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I COME TO BURY GLOBALIZATION, NOT TO PRAISE IT

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Professor Peter A.G. van Bergeijk

Inaugural Address as Professor of International Economics and Macro Economics delivered on 29 October 2009 on the occasion of the 57th Anniversary of the International Institute of Social Studies, The Hague, The Netherlands

Said the rich GATT skeleton
One world, high tech
Said the Underclass skeleton
Get it in the neck

Said the World Bank skeleton
Cut down your trees
Said the I.M.F. skeleton
Buy American cheese!

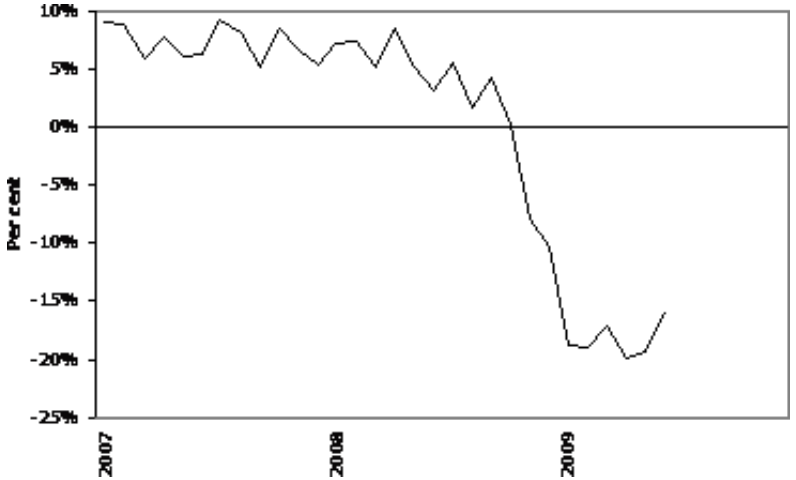
Allen Ginsberg, *The Ballad of the Skeletons*,
2 February 1997 New York, NY

I Come To Bury Globalization, Not to Praise it

Friends, EURasmians, countrymen, lend me your ears!

Eighty years ago on Black Tuesday, the New York Stock Exchange collapsed in what is now known as the Crash of 1929. This event is generally considered to be the beginning of the Great Depression of the 1930s. At its 80th anniversary it is tempting to look at our own world and ask ourselves if we are heading towards a comparable collapse of the world economy.

FIGURE 1
Growth and decline of world trade 2007-2009 (Q2)
Real percentage change vis-à-vis same month in previous year



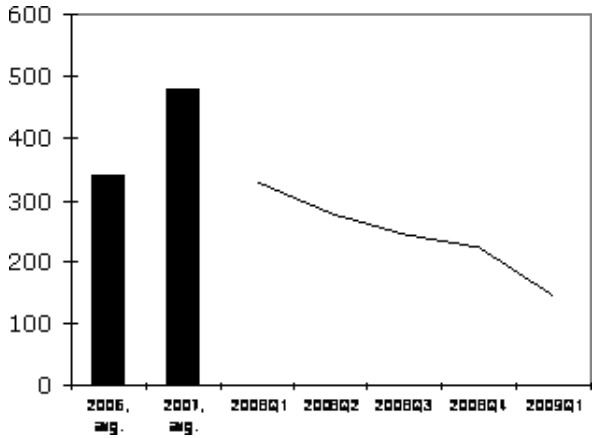
Source: CPB world trade monitor data set http://www.cpb.nl/nl/research/sector2/data/trademonitor.xls.

Indeed, one year ago it became clear that October 2008 had something extraordinary in store for globalization. In 2007 and 2008 the world trade volume had been growing at a rate between 5 and 10 per cent, but in October 2008 world trade suddenly came to a virtual halt and then started to decline. This decline rapidly turned into a collapse: early 2009 trade figures were about twenty per cent lower in real terms than they had been just one year earlier (Figure 1). A decrease of this magnitude had not occurred in the post Second World War era. We have to go back to the Great Depression and its aftermath to see a comparable destruction of trade. But it was not only trade that was in peril. The Foreign Direct Investment (FDI) collapse was even more pronounced. For the first quarter of 2009 UNCTAD (2009a) estimated a decrease by 54 per cent on the basis of a sample of 57 countries for which quarterly data on FDI inflows are available (Figure 2). Cross border mergers and acquisitions showed the strongest declines as they were 62% and 77% lower in the last quarter of 2008 and the first quarter of 2009, respectively.[1] UNCTAD's (2009b) *World Investment Prospects Survey* reports that 57% of the multinationals expects a decrease in Foreign Direct Investment and about half of them expect that this decrease will be more than 30%.

To put these developments into perspective, consider Figure 3 that summarizes data for the development of real world trade since 1880. The line in the graph relates to the left axis and presents index numbers with 1998 as a base year.[2] Since the end of the 19th century world trade has steadily grown with the exception of the *inter bellum* when a strong break occurred in the long term trend and the global trade curve shifted downwards.

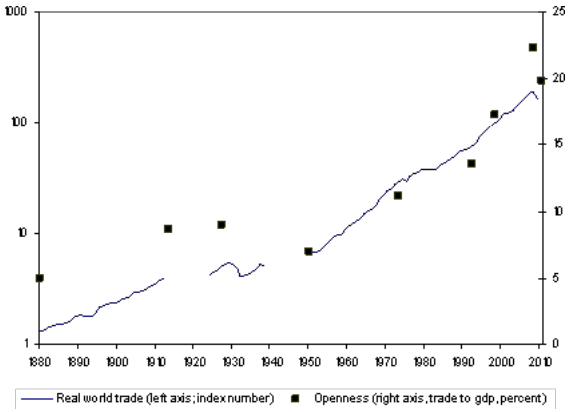
Since the Second World War world trade increased 25-fold implying a rate of growth of about 5.5% per annum.[3] From this perspective the first oil shock in 1973 and the stagflation of the 1980s are mere ripples. The last sixty years of almost continued growth constitute an exceptional chapter in the history of world trade indeed. Equally exceptional are both the speed and the depth of the downturn in trade that started one year ago and became manifest at the beginning of this year.

FIGURE 2
Development of Foreign Direct Investment 2007-2009
Billions of US dollars, quarterly data (2006, 2007 averages)



Source: UNCTAD/PRESS/PR/2009/024, 24/06/09

FIGURE 3
Historical Perspective on the 2009 Trade Crunch



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 2008 and 2010 constructed on the basis of International Monetary Fund, *World Economic Outlook Database*, April 2009, and have further been updated in the basis of IMF (2009b).

It is not only the volume of trade which drifts away from its long term trend; also openness (that is trade in relation to production) is showing a steep decline.[4] In the neoclassical trade model less openness means less international specialization. The square markers in the graph relate to the right axis that summarizes a well-known measure of openness, namely the trade-to-GDP ratio (in per cent). The development of openness again illustrates both the unprecedented impact of the Great Depression and the extraordinarily developments that we are witnessing today. Based on recent IMF projections, the world appears to be experiencing its most significant decrease in openness since the 1930s. At the same time Figure 3 clarifies that the world is still much more open today than it has ever been in the previous century. This nuance is important, but it does not mean that complacency is in order. Indeed, as was discussed this morning during the international seminar 'A crisis of capitalism? A crisis of development!', de-globalization is a risk and that it is so in particular for the people that are already most vulnerable.

This inaugural address considers the phenomenon of de-globalization. My interest in this topic fits in the tradition of the Chair of International Economics and Macroeconomics at this Institute. Eleven years ago Sandro Sideri (who was then holding the Chair of International Economics at ISS) was very much concerned about the increasing risk of the second reversal of the globalization process in an ISS working paper with a visionary title: 'The World Economy, The Crisis in Financial Markets and the Risk of a Global Depression' (Sideri 1998). We now know that the second reversal of the globalization process has occurred. The issues about which we still speculate are whether we have already hit the bottom and how long the period of de-globalization will last. These two issues may actually remain on the table for quite some time as was the case during the 1930s when even the most educated and rational analysts found it difficult to gauge whether the crisis was permanent or temporary. An example is Jan Tinbergen, who in 1933 (so 4 years into the Great Depression) wisely admitted that he did not know the answer and concluded that the question about the duration of the crisis could not be predicted with any confidence by economic science.[5] Given

the preliminary state of our knowledge any results should be treated with caution.[6]

With this caveat in mind I want to discuss the outlook for world trade and the drivers of its collapse and to see what lessons can be drawn for policies and for the institutions that underpin the internationalization of the world economy. It is important to point out that in contrast to most economists and policy makers we will be concerned with imports rather than exports. There are four reasons for this focus on imports. First, we can learn a lot more from the development of imports during *individual* financial crises. This provides a basis for comparison that can put the recent collective financial crisis into perspective. Second, the focus on exports as a driver of national growth is misplaced. Indeed, just as consumption is the ultimate goal of production, it is import that is the ultimate goal of export. Indeed development requires imports of capital goods, raw materials, intermediate goods and essential consumer goods.[7] Third, whereas the development of exports is largely determined by factors that are exogenous to countries imports can be influenced by national decisions. Fourth, the size of world markets during a global crisis is not determined by supply but by demand, that is world trade is determined by the imports of all countries. It is this perspective – left out of the analyses and policy discussions – that I want to provide.

1 Where is the Bottom?

It is a truism that the trade collapse hit the economic profession completely by surprise. Between December 2007 when the financial crisis started and July 2009, the OECD, for example, revised its prediction for the growth rate of world trade from +8% to −16%, that is an unprecedented 24 percentage points revision (see Table 1).Other international organizations such as the World Bank, the WTO and IMF did not do better. During 2009 global trade projections were continuously revised downward.[8] The international organizations however, continued to agree 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 appear to be both dismal and optimistic at the same time. As we will see the international institutions may underestimate the depth of the downturn and also run the risk of being too optimistic about the duration of the trade collapse as well.

TABLE 1
Changing OECD predictions for world trade in 2009

Source	Publication date	Prediction
Economic Outlook 82	December 2007	8.1%
Economic Outlook 83	June 2008	6.6%
Economic Outlook 84	December 2008	1.9%
Economic Outlook, Interim Report	March 2009	–13.2%
Economic Outlook 85	July 2009	–16.0%

Sources: OECD publications as indicated in the table, OECD, Paris; several dates of publication.

Indeed, it is unfortunate but true that this crisis shows again that the economic profession is a lot better in explaining *post mortem* why the patient died than in predicting the advent of the deglobalization virus (or its defeat, for that matter). A key question is of course whether anything can be said at all. It may be the case that structural change presently is so far-reaching that econometric analysis (based as it is on past experience) cannot be used to analyse and/or predict the impact of such significant changes in economic relationships and policies as we presently witness on an *ex ante* basis.[9] Admittedly, it has been possible to estimate meaningful econometric models that continue to work during significant changes in international regimes (examples are Van Bergeijk and Oldersma, 1990 and Van Bergeijk and Berk, 2001), but the point is that much of the recent work that has been done on post Second World War data simply is inappropriate for the analysis of the present crisis because it does not include the Black Swan of the 1930s (*cf.* Taleb, 2007).

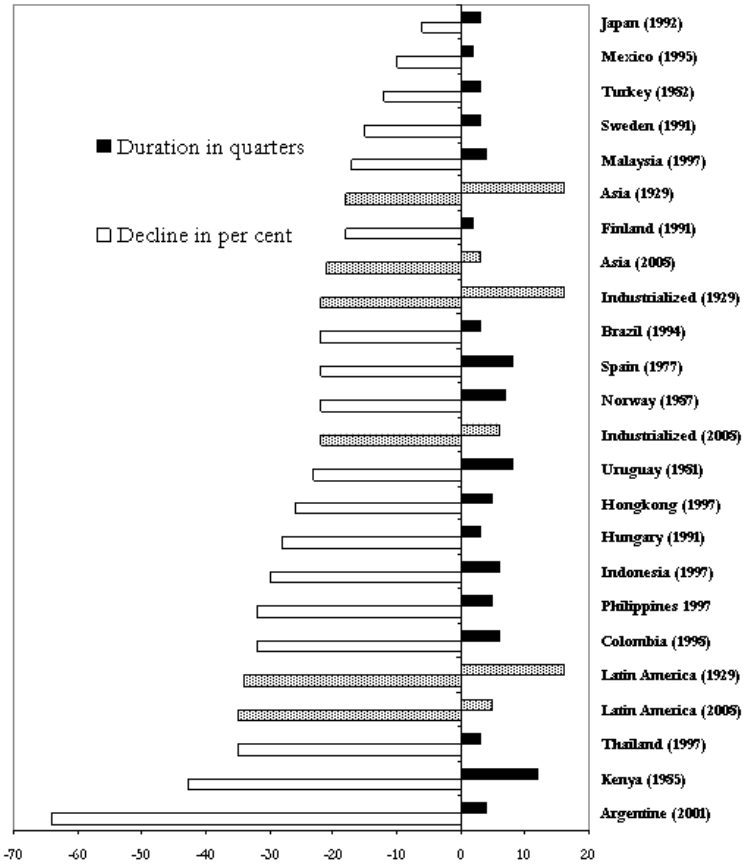
1.1 *Historical approach*

Fortunately, an approach exists that provides a valid alternative for the econometric modelling exercises that are typically being 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). Essentially these papers provide a useful and relevant collection of case statistics. The focus of these studies is on the development during and after a financial crisis of financial and economic variables regarding a number of national economies.[10] These reports offer a perspective on what can happen without making actual predictions. As such, the methodology reflects the uncertainties inherent in our present state of knowledge and at the same time they help policy makers to get some idea of what is to come. It is useful to broaden the national perspectives of these studies in order to try to assess the extent and possible duration of the trade collapse that is induced by the current crisis.[11]

Figure 4 summarizes the depth (percentage decrease) and duration (measured in quarters) of the reduction of the volume of imports. Measurement is from peak to trough; that is from the point where the import volume starts to decline (its rate of growth becomes negative) to the point were it starts to increase again (so its rate of growth becomes positive). The volume of imports is being studied in the aftermath of 18 important financial crises that have been identified in Fingerand and Schuknecht (1999) and Reinhart and Rogoff (2009).[12] These crises occurred after 1980 and before 2007, the year that the present credit crisis started. The sample of 18 crises covers most continents and includes countries with rather different levels of development, but the sample excludes relatively small financial crises. Importantly, a lack of reliable data prohibited the inclusion of all crises studied by these authors. Finally, the comparability of the available data is imperfect since different sources had to be consulted so that my estimates of the real reductions in the volume of imports are based on different methodologies.

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 lecture.[13] Clearly the results in Figure 4 thus need to be interpreted with caution.

FIGURE 4
Development of Import Volumes during 18 Major Post-1980 Financial Crises, During the 1930s and Since 2007 (Peak-to-Trough Decrease in Per Cent and Duration in Quarters)



Source: see the data appendix in Van Bergeijk 2009b, data for 2007-2009Q2 from CPB (2009).

1.2 *Findings and Relevancy*

With these caveats 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).[14] This is a percentage decrease in excess of the projections that we discussed earlier (for example Table 1 and footnote 8) but the duration is actually more or less in line with the expectations of the international organizations that trade will show positive growth in 2010. By way of comparison three regional averages (Asia, Industrialized and Latin America) for the Great Depression have also been included in Figure 4.[15] Compared to the individual post 1980 crises the percentage trade reduction during the *inter bellum* is not extraordinary... for a financial crisis.

It is of course not clear beforehand what the experiences of the trade collapse during the Great Depression mean in the present context. On the one hand the 1930s are a look-a-like of the 2000s. Interestingly, Jan Tinbergen's (1933) description of his world shows remarkable similarities with how we ourselves would describe the globalizing economy at the start of the third millennium. Life expectancy increases. There is a strong international reallocation of production towards the periphery ('primitive countries that only recently have become capitalist'). Communication and transport improve and become cheaper. New products come on the market, such as cars and radio. These new industries boost the economy and the stock exchange booms, helped by financial innovations such as consumer credit and the emergence of investment trust. On the other hand (and particularly regarding trade) important differences should be noted (*cf*. Van Bergeijk, 2009b). Trade in the *inter bellum* was much more in conformity with the neoclassical model of comparative advantage (that is trade in completely different commodities), whereas intra industry trade (so trade within the same commodity group) is an increasingly important characteristic of modern trade even in a North-South and South-South context. Much trade is even intra company trade that takes place within multinational corporations that manage international value chains taking advantage of location advantages around the globe. So similarity

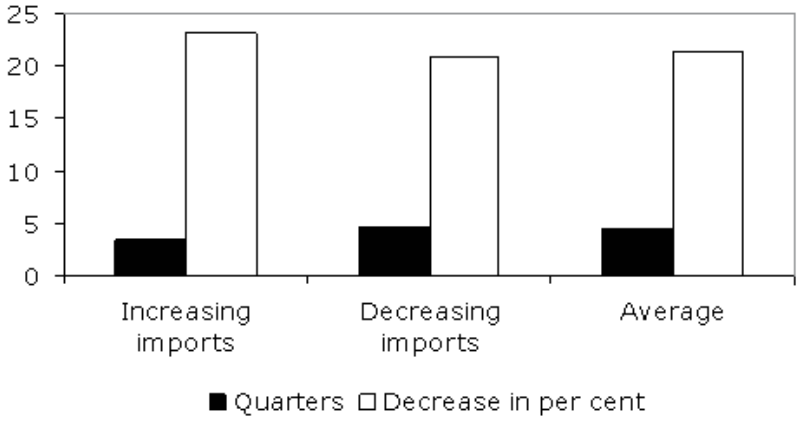
and differences abound. The key difference however, between the individual financial crises and the collective crisis of the *inter bellum* appears to occur in the duration of the import crunch as import volumes for the industrialized countries, Asia and Latin America decreased over a period of 4 years, so well beyond the present 5 quarters or so. Actual recovery to pre-crisis levels took some 8 years. For many countries trade volumes did not fully recover before the Second World War.

1.3 *Duration is an Important Remaining Issue*

What does this all imply for the present trade collapse? Figure 4 also contains three regional averages for the post 2007 period. The decrease in per cent is already comparable with the experience in the 1930s, but this time the collapse occurred in less than a year. The open question therefore is the duration of the trade collapse and the only valid strategy is to actually wait and observe what happens.

Figure 5 describes the most recent data for a group of 35 countries that are available from the *OECD National Account Statistics*.[16] The figure distinguishes between a group of 7 countries where the import volume was increasing again by the end of the second quarter of 2009 and a group of 28 countries where it was still decreasing (and where both the depth and the duration of the peak to trough movement are thus by definition underestimated). The data suggest that the stronger the trade collapse the quicker the rebound, although the difference in the extent of collapse is small (2.2 percentage points) and not significant[17]. The difference between the duration of the trade collapse for those countries where the import volume is improving (3.4 quarters) and where the imports are still deteriorating (4.7 quarters) is statistically and economically meaningful.[18] With the duration of the present import collapse already at the average of the 18 post-1980, pre-2007 financial crises as reported in Figure 4, the world economy now is at a watershed. The economy could rebound but also move into uncharted territory. The timing of this inaugural address is perfect: I can address the issue but not solve it and thus I am lucky to have a relevant research agenda for the coming years.

FIGURE 5
Development of Import Volume 2007Q4–2009Q2 for Two Subgroups (35 countries, peak to trough, seasonally adjusted)

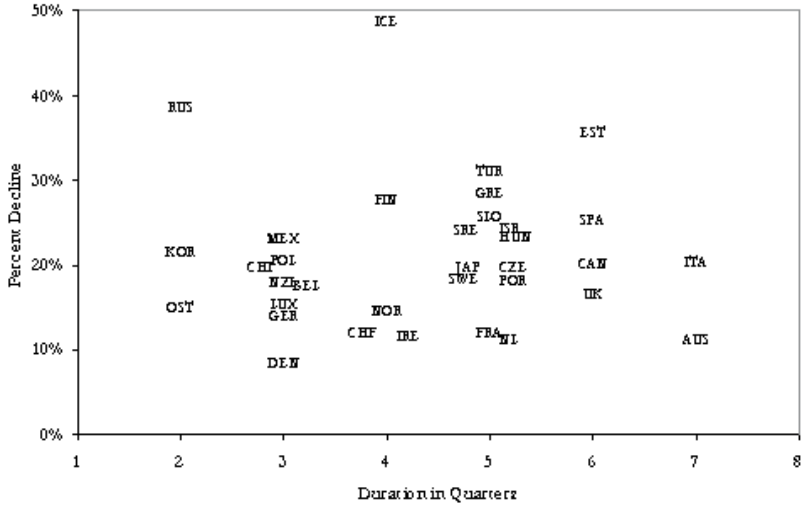


Note: For Luxemburg and Russia 2009Q1.

2 Behind the Trade Collapse

Importantly, individual country experiences differ a lot as illustrated in Figure 6 for the same group of 35 countries. Even for a relatively homogeneous set of countries that provide data for the *OECD National Account Statistics* large differences can be observed. The extent of the import collapse ranges from −10% for Ireland to −49% for Iceland. It is important to understand why these country experiences diverge.

FIGURE 6
Percentage Decrease of Import Volume (35 countries*, peak to trough, seasonally adjusted)



The phenomenon of trade collapse, unfortunately, is not yet well understood. Admittedly, the profession, in particular the economists at the international institutions, has provided a long list of potential explanations, but we are far away from a real understanding. In any case it is noteworthy that none of the proposed explanations for the 2008/9 trade collapse have been put to the test, essentially because data are not yet available for a sufficiently long period or at the level of detail that is necessary to test some of the 'explanations' – which actually are 'hypotheses' and should be treated accordingly.

2.1 *On the WTO long list*

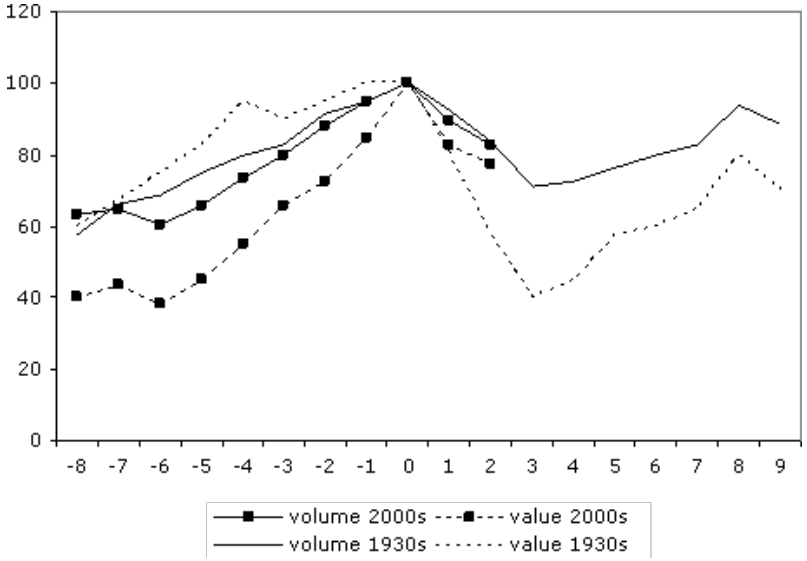
Let us first consider some of the explanations on the long list of the World Trade Organization. The *World Trade Report 2009* (WTO 2009b, p.2 and p.18) suggests six explanations for the strength of the trade collapse

- the decrease of commodity prices;
- swings in the value of the US dollar;
- the concurrence of problems in all countries;
- the occurrence and intensity of global supply chains;
- shortage of trade finance, and
- an increase in protectionism.[19]

Values versus volumes

The first two explanations relate to the monetary value of trade flows and are of course relevant for the interpretation of the headline figures on international trade which are often in current prices and US dollars, but these measurement issues do not have an impact on changes in trade volumes which I will study today. Moreover, in contrast to the 1930s when price movements played an important role values and volumes presently appear to move more or less in tandem as shown in Figure 7. Anyhow, since I am studying the changes in trade volumes I have to look for other reasons for the trade collapse.[20]

FIGURE 7
Real and Nominal World Trade Before and During Two World Trade Collapses (index numbers; peak year = 100)



Sources: United Nations Statistical Office, *International Trade Statistics 1900 – 1960*, New York 1962, Table I and calculations based on *CPB trade monitor*.
Note: End of period data.

Concurrence

The third explanation, that is the fact that all countries are now hit by the crisis and reduce their imports, is of course relevant as this makes an export-oriented strategy to grow out of the problems highly dubious. Indeed, as noted earlier the global nature of the crisis and especially the fact that most countries experience reduced demand at the same time suggests that the duration of the trade collapse may take much longer than any post Second World War episode. All in all concurrence may explain average depth and dura-

tion of the trade collapse but not the individual country experiences.

Global value chains

Also the value chain argument has a strong intuitive appeal because many products are international composites. Consider the value of Apple's Ipod chain that has been charted by Linden et al. (2007): the hard drive is supplied by Toshiba but produced in China, the display by Toshiba-Matsushita and produced in Japan and the video processor is supplied by Broadcom but produced in Singapore or Taiwan. These complex products themselves often have multinational supply lines and moreover many less important components are also produced all around the world. Apple organizes the international value chain providing market knowledge, intellectual property, system integration and cost management skills, and a brand name. China inserts, tests and assembles these components. Indeed, if we buy an Ipod we use knowledge, labour and capital from all around the world.

Two implications follow from the global value chain argument. First, it points out the increased linkage of economies and thus the concurrence of collapse in many countries.[21] Second, there is a measurement issue. The WTO points out that the components in the final product are counted every time they cross a frontier. Thus import and export data (which are turnover figures) may show stronger fluctuations than the underlying changes in final demand.[22] We do not have systematic information about the composition and location of components in international value chains because these are corporate secrets and because the trade registration system does not account for it. So while this is a plausible explanation, no empirical evidence is available yet.

Trade finance

Insufficient trade credit is a highly likely suspect that has also been mentioned as a major reason for the collapse by other institutions (for example the OECD 2009b, p. 23, attributes a third of the fall of world trade to a lack of international finance). The financial crisis may especially hit international trade. 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 international exchange is in peril.

Still the evidence is not particularly convincing. The April 2009 *Trade Finance Survey* of the International Monetary Fund and the Banking Association For Trade (2009) covers the period October 2007- January 2009 and the activities of 44 banks located in 23 countries. The report shows only a substantial decrease in the value of letters of credit and actually pointed out that little noticeable change had occurred in the percentage of banks reporting a change in other trade finance product lines (Export Credit Insurance and Short-term Export Working Capital). More importantly, there appears to be an issue of causality: did trade collapse because of lacking finance or did trade finance collapse because of lacking trade? Interestingly, 73% of the responding banks mentioned a

decline of trade activities as the most important reason for the decline in trade finance.[23]

Protectionism is just around the corner

The sixth explanation actually is a warning. The WTO offered it as a potential explanation in March 2009 but rephrased its hypothesis into a warning in the *World Trade Report* in July 2009. The evidence that is presently available suggests that protectionism occurred so far on a limited scale of local and individual incidents (Evenett, Hoekman and Cattaneo, 2009). While acknowledging the risk of rising protectionism and some relevant policy tensions, UNCTAD (2009b, p. 15) also concludes that 'no significant backlash against FDI has been observed so far'.

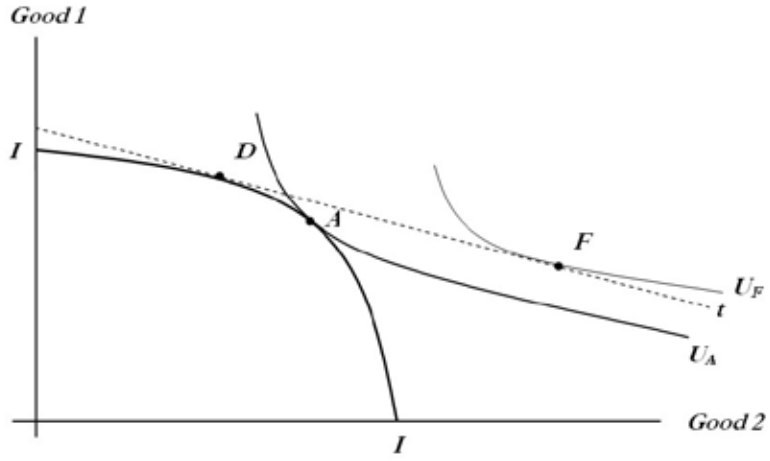
2.2 Trade Uncertainty

One of the key potential drivers of the trade collapse may have been overlooked[24], namely the fact that the actual implementation of trading decisions has become much more uncertain. This uncertainty is fundamental and occurs on all levels. Will trading partners still exist when the goods arrive? Will the goods arrive? Will trading partners be able to pay? International payments need to be made. So it is not only the individual firm's capacity to pay that matters but also of its bank and even of its home country. National policies are important because countries could be expected to increase protectionism to engage in competitive devaluations. Trade uncertainty is always relevant of course, but the point is that the financial crisis induces a shock increase in trade uncertainty. Indeed, if anything, the crisis must have increased the subjective probability that international trade will *not* occur. How do such expectations of increased trade uncertainty influence actually observed trade volumes?

Let us see what the traditional neoclassical model tells us about the impact of (the risk of) trade disruption. First, consider Graph 1 that illustrates this model for a small open economy that trades two goods. The production structure is represented by a transformation curve *II* and the preferences of the consumers are represented by

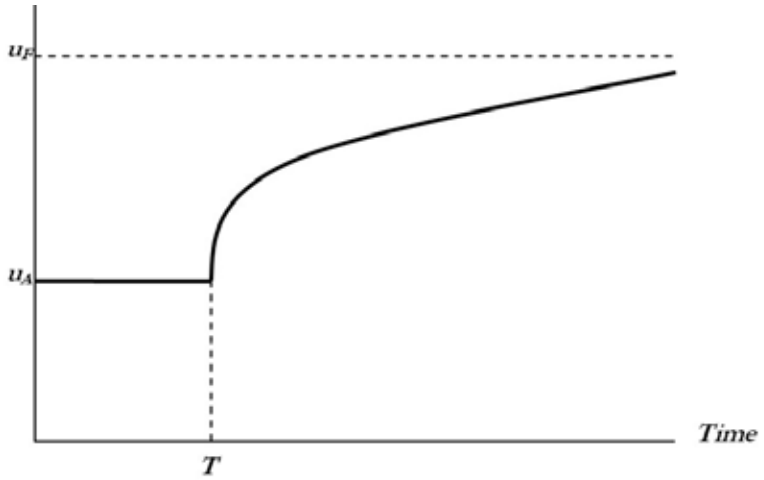
indifference curves that have been identified with the utility levels U_F (of free trade) and U_A (of autarky), respectively. The economy trades at the international price ratio *t*. Three points are of special interest: the autarky point *A* (where the economy consumes what it domestically produces), the free trade consumption point *F* and the concomitant production point *D* (the economy specializes in the production of good 1 which it exports and exchanges against good 2).

GRAPH 1
Neoclassical Model: From Autarky to Free Trade



The comparative static analysis of free trade is part and parcel of 'Economics 101', but how does the autarkic economy reach free trade? What happens when we move from *A* to *D* in production and from *A* to *F* in consumption? Graph 2 illustrates the time path of utility. A jump in utility occurs and then as the economy specializes (this takes some time) the free trade utility level is approached. These images of the benefits of free trade are at the back of every economist's mind, but how does trade uncertainty work out in this scheme?

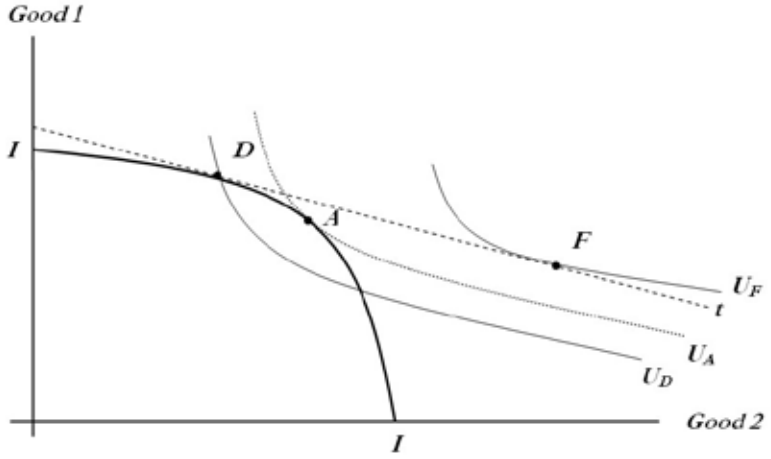
GRAPH 2
Time Path of Utility as the Economy Moves from Autarky to Free Trade



The least complicated and most transparent way to introduce trade uncertainty in the neoclassical trade model is to assume that two states of the world exist: a free trade environment where all trade is possible and a no-trade environment where all trade collapses (Van Marrewijk and Van Bergeijk, 1990). This abstraction does not imply that actually no trade will occur – it should be interpreted as describing the economy's actual view on the future in terms of an average of these extreme states of the world.[25] Next it is important to realize that an economy or its agents decide on the pattern of domestic specialization before the state of the world is known (that is whether a no-trade or a free trade situation occurs). Once the decision about the optimal pattern of specialization has been taken either by a social planner or through the market mechanism, the allocation of the factors of production cannot be changed overnight because of the costs of reallocation or, alternatively, the time needed to make adjustments.

GRAPH 3
Trade Disruption in the Neo-Classical Model

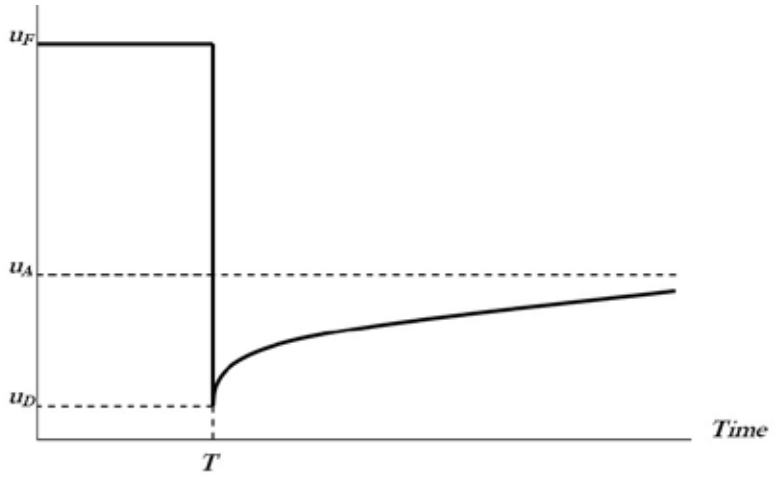
These theoretical building blocks are shown in Graph 3 that illus-



trates that international specialization in conformity with comparative advantage does not always yield a utility outcome that improves on welfare in the case of autarky. Whether this happens or not depends on the particular trade regime that occurs. In the free trade situation the economy consumes in point *F* and achieves utility U_F. But if the no-trade situation emerges while the economy is fully specialized, consumption drops to *D*, the production combination that is actually being produced. Since this production combination is the result of decisions that assume that international trade is possible, the resulting consumption combination logically cannot be optimal if trade is impossible. The extent of international specialization is thus suboptimal if the originally expected volume of international trade does not materialize and this situation will yield a lower utility level (actually even less than in autarky). Consequently, the economy will de-specialize in the no trade environment (the reallocation of the factors of production

will take some time). The time path of utility (Graph 4) is not the mirror image of the movement from autarky to free trade (Graph 2) although free trade and autarky are the end points of the time path.

GRAPH 4
Time Path of Utility as the Economy Moves from Free Trade to Autarky



Interestingly, the neoclassical analysis of a shock increase in trade uncertainty shows that 'green shoots' are *not* necessarily a sign of improvement. In Graph 4 improvement starts at T and income starts to rise (but it does not rise to the previous peak). So utility increases after time *T*, but the illness is not cured at all and the *status quo ante* is not restored. More importantly, consumers and producers will consider the expected utility of their consumption and production decisions and will *a priori* prefer a pattern of international specialization between autarky and free and undisturbed trade. Trade uncertainty thus yields less specialization in accordance with (and perhaps even against) comparative advantage and hence trade uncertainty induces a reduction of international

trading opportunities and global welfare (Van Marrewijk and Van Bergeijk, 1993). Indeed, even if trade continues to be free and undisturbed *ex post* we will measure a reduction of trade once perceived uncertainty increases *ex ante*. These neoclassical insights would seem to be crucial both in understanding what is happening in the world economy and to inform and design economic policy responses to de-globalization.

2.3 Do the Data Confirm these Hypotheses?

Having discussed a number of potentially relevant explanations for the strength of the trade collapse, it is now time to take a closer look at the development of the import volumes of 45 countries in 2007 and to consider to what extent the suggested explanations are relevant.[26]

Method and explanatory variables

This is a low pretence exercise that only aims to make a preliminary assessment of some empirical regularities in a dataset that will be updated and revised over the next quarters if not months. Perhaps someone would want to object that it is better to wait longer and then make a better analysis. However, if we want to say something about the very recent developments, then we have no other option but to use whatever data available, even if these data are imperfect and prone to revisions and updates.[27] Moreover, I do not develop a formal model but will estimate a quasi-postulated reduced form equation that takes account of some of the explanations that we discussed earlier (in particular the global value chain and trade uncertainty hypotheses) and also this lack of formal structure may attract criticism. For a preliminary assessment however, the methodology suffices.[28]

Consequently, based on our earlier discussion and the available data and its characteristics, I select four economic and one statistical variable as explanatory variables for the percent reduction in import volume that occurred between 2007Q1 and 2009Q2.

Share of manufactures (Global value chain hypothesis)

The value chain argument provides a testable hypothesis, namely that trade in manufactured goods is especially vulnerable during trade collapses as these goods constitute the vast majority of the international composites. I use the share of SITC6-8 in total imports as an indication for the intensity of a country's manufactured goods import. I expect *a priori* that a larger share of manufactured goods will be associated with a larger import reduction.

Decrease of the volume of GDP (Global value chain hypothesis)

The second testable hypothesis is that imports will show stronger fluctuations than the underlying changes in final demand. I use the percentage change in the GDP volume which I measure from peak to trough. I expect to find that a larger reduction of GDP is associated with a larger value for the dependent variable. Actually, since I will estimate an equation in logarithms the coefficient is an elasticity and it should exceed the value of 1 if imports are to show larger fluctuations than underlying demand.

(De)centralized decision making (Trade uncertainty hypothesis)

The next explanatory variable covers the extent to which decision making is centralized or decentralised. One implication of the neoclassical model of trade uncertainty is that decentralized economies trade too much in relation to the existing trade uncertainty. A shock in trade uncertainty will thus *ceteris paribus* lead to a stronger reduction of trade in a centralized economy. In order to take account of this characteristic of a country's decision making structure I rely on the Polity database, an important data set constructed by political science (Jaggers and Gurr,1995) that provides scores for the extent to which a country's decision structure is autocratic, democratic and a combined measure ('polity') that measures

'relative democraticness'. I expect *a priori* that centralized decision making in the context of an increase in trade uncertainty will *ceteris paribus* yield lower levels of specialization and trade volumes and thus larger trade reductions.

Import inclination

The third economic variable is not related to a particular hypothesis, but inclusion of this variable provides a useful correction for a large number of economic country attributes that *a priori* would seem to be relevant for import volumes. Import inclination is the comparative strength of a nation's intention to import. Some countries import relatively more than other countries, even after controlling for potential causes such as the geographic location (in particular the distances to other markets), the production level, the population size and being an island or a landlocked economy. One may even go deeper in one's efforts to understand why some trade flows are larger than expected and therefore also consider factors that are relevant at the bilateral level such as common languages, free trade agreements and exchange rate arrangements including monetary union. Even after controlling for all these factors we still have countries that import more than we would expect.

The extent to which this happens is measured by the trade inclination parameter. This variable is formally defined as the ratio of a country's actually observed bilateral import flows to the in sample predictions for those flows, so that counties that trade more than expected are said to have a strong (for example, exceeding the value of 1) import inclination.[29] I expect *a priori* that countries with a strong import inclination will reduce their imports to a lesser extent than countries with a weak import inclination.

Data publication delay

Finally, we also have to consider the fact that not all countries in the sample have already published data for the second quarter of

2009. This is of course relevant since observations from the early phase of the trade collapse will generally speaking relate to smaller reductions of trade flows. Therefore I include a dummy variable that measures the publication delay that is the number of quarters elapsed between the latest available number and 30 June 2009. The longer the delay the lower the observed trade reduction will be.

Estimated equation and findings

All in all a quasi-reduced form equation will be estimated for 45 countries using Ordinary Least Squares:

$$\log(\textit{import reduction}) = \alpha\ \textit{polity} + \beta \log(\textit{manufacturing share}) +$$

$$\gamma \log(\textit{GDP reduction}) + \log \delta\ (\textit{import inclination}) + \zeta\ \textit{publication delay} + \varepsilon$$

with *import reduction* (decrease in volume in per cent, see Data Appendix)

polity is either the autocracy, democracy or polity (=democracy−autocracy) score that characterizes the extent of decentralized decision making

manufacturing share (percent of total imports)

GDP reduction (decrease in volume in per cent, see Data Appendix)

publication delay in quarters

and ε is the error term

A priori we expect $\alpha > 0$ for autocracy (else $\alpha < 0$), $\beta > 0$, $\gamma > 0$ (actually $\gamma > 1$) $\delta < 0$ and $\zeta < 0$.

Table 2 reports the empirical results. The first column reports a 'core model' that does not include the variables linked to the two hypotheses. Import inclination and publication delay are highly significant and explain about one fifth of the variance in import decline. The other columns report different specifications of the model. Since import inclination and the extent of decentralized decision making may be correlated Table 2 reports specifications both with (column 2, 4 and 6) and without (column 3, 5 and 7) this explanatory variable.[30] The estimated equation explains about 30 to 40% of the cross country variation of the dependent variable (the log of the import crunch in percent) and the F test is significant, so that the equation is significant in what it explains (actually this is not a bad result, compare for example Eichengreen and Irwin 2009).

All in all the equation performs satisfactorily. The estimated coefficients conform to the *a priori* expectations. The manufacturing import share is not significant, the autocracy score and the change in GDP are not sufficiently significant (GDP change is significant at a 90% confidence level only and only in the last specification). The estimated coefficients of the other variables are significant and often highly significant. So whereas the econometric investigation provides evidence that the trade uncertainty explanation may matter for the extent of the import collapse, the value chain hypothesis is not supported by the data that I analyze. Actually, the evidence in support of the trade uncertainty explanation is quite robust, but we should remember that this is an indirect relationship and that further research on this topic is needed.

TABLE 2
Determinants of import crunch in per cent
(OLS, 45 countries, most recent data available, Week 39, 2009)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Decision making		**Autocracy**		**Polity**		**Democracy**	
		0.08	0.09	-0.04	-0.05	-0.08	-0.09
		(1.5)	(1.6)	(-2.2)	(2.5)	(-2.5)	(-2.9)
		{0.14}	{0.11}	{0.03}	{0.02}	{0.02}	{0.01}
Manufacturing import share (log)		-0.01	0.21	0.07	0.11	-0.12	0.03
		(-0.0)	(0.4)	(0.2)	(0.3)	{0.3)	(0.74)
		{0.99}	{0.66}	{0.88}	{0.80}	{0.77}	{0.95}
GDP crunch (log)		0.18	0.21	0.18	0.20	0.19	0.21
		(1.3)	(1.5)	(1.4)	(1.6)	(1.6)	(1.7)
		{0.18}	{0.13}	{0.16}	{0.12}	{0.12}	{0.09}
Import inclination ratio (log)	-0.20	-0.17		-0.15		-0.14	
	(-2.6)	(-2.2)		(-1.9)		(-1.8)	
	{0.01}	{0.03}		{0.06}		{0.08}	
Publication delay (quarters)	-0.24	-0.30	-0.23	-0.35	-0.30	-0.37	-0.34
	(-2.8)	(-2.9)	(-2.2)	(-3.3)	(-2.8)	(-3.6)	(-3.2)
	{0.01}	{0.01}	{0.03}	{0.00}	{0.01}	{0.00}	{0.00}
Constant term	2.8	3.3	2.7	4.0	4.0	4.6	4.3
	(28.6)	(1.8)	(1.4)	(2.2)	(2.2)	(2.6)	(2.3)
	{0.00}	{0.08}	{0.17}	{0.03}	{0.03}	{0.01}	{0.03}
N	45	40	40	40	40	40	40
R^2	0.20	0.32	0.22	0.36	0.29	0.29	0.33
Adjusted R^2	0.16	0.22	0.13	0.27	0.21	0.29	0.25
F	5.2	3.1	2.5	3.8	3.6	4.2	4.2

Notes: (t value in parentheses) {p value in brackets}.

To sum up. We have measured and discussed recent developments of import volumes making appropriate comparisons against earlier historic episodes whenever relevant. The descriptive analysis covered the *inter bellum*, the major financial crises of the 1980s, the 1990s and early 2000, as well as the most recent crisis 2007Q1-2009Q2. The findings substantiated that recent developments classify as a unique phase in economic history. The analysis of these descriptive statistics suggests for the present import collapse as likely outcomes (peak to trough): a decline by some 20 to 25 per cent and a minimal duration of 5 quarters. Actually, it is quite possible that the collapse will continue – at least duration will in all likelihood increase further. The available data show that only seven countries in my sample achieved positive growth rates for their import volume.

The preliminary cross-country investigation of competing theories regarding the drivers of the trade collapse in individual countries provides a few clues. Countries that have strongly opened up to international trade and investment (as indicated by a high import inclination ratio) will reduce their imports comparatively to a lesser extent. It is especially relevant that the extent of (de)centralised decision making is significant. To put it simply, democracies trade too much for their own good – their decentralized reaction to trade uncertainty is suboptimal. This would seem to suggest that trade needs to be reduced to some extent and this do-it-yourself policy advice brings me to the final part of my lecture: the role of the economist in designing economic policies to meet the issue of de-globalization.

3 Protectionism and the Intellectual

In times of severe crisis purely national interests gain the upper hand and often policy advisors propose protectionist measures. Especially (the threat of) high unemployment is a powerful incentive to reduce imports by means of tariffs and non-tariff barriers such as quota and regulations. Even economists that under normal conditions are *pro* free trade advisors may find themselves in a posi-

tion where they have to compromise between 'the theoretically optimal' and the 'practically possible'. For example, in the 1930s Keynes accepted the need to consider import barriers as appropriate second best instruments to fight the depression. Keynes was especially outspoken although his theoretical position can at last partly be explained by the fact that he was assuming that the gold standard would be continued – once Britain was off gold Keynes changed his view and advised against protectionism. But the explanation is only partial because Keynes was never willing to give up this instrument, as he assumed that some sort of control over trade flows would be necessary in the international institutional framework that was to be created after the Second World War (see Kindleberger,1973 and Eichengreen 1984).

Keynes' intellectual position in the wake of critical economic developments is by no means a unique phenomenon. It is characteristic for periods of de-globalization and depression that import substitution is seen as a viable alternative in policy quarters. Presently, even institutions that are assumed to underpin the open world economic system fall into this trap of second-best de-internationalization. An example is the IMF's 2009 Article IV Consultation of China. Actually, the Executive Board:

> supported the steps that China is taking to bolster private consumption as part of a comprehensive, well-sequenced strategy aimed at rebalancing China's growth model, and saw further room for *policies to reduce China's dependence on exports and high levels of investment* (IMF 2009c, emphasis added).

Another recent example is Rodrik (2009) who discusses the impact of the crisis on developing countries. Rodrik argues that fast growth of the emerging markets (Japan, the Asian Tigers, Eastern Europe, the BRIIC countries etc.) in the past fifty years was possible due to the fact that these countries captured growing shares of the world market for non primary products – a development strategy no longer feasible for large and middle income economies after the present crisis since the US in all likelihood will no longer be able to run large trade deficits. Accordingly, he proposes industrial policies

as a panacea: that is to increase the profitability of these products by tax exemptions, direct credit, payroll subsidies, investment subsidies etc. There is only one important obstacle, namely the WTO: 'In a world where economic growth requires the encouragement of modern economic activities in developing nations, the Agreement on Subsidies makes little economic sense' (Rodrik 2009 p. 24).[31]

I disagree. The argument is of course not that the neoclassical free trade recipe is sacred although it should be noted that praise for globalization has come from left and right and from Milton Friedman to Karl Marx (Jellissen and Gottheil 2009) while it is also important that lower trade openness will exert a further negative impact on growth (Lewer and Van den Berg 2003). My point is basically that a shock in trade uncertainty appears to have been one of the factors behind the trade collapse. So far policy makers have avoided the error of the 1930s to rely on trade barriers and other beggar thy neighbour policies. Such errors would have increased trade uncertainty even further. It is true that there are some early signs that world trade may stabilize, but the situation is still extremely fragile. So what can we actually do? First-best government action should be aimed at reducing uncertainty per se through strict adherence to conflict settlement procedures or other instruments of economic diplomacy that aim at increasing trust in free trade. Indeed, such policies tackle the source of the problem from which the uncertainty externality arose in the first place. It may be especially relevant for small countries as the WTO seeks to protect their interests in open and multilateral trade against the (market) power of the large economies. If international politics were to resort to economic warfare and economic surveillance more often, this would impose substantial costs on the world economic system. It is important to note that Bretton Woods institutions were designed to achieve more than stabilization. Bretton Woods also has geopolitical benefits. The architecture for world governance is perhaps imperfect but it offers a multilateral approach to peaceful conflict settlement. The point to take home from this lecture thus is that trade uncertainty is an additional argument to strive for greater security for trade and so my research supports efforts to strengthen the open multilateral trading sys-

tem, guided by WTO rules as a clear commitment to free trade. The conclusion of the Doha Round is not only a much needed antidote against protectionism and global instability, but it will also show a clear commitment for multilateral negotiations.

> I speak not to disprove what the IMF and Rodrik spoke,
> But here I am to speak what I do know.
> You all did love globalization and openness once, not without cause:
> What cause withholds you then, to mourn for it?

4 Final Act

In June 2007 I co-organized with Gerrit Faber the art exhibition *A wealth of creations*. Much has changed in the economy since the summer of 2007, but the key reason to bring art and economics together has not changed. Today we are surrounded by the art of 12 economists that make up the art exhibition *Antidotes from the dismal science*, co-organized with Philip Hans Franses.[32] The hopeful message of this exhibition that will have a follow-up in Rotterdam is that creativity and economics go hand in hand. Creativity makes economics colourful and perhaps even a happier science and it is the most powerful ingredient in a recipe against depression. I would like to thank my colleagues for their antidotes and especially Jan Pen whose painting is also on the cover of the present paper.

I have to admit that I often find it difficult to answer the question 'are you an artist or an economist?' So today I must be a lucky fellow: This is one of those rare occasions where I can officially be both at the same time. Obviously, my art is only one of my antidotes. Equally important are Hanneke, Doris, Vera and Eva.

Many people have helped to organise today's celebration of Black Thursday. It is a fruitful and happy day. I would like to thank a few of them in particular. Amy Gammon, Jane Pocock, Karen Shaw, Femke van der Vliet, Martin Blok and John Steenwinkel helped with logistics, language and communications. Arjan de Haan and Rolph van der Hoeven co-organized the seminar 'A crisis of Capitalism? A crisis of Development!' which was made possible by financial contributions from the Research School for Resource Studies for Development CERES, the Ministry of Economic Affairs and the ISS Innovation Fund. This seminar is an important stepping stone in an ISS project (and a new CERES working programme) that will focus on the impact of the crisis on developing countries. I am looking forward to work with many colleagues on this very important issue.

I would also like to thank my students especially those attending last year's courses 4207 and 4312 where I had a try-out of ideas that developed into this inaugural address. As a living monument of the benefits of globalization with students from 51 countries, the ISS is a wonderful and stimulating place. Working here actually is the best antidote against pessimism.

Appendix I: Data Sources

Data on the import volume and its composition

Import crunch is measured peak to trough over 2007Q4-2009Q2.

- OECD *National Accounts*, seasonally adjusted: Australia, Austria, Belgium, Brazil*, Canada, Chile, Czech Republic, Denmark*, Finland, France, Germany, Greece, Hungary, Ireland*, Israel, Italy, Japan, Korea (South), Mexico, New Zealand, Norway, Poland, Portugal, Russia*, Spain, Sweden, Switzerland, Thailand, The Netherlands, Turkey, UK, USA.

- IMF *International Financial Statistics*

  (a) seasonally adjusted: Ecuador*, Pakistan*, Singapore*
  (b) National Accounts data deflated by GDP deflator: Argentina†, Belarus†, Brazil†, Bulgaria*, India†, Indonesia*, Malaysia†, Peru†, Romania†, South Africa*, Thailand*
  (c) National Accounts data deflated by import wholesale price index: Venezuela*.

Composition of trade (SITC 6, 7 and 8 import shares in per cent for the year 2007) is from United Nations, 2008, *International Merchandise Trade Statistics Yearbook* Volume II country pages, UN: Geneva and New York.

Democracy,polity and autocracy

The Polity IV dataset (http://www.systemicpeace.org/polity/polity4.htm) is used to describe the political system of the sanction target. Polity contains operational indicators of institutionalized authority characteristics and annually codes nine democracy and autocracy indicators for 162 countries (all independent countries that in the early 1990s had a population greater than 500,000). The data are for 2007.

GDP reduction

Volume (index) OECD National Accounts and IMF International Financial Statistics measured peak to trough over 2007Q4-2009Q2

Notes

*Last available observation 2009Q1

†Last available observation 2008Q4

References

Arribas, I, F. Pérez and E. Tortosa-Ausina, `Measuring Globalization of International Trade: Theory and Evidence', *World Development* 27(1): pp. 127-45.

Auboin, M. and M. Meier-Ewert (2003) 'Improving the Availability of Trade Finance during Financial Crises', *WTO discussion paper*, Geneva: WTO.

Bergeijk, P.A.G. van (1999) 'Systeemschokken: Staat de econoom echt met lege handen?' Oratie, Rotterdam: Erasmus Universiteit:.

Bergeijk, P.A.G. van (2009a) *Economic Diplomacy and the Geography of International Trade*. Cheltenham: Edward Elgar.

Bergeijk, P.A.G. van (2009b) 'Expected Extent and Potential Duration of the World Import Crunch', *Kyklos* in print.

Bergeijk, P.A.G. van and J.M. Berk (2001) 'EMU, the term structure and the Lucas critique', *Kyklos* pp. 547-556.

Bergeijk, P.A.G. van and S, Brakman (eds) (2010) *The Gravity Model in International Trade: Advances and Applications*. Cambridge University Press: Cambridge MA, 2010, in print.

Bergeijk, P.A.G. van and P.H. Franses (eds) (2009) *Antidotes from the dismal science*. The Hague and Rotterdam.

Bergeijk, P.A.G. van and N.W. Mensink (1997) 'Measuring Globalization' *Journal of World Trade* 31 (3), pp. 159-168.

Bergeijk, P.A.G. van and H. Oldersma (1990) Détente, 'Market oriented Reform and German Unification. Potential Consequences for the World Trade System', *Kyklos* (1990) 43 (4): pp. 599- 609.

Claessens, S., M. A. Kose, and M.E. Terrones (2008) 'What Happens During Recessions, Crunches and Busts?' *IMF Working Paper WP/08/274*, Washington D.C.: IMF.

CPB, Netherlands Bureau for Economic Policy Analysis (2009) *CPB-World Trade Monitor*, http://www.cpb.nl/nl/research/sector2/data/trademonitor.html, Den Haag:CPB.

Eichengreen, B. (1984) 'Keynes and Protection', *Journal of Economic History* 44 (2): pp. 363-373.

Eichengreen, B. and D. Irwin (2009) 'The slide to protectionism in the great depression: who succumbed and why?', *NBER Working paper 15142*, Cambridge MA: NBER.

Evenett, S.J., B.M. Hoekman and O. Cattaneo (eds) (2009) *The fateful allure of protectionism: Taking stock for the G8* London: World Bank and CEPR.

Faber, G. and C. van Marrewijk (2009) 'De crisis en de schommelende wereldhandel', (The crisis and fluctuations of world trade, in Dutch), *ESB* 94 (4563S): pp. 20-24.

Fingerand, K.M. and L. Schuknecht (1999) 'Trade Finance and Financial Crises', *WTO Special Studies 3*, Geneva: WTO:

Hong, K., J.-W. Lee and H. C. Tang (2009) 'Crises in Asia: Historical Perspectives and Implication', *ADB Working Papers Series 152*, Manilla: Asian Development Bank.

International Monetary Fund (2009a) World Economic Outlook, Washington DC: IMF.

International Monetary Fund (2009b) World Economic Outlook Update – Contractionary Forces Receding But Weak Recovery Ahead, 8 July, 2009.

International Monetary Fund (2009c) 'IMF Executive Board Concludes 2009 Article IV Consultation with the People's Republic of China', Public Information Notice (PIN) No. 09/87, 22 July 2009.

International Monetary Fund - Banking Association For Trade, 2009, Trade Finance Survey: A Survey Among Banks Assessing the Current Trade Finance Environment, Fimetrix.

Huisman, S. and R. Lensink (2009) 'Microfinanciering en de financiële crisis' *mimeo*.

Jaggers, K. and T.R. Gurr (1995) 'Tracking Democracy's Third Wave with the Polity III Data', *Journal of Peace Research* 32 (4): pp. 469–82.

Jellissen, S.M. and F.M. Gottheil (2009) 'Marx and Engels: In praise of globalization', *Contributions to Political Economy* 28: pp. 35-46.

Kindleberger, C.P. (1973) *The World in Depression 1929-1939*. London: Allen Lange, London: The Penguin Press.

Laeven, L. and F. Valencia (2008) 'Systemic Banking Crises: A New Database', *IMF Working Paper WP/08/224*, Washington DC: IMF.

Lewer, J.J. and H. van den Berg (2003) 'How Large Is International Trade's Effect on Economic Growth', *Journal of Economic Surveys* 17(3), pp. 363–96.

Linden, G. K. L. Kraemer and J. Dedrick (2007) Who Captures Value in a Global Innovation System? The case of Apple's iPod, North Irvine, CA: Personal Computing Industry Center (PCIC).
Linnemann, H. (1967) *'The Plan that Failed: The United Nations development decade and beyond', (Inaugural Address delivered on the occasion of the accession to office as ordinary professor of economics at the Institute of Social Studies at The Hague on 9 January 1967)*, Haarlem: Erven F. Bohn.
Lucas, R.E. (1976): 'Econometric Policy Evaluation: A Critique', in: R.E. Lucas (ed.), *Studies in Business-Cycle Theory*: pp. 104-130, Cambridge (MA): MIT Press.
Maddison, A. (1995) *Monitoring the World Economy 1820-1992*, Paris: OECD.
Maddison, A. (1985) *Two Crises: Latin America and Asia 1929-38 and 1973-83*, Paris: OECD.
Maddison, A. (2001) *The World Economy: A Millennial Perspective*, Paris: OECD.
Marrewijk, C. van and P.A.G. van Bergeijk (1990) 'Trade Uncertainty and Specialization: Social versus Private Planning', *De Economist* 138 (1): pp. 15–32.
Marrewijk, C. van and P.A.G. van Bergeijk (1993) 'Endogenous Trade Uncertainty: Why Countries May Specialize Against Comparative Advantage', *Regional Science and Urban Economics* 23(4): pp. 681–94
OECD (2007) *Economic Outlook 82* (December) Paris: OECD.
OECD (2008a) *Economic Outlook 83* (June) Paris: OECD.
OECD (2008b) *Economic Outlook 84* (December) Paris: OECD.
OECD (2009a) *Economic Outlook, Interim report* (March) Paris: OECD.
OECD (2009b) *Economic Outlook 8* (June) Paris: OECD.
Reinhart, C.M. and K.S. Rogoff (2009) 'The Aftermath of Financial Crises', *NBER Working Paper 14656*, Washington, DC: NBER.
Rodrik, D. (2009) 'Growth after the crisis' *Mimeo* Harvard Kennedy School, Cambridge MA, 12 May.
Shakespeare, W. [1623] (1992) *Julius Caesar*, Hertfordshire: Wordsworth Classics.
Sideri, S.(1998), 'The World Economy: The Crisis in Financial markets and the Risk of a Global Depression', *ISS Working Paper 283*, The Hague: ISS

Taleb, N.N. (2007) *The Black Swan; The impact of the highly improbable*. Random House, Inc.
Tinbergen, J. (1933) *De Konjunktuur*, Amsterdam: Arbeiderspers.
Thomas, A. (2009) 'Financial Crises and Emerging Market Trade', *IMF Staff Position Note SPN/09/04*,: Washington DC: IMF.
UNCTAD (2009a) Press note, 24 June.
UNCTAD (2009b) *World Investment Prospects Survey 2009–2010,* New York and Geneva: UNCTAD.
World Bank (2009a) *Global Economic Prospects 2009*, Forecast Update, Washington DC, World Bank March 30.
World Bank (2009b) *Global Development Finance: Charting a Global Recovery*, Washington DC: World Bank.
World Trade Organization (2009a) Press note 24 March.
World Trade Organization (2009b) Press note 22 July.
World Trade Organization (2009c) *World Trade Report 2009 - Trade Policy Commitments and Contingency Measures*, Geneva: WTO.
Yakop, M. and P.A.G. van Bergeijk (2009) 'The Weight of Economic and Commercial Diplomacy', *ISS Working Paper 478*, The Hague: ISS.

End Notes

1. All comparisons are to the same period in the previous year.

2. The graph uses a logarithmic scale so that exponential growth of world trade is represented by a straight line.

3. Incidentally, this is a substantial increase over the annual growth rate of 3.5 per cent that was registered between 1880 and the First World War.

4. Admittedly, this is a crude measure for globalization of international trade as it does not consider the network and interconnectedness of the world trade system, but this is the only measure available for this long time span (*cf*. Arribas et al, 2008).

5. "Uit het voorgaande blijkt wel dat de vraag over de duur van deze krisis en depressie door de wetenschap niet met een grote zekerheid kan worden voorspeld" (Tinbergen, 1933 p. 177).

6. It is, moreover, noteworthy that even our views on the 1930s are still changing. See for example Eichengreen and Irwin (2009).

7. This point is generally overlooked and thus worth emphasizing. This is also a bit of an ISS tradition: see Linnemann (1967).

8. By the beginning of July 2009 World Bank (2009a), WTO (2009a) and IMF (2009a) revised their April 2009 projections of −6.1%,−9% and −11%, respectively to −9.7%, −10%, and 12.2% respectively (World Bank 2009b, WTO 2009b, IMF 2009b)). A protracted recession scenario (World Bank, 2009b p. 33) includes shrinkage of −11.9% in 2009 and, additionally, −4.7% in 2010.

9. This point goes beyond the so-called 'Lucas Critique' (Lucas, 1976) that policy regime shifts change the structure of the economic system under investigation because quantitative changes of policy instruments will influence the coefficients of the estimated behavioural equations, as the expectations of firms and households (as well as the restrictions under which economic subjects maximize) depend on parameters indirectly related to the considered policy instruments. A critical discussion on the generality and applicability of the Lucas critique is Van Bergeijk (1999).

10. Typically these studies report movements in asset prices, credit, unemployment and Gross Domestic Product and pay hardly (if any) attention to the development of trade. Whenever 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). A reason for the neglect of trade in most analyses of the aftermath of financial crises may be that the impact of a crisis on exports is ambiguous (see Fingerand and Schuknecht, 1999 especially p. 24 and Van Bergeijk (2009b) for a discussion of recent empirical studies on this topic).

11. Such manner of research would seem to add to the existing stock of knowledge especially in view of Thomas', (2009) p. 2, assessment that 'the economic literature on the linkages between trade volumes and financing is very thin'.

12. Note 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 in Van Bergeijk 2009b, 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, it is not obvious that one can rely upon a generalization of these individual cases, given seriousness and global nature of the '2007–20?? crisis.

13. I discuss these issues in more detail in Van Bergeijk (2009b).

14. Gaber and Van Marrewijk (2009) using a different methodology estimate that the period of negative world trade growth will last 14 months, quite comparable to the average of 5 quarters that I find.

15. These observations were not used in the calculations of depth and duration reported earlier.

16. See the data appendix for the list of countries available from this source.

17. The standard deviation of the full sample is 8.1 percentage points.

18. Note that the data for all countries are underestimated. Iceland's import volume collapse ends by my definition in 2008Q8 as the growth rate turns positive in 2009Q1 (+14%), but it turns negative again in 2009Q2 (−5%).

19. The *World Trade Report 2009* does not repeat one of the potential explanations that was mentioned by its director-general during his pre-April G20 press conference (WTO 2009b) namely that ' production for many products is sourced around the world so there is a multiplier effect — as demand falls sharply overall, trade will fall even further'. Disappointingly, the *World Trade Report* published a full quarter later only repeated the press note suggesting that no new analytical results had emerged.

20. Price movements and currency fluctuations imply of course relevant *measurement* issues especially for the price indices that are used to deflate the import values. It is, however, too early to know if and in which direction this distorts the reported quantity indices.

21. A comparable point is that manufacturing and capital goods (that is the sectors that have been hit hardest) account for a larger share of world trade than world output (OECD 2009b, p. 23) – see also the previous note.

22. Incidentally, this measurement issue is not only relevant in the context of global value chains but also in relation to the measurement of openness and globalization. It is not always recognized that trade relates to turn over rather than value added. Trade to GDP ratio's therefore need careful consideration (see Van Bergeijk and Mensink, 1997). Note that double counting is actually only a problem for components that are repeatedly moved back and forward between a pair of countries and this is hardly ever the case.

23. Causality is a problem that extends well beyond the domain of international finance. Also micro credit institutions report in the same vain (see Huijsman and Lensink, 2009).

24. At least this factor has not been explicitly acknowledged as an independent factor.

25. Of course these extremes do not occur often in practise, but is useful and not unreasonable to assume that economic subjects evaluate future trade prospects in terms of these two trade regimes. Their expected utility will thus be a weighted average of the utilities that can be achieved in the no-trade situation and the undisturbed-free-trade situation, respectively and with the respective probabilities as weights.

26. These 45 countries have been selected on the basis of data availability both for the dependant variable and for the explanatory variables – see the Data Appendix.

27. Data collection was stopped in week 39.

28. I do not include price and exchange movements since I study quantities. Trade finance is excluded because of the problem of causality.

29. I derive observed and predicted bilateral imports from a gravity model estimated for the year 2006 and 63 countries (Yakop and Van Bergeijk, 2009). The gravity model is one of the most robust and widely used tools of applied trade analysis. Importantly, it has done an excellent job in situations that were characterized by significant structural change such as the fall of the Iron Curtain (Van Bergeijk and Brakman, 2010).

30. Autocracy and import inclination appear not to be correlated (at least in this sample).

31. Rodrik's paper of course has many nuances and actually is a bit Keynesian in the sense of Churchill's dictum 'If you put two economists in a room, you get two opinions, unless one of them is Lord Keynes, in which case you get three opinions'

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