime GDP was contributed by transport, led by port activities, maritime engineering and support services.

5. CONCLUSION

The research gives a quick outline of how transportation development has affected UAE's economic expansion. The nation has drawn interest from investors, job seekers, and visitors from around the world. The nation has several carefully constructed landmarks. By making a deliberate effort to gather notice on a worldwide scale and subsequently draw tourists. The country can be regarded as having world-class transportation facilities because the government has made significant contributions to the development of the nation's transportation. The government's efforts to improve transportation service have proven to be quite helpful in maintaining the pace of economic growth.

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IMPACT OF MOBILE E-LEARNING MANAGEMENT SYSTEM ON PROCESS PERFORMANCE AT UAE EDUCATION INDUSTRY

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ABSTRACT

The aim of this research is to show the e-learning to be viable there should be proper technical assistance. Online instruction promotes learning by encouraging students to use the variety of learning resources at their disposal and boosting their level of commitment to their majors. The virtual world is a great place to study since it provides users with access to knowledge that has been earned through experience. This research helps to evaluate the educational performance through mobile e-learning management on the basis of literature, research studies, and journals.

Keywords: *Mobile E-Learning Management, Process Performance, UAE Education Industry.*

1. INTRODUCTION

E-learning is one of the essential strategies that efficiently evolve during the Covid-19 pandemic by considering the utilization of various electronic devices and internet availability in both

synchronous and asynchronous environmental conditions [1], [2]. E-learning practices serve as one of the significant measures introduced to develop the student's learning process, constantly dealing with the pandemic implication, regulations, and restrictions [3], [4]. E-learning leads to interaction with social isolation as individuals cannot see their classmates and teachers face-to-face anymore. E-learning demands assessment similar to that of the regular classroom setting, and hence no proctors or teachers can easily avoid cheating in any sense [5]–[7].

E-learning is a learning approach based on formalized instruction but uses electronic resources. After the current pandemic at primary education colleges in the UAE, a survey was performed to assess students' perspectives on the future of mobile learning [8], [9]. Communication, evaluation, online education experience, technology use tools, time management, anxiety, and coronavirus disease stress were all listed as problems in the study [10]–[12]. The Covid-19 pandemic has accelerated E-learning and ushered in one of the most significant workplace shifts in our lives. Everything has altered tremendously in how we work, shop, learn, exercise, and communicate [13].

This research aims to find a link between systematic e-learning management (planning, organization, control, and organizing of the e-learning process) and process e-learning performance as measured by Reeves on the one hand and learning subject/content reliance on the other [14]–[16]. Furthermore, the platform performance was given special attention in our overall study because it can influence the systematic application of the e-learning paradigm [17], [18]. The International Association of Universities 2020 performed a survey to determine the impact of COVID19 on higher education institutions around the world [19]. The study's findings revealed that the COIVD-19 crisis impacted all of the participating institutes' activities. The results also negatively impacted activity quality and inequity in educational chances.

1.1. **Problem Statement**

The pandemic that we are facing changed the whole process of education, specifically the usage of the most common language (English) which changed to online learning throughout most universities [20]. In our situation, for the first time E-Learning education seekers have took interest in the participation in online learning the objective of it to see if the challenges faced and experienced gained in the hard times of the pandemic would have helped in avoiding those issues [21], [22]. The survey was conducted for the objective mentioned earlier having various questions

to gain data for the goal of the questionnaire [23]–[25]. The questions ranging from demographic questions about the students and the feedback of the individuals on their learning experience using online method whether they are satisfied or dissatisfied. The data generated showed that students were having problems with learning electronically which was due to the unavailability of communicate to the professors, unable to be fully responsible without guidance and missing the completion of assignments those are all vital for having a great educational process.

2. THEORETICAL FRAMEWORK

The sudden implication of the Covid-19 pandemic and its adverse impact has placed a challenging situation in front of the educational sector [26], [27]. The pandemic cause restriction to the ongoing practices of the academic industry, whether it is of school institution or the university level [28]–[30]. Besides, the strictly imposed lockdown implications by the government also lead to ending face-to-face education in numerous universities, colleges, and schools. In concern to this, the undertaking of effective measures remains at the demanding stage to keep continuous learning and academic interaction by the existing learners worldwide [31]–[33]. E-learning is one of the essential strategies that efficiently evolve during the Covid-19 pandemic by considering the utilization of various electronic devices and internet availability in both synchronous and asynchronous environmental conditions [34], [35]. E-learning practices serve as one of the significant measures introduced to develop the learning process of the student, constantly dealing with the pandemic implication, regulations, and restrictions [36]. Besides, the measure is also considered crucial in delivering flexible and student-inclusive learning processes cost-effectively and more easily [37]–[39]. Whether students belong to rural or urban regions, e-learning is the best solution to provide educational measures, followed by collaborating and enhancing their certainty and confidence level [40]–[42].

Running along with the e-learning process is not always beneficial to learners or students for several reasons [43]. E-learning leads to interaction with social isolation as individuals cannot see their classmates and teachers face-to-face anymore. Sometimes, students also require facing the challenges of adequate internet availability, which is considered one of the significant disadvantages of evolving with e-learning measures [44]–[46]. E-learning demands assessment similar to that of the regular classroom setting, and hence no proctors or teachers can easily avoid

cheating in any sense [47]. Therefore, the proposal is further developed along with the primary purpose of dealing with e-learning practice during the Covid-19 pandemic [48], [49].

Blackboard has issues with students confirming their check-ins online, the students have had to use any means necessary for online learning such as WhatsApp to ensure reliability of their own learning process since mobile phones are commonly used between students [50]–[52]. Another conclusion has been drawn from this study is that there is a positive impact on using SM applications in the learning process since these application are supported using the English language [53], [54]. Moreover, the education seekers have had lots of trouble getting quality education due to the fact that they are from rural areas so their technological devices and internet are not on par with the other students [55]–[57]. So during the pandemic, students have had the time to pursue education but had lots of difficulties trying to have access to the information, files, and even tests making it a terrible experience for the learning process [58]. Blackboard platform has shown that there was lack in the utilities that it offered based on the reviews from the students and the absence of the English language practice. In the UAE, many educational institutions have offered online courses to know if going online during the pandemic which provided the students with the opportunity to learn via online methods. Unfortunately, students were relatively new to online learning and have lacked in aspects such as preparation and competency in learning online.

3. LITERATURE REVIEW

Learning is in two forms in today's generation, where traditional education is often done via classrooms. In contrast, electronic learning is established using what people can't live without, which is technological devices such as the internet and computers [59], [60]. Lives were led usually before the pandemic that e-learning did not take any importance towards the learning process [61]. However, the regular learning routine was no longer a valid process for acquiring information. People had to adapt accordingly to classrooms and meet tests via online applications and software [62]–[65]. Having all these new things to set up for e-learning, students and teachers had to go through lots of struggles to figure out the optimal way to benefit from learning online since this will have to be the norm from now on, and taking a questionnaire in various universities around the UAE to have the student's views on the upcoming learning possibility using mobiles or tablet devices [66], [67]. The questionnaire has taken a positive turn showing the students' interest in

having mobile learning as a valid option in the education sector [68]–[70]. The sample size is 52 participants in this study which is a relatively low number of respondents to ensure the accuracy of the questionnaire. There was an alternative study conducted which included a total number of 208 respondents that contains students and college members from DCM [71]–[74]. The study revolved around evaluating online education, stress levels, usage of technological devices, and students' pace with their ability to have proper time management [75]. The Covid-19 pandemic has accelerated E-learning and ushered in one of the most significant workplace shifts in our lives. Everything has altered tremendously in how we work, shop, learn, exercise, and communicate [76], [77]. To have proper economic development, educational investments worldwide have become an essential variable for organizations and societal dynamics [78].

Companies are under increasing pressure in today's market to decrease costs while maintaining the high standards of quality that customers wish to have [79], [80]. E-learning is a different approach that utilities the flexibility and efficiency of reducing costs since no location is needed to process learning [81]–[83]. However, the difficulty comes from putting an effective learning curriculum suitable with the online learning so that students will have the same quality of education anywhere that integration with the software will further assure that proper tracking of student progress [84]. The same issue applies to educational institutions: a fundamental flaw in many various methods to have the best ideas of e-learning to be implemented [85]. Using current technology automatically and significantly advances learners toward their learning objectives [86], [87]. It is frequently assumed that "integrating" a technology solution into the knowledge provider, which is the teacher and the receiver of that information (learning). The main objective of this research is to find a link between systematic electronic learning various processes (planning, organization, control, and organizing of the e-learning process) and process how effective it is by looking at its performance from one point of view and looking at its content of learning on the other hand [88]. A research was published which showed a model of e-learning that had all the essential factors for success that focuses mainly on the process and the platform used for e-learning instead of looking at the full e-learning process [89]. Furthermore, the platform performance was given special attention in our overall study because it can affect the applicable systems of the e-learning paradigm [90]–[92].

Online learning is a field that has many sub-disciplinary areas that when any study is conducted, there will be IT applications as a subfield and education field [93]. The challenges faced can be

solved relatively quickly if its concern is on the technical side but will be harder at an organizational level [94], [95]. Any university or institute of the same sort should have constant updates and adaptations to provide the highest level of proper information delivery to allow the students to gain more in their skillsets and become more competent [96].

The e-learning process has had enormous support all over. However, there are still ways in which another study was conducted to utilize the technological aspect in the e-learning process fully [97]. As a result, this research focused on developing such a model, implementing new procedures, and further elaborating its importance while looking at the correlation between the performance from e-learning and its model of management [98], [99].

It is impossible to overstate how vital e-learning and knowledge management is in any work-related environment [100]–[102]. With the requirement of teaching and having people well accustomed to technologies, products, and services found in various workplaces, specifically, it is valid in healthcare sectors [103]. There is a constant need to train and retrain people in new technologies, products, and services found within the environment [104], [105]. There is also an ongoing and unwavering requirement for effective knowledge management and leveraging so that it is readily available and accessible to all stakeholders in the workplace [106], [107]. In addition, some other aspects within the medical and healthcare sector underscore the need for continual refreshment, training, and retraining of its staff [108], [109]. These elements are: An increasingly knowledgeable and empowered population has raised expectations for greater healthcare quality [110]. A severe lack of professionals such as doctors (which necessitates individuals' "multitasking" attempts and hence "forced" learning of additional skill sets), Heterogeneous medical practice norms necessitate regulations meant for reviewing and simplifying the practices of healthcare through forcing a system that allows having a minimum credit point related to the issuing of APC, Healthcare services, technologies, and products are becoming more complicated, and technological development is speeding up [111]–[113].

In addition, sometimes, we forget the foundations in our enthusiasm to embrace technology. "Build it, and they will come," we've all heard before [114]. This is certainly not the case in the New Economy; ask many of the "dot-com" businesses that have gone out of business in the previous year. "How long will they stay?" is the question, even if you construct it and they arrive. The same questions can be used for e-learning [115], [116]. As a result, we must reconsider our

understanding of the e-learning paradigm to harness its benefits while avoiding its drawbacks entirely [117]. An E-learning system that is appropriately designed is having the analysts predict that organizational expenditure on e-learning programs will exceed twenty-three billion dollars by the year 2004 due to the electronic impact on the development and delivery of training programs [118]–[120]. Even though the term "e-learning" has become firmly entrenched in the universal corporation lexicon, most higher-ups see it as putting people and technologies across different learning courses at random in wishing that one of them would work [121]. Higher-ups with their measure of the other procedures related to training are almost solely the emphasis of first-generation e-learning systems [122]. They don't contribute much to the learning process. Instead of relying on guides and tutorials, they don't supply any tools to help with internal content creations [123], [124].

The systems of management learning (LMS) are generally seen as having a very low impact for an organization to outsource [125], [126]. The clamor of hype from an increasing number of e-learning providers has added to the confusion, with promises and forecasts leaving executives meandering aimlessly down the e-learning path. The author of this paper gives an overview of the various systems that e-learning can be created and the activities that must be completed [127], [128].

On the other hand, students praised the effectiveness of learning using the internet in the hardest of times (pandemic). Several aspects of the field were examined in the study [129]. The study's findings showed that incorporating educational technology into teaching and learning is a good idea [130]. The pressure from the pandemic on the education levels is discussed by editorial board. More research and resources on the issues of online entrepreneurship education are needed, they said. Another study that looked at the value of studying and learning using electronic methods examined the strong suits, shortcomings, obstacles, and potential of online education during the pandemic [131]. During un-controlled problems such as the one we are facing now, the study offered a couple of pointers for dealing with issues faced by learning electronically [132], [133]. [134] looked at a case study in Pennsylvania for characteristics of adolescent online learners. That particular study's objective was to have achieved the online learning by students from middle school age taking into account various variables such as their characteristics, performance in education support in both social and educational [135], [136]. Findings showed that the students would have a positive academic success if their parents and educators assisted them. The International Association of Universities 2020 performed a survey to determine the positive or negative effects of COVID19 on higher education institutions all over different countries [137]–[139]. The study's findings revealed that the COIVD-19 crisis impacted all of the participating institutes' activities. The results also negatively impacted activity quality and inequity in educational chances.

3.1. General Research Model

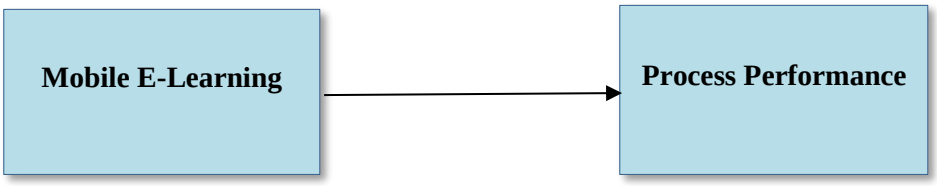

Figure 1: Conceptual Research Model

4. DISCUSSION

The Covid-19 Pandemic shifted the entire educational process on the internet, particularly ELE (English language education), which has been converted to e-learning at most universities worldwide. As a result, the focus of this research is on the online hurdles and obstacles experienced throughout the pandemic and what must be done to avoid these issues. During the COVID-19 crisis, learner satisfaction with online English language education was analyzed. The results showed that most learners could overcome most of the technological challenges associated with online learning systems after some time. The use of e-learning in education, particularly for higher educational institutions, has multiple advantages, and e-learning is considered one of the expected significant ways of education due to its numerous advantages and benefits. Several research and writers have offered help and advantages resulting from the deployment of e-learning technology in schools. Students and instructors can also be encouraged to participate in various online learning. The use of e-learning to enhance teaching during a pandemic is ideal since it allows all students and educators to carry out education and learning from home to combat the epidemic. COVID-19.

E-learning has various advantages that students with no prior experience can't envision specifically in the higher education levels. Students have a mature mind and can be solely responsible for pursuing knowledge. The advantages that have been the result of online learning technologies in universities are the following:

1. The student's choice to decide the time and location of their learning; the settings of their knowledge acquisition. Each student is free to determine the most appropriate time they would like to put their undivided attention into education, whether it be early in the morning, midnight, or even during lunchtime. It will all be to the individual's preference and based on what they view as the most efficient and convenient way of learning.

2. E-learning allows individuals to have access to information of any sort in a matter of seconds. The data provided can be from the professor, or the student can self-search and gain knowledge since the internet has a lot of free access to valuable information; Making the learning more effective.

3. The very underrated advantage of e-learning is that the travel expense is diminished since learning can be done at the comfort of your home, giving people with less good financial stability a chance to pursue their studies.

4. E-learning allows fewer faculty members to be in an educational institution since students are not all present on the campus due to the pandemic; thus, a more significant number of staff is inefficient.

5. The e-learning process allows students to develop communication between one another by a discussion on the subject, making the students accustomed to talking and involving themselves in the topic without constant hesitation (introvert) of talking to other fellow students. This allows for a more excellent bond between faculty members and students and between one student to another. According to Wagner et al. (2008), e-Learning provides additional opportunities for engagement between students and teachers throughout material delivery.

5. CONCLUSION

To conclude, e-learning is based on formalized instruction but uses electronic resources. Its practices serve as one of the significant measures introduced to develop students' learning process. After the current pandemic in UAE education colleges, a survey was performed to assess students' perspectives on the future of mobile learning. The Covid-19 Pandemic shifted the entire educational process on the internet. An online survey was devised to estimate the E-Learning challenges among the unexpected health and economic crises. The purpose of this research is on the online hurdles and obstacles experienced during the pandemic. Accessing online lectures, downloading materials, and administering online tests were applied among the most difficult challenges. Due to technical difficulties, some students could not access online tests on their mobile phones. E-learning is considered one of the most significant ways of education due to its numerous advantages and benefits. It can also improve the effectiveness of knowledge and certifications by providing easy access to a vast amount of data. Google Classroom platform may be combined with the Google Meet system to provide laboratory practices for STEM courses. During the COVID-19 crisis, educators and students should be given appropriate training to become influential users of educational apps such as Zoom, Google Classroom, Teams, and others applications.

6. RECOMMENDATIONS

One of the recommendations is to combine the Google classroom platform and the meet system to provide the courses with laboratory applications. Other acceptable educational platforms can be incorporated into the Google Meet system for lab practices. During the COVID-19 crisis, faculty members and academic seekers must be given appropriate training to use educational apps that are most commonly used throughout the world, such as Zoom. The pandemic condition necessitates instructors who are well experienced with technological devices/ software usage and adequately trained. Faculty members should improve their skills to make the most of the technological devices mentioned earlier. Instructors should encourage students to use various educational applications and equip them with simple, effective, and entertaining study materials to draw students' attention to E-learning. Students and instructors can also be encouraged to participate in various online learning. They might get suitable online training to employ different learning approaches such as knowledge training and multiple students. The benefits of e-learning to enhance teaching in such

rough times are ideal. It allows all students and educators to carry out education and learning from home to combat the epidemic. COVID-19. However, some faculty members and university students have started their inability to teach and learn using such electronic learning models. Professors could not accurately assess the students' performance due to the absence of timely response, the low levels of attention span from students since many courses were of knowledge-intensive materials, making it seem uninteresting to the person pursuing knowledge. While the internet is accessible to everyone, professors have stated that a couple of their students were trying to obtain data from online works for their requested assignments or their instructor's request. Every educational institution should have continuous improvement based on the students' feedback and its faculty members. A portion of the student's feedback stated that they prefer to have a more interactive learning session than just going through lots of data. The other part said that they prefer electronic learning the way it is. The remaining portion stated that once the pandemic subsides and life is to be resumed usually, educational learning procedures should also go back to the way it was (classroom teachings). To control students and use their acquired knowledge through learning properly, institutions have taken into their possession soft wares that can detect copied or plagiarized paperwork. Learning platforms provide capabilities such as breakout rooms, screen sharing, administration of learning materials, and communication help. To organize your classes efficiently, you must first comprehend the platform's benefits and limits. You should test the functionality before delivering the session to ensure that it operates well. Unlike in the classroom, where students may interact physically in an immersive atmosphere, online classes appear to confine professors to a small screen, causing pupils to disengage from the learning content. After 10-15 minutes of long, one-way live streaming sessions, students become cleared. As a result, you might want to break up the session into small time intervals and incorporate various activities to keep students engaged. Several online communication technologies may promote group activities, including debates, group work, assignments, case analysis, role play, and presentations, which allow students to gain skills outside of their academic knowledge and make classes more interesting.

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IMPACT ON TRANSPORTATION FLEXIBILITY ON ECONOMIC GROWTH AT UAE'S MARITIME INDUSTRY

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ABSTRACT

The proximity to actions, employment prospects, and other opportunities gives modern cities a social edge and increases the economic growth. These cities are growing into complex, fragmented systems. Thus, promotion of sustainable and shared transportation options, the enhancement of social fairness, health, city resilience, and the efficiency of rural and scattered parts are some of the major difficulties facing transportation planning. This research is subjected to highlight the impact of transportation flexibility on economic growth. Findings revealed transportation flexibility is a cost effective way to promote transportation in the city as well as the increase in economic development.

Keywords: *Economic Growth, Transportation Flexibility, UAE.*

1. INTRODUCTION

Cities that experience rapid economic expansion, rising populations, and increased need for mobility are the best examples. As a result, there is an urgent need for specific measures to address

the rising and diverse transportation demand [1]–[4]. Innovative on-demand mobility, such as advanced transportation services can fill the gap between shared, subpar public transportation and unsustainable private individual transportation [5]–[7]. The United Arab Emirates' economic prosperity depends heavily on public transportation [8]–[10]. Through this flexibility, a variety of services are now available [11], including sending couriers by sea, road, or air, commuting from one location to another by car, bus, subway, or airline, and so on [12]–[14]. However, flexibility services may be a little more organized, well-priced [15], and able to accommodate a wider spectrum of users or even a combination of all three [16]–[19]. Globally, industries that deliver goods and services need transportation [20], [21] and its flexibility to operate more efficiently [22]–[24]. The economy has major dependency on transportation sector of a country [25]–[27]. Therefore, this research is aimed to explore the factors that can help to enhance economic growth while considering transportation as independent variable of the research.

2. THEORETICAL FRAMEWORK

2.1. What do you mean by transportation?

Transportation means a mode of transport such as car, bus, train or airways to be used to commute from one place to another [28]–[30]. Basically, how transportation is used flexibly on these above mentioned modes of transports [31] which are going to be used for the betterment for the public in order to offer them various services [32]–[35]. Public transport plays an essential role in the economic development of the United Arab Emirates [36]–[38]. Now, various services can be obtained through this flexibility such as traveling from one place to another via car, bus or metro or plane [39]–[41], sending courier through sea, road or air transport [42]–[46]. Nevertheless, flexibility services can be a little cost effective [47], [48], well-organized and offer a wider range of users or maybe a fusion of each [49]–[52]. Globally, transportation and its flexibility are very important for smoother functioning for industries that provide goods and services [53], [54].

2.2. What is economic growth?

Economic growth in simple terms means an increase of the production of goods and services from time to time or in a given period [55]–[57]. How is a country’s economic growth measured? It is measured through GDP (Gross Domestic Product) [58]–[60]. For example, increase in capital goods, labor force [61], technology and human capital can all contribute to increase in economic

growth [62], [63]. The cumulative increase in production is correlated with the increase in average marginal productivity [64]–[66]. Thus, by enticing customers to take out their wallets and purchase more, this raises income. [67]–[69], which means higher quality of life or standard of living [70], [71]. However, GDP does not measure happiness of a person or individual, environmental quality, levels of health and education, increases in variety etc [72], [73].

2.3. A Short Brief on UAE's Maritime Industry

Pearl diving used to be a significant source of income for the nautical sector in the United Arab Emirates. For each annual season, more than 1200 boats carried 20,000 men or more. Sadly, the Great Depression and China's invention of artificial pearls caused this venture to collapse. Depression in 1930s. Fishing was also an important source of earning back then. United Arab Emirates is famous for its history as a maritime trading nation. After the discovery of oil, this range is global, especially in Dubai, where the east-west trade gap is narrowing. The region serves all nationalities as goods are imported and re-exported for distribution to the Middle East, Africa and other parts of the world, far beyond their old trading partners.

The UAE's seaports are international and regional hubs and an important driver for promoting economic growth and economic diversification. The country's maritime transport sector is constantly evolving in terms of ports, shipping, maintenance and dry dock construction in accordance with international standards for maritime safety and protection of the marine environment. There are many ports in the UAE. According to the World Shipping Council, two of the world's 50 largest container ports are located in the UAE, with Dubai in the top ten. It has 1010 berths with a carrying capacity of 100 million tons.

- Seaports such as Zayed port (Abu Dhabi), Mina Rashid and Jabel Ali Port (Dubai), Mina Saqr (Ras al Khaimah), Fujairah Port, Khalifa Port (Abu Dhabi) have been the economic powerhouses of the UAE.
- Lastly, UAE's maritime industry has shown a rapid growth after the discovery of oil. Due to the current pandemic, its maritime industry has been hit hard by the coronavirus crises. We shall discuss this further in the report.

3. LITERATURE REVIEW

As we all know that transportation in today's world plays a major role and more importantly its flexibility directly leads to the country's economic growth [74]–[76]. The article of Geography transport says that "When transport systems are efficient [77]–[79], they provide economic and social opportunities and benefits that result in positive multiplier effects such as better accessibility to markets, employment [80]–[83], and additional investments" Transportation and Economic Development) [84]–[86]. This means that both transportation flexibility and economic growth has an important connection between each other [87]–[90]. The development of transportation flexibility takes place in a socio-economic context [91]–[93]. Although development policies and strategies focus on physical capital [94]–[96], in recent years human capital has seen a good balance with the inclusion of issues [97]–[99]. Despite the relative importance of physical and human capital [100], development cannot occur without their interaction, because without proper operation and maintenance [101], infrastructure cannot remain viable [102]–[104]. At the same time, economic activity cannot be undertaken without infrastructure [105]–[107]. The highly transactional and service-oriented functions of many transport operations highlight the complex relationship between its physical and human capital needs [108]–[111]. For example, efficient logistics depends on infrastructure and management experience [112]–[114].

Due to intensive use of its infrastructure [115], the transport sector is an important component of the economy and a common tool used for development [116]–[118]. This is even more so in the global economy, where economic opportunities are related to the mobility and freight of people [119], [120], including information and communication technologies [121]–[124]. The relationship between quantity and quality of transport infrastructure and level of economic development is clear [125]–[127]. High density transport infrastructure and highly connected networks are usually associated with high levels of development [128]–[131]. When transportation systems are efficient [132], they provide economic and social opportunities and benefits, resulting in positive multiplication effects such as improved access to markets [133], employment, and additional investment [134]–[136]. When transportation systems are low in terms of capacity or reliability, they may have economic costs such as reduced or lost opportunities and lower quality of life [85], [137]–[139].

3.1. General Research Model

Figure 1: Conceptual Research Model

4. DISCUSSION

On the basis of theoretical review, it can be said that the impact of transportation flexibility is positive for economic growth. Currently, maritime industry has suffered a major setback due to the coronavirus crisis. Declines in trade and production, changes in freight rates due to trauma in container demand for goods, and restrictions on repatriation and crew changes by governments worldwide are some of the ways in which pressure is increasing on the epidemic sector. Shipping industry faces $1.7 Billion revenue loss and faces widespread political tensions, environmental concerns and trade restrictions. In addition, people lost their jobs, companies went bankrupt, expats left the country due to job loss and seeing no upcoming opportunities in the coming years, port closures, less demand for cargos, dispute between owners and charters, disputes in lay time settlement, discussion on clauses between owners of the ship and charters etc.

5. CONCLUSION

In conclusion, this pandemic has effective the complete logistics industry in transportation which led to a major hit on the country's economy. Both transportation and economy share a connectivity with each other, which needs to be balanced for an economic growth. Therefore, impact of flexibility on transportation will lead to an economic growth and the inflexibility of transportation can also lead to a decline in the country's economic growth such as GDP, exchange rate etc.

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THE IMPACT OF BLOCKCHAIN TECHNOLOGY ON CRISIS MANAGEMENT: THE CASE OF COVID-19

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ABSTRACT

Blockchain sector has advanced as a recourse can be used in numerous ways by global health tacticians and policy experts to reduce the disastrous impact of coronavirus disease (COVID-19). The COVID-19 pandemic has spawned many blockchain-related ideas and initiatives, but to the best knowledge, no in-depth studies have been performed to uncover and summarize the key features of these technologies. The SARS-CoV-2 pandemic started at the tail end of 2019 when a new coronavirus was identified as an unidentified pneumonia-like illness. Our suggested high-level, decentralized architecture makes it easier to manage massive amounts of data and stores the data on a blockchain under government control. There are considerate difficulties faced if institutions are to regain their trust and have hope again, given today's distrust, last year's fear of the pandemic, and the emergence of technology that enables the production of standard sample.

Keyword: *Blockchain, COVID 19.*

1. INTRODUCTION

Humanity has experienced pandemics before. It has, in fact, been numerous cases when epidemic wave would have to be handled with, sometimes for years at a time. SARS-CoV-2 is a present threat, but infectious illnesses have played a key part in human history from the beginning of civilization and the formation of sections of the population living together [1], [2]. It became necessary to begin recording the first pandemics as the global population expanded and illnesses spread, posing a hazard to the population [3], [4]. As a result of these pandemics, the civilizations in which they arose were frequently reshaped, and the path of history was virtually or decisively altered by them [5]. Pneumonia cases with an unknown cause were reported to the WHO Country Office in China in December 2019. SARS-CoV2 was discovered a few weeks later to be a coronavirus and was renamed [6], [7]. There has been an exponential rise in the number of persons infected and killed as a result of the new coronavirus outbreak that was sparked by the COVID-19 sickness [8], [9].

The early detection of the disease's rapid spread led to the development of more effective techniques to manage activities in order to limit the disease's potentially fatal consequences [10]. The outbreak in Italy mostly affected the country's northern regions [11]. In order to cope with a sanitary situation that quickly became a full-blown national disaster, swift action was required [12]. To stop the infection from spreading, extreme measures of seclusion were necessary [13]. Global hygiene and disease control methods, such as contact investigation and infection control in health care facilities as well as community containment were proven to be key tactics during the SARS epidemic in 2003 [14]–[16]. When Italy plunged into a 2-month lockdown in 2019, it was evident that the SARS experience had not been forgotten, as seen by the countermeasures implemented [17]. All non-essential activity were restricted while the school was under lockdown [18]. Hospitals overflowing with patients battled for their lives, while the remainder of the populace was kept inside in dread and unease due to the pandemic's uncertain conclusion and its terrible effects [19].

In the last 20 years, a number of digital and technical tools have emerged that have had a profound impact on our lives. Some of these might be utilized to enhance the current SARS-CoV-2 containment measures, hence boosting their effectiveness [20], [21]. One of them is the

blockchain. Since its inception in 2008 as a means of enabling Bitcoin's technology, blockchain has found use in a variety of areas [22]. The fundamental properties it has with other block chain systems explain why it is so widely used: Through the use of encryption and a consensus method, it ensures data inalterability and high levels of security [23]–[26]. In the event of a pandemic emergency, we want to promote the use of blockchains to streamline the flow of information between healthcare facilities and to document contributions of cash, equipment, and medical supplies.

2. LITERATURE REVIEW

In addition to people's excitement for blockchain's potential applications and its function in decentralizing society, as well as the independence it confers from centralized power, after 2008, it started to polarize a lot of scholarly and media attention [19], [27]. Many people have paid attention to the potential beneficial or negative effects that widespread use of this technology might have on our society [28]. Since Bitcoin has the greatest user base and is now the most widely used and relevant blockchain technology, the majority of research is being conducted in this setting [29]–[31]. Ongoing research questions the long-term viability of Bitcoin's blockchain-based infrastructure due to its effects on the environment, societal challenges, and economics, among other things [32]. Even though blockchain technology has been around 13 years. Only a few additional uses of blockchain had been developed by period of the COVID-19 outbreak had spread [33]. This is noteworthy [34].

For the last several months, blockchain has been and continues to be a key component in the battle against COVID-19, as it provides efficient control and tracing solutions, guarantees a traceable supply chain of crucial items and contributions, and safe payments [35], [36]. Improve clinical studies, monitor contributions, manage supply chains, and more using blockchain technology, which can be used in all sectors of healthcare touched by the epidemic [37], [38]. There have been several solutions proposed to the problems that arose during the epidemic, but many of them remained only ideas with no real assessment of their efficiency [39], [40]. In addition, there are great hopes for the potential usage of blockchain since its applications may be found in practically every human endeavor [41]. In spite of the recent rise in the popularity of blockchain technology in recent years, much of the literature on this technology has remained focused on its technical aspects, therefore ignoring to address the various difficulties it offers [42], [43].

After the technology has been solidified, the issue arises as to whether it should be used in other similarly complicated and critical situations, such as the pandemic management [44], [45]. Due to the fact that it can handle a wide variety of different requirements, including data exchange, data security, and data access, blockchain might be very valuable [46]. Managing the epidemic is becoming more and more feasible because to blockchain's ability to provide a cost-effective, trackable, and secure method for determining which line of action is the most beneficial [47]. Today's blockchain might be a tremendous tool in the battle against the virus because of its excellent tracking and monitoring characteristics, ensuring the visibility of both the supply chain of needed supplies and the safe handling of contributions [48]–[50].

2.1. Block chain current and future uses

The Bitcoin blockchain is a decentralized public record that can be accessed by anybody who is prepared to put their trust in it [51]. It was designed to keep track of Bitcoin exchanges. A brief introduction and explanation of this technology is provided below in order to better explain how we want to use it in our software architecture application [52], [53]. A predetermined number of new bitcoins is created every minute on average in the Bitcoin economy [54]. For all intents and purposes, bitcoins are always linked to specific Bitcoin addresses, and may be moved from one location to another via transactions [55]–[57]. Anyone may create new bitcoin addresses, receive bitcoins, and then transmit those bitcoins to others. It's possible for everyone to take part in the race to create new bitcoins in principle [58]. Neither the minting process nor the transactions are regulated by any central body [59]. A clever combination of a few fundamental cryptographic ideas (specifically, cryptographically functions and digitally signed systems with the adaptability of peer-to-peer networks) makes this all feasible [60].

A decentralized peer-to-peer network built on demand over the Internet connects all Bitcoin nodes: It is a node in the Bitcoin network every time the Bitcoin application is run on different [61]. A flow of data packets is shared with the new node to keep it up to date with the current system status [62]. Nodes get all the information they need to verify the integrity of a packet in every packet they receive from their neighbors [63]. Only if it passes this examination is it forwarded to all other nodes in the network. As a result, each and every node sends a confirmed packet to all of its neighbors in exactly the same way [64]. To do the full operation, it just takes a matter of seconds. Most of the time, the packets transferred inside the Bitcoin network include either a transaction or a block of data. Input and output addresses, digital signatures, and space to ultimately store a

message are the only components need to complete a transaction [65], [66]. It is common practice to assign input addresses to their corresponding output addresses when a transaction occurs. Digital signatures can't be created without the private keys that can only be obtained by entrusting the input addresses with a digital signature [67], [68]. Bitcoin transactions take a few seconds to reach all of the other nodes in the network, which is why it takes so long for a packet to get at its destination [69].

This does not adequate to declare the transaction validated, even if every take on the role the input address from which it was transmitted and may thus detect any transaction originating from the same address as illegitimate [70], [71]. For this reason, a transaction may be confirmed only when a miner adds it to a subsequent block. Some nodes, known as miners, perform extra tasks that set them apart from the rest of the network [72]. There are many other kinds of transactions that may be performed on a ledger; in addition to basic ones, they can also seek to add to it [73]–[75]. Its creation necessitates the use of sophisticated computational equipment [76]. If the miners are successful, they will be well rewarded: Not only do they get the freshly minted bitcoins, but they are also rewarded with the transaction fees associated with any transactions they successfully include in the block [77]–[79]. As long as the block has, I link to previous legitimate blocks; a timestamp, which serves as a digital fingerprint of all transactions contained in the block; and a unique nonce, the block is regarded to be valid and may be included in the blockchain [80]. To locate a nonce, a miner must do a brute-force search, and the likelihood that a particular miner would succeed is directly related to the amount of computer power used [81], [82]. There are nodes on the peer-to-peer network where such a nonce may be found for a miner's block [61]. Each node may independently verify that the block is legitimate, and all miners will begin linking that one as the final valid block. Until the first block was mined by Satoshi Nakamoto in January 2009, the blockchain consisted of a series of connected blocks [83].

2.2. How blockchain will give advantage

Technological innovation is one of the important variables that may assist to overcome the obstacles provided by the COVID-19 pandemic [60], [84]. Technological advances, like the Web of Things (IoT), machine intelligence, deep learning, cryptocurrency, mechatronics, unmanned aircraft, three-dimensional able to print, nanotechnology as well as bioengineering, 5G communication systems, platform as a service and computing capabilities, and data science, can be able to leverage to devise effective urgent management techniques for the COVID-19 pandemic

[85]–[88],[89]. Moreover, it is not bidirectional [90]. Distributed ledger technology enables users to trust the result of a process without believing the individuals, which is a requirement for economic efficiency and success [91], [92]. The novel coronavirus generated special challenges.

Individuals and towns are contributing money and protective gear in significant amounts [93]. However, a widespread fear is that contributions are being not utilized where needed and that resources are being diverted [94], [95]. There are various causes underlying these challenges, but they effect the motivation of individuals to give and hence postpone the purpose of fixing the problem.

2.3. Monetary Donation

As the number of infected persons continues to rise and hospitals in Italy are forced to deal with an unprecedented level of demand, a number of fund-raising events have been organized to help alleviate the strain [96], [97]. This problem is complicated because individuals frequently feel conflicted between their want to give money and their lack of faith in how it will be used. We believe that blockchain technology can be used to solve this issue [98], [99]. Why isn't this technology being utilized for goodness instead of only for profit?

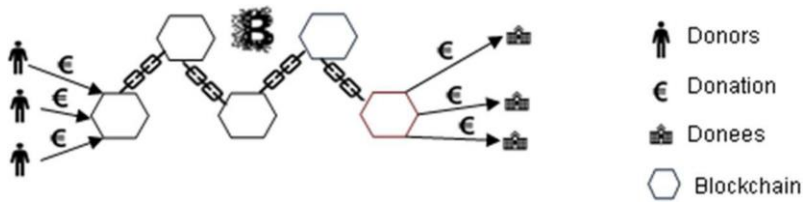


Figure 1: Blockchain Process

All stakeholders, contributors, and recipients can track and verify every monetary transaction thanks to the usage of blockchain, which is additionally bolstered by the inclusion of relevant paperwork [100], [101]. Because of the system's openness, the issue of skepticism previously highlighted would be resolved, allowing for an increase in contributions and faster collection and transmission of cash to hospitals, charities, and other projects [102].

2.4.Technical and Sanitary Material Donations

The global supply chain has been severely disrupted by the continuing COVID-19 outbreak [103], [104]. Factory lockdowns have led to a stop in industrial productivity, as well as a lack of factory design and equipment that can accommodate the new social and physical distance paradigms [105]. Additionally, the worldwide supply chain has been impacted by import and export restrictions [106], [107]. Despite the fact that it is now hard to measure the full extent of the pandemic's impact on global supply chain, it is clear that there have been major supply and demand issues. Strong growth or high supply might be caused by the sort of items needed [108], [109]. Supply chains for hospital devices and medicines have encountered and continue to encounter challenges in maintaining their integrity while also satisfying the increased demand [76].

Manufacturing businesses and certain foreign nations have volunteered to give technological and/or sanitary supplies to hospitals in times of crisis, such as during the SARS-CoV-2 epidemic. Products sold may not be delivered to their intended destinations for a variety of reasons [110], [111]. Think of a manufacturing business that is able to shift its major output into donating face masks and protective suits to a medical facility by air and that the transportation of these items takes place through the air [112].

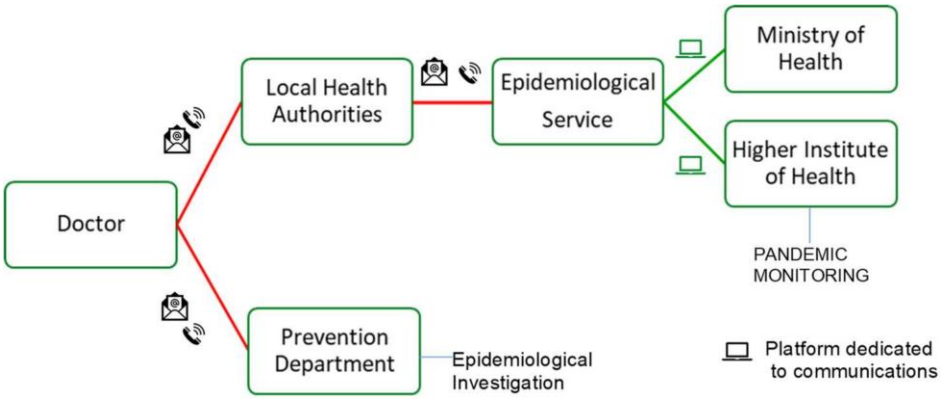
For example, a blockchain may be used to track a product's complete life cycle [113]. The presence of a trustworthy person who can record the transaction on the blockchain should be ensured at all points of access; this person should also bring, where feasible, the de-materialized papers such as the bill of lading or receipt signature [114]–[116]. The manufacturing firm, airport security, transportation companies for each delivery and delivery site, and the hospital are the trusted players [117]. There is an initial transport vehicle from which the items are loaded, and an authorized person adds this transaction to a network [118]. Then, a second man notifies the arrival of these products at an airport and their boarding aboard the aircraft, which completes the transaction. It is done both after the aircraft has landed and when items are moved from an airport to a medical facility [119].

Figure 2: Blockchain Life Cycle [120]

The development of a more robust supply chain may be aided by the use of blockchain technology [121]. Using blockchain, all stakeholders may be brought together in such a stable place without revealing their identities. Auditability, provenance, and transparency are all aided by the immutability of information logs [122].

2.5.Notification Flow of Suspected COVID-19 Cases

There were indicators for each area in Italy as to how COVID-19 instances were being communicated in Italy [123]. On the form for reporting instances of insert from viral pathogens doctor fills up the patient's individual and demographic clinical information, which relates to the locations they've been and how they've gotten there [124], [125]. The Prevention Department and the associated Local Health Authority must be notified of the completed form through email or phone [126]. This information is used to conduct epidemiology studies to discover all of the person's connections, in particular [127], [128]. When the LHA transmits a document to a regional epidemiological service, the data is sent to the Ministry of Health and ISS through an ad-hoc



infrastructure, which in turn provides the information to the LHA [129], [130]. This information is often used by the latter to track the spread of the

Figure 3: Notification Flow of Suspected COVID-19 Cases [131].

epidemic throughout the country [132]. SARS-CoV-2 test samples have been transferred to the regional lab in the meanwhile [133]. The doctor updates and delivers the results following the notification flow as outlined when the test results are available [134], [135].

Therefore, the doctors in the urgent and communicable diseases areas of the hospital, wellbeing staff from different wards, LHA officials, regional etiological provider functionaries, and protection divisional officials all participate in blockchain integration at the regional level [119], [136], [137]. Doctors would be responsible for uploading forms and changes to the blockchain, as well as verifying the information in the applications and changes [138], [139]. A new version of the data would then be included in a block on the blockchain, making it available to any users who have chosen to participate.

2.6.General Research Model

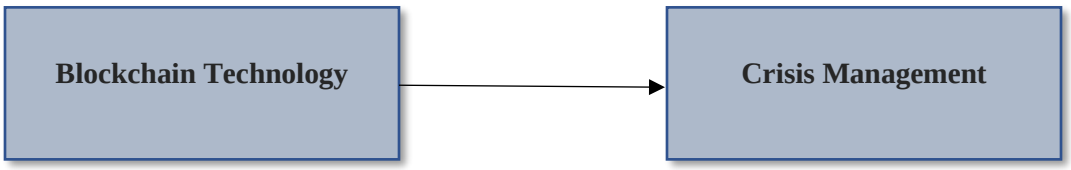


Figure 1: Conceptual Research Model

3. DISCUSSION

The unquestionable promise of blockchain technology has made its use a popular issue in recent years. It can be said that this technology can be deployed instantly and readily would be a mistake, since blockchain is a difficult technology that only a small number of individuals have started to examine. Despite the hype about blockchain, it is not a panacea for all of the world's problems.

However, it does provide new approaches to enhance the administration of current systems, and this is why it is so intriguing and demanding to investigate. There is a wide range of applications for the blockchain, which was originally designed to revolutionize the digital money industry. One of the most appealing aspects of this technology is the distributed system, which maintains the integrity of the data while also protecting users' privacy. A consumer usually, who are emotionally demanding and cognizant, would then request innovative goods / processes from institutions and businesses that are able to take advantage of these new technologies to improve or change the existing processes, create new industries, and create innovative products. While this may have seemed like an idealistic picture of the future only a few years ago, blockchain, a technology that can retain an unalterable record of every transaction, has already become a reality. Using blockchain technology, Gartner predicts that by 2025, the supply chain will be revolutionized, new business models will emerge, and old ones will be disrupted. When this technology is fully tapped into, it results in more efficient operations, real-time transactions, and lower costs in every area of the economy.

Security and confidence can be restored if the method presented in this article is transparent and immutable in crucial emergency scenarios, guaranteeing an efficient system that is also trustworthy. Collaboration and standardization amongst parties that are distinct in nature but have convergent requirements and interests would be necessary to realize the full potential of such a system's capabilities. The introduction of blockchain technology to solve these issues and the significant expenditures they would involve would make one question whether blockchain is not simply another example of an insufficient invention. Testing and analysis will help decide the optimum course of action for introducing this technology gradually, so that significant returns may be achieved step-by-step. That's why the purpose of this research is to build the basis for future research that will include cost-benefit analysis and an assessment of metrics like ROI to evaluate the viability of the project. When it comes to IT deployment, this article presents an architecture that should be studied more.

Blockchain technology has the potential to spur the development of new services for and on behalf of people. When there is an emergency like the COVID-19 crisis, the government must take an active role that appreciates the critical significance of innovation in every area and encourages the digital culture and associated infrastructures. However, when there are several parties engaged, like in the case of providing emergency services, there is an even greater requirement for openness;

quickness; correctness; safety. With the confidence in public institutions at an all-time low, it's critical for governments to meet the needs of people while maintaining high quality standards to generate value for the public and regain the trust of the public. There must be a greater emphasis on the execution of a development and growth plan that includes numerous decision-making levels (businesses, universities, and people), as well as a more participatory form of governance of local systems at the Centre of national governments' attention. To take advantage of emerging technologies like as bitcoin, machine learning, or the Internet - Of - things, a solid digital understanding is required to establish a strong desktop culture that is based on constant and trustworthy engagement with residents, enterprises, and national public authorities.

4. CONCLUSION

The blockchain technology used to manage monetary gifts makes it possible to keep track of the money that has been sent to the recipient. Through the usage of this technique, contributions to hospitals and healthcare infrastructures may rise since donors no longer have to worry about their money being misappropriated. Technical and sanitation items may be tracked on the blockchain in order to find out what went wrong if anything goes wrong, such as a product being lost. This increases the likelihood that donated goods will arrive to institutions when and how they are supposed to. The adoption of blockchain is hampered by the need for vetted individuals at each of the system's entry points. As a result, we're not talking about getting rid of unexpected occurrences altogether, but rather about making it easier to figure out what causes them.

To improve communication amongst healthcare infrastructures, blockchain technology may be used to speed up the flow of information. There is unfortunately a dearth of current digitalization in many national health care systems. In light of the current epidemic, it has become clear that hospitals and healthcare systems need to be digitally transformed. To assist in the management of the pandemic, our study proposes a digital system to detect what is occurring and ensure that the information is accurate and tamper-proof. In our proposal, we want to aid in the administration of enormous amounts of information and the storage of the collected data on a distributed manner, in an official blockchain. Governments and health agencies throughout the globe will need to examine new pandemic strategies to follow South Korea's lead after the epidemic is finished. They can't ignore digital and creative support systems like blockchain in future initiatives since it

represents a viable instrument to help the healthcare system. A new pandemic wave seems unlikely, but if it does occur again, we must be better equipped and utilize all of our technical tools to halt the development of a new epidemic and all of its associated issues.

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IMPACT OF TRANSPORTATION ACCESSIBILITY ON ECONOMIC GROWTH AT UAE MARITIME INDUSTRY

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ABSTRACT

This research is aimed to explore an environmentally beneficial investment in sustainable transportation should be made in a way that ensures steady growth of economy. The transportation system's time savings were invested back into society's economic input-output relationships, which raised the income level. This research provides theoretical view from literature that the infrastructure can increase accessibility while also increasing industry productivity. More specifically, this research has exposed collaboration occurs when industries retain adequate productivity in their relationships with accessibility. The maritime industry was targeted to assess the impact of transportation accessibility on economic growth, that concludes government authorities must seek the optimal collaboration between transportation plans and economic development strategies.

Keywords*: Transportation Accessibility, Economic Development, Maritime industry UAE.*

1. INTRODUCTION

Transportation is considered as crucial to a company's and a nation's reputation, economic growth and transportation share many similarities [1], [2]. Take China as an example, where the manufacturing capacity and operations have increased significantly over time due to the country's extremely efficient transport sector as a result, the Chinese marketplaces have gained significant reputation and high levels of profitability in a variety of global markets [3]–[5]. Accessibility to transportation enables businesses to expand and grow their markets [6]. Moreover, giving everyone in society equal access to transportation is not feasible economically [7], [8]. Despite being able to achieve the perfect condition, we would have wasted resources that could have been used more effectively for another company project. [9], [10].

Therefore, an economy should maximize the transportation investment in a way that provides efficient accessibilities for productive customers while ensuring that the socially vulnerable preserve at least the necessary accessibility [11]–[13]. This study would advise actions we should do to enable "meaningful accessibility" for the entire economy of society in the same setting [14], [15]. in order to provide a deep study on important factor of a nation this research is aimed to identify the impact of transportation accessibility on economic growth in Maritime industry UAE. Transportation accessibility is considered as independent variable while economic growth is dependent variable of the research.

2. LITERATURE REVIEW

2.1. Transport Accessibility and Economic Growth

[16] stated that the effect of the transport accessibility on economic growth is notable, as the rise and development of the transport industry aids to many factors that trigger economic growth [17]–[19]. Initially, the emergence of the transport industry itself has creates jobs in all dimensions and phases of it from the manufacturing of transport vehicles to drivers who drive the vehicles, the boom of the industry itself is constantly creating jobs and reducing unemployment [20], [21]. Moreover, transport accessibility provides the facility to transport goods, which is a crucial aspect in trading [22]–[24]. Transportation is the base of a distribution channel, and the method of distributing products from manufacturer to supplier, to wholesaler and then to the market retailer [25]–[27]. The aiding factor of transport in all industries and markets is the facilitation it provides

to safely carry goods from manufacturer to customer [28], [29], which is proving to be an all-rounder factor in triggering several points which assist in increasing economic growth employment, income spending, production etc [30]–[32]. Safe and sound transportation significantly lowers the cost of transporting goods as well as people (travel) [33], as one mean of safety and assurance would minus all other related costs and the upcoming costs in case of damaged goods [34]–[37]. The transportation of people increases productivity in an economy, which enables people to work and look for jobs in places which may seem inaccessible and far away [38], which also is another factor encouraging the economic growth which also provides an improved standard of living [39]–[41]. Furthermore, the output of goods and the influx of their availability increases, as the quick availability of goods will conflict with the demand supply rule [42], as efficient supply will maintain the demand and fight off inflation ticking another box for economic growth [43], [44]. Although transportation accessibility may seem favorable, it is essential to still evaluate the costs and expenditure which comes with it [45].

The economic growth and transport have a lot of things in common because the reputation of a company and country is highly dependent on transport [46]–[48]. Consider the example of China where the transport industry is highly efficient and that's why the operations and businesses in China have seen a lot of growth and production capacities overtime [49]–[51]. And for this reason, the Chinese markets have seen a lot of fame and high profitability in many different markets around the world [52], [53]. The transport accessibility allows companies to develop and grow their markets [54]–[57]. China Pakistan Economic Corridor where the Chinese government has invested a huge amount of money to build a huge rail and road network from South Asia to Africa and that's why it will allow a lot of communities and economies to develop overtime [58]. The CPEC is playing a huge role in the development of a lot of economies [59], [60]. The importance of transportation in CPEC is there because if people are not efficiently moving their goods and products from one to another then they are not contributing towards their economies [61], [62]. And that's why the underdeveloped countries have not grown their economies because of their poor transportation systems [63], [64].

2.2. Transportation Accessibility and Maritime Industry

[65] stated that maritime transportation industry has been one of the oldest methods of transportation of goods and people in human history [66], [67]. Maritime transport is waterborne

transport and it has only aided to transport accessibility, as connection by land may not always be possible and favorable by geographical conditions [68]–[70], but waterborne transport is a feasible and cost-effective method widely used by people to transport goods from one place to another [71], [72]. The initial availability and reliability begins from the geographical factors of the original destination, up to the arrival destination, only then will this method of transport will be possible [73], [74].

Moreover, the maritime industry has only proven to be fruitful in terms of creating employment and more so boosting the import and export industry of a country [75]–[79]. From the engineering of ships and containers to development and management of ports, this industry has only flourished with time regardless of many other innovations and inventions in the transport industry which are deemed quicker and efficient [80], [81], such as air cargo and land cargo, but sea freight cargo still remains a method which is the first choice of many individuals and firms – mainly because of its low cost factor [82], [83]. It is an observed fact that cities with ports for example, Karachi, Dubai and Shanghai have offered immense opportunities and have caused an influx of productivity and economic growth to the government and to the people of the cities [84]–[86]. This factor of a port has initiated a lot of migration for work, as the described cities are mainly home to immigrants and expatriates who have traveled for work and an abundance of population is employed at ports [87].

Furthermore, this availability has caused a great impact in the export and import of products from continent to another, which has divided gaps and has turned the world into what we now know as the ‘global village,’ as business activity stretched beyond borders [88], [89], supplying specially manufactured products and creating strong ties between governments [90]–[92]. Due to such developments, the innovation that has occurred and is constantly being upgraded in the industry is notable [93]–[95]. There are multiple technological advancements that are being carried out to improve and create more efficiency in modifying ports, clearing out water channels [96], creating and engineering safe freight water vehicles and increasing the size capacity of vessels such as containers, tankers, bulk carriers etc [97]–[99]. Therefore, the correlation between GDP and global economic trade will constantly keep this form of transportation a crucial one despite many available alternatives and developments [100]–[102]. A negative aspect of this industry, as voiced by environmental experts and advocates [103], is the extreme impact on marine life and the destruction of habitats as well as the vast increase in greenhouse gases that originates from

maritime transport [104], creating this as an external cost towards the industry as well as gaining backlash from a mass number of environmental advocates [105]–[107].

The maritime industry too sees a huge fame and growth if the accessibility of transport is there. For example, if people sitting in Bangladesh have to export and transport their goods i.e. fish from one place to another then it is highly important to have an efficient transport service in order to transport their goods from one place to another [108]–[110]. This is because of the reason that a lot of customers wait for the products too and that's why for maritime industry, the availability of transport is highly important to play a bigger role in the development of economies and companies [71], [111].

2.3. Impact of Maritime Industry on Economic Growth

[112]–[114] stated that the impact the maritime industry has created in terms of economic growth is massive, since maritime transportation industry has created multiple jobs in several sectors which are directly or indirectly related to it [73], [115]–[117]. The government gains tax revenue through ports, through custom charges, taxes as well as port being under the public sector, which aids to in filling in the government expenditure and crating government jobs for individuals [118], [119]. Moreover, the industries which have emerged due to maritime transport are countless – one being the cargo shipment industry [75], [120]. People relocate from country to country and prefer taking their belongings with them, which is cost effectively possible through cargo shipments [121]–[123]. Apart from relocation, it is notable how products are imported and exported – from technological devices and appliances to dry fruit and cattle maritime transport has proven to be a one stop solution for many problems [124], [125]. Sea passenger transport may seem outdated, but it has been an existing method for transport all over the world in the past, and is still carried out in some parts of the world today, mainly for leisure and national transportation region to region [126]–[128]. It may be time consuming but it is still a notable method of transport, which again improves the travel and productivity of individuals [129], [130]. About 90% of the world's trade is carried out through sea transport, which also generates regional and international employment as well as an increase in the GDP, along with aiding in a positive BOP (Balance of Payments) [131]–[133].

[134], [135] stated that economies always prosper when the economic growth is there and that's why transportation in the economies is important for this reason [136], [137]. A lot of developed

countries have efficient means of transport and that's they have seen a lot of growth and developments in their regions [76], [138], [139]. For example, if there is a flood in the coastal regions of the United States, the help and relief teams are easy to reach there on time because of the efficient transportation in their regions and that's why its east for them to deliver the products on time and that's why transportation plays an important role for the growth of economies.

2.4. General Research Model

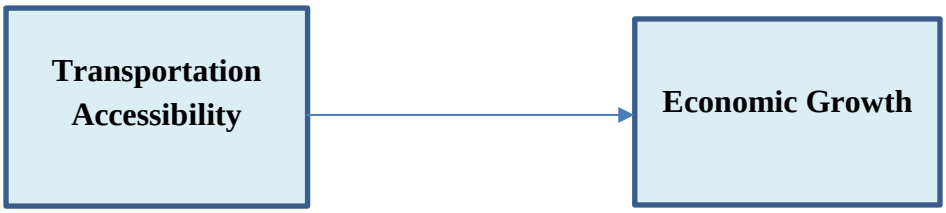

Figure 1: Conceptual Research Model

3. DISCUSSION

This research provided a deep insight about environmental protection and economic growth are both necessary for sustainable development. The theoretical analysis of this research focuses on achieving sustainable environmental protection as opposed to sustainable economic growth. For this reason, the study established that increased transportation accessibility and the local production system interact reciprocally to produce the overall benefits from a transportation investment. Additionally, this research demonstrated that the relationship between accessibility and the economy only makes sense when each component continues to produce at a reasonable level. Similarly, in order to alter ports, clear waterways, design and engineer safe freight water vehicles, and increase the size capacity of vessels such as containers, tankers, bulk carriers, etc.,

there are several technological developments being carried out. Despite the availability of many alternatives and technological advancements, this mode of transportation will continue to be essential given the relationship between GDP and global economic commerce.

4. CONCLUSION

Facilitating the transportation sector, the best method to meet the objectives of environmental sustainability, economic growth, and equal distribution of accessibility is to run the system as efficiently as possible. Transportation investments are recognized as an essential component of society's overall production system. The relationships between transport accessibility is able to determine the special benefit to the growth of economy. Many industrialized nations have effective transportation systems, and as a result, their regions have experienced significant growth and development. As a result, it is simple to deliver the goods on time, thus transportation is crucial for the development of economies.

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THE EFFECTIVENESS OF E-LEARNING ADOPTION ON THE EDUCATION SYSTEM DURING THE COVID-19

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ABSTRACT

Around the world, the COVID-19 outbreak has caused destruction. Governments all across the world have temporarily closed educational institutions to stop the coronavirus's spread. As face-to-face instruction has been phased out in favor of online classrooms, online learning has grown, allowing students to continue their education. The sudden transition from in-person to online learning has created a number of problems for students, teachers, administrators, and education leaders. Based on previously published sources, the first step of this research is to attempt to define the many terms used to characterize online learning. After that, it examines the important problems brought on by the widespread use of online learning during the epidemic and several academics' suggestions for enhancing its effectiveness.

Keywords: *E-learning, Education System*

1. INTRODUCTION

The COVID-19 epidemic has wreaked havoc on the world, impacting nearly every element of human life [1], [2]. The temporary shutdown of educational institutions throughout the world is a clear illustration of the disruption created by COVID19 [3], [4]. Face-to-face classrooms have been shifted online to assure continuity of education for students, ushering in a new era of online learning in which lectures, lessons, and other learning activities are performed remotely [1], [3], [5]. Online learning is not new in industrialized cultures. Students are often familiar with different components of online learning through the usage of Moodle, Blackboard, and other learning monitoring systems because it is part of the school curriculum [6], [7]. Online learning, on the other hand, is not widespread in poor countries like Cambodia, and there are several challenges with establishing this learning modality [8], [9].

The goal of education is to develop a person into a perfect individual. Education paves the route for them to achieve their goals [10]. Education also aids in the instillation of societal obligations. Learning is at the heart of education [11], [12]. Learning is the process of obtaining new information or abilities via study, practice, or instruction [13]. Any strange accident that occurs anywhere in the globe has an influence on schooling [14]–[16]. As a result, the COVID 19 pandemic has left its mark on schooling [17], [18]. The global spread of this hazardous virus has compelled educational institutions to close in order to stop the infection's transmission [19], [20]. During the lockdown, this occurrence caused education experts to consider other teaching approaches [21]. As a result, it prepares the way for web-based, e-learning [22], or online learning [23]–[25]. Learning has entered the digital realm in today's environment [26]. In this scenario, teachers and pupils are digitally connected [27]. During the COVID-19 Pandemic, this research will aid in determining students' opinions regarding e-learning [28]–[30].

This research is specifically aimed for students, universities, researchers and schools who wanted to understand more about the role of e-learning during the epidemic. It may be a valuable learning tool at educational institutions to use digital technology to improve students' knowledge and abilities. For the sake of pupils, the government and educational departments must create improved eLearning infrastructure.

2. LITERATURE REVIEW

E-Learning is a new way to learn and interact that makes use of high-speed networks and new computing capabilities [31]–[33]. It allows you to improve your talents, study from the comfort of your own home, and collaborate with people all around the world [27], [34]–[36]. This new technology have changed the way people learn [37], as well as the procedures and surroundings in which they learn. E-learning, according to the [38]–[40] is defined as the use of web-based technological tools in conjunction with resources available on CDs, the internet [41], video and audiotapes [41], [42], and television broadcasts [43], [44]. The basic goal of eLearning, regardless of the method it employs [45], is to present users with a learning opportunity [46]–[49]. Looks for a single definition of e-learning, which does not exist owing to the various viewpoints and ongoing growth of the term [50]. E-Learning has been discovered to be a synthesis of several fields, including data communication [51], computer science, and education [52], [53]. As a result, e-learning must be defined broadly. E-learning, according to the author, is much more than just technology [54], [55].

2.1. E-learning during the pandemic

The epidemic of COVID-19 forced the closure of educational institutions all across the world [56]. For governments and academic institutions [57], continuing the learning process through e-learning and online classrooms is a significant problem [58]–[60]. Lack of technical assistance, awareness, preparedness, skills, resource materials, and infrastructure [61], according to the author [62], [63], are all barriers to e-learning implementation [64], [65]. The effectiveness of e-learning programs is partly dependent on trust concerns, reluctance to change, and budgetary issues.

2.2. Types of e-Learning

2.2.1. Simultaneous Delivery

Lecturers and students (learners) from different schools, such as colleges, institutes, and schools, connect and engage directly in real time in this kind [66]–[68]. This mode, often known as synchronous, is used to deliver remote learning and some training classes [69], [70]**.**

2.2.2. Asynchronous Delivery

The lecturer in this case makes the course information available on videotapes or transfers it to a computer or other device [60], [71]. On the other hand, the student (receiver) receives the content at a later date that is convenient for him [72], [73].

2.3. Effectiveness and Adoption of e-Learning among the Learners and Teachers

Explains why ICT has been so popular in recent years and will continue to do so in the future [74], [75]. The authors claim that comparing the effectiveness of e-Learning to that of a regular classroom is an old study issue [76], [77]. The focus should now be on improving and improving the effectiveness of this form of learning [78]–[82]. Future research and developments should adapt the e-learning system design model to overcome current limitations and broaden the usage and adoption of "online teaching" across cultural and geographical divides [83]–[85]. The elements that influence the adoption of e-learning systems are examined [86], and it is discovered that adoption is influenced by "relative advantages, trial ability, and academic specialty [87]–[89]." The adoption rate of new systems and technologies increases when there is a positive relative benefit [90]–[92]. If instructors are given the opportune it to try out the tools and technologies before they are implemented, they will feel more confidence, and so the adoption rate will increase [93].

E-readiness is a vital criterion for the success of e-learning programs in higher education [94]. In [95]–[97] the author examines e-readiness criteria and how to enhance them to make e-learning more successful [98], [99]. The most important aspects impacting eLearning preparedness, according to the study, are skills and attitudes [100]. [101]–[105] stated that students may find it challenging to communicate with other students, professors, and administration in an online class [106]. Some pupils separate themselves or feel lonely in some way [107]–[109]. They don't approach anyone and beg for help on their own [110]–[112]. Because of the lack of face-to-face connection and nonverbal communication, students in an online classroom have difficulty interacting and collaborating [113]–[115]. Students do not believe they are truly linked [116]. While it comes to the benefits, curriculum may be built with a specific student in mind when preparing for online learning programs [78], [117].

2.4. Teaching Staff Training vs. Effect on University and High School Students' Trust in Online Education

The COVID-19 epidemic has wreaked havoc on the educational system, particularly in academic institutions [118], [119] and, in particular, on teaching staff the most valuable resource in any educational institution who are dealing with financial, physical, and emotional issues [120], [121].

The teaching staff uses virtual teaching approaches that are unaffected by the increased demands imposed by the coronavirus epidemic [122]–[125]. Every academic or pre-academic educational institution has the resources to create a virtual class that functions as an extension of the actual one [126], [127]. The capacity of the teaching staff to adapt to changing needs, on the other hand, is highly influenced by the development of working abilities with new technologies [128]–[131]. Teachers who have access to distant learning courses and digital materials have a lower risk of maledicting to the challenges posed by online courses and are more confident in their ability to continue teaching in the new environment [132], [133]. The easiest approach for teaching staff in the context of the COVID-19 epidemic is to teach their lessons through video, either live or remotely transmitted.

2.5. General Research Model

Figure 1: Conceptual Research Model

3. EMPIRICAL ANALYSIS

3.1.Willingness

The information revolution, as well as the global availability of technology, has had a significant influence on modern education. It is crucial in the development of all new pedagogical abilities in education at all levels. Wherever you need to study, there are a plethora of resources available online. Students can not only use digital devices and gadgets for amusement, but they can also use

them to participate in learning activities. Table-1 depicts students' desire to participate in e-learning in this setting.

Table-1: Student's willingness towards e-learning

Classification	Respondents	Percentage
Yes	144	82.29
No	9	5.14
Maybe	22	12.57
Total	175	100

Around 82.29 percent of the 175 students polled said they were eager to study through e-sources. Approximately 12.57 percent of them stated that they are studying from e-sources since they have no other options. Since courses and educational institutions are expected to close as a result of Corona, students have relied only on e-learning. The vast majority of the institutions where students took part in this study encouraged students to learn using e-sources. Because of a lack of connectivity, just 5.14 percent of them were unwilling to learn. Table 1 shows that the majority of respondents are interested in learning through e-based learning.

3.2.Improvement of self-study skills

After globalization, education has grown increasingly related with digital and mobile paced, today's learners have quite different expectations than in the past. Students have expressed a need for learning resources that can be accessed over the internet on mobile phones and PCs. The fundamental benefit of e-learning is that students may learn at their own pace and convenience. Table-2 depicts the quality of students' self-study skills using e-learning in this setting.

Table-2: E-learning improves your self-study skill

Classification	Respondents	Percentage

Yes	145	82.86
No	8	4.57
Maybe	22	12.57
Total	175	100

Around 82.86 percent of the 175 students polled said that e-learning had helped them enhance their self-study skills. Approximately 12.57 percent of them stated that they are studying from e-sources since they have no other options. Since courses and educational institutions are expected to close as a result of Corona, students have relied only on e-learning. The vast majority of the institutions where students took part in this study encouraged students to learn using e-sources. Only 4.57 percent of them believed that using an e-source alone may help them enhance their self-study skills. As shown in Table 2, the percent of people believe that e-based learning enhances their self-study skills.

3.3.Technical issues

E-learning requires a high-bandwidth internet connection at all times. Because of a lack of connection and a severe power constraint, it does not always succeed. Due to the absence of infrastructure that online courses require, e-learning is much worse in rural regions compared to metropolitan areas, and as a result, students fail to attend their virtual lessons. Table-3 summarizes the technological aspects of e-learning in this context.

Classification	**Respondents**	**Percentage**
Yes	47	26.86
No	94	53.71
Maybe	34	19.43
Total	174	100

Approximately 53.71 percent of the 175 students polled said they had no such technical challenges while e-learning. Around 26.86 percent of them have had technical difficulties. Nearly 19.34 percent of them said that inadequate internet connections make it difficult to follow the lessons at times. Video lectures from Zoom and other programs, in particular, have a large number of technical setups, which might be difficult to manage if the listener is unfamiliar with the technology. Table 2 shows that when it comes to technological challenges in e-learning, the majority of respondents say no.

4. DISCUSSION

4.1. Distance Learning Goals

Distance learning, in keeping with the overall goals of education, attempts to deliver considerably more it promises:

- Educational opportunities for people who are denied them at all levels for a variety of reasons, including political, geographic, economic, and social factors, to mention a few. The primary goal of distance education is to help ambitious students develop and educate themselves in order to better their educational, social, and professional levels.
- Creating appropriate educational environments to meet and cater to the requirements of learners in order to promote lifelong learning.
- Offering learners a flexible schedule to accommodate their own needs and situations, such as housewives, farmers, industrialists, and employee
- Reinventing education while being consistent with the offering of information and the current era's scientific and technological development. Individuals must be able to gain competency via continual education and self-learning under this new educational approach. The concept of 'anytime, anywhere' learning is a necessity of the time, allowing students to learn whenever and wherever they choose, using whatever technology they like, as opposed to the conventional classroom and lecture hall atmosphere.
- Introducing new specializations that society requires but that existing college institutions do not permit or support.

- Providing cultural activities and information to all residents. The advantages of information and communication technology are not confined to students; they are available to all citizens. It is feasible because of current communication technologies such as television and satellites, which may be used to transmit instructional programs [134].

4.2. Elements of Distance Learning

To begin, distant learning necessitates the use of the internet to permit contact with the student or learner who is present and accountable for tracking all educational content. To accomplish this, specially built sites and portals that follow an acceptable methodology can be employed. These websites and portals should explain the content in an easy-to-understand way in order to be useful. Both the instructor and the student can have access to discussion forums, both direct and indirect. Finally, the instructor who has been tasked with monitoring and evaluating the student's work must be available and offer the student the grades he deserves [135].

4.3. Distance Learning Methods

There are several distance learning approaches, each of which focuses on a different stage of the educational engagement as remote learning evolves. Information and communication technology is advancing at a breakneck speed. This growth and progress is evident in its growing educational applications. New and more effective distant learning approaches are being developed [40]. The following are some of the most tried and true approaches for distant learning:

4.4. Multimedia Style

Written communication is the foundation of this strategy. Learners employ audio and video recordings on CDs, as well as phone and radio broadcasting, to supplement the written content delivered to them. Learners are given educational references, study aids, and systematic literature to read. Multimedia style may be used not just to promote distant learning on its own, but it can also be used to support other techniques [136].

4.5. Video Conferencing Method

This strategy is identical to what is taught in a typical classroom. Learners, on the other hand, are separated from their teachers and colleagues by geography and are linked via high-speed communication channels. The teacher can be seen and heard by everybody. They have the ability to ask direct inquiries. They are able to actively participate in a conversation and interact with the

teacher's topic. However, in order to ensure that everything goes well and according to plan, the video conferencing approach necessitates previous planning and preparation and takes longer than a regular class lecture. It also necessitates the use of scientific materials and media. Teachers should be taught how to pique students' interest [137].

4.6. Advantages and Disadvantages

As a result of the COVID-19 outbreak, educational activities in the classroom have been temporarily halted. Students in their last years of high school and university are in an unusual scenario that prevents them from seeing the future clearly. The length of the epidemic and its effects on everyday living, as well as expenses and other financial concerns, can have a direct impact on university and high school students' ability to continue their studies. The vulnerability created by disruptions in the academic environment is concerning. Undergraduate and postgraduate students' situations have created adverse conditions, such as the need to drop out of school. The pandemic crisis generated a sense of exclusion, highlighting an image of unfairness in the academic education system [138].

By increasing opportunities for education, turning student populations, and inspiring the creation of new teaching techniques, online learning has the potential to transform the education system, making learning more accurate, effective, and less hectic for both instructors and students. Although studies show that online and conventional education provide equivalent learning outcomes, it is also acknowledged that online learning is viewed to be less interactive than classroom learning. Fortune, Spielman, and Pangelinan found no statistically significant difference in different learners between students taking online courses and students taking courses in person in a research including 156 students.

Due to enhanced flexibility and learning possibilities, online education has demonstrated a variety of benefits, including simple access to specialists, exposure to educational environments, a diverse range of course kinds, and participation in student communities. There are a number of drawbacks to online education, including challenges with internet surfing, computer compatibility, and technological concerns.

Students had to alter their daily schedules during the start of the COVID-19 epidemic to adjust to a state of isolation. Those studying abroad were forced to return home, but many of them were unable to do so owing to airport and border closures. Students' socio-emotional balance worsened

as a result of their lack of socialization, especially in young people with pre-existing difficulties of this sort. The major repercussions of isolation, according to students, were anxiety and sadness[139].

The degree to which students feel comfortable utilizing the internet and their overall pleasure with the online experience has been found to have a substantial link. According to research, developments in information technology and the growth of computers have a favorable impact on university/high school students' attitudes toward studying in today's educational contexts. In the context of education, mobile devices and accessible web access have transformed the mode of communication. By motivating and immersing students learning, social media sites can bring about changes in teaching techniques and yield benefits.

During Romania's isolation, parents were responsible for ensuring their children's opportunities for participation in online learning activities offered by their educational institutions. To take an online course, you'll need a laptop, a smartphone, or a tablet, as well as internet connectivity. The students' families or educational institutions may own this technology. The parents or legal guardians are solely responsible for any damage to leased technical and communication equipment. Platforms, digital instructional tools, and virtual libraries are all available for free.

5. CONCLUSION

Information and communication technology (ICT) is a relatively recent instrument in education and learning, particularly in developing countries such as Jordan. Because of the extraordinary crisis and threat to public health presented by the COVID-19 virus, which resulted in national lockdowns, the great majority of higher educational institutions throughout the world were forced to transition to e-learning to ensure the teaching-learning process was not disrupted. There are both undergraduate and graduate programs that are completely delivered electronically (e.g. distance learning, online learning, or a combination of both) in many countries around the world, especially in developed countries, so eLearning programs are not new to the teaching learning process.

As a result, making the shift to e-learning during the COVID-19 pandemic may not be difficult for these nations, and it may be more welcomed and received by both instructors and students. However, as this study discovered, the move to e-learning may not be well embraced and

implemented in other nations, particularly emerging ones such as Jordan, where the technology infrastructure is not yet fully built. Despite the fact that the majority of student respondents in this survey were happy with the e-learning experience, they did describe a variety of issues encountered during the eLearning process, the majority of which were technical in nature. The immaturity of electrical technology in Jordan in comparison to more sophisticated countries may have produced such technical issues. In many rural and distant sections of the nation, for example, a functional internet network might not be accessible. In addition, as revealed by student respondents in this survey, both teachers and students in Jordan are unfamiliar with e-learning and remote learning, which might be another issue impacting the efficacy of e-learning.

This conclusion might be explained by variations in performance expectations (for example, stronger integration of cognitive processes) and learning climate/social milieu between medical school and other university schools. In addition, as compared to female students, male students adopted e-learning more readily and patiently and gave the experience a higher rating. This might be due to female students having less exposure to and usage of digital tools than male pupils. Furthermore, female students may have had higher anxiety as a result of the abrupt transition from traditional classroom instruction to e-learning, which may have harmed their performance and overall happiness with the experience.

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IMPACT OF TRANSPORTATION SECURITY ON ECONOMIC GROWTH AT UAE MARITIME INDUSTRY

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ABSTRACT

To identify the impact of transport security and the infrastructure of power development on economic growth in the context of the maritime industry this research is aimed to examine the main drivers of the maritime industry transport. It also focuses on innovative transportation security policies that will enhance the change to ensure the growth of the economy in the context of the maritime industry. The objective of this research is to gather information from secondary sources to help with academic research and the economy by evaluating the effect of transportation security on economic growth in the UAE.

Keywords: *Transportation Security, Economic Growth, UAE Maritime Industry.*

1. INTRODUCTION

Dubai is regarded as a low-crime nation, opportunistic crime does exist. Visitors from abroad or expatriates may be more exposed because of their perceived riches. Densely inhabited places, including well-known tourist destinations, may be advantageous [1], [2]. People who are not attentive of criminal surroundings or who are displaying valuables like smartphones, purses, or other electronic gadgets are likely to be targeted by criminals [3]. Similarly, protecting the nation's interests and making sure its citizens are secure through their actions are the two main purposes of transportation security [4], [5]. Not only does transportation security give businesses the chance to thrive economically, it also gives passengers protection [6]. Security is also crucial in the case of transporter property in order to convey the goods safely from one location to another and complete the transaction [7], [8]. The safer a nation's transportation is, the better security and cutting-edge technology its citizens will have access to. In order to evaluate the impact of transportation security on economic growth of UAE this research is focused to gather the data facts from secondary source to contribute in the academic research and economy.

2. THEORETICAL FRAMEWORK

In the development of the economy of the UAE maritime industry, the role of transportation security is vital. In the context of the concept of the independent variable; 'Transportation security' and the dependent variable economic growth in the UAE maritime industry needs to be understood first [9], [10]. It will provide knowledge to understand both variable relations.

2.1. Transportation security

Transportation is a way to communicate or move from one place to another [11], [12]. Without an effective transportation system, the people of a country cannot easily make connections with each other [13]–[15]. In the current time and because of technological development the process of transportation has become so easy that saving the time of humans and opening many opportunities to the world [16], [17]. Transportation security is important and is significant in developing an economy [18]. In addition, transportation is the main way to communicate with local and international bodies to conduct business [19]–[21]. It can take place in three forms like road transportation, air transportation, and water transportation [22]. In case a country has developed a high technology dependence transportation system then they provide their serval industry lots of

opportunities to conduct business [23], [24]. In addition, especially to conduct global business, those countries play a significant role because of the safe and secure transportation system [25]–[27]. In UAE the water transportation is highly developed to provide the maritime industry to be successful in their way [28]. The importance of transportation security is to protect the national interest of the country and ensure the citizens of the country are secure through their actions [29]–[31]. Transportation security provides not the only opportunity for economic growth in business but also provides safety to the passenger [32]–[34]. In addition, in the case of transporter property, security is essential to safely deliver the time from one place to another and make the deal successful [35], [36]. The more the transportation of a country will be safe, the security and innovative technology the people of the country will get advanced facilities [37], [38]. Transportation security plays an important role in the development of the economy of any country [39].

2.2.Economic growth

Economic growth refers to the increase in the amount of service and goods produced at a particular time per head in population [40]–[44]. It refers to the aggregate of economic production [45]. An increase in economic growth measures the increase of the gross domestic product (GDP) of a country [46]–[48]. It references the increase in the value of the national output, expenditure, and the country's income [49]. The higher a country's economic growth, the higher will be the living standard of that country [50]. Further, it also denotes an increase in real income and development in useful areas like health and education [51]–[53]. UAE has a strong economic infrastructure and in 2019 the growth of the UAE economic forecast was 3.7% which was a positive outlook of their economic performance [54], [55]. In 2017 their growth of GDP was 0.80% and the annual GDP percentage was 8.20% [56], [57]. In the economic growth, the contribution of the transportation sector is 5.40% [58]. The higher economic growth lowers the risk of unemployment [59]–[61]. The firms in the economy start to expand and try to impose more employees for creating opportunity [62]–[64]. In addition, the positive growth in economic development also reduces the borrowing from the government [65], [66]. Because economic growth creates higher tax review and so that less money needs to be paid on the benefits such as unemployment [67]–[69]. The public service provided by the government can be improved because of the higher economic growth [70]–[72]. The higher tax revenues the government can spend on the welfare of health education and other projects provide better life opportunities [18], [73]–[75]. The technological

infrastructure of the country can be improved by spending money on research and development by firms [76], [77]. It reduces the poverty of a country and provides a better life experience that will open up new ways to see their life and enjoy the facilities. Therefore, economic growth is a vital factor for a country to ensure an advantage in the market [78], [79].

3. LITERATURE REVIEW

Transportation, logistics, and this kind of infrastructure influence economic growth [80]. Quality and secure transport provide access to the local and international market easily [81], [82]. In addition, efficient transport can provide cheaper service so that more service can be taken [83]–[85]. Large scale transport encourages the local and international economy to encourage the logistics business to grow [86]–[89]. A sound and secure transportation system lower the cost of moving goods and people [90], [91]. Thus it increases the productivity of the economy [92]–[94]. These as early discussions an increase in the economy increases the living standard of the country [95], [96]. The time of assessing the expenditure related to transportation security the main concern needs to be produced as it is the central component of the economy's growth [97], [98]. High productivity investment in the security of transportation ensures the economic welfare of a country [99]–[101]. Thus it also creates many job opportunities and contributes to long-term economic development [102].

3.1. Relation and impact of transportation security in economic development in the context of the maritime industry of UAE

The maritime industry is related to shipping, ocean, navigation, or any other activation in the sea surface [103]–[105]. In the developing countries, the population is going faster, in that context the low cost effective maritime industry and transportation play a significant role in economic growth and sustainability [106]–[109]. In the current economic and global context of UAE, the maritime industry is the backbone of the global trade and economy [110]–[113]. The water transportation system of the UAE provides regional and international hubs for the purpose to provide opportunities for economic development [114]. In addition, it includes the development of the port, maintenance, and growth of dry docks, ship operation, maritime protection [115], [116], and safety [117]. In the country UAE, they have more than 16 seaports and in the case of port terminal containers [118], they have more than 9 [119]. As per the world's shipping council in UAE two of the world's 50 port containers are located [120], [121].

In UAE there are some major seaports and waterways for example; seaport of Mina Rashid emirates and location in Dubai, Port of Jebel Ali emirate and location in Dubai, Port of Mina Khalid location and emirate in Sharjah, Port of Mina Zayed location, and emirate in Abu Dhabi, Port of Khorfakkan location in Khorfakkan and emirates in Sharjah, Khalifa Port location and emirates in Abu Dhabi and many others [122]–[125]. Their water ports are reactive in handling logistics and cargo all over the world. It was estimated that almost 61% of cargo from the GCC countries arrived via the port of UAE [126], [127]. In the UAE the commercial port can consist of 310 breathe and have the capacity of cargo to cover 80 million tonnes [128]. They also provide the ferry service all over the country [66], [129], [130]. The transport and security are so developed in the country that contributes overall economic development by 13.80% in the year 2016. In addition, it has a value of around 45,395 in 2017 and a percentage of contribution of 14.10 % in 2017 [131]. Thus it helps to develop the GDP of the country and provide a high value to the citizens' lives [132], [133]. In addition, UAE provides a high priority to developing their transportation infrastructure to ensure that people get attached to their system easily and invest in their business [82], [134]–[136]. Their higher GDP growth is an indication that their too much development in the transposition in terms of the maritime industry opens up the path to making connections with the outer world [137]–[139]. Again, the main source of their economy is oil that also exports with the help of their maritime industry and excellent transportation system.

3.2.General Research Model

Figure 1: Conceptual Research Model

4. DISCUSSION

For sustainable economic development transport and economy are linked with each other. The external dimension of the economy provides an economy to grow fast. In case transportation lagging behind then, it loses the international and global market potential and loses competitive facilities in the market. In order to provide diversification and share with a country, the influence of transportation and its security is important. Based on that, one can tackle the initiative to be innovative and creative in other sectors that will open up new business paths for expansion and economic growth. Boosting economic relations between the two countries is based on secure transportation and the cost-effective way by taking the help of the maritime industry. With the facilities of the waterway, one can straighten their supply chain distribution with other countries and ensure the quality transport on time. Because of the navy security, there is no risk of the theft or loss of the product that ensures the secure transaction. On the other hand with technological development with proper weather forecast the news related to seastorm, rain can gather and precaution and awareness can be spread. In other modes of transportation in the aviation industry or in road transport, the risks are high of theft or other cases like the accident, attack, or any natural calamity. Compared to the maritime industry, transportation is easy and cost effective. It also reduces the impact of environmental pollution and traffic on the road.

5. CONCLUSION

The influence of transport, economic growth is possible and it also creates job opportunities in the country in different categories and provides youths of the country to explore the passion and implement their new innovative ideas to develop the transportation that will contribute to local and international development. The job opportunities also have an impact on the economy that sincere the living standard of humans of the country and ensure the competitive position of the country worldwide. The savings in cost can be invested in other areas of economic development such as education, research and development, and the health of the country that will create more engineers, doctors, scientists who will contribute to future secure transport and increase the standard of living.

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THE IMPACT OF SOCIAL MEDIA ON CUSTOMER BEHAVIOR DURING THE COVID-19

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ABSTRACT

The super medium for correspondence during the Covid pandemic is web-based media. The assessment drive aims to close the gap in writing about the usage of online media during the Covid epidemic. This analysis aims to shed light on how using online media during lockdown affects a few estimates. Customers are aware of phone news, and they trust official sources. This analysis demonstrates that respondents' use of electronic media during Covid isn't as old as be typical events because a typical cause for this, persistence. Prior to the Covid pandemic, the majority of electronic media sharing were based on fantasies or incredible urges that may make people uncomfortable. People are in lockdown throughout the pandemic, offering essentially the same ideas, and adhering to identical personal conduct norms. Since there is a regular explanation and clients to deal with, mental flourishing is not adversely impacted.

Keywords: *Social Media, Covid-19, Customer Behavior.*

1. INTRODUCTION

The subsequent global pandemic, known as Coronavirus disease (Covid), began in Wuhan, People's Republic of China. The World Health Organization (WHO) of the United Nations

declared Covid a pandemic on November 11, 2020, citing 118,000 cases spread across 110 countries [1]–[3]. By March 15, 2020, there were 156,400 cases in 142 countries, with Europe serving as the pandemic's focal point. The following day, the number of cases increased to 181,121 across 155 countries. The following day, the number of patients increased to 196,106. Unquestionably, there were 2,072,113 asserted cases, 510,122 recoveries, and 138,475 fatalities across 185 locations as of April 15th [4], [5].

The rapid improvement is due to a combination of factors, including high infectivity and asymptomatic spread [6], [7]. The media attention also contributed to an increase in Covid care, which helped people become acquainted with the pandemic while also putting pressure on a couple [8]. This research intends to assess the impact of web-based media use during the Covid pandemic [9], [10]. Customers are likely to be influenced as a result of lockdowns increasing their use of online media [11]. The way where people reside changed basically, which is depended upon to change online media use when differentiated and commonplace events [12], [13]. People have started to zero in nearer on their own neatness, flourishing and prosperity than regular events [14]. Importance is given to the money related and monetary prosperity also decreased during the Covid pandemic [15]–[17].

Furthermore, investigating the effects of web-based media use during a pandemic is expected to aid crisis management [18], [19]. Countries do not respond to the pandemic in the same way, so one country's experience can help others [20]–[22]. It is widely expected that new Coronavirus outbreaks will occur in the near future, so evaluating most of the communication medium will be beneficial in the near future as well [23], [24]. This investigation targets revealing the effects of online media use in a couple of estimations during lockdowns [25]–[27]. The survey means to address the assessment question of: 'Are the effects of online media use not as old as be normal events?' [28], [29]. The investigation continues with the writing review, which investigates the impact of electronic media use in a variety of estimations such as public health, fake news, data sharing, and physiological success and pressure [30]–[34]. The technique region describes the assessment strategy, which is followed by audit disclosures and delayed consequences [34], [35]. The final section summarizes research findings and discusses whether or not electronic media use is as old as events and why.

2. LITERATURE REVIEW

2.1. Social Media use, Public Awareness and Decision-Making

Web-based media is one of the best systems of correspondence in this day and age [36]–[39]. There were 4.54 billion dynamic web clients and 3.8 billion dynamic web-based media clients by January 2020 [40]–[42]. Just about four billion dynamic web-based media clients show the infiltration of web-based media. [43], [44] expressed that online media can possibly build the public's familiarity with the security of untamed life. [45], [46] noticed that web-based media could be utilized to build public mindfulness during emergencies while legislatures ought to apply coordinated and very much arranged correspondence to expand trust among residents to trigger data sharing and looking for through interpersonal organizations [20], [47]–[49].

Essentially,[50]–[53] illuminates that chiefs' perspectives are impacted by web-based media, and leaders have given more significance to online media lately [54]. Web-based media is likewise utilized for governmental issues by each ideological group, and it makes a possibility with less financial plan to course their perspectives economically [55]–[58]. Web-based media is additionally utilized widely during the Coronavirus pandemic by the leaders [59], [60]. Social media is likewise a valuable mechanism for the organizations both to expand correspondence, client connections and deals [61]. [62], [63] further notice that web-based media utilization of firms can possibly increment absorptive limit and advancement inside a firm. [54], [64], [65] likewise express that viable interpersonal organization use could make a benefit for little and medium size firms.

2.2. Social media use and societal movements

Not with standing the everyday utilizes for general society and private associations, social media has likewise been utilized for cultural developments like Middle Easterner Spring, Gezi Park Development, #Me-too Development (a development against inappropriate behavior, and the world's most huge environment fights #FridaysForFuture [66]–[69]. These cultural developments feature that online media expanded majority rule support, where individuals who are edited or have a little appearance on conventional media tracked down a medium to communicate their perspectives uninhibitedly [70].

2.3. Social media use and knowledge sharing

[71], [72] directed a methodical audit on Ebola-related logical papers and analyzed the web-based media utilized for general wellbeing correspondence [73]. [74] further expressed that examination ought to be led to help wellbeing communicators. Moreover, [75] demonstrates that public data officials who consistently checked web-based media felt better ready for Zika infection [76].

2.4. Social media use and fake news

[77], [78] noticed that social media clients share counterfeit news because of absence of time to verify the first asset. [79], [80] research reactions of state-run administrations for the Coronavirus pandemic in China, Japan and South Korea, the writers illuminate that phony news spread through web-based media during the Coronavirus pandemic, which may require legitimate activity to forestall spread. [81]–[83] expressed that in Japan, where the #Chinese don't Comet Japan has gained popularity, deceit and false reports associated with the coronavirus have contributed to an increase in prejudice and xenophobia toward sufferers and Chinese visitors [84]. [85], [86] claimed that nearly half (45%) of the tweets associated with the Coronavirus are fake news posts made by automated systems [87]–[89]. This proportion highlights the value of online media users being aware and suggests that they should carefully consider the reliability of the source before sharing it [90], [91]. In a similar vein, the importance of professionals in medical services disseminating rational knowledge via online media is highlighted, which can halt the spread of false information [92], [93]. Likewise, emphasize the role that drug experts play in the fight against medication-related fraud [94].

[95], [96] stated that even scholastics could play a role in the spread of fake news by quickly disseminating incomplete or unseen investigations during Coronavirus. Specialists can identify ongoing work and distributed materials [97], [98]. Simultaneously, the media or public probably won't have the foggiest idea about the distinction and circle the work through features while the presupposition probably won't be precise [99], [100]. Similarly, the Peru government dispatched a site to sum up counterfeit news and later proclaimed that any singular sharing phony news or deception will be condemned to detainment. [101], [102] noticed that official logos of the legislative units are additionally utilized inside the phony news [103]. Oversight of phony news is an overall discussion, and it's anything but another theme. The preclusion of phony news will forestall spread of miss data and lessening related frenzy [102], [104]. Then again, it additionally has expected dangers of prohibiting the right to speak freely of discourse as the substance of phony news will be controlled by the legislatures where imperious states may utilize this even to work on their effect on the media and breaking point inverse voices [105], [106]. The effect of phony news on society can't be dismissed, regardless of whether during pandemics or races [107]. The 2016 US official decisions were a new model. [108] foster a model to build location of phony news where they had 98.36% precision [81]. Viable utilization of data innovations may forestall the spread of phony news without government intercession, as Size illuminates that frenzy identified with Covid would increment if residents

begin to doubt authorities identifying with control or course of data [109]. demonstrate that infodemic makes a critical issue for general wellbeing during Coronavirus pandemic as residents think that it is trying to recognize the phony and reality which shows the need of activity and attention to stop the spread of the phony news [110], [111].

2.5. Social media use, psychological well-being, and anxiety

Social media utilize brought about mental issues like dread of passing up a great opportunity, affectability identified with the quantity of preferences got, public weakness because of articulation of state of mind and uneasiness of losing web-based media accounts [112]–[114]. [115] further notice that the insurance of emotional wellness is essential during the Coronavirus pandemic. Notwithstanding the infection related tension, consideration should be given to cyber psychology as individuals are utilizing their innovative gadgets widely on account of the lockdowns. [116], [117] express that tricky cell use may make uneasiness direct their exploration before the pandemic, where utilization of cell phones is much more inescapable these days [118], [119].

There are likewise specialists which demonstrate that web-based media use makes tension where de Brail, Guillen and Bungee pronounce that YouTube utilization has a relationship with social uneasiness [120]. [111], [121] further notice that negative input, remarks and sharing may expand the uneasiness of clients. Creators likewise notice that web-based media use brings about enthusiastic issues like nervousness and discouragement [122]. At the point when the new examination identified with Coronavirus is analyzed, [123], [124] referenced that tension levels identified with Coronavirus are higher inside individuals who follow more news. [125] likewise illuminate that time spent contemplating the Coronavirus harms mental prosperity. [126]–[128] demonstrated that web-based media use may make nervousness, contingent upon the time spent. shows that the time spent on applications expanded by 20%. Half more information traffic is going on because of Coronavirus . These figures feature that clients will deal with more issues in regards to online media and innovation use, as there is a great deal of information identified with Coronavirus [129]–[131].

2.6. Social media use and behavioral effects

[132] showed that clients mirror their disposition via web-based media, which makes an opportunity for consultancy. Additionally [133] expressed that web-based media could be utilized for online medical care support. [134] further illuminate that clients get social help from the informal community. [135] encouraged wellbeing organizations to utilize Google

Patterns to anticipate client practices and forestall alarm related as what alarm clients are bound to look for the catchphrases identified with Coronavirus [136].

The writing audit shows the impacts of web-based media. From one viewpoint, it empowers correspondence by means of the remainder of the world, while, then again, it may influence the prosperity of clients [137], [138]. This exploration plans to gauge the impact of online media use on Coronavirus pandemic, where there was a lockdown to assess whether web-based media use is something very similar or unique in relation to ordinary occasions [139]. Proposals are made to help pandemic administration carefully

2.7. General Research Model

Figure 1: Conceptual Research Model

3. DISCUSSION

3.1.Advantages of social media use

In the period of the Coronavirus, web-based media have the extraordinary advantage of quick dissemination of educational content. For instance, created an infographic about the aircraft route executives of patients with suspected or confirmed Coronavirus. It was distributed via Twitter and WeChat, and within a few days requests for its translation into more than ten different languages had been received. In addition, the delivery method allowed for the infographic to be customized to the unique characteristics of each healthcare environment.

3.2.Disadvantages of social media use

We have the possibility that the data communicated is out of date, has not been subjected to peer review, is invalid, incorrect, inappropriate for our current situation, or even bogus. Another significant stumbling block for web-based media and data dissemination is the concept of "bubble channels," which educates us about a "customised environment" towards the client, where the calculations, based on information gathered from a similar client, anticipate their

inclinations and yield results that resemble any resemblance of that client. These air pockets create a circle of comparable substance that prevents the client from seeing other sources of data differentiation. This concept applies to any situation or illness that is advised in web crawlers or through online media stages.

Finally, the most obvious negative aspect of social media is the ability to disseminate incorrect, propaganda, and exaggerated data that can cause fear, stress, melancholy, and uneasiness in individuals with or without basic mental illnesses.

3.3. Info-emic and disinformation

It informs us about the torrent of data that has accumulated in the less than four months since the "Coronavirus" outbreak in China. With all the media attention, the torrential slide of information has become exorbitant, something that is also known as "Infodemia." By April 30, 2020, there were more than 8,000 papers in PubMed with the term "Coronavirus" (18, 19).

However, disinformation travels at the same rate as data; it is for this same reason that some authors have suggested forming working groups focused on combating fantasies and disinformation in online media platforms. In light of this, the World Health Organization (WHO) promoted a constrictive section on its website devoted to dispelling the Covid myth.

In relation to this same problem, the clinical community can access early and in vitro research results through broadcasts, which, when combined with the generalized fear of infection and overburdened medical systems, puts pressure on patients to request such test therapies for themselves or their families. In addition, doctors may feel compelled to use them even in the absence of a good reason.

4. CONCLUSION

There are benefits and drawbacks to using web-based media. The effective use of these tools during a pandemic can aid in the rapid dissemination of new significant data, sharing indicative, treatment, and follow-up conventions, contrasting various methodologies from around the world to adapt them to our setting and available resources, with the disadvantage of a potential spread of false information, fantasies, and worrying data when combined with isolation states. As a result, it is prudent to disseminate information without contributing to the infodemic and to employ web-based media with caution.

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THE IMPACT OF TRANSPORTATION RELIABILITY ON SUPPLY CHAIN EFFICIENCY AT UAE MARITIME INDUSTRY

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ABSTRACT

The objective of this research is to consider the transportation reliability and its impact on supply chain performance in maritime industry UAE. A systematic review of literature has focused to find the relationship and dependency of the variables. The research findings can be summarized in order to meet the needs of the shipper, service provider, and consignee, supply chain efficiency in transport logistics should include not only operational efficiency criteria but also measures of service efficacy. It must be focused on the various parties participating in the transport logistics operations and the entire supply chain efficiency rather than just on specific functional areas.

Keywords: *Transportation Reliability, Supply Chain efficiency, Maritime Industry.*

1. INYRODUCTION

The demand for the products that the maritime industry carries and transports makes it one of the largest industries in the world, and as a result, the demand for the maritime industry does not wane over time [1], [2]. Globally, the maritime sector has established a strong reputation. The use of the

water and the ocean for transportation has become the norm for many global marketplaces [3]–[5]. Many businesses acknowledge the significance of controlling their supply chains for quick product launch and service developments to the markets as a result of the development of the global economy and increased competition [6].

Furthermore, many businesses have used supply chain management to boost organizational effectiveness and reach objectives including higher customer value, better resource utilization [7], [8], and increased profitability in order to compete more effectively [9]–[11]. Therefore, this research focused to analyze the transportation reliability on supply chain efficiency that can control a business operations and enhances the growth in order to achieve market competitive advantage [12], [13]. This research includes two variables independent is transportation reliability and supply chain efficiency to be assessed as dependent variable by targeting maritime industry UAE.

2. LITERATURE REVIEW

2.1. Transportation reliability and supply chain

[14]–[16] explained that importance of transportation in the supply chain industry is huge because the markets will actually never work if the transport is not there and that's why people will have to suffer [12], [17]. Think of a vegetable shop or a meat shop which sells vegetables and meat to people [18]–[20]. The shop's business will be affected if the transport is not efficient because it will affect the business in a way that the shop will not be able to get the required products on time and that's why transportation is an important concept [21], [22].

The transport and logistics industry works together because there are many different modes of transport in different industries [23], [24]. Think of logistics because if the transport is not reliable, the products will get affected. The reliable transport will help the companies get an approach to the extensive markets [25], [26] and thus it will increase the span of the company in the market [27], [28]. A well-planned and a proper transport facility will allow the company to reach out to a wider region in the market and offer the products to the local markets and thus it will increase the revenues overtime for the companies in the local markets [29]–[31].

[32], [33] has explained the mobility of labor could be easily done with the help of transport in the supply chain industry [34]. Labors need to be extensively moving along with their products and that's why a reliable transport will help the movement in a perfect manner because if there is not

a reliable transport system, labors will not be able to be moved and thus the company might have to bear a lot of losses [35]–[37]. Also, the concept of economies of scale is there for companies with an efficient supply chain system because when companies start to face losses [38]–[40], they go for economies of scale where they penetrate deeply into the market and offer their products [41], [42]. Thus this increases the lifespan and revenues of the organizations [43]–[45]. The per unit cost of the products goes down because an efficient supply chain helps the companies reduce their costs [46]. It would not have been possible for these industries to procure raw materials [47], [48], gather large number of workers and sell the finished goods, without the efficient facilities of transport [49].

The purchasing power of parity also increases for the customers with a reliable transport facility in the supply chain industry and that's why this is a big benefit for them [50], [51]. A reliable transport option in the supply chain industry also increases the employment opportunities in the region [52], [53] because a lot of people get their jobs and other employment options in the transport industry [54], [55]. The trucking industry in the United States is perhaps the biggest transportation industry around the globe [56] and that's why it has employed millions of people [57]–[59]. Also, if the commodities are easily and flexibly transported, the local producers will be unable to charge the prices on their own [60], [61]. This will help in raising the competition and lowering down the monopoly in many certain regions around the global markets [62]–[66].

2.2. Transportation reliability and maritime industry

[67]–[69] explain that maritime industry is one of the biggest industries around the globe because of the demand of the products the maritime industry carries and transports and that's why the demand for maritime industry does not go down with the passage of time [70]–[72]. The maritime industry has earned a huge name around the globe [73]–[75]. The ocean and sea transports have become a common norm for many markets around the world [76], [77]. There have been several disputes as well due to the maritime industry [78]–[80]. One of the biggest disputes which ever occurred was in South China Sea where the Chinese government had several disputes with its Taiwanese and the US counterparts, and the Hong Kong government too had disputes with the Chinese government [81], [82]. The maritime industry has a lot of advantages overtime because the products being transported through sea and ocean freights have a lot of huge demand in the markets [83]–[85]. The perfect example of a maritime industry transport is when someone sitting in Pakistan orders something from Amazon, the product gets delivered through maritime transport

and that's why it has a huge demand in the global markets [86], [87]. However, it is crucial for maritime industries to have reliable and efficient means of transport [88]–[91]. The reliability should be there because customers always prefer to compromise on price but they do not prefer to wait for the products for long and they want the product to be delivered on time because everyone wants to have the product as soon as possible [92], [93]. This is because of the reason that reliability in transportation in the maritime industry is highly important [94], [95]. A reliable transport allows product delivery flow in a perfect and smooth manner and that's why maritime industry has a huge reliability on transport [96].

The employment opportunities in the maritime industry are high too because a lot of people have been employed in the maritime industry [97], [98] and that's why their employment in the maritime industry gets affected if the transport is not reliable and thigs get affected [99]–[102]. For example, if a delivery service does not deliver the products on time, the reputation may be tarnished. The era of social media is here, and people go frenzy and that's why a company's reputation gets tarnished and people might lose jobs too [103], [104]. This is the reason reliability in the transport in maritime industry is of huge importance [105]–[107]. Transporters make sure that there are no delays because if there are delays then there are certain complications [108] and it will be difficult for the company to regain its reputation and that's why things will be severely difficult to be controlled [109]–[111]. For this reason, the transportation in the maritime industry has a high value so that there are no losses for companies overtime on their balance sheets [112]–[114]. This is the reason effective companies in the maritime industry make sure that there are no delays in the transportation of the products [115].

2.3. Transportation reliability on supply chain efficiency at Maritime industry

[116]–[118] explained that the significance of transportation in the supply chain operations is tremendous on the grounds that the business sectors will not be able to operate work if the transport isn't there and that is the reason companies always thrive [119], [120]. Think about a vegetable shop or a meat shop which offers vegetables and meat to individuals. The supply chain operations of the shop will be affected due to the disturbance in the transportation [121], [122].

The supply chain industry cooperate in light of the fact that there are a wide range of methods of transport in various enterprises [123], [124]. Consider the companies which are in the supply chain markets, in such a case that the vehicle isn't solid, the items will get influenced [125]–[127]. The

supply efficiencies are highly regarded throughout the world [128] and that's why the global companies around the world are doing everything to support their transportation and that's why they have hired highly qualified transport employees to efficiently coordinate with their workplaces [129]–[132]. The bigger companies around the world have marked their name and reputation because they have retained a consistent transportation in their markets and people have long applauded their functions because of the reliable transport they have retained and that's why these companies have even seen a surge in their profits even during the time of deadly pandemics [133]–[135].

The portability of work could be handily finished with the assistance of transport in the store network industry [136], [137]. Works should be widely moving alongside their items and that is the reason a solid vehicle will help the development in an ideal way since, in such a case that there is certifiably not a dependable vehicle framework, works won't be moved and consequently the organization may need to bear a ton of misfortunes [138].

2.4.General Research Model

Figure 1: Conceptual Research Model

3. DICUSSION

A systematic review helped to figure out various aspects supporting the significant impact of transportation reliability on supply chain efficiency. Similarly, different businesses use a variety of transit methods the supply chain industry collaborates. The businesses involved in the supply chain with high involvement as if the truck isn't substantial, the goods will be impacted. The value of supply efficiency is widely recognized, thus multinational corporations everywhere are doing everything they can to assist their transportation. To effectively coordinate with their workplaces, they have also engaged highly qualified transport staff [139].

Additionally, the supply chain business might readily facilitate workforce mobility with the aid of transportation. Labors could be moved widely together with their products, that is why a reliable transport system will facilitate the movement perfectly. Without a reliable transportation, labors will be unable to be moved, which could result in significant losses for the business. Additionally, the idea of economies of scale exists for businesses with effective supply chains because, when businesses begin to lose money, they turn to economies of scale, where they expand their market penetration and sell their products.

4. CONCLUSION

In the end to conclude the article, it is evident from the fact that supply chain has a lot of factors, but transportation is one of the most important factor in the supply chain industry. And that's this makes supply chain as one of the most important tools in the logistics industry. The supply chain operations are always efficient if the transportation is reliable because the supply chain operations are highly dependent on transportation. Companies are always better off if their transportation is up to the mark and there is consistency in the transportation activities. And that's why a lot of big companies i.e. Alibaba and Amazon have top notch transportation to support their supply chains and that's why the disturbance in their supply chain is highly rare and for this reason they have grabbed a huge market around the globe.

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THE IMPACT OF COVID-19 ON THE MENTAL HEALTH OF FRONTLINE HEALTHCARE WORKERS

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ABSTRACT

The COVID-19 pandemic, healthcare systems are under a lot of strain as a result of a health emergency. Despite this exceptional pandemic, doctors treating COVID-19 patients come across a number of difficulties. Attention has been called to the mental health of frontline healthcare professionals as studies continue to show high rates of burnout, psychological stress, and suicide. Frontline healthcare workers who had direct contact with Covid-infected patients displayed a higher level of mental illness. Due to their excruciatingly long and stressful work hours, these HCW displayed signs of anxiety, sadness, and insomnia. This research carried out with impacts, benefits and disadvantages occurred for the HCWs during Covid-19 pandemic with the help of online research articles and accordance with word health organization.

Keywords: *Mental Health, Healthcare Workers, Covid-19.*

1. INTRODUCTION

Two years ago, when the new Covid 19 epidemic began in the Chinese province of Hubei and quickly spread both locally and globally over a short period of time, the world was hit by a humanitarian crisis [1], [2]. The virus-caused illness developed into a global public health

emergency, prompting the World Health Organization (WHO) to declare it a pandemic in March 2020 and implement global lockdowns and quarantining measures to halt its spread [3], [4].

The novel corona virus became a challenge specifically for the healthcare system and had a significant impact on the nations frontline workers i.e., the healthcare workers such as the doctors, nurses, physicians etc [5], [6]. who were up and front fighting the pandemic and treating those affected [7]. In our paper we intend to explore the influence of Covid- 19 on the mental health of these frontline healthcare professionals and study the challenges and risks they faced during and post Covid-19 [8]. While the fear of the pandemic has been decreased to some extent, the stress remains both personally and professionally [9], [10].

While the entire nation was under a strict lockdown and were instructed to maintain social distancing, this rule did not apply to the healthcare workers [11]. These HCWs were in direct and close contact with the infected patients [12], [13]. Apart from physiological risks, according to [14] due to lack of personal protective equipment, widespread media coverage, lack of resources for treatment, increasing number of cases, death toll, high workload and social stigma, frontline healthcare workers go through tremendous emotional stress during a pandemic [15]–[17]. COVID-19-related mental health issues are best described as a "slow-motion tragedy," as the psychological consequences are likely to be widespread and long-lasting.

2. LITERATURE REVIEW

2.1. Impact of Covid-19 on the mental health of health care workers (HCW)

The significance of mental health is often overlooked in societies, and this is partly due to the stigma surrounding the entire issue [18]. Individuals are looked down at and are perceived differently when they try to seek help and support for their mental health issues [19], [20]. According to WHO, *"mental health refers to a condition of well-being that enables people to perceive their abilities, cope with daily stress, be productive, and contribute to society."*

While the protection of mental health is mandatory for all members of the society, our report focuses on the mental health of the frontline heroes, especially the health care workers in the face of the pandemic Covid-19 [21], [22].

From reviewing previous literature [23], it has been well established that apart from the direct impact of the pandemic which was death and other physical morbidities, one of the indirect effects of the pandemic was the huge toll it took on the mental health of the health care workers who were in close contact to the infected individuals [24]–[26]. confirmed that the health care workers are at the highest risk of contracting the corona virus due to the nature of their job which requires them to be at the frontline fighting the pandemic [27].

The escalation of the Covid cases resulted in overcrowded hospitals and ICUs. The pandemic has a particularly strong impact on healthcare workers in intensive care units (ICUs) [28], as they witness the daily struggles of patients fighting with the life-threatening disease for which there was no cure readily available, these HCW have long-term interactions with infected patients and were exposed to insufficient protective equipment and the risk of infection [29], [30]. Moreover, these HCW were also not allowed to meet their families and were away from their homes for a long period of time [31]. The disruption in the work life balance of these HCW caused due to long working hours and work overload resulted in disturbed sleep cycle and lack of sleep has already been identified as a stressor on the job [32], [33].

It was highlighted by [34], [35] that healthcare professionals are subjected to high levels of stress, unstable work schedules, and irregular shifts, which can lead to sleep difficulties and psychological issues, increasing the workload of healthcare staff [36]. HCW not only endure stress as a result of their increased duty [37], [38]. Personal circumstances such as the risk of becoming infected and spreading the virus to their homes/families and the disruption of their work life balance was tied to greater mental health burden [6], [39], [40].

Furthermore, with every passing day and the rapid increase in the Covid cases and the lack of adequate medical supplies and other equipment further multiplied the HCW's anxiety [41]. Fear of working in such an environment and lack of rest can indirectly increase the likelihood of being infected with COVID 19 from working in a medical facility [42], [43]. The risk of transmission can adversely affect the willingness of healthcare professionals to aid in the outbreak situation [44], [45].

These healthcare professionals conceal a vulnerability characterized by anxiety, fear of contracting an infectious disease, and expectancy of impending death. Fear of isolation or system failures, such as a lack of PPE and ventilators, worsen this stress [46], [47]. According to research, the causes of these detrimental psychological effects include beliefs connected to the workplace, such as an excessive workload or amount of free time, a lack of personal

protection equipment (PPE), overly enthusiastic media coverage, and a sense of inadequate support [48]. According to research, extreme exhaustion can increase the HCW's propensity to constrict. Covid-19 [49], [50].

To further support the arguments, studies conducted by [51] confirmed that the frontline medical care takers in direct contact with the Covid infected patients has shown higher level of mental problems comparatively to the non-frontline workers [52]–[54]. These HCW showed symptoms of anxiety, depression, PTSD and insomnia due to unbearable and long working hours [55]. According to studies carried out in China, which demonstrated that psychological support or intervention may be required for HCW who showed high levels of depression, anxiety and insomnia due to their long interactions with Covid-19 patients [56], [57].

Moreover, from available literature it was identified that frontline health care workers were in a constant role conflict i.e., which was more significant between their familial role or healthcare personnel role [58]–[60]. Research revealed that HCW having children showed higher percent of mental distress, anxiety and depression due to fear of being a carrier and spreading the virus to the children [61]. confirms that all the aforementioned factors prove to be significant stressors that triggers stress in these health care professionals and severely impacts their performance in the long term if not provided with the proper mental support [62][63], [64]. Addressing the underlying consequences of the COVID-19 pandemic on healthcare workers is essential for designing policies and interventions to assist them maintain their mental health [65].

2.2. Discussing the risk of mental health encountered by front line heroes

One of the main risks of mental health encountered by the front-line heroes includes having a fear of getting infected by the virus [66]–[68]. As this is not just an ordinary virus that a person will fall sick after getting affected by, this is considered to be a deadly virus that can cause death. The mortality of the virus is considered to be very high, and the people getting affected by the virus can cause a lot of harm to society [69], [70]. The frontline workers are required to keep calm and are required to think of the current condition of the parent [71], [72]. The main objective is in making sure that work ethics have been taken into account in overcoming the problem situation [73], [74].

There lies a need for making sure that the mental health impact of the pandemic situation is required to make sure which aims at reducing the risk of getting affected by the virus [75], [76].

In addition to this, it has also been observed that the landlord is forcing the person to lease the property as they are regularly dealing with COVID 19 patients that have a high chance of spreading the virus [77], [78]. All the mentioned work activities are considered to be creating a lot of problems for the frontline personnel [79], [80]. Furthermore, the manner in which people are affected by the virus, along with the problem of not letting the family members see their loved ones before they pass away, is considered very tragic [81]–[83].

2.3. Evaluating the effect of mental health on work performance of frontline heroes

After being affected mentally, the workers suffered from offering a quality of works. They tend to make mistakes or are not mentally present at the place of treating the patient [84]. The problem arises when the healthcare workers are not able to deliver the quality of services they are required to provide [85]. The workers tend to lose confidence in the medical work that they are giving to the patient [86]. In addition to this, the reduction in the quality of offering the required services results in reduced motivation [87], [88]. The workers are also required to have the motivation to be fully functional in the work practices that are being carried out in the medical department [89], [90]. The frontline personals are humans and also require respect that allows in understanding in making them be fully functional during their work activity [91].

In addition to this, the workers also faced the fear of food, shelter, and healthcare as they have the notion that if they are affected, no person will look after their life [92]–[95]. This makes the personals not deliver the quality of service which they are appointed to offer to the patient [96]–[98]. In addition to this, brutal attackers are also being made to the frontline people if they do anything wrong during the treatment of the patient as there is a Situation that coordinates towards unethical practices related to making the people be aware of the mental torture which the health line works are facing [99], [100]. A number of issues in regards to making a number of work practices concerning improvement in the overall mental health of the works [101], [102].

The research shows that the first mental challenge, which the frontline personals faced, includes staying separately from their family members [103], [104]. It can also be said that there is more problem that comes to taking care of oneself as the personal healthcare keeps in mind that they are the only earning member and if they fall sick or lose their life it will be no one looking after their family member [105]. In addition to this, the situation arises when the workers are not being allowed to meet with other personnel to reduce the fear of the virus getting transferred [106].

2.4. The positive side of Covid-19 impact over frontline workers in UAE

Frontline workers recognized and rewarded in the UAE. The biggest heroes of the pandemic are frontline workers [107]. They've worked tirelessly to keep people safe and healthy, as well as to provide a sense of stability through difficult times [108]. Residents across the globe held monthly, even nightly, rituals in which they cheered medical personnel from their balconies every evening during the early days of the pandemic [109]. The novelty of these festivities fell off as Covid-19 outbreaks continued [110]. Despite this, hospital staff and others have continued to fight the health crisis, putting their lives on the line every day for the past nine months [111], [112].

2.5.The mission of the Frontline Heroes

Increasing public understanding of the critical role those frontline workers play during crises and emergencies, recognizing and appreciating their work and sacrifices, and taking care of their requirements and addressing their concerns [113]–[115]. Those operating on the frontlines in healthcare institutions, as well as in prevention and protection, are considered frontline heroes. It includes staff working in healthcare facilities including doctors, nurses, allied healthcare professionals (lab technicians, respiratory therapists, radiographers), as well as housekeeping, cleaning, and trash removal (porters, security, catering, administrative, pharmacists) [116]. It also covers people working in security and prevention, such as those engaged in crisis management, security, and emergency services, as well as frontline humanitarian organizations [117], [118].

2.6. 'HAYYAKUM' is a program that provides free tuition to the offspring of battlefield soldiers

Under the "Hayyakum" program, children of front-line healthcare workers will be given scholarships to attend public schools in the UAE. Scholarships will be offered from the 2020–21 school year through high school graduation [119]. It covers transportation, a laptop, and tuition. "Hayyakum" aims to provide frontline healthcare workers' kids with a top-notch education while simultaneously easing their parents' financial burdens and enticing them to stay in the UAE for a longer period of time [120], [121]. This program is a part of a bigger effort by the Ministry of Education and the Frontline Heroes Office to develop and carry out further education-focused program for the kids of frontline healthcare professionals while also securing long-term funding for the scholarship [122], [123].

2.7. Impact of Emotional Intelligence on HCWs during pandemic

HCWs are faced with difficult and stressful situations during the COVID-19 epidemic such as, the increased daily death rate, separation from their families, and the risk of infection [124], [125]. HCWs reported greater levels of psychological distress as a result, including anxiety, despair, sleeplessness, and emotional vulnerability [126]. Furthermore, it seems impossible to apply new rules and norms due to a lack of time and resources [127]. Even in this unique circumstance, though, using EI skills could only take a little while and have a big impact [128], [129]. As a result, health care CEOs are urged to use their interpersonal and personal abilities to develop positive relationships with their staff members such as:

- *Self-awareness of their own situation:* health-care executives should pay attention to their feelings in order to recognize difficult days and manage well. An accurate self-evaluation of mental and physical well-being could aid in making more informed decisions [130].
- *Paying attention to team emotions:* Health-care leaders should converse with their coworkers and listen to and watch their verbal and nonverbal communication. The HCWs' comments and actions could provide crucial information about their thoughts, emotions, and concerns, as well as their level of emotional exhaustion and discomfort.
- *Self-perception of their own interaction style:* When interacting with HCWs, health care leaders should pay attention to both the content of the messages provided and the communication methods employed (e.g., words and actions). The emotional and psychological conditions of HCWs may be influenced by the quality of leaders' interactions, which could have an impact on the organizational climate [131].
- *Support and knowledge of the team:* Health-care executives should spend time with their teams to learn about the requirements of HCWs and the workloads that are acceptable for them. It's very important to be sensitive to HCWs' perspectives and sentiments, especially in the context of crisis management [132].
- *Collaboration and teamwork:* health-care leaders should emphasize the importance of teamwork and schedule time for briefing and/or debriefing with their HCWs to discuss work difficulties and solutions. Each HCW's involvement is critical in developing a team spirit and performance based on shared values and common goals.
- *Guidance toward a new vision:* health-care executives should act as guides, understanding their HCWs' feelings, strengths, and weaknesses, deciding on a common

aim to pursue, and encouraging them to see the epidemic as a chance to learn and grow [133].

Given the difficult challenges that HCWs face around the world, EI must be implemented, which can only be accomplished by offering personalized training to health care leaders [134], [135]. EI skills can be learnt and developed through programs that combine theory and practice. The complexity of health-care institutions has grown. To cope with larger and longer-term pressures, health-care leaders must develop and deploy EI abilities [136]–[139].

2.8. General Research Model

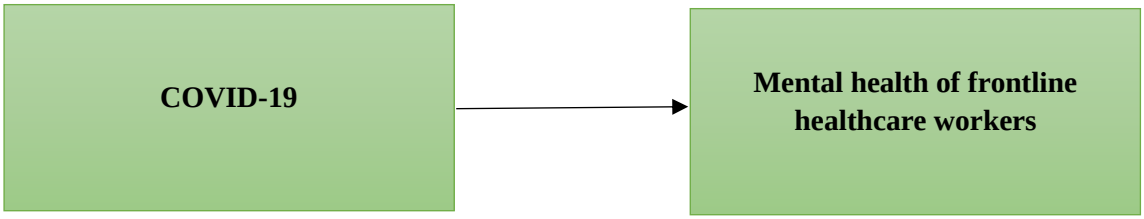

Figure 1: Conceptual Research Model

3. DISCUSSION

Lack of interpersonal communication causes healthcare professionals suffer from burnout and also experience a lack of self-control. Among the various other factors damaging the mental health of these health care givers, isolation and social distancing of front-line healthcare professionals who have to remain in quarantine (if infected) or quarantined (if infected) deprived the HCW from receiving any kind of social or emotional support from friends, colleagues, family etc. This is also linked with the sudden reversal of roles from being the caregiver and treating the ailing patients to becoming one of them creates a sense of loss of power, disappointment and helplessness among these HCWs.

The UAE has engaged over 80,000 important frontline employees in a unique initiative to give them with professional, psychological, and financial support in acknowledgment of their efforts. This includes mental health services, discounts, education, and benefits for the families of critical workers. Some UAE healthcare professionals will also be eligible for long-term visas

under other programs. To acknowledge the hard work and contributions made by frontline HCWs during Corona virus, golden visas were provided as a token of appreciation.

4. CONCLUSION AND RECOMMENDATIONS

After analyzing our topic through connecting provided information's, reasoning, and reflecting on concepts in the course through our understanding of the core issues in the case we need to provide suggestions and recommendation regarding the way of dealing with the impact of covid-19 on the mental health of frontline workers.

As a result of our research, we conducted suggestions for the frontline workers to deal with their mental health issues. During the covid-19 pandemic the frontline workers might experience pressure and stress which will lead to many damages. First of all, raising awareness among employees is important thing to do, for example The world health organization created a program for frontline workers to help them deal with their stress and pressure, they also created a list of important instructions, for example one of the instructions says "Be transparent with your manager, request the assistance you require, and educate yourself on your rights so that you can speak up for yourself." (***World Health Organization***), which is the right thing to do, communication is the most effective resource of having a stable mental health. Having such a program, educational posters that instruct the workers can Increase the awareness and help to the employees to control their mental health and create a healthy work environment. It can become difficult for frontline employees to cope with their daily activities so seeking for professional help can help workers to understand their emotions, what are the causes, and the professionals will suggest ways to deal with these problems.

Supporting each other is a good way to help with stress and pressure, because they have been at the same situation, so talking to someone knows exactly how it feels can create a healthy support system between employees, "Because of stigma or fear, most healthcare workers may face opposition from their families or communities. This could complicate an already difficult situation. Staying in touch with loved ones, particularly through digital means, is a good approach to keep in touch if possible. For social support, go out to your coworkers, manager, or other trusted individuals; your coworkers may be going through similar situations" (***WHO***)

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