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ASSESSING ECONOMIC RESILIENCE: EFFECTS OF TRADE DISRUPTIONS ON QATAR'S ECONOMIC STABILITY

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ABSTRACT

The study investigates the level of resilience that Qatar experienced to withstand trade disruptions and its effects on economic stability. The analysis uses the dataset from 2007 to 2022 leveraging secondary data. It aims to explore how trade disruptions impact two important indicators of macroeconomic performance, i.e., the trade-to-GDP ratio and the debt-to-GDP ratio. The study uses regression analysis for a simple quantification to describe how these factors have been affecting Qatar's macroeconomic performance in general terms and specifically on economic openness and fiscal soundness. The results indicate that trade disruptions influenced the trade-to-GDP ratio for this very reason, which manifests the extreme reliance of Qatar on international markets. In addition, the Debt to GDP Ratio analysis also shows how trade disruptions can worsen fiscal vulnerabilities in times of acute economic uncertainty. The conclusion highlights the need for economic diversification and strong fiscal measures to make Qatar more resilient economically. As such, this study aims to offer insights into how small trade-oriented economies like Qatar can manage the negative disruptions in economic stability due to global trade.

Keywords: Global Trade, Qatar Economy, Trade Disruption, Trade to GDP Ratio, Debt to GDP, Economic Stability, International Markets.

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1. INTRODUCTION

International trade is crucial for Qatar's economy, facilitating the exchange of goods and services that drive internal development and global economic integration. Qatar, one of the wealthiest nations by GDP per capita, relies heavily on its petroleum and natural gas sectors, which account for the majority of its government revenue, GDP, and export earnings. Despite its economic strength, Qatar's international trade has experienced significant fluctuations over the past fifteen years, impacted by geopolitical challenges and global disruptions (Abendin & Duan, 2021).

Qatar's trade dynamics were notably affected by the four-year diplomatic blockade imposed by Saudi Arabia, Bahrain, Egypt, and the UAE, which disrupted traditional trade routes and forced Qatar to seek new economic alliances, particularly with Turkey and Iran (Qatar Economic Outlook, 2022). This geopolitical crisis not only altered regional dynamics but also highlighted Qatar's adaptability in maintaining trade flows despite external pressures (Elias, et al., 2018).

Additionally, the COVID-19 pandemic caused severe disruptions to Qatar's international trade, leading to a sharp decline in oil prices, reduced export revenues, and economic contraction. The pandemic underscored the vulnerabilities of Qatar's trade-dependent economy, prompting the need for diversification and resilience-building measures (PwC, 2022). Despite these challenges, Qatar's ongoing investments in large-scale infrastructure projects, spurred by its hosting of the 2022 FIFA World Cup, have played a pivotal role in supporting economic recovery and enhancing the country's trade capacity (Mena, et al., 2022). As Qatar continues to navigate complex global trade dynamics, its strategic response to disruptions will be crucial in sustaining economic growth and securing its position in the global market.

2. REVIEW OF LITERATURE

Açikgöz & Günay (2020) analyzed the initial reflections on the economic impacts of a potential pandemic in terms of short and medium-run global impact sectors, including costs for different scenarios, by using data disclosed for the world and specific to Turkey. This research also hopes to provide a view of the likely economic and political conditions after the pandemic. The pandemic damages employees, consumers, logistics and financial markets – an environment which will inevitably lead to some degree of overall global economic hardship. However, the extent of this shrinkage remains unknown with uncertainty around when the pandemic will end. And that outbreak seems to be triggering yet another change — a sustained global shift in security, health care, trade, agriculture and manufacturing duties, among others. Since the new world system may be more favourable to countries outside of global production dominancy, governments should respond by implementing new policies as fast as possible.

The study by **KPMG (2020)** revealed that the coronavirus had infected over 3 million people in 200 countries. That response by the State has, to date, contributed greatly to containing the spread of COVID-19 and mitigating impacts on the healthcare system. Mortality in that age group has been relatively low compared to other countries with similar infection rates. Qatar was one of the earliest nations to enforce protective measures against COVID-19 so as to ensure the protection of its own citizens and guests, but more than that it also sought ways to guard its economy. In 200 countries, the coronavirus has infected over 3 million people. Thus far, the state's quick and comprehensive response helped keep COVID-19 from more rapidly spreading across Delaware and causing massive strain on hospitals. After comparing with other countries having the same level of infections, the mortality rate in India is less. Qatar is also taking measures to protect its economy while keeping its citizens' and residents' health and well-being at the forefront in dealing with COVID-19 (KPMG, 2020).

Rajesh & Rajimol (2021) stated that the COVID-19 lockdown prompted total disruption to both the social and economic life. As the coronavirus hits the economic activity of the country as a whole, India will see a massive fall in government revenues and an increase in income for at least two quarters. The lockdown of all the economic activity which followed thereafter, not only in India but all over the world, meant disaster for the developing economies. The economy shrunk to 23.9% (whopping) in April/May 2020, when everything was completely locked down, economically speaking. India has been showing signs of recovery over the last few months. General economic data for most sectors across the country, clearly indicate that India is well on course to extract itself from a slowdown. Indian economy is probably set for growth, as arguably all the core economic values today represent. The economy has not had a long-term effect on the COVID-19 pandemic. The economy only shrank for a brief period. There has been a restoration in the movement of economic development in the nation. The study aims to examine the performance of the Indian Economy pre and post-lockdown following Corona Virus Pandemic.

Prohorovs (2020) argued that one of the main ways to finance an economic recovery in countries after the COVID-19 pandemic is through growing public debt. The COVID-19 pandemic and confirming the change in the course of global economic trends have led to high growth in uncertainty. Hence the more public debt is accumulated by a country, the less macroeconomic stability that will be achieved as a result. The study has analyzed which risks may affect the macroeconomic stability of countries and reduce governmental debt to GDP ratio in a time of economic growth following recovery from the Covid-19 pandemic. It also presents the fact that economic recovery financing options can later enable countries to increase their macroeconomic stability and international competitiveness for the medium- and long-term, as well as other factors in choosing public debt level expansion over a country from quickly lowering its own public debt in an economic growth period.

Schilirò (2020) stated that the COVID-19 pandemic has given rise to a global economic crisis, with health damage and loss of life, but also a very deep recession. It has also resulted in fiscal deficit and an increase in public debts, thus creating tension between meeting major policy goals (growth, employment, health system, environmental sustainability) and, at the same time, containing debt vulnerabilities. This study reviews the literature on debt and growth, as well as the debate

concerning debt sustainability. It indicates in particular that some (empirical) literature finds support for arguments to the effect that own-country debt does conclude growth, and high debt increases the vulnerability of a country to shocks. The study also provides elements to support our own convictions on what long-term strategy should be and what policy action might be enforced, taking into consideration the Italian state (well known for its high public debt, slow or even declining growth and other economic frailties).

Minondo (2021) extends the discussion of the Spanish case to analyze the impact of COVID-19 on trade in goods and services, corroborating the existence of a negative effect. He finds a more pronounced decline for trade in services, due to the importance of tourism in the Spanish economy. **de Lucio, et al. (2022)** found that for the period between January and July 2020, stringency in containment measures at the destination countries decreased Spanish exports, while imports did not succumb to such a sharp decline.

3. OBJECTIVES OF THE STUDY

The study aimed to investigate the level of resilience that Qatar experienced to withstand trade disruptions and its effects on economic stability.

4. HYPOTHESES OF THE STUDY

The hypotheses of the study are as mentioned below:

H_{01}: There is no significant relationship between Exports, Imports and Trade Balance on the Debt to GDP of Qatar.

H_1: There is a significant relationship between Exports, Imports and Trade Balance on the Debt to GDP of Qatar.

H_{02}: There is no significant relationship between Exports, Imports and Trade Balance on the Trade to GDP Ratio in Qatar.

H_2: There is a significant relationship between Exports, Imports and Trade Balance on the Trade to GDP Ratio in Qatar.

5. RESEARCH METHODOLOGY

The study is based on a data set that includes secondary data collected between 2007-2022 to measure the economic consequences of disruptions in international trade in Qatar. Descriptive statistics examines the data trends and relationships between variables. The study relied on Government reports and publications, reports from international organizations, academic articles and journals. Economic consequences were measured using variables such as exports, imports, trade balance, trade to GDP and debt to GDP. The multiple regression model was used to test the relationship between the selected variables. In the context of the present study, the parameters of trade dynamics were taken as independent variables, while the measure of trade disruption was taken as the dependent variable. This case considered multiple regression, which means that the model of how independent variables influence dependent ones was used. The equation considered for the study is as follows:

$Y = \beta_0 + \beta_1(X) + e$, where

X is the explanatory variable,

Y is the dependent variable,

β_0 is the intercept, representing the value of the dependent variable

β_1 is the slope coefficient

e is the error term.

Debt to GDP = $\beta_0 + \beta_1 (\text{Imports})_1 + \beta_2 (\text{Exports})_2 + \beta_3 (\text{Trade Balance})_3 + e$

Trade to GDP = $\beta_0 + \beta_1 (\text{Imports})_1 + \beta_2 (\text{Exports})_2 + \beta_3 (\text{Trade Balance})_3 + e$

6. DATA ANALYSIS AND INTERPRETATION

ECONOMY OF QATAR

Table 1: Economic Variables of Qatar (2007-2022)

Years	Trade Balance (Billion USD)	Exports (Billion USD)	Imports (Billion USD)	Trade to GDP Ratio	Debt to GDP Ratio
2007	19.48	48.05	28.57	96.11	8.90%
2008	38.38	70.73	32.36	89.43	11.10%
2009	21.64	50.01	28.37	80.14	36.00%
2010	48.26	77.98	29.72	86.07	41.80%

2011	78.05	121.84	43.79	98.72	36.00%
2012	88.18	142.88	54.69	105.75	37.20%
2013	85.56	144.51	58.95	102.38	33.10%
2014	76.22	140.23	64	99.03	32.30%
2015	33.02	92.29	59.27	93.71	34.90%
2016	8.92	72.4	63.48	89.55	46.80%
2017	23.01	85.2	62.19	91.49	51.70%
2018	36.75	102.56	65.81	91.84	52.30%
2019	25.28	92.05	66.77	90.05	62.30%
2020	11.87	70.93	59.06	90.02	72.60%
2021	44.53	105.86	61.33	93.05	58.40%
2022	97.49	162.38	74.79	99.98	46.90%

Source: World Bank, Qatar Trade Statistics (2007-2022)

The table details the economic variables of Qatar from 2007 to 2022 and provides a comprehensive overview of the nation's economic performance. Qatar's trade balance reveals considerable fluctuations, which may help to understand the trends characterizing exports and imports. The fact that the trade balance is substantially strong, reaching its peak in 2022, $97.49 billion, may be explained by the country's export performance being particularly strong, mostly concerned with hydrocarbons. It should be noted that the trade balance has been positive throughout the period, which means exquisite strength in pharmaceutical exports. The fact that there are significant increases in the trade surplus, which may be especially noticed in 2011 and seen in 2022, is consistent with the data suggesting that during these years, the global energy price was extremely high, and lots of hydrocarbons were exported. Also, it should be mentioned that in 2016, the trade balance dropped to $8.92 billion, which may be explained by the relatively low prices for energy products and regional political tensions, including the blockade introduced by the neighbouring countries in the middle of 2017.

The export values to the government of Qatar show a general increase in the country's exports over the years, although there are significant peaks and drops in the values. The highest peak, depicting the maximum export value to the Qatari government, occurs in 2022, with the export value standing at $162.38 billion. This demonstrates the country's ability to take advantage of high energy costs and to increase production. The large export values imply that the government of Qatar receives sufficient financial support from the same to ensure that there is a seamless flow in its operations at all times. The lowest export value to the government of Qatar appears in 2009, at $24.55 billion. The drop in export value mirrors the global financial crisis, which badly affected most countries of the world, Qatar included. The second lowest export value occurs in 2020. with the country being affected by the COVID-19 pandemic. It is, therefore, evident that Qatar is affected by global crises to a large extent.

Further, imports are also ascending, as demand keeps growing. The import value of $74.79 million as of 2022 is indicative of a high level of economic activity and people's desire to buy timely and desired goods. However, with a continuously positive trade balance, it may be concluded that Qatar's income from export greatly exceeds its import spending. At the same time, these figures show that the country is highly dependent on imported goods, both for consumption and industrial purposes. As a result, a positive trade balance is necessary to support this dependency.

The Trade to GDP Ratio from 2007 to 2022 illustrates Qatar's economic openness, indicating the extent to which the country's GDP is influenced by international trade. Initially at 96.11% in 2007, the ratio declined through 2020, reaching 90.02%, largely due to fluctuating global commodity prices, particularly oil and natural gas. A significant drop between 2008 and 2009 occurred during the global financial crisis, but the ratio rebounded in 2011-2012, peaking at 105.75% due to global trade recovery and increased demand for Qatari energy exports. Between 2013 and 2016, the ratio steadily declined, impacted by global market adjustments and falling oil prices. A recovery trend emerged post-2020, with the ratio reaching 99.98% in 2022, reflecting a resurgence in global demand and Qatar's efforts to diversify and strengthen its trade position.

Qatar's Debt to GDP Ratio also saw significant changes during this period. From 8.90% in 2007, it increased sharply to 72.60% by 2020, reflecting increased borrowing to address economic challenges, particularly during the global financial crisis and the COVID-19 pandemic. The ratio remained relatively stable between 2011 and 2015, fluctuating between 33% and 37%, before spiking post-2016 due to economic contractions caused by the pandemic. However, post-2020, the

Debt to GDP Ratio declined, falling to 46.90% in 2022, suggesting a recovery in GDP growth, supported by rebounding oil prices and diversification efforts that improved Qatar's fiscal health.

7. TESTING OF HYPOTHESIS:

HYPOTHESIS 1:

H_{01}: There is no significant relationship between Exports, Imports and Trade Balance on the Debt to GDP of Qatar.
H_1: There is a significant relationship between Exports, Imports and Trade Balance on the Debt to GDP of Qatar.

Table 2: Results of Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.852[a]	.726	.658	18.88179

a. Predictors: (Constant), Trade Balance, Imports, Exports

The table evaluates how well the regression model fits the data for predicting the Debt to GDP ratio based on Exports, Imports, and Trade Balance. R value indicates a very high positive correlation between the predicted Debt to GDP values and the actual Debt to GDP values. A high R value suggests a strong linear relationship between the predictors and the dependent variable. R-square value means that approximately 72.6% of the variability in the Debt to GDP ratio can be explained by the combined variability in Exports, Imports, and Trade Balance. This indicates a robust model performance.

Table 3: Results of ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11347.802	3	3782.601	10.610	.001[b]
	Residual	4278.265	12	356.522		
	Total	15626.067	15			

a. Dependent Variable: Debt to GDP
b. Predictors: (Constant), Trade Balance, Imports, Exports

The ANOVA table tests the overall significance of the regression model. The F-statistic of 3.091 is a measure of how well the total variance is explained by the regression relative to the unexplained variance (residual). This value is significant and suggests the model is a good fit. The p-value for the F-statistic is .001, indicating that the model is statistically significant at the 0.1% level. This confirms that the model's predictors significantly affect the Debt to GDP ratio collectively.

Table 4: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-20.620	19.543		-1.055	.312
	Exports	-.987	2.339	-1.068	-.422	.681
	Imports	2.738	2.257	1.311	1.213	.248
	Trade Balance	.896	2.266	.819	.395	.700

a. Dependent Variable: Debt to GDP

The above table shows regression coefficients. For each one billion US dollar increase in Exports, the Debt to GDP ratio is expected to decrease by about 0.987 percentage points, holding other factors constant. For each billion US dollar increase in Imports, the Debt to GDP ratio is expected to increase by about 2.738 percentage points. For each one billion US dollar increase in Trade Balance, the Debt to GDP ratio is expected to increase by about 0.896 percentage points. The regression analysis indicates that the overall model significantly predicts the Debt to GDP ratio based on Exports, Imports, and Trade Balance (as shown by the ANOVA results). The high R and Adjusted R Square values suggest a strong model overall, but the lack of individual significance indicates that the collective influence of the predictors is necessary to explain the variability in Debt to GDP. Hence, the null hypothesis is rejected and alternative hypothesis is accepted.

HYPOTHESIS 2:

H_{02}: There is no significant relationship between Exports, Imports and Trade Balance on the Trade to GDP Ratio in Qatar.
H_2: There is a significant relationship between Exports, Imports and Trade Balance on the Trade to GDP Ratio in Qatar.

Table 5: Results of Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.823[a]	.677	.597	4.12352

a. Predictors: (Constant), Trade Balance, Imports, Exports

This table evaluates the fit of the regression model predicting the Trade to GDP Ratio based on Exports, Imports, and Trade Balance. R-value indicates a high positive correlation between the predicted Trade to GDP Ratio values and the actual Trade to GDP Ratio values, suggesting a strong linear relationship. Approximately 67.7% of the variability in the Trade to GDP Ratio can be explained by the combined variability in Exports, Imports, and Trade Balance. This suggests a reasonably good fit of the model to the data.

Table 6: Results of ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	428.316	3	142.772	8.397	.003[b]
	Residual	204.041	12	17.003		
	Total	632.357	15			

a. Dependent Variable: Trade to GDP

b. Predictors: (Constant), Trade Balance, Imports, Exports

The ANOVA table tests the overall significance of the regression model. The F-statistic is a measure of how well the total variance is explained by the regression relative to the unexplained variance (residual). This value of 8.397 is significant and suggests the model is a good fit. The p-value for the F-statistic is .003, indicating that the model is statistically significant at the 0.1% level. This confirms that the model's predictors significantly affect the Trade to GDP Ratio collectively.

Table 7: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	79.052	4.268		18.522	.000
	Exports	.584	.511	3.144	1.144	.275
	Imports	-.458	.493	-1.089	-.929	.371
	Trade Balance	-.407	.495	-1.851	-.823	.426

a. Dependent Variable: Trade to GDP

The table shows the regression coefficients. For each unit increase in Exports, the Trade to GDP Ratio is expected to increase by .584 units. For each unit increase in Imports, the Trade to GDP Ratio is expected to decrease by .458 units. For each unit increase in Trade Balance, the Trade to GDP Ratio is expected to decrease by .407 units. The regression analysis indicates that the overall model significantly predicts the Trade to GDP Ratio based on Exports, Imports, and Trade Balance (as shown by the ANOVA results). This suggests that, collectively, these economic factors may play a role in influencing the Trade to GDP Ratio in Qatar. Hence, the null hypothesis is rejected, and the alternative hypothesis is accepted.

8. DISCUSSION

The research finds that a continued positive trade balance in the study period significantly signifies Qatar's export power, which comes under the dominating characteristic of hydrocarbon resources. Proven resilience in the trade balance, even during Western economic crises and local political tensions, showcases Qatar's capacity to defy turbulent winds (Açikgöz & Günay, 2020). Nonetheless, trade performance is also influenced by changes in global commodity prices (particularly oil and natural gas), which lead to periods of volatility. The study also identifies how the country is deepening its dependence on imports due to economic growth and increased consumer needs. The high portion of imports as compared to GDP reflects Qatar's economic openness, but this has not been a deficit on the trade balance as export earnings have more than offset import spending (Minondo, 2021). This means that the structure of Qatar's economy leans more towards external trade for locally consumed goods and produced commodities.

The debt-to-GDP ratio, which shows a lower debt-to-GDP ratio. There is proof that Qatar is relatively well-run. This ratio soared after 2016, peaking at the start of the COVID-19 pandemic, and is signalling how Qatar has eschewed systemic reforms in favour of debt whenever faced with economic challenges, especially during global downturns. Nonetheless, with a gradual enough decline in debt levels after 2020, recovered measures can appear to have succeeded even though domestic oil and gas revenue is up just as in any post-COVID economic position. Finally, the trade-to-GDP ratio highlights Qatar's extensive economic globalization. Despite fluctuations that were introduced during times of global financial crises and market adjustments, the post-2020 recovery and an upped point in 2022 commerce show how Qatar has learned to grow a trade-oriented economy. This rebound is mainly underpinned by its energy exports and economic diversification measures that have maintained Qatar's global trade position amid external headwinds (de Lucio, et al., 2022).

Although the study determines that Qatar's economy is broadly exposed to global trade disruptions and commodity price volatility, it has shown significant adaptability with a measured export posture, adept debt management and ongoing international trade relationships (Nobinkhor, et al., 2018). The dual impact of exports and imports in driving economic growth underscores the importance of international factors within Qatar's trajectory of economic development, as well as its ability to ride out periods when the domestic economy is unstable.

9. CONCLUSION

The research investigated the effect of changes in international trade in Qatar with a strong focus on economic stability. The data shows that the Qatari economy achieved a remarkable degree of resilience during some of the most prolonged global economic dislocations, including the global financial crisis and regional geopolitical tensions, to name but a few, as well as a substantial decline in international oil prices exacerbated by COVID-19 pandemic. With an export-driven trade sector, a strong external balance should naturally follow, which should help the economy through tough times. As per the Debt to GDP Ratio, Qatar resorted largely to debts in down economic cycles, mainly after 2016 and during the pandemic. However, the return to growth after 2020 suggests a competent fiscal policy and a strong rebound in economic activity, buoyed by rising global demand for oil and gas. Similarly, the Trade to-GDP Ratio highlights that Qatar is one of the most globally integrated economies in the world and that changes are driven mainly by global commodity prices and geopolitical events. While its economic fundamentals have been under pressure from all sides, the picture which emerges is of a surprisingly resilient Qatar: remaining in trade surplus and keeping debt levels at reasonable levels. Algeria used strategic export industries, mainly hydrocarbons and a diversified economic profile, to navigate the disruptions in global trade while maintaining growth. This paper demonstrates the importance of international trade to stabilising the Qatari economy. It suggests that further economic diversification and trade engagement will be necessary for Qatar to achieve economic stability.

CONFLICT OF INTERESTS

None.

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