

**Strategies and Associated challenges of Logistics Industry during Covid-19  
in Pakistan**



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A Business Project submitted in partial fulfillment of the requirements  
for the degree of Executive Masters in Business Administration

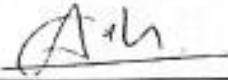
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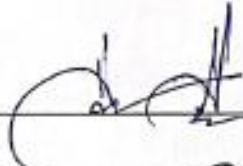
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## **ACKNOWLEDGMENTS**

I will take this opportunity to thank all those who have helped me complete this report. First of all, I would like to thank Allah who has always helped me in all my endeavors. This would not have been possible without the relentless support from my team at work who always stood up whenever I had to assign time to my studies, and my family for always encouraging me when I got exhausted from the work and study routine. The constant help from my supervisor Dr. Saleem Ullah Khan and his willingness to always come forward with all the help required made things a lot easier for me throughout this effort. Without his unconditional support I could not have achieved this. Last but not the least, the support and prayers of family has been a vital source of my success.

## **Executive Summary**

In socio-economic progress of a country, transportation plays a very essential role. The events in the transportation sector have great importance to achieve national socio-economic developmental objectives to provide employment, place of safety, and infrastructure. This sector is among most overlooked sector in Pakistan, but from last few years, there has been a great change by block chain and digital trucking. Pakistani transportation companies were far away from modern-day global practices and thus not investing on their human resource development. Lack of education and skill shortages among truck stations (addas) in transportation leads to problems like lack of skill to use technology, unjust compensation, high turnover rate, poor health and safety record, damages and losses, poor quality transportation services, low efficiency, etc., having effect on all stake holders such as Fast Moving Consumer Goods (FMCGS), Third Party Logistics (3PL) service provider, Truck Stations (addas), labor and warehouse staff. This study deals in assessing the efficiency of supply chain practices during Covid-19 in the Pakistan transportation industry especially various strategies, techniques, and associated challenges during the Covid-19 pandemic. Through interviews conducted from individuals of different transportation companies, the report ends with some recommendations based on the findings, which could be helpful for improvements in supply chain practices in the industry for training purposes and also for managers and executives to efficiently manage their workforce.

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## CHAPTER 1 - INTRODUCTION

The ability of recruiting, training, evaluating, and holding capable employee is a major part for winning businesses. In transport companies, employees are the extremely expensive assets. In the presence of resources such as financial resources, physical resources, and information resources, every person has different behavior. The individual and collective needs should be satisfied by the company or manager if employees are contributing for the completion of tasks and achievement of mutual goals of company. Human Resource Management department plays a key role. In an organization for developing employee's abilities, knowledge, professional and personal skills are important (Arashpour & Arashpour, 2011). Human resource management focuses on activities such as recruitment and selection, key employee identification, succession planning, mentoring, coaching, performance management, employee's career development and employee trainings (Purcell & Kinnie, 2007).

In transportation sector, Pakistan's traffic i.e. road traffic both passenger and freight has grown drastically. The road network has been extending continually. New motorways and freeways have altogether diminished the time it takes for products as well as individuals to arrive at their destinations. The accomplishments of specialist transport companies such as Daewoo, Faisal Movers, Bilal Travelers, and a lot of more local vendors have furnished buyers (i.e., offering customer's best travelling options) with best possible delivery options. Air routes have also incredibly increased due to private companies such as Air Blue, Shaheen Air, Serene Airways and Air Sial. Construction of Gwadar Port and up-gradation of new air terminals around the country paved the way for further development of the roads guaranteeing the construction companies for promising future. Although transportation sector has seen some advancement, still it is faced by man challenges. An extensive and comprehensive Public Transportation Strategy that covers all methods of transportation for both Metropolitan and Rustic vehicle is yet to be developed.

However, the transportation sector is still confronted with challenges such as metropolitan gridlock, absence of public vehicles, corruption, and other negative overflows from the transportation area, alongside security (particularly street wellbeing). Pakistan's transport system is highly dependent on road transport, which makes up to 90% of national passenger traffic (NPT) and about 96% of freight movement. Over the previous few years, road traffic including both freight and passenger has developed much quicker than the country's general economic growth. The Motorway Network and National Highway, which spans over a length of 10,849 km, contributes 4.2 % of the total road network (TRN) and carries 90% of Pakistan's total traffic. Road density (total length of road/ Total area) is a general indicator for the progress of a country's road system and parallel used as an index for success, economic activity, and growth. When compared with developed and developing countries, it is quite low in Pakistan, this fact is shown in figure 1. Pakistan, with a population of 220.9 million people, has a practically developed transport system, yet at the same time aims to double its present street thickness of 0.32-km/sq. km to 0.64-km/sq. km slowly over the course of the following 10 years.



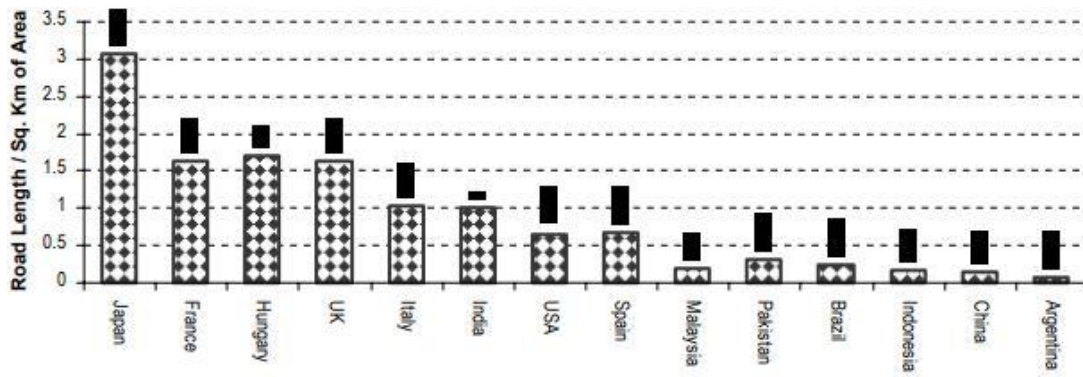


Figure 1: Road Density Comparison (Source: National Highway Authority)

### 1.1 Motivation Behind Study

Transportation industry hasn't been addressed well in the existing literature specifically in the context of developing economies. There is little empirical work conducted in relation to the HRM & Operation practices in the Transportation industry. Transportation industry is one of the most thriving industries in Pakistan which has developed into a very profitable and well-structured industry over the last few years because of the modern developments regarding infrastructures such as roads, highways, better warehousing facilities in the country. Moreover, the work in the transportation industry is contract and noncontract based. Thus, management of employees in this sector is a massive challenge. Over the years, the HR & operation practices in transportation industry have improved but still the lack effective use of technology, well planned HR processes and operation execution. The study was carried out during Covid-19, so, there were additional challenges of workforce management for HR & operations. This study explores these issues and proposes initiatives that could help the HR & Operations sector cater the various challenges regarding workforce management. In first step, the study focuses on the pitfalls and potential barriers. In the second step researchers identify strategies and initiatives for HR and operations at various levels to improve their process.

### 1.2 Objective of the Study

This study deals in assessing the efficiency of HRM practices in the Pakistani transportation industry especially in the Covid-19 context. After investigation of associated challenges and issues, the relevant recommendations are made which could be helpful for managers and executives to efficiently manage their workforce. Thus, this study adds value to the literature by focusing on Pakistani transportation industry and conducting interviews from the employees of transportation industry including Truck Stations (addas) and Fast-Moving Consumer Goods (FMCGs).

### 1.3 Organization of the Study

This project has five basic components, as listed in the figure. 2 below. The introduction deals with preliminary information about the project. The literature review discusses the existing practices in the logistics industry specifically setting China as reference. The result section details the actual practices and evaluation of these practices as well as providing

recommendations. The conclusion deals with outcomes of the study, implications, limitations and future research directions.



*Figure 2: Project Components*

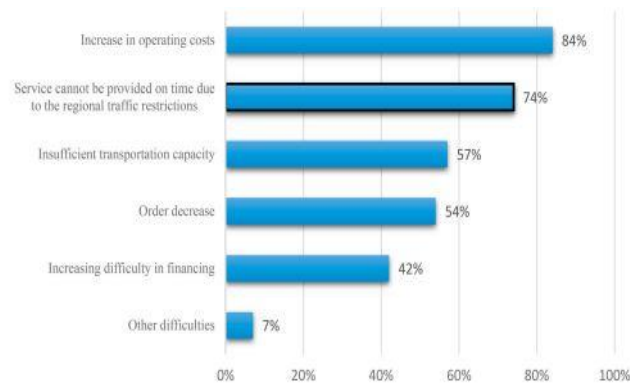
## CHAPTER 2 - LITERATURE REVIEW

The Corona virus pandemic brought incredible difficulties to the world economy and had an exceptional and inescapable effect on the logistics business. With regards to the progressive mitigation of the coronavirus in China, we noticed five effects on China's logistics industry, which are sharp drop in logistics demand, deficit of transportation limit, disturbance of logistics network, change of service mode, and expansion in operational expenses and number of loss-making ventures. In the post-covid time, China's logistics industry will grow quickly, prompting critical changes in five perspectives: demand of logistics, supply of logistics, logistics foundation or infrastructure, information of logistics, and logistics industry improvement and development.

### 2.1 Impacts of COVID-19 on Logistics Industry

Influenced by the quick government's control measures on individuals' versatility, there was a huge lack of labor forces in the logistics business. Accordingly, these disturbances have caused the deficiency of transportation limit. Additional proof for air transport, as indicated by the information reported by the Civil Aviation Administration of China (CAAC), throughout the Spring Festival, 412,000 flights were flown, with a normal of 11,302 flights each day, which was somewhere around 32 percent from a similar period last year. Broad control measures forced by the Chinese government to handle Corona virus lessen the spread of the infection as well as unavoidably remove transport organization. As displayed in Figure 1, CFLP (China federation of logistics and purchasing) overviewed the administrators of 100 Chinese street transport endeavors in February 2020, 74 percent of them expressed that they couldn't give transportation benefits on schedule because of the provincial traffic limitations. From one viewpoint, urban communities were secured, and the extent of transportation was significantly confined. On the other, the episode circumstance changes from one spot to another, and there were contrasts in neighborhood government limitations on transportation. Along these lines, it was hard for China to shape a bound together coordination network that upholds transportation during the flare-up.

To keep away from in person contacts however much as could reasonably be expected, buyers liked to buy necessities through internet businesses. For a similar explanation, new methods of logistics services were additionally developed such as contactless deliveries. On 26 January 2020, Meituan (one of the largest online food requesting applications in China) started to lead the pack in dispatching a contactless delivery in China (CNS 2020a). As per the 'Contactless Delivery Report' delivered by Meituan, contactless conveyance orders represent over 80% of the complete requests from January 26 to February 8 (Sina News 2020a).



*Figure 3: Key difficulties encountered by logistics enterprises during the outbreak.*

Source: China federation of logistics and purchasing. Report on impact of Covid-19 on road transport enterprises. <http://www.chinawuliu.com.cn/lhhzq/202002/18/493491.shtml>, 2020-2-18

The contrasts between contactless deliveries and conventional traditional delivery are displayed in Table 1 (developed by the author). According to the point of view of administration process, contactless conveyance requires the delivery person to deliver the products in the particular contactless region and convey them to the assigned area as indicated by the clients. According to the point of view of staff and hardware, contactless conveyance focuses on the safety of staff, their wellbeing, and the use of extra storage spaces. With respect to working expenses, since contactless conveyance requires more contactless offices, the underlying fixed venture cost of the activity is higher than the previous methods. These logistics endeavors need to take into account the control costs (for example the sanitization cost of delivery bundles, the development cost of contactless conveyance offices). Further, vulnerabilities in rush hour gridlock limitations make it hard to design transportation courses. As per data published by CFLP (China federation of logistics and purchasing) on 20-May-2020, lot of logistics organizations were suffering with great loss due to additional costs. Particularly, 57.6 percent of the SMEs (Small Medium Enterprises) have affected with losses, which has increased the industry average as per (CFLP 2020b).

	<b>Traditional Delivery</b>	<b>Contactless Delivery</b>
<b>Process</b>	Delivery person and merchant, Delivery person and customer are both face to face delivery.	Delivery person picks up goods in specific contactless area, delivers them to the designated location as required, and takes a photo to inform the customer.
<b>People in contact with goods</b>	Visualization and traceability of goods delivery process.	Visualization and traceability of health information.
<b>Delivery equipment</b>	No requirement.	Smart parcel lockers, unmanned vehicles ,etc.
<b>Delivery Time</b>	Long	Short

<b>Fixed Investment Cost</b>	Small	Large
<b>Variable Delivery Cost</b>	Large	Small

*Table 1: Comparison between Traditional Delivery Vs. Contactless Delivery*

## 2.2 Driving forces for the changes in the logistics industry

There are important factors that lead to modern advancement and improvement. With respect to the China's logistics industry, three main factors can be noticed which are request pull, technology-push, and strategy support. These factors were also seen in Pakistan context to some extent. With respect to global market interest, in light of the fact that numerous nations had shut their boundaries, international logistics are enormously limited. As the pandemic was progressively taken care of, worldwide transportation exercises started to some extent. It will improve participation between nations, which will prompt a more steady, organized and practical structure for the logistics industry. The development of smart logistics technology has become a new driving force in the logistics industry, given what the industry has encountered in terms of its potential during the COVID-19 outbreak. Smart logistics refers to a logistics system that realizes independent analysis, decision-making, and execution by applying smart technologies and devices (Kirch et al 2017; Pan et al. 2020). In smart logistics, smart terminal devices, such as Unmanned Aerial Vehicle (UAV) savvy package storage spaces, have been conveyed, and advances like enormous information, cloud computing, block chain and AI have turned into the critical advances for the improvement of China's logistics industry. For instance, JD.com has assembled 28 'Asia One' brilliant logistics communities, which have accomplished over 90% computerized activities (Xinhua News 2017) and are more than three times more productive than conventional distribution centers (Sohu News 2019).

In the post-COVID-19 period, by taking care of the emerging issues, logistics industry will grow such as new advances, new methods of administrations, and new approach climate (CFLP 2020c). Along these lines, as indicated by the hypothesis of current logistics administration framework (He and Liu 2018), bigger economies such as China will experience changed patterns in five angles: logistics request, logistics supply, logistics framework, logistics information, and logistics industry improvement (figure 4). Similar impacts can be expected in other parts of the world including Pakistan although the infrastructure in Pakistan needs to be developed significantly for these changes.

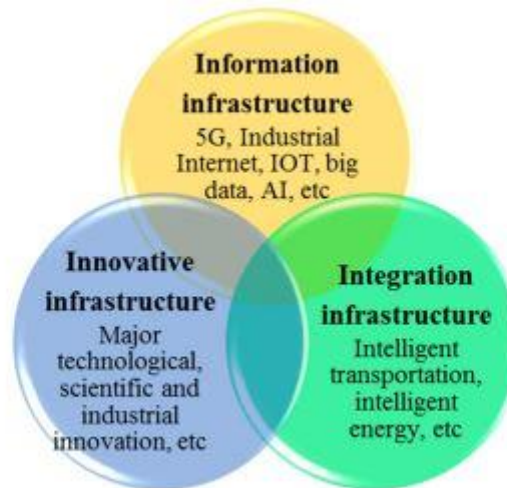


Figure 4: The Composition of China's new infrastructure construction project (Source: [http://m.xinhuanet.com/gd/2020-05/27/c\\_1126041680.htm](http://m.xinhuanet.com/gd/2020-05/27/c_1126041680.htm), 2020-5-27).

The new business needs produced during the COVID-19 has broadened the logistics horizon. From one viewpoint, more customers have encountered new logistics administration modes during the episode (for example contactless delivery), which will speed up the development of an ever-increasing number of contactless offices (for example shrewd package storage spaces, conveyance robots/UAVs). Then again, the COVID-19 pandemic has brought about numerous logistics endeavors highlighting the significance of close collaboration with upstream and downstream production network accomplices. For instance, during the COVID-19, JD.com, Suning and Cainiao, which have self-fabricated warehousing frameworks, stood apart among numerous logistics organizations. These companies have full-connect, complete inventory network administration capacities, which gives logistics administrations freedom to manage business. Versatile logistics endeavors will be focused on building a complete framework to guarantee the adaptability of the store assistance network. Some driving logistics undertakings have generally conveyed enormous information, AI, 5G and other important advancements to work on functional effectiveness in crisis (Sina News 2020d). Advancing the application of savvy gear and innovations won't just further develop the crisis support limit in general wellbeing occasions and cataclysmic events, yet in addition speed up the general improvement of logistics industry. In post pandemic, increasingly more logistics undertakings will speed up the usage of AI based techniques.

Logistics undertakings with high inventory network development exhibited their ability in quick reaction and dispatch during the flare-up; consequently, the public authority and undertakings will focus on their emphasis on this. Starting around 2018, the Chinese government has coordinated 266 undertakings to lead inventory network development and pilot projects (Ministry of Commerce of China 2020b). Inventory network development covers mechanical and administration model advancement, which have been broadly investigated. For example, JD Logistics utilizes block chain innovation to advance item recognizability, and Suning Logistics carries out the arrangement of worker sharing, which not just tackles the momentary labor force deficiency yet additionally lightens the work tension of society.

## CHAPTER 3 - METHODOLOGY

For purpose of what challenges faced by logistics industry in Pakistan during Covid-19, I have gathered primary data with help of face-to-face interviews and online interviews using an interview guide. As most of peoples associated with logistics business in Pakistan specially with road freight are illiterate, I developed simple and easily comprehensible questions for their better understanding to collect helpful data for my research work. Secondly, the pandemic was a first experience for everyone to face and accordingly develop policies & regulations. This project is limited to road freight logistics, inbound and outbound logistics details of which are provided in table 2.

Inbound Logistics	Logistics that carries raw material from market to production plant.
Out Bound Logistics	Logistics that carries finished goods from production plant to other factories and warehouses.
Primary Logistics	Logistics from factory to warehouse is known as primary logistics.
Secondary Logistics	Logistics from warehouse to supermarket is known as secondary logistics.

*Table 2: Explanation of freight logistics, inbound and outbound logistics*

### 3.1 Data Collection

Qualitative data collection methods such as meetings and interviews, are viewed as more proper for getting amore deep knowledge of a subject under focus when contrasted with quantitative techniques such as polls. Interviews are the most proper data collection technique to be adopted when point by point experiences are expected from individual members. For the current research, semi-structured interviews were conducted with managers, drivers, laborer, helpers, supervisors, and senior staff of the different industries of logistics and supply chain area. An interview guide with open ended questions was developed to have a sound understanding of the subject.

The respondents were chosen based on the contact points of the author as he himself works in this sector. Further snowball technique was used to select the key respondents for this study. The target people were contacted through WhatsApp , emails, phone calls. Based on availability, a total of 20 interviews were conducted. The span of each interview was somewhere in the range of 50 and 70 min. The interview questions were sent shared with the respondents, so they could get ready and if they have any queries regarding the questions, those could be sorted out. The interviews were recorded and interpreted subsequently. Besides, notes were also taken during the interviews and later matched with the findings of the interview as

well as used for integrating all the emerging themes for analysis purpose. After writing down all the findings of the study, the results were sent to respondents for their feedback and corrections in the transcribed information.

### 3.2 Details of the respondents

To collect useful primary data, I interviewed persons directly related to logistics business or who were indirectly related to logistics operation.

<b>Sr. No</b>	<b>People directly related to Logistics business.</b>	<b>Responsibilities</b>
1	Driver	Two drivers on a truck are responsible for vehicle safe transit.
2	Helper	To help driver completing journey within time.
3	Supervisor	Supervising a small group of trucks normally a fleet of 10 trucks.
4	Workshop Supervisor	Caretaker of truck repair & maintenance.
5	Assistant Manager	Responsible for all smooth operations of logistics including closing of trip.
6	Logistics Manager	Heading a region with a small fleet size providing 3PL service to customer.
7	Regional Manager	Heading & controlling several regions.

*Table 3: People directly related to logistics business.*

<b>Sr. No</b>	<b>People indirectly related to Logistics business.</b>	<b>Descriptions</b>



1	Local Addas	They are brokers that arrange supply orders for transporters to lift and deliver stock at customer's premises. They personally don't have any fleet of trucks.
2	Computerized Weight Balance	They provide facility to check and confirm weight of loaded and empty vehicle.
3	Labor	Group of people that load and unload trucks in warehouses or factory premises.
4	Fast Moving Consumer Goods	Includes all companies that provide products for end consumer.
5	Exercise & Taxation	Authority that holds power to permit or stop any truck due to lack of documentation of route permit, fitness certificate, insurance certificates and vehicle token tax.
6	Traffic Police	Responsible for penalizing any truck driver due to violation of traffic rules.

*Table 4: People indirectly related to logistics business.*

The interviewing session spread over pharmaceutical Industry, Fast moving consumer goods (FMCGs), Food & Beverage Industry, Oil Companies and Logistics Companies. The table below shows the details of the people associated with logistics along with their organization and designation who responded to us for this research to collect data.

<b>Interviewee</b>	<b>Participants</b>	<b>Organization</b>	<b>Designation</b>
1	Islamabad	A	Trade Marketing Manager
2	Faisalabad	B	Saffron Pharmaceutical
3	Islamabad	C	Area Sales Manager
4	Rahim Yar Khan	D	Assistant Key Account Manager
5	Lahore	E	Supply Chain Manager
6	Lahore	F	Assistant Manager Platform
7	Islamabad	G	Branch Manager
8	Sheikhupura	H	Owner of Company
9	Tarnol	I	Operations Manager
10	Sheikgupura	J	Owner of Company
11	Islamabad	K	Owner of Company
12	Islamabad	L	Owner of Company
13	Islamabad	M	Owner of Company
14	Sheikhupura	N	Owner of Company
15	Hattar	O	Operations Manager
16	Sheikhupura	P	Physical Logistics Manager
17	Sialkot	Q	Owner of Company
18	Lahore	R	Owner of Company
19	Rawalpindi	S	Supervisor
20	Karachi	T	Logistics Manager

*Table 5: Interviewing list of people associated with logistics.*

## **CHAPTER 4 - RESULTS**

In this section, we will detail all the responses and findings elaborating the challenges faced during Covid-19 in logistics industry of Pakistan:

### ***4.1 Declining revenues***

The term refers to those where were generating maximum revenue and will be getting less revenue as per upcoming months or years. In other words, it simply means that logistic companies would make a loss as covid -19 continues. Most of interviewees told us that as pandemic started and spread vastly, everything shut down due to lock down initially implemented by Government of Pakistan. All type of dispatches except food and beverages (F&B), all other dispatches related to business to business, business to customer, customer to business, primary and secondary dispatches were stopped because of strict bans and strategies implemented all over cities and areas by

traffic and local police to stop people coming out of their homes and getting in touch with environment which ultimately affects logistic operations hence resulted in low customer transportation orders to 3pl (Third Party logistic) provider, for this reason less margins and declining profits.

### ***4.2 Import and Export orders reduced.***

According to WHO website current outbreak of coronavirus disease (Covid-19) that was reported firstly from Wuhan, China on 31 December 2019. And the first case of COVID-19 was reported from Karachi on 26-February, 2020 which started spreading fastly. Mostly FMCGs working in Pakistan purchase their raw material for finished goods from other countries mostly from China. Hence during covid-19 period a lot of countries including China banned their geographical region for entries of raw and other products to stop and control virus, which ultimately reduced import and export order of every country including Pakistan which resulted zero or reduced dispatched orders from port Qasim to manufacturing plants and vice versa.

### ***4.3 Reduced local market dispatch orders across Pakistan.***

As the first lockdown was implemented by Government of Sind in the province for 14 days form 23 March 2019, ordering all public transport, markets, offices, parks include all gathering places to stop operational activities. Later, smart lock downs were imposed in all provinces and cities depending upon virus affected localities.

General public in Pakistan started to store products and items used for daily needs, because of the fear that markets will be closed for lockdown period and hence no supply of consumer products. Moreover, things will become more expensive due to shortage of food and grocery items. Labor shortage due to sickness and lockdown measures to stop spreading virus affects markets and all other business to close related to consumer products which ultimately results

in reduced or zero local market dispatch order across Pakistan hence affecting transportation business.

#### **4.4 Food and Beverage (F & B) Supplies Only.**

As lockdown continued in every city and provincial government immediate felt a need to make a policy regarding food and beverage supplies across Pakistan. The Government advises all FMCs to start food processing unit which were earlier stopped in lockdowns. Shortage of raw material and labor shortage were also a big bottleneck. Every food processing unit made special covid policy to run production units and resumed food supplies operations from factories to markets through improved supply chain and transportation networks.

<b>Sr. No</b>	<b>Type of supplies</b>	<b>Logistic Operations during Covid-19</b>
1	Food & Beverage (F & B)	Only supplies globally running.
2	Import & Export	Reduced supplies.
3	Local Market Orders	Limited orders.
4	Raw material	Reduced and limited.
5	Medicine & devices	Increased orders.
6	health & Care	Increased orders.
7	E-Commerce	Increased orders.

*Table 6: Impact of supplies during Covid-19*

#### **4.5 Ecommerce business started increasing in Pakistan.**

As covid-19 started to rise faster and hit peak where record breaking number of patients affected across Pakistan with in current pandemic, there exists a need for faster and better service provider to supply basic necessity that includes grocery items, medicines, fruits and vegetables, dairy products etc on their door step ,which ultimately led the companies to indulge in E-Commerce platforms (table 7) .On the other hand buyer decision making process changed dramatically during the pandemic.

<b>Sr. No</b>	<b>Name of E-Commerce Companies</b>	<b>Websites</b>
1	Daraz	Daraz.pk
2	Dastgyr	dastgyr.com
3	Tajir	tajir.app
4	Airlift	airlifttech.com
5	Bazaar	bazaar-tech.com
6	Food Panda	foodpanda.com
7	Cheetay	cheetay.pk
8	Jovi	jovi-app.com
9	Jugnu	jugnu.pk
10	Goto	Goto.com.pk
11	Ali Express	Aliexpress.com
12	Telemart	Telemart.pk
13	Shopon	Shopon.pk

14	Homeshopping	Homeshopping.pk
15	Ishopping	ishopping.pk
16	Yayvo	Yayvo.com
17	Symbios	Symbios.pk
18	Vmart	Vmart.pk
19	iBucket	iBucket.pk
20	Krave Mart	Kravemart.com
21	Amazon	amazon.com
22	Dawaai	Dawaai.pk
23	Grocer App	GrocerApp.pk
24	Price oye	Price oye.pk
25	Baby Plannet	Baby Plannet.pk
26	24seven	24seven.pk
27	Shopistan	Shopistan.pk
28	Kamyu	kamyu.pk
29	Medical Store	Medical Store.pk
30	Lootlo	lootlo.pk

*Table 7: Names of E-Commerce Companies*

Buyers are conducting extensive research online before speaking to salesperson or visiting a shop. While internet makes business easier and faster as buyers make more direct purchases online via Smart Phone and do not physically visit shops and stores. Hence, online stores decreased the need for warehousing and stores, which ultimately affected reduced logistics orders across Pakistan. Hence revenues decreased and net profits were very low.

#### **4.6 Training issues**

The pandemic addresses the greatest danger to lives, occupations and economies since the Second World War (WWII). It is as of now quickly reshaping social orders and economies, changing the manner in which individuals collaborate, the manner in which they work and the textures of their lives. As we understand the fact that people in logistics sector of Pakistan related directly or indirectly are mostly illiterate. There are very few developed HR - Departments in some companies and HR department do not exist in most of the logistic companies or in distributions. Hence it was a big challenge for logistic companies how to train drivers? Arranging training sessions for drivers and workshop staff related to current pandemic was another challenge for logistics companies.

<b>Sr. No</b>	<b>Global health will be different because of Covid-19</b>
1	Freedom of movement of people and goods could be restricted
2	It could lead to more outbreaks of other infectious diseases
3	The private sector may see a permanent shift towards stakeholder capitalism

4	Global health innovation could accelerate
5	Immunization efforts could be strengthened as a covid-19 vaccine is developed and deployed

*Table 8: Covid Effects on Global Health*

#### **4.7 SOP Creation and Securing Logistic Business**

It was very difficult for logistic companies to specially design SOPs that secure revenues in logistic business because in logistic operations it's difficult to stop sharing of evidence of delivery of goods document. Invoices that contain actually details description of goods need to be checked by different peoples across the chain from the product site to the delivery location. Hence there was a big chance of spreading of virus through invoice paper. Furthermore, what SOP was to develop for entering vehicle in loading premises (Factories) and leaving unloading premises (warehouses). Devising SOP regarding vehicles and safety measures of drivers was also a big challenge. The SOP need to be created for:

- Satisfactory Health parameters, working environment and conditions for logistic staff.
- Cash collection at time of delivering stock at customer premises.
- How to avoid face to face interactions and skill development?
- Damage or shortage issues

Creation of these SOPs during Covid-19 was challenges that create resistance in securing revenues in logistic operations.

#### **4.8 Securing Operational Areas**

Operational issues in business are problems that can create waste and affect profitability. Further, they can drain company resources, impact operational performance, and hinder growth. Below are some categories of operational issues as revealed from the interviews:

- a) Culture
- b) Waste
- c) Quality
- d) Delay
- e) Control

Considering that activities assume a significant part in expanding the worth of your organization and assisting you with procuring a benefit, these issues should be handled in the near future. Any other way, you'll never arrive at the degree of accomplishment you merit. More terrible, you could wind up closing down the business you've endeavored to construct. The table 9 explains the details of these issues in relation to above operational areas.

#### **4.9. Performance Management of Drivers**

In Pakistani culture, two types of business model can be seen one is cooperate culture business organization and second one is seith culture business (An entrepreneur who runs business and is illiterate) organization. In cooperate culture organization we can see each department with clearly defined job description of each employee. On other hand, we have seith culture business

organization where may be one person heading all department activities and with no defined job description of each employee. In Pakistan, majority of logistic companies operating are seith culture business organization where there is no concept of monitoring and rewarding for performance management of drivers and other staff. So, in time of Covid-19, this raised a great challenge for Human resource professionals to make proper HR policies for drivers to retain, monitor and reward for their performance management in the presence of high risk of life threat.

<b>Sr. No</b>	<b>Issues</b>	<b>Description</b>
1	Out of control over head costs	Every company has overhead costs, though the amount can vary depending on size, industry, etc. If you allow overhead costs to get out of control, they can have a negative impact on your company's profitability and lead to a significant net loss.
2	Too much Waste	Excessive waste is one of the most common operational issues in business. When time, labor, and materials are either being used ineffectively or being wasted, it can impact your company's bottom line. Additionally, too much waste can prevent you from scaling your company, focusing on the bigger picture, and increasing productivity.
3	No performance monitoring	When you don't monitor performance, there's no way to accurately measure how well your company is doing. Further, it becomes easier for staff problems to go unchecked. As a result, your company's profitability could experience a decline without you knowing the root cause.
4	Unstable Cash Flow	Failing to maintain a healthy cash flow can make it difficult (if not impossible) for your company to survive. Without the proper funds, you may find yourself unable to pay your utilities, cover staff salaries, or afford materials. In short, unstable cash flow can prevent your company from being able to function properly, especially in the current landscape.
5	Lack of planning	Another one of the most common operational issues in business is a lack of planning, particularly for periods of uncertainty. Neglecting to account for downward trends, slow seasons, and even economic downturns can put your company in a precarious position.

*Table 9: Operational Issues*

In first phase of covid-19, everything seem going to close, a situation of smart lockdown. Labor and drivers used to travel back toward their villages and small towns .There rises a shortage of labor on loading docks and unloading docks .On other hand

in production units specially in food and beverage plants labor was limited and was managed in shifts that causes delays in loading of finished good stocks in containers and trucks .Same situation on warehouse end labor shortage and limited according to covid SOP which causes delays in unloading of stock. Furthermore, shortage of drivers also affects transit times as there was only one driver on single prime mover, and they have to reach distribution after loading from factory within defined transit times.

#### ***4.10 Digital Trucking and new entrants in market***

In Covid-19, many businesses have been shut down, many businesses models have been restructured and many new businesses models entered consumer market. So, market share of any type of industry during Covid-19 got shrunked, squeezed, and stretched depending upon situation of new entrants, available players and players exiting from the market.

<b>Sr. No</b>	<b>New Entrants in freight logistics</b>	<b>Type</b>
1	Momentum Logistics	Finished goods Containers
2	Pyramid Logistics	Finished goods Containers
3	Faisal Mover Logistics	Open body & Finished goods Containers
4	Keep Trucking Inn	Digital Trucking
5	Truck Sher	Digital Trucking
6	Tenth Wheel	Digital Trucking
7	Wahyd Logistics	Digital Trucking

*Table 10. New entrants in freight Logistics in Pakistan*

Same situation occurred globally as well as in Pakistan in logistics industry. As borders of foreign countries have been sealed to avoid spread of virus from other countries there creates a situation for many vendors to stop dispatching of export products and to think of restructure of business models. During this research I found a company named “Alpha” working in vicinity of Faisalabad which was exporters of socks to international brands such as Adiddas and Nike started operations in February 2020 in logistics industry with a name Momentum Logistics. Furthermore, there are many other logistic players which were running operations in passenger buses and due to hold of operations by Government of Pakistan switch their core business to freight logistics for example now we can see prime movers and containers of Faisal Mover Logistics (FML) before it was seen working only in passenger buses. Another example of companies operating in oil trucks now also started working in finished goods containers. So, entering freight logistics market or switching to freight logistic market from any other type of businesses was a major threat and a big challenge for vendors currently operating in freight logistics market which ultimately effects revenues and resulted in decline in net profits. Digital trucking is one of game changer move in Pakistan Logistics Industry. In past trucking occupation used to be related with illiterate people. But now in recent times due to increase competition in supply chain industry, high customer demands and keeping record of each transit multiple companies entered

in digital trucking in Pakistan. In table 11, I mentioned some features which make digital trucking more successful in Pakistan during Covid-19 and which ultimately creates huge challenge for old logistic players to survive. Hence, affecting their revenues and net profits.

<b>Sr. No</b>	<b>Digital trucking features</b>	<b>Beneficiaries</b>
1	Electronic proof of delivery (ePOD)	Gains for Shipper.
2	Improved cash flows for clients.	Gains for Transporter.
3	Digital Agreement	Mutual gains for shipper & Transporter.
4	Smart Contract	Mutual gains for shipper & Transporter.
5	Record of freight history	Mutual gains for shipper & Transporter
6	Open Enterprise Logistic Models (OEL Model)	Mutual gains for shipper & Transporter
7	Subcontracting 3PL contracts	Gains for Transporter
8	Block chain	Mutual gains for broker, shipper & Transporter.
9	Guarantee business availability	Gains for Transporter.
10	Fleet Management solutions	Gains for Transporter.
11	Affordable prices point	Gains for Shipper.
12	Simplified entire value chain	Mutual gains for broker, shipper & Transporter.
13	Transparent costing	Mutual gains for shipper & Transporter.
14	Dashboard for all your previous and upcoming bookings	Mutual gains for shipper & Transporter.
15	Secure and convenient payment methods	Mutual gains for shipper & Transporter.
16	Updates and notifications	Mutual gains for shipper & Transporter.
17	Cost saving	Gains for Shipper.
18	Flexibility and reliability	Gains for Shipper.
19	Live tracking and digital insights	Gains for Shipper.
20	Reduced carbon footprints	Gains for Shipper.
21	Revenue boost	Gains for Transporter.
22	Easy Payments	Gains for Transporter.
23	Reduced payment times	Gains for Transporter.
24	Value added services	Gains for Transporter.

*Table 11. Digital trucking features*



## CHAPTER 5 - ANALYSIS AND RECOMMENDATION

### 5.1 Increase in revenues

Covid-19 starts in December 2019 and now it is about three years from the date spreading this virus. People from different countries survived during these two years and this virus has become a part of life as like other viruses present these days. So, we must make policies for transportation business to adopt change and work accordingly to previous as before start of Covid-19 to increase revenues in transportation business. Below are mentioned some business techniques as an outcome of the findings which can be adopted by logistic companies.

- By doing electronic ads or screens on vehicle container help us increase in revenues.
- Allowing local business and brands to paint on containers help us increase in revenues.
- By using vehicle containers as warehouse in case of no empty space in warehouse charging per day by transporter.
- By offering on demand services door to door (last mile service).
- By charging per kilometer freight to shipper.

As still we are running through Covid but with different variant such as Omicron and on other hand we don't know when it will be a suitable condition for life on earth i.e. covid free environment. Only way to increase export and import orders are Government should make policy for necessity items (such as edibles, medicines, fruits, cereals etc.) in case of lockdowns which can be allowed but issuing permit, so that it creates a pathway for transporters to transit from different areas of Pakistan to Port Qasim, hence increasing export orders helping transporters to increase in revenue.

### 5.2. Contactless deliveries

It's a new concept in Pakistan as well as already this model has been implemented in China as referenced to literature review. Local market orders of transportation were reduced from factories to shops because of lock down in cities hence affecting customers to buy products in bulk and store in houses. Solution to this problem is "Contactless deliveries". In this process, delivery person picks up goods in specific contactless area, delivers them to the designated location as required, and takes a photo to inform the customer. Further benefits of contactless deliveries are as follow:

- Visualization and traceability of health information.
- Delivery time is quite short.
- Variable delivery cost is small.
- Smart parcel lockers and unmanned vehicles.
- Fixed investment cost is large but in long run it is off no value.
- Less human resource required.

In the beginning of Covid-19, everything seems to be going in state of closing, especially in situation of lockdown when complete areas and cities were closed with proper announcement of governmental officials only general stores, pharmacies and eateries were to be opened. In this situation food and beverages (F & B) supplies were later announced by government to transport from factories to warehouses which ultimately causes decrease in revenues. As already mentioned in literature review as well as concept of contactless deliveries can also be applied in same situation to warehouse and factories

as manual loading and unloading of vehicles were done by labor which can be replaced with stock lifter and palletized stock same process can be done on other side. Hence all type of general consumer supplies can be done while maintaining transportation revenues.

### ***5.5. Expansion of E-commerce business is no threat.***

During Covid-19, Increasing online stores due to lockdown in Pakistan and across globe is no threat to transportation business. It is only the change of mode of transportation due to need of hour. In other words primary logistics business is transferred to secondary logistics business. Hence decrease in revenues in primary logistics, on other hand increase in revenues of secondary logistics. It also impacts local market consumer orders but increase in online stores i.e., food panda, daraz, airlift etc. orders. Many big tech giants are making digital apps through collaboration with big transportation companies and finding new ways of trucking with help of block chain to get more and more controls over shipments in Pakistan making it successful, hence, it creates need for more educated people to work in such environments which will ultimately replace illiterate people with literate one in supply chain industry. On other hand, soon there will be better human resource departments engaging, developing, and training to people and culture in logistic companies. Below are some of drilling and training exercises I am suggesting which will help in current pandemic to deal with while ensuring safety and health of employees in transportation companies.

### ***5.4 SOPs for Logistic Companies***

- Laying off 2nd driver and helper from long vehicles (Before 2 drivers and 1 helper).
- Temperature check of each driver at entrance of loading docks. (Warehouse & factories).
- By disinfecting driver cabin and container every time at time of loading. (Almost 3-4 times a week)
- Special permission letter copies to driver which allows governmental approvals for on road transit during lock down. (Certificate/Approvals)
- Wearing mask and gloves necessary at loading time. (In warehouse and factory areas)
- Disinfecting driver every time he returns to office for submission of PODs. (At time of closing of trips).
- Social distancing to maintain and implement with in loading, unloading, rest areas on highways, driver hotels and stops and gas stations.
- Stop use of thumb impression machines for attendance purposes. (to be marked online on WhatsApp by sharing current locations in office whatsapp group).
- Multiple shifts in workshops cooperate offices, warehouses, factories to avoid interactions between staffs.
- Working with 50% staff by offering residence in office premises for a week.
- JDs enhanced by rotational duties.

<b>Tenure &amp; Type</b>	<b>Trainings &amp; drilling exercises</b>
<b>Phase 1</b>	➤ No Trainings.
<b>Alpha</b>	➤ Work from home.
B.1.1.7	➤ Categorizing employees in teams.
	➤ Washing hands for 10 minutes at least.
<b>Phase 2</b>	➤ Trainings for drivers how to maintain social distancing.

<b>Beta</b>	➤ Working in paper less environment in cooperate offices to stop spreading virus. (Use of different apps)
B.1.351	➤ More training to strongly implement health and safety practices.
	➤ Use of warm water and effective ways to disinfect.
<b>Phase 3</b>	
<b>Gamma</b>	➤ Laying of staff, employees, labor and other wagers.
P.1	➤ Vaccination drives at governmental levels.
<b>Phase 4</b>	➤ Vaccination drives at governmental levels.
	➤ Vaccination drives at individual level by different organizations to their employees with help of NCOC.
<b>Delta</b>	
B.1.617.2	➤ Issuance of vaccine certificates.
	➤ Verification through Nadra and Online portal.
<b>Phase 5</b>	➤ Booster dose for above 30-year aged people.
<b>Omicron</b>	➤ Vaccination drives for helpers.
B.1.1.529	

Table 12: Covid-19 Phase wise practices

### 5.5. Performance Management of Drivers and adopting change

Some types of jobs are not very rewarding in the context of developing countries such as job of a security guard, job of a helper etc. Same is applicable to heavy truck drivers. On one hand, they are paid very less and on the other hand, they travel thousands of miles and stay on roads to deliver stock. As very few transportation companies have proper human resource departments, which can help to gauge and manage driver performances. Few big firms, institutes and transportation companies have taken initiative to offer services of trainings of drivers as well as they also have started monitoring drivers performances. Motorway Police has also made National Highways & Motorways Police Training College, Sheikhpura for trainings of heavy vehicle drivers. On other hand few big transport companies such as Capital Marketing Services (CMS), Bashir Sadiq Logistics (BSL), Daewoo express etc. have developed driver training schools where there are proper short courses related to driving manuals of different vehicle, health & safety standards related to on road driving, on road sense of driving etc. Furthermore, most of transport companies have tracked fleets which means that tracker companies such as E-Drive, Nexer Tech, TPL etc. have already given online web based and mobile portals to customers for multiple type of updates and notifications, which ultimately helps FMCGS and transporters to verify and gauge performances management of drivers during driving and idling throughout journey. Below are some bases on which we can check and incentivize performance management of drivers:

1. Kilometer travelled on daily and monthly basis.
2. Harsh braking during driving hour.
3. No of times over speeding during a month.
4. Traffic police and exercise & taxation Challans.
5. Idling time during journey or a complete round trip.
6. Achieving transit time of a complete trip.
7. No of trips during a month verses target.
8. Revenue generated by each driver during a month.
9. Halting time throughout month.
10. Workshop expenses throughout month.

11. Diesel consumption and analysis.
12. No of trips in hilly areas throughout month.

Above all types of data for performance management of drivers can be checked and fetch through IOT and tracker portals. On other hand in big transport companies, they have already maintained their operations room for reporting of big fleet size vehicles. Where they already make different types of report with help of tracker data. One such big report that contains all type of stuff that required for performances management of drivers is (VMR) Vehicle movement report and (TCR) trip closing report. As already discussed above that during peak time of covid and lockdown in several areas across Pakistan caused shortage of drivers and loading staff as people went back to their villages and small towns. Recommended solution for shortage of drivers is to implement concept of relay logistics. Each driver along with loaded truck have to travel to some kilometers without taking rest after that driver is changed and other driver will driver truck throughout destination. Same procedure will be done on return trip. For instance considering route:-

- Karachi to Islamabad (First Load 1600 Kms)
- Islamabad to Karachi (Return Load 1600 Kms)

No of Kms Travel	Driver Changed as per defined Kms.
0 -----400 Kms	Driver 1
401 -----800 Kms	Driver 2
801 -----1200 Kms	Driver 3
1201 -----1600 Kms	Driver 4

No of Kms Travel	Driver Changed as per defined Kms.
0 -----400 Kms	Driver 4
401 -----800 Kms	Driver 3
801 -----1200 Kms	Driver 2
1201 -----1600 Kms	Driver 1

*Table 13. First and return load makes complete one round trip.*

Furthermore, as we know that shortage of labor on loading and unloading docks creates high loading and unloading times. Recommended solution for this is to change manual loading process with palletized loading with help of lifters on warehouses and factories as well that will reduce loading and unloading times as well reduction in wages as well, hence implementing contactless deliveries concept as mentioned in literature review.

Adopting change is very important for each and every type of business for their existence in particular business sector. So, companies those who switched from any business sector or transformed from passenger buses services to road freight logistics during covid and in lock down scenario has done excellent because its need of an hour to sustain business. On other hand as already discussed, market share in every business sector is squeezed, stretched, shrinked or spread among existing players

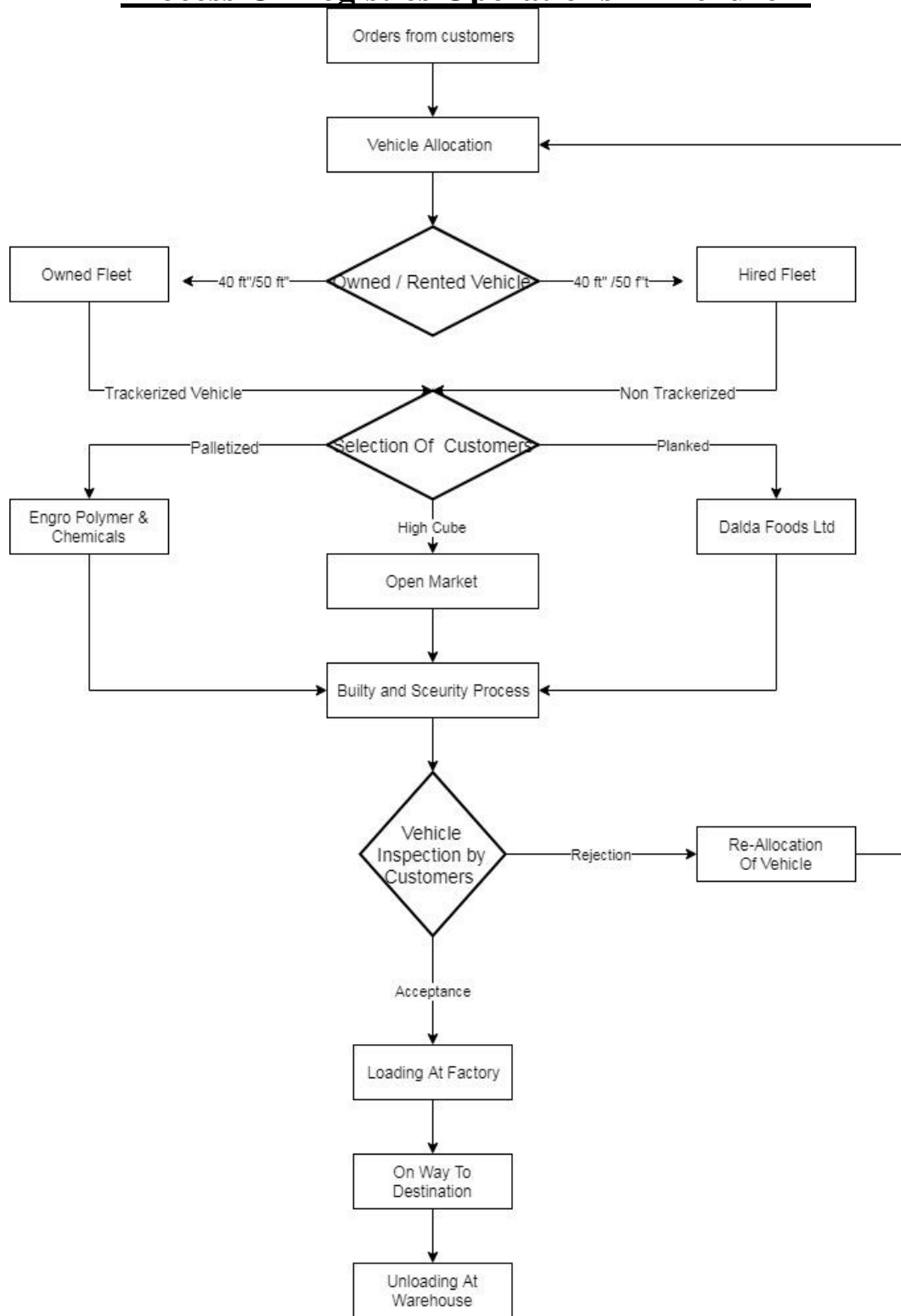
performing with in single business sector, while some new players enter market some players take exit from market sometimes there may be seasonal variation which also affects net margins and impacted in reduced revenues. So, this is a normal behavior of market and is not challenge raised by covid. In Pakistan, transporters who have big fleets of trucks and trailers maintaining their vehicles under their own workshops also have direct contractual lines with shippers such as FMCGS, Oil Companies, Manufacturing firms etc. Big fleet transporters also have their own tracking portals to trace shipments and keep updated about vehicles journey by connecting with their own tracking room. So, digital trucking has no impact on big fleet transporters. On the other hand, in Pakistan, there are transporters who have small fleet size or have single vehicle fleet, who does not have contractual lines have an opportunity to connect with digital trucking and get cash loads on better freights than open market without wasting their time in search of load with help of addas. Furthermore, these single fleet transporters do not have tracking portals to trace shipments and do not remain updated about vehicles. So, they have again opportunity to provide these services to their customers with the help of digital trucking by installing portable tracker devices and hence keep updated about vehicle journey. Hence, it's a change rather than threat to revenue.

## CHAPTER 6 – CONCLUSION

An assessment of Covid-19 challenges common in the transport sector in Pakistan was carried out. Interviews were conducted from different logistics companies, transport department of FMCGs, addas and other related parties. The issues under consideration were challenges faced by logistics companies during Covid -19, after-effects, strategy making for first time, retaining skilled drivers, implementing strategies, trainings, and drilling exercises. It was found that there were fewer formal practices related to Covid-19 in transport companies, transport departments of FMCGS and other related parties. During assessment, I also found that there are no proper training programs due to no long-term planning of transport companies and considering it waste of time and money. Furthermore, I found that there are no proper defined procedures for performance management and compensation and reward management for drivers in logistic companies and local addas. The Covid-19 practices are changing with time due to competition within transport companies coming in CPEC project in Pakistan and with upcoming waves of different Covid-19 variants. A lot more needs to be done by Government of Pakistan. Government should take initiatives of formal Covid-19 practices and there check and balance on regular basis. Transport companies should also focus on driver development as its main source of transport companies and trip completion cannot be done without them.

Like all research, this study also has some limitations. This study is based on freight logistics, inbound logistics and out bound logistics. These study recommendations cannot be implemented on passenger bus logistics. As covid occurs first time in history so it was first experience for everyone to face this pandemic and was difficult to make policies & regulations for it. Covid policies cannot be implemented for any other type of disease case; new policies will be made for new type of viruses and diseases in transport industry. In transport companies most of decisions are based on happening of event such as accidents, loss of life's in covid, strikes and roadblocks. Adding more to above findings are based on interviews, hence, it gives an overview of industry, but it cannot be generalized for the whole transport industry. Last but not the least, logistics industry is based on best transit time possible to be provided goods to the customer's door to attract much more business as possible.

## Process Of Logistics Operations-Annexure-1



## **VEHICLE MOVEMENT REPORT (VMR)-Annexure-2**

Report prepared by operations department includes 6 stations and contains 234 vehicle records.

If consists of further reports. Which are explained below:-

❖ **MTD –Report:-**

Month To Date report consists of monthly trips of each vehicle in detail form.

❖ **Efficiency Report :-**

This report gives a summary point of view of loading ,unloading ,workshop time ,stays on unloading ,stays on loading and empty hours stays as well.

❖ **Days Count Report :-**

It's a type of attendance of vehicle report.

❖ **Kilometer Report :-**

Distance from loading and unloading place is measured with the help of tracker based on Google maps and comparison with actual reading fetched from vehicle.

❖ **Revenue Report :-**

Revenue report is generated by the net earnings from the vehicle calculated for this purpose. The revenue is calculated by taking the difference of the expenditures incurred on the vehicle during transit pertaining to that trip and the income to be received or receivable from the order duly taken by the sales department for this purpose. The income is actually based on the quantity and weight of the products to be delivered.

❖ **Comparison Report :-**

The comparison is made by the reports fetched from tracker (VMR) and reports generated from vehicle movement system (VMS) .Which reveals gap between regional offices and accounts department.

❖ **Workshop Hours Report :-**

Daily update of vehicles present in workshop for repair & maintenance is taken ,which helps in calculating workshop hours during month.

❖ **Halting Report :-**

This report predicts number of days vehicle stays loaded on distribution .Time for halting is taken if vehicle reached before 5 pm at distribution.

❖ **POI Report :-**

Point of interest report predicts no of vehicles present at distributions , factories as well as fuel pumps.

❖ **Harsh Braking & NR-Report:**

No record & harsh braking reports are also available which explains how many vehicles tracking device is receiving signal and no of obsolete tracking devices.



**Certificate for Movement of Consumer Goods during lockdown-**  
**Annexure-3**

To whom it may concern:

XYZ Pakistan Limited is a leading food and beverage manufacturing company of essential goods in Pakistan. Based on notifications issued by the federal and provincial governments as a result of the constantly evolving situation due to COVID-19, we have been allowed to carry on operations by the provincial and federal governments.

In light of this, please accept this certification that \_\_\_\_ Transporter, having its office at \_\_\_\_\_, Islamabad, whose truck fleet with the corresponding plate, truck type and personal names are listed herewith below, is providing transport services to XYZ Pakistan Limited for the movement and delivery of goods (finished and semi-finished) from and to the below factories and 3<sup>rd</sup> party material management warehouse.

<b>Contractor Name M/s. ABC Transporter</b>						
<b>S.#</b>	<b>Invoice # /DN</b>	<b>Vehicle No</b>	<b>Driver Name</b>	<b>NIC No</b>	<b>License No</b>	<b>Mobile No</b>

Kindly allow the bearer of this certificate to pass through with goods retrieved from the below mentioned sites, without any hindrance.

**XYZ Factory:**

1. XYZ Pakistan Limited, Sheikhpura Factory, located 50 Km Lahore road Sheikhpura.

After delivery of the goods, please allow return of this individual/ vehicle to transporter site or above-mentioned sites, to ensure uninterrupted supply of essential food items across Pakistan during lockdown. As one of the leading food manufacturing companies, we need to ensure supply of pure and healthy food and beverages to the people of Pakistan. Our teams are carrying the relevant government notifications.

Thank you in advance for your cooperation's.

Yours Sincerely,

For XYZ Pakistan LTD

\_\_\_\_\_

## Questionnaire-Annexure-4

My name is Huzeafa Shahzeb, and I am student of E-MBA in National University of Sciences and Technology Islamabad. I am collecting data for my final year research work. Only purpose of this collecting data through this interview is to make findings helpful for research work and discover solutions for collected findings that can benefit supply chain and logistics industry in Pakistan.

<b>Q.1 What are main challenges faced during covid -19 in logistics industry of Pakistan?</b>
<b>Q.2 What SOPs were developed during covid -19 to restructure logistics business?</b>
<b>Q.3 What trainings and drilling exercises were initiated by HR to adopt change?</b>
<b>Q.4 Currently what HR practices are in use in logistics regarding pandemic?</b>
<b>Q.5 How many competitors enter and exit logistic market during Covid-19?</b>
<b>Q.6 Any suggestions that can help logistics industry to increase efficiency?</b>

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