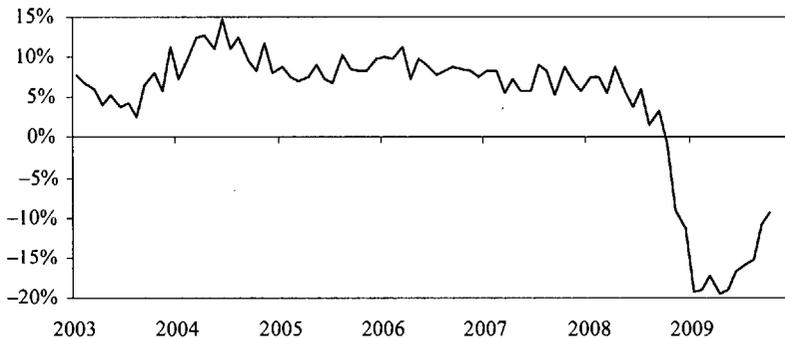


1. Introduction: Setting the Stage

October 2008 had something extraordinary in store for globalization. In the years 2004–2008 the world trade volume had been growing at an annual rate of between 5 and 10 per cent. These were high numbers but they were not outside the usual range for the development of real exports and imports at the global level – world trade over the period 1950–2008 grew by about 6 per cent per annum leading to a 25-fold increase in the volume of merchandise trade. In October 2008 world trade, however, suddenly came to a virtual halt and then started to decline. This decline rapidly turned into a collapse. In November 2008 the global trade volume declined by 7 per cent. December 2008 added 3 per cent; January 2009 another 7 per cent: early 2009 trade figures were about 20 per cent lower in real terms than they had been just one year earlier (Figure 1.1).



Source: CPB world trade monitor at www.cpb.nl

Figure 1.1 Growth rate of world trade with respect to same month in the previous year (2003–2009)

In the second half of 2009 some recovery occurred. According to the December 2009 issue of the CPB *World Trade Monitor*: ‘In October, world trade was still 13.2% below the peak level reached in April 2008 mainly resulting from the unprecedented drops in November 2008 up to January

2009. Compared to [2008] world trade was down by 9.4% in October, but it was already 9.0% above the trough reached in May 2009'.

This book deals with the collapse of trade and not so much with its recovery. It is not a study on the full 'business cycle' of trade as it focuses on the downturn (and its potential continuation) and the lessons that this exceptional 'natural experiment' provide for economic scientists and policy makers. The main narrative for this phenomenon is that the world trade collapse was caused by the collapses of (i) trade credit, (ii) international value chains and (iii) the multilateral policy approach to free trade (an increase in protectionism). This book will clarify that this theory for the world trade collapse collapses when confronted with the data. Focussing on the development of import volumes, I suggest an alternative explanation, namely that the trade collapse was driven by a shock of (perceived) trade uncertainty and provide some preliminary evidence for this hypothesis.

Typically, the mainstream analysis is based on preconceptions about what the drivers of the trade collapse should be. This book challenges the mainstream narrative of the world trade collapse because that narrative is wrong and because it provides the wrong kind of policy advice, thus increasing the risk of a deepening and prolongation of the crisis in international trade. Even when the mainstream explanations are refuted by data analysis, authors often stick to the idea that theory must somewhere be right and that the data must somewhere be wrong. The latter may be right but the former is a *non sequitur* or at least a very *non-empirical* argument. The fact that data are imperfect most of the time, only available with substantial delay and often do not exist, however, to a large extent could explain why many wrong ideas are able to survive for so long. The bottom line is that the economic profession does not offer a convincing explanation yet.

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 of the 2008–2009 trade collapse.¹ This will become evident when we scrutinize in later chapters the explanations on the long list that the World Trade Organization put forward in its *World Trade Report 2009* (WTO 2009b, p. 2 and p. 18). The WTO 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. The other organizations have echoed the WTO's long list which appears to have had a strong intuitive appeal, often stressing some of the factors that in particular relate to their respective missions.

The WTO's analysis is especially noteworthy because it is rather disappointing. This is true for the quantity of the reported analysis (which

covers one half of a page – out of a report with a total of 196 pages – and one footnote). It is also true for the quality of the analysis as many of the listed ‘explanations’ actually are logically flawed and have potentially dangerous policy conclusions’ as we will see in later chapters.²

Box 1.1 Factors explaining the extent of the world trade collapse according to the WTO’s World Trade Report 2009

One reason is that the fall-off in demand is more widespread than in the past, as all regions of the world economy are slowing at once.

A second reason for the magnitude of recent declines relates to the increasing presence of global supply chains in total trade. Trade contraction or expansion is no longer simply a question of changes in trade flows between a producing country and a consuming country – goods cross many frontiers during the production process and components in the final product are counted every time they cross a frontier. The only way of avoiding this effect, whose magnitude can only be guessed at in the absence of systematic information, would be to measure trade transactions on the basis of the value added at each stage of the production process. Since value added, or the return to factors of production, is the real measure of income in the economy, and trade is a gross flow rather than a measure of income, it follows that strong increases or decreases in trade flow numbers should not be interpreted as an accurate guide to what is actually happening to incomes and employment.

A third element that is likely to contribute to the contraction of trade is a shortage of trade finance. This has clearly been a problem and it is receiving particular attention from international institutions and governments. The WTO has played its part by bringing together the key players to work on ensuring the availability and affordability of trade finance.

A fourth factor that could contribute to trade contraction is an increase in protection measures. Any rises in these measures will threaten the prospects for recovery and prolong the downturn. The risk of growing protectionism is a source of concern.*

* Two factors that might accentuate the extent of year-on-year declines in monthly data in value terms are the higher commodity prices that prevailed a year ago and increases in the value of the US dollar compared with most other currencies.

Source: WTO (2009c, p. 2 and p. 18)

One relatively easy and obvious point that can be cleared right away is that two 'WTO explanations' for the strength and speed of the trade collapse relate to the monetary value of trade flows. Monetary variations 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 volume which is what we will study in this book.³

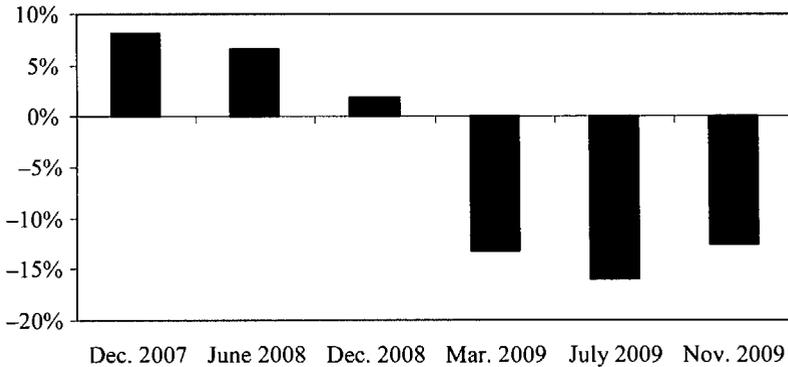
It is true that price movements played an important role in the 1930s due to the occurrence of a process of deflation which worsened the depression, but this was not the case in 2008–2009 (see Figure 1.4 below).⁴ Anyhow, since we will be studying the changes in trade *volumes* we will have to look for other reasons for the world trade collapse.⁵

In any case it is noteworthy that many of the proposed explanations for the 2008–2009 trade collapse have not been put to the test yet, essentially because data are not available (a) for a sufficiently long period or (b) at the level of detail that is necessary to test some of the 'explanations' – which actually are still 'hypotheses' and should be treated accordingly. This book will discuss and investigate these hypotheses and where appropriate and possible will attempt to provide tests of their validity. As will become clear it is not easy to find the 'smoking gun' as indeed other researchers (for example Levchenko et al. 2009) have also pointed out.

A Complete Surprise

It is, moreover, a truism that the trade collapse took the economic profession completely by surprise.⁶ 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 per cent to –16 per cent, that is an unprecedented 24 percentage points revision (see Figure 1.2).⁷ Importantly, other international organizations such as the World Bank, the WTO and IMF did no better. During 2009 global trade projections were continuously revised downward. By the beginning of July 2009 they revised their April 2009 projections (World Bank 2009a; WTO 2009a and IMF 2009a) of –6.1 per cent, –9 per cent and –11 per cent, respectively to –9.7 per cent, –10 per cent, and –12.2 per cent, respectively (World Bank 2009b, WTO 2009b and IMF 2009b). A protracted recession scenario drawn up by the World Bank in the summer of 2009 (World Bank 2009b, p. 33) included shrinkage of –11.9 per cent in 2009 and, additionally, –4.7 per cent in 2010.⁸

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).



Sources: OECD (2007, 2008a,b and 2009a,b,c)

Figure 1.2 How the OECD changed its predictions for world trade in the year 2009

Neglecting the Black Swan

A key question for empirical researchers 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 experiences) cannot be used to analyse and/or predict the impact of key economic events. This is especially true for the significant changes in economic relationships and policies (including the sudden revival of old-fashioned but appropriate Keynesian demand stabilization) as witnessed in 2008 and 2009.

Admittedly, it has been possible in the past to estimate meaningful econometric models that continued to work during significant changes in international regimes (examples are van Bergeijk and Oldersma 1990 regarding the fall of the Iron Curtain and van Bergeijk and Berk 2001 regarding the creation of monetary union in Europe). So econometric analysis *per se* is not inappropriate, even regarding seemingly unique events such as the world trade collapse. The point, however, 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).⁹ A Black Swan is a large-impact, low-probability event. Due to their infrequent occurrence such events are obviously difficult if not impossible to predict.¹⁰ Often Black Swans are treated by econometricians as outliers or such events are simply ignored. Of course the data for the interbellum appear to be less comprehensive and more

inaccurate, but that is no reason to neglect the 1930s. This is especially the case because we have so few observations on world trade collapses.

Actually, the problem is that many economists often appear to behave in the manner of the proverbial drunk who prefers to look for his lost key under the street light and not in the alley (where it was lost) because it is dark over there. Indeed, when economists embark on the road of a specific methodology they will often restrict their analysis to country groupings and periods for which the required data are available. In practice this means that the available analyses often deal with the experiences of a subset of OECD countries after the Second World War period. Many country studies deal with the US only or use US data as a proxy for global conditions (examples are Cheung and Guichard 2009 and Levchenko et al. 2009). Although these studies may be informative, there is no indication (or logic) that the findings for the US can be generalized to other countries or to the global level. The focus on readily available data is not only a waste of available but imperfect observations that cover longer periods; it also implies that the observation that really matters (that is the trade collapse of the 1930s) is not a part of the analysis.

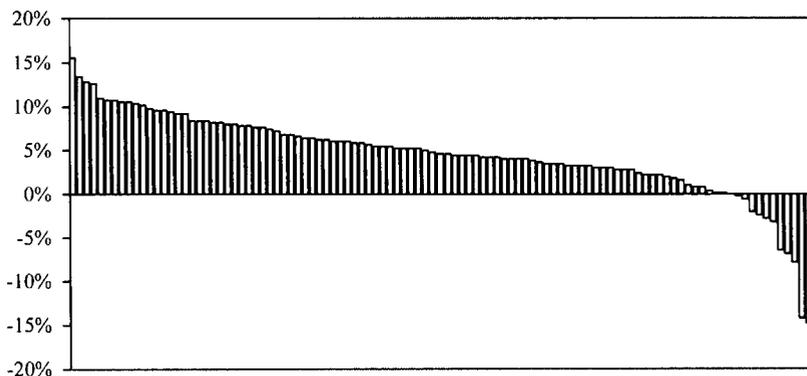
One contribution of this book is that I will not go for the perfect data or method, but that I am prepared to distil sensible evidence from whatever data available, exercising judgement in the interpretation of this evidence. (One exception to this rule should be mentioned right away and that is that China has not been included in the analysis because the data collection and reporting in my opinion are not trustworthy and comparable to other countries.) The methodology is sensible since clearly longer periods and broader country coverage are needed so as to include more cases of the infrequent phenomenon of world trade collapse.

1. A UNIQUE PHENOMENON?

Indeed, declines in the volume of world trade do not occur very often. Defining 'trade recessions' as situations in which trade decreases for two months in a row, Faber and van Marrewijk (2009) have analysed the two most recent decades of monthly world trade data.¹¹ Faber and van Marrewijk find only two other world trade recessions: the Asian Crisis (when their indicator decreased from June 1998 to August 1998, inclusive) and the Dotcom Crisis (where the trade recession is dated as January–October 2001). Using a slightly less restrictive definition and focussing on OECD trade rather than on global trade, Araújo and Oliveira Martins (2009) study trade data that cover the period 1965–2007. They find only six periods of negative OECD trade (their worst case is 1982 when OECD trade contracted by about 14 per cent). It is worth pointing out that the level of aggregation matters for the

frequency with which periods of negative real trade growth are being established. Araújo and Oliveira Martins (2009), for example, report that months of negative trade growth below 10 per cent occur in 2.4 per cent of the research period for total OECD trade, but in 4.3 to 6.5 per cent of the research period for the individual country data of France, Germany, Italy, Japan, the UK and the US. Negative trade growth is of course even more unlikely to occur on an annual basis, but when we increase the research period and also include the 1930s, then the phenomenon would seem to be less infrequent that suggested by those analyses that focus on the recent period only.

Using annual trade data for the period 1880–2009, Figure 1.3 illustrates the occurrence of negative annual growth rates for world trade: 12 per cent of the real annual growth rates are negative. Decreases in the volume of *world* trade are thus relatively unique in recent history, but they do occur. It is, however, not only the fact that negative world trade growth occurs with a very low frequency which makes the 2009 world trade collapse an intriguing phenomenon. Also the strength of the decrease is remarkable. The starkest declines in the figure are 1932 and 2009 (note that the 2009 figure is a preliminary estimate).¹² (Chapter 2 takes a more detailed look at the individual country experiences over this period.)

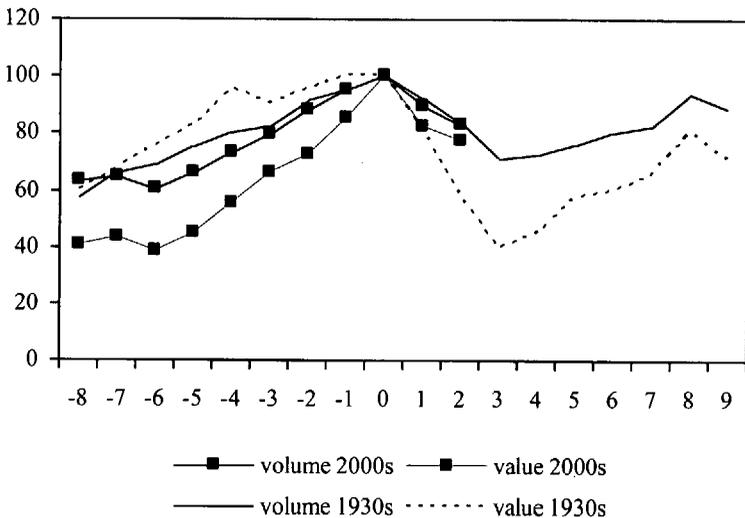


Sources: Calculations based on real trade data for 1880–1991 from Maddison (1995) and for 1992–2009 from CPB World Trade Monitor

Figure 1.3 Real annual growth rates in per cent for world trade sorted in decreasing order (1880–2009)

Two World Trade Collapses Compared

A decrease in the volume of world trade of this magnitude has actually 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 world trade. Figure 1.4 by way of illustration compares the time path of the trade collapse in the 1930s to that of the trade crunch that started in October 2008, showing the developments of both values and volumes of world trade. Setting the peak at time 0, we can see how trade values and trade volumes continuously increased in the eight years prior to the outburst of both crises and decreased in the years after the peak (the lines in the graph that describe the recent trade collapse have been identified with square markers). In general the real world trade numbers during the two trade collapses so far follow more or less the same pattern, but as the 2008 trade collapse (possibly) moves into its third year it is still too early to tell whether the world economy will follow a comparable trajectory or whether a quicker rebound will occur. The nominal data show clear differences both in the running up to the crisis and in the development during the trade collapses: in contrast to the 1930s when price movements played an important role, values and volumes during the most recent trade collapse appear to have been moving more or less in tandem.



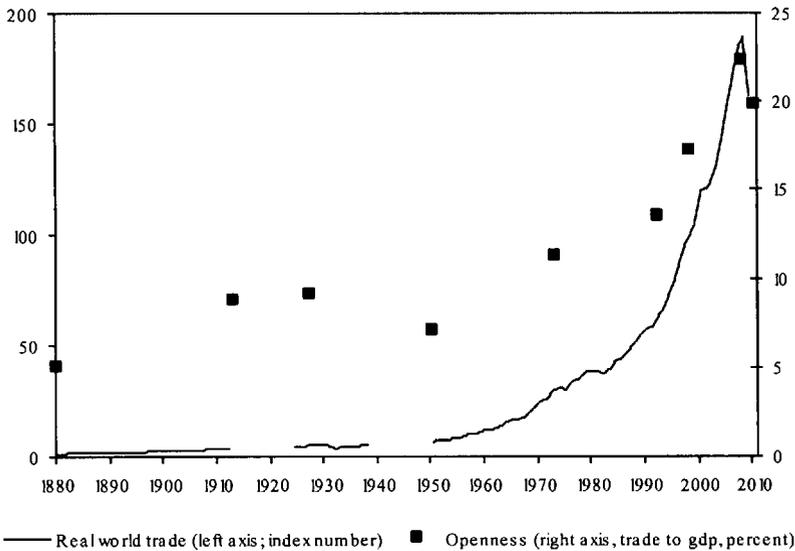
Notes: End of period observations with the exception of 2009. Peak year is 0

Sources: UN Statistical Office (1962), Table 1 and calculations based on CPB trade monitor

Figure 1.4 Real and nominal world trade before and during the two world trade collapses (index numbers; peak year = 100)

Figure 1.4 thus contradicts the nominal explanations put forward by the WTO in its *World Trade Report 2009* for the strength and speed of the trade collapse. This can be compared to findings by Levchenko et al. (2009, p. 6) who conclude from a detailed sector analysis of US statistics that

it is remarkable that in some important sectors, such as automotive, capital goods, and consumer goods, the prices did not move at all, and the entire decline in nominal exports and exports is accounted for by real quantities.



Sources: Real trade data 1880–1992 and trade to GDP ratios 1880–1998: Maddison (1995) and (2001). Real trade data 1992–2009Q1 *CPB World Trade Monitor*. Trade-to-GDP ratios 2008 and 2010 constructed on the basis of IMF World Economic Outlook Database, April 2009, and have been updated in the basis of IMF (2009b)

Figure 1.5 Historical perspectives on the 2009 trade collapse

It is even possible to put these developments into a longer and more comprehensive historical perspective. Figure 1.5 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. Since the end of the 19th century world trade had steadily been growing with the exception of the interbellum 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 and from this perspective the first oil

shock in 1973 and the stagflation of the 1980s show up as mere ripples. So the six decades before 2009 constituted an exceptional chapter in the history of world trade indeed.

Equally exceptional are both the speed and the depth of the downturn of the 2008 trade collapse. Eichengreen and O'Rourke (2009) estimate that the trade collapse in the first year of the 2008–2009 trade collapse was about double the decline that occurred in the similar phase of the Great Depression. Araújo and Oliveira-Martins (2009), moreover, see the exceptionally synchronized character of the downturn as a key characteristic: at the end of 2008 more than 90 per cent of the OECD countries suddenly and simultaneously experienced a decline of their individual trade flows in excess of 10 per cent.

More importantly, 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 and unique decline (see Estevadeordal et al. 2003 for an historic interpretation of this ratio). The square markers in Figure 1.5 relate to the right axis and summarize a well-known measure of openness, namely the trade-to-GDP ratio (in per cent).¹³ The development of openness again illustrates both the unprecedented impact of the Great Depression and the extraordinarily developments in 2009. Based on recent IMF projections, the world appears to be experiencing its most significant decrease in openness since the 1930s.

Similarities

But are the 1930s a look-alike of the 2000s? Interestingly, many contemporary observations in the interbellum suggest so. Although one could resort to many contemporary observers, I select a clear example of a very rational observer that was intellectually occupied with many of the issues that are central to the present book.¹⁴ Two years ago I discovered in an obscure second-hand bookshop in The Hague a booklet on the business cycle, the economic outlook and the still uncertain impact of what is nowadays known as the Great Depression that was written by the Dutch Noble Price laureate Jan Tinbergen in 1933 (Tinbergen, 1933). Tinbergen's description of his world (incidentally, much like many studies of his contemporaries) shows remarkable similarities with how we ourselves would today describe the globalizing economy at the start of the third millennium (compare Table 1.1).

- Life expectancy increased in the early twentieth century as happened in the greying societies at the end of that epoch.
- Tinbergen noted a strong international reallocation of production towards the periphery ('primitive countries that only recently have become capitalist') in the same manner that many observe today would

describe how the collapse of communism has stimulated the entry of China and other previously centrally planned economies into the world economic system.

- Communication (intercontinental and wireless telegraph) and transport (at the end of the era of sailing and the start of commercial air flight) improved and he studied the important consequences of these innovations: cost reductions and the fact that 'mental horizons' shrunk so that new far-away markets were becoming realistic opportunities. In technical economic terms the extent of potential markets increased significantly. Likewise, modern generations witnessed the advent of the container and the Internet, the former being a major transportation cost-reducing innovation, the latter being an equally important cost-reducing factor for the dissemination of knowledge and ideas.
- New products came on the market, such as cars and radios. Likewise the introduction of (portable) computers and mobile phones implied tremendous opportunities both for hardware providers and for producers of content.
- These new industries according to Tinbergen boosted the economy and fuelled the stock exchange booms – not only on their own account but also because they were helped tremendously by financial innovations such as consumer credit and the emergence of investment trust. It goes without saying that financial innovation was also characteristic of the 2000s.
- If anything unrealistic optimism dominated the period before the two trade collapses.

Table 1.1 Some differences and similarities of the context of the 1930s and the 2008 trade collapse

	1930s	2000s
Long-run reductions of trade costs	•	•
New modes of transportation and communication	•	•
Entry of new countries (recent capitalist countries)	•	•
Key innovations	•	•
Financial innovation	•	•
Worldwide crisis	•	•
Trade collapse most pronounced in manufacturing	•	•
Price decreases as an important driver of the trade collapse	•	
Trade mainly based on comparative advantage	•	
Substantial presence of international value chains		•

All in all the 1930s and the 2000s share a lot of characteristics, in particular perhaps regarding the optimistic view on the future of the economy. Innovations and internationalization were seen as strong trends that were expected to dominate the outlook for the world economy.

Differences

On the other hand (and particularly regarding the characteristics of the international trade flows) important differences should be noted between the two periods. Trade in the interbellum was much more in conformity with the neoclassical model of comparative advantage in which countries specialize in different products, whereas intra-industry trade (in which a country may export and import the same manner of products) is an increasingly important characteristic of modern international trade. This is true 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. So similarity and differences abound.

It may at first glance seem to be a bit disappointing that no clear-cut case of trade collapse exists, but it is important that some variation exists because that helps us to formulate and test hypotheses. Formulating and testing theories after all is the royal road to a better understanding of this phenomenon. It is also important that we have more than one case because that really opens the door to economic analysis. The historian Rothermund (1996, p. 1), for example, claims (about the analysis of the Great Depression):

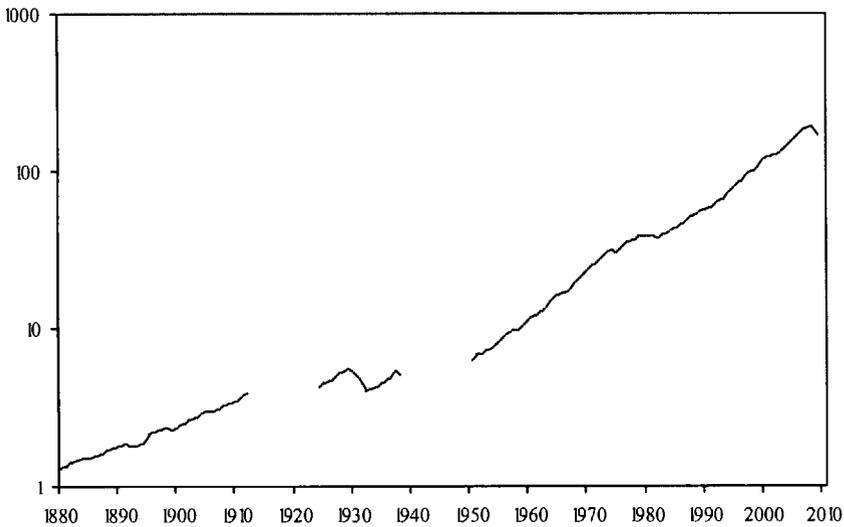
It seems that this was a unique event and such events can only be explained historically as they defy the laws of economics.¹⁵

While one would perhaps not completely want to agree with the logic of this argument, many would say that Rothermund definitely had a point ... but of course only until the second world trade collapse in 2008.

2. IS THIS A FOURTH PHASE IN MODERN WORLD TRADE HISTORY?

Let us now turn to the question of whether a new phase of de-globalization is a likely scenario. Figure 1.5 rather dramatically illustrated the second reversal of the globalization process. This is a message, however, that needs to be brought with a bit more nuance as the same figure also clarifies that the world is still much more open today than it ever was in the previous century.

Moreover, due to the exceptionally long period of strong growth the human eye observes an exaggerated development in the volume of trade for more recent years. A better way to represent this manner of data is to use a logarithmic transformation of the observations as is done for the same period and data in Figure 1.6. We can now see better that the reduction of the trade volume in the interbellum was stronger (in per cent) than the recent developments (but note again that we still do not know for certain if the trade collapse will continue or that trade by the end of 2009 had hit a sustainable bottom). Since Figure 1.6 uses a logarithmic scale, exponential growth of world trade is represented by a straight line: different slopes in the graph represent different rates of growth.



Sources: See Figure 1.5

Figure 1.6 World trade volume 1880–2009 (logarithmic scale)

We can thus readily observe three phases in the development of real world trade. Since the end of the 19th century world trade has steadily grown with the exception of the interbellum when a strong break occurred in the long-term trend and the global trade curve shifted downwards. Between 1880 and the First World War a real annual growth rate of about 3.5 per cent was registered and world trade increased twenty-fold. In the post Second World War period real growth was significantly stronger at 5.5 per cent per annum. Figure 1.6 thus illustrates the well-known economic historical narrative of the rise and fall of world trade since the industrial revolution, which according to Estevadeordal et al. (2003, pp. 368–70) is based on a consensus view. This

consensus sees the drive to the modern levels of internationalization as a consequence of the spreading of the free trade doctrine, giving rise to an 'age' of liberal economic policies and technological innovations that led to a strong decline in trade costs. This narrative sees the onset of trade stagnation after the First World War as a consequence of bad economic policies, in particular the continued adherence to the Gold Standard in the wake of the Great Depression which forced the 'Gold countries' to apply protectionist trade policies including higher tariffs, more quotas and other distorting commercial policies. The restoration of globalization would take from the end of the Second World War to the 1970s when the internationalization of production became again comparable to the levels at the start of the twentieth century.¹⁶

The consensus view sees income growth as one of the drivers of the second wave of the growth of trade in the most recent phase of globalization. This view that income growth drives world trade has been very influential. It has given rise to the idea of a multiplier that magnifies fluctuations in income. This multiplier (also known as the elasticity of world trade to world income) has reportedly increased since the 1960s (see, for example, Freund 2009a) and this empirical finding is often explained with reference to the international fragmentation of production and the growth of international value chains. In addition there is also some evidence for a second structural break around 1990, but this is less convincing (at least the alternative hypothesis of 'no break' cannot be rejected; see Cheung and Guichard 2009, p. 13). We will return to some of these issues in Chapter 4.

Trade Frictions

Recent scientific research on the trade collapse and the actual experiences before and during the years 2007–2009 have uncovered some nasty challenges for the traditional explanation of the booms and busts of world trade over the last two centuries pointing out that trade was stimulated (hindered) by decreases (increases) of certain friction parameters. A useful classification of trade frictions is developed by Estevadeordal et al. (2003). They distinguish three types of trade frictions:

- *Payment frictions*, related to the international exchange system and uncertainties regarding the future value of currencies and the possibilities to make international payments in an efficient way.
- *Policy frictions*, related to trade policies (tariffs, quota, etc., but also multilateral and bilateral agreements) and commercial policies (including export subsidies).
- *Transport frictions*, mainly related to transportation and communication costs.

Estevadeordal et al. (2003) econometrically identify drivers of the world trade collapse in the 1930s that differ from the consensus view. A first finding is the observation that the breakdown of the Gold Standard implied a collapse of the international payment system which brings in a relevant factor in the analysis – the so-called payment friction – that of course can also be recognized in the shock to trust and confidence in banks during the 2000s. Also and importantly, protectionism does not appear to have functioned as a trigger for the world trade collapse.¹⁷ Both in the interbellum and in the recent trade collapse the volume of world trade was already declining when protectionism still stood at historically low levels. So policy frictions appear to have been less important (if at all) in the first phase of the two trade collapses. Finally, the perceived reductions in distance frictions (often equated to transportation costs) may not have been the driver behind the development of world trade. Payment frictions will be addressed in Chapter 3 and policy frictions in Chapter 5, but it pays to consider the issue of transport frictions in more detail now.

The transport friction

In the roaring 1920s the advent of wireless radio, commercial air flight and other innovations were assumed to reduce the distance between countries and thus to increase trade amongst them. Likewise, around the turn of the millennium it was increasingly being argued that globalization reduced the distance between countries due to the Internet, lower transportation costs and the ease of travelling and communication. The death of distance was announced by amongst others Cairncross (1997) and Friedman (2005). Their hypotheses gained ground in the popular press and amongst policy makers: a truly ‘global village’ had emerged in which the difference between external (international) trade and internal (domestic) trade no longer seemed to be relevant: the world – in the words of Friedman – had become ‘flat’.

But had it? Essentially, this is an empirical question and a topic of much debate among trade economists. A counterintuitive finding of the empirical literature is that the impact of distance, despite stronger globalization, has at least remained as important as it used to be for the geography of international trade. An example is provided by the meta-analysis of the scientific literature by Disdier and Head (2008). They report on the basis of 103 scientific econometric studies for the years 1870–2000 and a good 1500 estimated distance parameters. Their analysis shows that the distance decay effect is on average one third stronger in the more recent period 1990–2000 compared to the average finding for the years 1870–1970. This result is a general finding in the modern empirical trade literature.¹⁸ It is an illustration of the fact that distance frictions are not always on a downward trend especially over the period 1950–2000, although the results reported by different authors for more

recent years are not completely consistent and seem to be mainly driven by reductions in border taxes. Interestingly, broadly defined trade costs appear to have increased in the run up to both trade collapses (see, for example, Estevadeordal et al. 2003 on the 1930s and Jacks et al. 2009 and Campbell et al. 2009 on the recent world trade collapse). Moreover, the causality with regard to trade frictions is not unproblematic: reductions in trade costs may be the drivers of world trade, but transportation costs may also decrease endogenously due to increasing volumes of trade. Indeed, to complicate matters even more: geographical trends in transportation costs are contradictory as decreases for the maritime transport costs for trade originating in Europe and Northern America contrast with increases for harbours located in Japan, Australia and New Zealand and this may reflect buoyant trade from Asia. If so transportation costs responded endogenously to changes in the geographical pattern of trade (see Boulhol and de Serres, 2010) and possibly may also have done so to the overall volume of trade.

Knowledge is Preliminary

Other issues about which we can only speculate are whether the world economic system hit a sustainable bottom in 2009, how long the apparent period of deglobalization could last and what the drivers of these processes will be. Such 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 four 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.¹⁹ Moreover, also in the years before 2007 quite a few empirical studies were published that contested the findings of earlier analyses of the 1930s. If a scientific consensus can still be attacked (and possibly change) after so long a period we should be prepared to keep an open mind, especially during the first decade after the start of the recent world trade collapse. Given the preliminary state of our knowledge any result should thus be treated with caution.

3. IN NEED OF A NEW NARRATIVE

The key message of this book is that the narrative that, so to say, developed on the wave of the world trade collapse is not to be trusted and actually is contradicted by many observations. The profession was perhaps too eager to provide *the* story that explained everything and trade analysts forgot to check

the facts. Wrong-footed economists were actually not helped by the coincidence that the necessary data to test their theories were not available because statistical series had recently been discontinued (as in the case of trade finance), simply did not exist or were under construction (as in the case of the extent of vertical specialization in trade). Another handicap of the profession was its recent focus on the microeconomics of heterogeneous firms which not only led to a neglect of well-established macroeconomic relationships, but also may have exposed the analysis to two separate but related problems that always have been a particular nuisance in economics: the micro–macro paradox and the fallacy of composition.²⁰

The micro–macro paradox occurs when the empirical analysis of micro data apparently does not support the results that are based on macro data. An example is the finding that firms do not become more productive while they internationalize their commercial activities. This contrasts with the fact that the macroeconomic welfare increase of internationalization (openness) is well established. This micro–macro paradox of international economics can be reconciled when we consider, for example, the effects of industry restructuring, that is the Schumpeterian process by which more productive firms drive out less productive firms.²¹ The implication is that a robust analysis often requires the simultaneous analysis of micro and macro data.

The fallacy of composition is a logical problem that can occur if one deduces from findings at the microeconomic level (that is at the level of firms, consumers or industries) what is happening at the macroeconomic level (that is at the level of the national or world economy), but neglects the interactions between individuals or sectors. An example is the sales contraction in international value chains. One explanation for this phenomenon is that value chains are important forward and backward transmitters of a demand shock and thus cause a fall in sales along the full chain (and thereby of international trade). An alternative explanation, however, is a process of substitution away from value chain activities so that international sales in the value chain contract while other international sales increase. The first explanation implies an unambiguous decrease in international trade. The alternative explanation (the contraction of trade in the value chain would be consequence rather than cause) may *ceteris paribus* increase international trade (or lead to a smaller contraction).

Anyhow, it is noteworthy that the factors that were the usual suspects during the first phase of the trade collapse – the fragmentation of production in international value chains, protectionism and trade finance – appear with hindsight to have been merely innocent bystanders. There is actually some evidence that one of these bystanders (the international business to business networks) may even have done a lot of good for the global economy in times of crisis. This book hopes to contribute to a new narrative of the recent crisis

(and may at the same time provide a fresh perspective on the potential causes of the trade collapse in the 1930s).

The need for a new narrative does not only reflect the need for intellectual honesty and clarity. Policy advice based on misperceived causes will be harmful. It prevents finding the right answers to the present crisis and to the trade collapses that undoubtedly will hit the world economy in the future. The risk of the verdict of the first phase thus is that these errors continue to be echoed in policy advice and economic analyses around the world. Keynes ([1936] 1986, p. 383) already noted that

The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influence, are usually the slaves of some defunct economist. Madmen in authority, who hear voices in the air, are distilling their frenzy from some academic scribbler of a few years back.

4. PLAN OF THE BOOK

The next chapter starts with an empirical description of the experiences of some 45–50 countries during three periods: the 1930s, 1980–2006 and the recent period of trade collapse from 2007 to 2010. It provides a discussion of measurement issues and an argumentation to analyse *import* developments. The empirical part of the chapter analyses how 18 major post-1980 financial crises have impacted on import volumes of individual countries. Next detailed analyses of import developments at the level of individual countries are provided for the two ultimate cases of world trade collapse. One of the important stylized facts is that individual country experiences differ a lot. This is true for the relatively homogeneous set of OECD countries in the years following 2007 and applies *a fortiori* for the other periods and other countries and country groupings that are investigated. The key research implication that follows from this observation and that makes up the body of the next chapters is the importance of understanding why these country experiences diverge.

Chapter 3 deals with the two major international capital flows that have an impact on international trade: foreign direct investment (FDI) and trade finance. One key theme explored in this chapter is substitution. Often a consequence of increasing FDI is that trade flows are reduced because export to a country is substituted so to say by building up production facilities for that product in that country. The strong reduction in FDI which is a reflection of investment plans being postponed and/or even put off may actually have

supported the volume of world trade to some extent because some international trade opportunities have not been cannibalized by the international reallocation of production facilities. Countervailing forces may also have been at work in formal and informal financial markets. In many discussions of the world trade collapse trade finance and trade credit are seen as more or less the same, but as we will see they are actually substitutes during a financial crisis that move in opposite directions: when banks reduce or withdraw credit, final arrangements like vendor or buyer credit become more important. Chapter 3 also reviews the available empirical literature pointing out many inconsistencies (and thus suggesting new issues for future research), but the final conclusion is that it is unlikely that a trade finance squeeze sparked the world trade collapse.

Chapter 4 describes and discusses international value chains and some measurement issues that may explain the simultaneous upward trends in globalization (measured by the trade-to-GDP ratio) and the share of value chain activity in total trade. The available empirical evidence on the relationship between, on the one hand, the strength of the decline and/or the speed of transmission in international value chains and, on the other hand, the relationship between shares of manufacturing trade, intra-industry trade and vertical specialization is inconclusive. The evidence suggests that international value chains have *not* been an important driver behind the trade collapse (as has been assumed by many authors). International value chains actually may have cushioned trade reductions.

Chapter 5 focuses on yet another factor (protectionism) that has unjustifiably been on the shortlist of potential drivers of the trade collapse. The chapter discusses (the political economy of) protectionism, describes recent patterns of protectionism and clarifies that protectionism cannot explain the 2008–2009 trade collapse (neither has it been the factor that set the trade collapse in the 1930s in motion). In addition the chapter sketches three scenarios for the future development of protectionism.

Following three chapters in which potential explanations are taken from the long list, Chapter 6 adds a potential driver of the trade collapse, as it develops and applies an alternative: the theory of trade uncertainty. An important theoretical finding is the existence of an information and/or co-ordination externality in decentralized market economies that induces too strong an international specialization pattern in such economies. Alternative theories that may yield similar relationships between specialization and political structures will be discussed and the chapter also reflects on observed patterns of political responses to trade disruption.

Chapter 7 provides an empirical analysis of one of the building blocks of the standard narrative of the world trade collapse, that is the value chain hypothesis, and tests this against the trade uncertainty hypothesis. A cross-

section analysis of the depth and duration of import decline in 45 countries and over 2007–2009Q3 shows that the presence of value chains has not increased the trade collapse at the level of individual countries. The econometric analysis confirms one of the predictions of the theory of trade uncertainty namely the weaker decline and the longer duration of the import adjustment in decentralized economies.

Chapter 8 sketches some economic and political second order effects of the process of deglobalization. The final chapter also takes up the issue of trade policy. It discusses the idea that trade barriers and import substitution are often seen as solutions in times of depression and illustrates that the current crisis is not different in this respect. The empirical evidence presented in this book, however, will show the risks of policies that digress in this direction. Since a shock increase in trade uncertainty must have been one of the key determinants of the world trade collapse it is the reduction of this uncertainty that is the first best policy recipe.

NOTES

- ¹ Two useful collections of state of the art assessments are: Baldwin and Evenett (2009) and Evenett et al. (2009).
- ² The *World Trade Report 2009* does not repeat one of the explanations 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 rephrased this press note.
- ³ Note, however, that exchange rate variability increases trade uncertainty and this may deter international specialization.
- ⁴ See Berthou and Emlinger (2009) for a detailed analysis of price and quantity movements. They find substantial shifts in the share of products differentiated by quality levels. In their analyses the reduction in demand for high-quality-high-price goods explains about two percentage points of the world trade collapse.
- ⁵ 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.
- ⁶ A notable exception is Lehman (2008).
- ⁷ The OECD world trade model is discussed in some detail in Chapter 3, section 3. The model is described and analyzed in Cheung and Guichard (2009).
- 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.

- 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) and van Bergeijk and Berk (2001).
- ¹⁰ It should be noted, however, that general collapses and crises (rather than trade collapses) occur in the international system with much higher frequency probably because of the inherent instabilities that increase when systems become more complex and integrated. It is almost a law in economics that economic subjects neglect or confuse the signals that critical forces are building up or that something really bad has happened. A very good account of the psychological mechanisms (disaster myopia and cognitive dissonance) that drive this collective human ostrich behaviour is Guttentag and Herring (1986).
- ¹¹ Faber and van Marrewijk (2009) use a five months centred average. Note that if this indicator turns negative for two consecutive months, the volume of trade will have contracted for two quarters which is in line with the usual definition of an economic recession (namely two quarters of negative GDP growth).
- ¹² Other years with strong negative annual growth rates are 1939, 1931 and 1938.
- ¹³ 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).
- ¹⁴ One such contemporary observer would be Keynes ([1919] 1984, pp. 6–7).
- ¹⁵ Rothermund is just a recent example of how historians see the great depression. See also Kindleberger (1978, pp. 14–15 and 21–2) on this topic.
- ¹⁶ Serrano (2007), for example, dates the 'phase transition' in the globalization of trade in the 1960s, suggesting the emergence of a new kind of relationship between world trade and world production around the start of the 1960s.
- ¹⁷ An alternative interpretation is that the measurement of the restrictiveness of trade policies is not measured accurately. See, for example, Anderson and Neary (2005).
- ¹⁸ See, for example, Linders (2006) and van Bergeijk (2009a). However, Brun et al. (2005) report a reduced impact of distance.
- ¹⁹ 'Uit het voorgaande blijkt wel dat de vraag over de duur van deze crisis en depressie door de wetenschap niet met een grote zekerheid kan worden voorspeld' (Tinbergen 1933, p. 177).
- ²⁰ And of course the fallacy of hasty generalization may have played havoc on the early attempts to say something about the drivers of the world trade collapse.
- ²¹ See van Bergeijk (2009a, Chapter 4).