Impact of global supply chain disruption on global supply chain resilience during pandemic like COVID-19

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CHRONICLE	ABSTRACT
	During a pandemic like COVID-19, the country adopted a lockdown to minizine the spread of the pandemic which disrupted the global supply chain and supply chain resilience failed to minimize disruption. In this regard, this study aims to explore the resilience system among countries during a global disruption and the impact of supply chain disruption on supply chain resilience through misinformation/fake news, panic buying behavior, and inflation factors. For this purpose, the analytical study has been selected to predict the impact of supply chain disruption on supply chain resilience through misinformation/fake news, panic buying behavior, and inflation and propose a solution accordingly. The data from 89 countries are collected on various factors for the year 2020 and mediating analysis is selected to test the hypothesis through regression and correlation. They illustrate that there is a 46% correlation and 21% dependency between supply chain disruption and supply chain resilience through misinformation/fake news, panic buying behavior, supply chain disruption & inflation. The criterion validity of convergence validity and Cronbach of homogeneity test are applied. It has been found that panic buying behavior & supply chain disruption has a 71% strong correlation as compared to other factors and the reliability is 69% which is highly reliable and acceptable. In the end, it is concluded that strong coordination among countries will minimize global supply chain disruption through supply chain resilience for continuing supply chain activities and supply chain organizations & mass media organizations coordination with each other for minimizing misinformation/fake news, panic buying behavior supply chain disruption, and inflation factors to improve supply chain resilience by using artificial intelligence technology.

1. Introduction

At the end of December 2019, COVID-19 originated in China and spread within two months to other countries. The World Health Organization kept an eye on the situation and later on March 11, 2020, declared it to be a global pandemic. The World Health Organization urged affected governments to implement a lockdown plan and advised them to restrict their borders to commercial traffic. These nations made announcements of a national lockdown and blocked the border to any unapproved commercial activity (Meyer, 2020). The aforementioned policy of many nations disrupted the design of the global supply chain because the product could not be shipped from one nation to another and delivered to the final consumer. This had an effect on the global supply chain process by affecting the just-in-time strategy because the global supply chain was built on a just-in-time strategy for producing products in a timely manner at a low cost. The disadvantage of this strategy is that if the supply side fails, the product cannot be delivered to the end customer, which increases demand uncertainty. During a pandemic like COVID-19, false information/ fake news increased demand uncertainty through panic buying behavior and a shortage of products occurred in the market due to supply and demand shocks in various countries. For example, Pakistan, Argentina, Djibouti, Canada, India, Sri Lanka, Guyana, Ghana, Angola, Colombia, Congo, Ecuador, Nigeria, Peru, and Venezuela. These shocks disrupted the global supply chain, and organizations were unable to recover from these shocks due to failure of supply chain resilience system. In this instance, the government loosened regulations and permitted

manufacturing companies to reduce demand uncertainty within constrained resources. These firms established a new type of supply chain resilience to reduce demand uncertainty by utilizing the most recent technologies, digital technology, and an omnichannel distribution system. For instance, in Brazil, charter flights were utilized to move pilots from one location to another and to maintain operations in the UK, DHL chose indirect routes. In order to deal with the demand unpredictability, supply chain organizations and the government worked together (Dunford, et al., 2020), (Kiernan & DeVita, 2020), (Zhu, Chou, & Tsai, 2020), (Altaf, 2020), (Center, 2020), (Rahman, Ahsan, Sohal, & Oloruntoba, 2022), (Rodrigue & Luke, Impacts of Pandemics on Supply Chains, 2020), (Khanal, Poudel, Lamichhane, & Ajanthan, 2020), (ILO, 2020), (Abbas, et al., 2020), (Hobbs, 2020), (Inoue & Todo, 2020).

This study has derived the problem from the above discussion that lack of coordination among countries has an impact on a global supply chain that disrupted the supply chain through misinformation/fake news, panic buying behavior, and inflation resulting in supply chain resilience being affected. The problem statement illustrates two points. The first point is that a country's policy has an impact on the global supply chain. The second point is that supply chain disruption increases due to misinformation/fake news, panic buying behavior, and inflation, resultantly supply chain resilience decreasing.

The research question is extracted from the problem statement. The research question is How does coordination among countries have an impact on global supply chain disruption? The answer to the research question will be given through an objective of the research. The objective of the research is to investigate the coordination among countries during global disruption and its impact on supply chain resilience. The objective will be achieved through research direction. There is a need to investigate the success/failure of the lockdown strategy among countries for the global supply chain design by considering misinformation/fake news, panic buying behavior, supply chain disruption, inflation, and supply chain resilience factors during a pandemic. The result will illustrate the strong/weak coordination among countries and its impact on supply chain resilience and these will be validated through criterion validity. After that an alternative strategy will be proposed that is helpful to minimize supply chia disruption during unprecedented events.

After the research direction, the main purpose of this research is to propose a resilience strategy for responding to global supply chain disruption during unprecedented events. For this purpose, this study worked on misinformation/fake news, panic buying behavior, supply chain disruption, inflation, and supply chain resilience for determining coordination among countries through relationship/dependency among factors, with the help of regression and correlation by using mediation analysis.

Below are five parts of this study. The second part is the comprehensive literature review, literature finding, research gaps, hypothesis and proposed concept. The third part is a research methodology on a selection of the research design, collection of data, and variables, measuring variables, quantitative research technique, validity, and reliability of research. The fourth part is an interpretation of the results/findings, validity, and reliability of the research. The fifth part is a discussion and conclusion.

2. Literature Review

This literature review will investigate misinformation/fake news, panic buying behavior, supply chain sorption inflation, and resilience in lockdown situations during a pandemic and the researcher's perspective on supply chain issues:

2.1 Causes of Supply Chain Disruption

The supply chain was disrupted as a result of fluctuating demand, storage and access restrictions, demand reductions, decreased productivity, transportation issues, price swings, natural disasters, a lack of raw materials, panic purchasing, cyberattacks, and pandemics (Dulam, Furuta, & Kanno, 2021), (Yuen, Wang, Ma, & Li, 2020):

Mass media and misinformation/fake news

The sources of mass media for informing the public about events are digital, electronic, and print media. During a pandemic like COVID-19, a lot of individuals turned to digital media. It is important to determine whether citizens in any nation turn to digital media amid a pandemic like COVID-19. An investigation of people's attitudes toward digital media in an Indian city in the north was conducted for this reason. The findings indicate that residents of the northern Indian metropolis depend on digital media. For the sake of the general public, it is necessary to check false information, misleading stories, and fake news. Fake news and inaccurate information breed insecurity, which breeds fear, anxiety, resentment, finger-pointing, dishonor, aggressive violence, and panic (Dhanashree, Chauhan, Bhatia, Sethi, & Chauhan, 2021), (Nicomedesa & Avilab, 2020).

Mass media and panic buying behaviour

One of the things that trigger panic buying amid unplanned catastrophes like the pandemic is the media's impact. The false information or news that was spread by a variety of sources to the general public through the media regarding a lack of necessities during a pandemic. People panicked and purchased goods in large quantities from the market as a result of the pandemic/lockdown, which led to a product shortage. It is important to determine whether citizen behavior in any nation during a pandemic like COVID-19 alters as a result of false information or fake news. In this regard, the issue with toilet paper in Tokyo, Japan, was brought up. Due to the transmission of false information and bogus news about toilet paper in Tokyo, people bought large quantities of toilet paper (Abbas, et al., 2020), (Prentice, Quach, & Thaichon, 2021).

Panic buying behaviour and supply chain disruption

The abrupt rise in demand for necessities during unforeseen events like the pandemic is caused by panic buying behavior. The supply chain was disrupted as a result of the panic buying that contributed to the demand uncertainty. During pandemics like COVID-19, supply chain disruptions occurred due to panic buying and panic buying was one of the factors that revealed weaknesses in effective and optimized supply chain systems. Because of the lockdown, businesses were unable to meet client demand, harming the supply chain process. There is a need to look into whether panic buying during a pandemic like COVID-19 caused supply chain disruption in any country. An investigation into whether or not panic buying caused supply chain disruption was carried out in New Zealand. When compared to holidays and events like Christmas, Easter, and Black Friday before the outbreak, the panic buying behavior during the pandemic. It had discovered that, compared to prior years, the pattern of panic-buying behavior is high for the years 2020 and 2021, and that this pattern boosted demand for a necessity that was not being met by organizations (Dulam, Furuta, & Kanno, 2021), (Yuen, Wang, Ma, & Li, 2020).

Researcher Perspective on Supply Chain issues

It was claimed that the global supply chain was affected by the lockdown strategy. In this regard, an investigation had done to assess the effects of the lockdown on global SC by collecting secondary data, and data were analyzed by applying the disaster effect model. It had been found that the lockdown strategy harmed the global supply chain by disrupting various stages of the supply chain process which created financial constraints for businesses. It was recommended that the lockdown strategy would be short to minimize global supply chain disruption (Guan, et al., 2020).

Panic buying behavior is one of the causes of demand uncertainty through misinformation/fake news. It was claimed that there was an indirect effect of panic buying behavior between mass media and supply chain disruption during the pandemic. In this regard, an investigation had been done to assess the impact of panic buying behavior between mass media and supply chain disruption by applying media dependency theory. For this purpose, a cross-sectional study was applied and collected data from 100 countries to determine indirect effects, indirect effects, and dependency between mass media, panic buying behavior, and supply chain disruption. It has been found that misinformation/fake news mediating between mass media and supply chain disruption (Bukhari & Zafar, Perspective of Misinformation/Fake News in context of Supply Chain Disruption and Mass Media during pandemic like COVID-19).

Panic buying behavior was one of the causes of supply chain disruption. It was claimed that panic buying behavior had an impact on supply chain disruption. In this regard, an investigation had been done to assess the impact of panic buying behavior on supply chain disruption during and before. For this purpose, an analytical study selected and collected data from 100 countries to investigate the relationship & dependency between panic buying behavior and the food supply chain. It has been found that there is an impact of panic buying behavior on the food chain during the pandemic as compared to before the pandemic. It is recommended that supply chain resilience is a solution to minimize panic buying behavior (Bukhari & Zafar, Impact of Panic Buying Behaviours on Global Food Chain during Pandemic, 2022).

Panic buying behavior has an impact on supply chain resilience through demand uncertainty. It was claimed that panic buying behavior had an impact on supply chain resilience. In this regard, an investigation had been done to assess the impact of panic buying behavior on supply chain resilience. The result shows that panic buying behavior created demand shock which affected Supply chain resilience through supply shocks (Hobbs, 2020).

There is a need to adopt new technology for the agri-food system to minimize supply chain disruption during unexpected events. In this regard, systematic literature analysis was carried out to determine the adoption of new technology and it was discovered that artificial intelligence is the best technology for the supply chain after the COVID-19 pandemic. It was recommended to create a new business model, it is necessary to completely redesign the supply chain model (Vaio, Boccia, Landriani, & Palladino, 2020).

3. Analysis on Literature Review

The analysis of the literature review has been done. The first analysis is that there is a lack of coordination among countries. The second analysis is that the lockdown strategy increases misinformation/fake news, demand uncertainty, panic buying behavior, supply chain disruption, and decreases supply chain resilience. The third analysis is that research did research on disciplinary factors by ignoring inter-disciplinary factors and theory evidence base research by linking theory with existing literature review.

3.1 Findings to conduct Research

This study has found three findings from literature analysis to conduct research. The first finding is that lack of coordination among countries increases misinformation/fake news, demand uncertainty, panic buying behavior, supply chain disruption, and inflation in lockdown situation during a pandemic like COVID-19. The second finding there is less research on inter inter-disciplinary factors through resource dependency theory during the pandemic situation.

3.2 Hypothesis

Based on the findings, below are a hypothesis of this research:

i. H_{o1}: There is coordination among countries which decrease misinformation/fake news, demand uncertainty, panic buying behavior, supply chain disruption, and inflation by increasing supply chain resilience in lockdown situations during pandemics like COVID-19.

   H_{A1}: There is a lack of coordination among countries which increase misinformation/fake news, demand uncertainty, panic buying behavior, supply chain disruption, and inflation by decreasing supply chain resilience in lockdown situations during pandemics like COVID-19.

3.3 Proposed concept

The proposed concept of this study is that the global pandemic affected coordination among countries through the global lockdown. The global lockdown disrupted the global supply chain and created demand uncertainty in various countries through increasing panic among citizens to buy necessary items in bulk due to increasing misinformation/fake news about necessary items which created a shortage of products through decrease in supply chain resilience resultantly increase inflation.

3.4 Variables and Measuring Variables

This study has used five measuring variables. The first is the world freedom press measuring variable of mass media. The second is the food affordability measuring variable of panic buying behavior. The third is the food availability measuring variable of supply chain disruption. The fourth is the national resilience measuring variable of supply chain resilience. The fifth is the consumer price index measuring variable (Desk, 2022; Methodology, 2020; Data Bank, 2022; Freedom, 2022).

4. Research Methodology

4.1 Research Design

This study has applied a cross-sectional study to forecast coordination among countries by proposing correlation/dependency among misinformation/fake news, panic buying behavior, inflation for determining impact on supply chain resilience through supply chain disruption in lockdown situation during pandemic like COVID-19 (Thomas., 2021), (What is a cross-sectional study, 2021) (Cherry, 2019), (Simkus, 2021), (Setia, 2016). For this purpose, data for measuring variables are collected from reporter without Borders, economist impact, and World Bank for various countries during the pandemic for the year 2020 through cluster sampling of the Western Pacific region, South East Asia region, Europe region, East Mediterranean region, Americas region, and African Region(Covid19 Infodemics Observatory, 2022). The total population is 113 countries and sample size 89, 95% depending on fulfilment of assumptions of techniques.

4.2 Quantitative Technique

This study has applied mediating analysis to determine the relationship and dependency between supply chain disruption and supply chain resilience through misinformation/fake news, panic buying behavior and inflation (Thompson, 2022). There are seven assumptions of these techniques measuring scale, outlier, normal distribution, linear relationship, linearity, normality, homogeneity of error variance, multicollinearity and independence of errors (Pearson's Product-Moment Correlation using SPSS Statistics, 2022), (Kenny, 2021), (Linear Regression Analysis using SPSS Statistics, 2022).

4.3 Assumption of technique

The variables must be measured at a ratio scale or interval scale with a linear relationship, normally distributed having no outlier, less multicollinearity, and independent of observations. homoscedasticity (Lund & Lund, Pearson's Product-Moment Correlation using SPSS Statistics, 2022), (Lund & Lund, Linear Regression Analysis using SPSS Statistics, 2022) (Lund & Lund, Pearson's Product-Moment Correlation using SPSS Statistics, 2022). The measuring variables world freedom press, food affordability, food availability, and consumer price are measured at an interval scale. There is a linear relationship between measuring variables mentioned in Fig. 1.
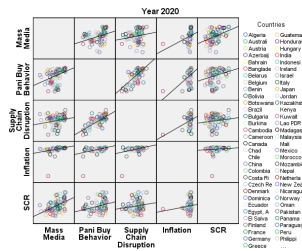
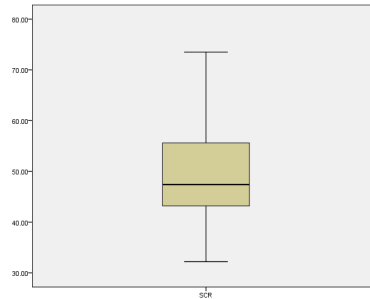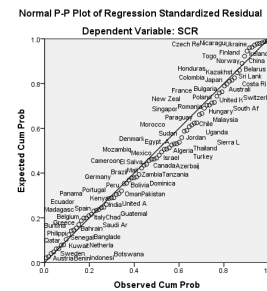|		
Fig. 1. Linear Relationship	**Fig. 2.** Outlier	**Fig. 3.** Checking Residual

There is no outlier in the consumer price index, the dependent variable mentioned in Fig. 2. This study has applied linear regression to determine data is normally distributed for the consumer price index. It has been found that data is normally distributed by checking the residual (errors) of the regression line mentioned in Fig. 3. The world freedom press is an independent variable, food affordability is a moderating variable, food availability is a mediating variable, and the consumer price index is a dependent variable. The current study has only one independent variable and one dependent variable. In this regard, there is no need to check collinearity because it requires two or more independent variables (Hayes, 2022). The independence of observations is measured through Durbin-Watson test by using linear regression and it has been found that the Durbin-Watson test value is 2.016 which falls between 1.5 to 2.5 mentioned in Table 1. Hence, data is not autocorrelated (Statistics Solutions, 2022).

Table 1
Independence of Observations

Model	Durbin-Watson
1	2.016

a. Predictors: (Constant), Mass Media
b. Dependent Variable: Inflation

There is no homogeneity of error variance because sample size selected variables are same mentioned in Table 2:

Table 2
Homogeneity of Error Variance

Descriptive Statistics		
	N	Mean
Mass Media	89	65.9901
Panic Buy Behavior	89	70.7730
Supply Chain Disruption	89	59.7910
Inflation	89	96.9112
SCR	89	49.8933
Valid N (listwise)	89	

4.4 Validity and Reliability Test

The results will be validated through criteria validity by using the correlation coefficient. After that Cronbach's α of homogeneity test is applied for reliability (Heale & Twycross, 2015; Forero, 2014; Daud et al., 2018; Measurement in Health & Physical Education, 2021).

Analysis

Mediating Analysis

This study wanted to investigate coordination among countries by proposing correlation/dependency among misinformation/fake news, panic buying behavior, and inflation for determining the impact on supply chain resilience through supply chain disruption in lockdown situations during a pandemic like COVID-19. For this purpose, the Alternative Hypothesis, there is a lack of coordination among countries which increase misinformation/fake news, demand uncertainty, panic buying behavior, supply chain disruption, and inflation by decreasing supply chain resilience in lockdown situations during a pandemic like COVID-19. In this regard, mediating analysis is applied by using the process procedure for SPSS Version 4.1 written by Andrew F. Hayes, Ph. D (Hayes A. F., Introduction, 2022). The basic requirement of mediating analysis is to select a model, dependent variable, independent variable, and moderating and mediating variable. The current research has selected model 4, supply chain disruption as the independent variable, misinformation/fake news, panic buying behavior, and inflation as mediating variable, and supply chain resilience as the outcome variable and the sample size is 89 with a 95% or 0.05 confidence interval. The hypothesis is divided into two portions. The first portion will be tested to determine coordination among countries during global disruption through the availability of necessary items in case of demand uncertainty that includes an increase of misinformation/fake news, panic buying behavior & inflation, and government response to minimize through resilience. The second portion will be tested through coefficients of misinformation/fake news, panic buying behavior, supply chain disruption, and inflation to determine positive negative signs for examining decreasing/increased impact on supply chain resilience in lockdown situations during a pandemic like COVID-19.

4.5 Regression and Correlation

This study wanted to investigate the first portion of hypothesis to determine coordination among countries during global disruption through the availability of necessary items in case of demand uncertainty that includes an increase of misinformation/fake news, panic buying behavior & inflation, and government response to minimize through resilience. For this purpose, the Alternative Hypothesis there is a lack of coordination among countries which increase misinformation/fake news, demand uncertainty, panic buying behavior, supply chain disruption, and inflation by decreasing supply chain resilience in lockdown situation during a pandemic like COVID-19 through moderating analysis. The regression and correlation coefficient results are given in Table 3:

Table 3
Regression and Correlation Coefficient

Regression and Correlation Coefficient							
Model	R	R Square	MSE	F	df1	df2	P
1	0.4632	0.2146	85.0290	5.7378	4.0000	84.0000	.0004

a. Predictors: (Constant), Mass Media

4.6 Interpretations

The result illustrates that correlation coefficient is 0.4632 and 0.2146 dependency of mass media, panic buying behavior and inflation between supply chain disruption and inflation. These results are interpreted with the world freedom index and global food index. The correlation coefficient of 46.32% falls under the range of 40-55 (difficult situation) for the world freedom index and the correlation coefficient of 46.32% falls under the range of 40-60 (moderate performance) for the global food index. Whereas a dependency value of 21.46% fall under 0-40 (very serious situation) for the world freedom index and a dependency value of 21.46% fall under 0-40(need improvement) for the global food index.

4.7 Analysis and Findings

The results illustrate that demand uncertainty increases through mass media, panic buying behavior, and inflation that disrupted the supply chain resultantly a decrease in supply chain resilience due to global lockdown and weak coordination/relationship among countries. The weak dependency/relationship illustrates that there is a hidden factor that has an impact on it. It has been found that there is weak coordination/dependency among countries during global disruption that disrupted the supply chain through demand uncertainty in terms of mass media, panic buying behavior, and inflation, resultantly the government's unable to minimize demand uncertainty due to a decrease in supply chain resilience. Hence, the first portion of the alternative hypothesis is accepted.

4.8 Coefficients

This study wanted to investigate second portion of hypothesis to determine of positive/negative signs for misinformation/fake news, panic buying behavior, supply chain disruption, and inflation to examine decreasing/increasing impact

on supply chain resilience in lockdown situations during a pandemic like COVID-19.For this purpose, the Alternative Hypothesis there is a lack of coordination among countries which increase misinformation/fake news, demand uncertainty, panic buying behavior, supply chain disruption, and inflation by decreasing supply chain resilience in lockdown situation during a pandemic like COVID-19 through moderating analysis. The coefficient results are given in Table 4:

Table 4
Coefficients

	Coefficients					
	Coeff	Se	T	P	LLCI	ULCI
Constant	43.6450	17.8625	2.4434	0.0166	8.1234	79.1665
Food Availability	-0.0387	0.1317	-0.2939	0.7695	-0.3007	0.2233
World Freedom Press	0.2719	0.0716	3.7953	0.0003	0.1294	0.4143
Food Affordability	0.1095	0.0863	1.2694	0.2078	-0.0621	0.2811
Consumer Price Index	-0.1758	0.2008	-0.8755	0.3838	-0.5751	0.2235

4.9 Interpretations

The results show that the coefficient of food availability/supply chain disruption mass media is -0.0387 with a P value 0.3007 > 0.05, the coefficient of consumer price index is -0.1758 with a P-value 0.3838> 0.05, the coefficient of World Freedom Press/mass media is 0.2719 <0.0003 and coefficient of food affordability/panic buying behavior is 0.1095>0.2078.The Positive signs indicate that when X rises, Y rises, and vice versa, whereas negative signs indicate the opposite, that is, when X falls and Y rises, and vice versa (Hayes A. F., Introduction, 2022).

4.10 Analysis and Findings

The results illustrate that demand uncertainty increases through mass media, panic buying behavior, and inflation because the negative sign of inflation/consumer price index has been found which means consumer price index increase due to demand uncertainty that disrupted the supply chain because of the negative sign of food availability/supply chain disruption. This is the reason for weak relationships/dependency. It has been found that positive & negative signs of supply chain disruption and inflation have an overall impact on dependency/relationship. Hence, the second portion of the alternative hypothesis is accepted.

4.11 Validity and Reliability of Research

Validity of Research

This study has proposed that there is an impact of supply chain disruption on supply chain resilience through misinformation/fake news, panic buying behaviour and inflation. This illustrates the strong/weak relationship between variables because of mediation between variables. The criteria are there is a strong relationship between supply chain disruption with misinformation/fake news or panic buying behaviour or inflation. The said criteria are tested through Pearson correlation coefficient at Table 5. The results show strong associations between variable supply chain disruption and panic buying behaviour. This relationship decreases the relationship of other variables. Both criteria and tested criteria are the same and the concept is successfully validated with criteria validity.

Table 5
Coefficients

		Correlations				
		Mass Media	Panic Buy Behavior	Supply Chain Disruption	Inflation	SCR
Mass Media	Pearson Correlation	1	.370**	.188	.312**	.439**
	Sig. (2-tailed)		.000	.077	.003	.000
	N	89	89	89	89	89
Panic Buy Behavior	Pearson Correlation	.370**	1	.719**	.438**	.271*
	Sig. (2-tailed)	.000		.000	.000	.010
	N	89	89	89	89	89
Supply Chain Disruption	Pearson Correlation	.188	.719**	1	.352**	.140
	Sig. (2-tailed)	.077	.000		.001	.191
	N	89	89	89	89	89
Inflation	Pearson Correlation	.312**	.438**	.352**	1	.100
	Sig. (2-tailed)	.003	.000	.001		.349
	N	89	89	89	89	89
SCR	Pearson Correlation	.439**	.271*	.140	.100	1
	Sig. (2-tailed)	.000	.010	.191	.349	
	N	89	89	89	89	89

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Reliability Test of Research

The reliability test of this study is 0.694 which is more than 0.6, which means there is high reliability and acceptable in Table 6 and 7:

Table 6
Case Processing

Case Processing Summary			
		N	%
Cases	Valid	89	100.0
	Excluded[a]	0	.0
	Total	89	100.0

a. Listwise deletion based on all variables in the procedure.

Table 7
Reliability Test

Reliability Statistics	
Cronbach's Alpha	N of Items
.694	5

5. Discussion and Conclusion

This study has found that global supply chain resilience was disrupted due to weak coordination among countries. This has an impact on a global supply chain through misinformation/fake news, panic buying behavior, and inflation resulting in a decrease in supply chain resilience being affected due to lockdown situations during a pandemic. In this regard, in the event of unexpected events, there is a need to make the global supply chain resilient by continuing commercial activities with friendly neighboring countries through coordination between them. For this purpose, a centralized system will be established within countries to continue the supply of products by applying artificial technology to forecast demand for products and make targeted operations or smart lockdowns to minimize unexpected events through coordination between mass media organizations and supply chain organizations in terms of verifying authentic news. This will be helpful to reduce panic among citizens about buying necessary items in bulk by reducing misinformation/fake news by detecting and circulating actual news on mass media by using artificial technology. This will minimize demand uncertainty by reducing supply chain disruption and inflation. Hence the economy will improve.

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