

Introduction: why economies are never at rest

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Even people who are not really interested in economics cannot fail to be struck by two economic phenomena: the gap between rich and poor and the alternation of boom and bust. Over the last fifteen years most of what I wrote dealt with the first topic. Now the invitation by *Leidschrift* to write about economic crises gave me the opportunity to focus on the second one.

In general a crisis, from the Greek *krisis*, is defined as any event that leads to, or is expected to lead to, an unstable and dangerous situation. That of course is quite vague. When it comes to economic crises, things are no different. The expression ‘economic crisis’ is used for unstable, disturbing situations with a (potentially) negative impact and covers a wide range of forms, intensities, and durations of disturbances with quite different causes and remedies. In ordinary conversation, moreover, the expression ‘economic crisis’ is often used as more or less synonymous for ‘recession’ or ‘depression’, whereas economists tend to distinguish between these terms and give them more precise, different meanings.

I will not be too concerned about all these definitions and distinctions and use the expression in that very broad and open sense of an unstable, disturbing situation. As the reader can see for him- or herself, so do the authors who write about crises in this issue. They cover a very broad and diverse gamut of ‘crises’. Luuk de Ligt compares in his article two financial crises in Rome between the first century b.c. and first century a.d. Yaacov Lev in turn describes the Nile’s annual cycle and the structure of Cairo’s bread market and shows how food crises in medieval Egypt tended to be caused by either an insufficient rise of the water level of the Nile or by speculative withholding of supplies. Remi van Schaik looks at short-term grain shortages in the Late Middle Ages, discussing their wider causes and consequences. Bram Hoonhout analyses a ‘subprime crisis’ in the eighteenth century, looking at the selling and consequent collapse of plantation mortgages in the West Indies in the 1770s. Jeroen Touwen analyses similarities and differences between the so-called Great Depression of the 1930s and the current crisis in the Western world. The article by Rogier Busser takes us to Japan. It analyses two short-term crises in the 1940s and the 1970s and the almost permanent ‘recession’ that characterises the economy

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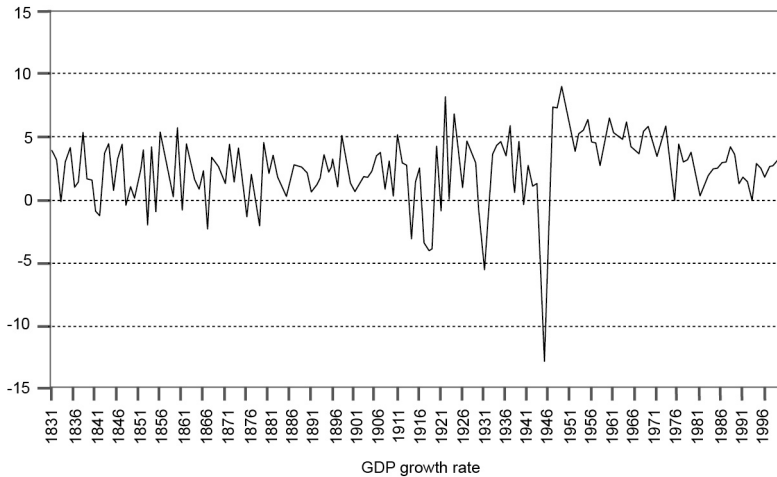
of the country over the last two decades. Finally, Thomas Lindblad analyses the financial crisis of 1997-1998 in Southeast and East Asia in order to find out whether and what lessons economic historians could learn from it. I will not present an actual introduction to the articles in this issue. They can speak for themselves. It would, moreover, feel somewhat patronizing to synthesize them on behalf of the authors and for the readers. I will try and present a general introduction into the topic 'economic crisis in history'. To keep the topic, somewhat, manageable, I will confine my examples to the economic history of the Western world.

Crises, capitalism and modern economic growth

It is undisputed that advanced capitalist economies, in which markets play a fundamental role, have always known their fluctuations and instability. It would be quite miraculous if overall supply and demand would always directly and spontaneously equalize in such enormously complex systems. And even if they would, there is always in principle an unlimited amount of 'exogenous' events: that is non-economic events, that might disturb economic stability like natural disasters, politics, wars, all sorts of human decisions. The distinction often made in this context between causes that are exogenous and endogenous, i.e. internal to the workings of the economic system, is relative and fairly arbitrary. I will nevertheless use it, again to make my topic somewhat more manageable and focus on those fluctuations that are (primarily) endogenous.

Most economists associate economic fluctuations and economic cycles with advanced market economies and distinguish between on the one hand economies with modern economic growth and on the other hand static, 'traditional' economies where the role of the market mechanism in economic life would be much less prominent and economic growth all but absent. Fluctuations of all sorts may very well have been present in traditional, pre-market, pre-modern growth economies but, so they claim, they were not endogenous to any economic system and therefore not really 'economic'. Most historians would now no longer endorse this view.

Fig. 1: Economic fluctuations in countries of the European Union 1830-2000



Source: A. Carreras and X. Tafunell, ‘The European Union Economic Growth Experience, 1830-2000’ in: S. Heikkinen and J.L. van Zanden eds., *Explorations in Economic Growth* (Amsterdam 2004) 63-88: 67.

The sharp contrast, so dear to, for example, Karl Polanyi (1886-1964), between non-capitalist, traditional economies with exchange relations embedded in social relations and capitalist economies where the market mechanism functions entirely according to its own logic, is now considered quite exaggerated.¹ Actually in capitalist societies markets are also embedded in social relations and to a higher or lesser extent regulated, whereas the market mechanism was never or in any case hardly ever completely absent in pre-capitalist societies. Differences in this respect are a matter of degree. As a rule, endogenous and exogenous factors both play a role in causing ‘economic’ crises, be it in often quite different proportions.

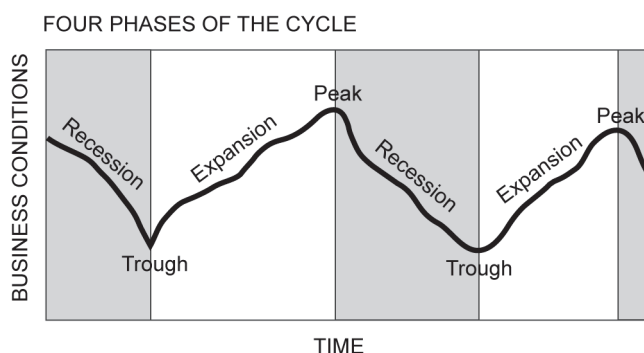
There continue to be good reasons to make a distinction between a world before industrialisation that was static and lacked modern economic growth, and a world with capitalism and in particular industrialisation, that is dynamic and growing. But here too one must be wary not to exaggerate.

¹ K. Polanyi, *The Great Transformation. The Political and Economic Origins of our Time* (Boston 1944). For an analysis of his work containing many references to critics, see G. Dale, *Karl Polanyi: The Limits of the Market* (Cambridge 2010).

In the very long run the pre-industrial world indeed hardly knew economic growth, certainly not the sustained, substantial growth we now call 'modern'. But as we will see, that does not mean it was motionless.

What sorts of 'crises' does one come across in the literature? Let us begin our brief overview with the shorter 'endogenous' fluctuations that are so characteristic for capitalist economies and that are often, not very adequately, referred to as 'business cycles'.² They involve a movement of several fundamental economic indicators together and are usually measured by considering the growth rate of real GDP.

Fig. 2: A business cycle



Source: P.A. Samuelson, *Economics. International Student Edition* (New York 1967) 243.

Over time many such cycles have been identified or at least distinguished.³ The most well known shorter ones are the Kitchin cycle, lasting about forty months and discovered in the 1920s by Joseph Kitchin (1861-1932) and the Juglar cycle, lasting seven to eleven years and identified in 1862 by Joseph Clément Juglar (1819-1905). Then there is the so-called Kuznets cycle, called after Simon Kuznets (1901-1985) that is assumed to last fifteen to twenty-five years. In all these cycles changes in investment play the key role.

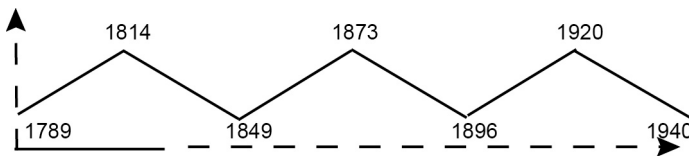
² The term is not very adequate as the fluctuations encompass the entire range of economic activity, not just business, and as they are not really cyclical, but it continues to be used.

³ For an introduction see: C.D. Romer, 'Business cycles', *The Concise Encyclopedia of Economics*, <http://www.econlib.org/library/Enc/BusinessCycles.html>, second edition, and http://en.wikipedia.org/wiki/Business_cycle, accessed 3 May 2013.

It is debated to what extent these ‘cycles’ really show a fixed, periodically returning and fully endogenous pattern.

When it comes to longer wave-like fluctuations in economic life opinions are much more divided. That certainly is the case with so-called long Kondratiev waves or cycles that are supposed to last some forty-five to sixty years and that are called after Nicolai Kondratiev (1892-1938), a Russian economist who wrote about them in the 1920s and 1930s.⁴ Scholars do not agree on their actual existence and in particular their periodicity. Kondratiev himself regarded the ascendant phase of his waves as characterized by increasing prices and low interest rates, and the descendant phase by decreasing prices and high interest rates. Subsequent analysis concentrated on output.

Fig. 3: Kondratiev price waves



Source: T. Fanfani, *Storia Economica* (Milan 2010) 13.

For Kondratiev those long waves were characteristic for the evolution of modern capitalism. His first wave started in the 1780s. There are, however, scholars who assume that long waves, not necessarily with the same characteristics or causes, existed already earlier on. They also call those ‘waves’ or ‘cycles’ after Kondratiev or refer to them as ‘secular trends’, suggesting their upsurge and downswing together might last as long as a century.⁵ For such long waves one also encounters the terms ‘phase A’ and ‘phase B’, originally introduced by French economist François Simiand (1872-1935), and initially referring to much shorter price waves in the industrial(ising) world.

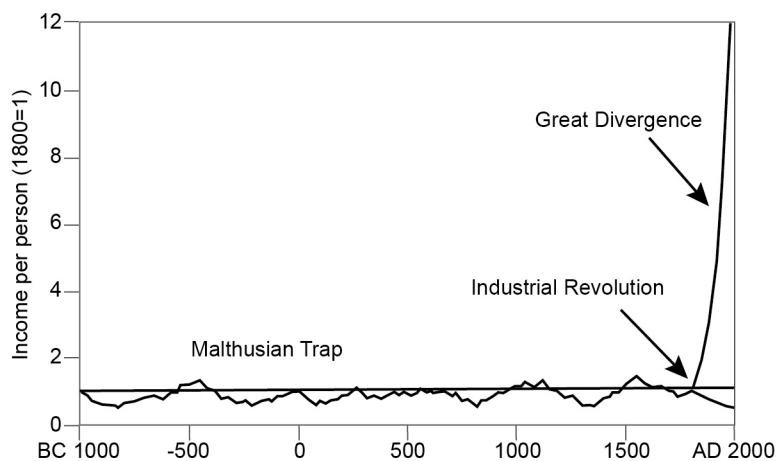
⁴ For further information on Kondratiev and more in general on long waves and economic development, see: C. Freeman and F. Louçã, *As Time goes by. From the Industrial Revolutions to the Information Revolution* (Oxford 2001).

⁵ Fernand Braudel, to some extent Immanuel Wallerstein, and definitely Andre Gunder Frank are amongst the scholars who think there were already Kondratiev waves or secular trends of sorts long before 1800.

Crises before capitalism and modern economic growth

No one would of course deny that economic life has always been subject to all sorts of fluctuations, even when it was not dominated by the market and growth was still rare. What is debated is what caused those pre-industrial and pre-capitalist fluctuations, i.e. whether they were endogenous and whether they were periodic. Over the very long run the pre-industrial and pre-capitalist world was one of continuity and stability.

Fig. 4: Long-run stability on a global scale



Source: G. Clark, *A Farewell to Alms. A Brief Economic History of the World* (Princeton 2007) 2.

Things, however, were quite different in the less-long run. Traditional economies not only suffered from the many forms of external disturbance that also impinge on modern economies; on top of that they suffered from the vagaries of nature to an extent that advanced economies simply no longer know. Nature – via e.g. weather conditions, climate, diseases of people and animals, the (non-)availability of resources – had a direct and often very disturbing impact on all levels of economic life. This meant that volatility and variety, and thus unpredictability, were all too present in the

old economic regime in the short run.⁶ The following table can serve as an illustration. It shows fluctuations in the price of wheat over a brief period of time. Wheat was by far the most important consumer good at the time in France.

Fig. 5: Short-term fluctuation. Wheat prices in Rozoy and Brie (France), grams of silver per setier (about 150 litres)

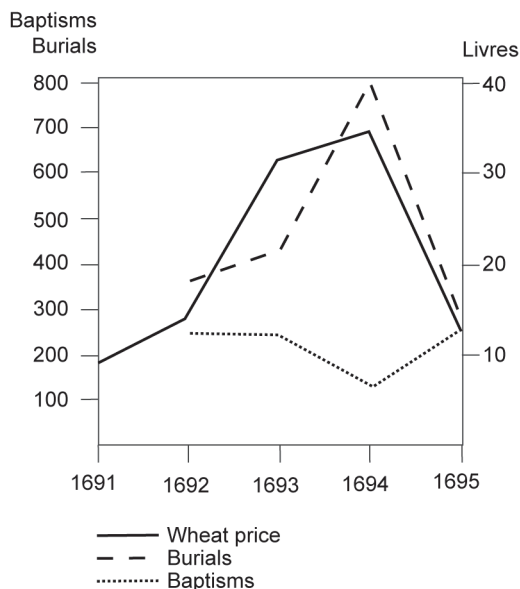


Source: W. Abel, *Agricultural Fluctuations in Europe from the Thirteenth to the Twentieth Centuries* (London 1980) 166.

Most of such fluctuations will have found their origin *outside* the economic system. One should be wary though of generalizing too rash and suggesting that endogenous economic fluctuations thus are a very recent phenomenon. Historians as a rule distinguish between several types of crisis when discussing traditional economies. Probably the best-known variety is the so-called *crise de subsistance* that figures prominently in the work of historical demographers. Such crises, that were quite frequent in most of Europe until far into the eighteenth century and only really disappeared during the nineteenth century, express a close relationship between the availability of food on the one hand and mortality and fertility (and often also nuptiality) on the other.

⁶ D.W. Allen, *The Institutional Revolution. Measurement and the Economic Emergence of the Modern World* (Chicago and London 2012) 22-43.

Fig. 6: A 'crise de subsistance' in Meulan, to the Northwest of Paris, 1693-1695



Source: P. Kriedte, *Spatfeudalismus und Handelskapital. Grundlinien der europäischen Wirtschaftsgeschichte von 16. bis zum Ausgang des 18. Jahrhunderts* (Göttingen 1980) 14.

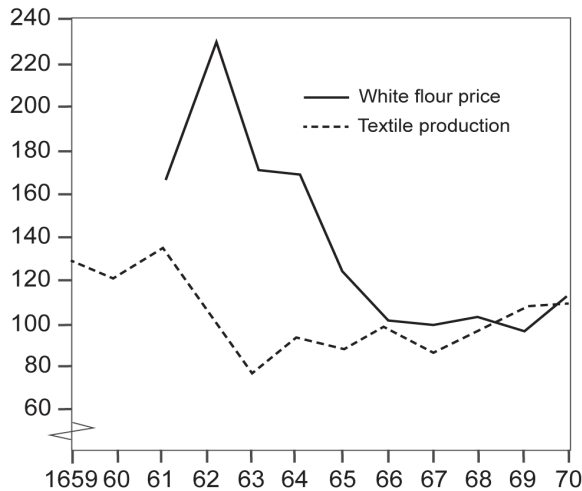
That means they were considered part and parcel of the Malthusian dynamics that supposedly characterised the pre-industrial world.⁷ Their frequent occurrence in the end was regarded as a symptom of 'overpopulation', which led to food shortage, which in turn led to higher mortality. The impact of changes in price level and mortality on nuptiality and fertility seems well established. The relationship, though, between 'overpopulation', food crises and actual increases in mortality appears to have been much weaker than scholars have long assumed. Overall, high mortality – in the short as well as in the long run – appears to have primarily been a consequence of diseases whose occurrence often was not or hardly

⁷ For a description of those dynamics that are relevant in this context, see the article by Clark referred to in note 21.

related to what went on in the economy or to changes in population size.⁸ This would mean that the prime mover of such crises as far as they were ‘crises of mortality’ was to a large extent external to the economy. In as far as they were ‘crises of scarcity’, they could be related to ‘overpopulation’, but also of course to other factors like weather or war.

The so-called *crise de type ancien*, a crisis of underproduction that figures prominently in the work of French economic historian Ernest Labrousse (1895-1988), overall looks more like a direct consequence of the internal logic of traditional economies. Labrousse postulated a correlation between high food prices and ‘recession’ in the rest of the economy, in particular a steep drop in the sale of manufactured goods.⁹

Fig. 7: A ‘crise de type ancien’ in Lille 1662/1663 (1666-1670 = 100)



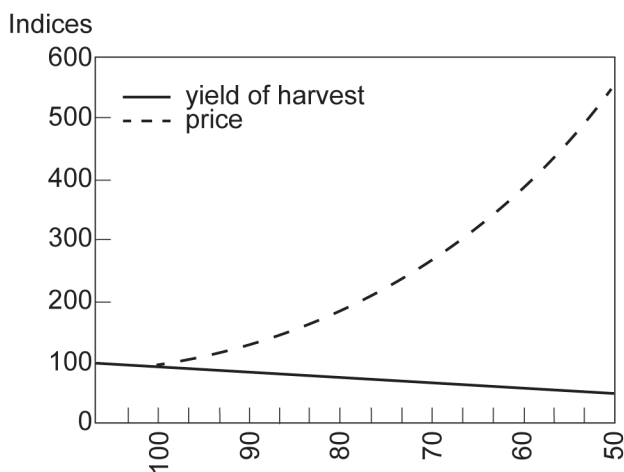
Source: P. Kriedte, *Spatfeudalismus und Handelskapital. Grundlinien der europäischen Wirtschaftsgeschichte von 16. bis zum Ausgang des 18. Jahrhunderts* (Göttingen 1980) 22.

⁸ M. Livi-Bacci, *Population and Nutrition: an Essay on European Demographic History* (Cambridge 1990; originally Bologna 1987) 73-77.

⁹ E. Labrousse, *Esquisse du mouvement des prix et des revenus en France au XVIIIe siècle* (Paris 1933) and idem, *La crise de l'économie française à la fin de l'Ancien Régime et au début de la Révolution* (Paris 1944).

Here too the actual trigger was often ‘nature’ or some event outside the economy proper. But the chain of events that was then set in motion can only be understood with reference to the functioning of the existing economic system. Such crises occurred so frequently and had such an impact because a very high proportion of total income of ordinary consumers had to be spent on food. In early modern Europe this could amount to as much as 60 to 80 per cent. A small decline in the supply of food already led to a substantial increase in its price and then a sharp fall in the demand for manufactured goods.

Fig. 8: The Law of Gregory King, English statistician and political arithmetician (1648-1712)



Source: B. Slicher van Bath, *The Agrarian History of Western Europe, 500-1850* (London 1963) 118.¹⁰

Volatility, however, during the economic ancien régime was not just characteristic for the sphere of production in agriculture and manufacturing. Many crises were monetary or more broadly, financial in origin. The stock and supply of money for a very long time were tightly connected to the stock and supply of the materials that functioned as or guaranteed money.

¹⁰ For further information on King see:

http://en.wikipedia.org/wiki/Gregory_King, accessed 28 May 2013.

In Europe, that as a rule meant precious metals. This had some obvious disadvantages: it made economies dependent on the actual availability of those metals which could be in short supply, were not always easy and safe to transport and were subject to wear and tear. It is not by accident – and not irrational – that so many people, in particular people in government, often were obsessed with its imports and exports.

In principle there were also advantages to this close identification of money with bullion. It was, at least in principle, much clearer what money was and how much of it there was than it is nowadays. It was much more tangible. Such a situation does not provide much room for manipulation. At least so it seems. Actually, manipulation, speculation and lack of transparency were rife. Many people using coins clipped them by shaving metal from their circumference or sweated them by shaking them in a bag and collecting the dust worn off. And there was debasement by rulers who reduced their silver or gold content. This tends to increase the available amount of money in circulation, which normally leads to rising prices, which in turn reduces the purchasing power of the currency but makes debts less burdensome for the government. That also profited from the fact that debasement led to re-coining. Having new coins minted at the Mint of the sovereign cost money, the so-called seigniorage, that took the form of a difference between the face value and the commodity value of a coin. With only very few exceptions, the main ones being the pound sterling since about 1550 and the Dutch florin since about 1600, the silver value of moneys of account in early modern Europe decreased sharply.¹¹

Actually the world of money has always been a world of manipulation, speculation, manias, panics, and follies, and thus of crises. That is only too obvious for capitalist times, but it was also true for the world before modern capitalism.¹² Let me just give one example (table 1)

¹¹ F. Braudel and F. Spooner, 'Prices in Europe from 1450 to 1750' in: E.E. Rich and C.H. Wilson eds., *The Cambridge Economic History of Europe*. IV. *The Economy of Expanding Europe in the Sixteenth and Seventeenth Centuries* (Cambridge 1967) 375-486: 458.

¹² For a general overview of the entire period discussed in this text see: C.P. Kindleberger and R.Z. Aliber, *Manias, Panics and Crashes: A History of Financial Crises* (n.p. 2011) and C.M. Reinhart and K.S. Rogoff, *This Time is Different: Eight Centuries of Financial Folly* (Princeton and Oxford 2009).

from the notorious Kipper-and-Wipperzeit in Germany, a period of financial crisis during the start of the Thirty Years War (1618-1648).¹³

Table 1: Exchange rate Reichstaler–Kreuzer

Period	Exchange rate Reichstaler–Kreuzer
1566	0068
1590	0070
1600	0072
1610	0084
1616/17	0090
End 1619	0124
End 1620	0140
End 1621	<390
1622/23	>600 regionally >1000
From 1623	0090

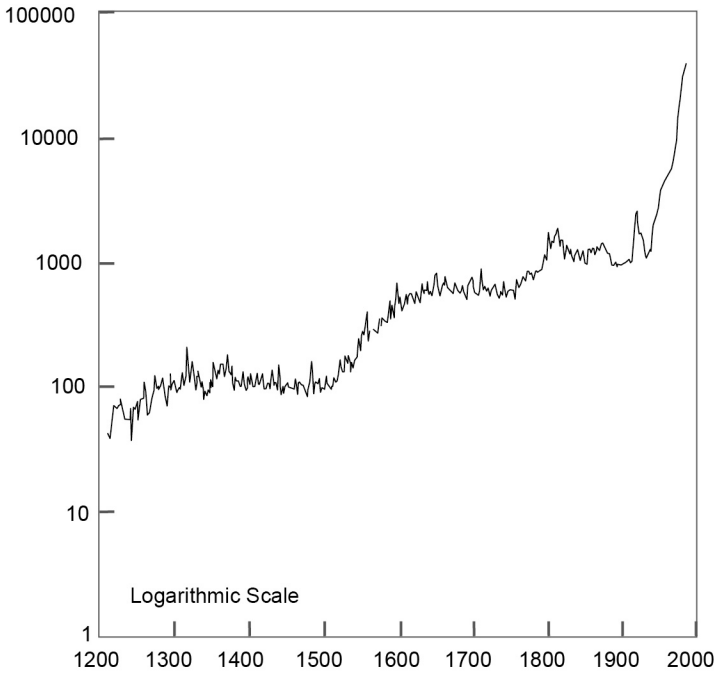
Source: http://de.wikipedia.org/wiki/Kipper-_und_Wipperzeit, consulted 28 May 2013.

The history of prices as a history of crises

Talking about money inevitably involves talking about prices that tend to function as a good seismograph of economic ‘activity’. The history of prices has always shown fluctuations and even severe turbulences. The following graph shows an example of the long waves in European price history.

¹³ See for an introduction http://de.wikipedia.org/wiki/Kipper-_und_Wipperzeit, accessed 30 May 2013.

Fig. 9: The prices of consumables in England



Source: D.H. Fischer, *The Great Wave. Price Revolutions and the Rhythm of History* (New York and Oxford 1996) 4.

Of course scholars have always been fascinated by such price waves, their causes and often disturbing effects. Not surprisingly many looked for their cause in the supply of money. For monetarist economists like Milton Friedman (1912-2006) who focussed on the working of modern capitalist economies, they became a matter of principle.¹⁴ They, however, had predecessors who – which of course is of great interest to historians – saw similar mechanisms at work already before the nineteenth century. I will focus here on long-term fluctuations. François Simiand, a scholar who was

¹⁴ For an introduction see: B.T. McCallum, 'Monetarism', <http://www.econlib.org/library/Enc/Monetarism.html> second edition, consulted 30 May 2013.

quite influential in French historiography, made a distinction between prolonged periods of rising prices (phase A) and prolonged periods of falling prices (phase B). Two such phases together lasted some forty to fifty years. He claimed that such phases are clearly visible from the beginning of the nineteenth century onwards but already existed, at least in advanced economies, from the beginning of the sixteenth century and points out that the phases were much longer before the end of the eighteenth century when his in-depth analysis began. Phase A is characterised by great economic activity and a general rise in incomes; profits as well as wages. Its origins are to be found in an increasing supply of money. A shrinking supply of money is at the origin of phase B.¹⁵

Earl J. Hamilton (1899-1989), to just refer to another example, saw a direct connection between price rises in Spain, and soon also the rest of Europe, in the sixteenth century and the inflow of bullion from the Americas.¹⁶ That famous ‘price revolution’, however, has increasingly been attributed to other causes.¹⁷ The same has happened to the decline of prices that occurred during the seventeenth century. In Simiand’s perspective at least from the 1650s onwards, prices tended to decline, which he in the end considered positive for the economy. In the work of historians like Pierre Goubert (1915-2012) and Emmanuel Le Roy Ladurie (1929), the seventeenth century began to be depicted as an age of crisis with all the *negative* connotations of that term. For them the real underlying cause of the up- and downward movement of prices resided in changes in population. Lowering prices were a symptom and cause of economic retraction. Their demographic, Malthusian interpretation of long price waves, in this case

¹⁵ For an analysis of Simiand’s ideas see: F. Vayssiere, ‘Raison collective et progrès économique: la théorie du cycle de François Simiand’, http://dumas.ccsd.cnrs.fr/docs/00/81/78/54/PDF/2012-06_VAYSSIERE_RAI.pdf, consulted on 4 June 2013, and M. Lévy-Leboyer, ‘L’héritage de Simiand: Prix, profit et termes d’échange aux XIX siècle’, *Revue Historique* 243 (1970) 77-120.

¹⁶ E.J. Hamilton, *American Treasure and the Price Revolution in Spain, 1501-1650* (Cambridge Mass. 1934).

¹⁷ See not so much for the actual text as for the many notes and references: D.H. Fischer, *The Great Wave. Price Revolutions and the Rhythm of History* (New York and Oxford 1996) 70-90.

truly *secular* trend movements, began to prevail at least in studies dealing with pre-industrial societies.¹⁸

Table 2: The correlation between population and price level

Period	Population	Period	Cereal Price Levels
1150-1300	Considerable growth	1200-1300	High
1300-1450	Serious decline	1300-1450	Low
1450-1600	Steady growth	1450-1550	Rising slightly
		1550-1650	Rising steeply
1600-1700	Standstill, or retarded growth	1650-1750	Falling
1750-1900	Very rapid growth	1750-1878	Rising

Source: B. Slicher van Bath, *The Agrarian History of Western Europe, 500-1850* (London 1963) 113.

This approach, in which technology and institutions are assumed to be more or less unchanged, was not only popular amongst the *Annales* historians just referred to. Already in the 1930s, German economic historian Wilhelm Abel (1904-1985) had written a major interpretation of centuries of Western European economic history that took changes in population as its point of departure.¹⁹ So did the Dutch historian Bernard Slicher van Bath (1910-2004) in a brilliant synthesis of the agrarian history of Western Europe from 500 to 1850.²⁰ It became mainstream. The majority of historians analysing pre-industrial economies still depart from Malthusian assumptions.²¹ In the Malthusian approach the relation between resources

¹⁸ P. Goubert, *Beauvais et le Beauvaisis de 1600 à 1730. Contribution à l'histoire sociale de la France du XVII^e siècle* (Paris 1960) and E. Le Roy Ladurie, *Les Paysans de Languedoc* (Paris 1966).

¹⁹ W. Abel, *Agrarkrisen und Agrarkonjunktur in Mitteleuropa vom 13. bis 19. Jahrhundert* (Berlin 1935). There is an English version, to which I refer in this text: *Agricultural Fluctuations in Europe from the Thirteenth to the Twentieth Centuries* (London 1980).

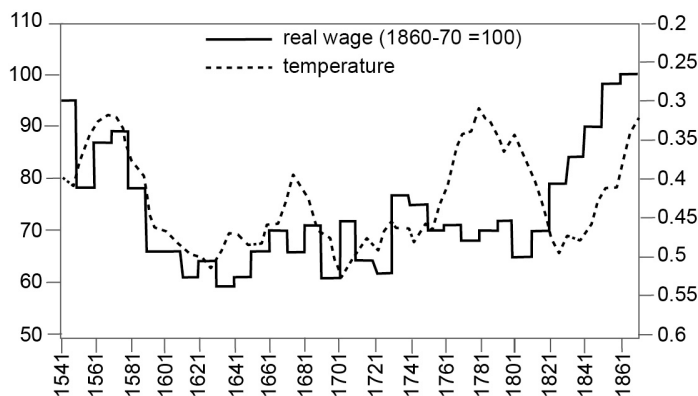
²⁰ B. Slicher van Bath, *The Agrarian History of Western Europe, 500-1850* (London 1963).

²¹ A very explicit defender of this approach at the moment would be: G. Clark, 'In Defense of the Malthusian Interpretation of History', *European Review of Economic History* 12.2 (2008) 175-199. K. Gunnar Persson would be a good exponent of

and population has mostly been interpreted in terms of tensions and crises as a consequence of major changes in the numbers of total population. One might also consider the economic consequences of demographic factors like the age-structure, e.g. the advantages and disadvantages of having a low or a high dependency rate. Or the fact that people have fairly typical spending patterns through their life cycle, which means that demographic phenomena, e.g. baby booms can have a clear impact on patterns of development.

If indeed demography would be so important for explaining long-term as well as short-term economic fluctuations in prices, production and productivity for the pre-industrial world in particular, the question what determines demographic fluctuations of course becomes paramount. We already referred to the availability of resources and to the role of diseases. Considering the fundamental role of agriculture in that world, one of course might also, for the long run, consider climate.²²

Fig. 10: The connection between wages and temperatures



Source: K. G. Persson, *An Economic History of Europe. Knowledge, Institutions and Growth, 600 to the Present* (Cambridge 2010) 48.

those who reject the idea that the history of the pre-industrial world always is 'Malthusian'. See: K.G. Persson, 'The End of the Malthusian Stagnation Thesis', <http://www.econ.ku.dk/europe/early-growth.htm>, accessed 03 May 2013.

²² B.M.S. Campbell, 'Nature as Historical Protagonist: Environment and Society in Pre-Industrial England', *Economic History Review* 63.2 (2010) 281-314.

In industrial and post-industrial economies destabilising change has often been caused by shifts in investment, in turn caused by major technological changes. In the pre-industrial world technological change – as well as other kinds of economically relevant change – was so sparse, minor and slow that its short-term effects were hardly noticeable on a macro-economic level. It did not cause major destabilisation. Over the long term it only created very low growth and incremental change. The major general-purpose technological breakthroughs that really put an end to Malthusian constraints in producing food, shelter, clothing and energy, only emerged with the Industrial Revolution.

Crises in advanced economies: causes

In the end all economists agree that fluctuations are an integral part of (modern) economies. They do, however, fiercely disagree about their causes, remedies and severity. Mainstream economics long assumed markets would fairly quickly and ‘automatically’ return to a situation of equilibrium. Crises were just a brief disequilibrium or shake up because of a transient mismatch between productive capacity and aggregate demand. In the longer run Say’s Law, stating that aggregate supply creates its own aggregate demand – which means that a general glut is impossible – would hold.²³ Karl Marx (1818-1883) and his followers of course disagree. They see crises as inherent to capitalism and unavoidable ‘considering the poverty and restricted consumption of the masses, in the face of the drive of capitalist production to develop the productive forces as if only the absolute consumption capacity of society set a limit to them.’²⁴ This inherent instability basically is considered negative as crises succeed each other and the number of losers increases and that of winners decreases with every crisis. Joseph Schumpeter described modern capitalism as a ‘perennial gale of creative destruction.’²⁵ Growth is the result of innovation. That has its

²³ For this law called after the French economist J.-B. Say (1767-1832), although he did not really invent it, see: http://en.wikipedia.org/wiki/Jean-Baptiste_Say, accessed 28 May 2013.

²⁴ K. Marx, *Capital. A Critique of Political Economy* III (Harmondsworth 1981) 615. I here refer to the version published in *The Pelican Marx Library*, edited by Penguin.

²⁵ J.A. Schumpeter, *Capitalism, Socialism and Democracy* (London 1976) 84.

price and is disturbing but in the end crises would lead to progress. The originality of John Maynard Keynes (1883-1946) resided in his view that insufficient aggregate demand can cause a situation of severe and long-lasting crisis, i.e. a serious depression that will not be solved by any ‘invisible hand’. In such a depression people tend to neither consume nor invest but develop a preference to hold money as liquid cash. Government is therefore required to step in, e.g. by lowering interest rates, funnelling new money, giving tax breaks or starting public works. With the passing of time it was not just full blown Keynesians who were convinced of the necessity of such government intervention. For several decades after the Second World War almost all economists in the Western world held this view that was popularised by economists like Paul Samuelson (1915-2009) who created a kind of neo-classical-Keynesian synthesis.²⁶

The claim that monetary swings play a role in the emergence of economic fluctuations and disturbances is at the hearth of ‘monetarism’ as it is usually associated with Milton Friedman. He claimed he knew of no severe depression, in any country or at any time, that was not accompanied by a sharp decline in the stock of money, and equally of no sharp decline in the stock of money that was not accompanied by a severe depression: that is quite extreme. It is striking though, that at the moment the most popular explanation of the Great Depression of the 1930s in all probability is the monetarist one, that argues that it was caused by monetary contraction.²⁷

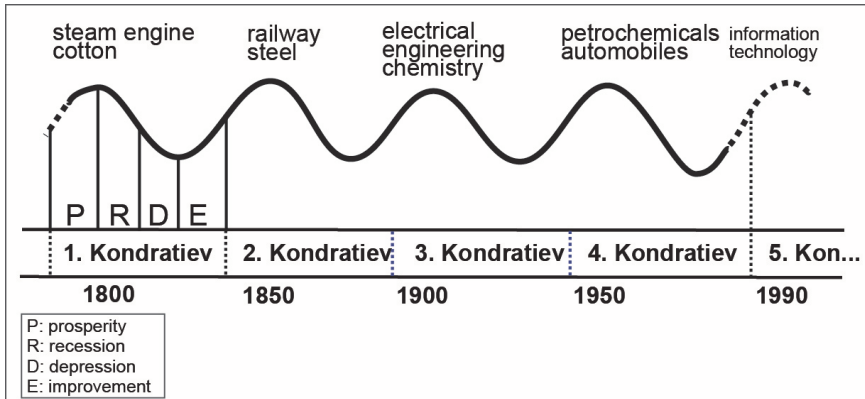
The explanations in the previous paragraph concern short crises and depressions. What about the long waves? As we have seen, for the pre-industrial period, monetary, demographic and climatic explanations have been put forward to explain ‘secular trends’. In my view, overall, demographic explanations are the most convincing for that period, but in the end leave one with the question what explains demography. For the period since the beginning of industrialisation the most popular explanation for the Kondratiev waves at the moment seems to be a succession of macro-innovations in terms of general purpose technologies that led to booming and then flattening investment. That of course only makes one

²⁶ See for an introduction e.g. J.O. Blanchard ‘Neoclassical synthesis’ in: *The New Palgrave Dictionary of Economics* (2nd edition; Houndmills 2008).

²⁷ M. Friedman, A. Jacobson Schwartz and P.L. Bernstein, *The Great Contraction, 1929-1933* (Princeton 2012). For his claim about the importance of money for crises in general see: M. Friedman, http://books.cat-v.org/economics/capitalism-and-freedom/chapter_03, accessed 7 June 2013.

wonder what causes such innovations, whether there really is a periodicity in their occurrence and why.

Fig. 11: Innovations and Kondratiev waves



Source: http://en.wikipedia.org/wiki/Kondratiev_wave.

Is there any chance to eliminate crises?

The death of 'the business cycle' has already been foretold quite often. Irving Fischer (1867-1947), co-founder of the Econometric Society and its first chair, in the 1920s thought that forecasters would be able to 'predict business conditions in a truly scientific manner (...) much as we forecast the weather' (sic) and that economists should be led 'to control and reduce the so-called business cycle.' His comment in the *New York Times* of October 16, 1929 that stock prices had reached 'what looks like a permanently high plateau' shows he might have been rather optimistic.²⁸ Keynes was convinced that economics is a matter of uncertainty, but nevertheless is supposed to have said in 1927: 'We will not have any more crashes in our time'²⁹ and ventured a quite optimistic long-term forecast:

²⁸ As cited in: S. Nasar, *Grand Pursuit. The Story of Economic Genius* (New York 2011) 301.

²⁹ He is supposed to have done so in a conversation with F. Somary in 1927, reported in: F. Somary, *The Raven of Zurich* (London 1986) 146-147.

Let us, for the sake of argument, suppose that a hundred years hence we are all of us, on the average, eight times better off in the economic sense than we are today. Assuredly there need be nothing here to surprise us. Thus for the first time since his creation man will be faced with his real, his permanent problem – how to use his freedom from pressing economic cares, how to occupy the leisure, which science and compound interest will have won for him, to live wisely and agreeably and well. (...) If economists could manage to get themselves thought of as humble, competent people on a level with dentists, that would be splendid.³⁰

Paul Samuelson, in all probability the most influential economist of the twentieth century and winner of the Nobel Prize for economics in 1970, wondered in 1967 what could be said ‘scientifically’ about the outlook for business fluctuation. He thought most economists would pretty much agree with the following formulation:

Although nothing is impossible in an inexact science like economics, the probability of a great depression – a prolonged, cumulative, and chronic slump like that of the 1930s, the 1890s, or the 1870s – has been reduced to a negligible figure. No one should pay any appreciable insurance premium to be protected against the risk of a total breakdown in our banking system and of massive unemployment in which twenty-five per cent of the workers can find no job.³¹

It is interesting to see *why* he thought what he calls ‘depressions’ would disappear. He gave two main reasons:

The electorate in a modern mixed economy will insist that any political party which is in power (...) will take the expansionary actions that keep great depressions from occurring. (...) [D]emocratic mixed economies are unlikely to experience old-fashioned prolonged depression ever again (...)³²

³⁰ J.M. Keynes, ‘Economic Possibilities for Our Grandchildren’, originally written in 1930. I quote from the version in his *Essays in Persuasion* (New York 1963) 358-373.

³¹ P.A. Samuelson, *Economics. International Student Edition* (New York 1967) 254.

³² Samuelson, *Economics*, 254, 256.

The other one is increased knowledge: ‘We have eaten from the Tree of the Fruit of Knowledge (...)’³³ Samuelson clearly was overconfident. But he was not alone. In 1967 a conference was held in London to discuss whether the business cycle had become obsolete.³⁴

In 1997, three decades later, Steven Weber, a political scientist in Berkeley, fantasized in a widely discussed article about the end of the business cycle:

The waves of the business cycle are becoming ripples. (...) Smarter government policy, globalization, changes in employment, advances in information technology, and emerging markets all cushion shocks and dampen the familiar boom and bust. The consequences for world politics and prosperity will be profound.³⁵

At that time, we also witnessed the rise of ‘new growth theory’ that claimed that we might be fairly confident our living standards would continue to improve. The Internet with its free information and global competition would push down prices. In combination with the fact that knowledge was becoming the main source of growth, that would end booms and busts. The most advanced economies in the world had become knowledge-economies and those, so it was claimed, no longer suffer from decreasing returns.³⁶ In 2003, to give one last example, Robert Lucas, winner of the Nobel-Prize for economics in 1995, declared that the ‘central problem of depression-prevention (has) been solved, for all practical purposes.’³⁷

³³ Ibidem, 254.

³⁴ M. Bronfenbrenner ed., *Is the Business Cycle Obsolete?* (New York and London 1969).

³⁵ S. Weber, ‘The End of the Business Cycle?’, *Foreign Affairs* 76.4 (1997) 65-82.

³⁶ J. Cortright, ‘New Growth Theory, Technology and Learning. A Practitioner’s Guide’, *Reviews of Economic Development, Literature and Practice* 4 (Portland 2001); M. Ridley, *The Rational Optimist. How Prosperity Evolves* (London 2011) and D. Warsh, *Knowledge and the Wealth of Nations. A Story of Economic Discovery* (New York and London 2006).

³⁷ R.E. Lucas, Jr., ‘Macroeconomic Priorities’, Presidential Address delivered at the one-hundred fifteenth meeting of the American Economic Association, 4 January 2003, Washington DC:

<http://pages.stern.nyu.edu/~dbackus/Taxes/Lucas%20priorities%20AER%2003.pdf>, accessed 2 June 2013.

All these predictions and many more have come to naught. Why do we still see serious booms and busts? There are more economists than ever. They have more influence than ever and like to suggest they are real scientists. Modern economies may be less suffering from the unpredictability of nature but they still are volatile, unpredictable and crisis prone. I see a mix of fundamental and practical reasons. Let me begin with the fundamental ones. Most economic decisions, not just the innovative ones, are as Keynes puts it, the result of ‘animal spirits – of a spontaneous urge to action rather than inaction.’ Much of what is going on in economic life, still in his words, is an effect of the ‘temptation to take a chance.’³⁸ Every economic agent has to deal not just with risk but also with fundamental uncertainty. The word ‘risk’ refers to measurable uncertainty with known probabilities, whereas the word ‘uncertainty’ refers to non-measurable, qualitative uncertainty with unknown probabilities.³⁹ Individual agents who suffer from an overload of information and a limited amount of time cannot be perfectly rational. The concept ‘rational expectations’, so dear to many economists, means nothing as already shows in the fact that economists themselves hold so many different ‘rational’ expectations. We already referred to Schumpeter, who with good reason pointed out, that innovation is the essence and motor of any capitalist economy. Actually this applies to any developed economy. Innovating, however, is not a matter of calculating the *known* but of venturing into the *unknown*. Even the actions of those people who would like to be a perfect homo economicus are unpredictable, let alone the interaction between them. Macro-economic developments depend on the interplay of interpretations, expectations, hopes and actions of so many people and on so many occurrences, that no one can know the outcome. Macroeconomics is at best informed guessing. The economy is an open, indeterminate, instable system whose future cannot be deterministically predicted from within.

Central planning by the state or some kind of all-encompassing institution will not save us in the end. Not just because the goals of the planners will often be incompatible with each other and will certainly encounter resistance. But also because, as Hayek has shown, much of the knowledge required for centrally planning an economy is inherently local, i.e. decentralized. Planners in a centrally planned economy will never be able

³⁸ I took these quotes by Keynes from: J. Schlefer, *The Assumptions Economists make* (Cambridge Mass. and London 2012) 150, 159.

³⁹ See for this distinction: F.H. Knight, *Risk, Uncertainty, and Profit* (Boston 1921).

to collect and coordinate enough information to optimally or even efficiently allocate resources. They lack prices that make it possible to determine scarcity and efficiency and are not able to rapidly adapt to changes and particular circumstances of time and place.⁴⁰ Actually in many developed economies intervention by ‘the state’ has become part of the problem. Most governments are so involved in the economy and take so many measures – with intended *and* unintended, foreseen, unforeseen and unforeseeable consequences, often only to be succeeded by other governments that want to implement *their* policies – that government itself has become a source of disturbance. That effect is only enhanced by the fact that there is no global government.

Let me now refer to some more practical reasons why fluctuations have not and will not become a thing of our economic past. Most consumers in the developed world have much more discretionary income than people have ever had before. This means they have far more room to choose what to consume and can also decide to postpone consumption and set aside large amounts of money. All that non-consumed money is then expected to find profitable investment. The amounts of money involved are enormous. Let me just give three illustrations. Gross monetary holdings of households and non-financial joint stock companies in Germany, Great Britain, Japan and the USA together, amounted to more than three times their total GDP at the end of 2010. In Europe in 2010, stock exchange investment amounted to 8,000 billion euros, i.e. some four times German GDP. In the Netherlands alone in 2012, institutional investors invested an amount of money some three times as large as GDP; some 900 billion euros alone were put aside for pensions.⁴¹ It will not come as a surprise that financial transactions are a manifold of real transactions. Currency trade alone worldwide amounts to 4,000 billion dollars per day. That is ten times all trade at the world’s stock exchanges. The value of transactions at the Wall Street Stock Exchange and the Deutscher Aktienindex (DAX) increased tenfold between 1960 and 2010.⁴²

⁴⁰ See for this claim: F.A. Hayek, *The Counter-Revolution of Science. Studies on the Abuse of Reason* (Glencoe 1952) and idem, *The Road to Serfdom* (London 1944).

⁴¹ H.-J. Wagener, *Die 101 wichtigsten Fragen. Geld und Finanzmärkte* (Munich 2012) 148, 89; and <http://www.cbs.nl/NR/rdonlyres/9E73B22E-1D7B-4AB2-BECF-8C2E60EE9E91/0/2012beleggingeninstitutionelebeleggersart.pdf>, accessed 28 May-2013.

⁴² Wagener, *Geld und Finanzmärkte*, 147.

The enormous increase in production and productivity makes the economy very prone to overproduction. Producers are now chasing consumers, trying to seduce them to buy via advertising and branding. The enormous increase in consumer credit is part of this chasing of consumers. Such credit has become a normal way of financing the purchase of consumer goods. Debt very probably has always been a normal part of life for many ordinary people, but for them at least, it long tended to be embedded in a context of personal connections and trust.⁴³ Now it has often turned into an abstract transaction and a form of calculation. This leads to the fascinating fact that in many wealthy modern societies one can find mountains of debts as well as mountains of savings. To refer again to the example of the Netherlands: its inhabitants, as indicated, have not only set aside more than 900 billion euro for their pensions. But at the same time private debt in the form of mortgages alone amounts to 600 billion euro. Producing too has to a large extent become a matter of credit and total debts of firms are huge.

Talking about credit means talking about money and money creation. Money has always been an extremely complex phenomenon at the origin of many crises and it has become only more complex with the passing of time.⁴⁴ Cash money and current accounts in the Eurozone, so-called M1 amounted to 4,700 billion euros in July 2011 which was only about half of the total amount of ‘money’ of which people in that zone could dispose of on fairly short notice. That is about as much as total GDP of the Eurozone at the time.⁴⁵ Banks have always created money but they did so subject to certain restrictions of liquidity and solvability. Those, however, have been loosened over time. When the last financial crisis set in, many Western banks had only ten per cent or even less company capital. That may have increased flexibility but certainly increased risks and uncertainty.

⁴³ C. Muldrew, *The Economy of Obligation: the Culture of Credit and Social Relations in Early Modern England* (Basingstoke 1998). The broad synthesis by D. Graeber, *Debt. The first 5,000 Years* (New York 2011), is a fairly unmanageable mixture of brilliance, information and chaos.

⁴⁴ For the fascinating but quite complicated history of money, see: N. Ferguson, *The Ascent of Money: A Financial History of the World* (London 2008); more thorough and informative: G. Davies, *A History of Money from Ancient Times to the Present Day* (Cardiff 2002) and more introductory: C. Eagleton and J. Williams, *Money. A History* (London 2007).

⁴⁵ Wagener, *Geld und Finanzmärkte*, 43-45.

Crises and the state

Talking about debt, credit, and money, inevitably means talking about the state. States in the Western world as a rule have been heavily indebted from the moment they began to emerge in the High Middle Ages. Rulers did not wait for Keynes to start spending more than they had.⁴⁶ The emergence of a complex finance sector in the Western world has from the very beginning been tightly interconnected with the emergence of states that needed enormous sums of money.⁴⁷ Strikingly enough two of the first major financial crises in Europe – the bursting of the South Sea Bubble in Britain and that of the Mississippi Company in France, both in 1720 – occurred as a company assumed the national debt of the country. Over the last 140 odd years government spending as a percentage of GDP has increased enormously. So did debts, at least over the last fifteen years.

Table 3: Gross public debt as a percentage of GDP

Country	1998	2007	2010	Country	1998	2007	2010
Greece	94,5	107,4	144,9	Italy	114,9	103,1	118,4
Portugal	50,4	68,3	93,3	Belgium	117,2	84,1	96,2
Ireland	53,0	24,8	92,5	Spain	64,1	36,2	61,0
				Netherlands	65,7	45,3	62,9
Denmark	61,4	27,5	43,7	Germany	60,3	65,2	83,2
Sweden	69,9	40,2	39,7	France	59,4	64,2	82,3
Estonia	6,0	3,7	6,7	Great Britain	46,7	44,4	79,9

Source: H.-J. Wagener, *Die 101 wichtigsten Fragen. Geld und Finanzmärkte* (Munich 2012) 126.

⁴⁶ See for many examples J. Macdonald, *A Free Nation deep in Debt. The Financial Roots of Democracy* (Princeton and Oxford 2006).

⁴⁷ R. Bonney ed., *Economic Systems and State Finance* (Oxford 1995); R. Bonney ed., *The Rise of the Fiscal State in Europe* (Oxford 1999); M.D. Bordo and R. Cortés-Conde eds., *Transferring Wealth and Power from the Old to the New World. Monetary and Fiscal Institutions in the 17th through the 19th Centuries* (Cambridge 2001); N. Ferguson, *The Cash Nexus. Money and Power in the Modern World, 1700-2000* (London 2001); Macdonald, *Free Nation deep in Debt*; P. O'Brien, B. Yun-Casalilla, and F. Comín Comín eds., *The Rise of Fiscal States. A Global History, 1500-1914* (Cambridge 2012).

Table 4: Government* spending, percentage of GDP 1870-2009

	1870	1913	1920	1937	1960	1980	1990	2000	2009
Austria	10.5	17.0	14.7	20.6	35.7	48.1	38.6	52.1	52.3
Belgium	n.a.	13.8	22.1	21.8	30.3	58.6	54.8	49.1	54.0
Britain	9.4	12.7	26.2	30.0	32.2	43.0	39.9	36.6	47.2
Canada	n.a.	n.a.	16.7	25.0	28.6	38.8	46.0	40.6	43.8
France	12.6	17.0	27.6	29.0	34.6	46.1	49.8	51.6	56.0
Germany	10.0	14.8	25.0	34.1	32.4	47.9	45.1	45.1	47.6
Italy	13.7	17.1	30.1	31.1	30.1	42.1	53.4	46.2	51.9
Japan	8.8	8.3	14.8	25.4	17.5	32.0	31.3	37.3	39.7
Netherlands	9.1	9.0	13.5	19.0	33.7	55.8	54.1	44.2	50.0
Spain	n.a.	11.0	8.3	13.2	18.8	32.2	42.0	39.1	45.8
Sweden	5.7	10.4	10.9	16.5	31.0	60.1	59.1	52.7	52.7
Switzerland	16.5	14.0	17.0	24.1	17.2	32.8	33.5	33.7	36.7
United States	7.3	7.5	12.1	19.7	27.0	31.4	33.3	32.8	42.2
Average	10.4	12.7	18.4	23.8	28.4	43.8	44.7	43.2	47.7

*1870-1937 central government; 1960-2009 general government.

Source: 'Taming Leviathan. A special report on the future of the state', *The Economist*, 19 March 2011, 4.

Debt of course need not cause big crises. Great Britain had a public debt of some 250 per cent of its GDP after the Napoleonic Wars and that did not stop its take-off. But one cannot help wondering whether there must not be a level of indebtedness where it hampers growth and becomes a major problem. When it comes to public debt, economists Reinhart and Rogoff, experts in the field, very recently claimed that 'across both advanced countries and emerging markets, high debt/GDP levels (90 per cent and above) are associated with notably lower growth outcomes.'⁴⁸ Some scholars came to a similar conclusion, whereas others who found errors in their calculations, contest their claims.⁴⁹ Whatever the exact threshold, it will be

⁴⁸ C.M. Reinhart and K.S. Rogoff,

http://scholar.harvard.edu/files/rogoff/files/growth_in_time_debt_aer.pdf

American Economic Review: Papers & Proceedings 100 (May 2010) 573–578: 578,

accessed 28 May 2013.

⁴⁹ See S.G. Cecchitti, M.S. Mohanty and F. Zampolli, 'The Real Effects of Debt', Bank for International Settlements Working Papers No. 352, September 2011, <http://www.bis.org/publ/work352.pdf>, who think that a public debt of over

extremely difficult to do something about public debt even when one thinks it is too high. Welfare has turned into a right and the modern welfare state into a kind of addiction. Many millions of people have become stakeholders in over-spending.

Adding up different forms of debt in the Western world leads to a frightening sum. Over the last thirty years, from 1980 to 2010, in eighteen advanced economies, the ratio of the added debts of households, non-financial corporations and government to their added GDP is estimated to have increased from 167 per cent to 306 per cent.⁵⁰ Total household debt in those countries in 2010 amounted to 90 per cent, their total non-financial corporate debt to 113 per cent, and their government debt to 104 per cent of GDP. In the Netherlands, to give one example, those figures were 130, 121 and 76 per cent.⁵¹ The scholars who came up with these figures also indicate what they regard as a critical ratio of debt to GDP. For government and household debts, that would be 85 and for non-financial corporate debt 90 per cent. Whatever the exact critical ratios might be: the current debt situation in the Western world is extremely instable and it fully escapes me how anyone can claim yet more Keynesian spending would provide a way out of this predicament.

Increasing globalization has led to increasing interconnectedness, for better and certainly also for worse. Existing problems have only worsened by the global imbalances when it comes to trade flows, currency reserves and growth rates. The USA, for example, has an enormous trade deficit: for April 2013 alone it amounted to over forty billion dollars. China in turn has built up currency reserves that amounted to 3,300 billion dollars in December 2012.⁵² Europe will have to get used to a completely different

eighty-five per cent of GDP becomes a drag on economic growth. I consulted the website 28 May 2013. For the critique see: T. Herndon, M.I. Ash and R. Pollin, 'Does High Public Debt Consistently Stifle Economic Growth? A Critique of Reinhart and Rogoff'. This text can be found on the website of the Political Economy Research Institute of the University of Massachusetts. I consulted it 28 May 2013.

⁵⁰ Cecchitti, Mohanty and Zampolli, 'The Real Effects of Debt', 7.

⁵¹ *Ibidem*, 24-26. According to the Centraal Plan Bureau in the Netherlands, Dutch government debt in 2010 would have been sixty-four per cent of GDP.

⁵² <http://www.census.gov/indicator/www/ustrade.html> and http://en.wikipedia.org/wiki/List_of_countries_by_foreign-exchange_reserves, both accessed 7 June 2013.

global order in which it will play the role of ‘sick man’ instead of shining example.⁵³ The huge imbalances in the European Union and the Eurozone are not exactly helpful either and their impact is only heightened by the fairly disastrous decision to introduce a common currency in completely different economies and societies. That comment on the euro brings us back to money and finance. In the highly speculative sphere of money and finance, risk, uncertainty and unpredictability have always been even more prominent than in the ‘real’ economy. We have indicated that this sphere has now become bigger and more complex than ever before. The economic system of the Western world at the moment can very probably best be described as ‘financial capitalism’ and is basically unstable as e.g. Hyman P. Minsky (1919-1996) has pointed out.⁵⁴ The ‘normal’ dangers of manias, panics, follies, and fraud, can now have consequences of unprecedented dimensions.

Let me conclude: ‘It’s tough to make predictions,’ Yogi Berra, the American baseball player, is supposed to have said, ‘especially about the future.’ But I dare predict that severe economic crises are not a thing of the past.

⁵³ P. Vries, ‘Decline of the West? – Rise of the East?’, *Journal of Modern European History* 11.3 (2013) 315-328.

⁵⁴ For information see http://en.wikipedia.org/wiki/Hyman_Minsky, accessed 28 May 2013.