

DO TURBULENT BUSINESS ENVIRONMENTS SHAPE ASYMMETRIC TRADE
POLICY RESPONSES? INSIGHTS INTO THE COVID-19 PANDEMIC AND THE
GREAT RECESSION

*¿LOS TURBULENTOS ENTORNOS EMPRESARIALES CONFIGURAN LAS
ASIMETRÍAS DEL TRATO COMERCIAL? PERSPECTIVAS DE LA PANDEMIA DE
COVID-19 Y LA GRAN RECESIÓN*

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ABSTRACT

The current pandemic crisis and the Great Recession are the most turbulent events of the XXI century. The aim of the paper is to explore and identify the pattern of response through mixes of harmful trade policy interventions during these two systemic crises. The comparative descriptive assessment focuses on two broad categories of measures, i.e. import-related and export-related harmful interventions. Some stylized facts emerged from this analysis and draw the conclusion that the two major crises have led to different responses from governments, dictated by reasons and specific needs. These patterns of response challenge the future and stability of international trading system and the behavior of companies in the global business environment. Therefore, this research provides valuable information not only for the business community, but for macro-policy makers as well.

Keywords: Business, systemic crisis, trade policy, protectionism.

RESUMEN

La actual crisis pandémica y la Gran Recesión son los acontecimientos más turbulentos del siglo XXI. El objetivo de este documento es explorar e identificar el patrón de respuesta a través de combinaciones de intervenciones de política comercial perjudiciales durante estas dos crisis sistémicas. La evaluación descriptiva comparativa se centra en dos amplias categorías de medidas, es decir, las intervenciones perjudiciales relacionadas con las importaciones y las relacionadas con las exportaciones. De este análisis se desprenden algunos hechos estilizados y se llega a la conclusión de que las dos grandes crisis han dado lugar a respuestas diferentes por parte de los gobiernos, dictadas por razones y necesidades específicas. Estas pautas de respuesta ponen en tela de juicio el futuro y la estabilidad del sistema comercial internacional y el comportamiento de las empresas en el entorno empresarial mundial. Por lo tanto, esta investigación proporciona información valiosa no sólo para la comunidad empresarial, sino también para los responsables de la política macroeconómica.

Palabras clave: empresas, crisis económica, crisis pandémica, política comercial, proteccionismo.

JEL Classification / Clasificación JEL: F13, G01.

1. INTRODUCTION

Since the 1960s, words such as *chaos* and *turbulent environment* describe the world of business; industries, markets and businesses face heightened vulnerability, but also a flood of opportunities (Drucker, 1969; Toffler, 1973; Toffler, 1983). As Kotler & Caslione (2009) assert, technological advances and the computer revolution, disruptive technologies and innovations, hypercompetition, the rise of the rest of the world, stakeholder behavior, environmental conditioning, the amplification of international risks are the drivers of the market and business chaos. The tendency to diversify risks and amplify their destructive potential has led to a “risk society” paradigm where wealth creation is systematically accompanied by risk creation (Adam et al., 2000; Beck, 2009). The latest reports, which map the global risk landscape, illustrate important shifts in the potential impact of each risk category (World Economic Forum, 2021).

The coronavirus pandemic and the 2008 economic crisis are the biggest systemic crises of the 21st century. As economic history showed, systemic crises fertilise the ground for policy interventions; after the onset of the pandemic, most governments, anticipating a recession worse than those of the entire post-war period, responded through fiscal and monetary stimulus packages with consequences that extended beyond national borders. Driven by public health emergencies and other largely domestic considerations, governments’ responses ranged in size, mix and transience, but some affected trading partners even to beggar-thy-neighbor status. Coined *The Great Lockdown* (Gopinath, 2020), the coronavirus pandemic has affected the world in a different way than other major post-war events (Chang et al., 2020), raising a wave of uncertainty and potentially more severe turmoil than the Great Recession (Baker et al., 2020).

With the advanced state global interconnectedness, the spillover effects of the hyperactivity of decision-making in many countries of the world have crossed borders and have challenged the multilateral trading system. Governments around the world have responded with a variety of macroeconomic policies, but most have interfered with trade flows claiming security.

The importance of addressing the consequences of systemic crisis responses on trade flows is mainly substantiated by two contextual observations. First, pandemic followed a period of resurgence of anti-

globalisation sentiments, fuelled by policies of the US administration, Brexit, the rise of China, etc. (Curran & Eckhardt, 2020; Kerr, 2020; Albertoni, 2021). The rationale for trade policy interventions under the argument of national security, protection of the economy and stability of the multilateral trading system is currently interpreted in different lights, because of political developments in the US and in response to the pandemic crisis (Ivory, 2020). Second, for systemic crises involving a large number of economies, empirical evidence has found that policy interventions, initially considered temporary, tend to turn permanent. As Evenett et al. (2020) estimates, in 2020 more than 32% of world trade was still affected by distortions introduced in 2009.

Post-war era saw the desire to build a liberal economic order and eradicate the legacy of the 1930s and the WWII (Kerr, 2010). However, alongside the reduction in tariff protectionism, new protectionism has emerged, which is increasingly veiled and difficult to recognize, particularly due to economic issues such as the abandonment of the fixed exchange rate system, the oil crisis, the financial crises in Asia, the Great Recession of 2008, etc. (Kerr, 2004; Kang & Ramizo, 2017). It is clearer that in turbulent times, government policies tend to be defensive towards the changing international environment. Anti-crisis measures have triggered 'opaque' protectionism causing discrimination, often very subtle, against businesses, workers and foreign investors; the use of WTO 'legal protection' such as anti-dumping actions has increased. While not a major cause, this "murky protectionism" led to a sharp contraction in world trade. (Baldwin & Evenett, 2011). As Evenett (2019) acknowledge, the policy mix of large economies tends to be reconfigured, with a focus shifting from traditional forms of intervention to less transparent forms of discrimination against foreign trade interests, with increasing pressure to protect domestic trade interests during the economic turmoil.

Considering the potential for harm and the potential of government interventions to influence the relative treatment of national trade interests vis-à-vis foreign partners, analyses of the two systemic crises concluded that in both 2009, the darkest year of the global financial crisis, and 2020, the first year of the pandemic crisis, the world's major countries responded differently, but the share of harmful measures was higher in 2020. (Evenett, 2020a; Evenett & Fritz, 2020).

So it's worth wondering: Is there a pattern of response repeating itself from one systemic crisis to another? In an attempt to answer to such a challenging question, the aim of this paper is to explore and identify the pattern of response through damaging interventions on trade flows in the two systemic crises of the 21st century. Its focus is on a comparative descriptive assessment of harmful policy interventions related to imports and exports in response to the Great Recession of 2008 and the COVID-19 pandemic. Only very few studies have dealt with trade policies during economic crises, and even fewer discuss the protectionist behaviour of governments during episodes of turbulence triggered by non-financial shocks. As such, a

comparative focus broadens the area of knowledge and provides interesting findings on differences across governments' trade policy responses to turbulences that affect the future of international trade cooperation and the multilateral trading system. The rest of the paper is organized as follows. The second section explores significant contributions to the literature's development. The third section describes the research approach, and the fourth section examines particular stylized facts yielded by the empirical investigation. Finally, the fifth section draws some conclusions and potential future research directions.

2. RELATED LITERATURE

The Covid-19 pandemic was a shock to supply and demand (Carrasco & Tovar-García, 2020), while the contraction of trade during the Great Recession was due to a shock to demand (Baldwin & Tomiura, 2020). As a result, both trade in goods and trade in services were affected; distribution chains are among the key channels through which the Covid-19 pandemic is impacting the global economy. Global value chains are disrupted as a result of the ongoing pandemic and the multiplier effects spread over the network, which affects countries highly oriented to the world market, not just for exports but also for imports (Fernandes, 2020). At the same time, this disruption increases the cost of doing business in the manufacturing sector, mainly due to the fact that, in recent decades, much of the world trade flows, especially with complex goods, are integrated into global value chains, which caused an increasing elasticity of global trade which, during the Great Recession, led to its severe and synchronized contraction (Escaith et al., 2010; Campos-Romero & Rodil-Marzábal, 2020). If world demand decreases and the demand for complex goods decreases faster than that for simple goods, then a compositional effect of the deceleration of demand for goods produced in global value chains emerges (e.g., capital goods, complex consumer goods) that reduces the dynamics of trade faster than under other circumstances (Ferrantino & Taglioni, 2014).

In this context, the propensity for protectionism, which has been evident in recent years, poses significant strategic challenges for businesses, especially since the current pandemic crisis comes a little over a decade after the Great Recession, the two shocks having a major impact on global value chains and trade flows (Curran & Eckhardt, 2020; Gereffi, 2020; Curran et al., 2021).

Over the last few decades, the literature has controverted the countercyclical nature of protection. Traditional wisdom affirms the countercyclical nature of trade barriers. Bagwell & Staiger (2003) investigate the ability of countries to overcome beggar-thy-neighbor incentives and implement liberal trade policies; they recognize that there is a relationship between the nature of the business cycle and the degree of protection. These findings are consistent with the results of previous studies applied to various countries,

periods and protectionist measures (McKeown, 1984; Gallarotti, 1985; Corden, 1993; Rodrik, 1995).

Recently, a growing body of literature has challenged the universality of these findings, demonstrating that the pro-cyclical nature of protectionism was only characteristic of economies prior to the WWI. In the post-war decades, the architecture of the global economy has changed, economies are more open, production chains are more fragmented across borders, intra-industry trade has developed resulting in a flattening of protectionist cycles (Rose, 2009). In a similar vein, Viju & Kerr (2012; 2013) claim that, given the experience of the Great Depression, when trade barriers increased rapidly in a beggar-thy-neighbor trade war (Kerr, 2009), observers anticipated similar developments early in the 2008 economic crisis, but the empirical evidence did not reveal a strong focus on protectionism. Governments have reacted through macroeconomic and trade interventions, but restrictive measures, mostly non-tariff (e.g., Sanitary and Phytosanitary, Technical Barriers to Trade, etc.), have targeted sectors that have been chronically protected by governments (Viju & Kerr, 2012). Ghemawat & Altman (2016) even discuss the possibility that world trade has reached or even surpassed its peak, since the sources of pressure are more structural rather than cyclical.

During the first months of the pandemic crisis, governments also responded with macro-economic and trade interventions, but in a different manner than previous crises. Many countries have limited exports of medical goods and equipment in response to domestic demand (Baldwin & Evenett, 2020). At the same time, many governments have amended the public procurement regimes for personal protection equipment. Hoekman et al. (2021) conclude that the use of trade measures targeting medical products in the first months of the pandemic crisis is positively correlated with the characteristics of national procurement regimes applied in the pre-crisis period. Based on micro-level analyzes, Fiorini et al. (2020) recognize that export restrictions and requisitions of critical goods for this period may appear legitimate but have unintended consequences; because production is organized in supply chains and the world market for medical equipment is rather fragmented, these measures can impede access to essential goods, increase prices, increase market volatility and distort investment decisions, with short-term and long-term side effects.

As many international trade scholars explain, trade policy measures, whether focused on imports or exports, are, under almost all circumstances, second-best answers (Lipsey & Lancaster, 1956; Bhagwati, 1969; Evenett, 2020a; S. J. Evenett, 2020b). Evaluating the implications of export restrictions, Hoekman et al. (2020) point out that they are inefficient because they lead companies to divert supplies abroad from countries that impose such measures, encourage panic buying and speculation, negatively shape investor perceptions, drive higher prices, identify local alternatives and employ less productive technologies, and sub-optimal combinations of inputs. They also argue that these restrictions, if they affect major inputs used in other countries, will have a negative impact on their ability to respond to growing global demand and increase exports,

particularly in the context of many companies with large production networks around the world and requiring parts/components to continue the production process.

Evenet et al. (2021) provide a descriptive assessment of trade policy measures targeting medical products and food during the pandemic crisis and found considerable heterogeneity among countries in the use of trade policy instruments and the types of instruments used. They also observed an increase in trade policy activism in the early months of the pandemic as the number of cases increase, medical products being targeted primarily by trade policy measures.

During the current pandemic crisis, many WTO members have made uncoordinated use of trade policy instruments, which has raised concerns about the ability of the organization and its members to negotiate new trade rules in the new context and the need to reform the multilateral trading system (Hoekman, 2020).

3. RESEARCH DESIGN

Following the aim of the study and the literature review, a descriptive methodological design has been employed, with a focus on closely scrutinizing the use of harmful traditional trade policy interventions during the COVID-19 pandemic and the 2008 economic crisis. This analysis covers two broad categories of measures, namely NTMs as traditional import restrictions, and harmful ERs. Global Trade Alert collects and provides complex country-specific data on government interventions on trade flows since 2008, affected sectors, trade flows, number and categories of measures implemented, etc. The WTO Integrated Trade Intelligence Portal also provides detailed information on non-tariff measures applied by WTO members in merchandise trade; it covers the main categories of measures initiated and in force, the countries that impose them, the trading partners concerned, the products subject to them, etc. Table 1 depicts a summary of the main policy instruments.

To explore in-depth and identify some patterns of trade policy harmful responses to the Covid-19 crisis and the Great Recession, we performed a grouped frequency distribution analysis of NTMs initiated and in force, and ER interventions, using quartiles values as bin arrays. First, we measured the central tendency and assessed the distribution of non-tariff measures and export restrictions in the selected years. The descriptive analysis provides global averages and other summary statistics, but does not uncover differences between countries, which is why we have expanded this analysis with a frequency analysis; we measured the frequency with which countries across the world have resorted to trade policy instruments to restrict imports and exports in selected years.

Combining an extensive body of policy interventions in the crisis period, systematically identifying existing and newly initiated non-tariff measures

TABLE 1. DATA DESCRIPTION

Variable	Description	Detailed query	Source
NTMs	Non-tariff Measures in force	Number of measures Reporting countries Products/sectors affected	WTO Integrated Trade Intelligence Portal
NTMs_I	Non-tariff Measures initiated	Number of measures Reporting countries Products/sectors affected	WTO Integrated Trade Intelligence Portal
AD	Anti dumping		
CV	Countervailing		
ES	Export Subsidies		
QR	Quantitative Restrictions		
SG	Safeguards		
SP	Sanitary and Phytosanitary		
SSG	Special Safeguards		
TBT	Technical Barriers to Trade		
TRO	Tariff-rate quotas		
ER	Export harmful interventions	Number of measures Reporting countries Products/sectors affected Type of measures	Global Trade Alert database

potentially triggering asymmetric treatment to the detriment of foreign trade interests by restricting imports and banning exports, we aim to outline a broad perspective on the way that severe macro-environmental turbulence may set international trade agendas. We have specifically focused on the traditional protection of domestic economies, as discrimination against foreign trade interests is obvious. Though export subsidies were among the measures adopted by governments in both periods, they were designed to support and encourage exports, often at the expense of domestic demand. The fiscal and financial support packages enacted by governments include measures that distort competition, with subsidies as just one part of them, while the real aim is to preserve jobs or support strategic sectors and, not least, to restore the balance of trade. Such benign interventions may also discriminate against foreign trade interests, but their effects remain more veiled than that of traditional protectionist instruments.

Some readers may object to the inclusion of TBT and SPS measures in an analysis of crisis response. According to WTO (2020), around two-thirds of the notifications submitted by its members by 1 December 2020 in response to the pandemic context concerned with product standards and regulations or conformity assessment procedures for such measures, i.e. TBT and SPS measures. The standards, regulations and related measures notified by WTO members mainly affect trade in personal protective equipment (PPE), food products, medical equipment, medical supplies, medicines (pharmaceuticals), plant products and general products. These measures include streamlining certification procedures, ensuring that medical products are safe, and managing COVID-19 risks in international trade in live animals.

4. EMPIRICAL EVIDENCES AND DISCUSSIONS

This section discusses some of the stylized facts that emerge from selected data on the use of NTMs and export harmful restrictions during the Great Recession and the first year of the COVID-19 outbreak.

The first stylized fact that emerges from the data considered is the hyperactivity in import-related policy interventions with harmful effect (beggar-thy-neighbor) in both 2009 and 2020.

As table 2 reveals, in 2009, 2820 new non-tariff measures were initiated besides the 1499 NTMs in force. The central trend in the evolution of policy interventions initiated this year exceeds the central trend depicting the NTMs in force, pointing to a clear shift towards responses that, intentionally or not, affect the interests of trading partners. Table 4 reveals a similar pattern, supported by evidence of 13578 NTMs in force and 43268 new NTMs initiated globally as of 31 December 2020, reported by the WTO.

The second stylized fact is that interest in “old-fashioned” protectionism does not seem to be waning. The data in Table 2 show that in 2009, QR, SPS and SG were prevalent among the import-related measures in force with discriminatory potential, but with an uneven distribution around the central tendency. A broadly similar pattern emerges in the darkest year of the global financial crisis, when the world’s countries responded by initiating new NTMs dominated by TBT and SPS, also with an uneven distribution.

A distinguishing feature in 2020 is the much wider use of export restraint measures with potentially harmful effects on trading partners. Table 6 contrasts the distribution of harmful interventions on export flows in the two selected years. As it can be noted, in 2020, some WTO Members implemented 333 export interventions (export bans, export licensing requirements, export quotas), i.e. by about 444% more than in 2009. This observation prompts a third stylized fact: both in the first year of the pandemic crisis and in the peak year of the economic crisis, the degree to which countries use export restriction measures is heterogeneous, but this heterogeneity is lessening in the case of import-related actions. Considering this heterogeneity, there is a visible tendency for a large number of measures to be clustered in a small number of world economies.

The data in table 2 highlights that in 2009 the most used NTMs were QR (24 countries / 500 measures), SPS (35 countries, 313 measures), SG (12 countries / 259 measures), TBT (39 countries / 254 measures), AD (20 countries / 155 measures), etc. In the same year, among the NTMs launched the most used were also TBT (77 countries / 1487 measures), SPS (48 countries / 737 measures) and SG (13 countries / 283 measures). Countries that have massively pushed in this direction are China (200 TBT, 90 SP), Israel (135 TBT), Brazil (92 SP), Saudi Arabia (89 TBT), USA (85 SSG, 73 SP, 71 TBT), Qatar (82 TBT) etc.

When these data are considered together with those in Table 3, a picture of a high concentration of measures in a small number of countries emerges.

TABLE 2. FREQUENCIES STATISTICS OF NTMS INITIATION AND IN FORCE IN 2009

	NTMs initiated					NTMs in force								
	AD _J	CV _J	QR _J	SG _J	SP _J	SSG _J	TBT _J	AD	CV	QR	SG	SP	SSG	TBT
N	26	7	8	12	48	13	77	20	4	24	6	35	12	39
Mean	8	4	6	2	15	22	19	8	2	21	2	9	22	7
Median	6	2	2	1	5	17	5	4	1	7	1	2	11	2
SD	8.75	4.76	9.58	2.57	21.92	26.25	32.55	8.95	2.50	32.48	0.84	15.55	25.34	10.89
Min	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Maxi	31	14	29	10	92	85	200	38	6	118	5	59	77	52
Sum	216	28	44	25	757	283	1487	155	9	500	9	313	259	254
% of total NTMs	7.66	0.99	1.56	0.89	26.13	10.04	52.73	10.34	0.60	33.36	0.60	20.88	17.28	16.94
Percentiles	25	2	1	1	2	2	2	2	2	4	1	1	1	1
	50	6	2	2	5	17	5	4	1	7	1	2	11	2
	75	11	6	4	22	32	21	12	5	14	2	6	37	5

Note: In tables 2, 4, 5 we have the following statistics: N = number of countries with NTMs; Mean = average number of NTMs per country; Median = central value/number of NTMs per country; SD = standard deviation; Min = the lowest number of NTMs adopted by a country; Max = the highest number of NTMs adopted by a country; Sum = sum of NTMs adopted by all countries.



Notably, in 2009, 19 countries each introduced between 21 and 200 TBT, three countries launched between 32 and 85 SG, 12 countries set up between 22 and 92 SPS.

TABLE 3. FREQUENCY TABLE OF NTMS IN FORCE AND INITIATED IN 2009

In force							
Bin array	AD	CV	QR	SG	SP	SSG	TBT
min	4	3	2	4	11	3	14
25	3	0	6	0	0	0	0
50	3	0	4	0	8	3	9
75	5	0	6	0	8	3	7
max	5	1	6	2	8	3	9
Initiation							
Bin array	AD_I	CV_I	QR_I	SG_I	SP_I	SSG_I	TBT_I
min	5	3	3	8	10	3	12
25	4	0	0	0	6	2	10
50	4	1	2	0	9	2	17
75	7	1	2	2	11	3	19
max	6	2	1	2	12	3	19

Note: The quartile values were used as bin arrays to cluster the data series.

At the end of 2020, the protectionist pattern appears almost unchanged. Accordingly, of the 13578 NTMs applied worldwide, SP (3668), TBT (3046), AD (1911), QR (1636) were most frequently used. At the same time, 43268 NTMs were initiated globally, most of them being TBT (136 countries / 25806 measures), SP (179 countries / 17117), AD (29 countries / 249 measures). The most active countries were the USA (1303 TBT, 2469 SP, 29 AD), China (1300 TBT, 1185 SP, 18 AD), the EU (1168 TBT, 642 SP, 14 AD), Saudi Arabia (1110 TBT, 254 SP), Brazil (1016 TBT, 1282 SP), Israel (1138 TBT), Canada (1235 SP, 560 TBT, 6 AD).

The pattern of concentration also persists; as detailed in tables 4 and 5, WTO reports that 34 countries have each undertaken between 228 and 1303 TBT, and 45 countries have launched between 66 and 2469 SPS.

In 2020, some of the WTO Members have implemented 333 export interventions (i.e. export bans, export licensing requirements, export quotas), approximately 444% more than in 2009. The number of countries making use of such interventions was also more than four times higher (99 in 2020 comparing to 20 in 2009). In addition, a larger number of countries each adopted a larger number of measures, as follows: 18 countries adopted between 4 and 45 harmful ERs in 2020, compared to 5 countries that launched only between 4 and 29 harmful ERs in 2009.

TABLE 4. FREQUENCIES STATISTICS OF NTMs IN FORCE AND INITIATED AT 12/31/2020

	NTMs initiated													NTMs in force												
	AD_I	CV_I	SG_I	SP_I	TBT_I	AD	CV	ES	OR	SG	SP	SSG	TRO	TBT	AD	CV	ES	OR	SG	SP	SSG	TRO	TBT			
N	29	9	24	179	136	34	12	25	45	25	45	122	15	49	101											
Mean	9	6	2	96	190	56	18	17	36	2	30	90	26	30												
Median	4	3	1	20	64	20	5	13	20	2	6	11	14	6												
SD	12.25	7.26	1.86	262.37	299.10	83.82	35.38	18.72	41.35	1.61	74.04	138.30	36.50	63.31												
Min	1	1	1	1	1	1	1	1	1	1	1	1	2	1												
Max	61	22	8	2469	1303	388	127	72	174	8	661	496	214	526												
Sum	249	50	46	17117	25806	1911	211	429	1636	56	3668	1347	1274	3046												
% of total NTMs	0.58	0.12	0.11	39.56	59.64	14.07	1.55	3.16	12.05	0.41	27.01	9.92	9.38	22.43												
Percentiles	25	2	1	1	4	4	3	5	6	1	2	5	3	2												
	50	4	3	1	20	64	20	5	13	20	2	6	11	14	6											
	75	11	9	2	66	228	80	16	18	51	3	30	105	32	32											

TABLE 5. FREQUENCY TABLE OF NTMs IN FORCE AND INITIATION AT 12/31/2020

	In force													Initiation												
	AD	CV	ES	OR	SG	SP	SSG	TRO	TBT	AD	CV_I	SG_I	SP_I	TBT_I	AD	CV_I	SG_I	SP_I	TBT_I	AD	CV_I	SG_I	SP_I	TBT_I		
bin array																										
min	4	4	2	3	2	9	29	1	6	20																
25	5	5	3	4	11	0	8	3	7	11																
50	9	9	1	7	11	10	24	4	14	21																
75	7	7	3	5	10	0	31	3	10	24																
max	9	9	3	6	11	6	30	4	12	25																
Initiation																										
bin array																										
min	6	6	4	4	17	24	12	12	12	12																
25	4	4	0	0	0	29	23	3	23	23																
50	5	5	2	2	0	39	33	3	33	33																
75	7	7	1	1	2	42	34	2	34	34																
max	7	7	2	2	5	45	34	2	34	34																



TABLE 6. FREQUENCIES STATISTICS OF ERs IMPLEMENTED IN 2009 AND 2020

ERs		2009	2020
N	Valid	20	99
Mean		4	3
Median		1	2
SD		6.44	5.02
Min		1	1
Max		29	45
Sum		75	333
Percentiles	25	1	1
	50	1	2
	75	4	4

TABLE 7. FREQUENCY TABLE OF HARMFUL ERs IMPLEMENTATION IN 2009 AND 2020

bin array	ERs 2009	ERs 2020
min	12	36
25	0	0
50	0	25
75	3	20
max	5	18

The fourth stylized fact is regarding the sectoral distribution of these policy measures, in the view that both in 2009 and 2020 NTMs with discriminatory potential covered roughly the same sectors, while ERs affected other sectors. Unlike in 2009, when the use of ERs was moderate and largely determined by countries' development strategies, in 2020 governments were more aggressive in using various export-related restrictions such as export bans, export licensing requirements, export quotas in critical crisis management areas.

TABLE 8. DESCRIPTIVE STATISTICS OF HARMFUL ERs BY AFFECTED SECTOR

	2009	2020
Mean	3	7
Median	2	3
SD	4.07	12.30
Min	1	1
Max	30	94
Sum	180	666
Count	61	98

The sectors most affected by the NTMs initiated in 2009 were prepared foods, beverages, spirits, vinegar, tobacco (572 measures including 311 TBT, 162 SP); live animals and their products (527 measures including 277 SP, 180 TBT); plant products (427 measures including 190 SP, 160 TBT); machinery

and electrical equipment (422 measures including 371 TBT) and products of the chemical and allied industries (291 measures including 153 TBT, 56 SP).

As of December 31, 2020, the sectors most affected by the NMTs initiated were prepared foodstuffs, beverages, spirits, vinegar, tobacco (7082 measures including 4113 TBT, 2960 SP); vegetable products (7529 measures including 4916 SP, 2608 TBT); live animals and products (7216 measures including 5264 SP, 1951 TBT); machinery and electrical equipment (5329 measures including 4881 TBT) and products of the chemical and allied industries (4958 measures including 3652 TBT, 1261 SP).

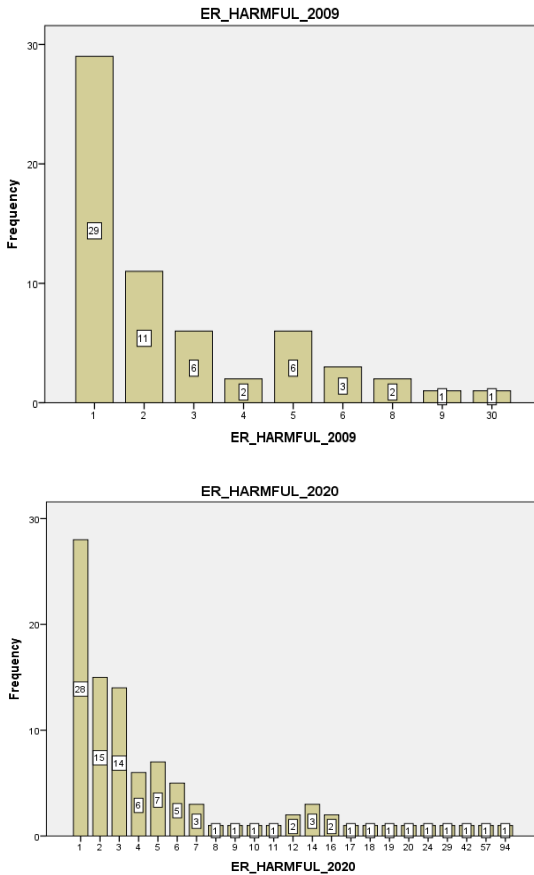
In 2020, 98 sectors were affected by 666 harmful ERs, with a dispersed distribution, while in 2009, 61 sectors were affected by 180 harmful ERs, with quite a normal distribution.

As figure 1 depicts, by 2020 the six most affected sectors where essential goods for the current pandemic are produced include pharmaceuticals (94 measures), made-up textile articles (57 measures), medical and surgical equipment and orthopedic appliances (42 measures), clothing excluding fur (29 measures), other plastic products (24 measures) and chemicals (20 measures). Traditionally, food and agri-food are essential categories, but in the pandemic context equipment, medical supplies and medicines fall into this category. In such contexts, demand for these categories usually increases substantially, resulting in trade disruptions and even trade "wars". As Everett (2020b) points out, the current pandemic was preceded and influenced by two notable contextual factors. First, many governments have taxed imports of medicines for domestic health policy reasons. Second, the international production and distribution of medicines and medical goods is largely concentrated in international value chains.

In the pharmaceuticals sector, harmful ERs include export bans, export licensing requirements and export-related NTMs applicable not only to Covid vaccines but also to active compounds used in medicines aimed at treating or reducing the risk of death for Covid patients. In the short term a global pandemic can potentially provide important opportunities for pharmaceutical companies as it stimulates demand for drugs, vaccines and medical devices and, most importantly, can foster critical or disruptive innovation (Sneader & Singhal, 2021). Moreover, demand reshaping, supply shortages (affecting the market for medical devices and PPE), panic buying, limited interactions and increased use of telecommunications, regulations targeting import liberalization and export restrictions are among long-term consequences of Covid-19 leading to structural changes in this industry (Ayati et al., 2020). In the long term, delays in authorizations, shifts to self-sufficiency within supply-chains, reduced growth and possible changes in consumer behavior unseen in previous recessions could potentially affect the pharmaceutical industry (Ayati et al., 2020).

In Figure 1, the horizontal axis displays the number of harmful export restrictions and the vertical axis plots the frequency of such restrictions (the number of affected sectors). This figure reveals that in 2009, in opposition

FIGURE 1. FREQUENCIES OF HARMFUL ERs IN 2009 AND 2020 BY AFFECTED SECTORS



to 2020, only one sector, i.e. vegetable oils, was more affected through 30 harmful ERs, while the other sectors were subject to fewer ERs; among these sectors are copper, nickel, aluminum, alumina, lead, zinc and tin, unwrought (9 measures); waste or scrap metals (8 measures); other non-ferrous metals and articles thereof, cermet and articles thereof (8 measures); basic organic chemicals (6 measures). In the vegetable oil sector, Malaysia has imposed taxes on exports of crude palm oil (29 interventions) dictated more by domestic than global economic considerations. Since the 70s, the country's industrial strategy has focused on the development of crude palm oil production and refining industries, and today Malaysia is one of the world's leading producers and exporters of palm oil and palm oil derivatives(MPOB, 2015). In 2009,

extreme weather events affected this production, which is vital to the country's economy. This situation, coupled with growing international concern about the sector's negative impact on the environment, resulted in the enactment of protective measures.

Notably, in 2009 and later trade policy instruments targeted the sectors traditionally protected by governments, as these sectors absorb a large part of the workforce, are strongly unionized and actively involved in lobbying. In 2020, the pharmaceutical and electronics and equipment sectors were among the most active lobbying industries not only in the US but also in Europe.

5. CONCLUSIONS

This paper compares the propensity to use restrictive/harmful trade policy instruments in response to the Covid-19 pandemic and the Great Recession of 2008. The analysis discloses several stylized facts that emerge from selected data, as follows.

In 2009, there was a clear activism in trade policy, and it was reflected in the initiation of new NTMs, such as TBT, SPS, SG and AD. In 2020, interest in old-fashioned protectionism does not seem to have diminished, with many countries still resorting to measures to protect domestic industries through non-tariff barriers affecting imports.

Unlike in 2009, when the use of ERs was moderate and largely triggered by development strategies, in 2020 governments were more aggressive in using various ERs such as export bans, export licensing requirements, export quotas in critical crisis management areas.

In 2009, but still today, the industries covered by non-tariff measures were those traditionally protected by governments as sectors that absorb a substantial part of the labor force, have strong unions and are actively involved in lobbying activities. Furthermore, lobbying was consistent across the sectors covered by the export restriction measures, particularly in 2020.

During both the first year of the pandemic crisis and the peak year of the economic crisis, the degree to which countries use export restriction measures is heterogeneous, but this heterogeneity is decreasing in the case of import-related measures. In view of this heterogeneity, there is a noticeable tendency to concentrate a large number of measures on a relatively small number of world economies.

To conclude, we can argue that the two major crises of the past decades have led to different responses from governments driven by the specific reasons and needs for managing them. Thus, while the Great Recession has perpetuated old - style protectionism based on non-tariff measures aimed at preserving jobs and balancing trade, the pandemic crisis has exposed a new facet of protectionism materialized in export-related interventions. The two periods of turbulence have exerted pressure on businesses, but interventions on trade flows could prove all the more harmful as value chains become larger and more fragmented worldwide.

Patterns of response to various crises challenge the future of international cooperation and the stability of the international trading system. As a result, this research provides valuable insights not only for the business community, but also for macroeconomic decision-makers. As comprehensive data sets become available, new lines of inquiry might be explored. What will be the mid-to long-term impact on sustainable development? How are companies going to shape their behavior in the international business environment? What will be the sources of competitive advantages over the next several years? Such research questions, and other not necessarily related to the trade response to the crisis, deepen the knowledge, especially since the current pandemic and the Great Recession are the most turbulent events of the postwar era.

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