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SOME ECONOMIC HISTORIC PERSPECTIVES
ON THE 2009 WORLD TRADE COLLAPSE

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Abstract

The paper puts the collapse of the world trade volume in 2009 into two historic perspectives. First, the paper analyses 18 major post-1980/pre-2007 financial crises and uses these observations as a basis to critically evaluate presently available projections for world trade. Second, the paper takes into account the developments in the world's trade volume and openness since 1880. Next to the direct impact of the present financial crisis on trade, potential second order effects on economic growth and international political relations are identified.

Keywords

World trade, depression, financial crisis, import crunch, trade and conflict

JEL classification

F01, F10, G01

Some Economic Historic Perspectives On The 2009 World Trade Collapse[1]

1 Introduction

In March 2009, in preparation for the April G20 meeting, the World Bank (2009a), the World Trade Organization (2009) and the Organization for Economic Co-operation and Development (2009a) published projections for the development of global trade. The forecasts agreed that world trade in 2009 would contract although the studies disagreed on the actual rate of decrease of the volume of world trade (see Table 1). The predictions of the international organizations also agreed in the sense that they foresaw that trade would hit bottom soon and that positive growth would return on average in 2010. In this sense their predictions were both dismal and optimistic at the same time. It is not clear, however, why the predictions differed by so much (estimates range from –6.1 to –13.2 per cent) and how the duration of trade reduction has been established since the institutions have not provided detailed information about the actual models and assumptions. Since the April G20 meeting the global trade projections showed the usual pattern of continuous and substantial downward revision (see Fingerand and Schuknecht 1999, pp. 25-6)[2]

TABLE 1
Recent predictions for world trade

	2009		2010
	March '09 estimate	July '09 estimate	
World Bank	–6,1%	–9.7%	2,3%
WTO	–9%	–10%	"recovery"
OECD	–13,2%	–16%	1,5%

Sources: World Bank 2009 a,b, World Trade Organization 2009a,b and OECD 2009a, b

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[2] Trade estimates had been revised substantially downward by the end of the second quarter of 2009. The central scenario in World Bank (2009b, p. 9) amounts to a reduction in the volume of trade with –9.7 %; the protracted recession scenario (World Bank 2009b, p. 33) includes shrinkage of –11.9% in 2009 and, additionally, a –4.7% in 2010. The OECD (2009b) p. 39 revised downward its negative growth estimate for world trade in 2009 to –16%. WTO (2009b).

This working paper uses an approach that provides an alternative for the modelling exercises that are typically used by the large international organizations. Recently, a number of papers have taken an historical approach focusing on the development of key economic factors in the aftermath of financial crises. Examples are Laeven and Valencia (2008) and Reinhart and Rogoff (2009). These contributions focus on the development during and after a financial crisis of specific financial and economic variables regarding the national economies that are being studied. Typically movements in asset prices, credit, unemployment and Gross Domestic Product are reported. Hardly any attention, however, has been paid to the development of international trade. When trade is part of the analysis, the dataset is regionally focused (Hong et al. 2009) or deals with a subset of countries such as the OECD (Claessens et al. 2008) or emerging markets (Thomas 2009). Clearly, a broader perspective is in order if one wants to assess the extent and possible duration of the trade collapse that is induced by the present credit crisis. This would seem to be especially relevant because, according to Thomas (2009, p. 2), 'the economic literature on the linkages between trade volumes and financing is very thin'.

This paper attempts to fill this gap. Section 2 discusses how financial crises may influence exports and imports. Section 3 summarizes historical evidence on the impact and duration of import volume reductions in the context of individual financial crises, in particular in the post-1980/pre-2007 era. This approach is relevant in the present context because a global reduction in import demand will by definition enforce a decrease of exports for all countries. In section 4 we will therefore look beyond these individual crises and also reflect on some issues posed by the previous global trade collapse that occurred in the 1930s. Section 5 deals with second order effects of the 2009 trade collapse, in terms of both potential growth reducing and political implications. The final section concludes and discusses some policy relevant issues.

2   Why Import Rather Than Export Is Key To Understanding The Trade Collapse

The reason for the neglect of trade in most analyses of the aftermath of financial crises may very well be that the impact of a crisis on exports is ambiguous. The decline in domestic demand may induce firms to find new markets abroad and if policy makers respond with a devaluation one expects that exports will increase in the aftermath of a financial crisis (Fingerand and Schuknecht, 1999, p. 24). More importantly, individual country experiences during such episodes typically show that policy makers opt for an export led growth strategy to get out of the crisis situation. Resources are often re-allocated towards the export sector in order to ensure that hard currency can be earned, for example, in order to be able to meet international debt obligations. Exports thus actually may tend to grow during and after financial crises. Given this theoretical ambiguity it is not surprising that the empirical evidence regarding the impact of financial crises on export growth is mixed. One of the leading studies in the field (Claessens et al. 2009, Tables 6, 7, 8, 9 and 11, pp. 66–70) generally reports insignificant coefficients. It is only in the

sub-sample of those recessions that include house price bursts that a positive impact on the volume of exports is significant (but only at the 90% confidence level). Thomas (2009, p. 7) reports a negative contemporaneous banking crisis dummy (also only at the 90% confidence level) for the exports of emerging markets that are hit by a financial crises. Hong et al. (2009, Figure 3, p. 14) graphically report an average slowdown of export growth, but the mean and median response in their sample never turns negative. The evidence all in all is inconclusive, which seems to imply that export is not strongly impacted during a financial crisis. Indeed, the IMF (2009, p. 112) notes that

> one key factor that helped economies recover from a recession associated with a financial crisis was the fact that they were able to benefit from strong external demand. This suggests that disruptions to the supply of credit may not matter much for firms that are highly dependent on outside funding if they produce goods that are highly tradable

This stylized fact, however, should not lead to the erroneous conclusion that finance is not important for international trade. On the contrary, the disruption of credit *a priori* would seem to be very relevant for international trade, be it for import flows or for export flows. Banks and banking services are more (and often much more) important for international activities than for domestic activities (cf. Fingerand and Schuknecht, 1999 and Auboin and Meier-Ewert, 2003). First, the working capital is *ceteris paribus* needed for a substantially longer period in international transactions because of the time involved in transportation over much longer distances. Second, international payment is much more complicated because of different exchange rates and different jurisdictions. Third, in contrast to domestic trade, payment in cash is not a viable alternative so that banks always need to be involved. It is not only the fact that international trade crucially depends on financial services to finance trade-related expenditure and to insure against trade-related risk that makes trade vulnerable for financial instability. Equally important is that actual payments need to be settled by involving several banks that function under different regulatory supervision regimes so that thrust between the financial institutions involved is a *sine qua non*. During financial crises thrust collapses and thus trade is at risk.
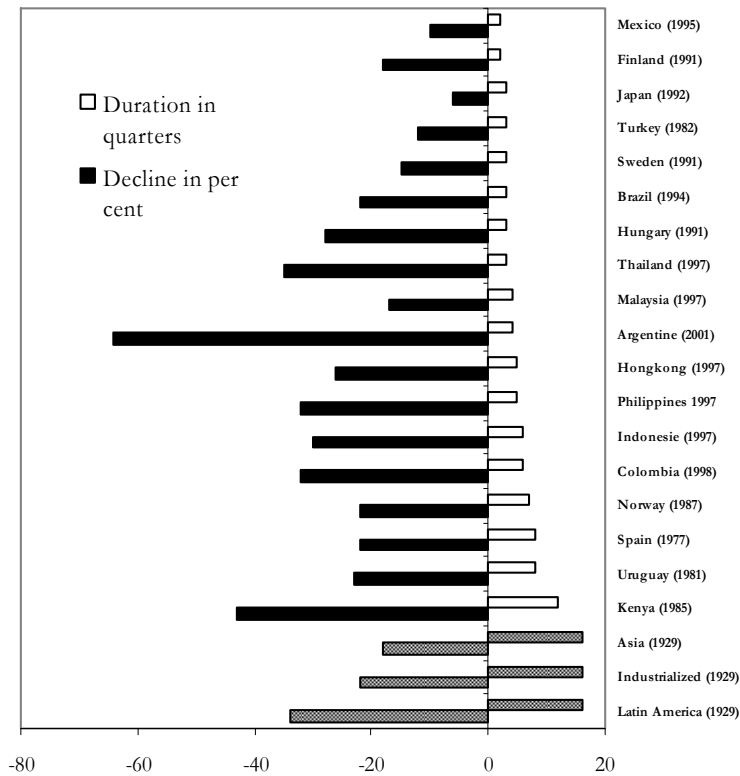
From a political economy perspective the perception may be relevant that imports entail an outflow of hard currency. Thus policy makers might not be inclined to come to the aid of importing firms (unless the imports are crucial for the exporting industry). Payment risk is especially relevant for the importer who will experience a rise in transaction costs, for example, because letters of credit or even full payment in advance is required. The reduction in effective demand that is a consequence of a financial crisis directly translates into a reduced import volume. Finally, in a scenario that involves a depreciation of the currency the price of imports will rise and thus exert a negative influence on the volume of imports.

All in all the impact of a financial crisis should be expected to be most visible and unambiguous in the development of the volume of imports and this is the issue of the next section.

3 A Short History Of Financial Crises And Import Crunches

Figure 1 summarizes the depth (percentage decrease) and duration (quarters) of the reduction of imports. These variables are measured from peak (i.e. the turning point where the rate of growth of imports becomes negative) to trough (i.e. the end of the contraction of the import volume where the rate of growth becomes positive again). Figure 1 deals with the aftermath of 18 important financial crises that were identified in Fingerand and Schuknecht (1999) and Reinhart and Rogoff (2009). These crises occurred after 1980 and before 2007, the year that the present credit crisis set in.

FIGURE 1
Import volume during 18 major post 1980 financial crises
Decrease in per cent and duration in quarters (both peak to trough)

Source: see the data appendix

The sample of 18 crises is more balanced than other studies in the field in the sense that this group of countries covers most continents and includes countries with rather different levels of development, but the sample is also biased because relative small financial crises are not included and because a lack of reliable data prohibited the inclusion of all crises studied in Fingerand and Schuknecht (1999) and Reinhart and Rogoff (2009). Moreover, the comparability of the data is imperfect since different sources had to be

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consulted so that the real reductions in the volume of imports are based on different methodologies. Only in a limited number of cases the preferred data (import volumes deflated by relevant international price indices) were available from the IMF. So other methods had to be used as well, for example, National Accounts data which are available from the OECD or the IMF and which are deflated by import price indices (that are established on a national basis) or by the GDP deflator. The appendix discusses the sources and methods that have been used for individual countries.

Most importantly, in a number of cases that are identified by Fingerand and Schuknecht (1999) and Reinhart and Rogoff (2009) no reliable data on the volume of imports were available at all so that these financial crises were excluded from the sample. The imperfectness of the data is a problem that, unfortunately, cannot be solved if one wants to broaden the perspective and thus has to study a group of heterogeneous countries as in the present working paper. Clearly the results in this working paper thus need to be interpreted with caution.

With this caveat in mind it is noteworthy that the volume of imports on average decreased by 25.4 percent (with a standard deviation of 13.4) during 4.8 quarters (with a standard deviation of 2.6). The empirical evidence summarized in Figure 1 can be compared to findings of Claessens et al (2008, pp. 66–70) who, depending of the type of the crisis that is being studied, report for their sample of 122 recessions in 21 OECD countries in the years 1960–2007 that median and mean decreases in import volumes occur in the range of –5 to –8 per cent at a confidence level of 99%. The smaller amplitude for OECD countries is in line with the fact that generally speaking the largest impacts according to Figure 1 are found in non OECD countries.

From the perspective of Figure 1, the forecasts by the international organizations (summarized in Table 1) are probably too optimistic (even after the second quarter revisions of the projections) regarding the expected percentage decrease although the relative quick rebound of world trade appears in line with the individual country experiences.

It should, however, be noted that peak-to-trough developments may provide a distorted and a too optimistic picture of the actual duration of the problems. Consider, for example, Table 2 that provides further information on the time that elapses until the import volume has completely returned to its pre-crisis level. Recovery to pre-crisis levels on average takes 13.1 quarters (with a standard deviation of 7.6). Often the cases appear to be of a long and protracted nature. Moreover, a key question is whether these individual cases can be relied upon in view of the seriousness and global nature of the present crisis. This is not obvious as I will argue in the next section.

TABLE 2
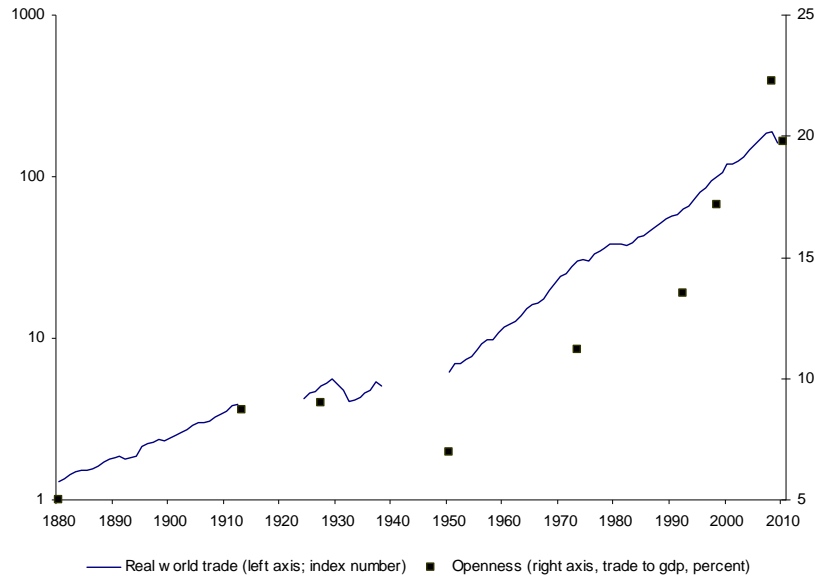**Duration of the import crunch and its recovery**

	Year	Period (Quarters)		
		Peak to trough (1)	Recovery to pre-crisis level (2)	(1) in per cent of (2)
Uruguay	1981	8	32	25%
Kenya	1985	12	28	43%
Colombia	1998	6	20	30%
Norway	1987	7	16	44%
Finland	1991	2	15	13%
Argentine	2001	4	13	31%
Hongkong	1997	5	13	38%
Philippines	1997	5	13	38%
Spain	1977	8	13	62%
Thailand	1997	3	13	23%
Indonesie	1997	6	12	50%
Sweden	1991	3	12	25%
Brazil	1994	3	8	38%
Malaysia	1997	4	8	50%
Japan	1992	3	7	43%
Hungary	1991	3	6	50%
Mexico	1995	2	3	67%
Turkey	1982	3	3	100%

Source: see the data appendix

4　　Beyond Individual Crises

Consider the exceptional, truly global nature of the crisis (the fact that most countries experience reduced import demand at the same time) and the strong (and in recent history unprecedented) collapse of the world trade volume that is illustrated in Figure 2. Figure 2 summarizes long term data for real world trade. The left axis presents index numbers (1998=100, logarithmic transformation) and the right axis summarizes a well-known measure of openness namely the trade-to-GDP ratio (in percent). Like in the 1930s a strong break from the long term trend in global trade volumes occurs. Moreover, a sharp reduction in the extent of openness is to be expected on the basis of present prognoses of the IMF (2009) for world GDP and the world trade volume.

FIGURE 2
Historical Perspective on the 2009 Trade Crunch

Real world trade (left axis; index number) ■ Openness (right axis, trade to gdp, percent)

Source: Real trade data 1880-1992 and trade to GDP ratios 1880-1998 Maddison 1998
and 2001. Real trade data 1992-2009QI CPB trade monitor. Trade to GDP-ratios 2009
and 2010 constructed on the basis of International Monetary Fund, World Economic
Outlook Database, April 2009

The collapse of global trade provides corroborative evidence that the present
crisis is a different class: unlike was the case for the individual financial crises
studied so far, we now have to realize that global markets are influenced
through the concurrence of problems in all countries. This makes it impossible
to follow an export led recovery strategy and for this reason the duration of the
crisis may take much longer than during earlier post Second World War
episodes.

Let us thus consider the issue of duration from a broader historical
perspective. By way of comparison three regional averages for the Great
Depression have also been included in Figure 1 (these observations were not
used in the calculations of depth and duration that were reported earlier).
Compared to the individual post 1980 crises the percentage trade reduction
during the inter bellum is not extraordinary. The findings in this paper may
thus change the dominant historical perspective on the causes of the trade
collapse during the Great Depression.[3] Typically economists tend to blame
protectionism and competitive devaluations for the reductions in trade
volumes and for good reasons, but the findings in this paper suggest that

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[3] Eichengreen and Irwin (2009) in a recent article relate the trade collapse in the 1930s
to the financial crisis rather than to special interest commercial policies.

another mechanism (namely the credit crunch) may have been empirically relevant too.

The key difference, however, between the individual financial crises and the inter bellum appears to occur in the duration of the import crunch as import volumes for the industrialized countries, Asia and Latin America decreased over a period of 4 years. (Recovery to pre-crisis levels took some 8 years but for many countries trade volumes did not fully recover before the Second World War).

It is of course not clear beforehand what the experiences of the trade collapse during the Great Depression mean in the present context. Trade in the inter bellum was much more in conformity with the neoclassical model of comparative advantage whereas intra industry trade is an increasingly important characteristic of modern trade even in a North-South and South-South context. Much trade is intra company trade that takes place within multinational corporations that manage international value chains taking advantage of location advantages around the globe. As these intra-company trade flows would not seem to depend on trade credits the impact of a global financial crisis could be less in the present context On the other hand, like in the inter bellum, consumer durables appear to be especially hit. Since producers of these durables, such as the automotive industry, are very much organized along international value chains demand reductions in one country may spread much more quickly to other countries through the trade channel. On balance it would seem sensible to consider the average duration indicated in the previous section as a minimum estimate. Actually this is a cautious note that would seem to apply to other analyses that use historical data to guesstimate the duration of the present crisis.

5   Economic and Non-Economic Second Order Effects

The findings in this paper show for individual cases that a financial crisis exerts a strong and negative impact on the volume of imports. The concurrence of financial crises in a great many countries implies that global import demand will contract so that an export led recovery is hardly conceivable. Therefore the average duration of the financial crises that have been studied in this paper probably offers a lower bound estimate for the duration of the present trade collapse.

In addition it may be relevant to consider some second order effects that go beyond and/or are implied by the presently observed reduction in trade. First, the reduction of multilateral trade openness (that is exports and imports in per cent of GDP) will exert a further negative impact on growth. Lewer and van den Berg analyse 246 cross-section regressions and 596 time series regressions that were reported in 83 econometric studies that were published in scientific journals over the years 1960–2002. On the basis of the point estimates the studies yield a consensus view that a 1 percentage point reduction in multilateral trade linkage on average decreases annual long-run growth by 0.2 percentage points. Lower multilateral trade openness will thus further

reduce the scope for recovery.[4] Second, the reduction of the export potential could induce economic nationalism, protectionism and a flight into import substitution activities which will reduce global efficiency and export opportunities for other countries. Third, even without concrete and observable trade conflicts the implied uncertainty about trading possibilities will influence the extent of specialization and possibly the pattern of specialization as well (van Bergeijk, 2009).

Importantly, non-economic second round effects may occur in the field of international politics. A rich empirical literature exists of studies that deal with the trade–conflict relationship (that is: how does international trade influence conflict and co-operation between nations) and the conflict–trade relationship (that is the questions of how conflicts hinder international trade or how the reduction of conflict increases trade). Although the causality issue has not been settled, little dispute exists about the significantly negative relation between the two variables (it has to be noted that the strength of the estimated effect tends to be lower in more recent datasets).

TABLE 3
Meta-analysis of 15 empirical studies published in the years 1980-2006 on the trade conflict nexus (dependent variable: reported trade conflict elasticity, method: OLS)

Publication lag (years) [a]	-0.03*
	(-1.92)
Dataset pre 1980	-0.25*
	(-2.11)
Assumed causality (dummy) [b]	0.11
	(1.78)
Terrorism	0.27$
	(3.04)
R^2	0,59
F test	3.6#

Sources: Bergeijk (1989, 1994), Blomberg (2006), Freytag et al. (2006), Gasiorowski (1986), Li et al. 2004, Lundborg (1988), Mousseau et al. (2003), Nitsch et al. 2004, Polacheck (1980, 1992), Polacheck et al. 1992, Pollins (1989), Summary (1989)

Notes: [a] year of publication minus last year of estimation period

[b] (dummy = 0 for impact of conflict on trade)

$ significant at 99%

significant at 95%

* significant at 90%

(t value-s in brackets)

The constant term is negative and significant but not reported

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[4] See, however, Rodrik (2009) for a contrary position. Rodrik finds a small negative coefficient for the export share in his growth regressions. My point would be that Rodrik neglects another component of international trade, namely imports.

This is illustrated in Table 3 that reports on a meta-analysis of 15 scientific studies that were published in the years 1980-2006. On average these studies report an elasticity of -0.22. Almost sixty percent of the variation of the estimated coefficients can be explained by a simple regression. It matters whether the dataset is less recent (either from the perspective of the time lapse between the end-year of the data set and the year of publication or in the sense that the study deals only with periods prior to 1980) as the relationship appears weaker for the more recent past. Also the particular form of conflict matters: studies that deal with terrorism find a smaller effect. The assumed causality is not a significant determinant of the reported elasticity so that the studies agree on the strength of the mechanism although they disagree on the causality. All in all an increase in the level of international conflict could result in relation to the trade collapse.

6   Concluding Remarks

The trade collapse is thus not only relevant because of its economic implications. The phenomenon of de-globalisation (that is also influencing other flows such as Foreign Direct Investment, lending, development aid and migration) also threatens (the institution that underpin) the Liberal Peace.

First-best government action should be aimed at reducing uncertainty *per se*, through, strict adherence to WTO conflict settlement procedures or other multilateral instruments that aim at increasing trust in free trade. Indeed, it is important to recall that the benefits of the Bretton Woods institutions were hoped to extend beyond economic stabilization and prevention of the errors of the Great Depression. The spirit of Bretton Woods was also to prevent a repetition of the great wars. Recent empirical research for the years 1885–1992 shows that a clear contribution was delivered:

> The pacific benefits of democracy, economic interdependence, and international organizations are all the more apparent if they are compared to the effects of alliances and a preponderance of power – the elements stressed in realist theories of international politics. Surprisingly, alliances do not reduce the likelihood of interstate disputes, even fatal ones, when the influences of (democracy, economic interdependence and membership of international organizations) and previous dyadic conflicts are held constant. … Efforts to consolidate democracy, increase interdependence, and create a network of international organizations, our results suggest, should have greater benefits (…that) policymakers should incorporate in their strategy for peace. (Oneal et al 2003, p. 388)

It is thus worth repeating that the multilateral governance of the world trade system is offering protection of small and medium-sized countries and new entrants to the world market. It is the multilateral approach that offers a first line of defence against increasing bilateralism and protectionism and against power politics of other countries. It provides the institutional and economic background against which trade, investment, and conflict resolution can be reconciled.

Appendix: Time Series Data Sources

- Index numbers for the import volume could be derived from IMF, *International Financial Statistics* for
    - Argentine (2001)
    - Hongkong (1997)
    - Japan (1992)
    - Norway (1987)
    - Philippines (1997)
    - Sweden (1991)
    - Thailand (1997)
    - Turkey (1982)
- Imports in constant prices could be derived from IMF, *International Financial Statistics* for
    - Brazil (1994)
    - Hungary (1991)
- Imports in current prices deflated by GDP deflator could be derived from IMF, *International Financial Statistics* for
    - Colombia (1998)
    - Indonesia (1997)
    - Malaysia (1997)
    - Mexico (1995)
    - Spain (1977)
    - Uruguay (1981)
- Seasonally adjusted index number for the volume imports could be derived from *OECD Quarterly National Accounts for*
    - Finland (1991)
- Regional averages were taken from Maddison, 1985
    - Asia (1929): Table 2, p. 14
    - Industrialized countries (1929): Table 1, p. 13.
    - Latin America (1929): Table 2, p. 14
- Data on Kenya (1985) are derived from Fingerand and Schuknecht, 1999, p. 42.

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