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Abstract[1]

This paper surveys the causes and consequences of late 19th century globalization, as well as the anti-globalization backlash of that period.

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Section 1. Documenting globalisation

1.1. Introduction

The period from 1870 to 1914 represented the high water mark of 19th century globalization, which, as Chapter 1.4 showed, had been developing since the end of the Napoleonic Wars. This chapter will explore several dimensions of this globalization, as well as its effects on the European economy. Since the topic is vast, our focus will be on the links between Europe and the rest of the world, rather than on the growing integration of the European economy itself, although that will be alluded to.

Nineteenth century globalization involved increasing transfers of commodities, people, capital and ideas between and within continents. The most straightforward measure of integration is simply the growing volume of these international flows, perhaps scaled by measures of economic activity more generally: for example, the ratio of commodity trade to GDP, or the number of migrants per head of population. Another measure is the cost of moving goods or factors of production across borders, and this cost will show up in international price gaps. Because it is less easy to measure integration in the international 'markets' for ideas and technology, these flows are often not discussed in economists' accounts of globalization, but they are sufficiently important that they will be briefly considered here, problems of quantification notwithstanding.

Having documented the increasing integration of international markets in the late 19th century, we then discuss some of the effects of this unprecedented globalization. Finally, we turn to the question of how sustainable the relatively liberal 19th century world economy was: could globalization have continued unabated after 1914, had World War I not intervened, or were there forces that would have undermined open markets even had that cataclysm not occurred?

1.2. Trade, 1870-1914

European international trade in current values grew at 4.1% a year between 1870 and 1913, as against 16.1% a year between 1830 and 1870.[2] In 1990 prices, European international trade grew at 6.8% a year (Maddison 2001, p. 362), with growth being particularly high in Belgium, Germany, Switzerland and Finland (Table 1.1). The European trade to GDP ratio, including intra-European trade, increased from 29.9% to 36.9%, while excluding intra-European trade it increased from 9.2% to 13.5% (Table 1.2), slightly more than the United States figure (12% in 1913).

[2] Bairoch (1976), p. 77; Prados de la Escosura (2000) and personal communication with the author.

Price evidence also shows impressive international integration during this period. Between 1870 and 1913, the wheat price gap between Liverpool and Chicago fell from 57.6% to 15.6%, and the London-Cincinnati bacon price gap fell from 92.5% to 17.9%. The period also saw US-British price gaps for industrial goods such as cotton textiles, iron bars, pig iron and copper falling from 13.7% to -3.6%, 75% to 20.6%, 85.2% to 19.3% and 32.7% to -0.1% respectively (O'Rourke and Williamson 1994). Prices also converged between Europe and Asia, with the London-Rangoon rice price gap falling from 93% to 26%, and the Liverpool-Bombay cotton price gap falling from 57% to 20% (Findlay and O'Rourke 2007 , pp. 404-405). However, both Federico and Persson (2007) and Jacks (2005) point out that grain price convergence was if anything more impressive between 1830 or 1840 and 1870 than between 1870 and 1913.

International trade grew for many reasons. International freight rates declined steadily as a result of constant technical improvements and the growth in the usage of faster and more regular steamships, especially after the opening of the Suez Canal in 1869 (which could only be used by steamships). However, as overland transport was much more expensive than water transport, the reduction of internal transport costs through the development of railways was crucial (Figure 1.1). As a percentage of the Chicago wheat price, the cost of shipping wheat to New York declined from 17.2% to 5.5% , while the cost of shipping it from New York to Liverpool fell from 11.6% to 4.7% (Findlay and O'Rourke 2007, p. 382). Railroads were particularly important in large countries such as Russia (Metzer 1974).

In addition, peace between the main powers between 1871 and 1914 promoted trade (Jacks 2006). The development of European formal and informal empires increased extra-European trade through the reduction of trade barriers, the inclusion of colonies in currency unions, and the better protection of (European) property rights (Mitchener and Weidenmier (2007). Meanwhile, the gradual spread of the gold standard dampened exchange rate fluctuations and reduced uncertainty in trade. Whether international currency arrangements such as the Latin Monetary Union (LMU) and Scandinavian Monetary Union (SMU) had an additional positive effect on trade is a matter of controversy (López-Córdova and Meissner 2003, Estevadeordal et al. 2003, Flandreau and Maurel 2005).

Falling transport costs implied increasing potential market integration, but politicians always had the possibility of muting or even reversing this via protectionist policies. Beginning in the 1870s Continental European countries raised barriers to trade in grain and other commodities (Bairoch 1989). Thus, Federico and Persson (2007) show that while grain prices converged among free trade countries during our period, this was more than counterbalanced by a substantial increase in price dispersion between free trade and protectionist countries.

As regards the pattern of trade, Europe as a whole was a net exporter of manufactures and a net importer of primary products, although this masks important differences between regions. At one extreme lay the United Kingdom, massively dependent on imported food and raw materials paid for with exports of manufactures and services. The rest of Northwestern Europe had a similar but less extreme specialization. Eastern and Southern Europe, however, despite a growing industrialization, still exported primary products and imported manufactures, net. The overall European deficit in commodity trade was partly balanced by net exports of services. To give an idea of their magnitude, the United Kingdom surplus in business services trade averaged over $800 million during 1911-13, as compared with a figure for total European exports of $11 billion in 1913 (Imlah 1952).

1.3. Capital flows, 1870-1914

International capital market integration was extremely impressive during this period. Europe was the world's banker (Feis 1930), and those regions with good access to European capital and abundant resources such as the US, Canada, Argentina and Australia prospered most between 1870 and 1913. There was also a smaller, but still important, transfer of capital from the Western European core to the more peripheral economies of South, Central and Eastern Europe.

For the UK, Edelstein (2004, p. 193) estimates that 32% of net national wealth was held overseas in 1913. This reflects four decades in which foreign investment as a percentage of (domestic) savings averaged roughly one third (Table 1.3). The UK committed, on average, some 4% of its GDP to capital formation abroad over a period of more than 40 years, an unprecedented phenomenon. Europe as a whole dominated foreign investment. In 1914, England (42%), France (20%) and Germany (13%), Belgium, the Netherlands, and Switzerland combined accounted for 87% of total foreign investment (Maddison 1995, p. 65).

Capital market integration has traced out a U-shape over the past 150 years (Obstfeld and Taylor 2004), with late 19th century integration being followed by interwar disintegration and a slow move towards reintegration in the late 20th century. According to Obstfeld and Taylor (2004, p. 55), foreign assets accounted for 7% of world GDP in 1870, but for nearly 20% during 1900-14. The figure was only 8% in 1930, 5% in 1945, and still only 6% in 1960. However, it then shot up to 25% in 1980, 49% in 1990, and 92% in 2000. On this measure it was not until some time in the 1970s that the pre-1914 level of integration was recouped. Another measure of integration was suggested by Feldstein and Horioka (1980). International capital mobility breaks the link between domestic savings and domestic investment, as domestic savings can be invested abroad and domestic investment can be financed externally. Consequently, the weaker the

relationship between domestic savings and domestic investment, the higher is international capital mobility. The U-shaped pattern emerges yet again from the data. A third measure looks at bond spreads. Bond spreads between peripheral economies, be they in Europe or not, and England, France, and Germany fell, on average, from some 5% in 1870 to only 1% in 1914 (Flandreau and Zumer 2004). Mauro et al. (2002) have shown that emerging market bond spreads then were, on average, less than half of what they were in the 1990s, which demonstrates just how safe investors perceived foreign investment to be at the time.

Capital market integration was not a continuous process. As is true today, there were reversals which subjected capital-receiving countries to 'sudden stops' (Calvo 1998). A first wave of financial integration came to an end with the Baring crisis of 1891. Capital receded dramatically for roughly a decade before massive foreign lending resumed again around the turn of the century.

What explains late 19th century capital market integration? The absence of military conflict among the main lending countries between the Franco-Prussian War and World War I certainly helped create and stabilise an atmosphere conducive to foreign lending. Another political explanation, by contrast, has been highly controversial. Marxists have long argued that late 19th century capital exports and imperialism are only two sides of the same coin: excessive saving at home, generated by a highly unequal distribution of income, required outlets in underdeveloped countries, as domestic investment would have been subject to Marx's law of the falling rate of profit. This idea associated with J.A. Hobson allowed Lenin to declare imperialism to be the highest stage of capitalism. The contention of a connection between empire and capital exports was subsequently discredited, to be resuscitated recently by revisionist historians arguing for a more benign interpretation of imperialism. For example, Ferguson and Schularick (2006) argue that members of the British Empire benefited from their colonial status through substantially reduced interest rates, presumably as a result of more secure property rights. But Table 1.4 raises doubts about whether colonial affiliation mattered for the size and the direction of capital flows. All English colonies combined (excluding Canada, Australia and New Zealand) received a paltry 16.9% of English capital exports, which is less than what the US alone received (20.5%). The French and German experiences suggest the same, with colonies receiving only 8.9% and 2.6%, respectively, of the overall capital exports of their respective mother countries.

Turning to economic institutions and policies, a great deal of attention has been devoted to the gold standard (Bordo and Rockoff 1996) and, more recently, to sound fiscal policies (Flandreau and Zumer 2004). Adherence to gold is seen as having promoted global financial integration in two ways. First, it eliminated exchange-rate risk. Second, it signalled that the

government concerned would pursue conservative fiscal and monetary policies, which assured potential investors that returns were reasonably safe.

While economic institutions and policies can facilitate capital imports, they can never attract them if there is no genuine interest on the part of investors in what a specific country has to offer. This brings us to economic fundamentals as the main determinant in explaining the size and direction of flows. Over 50% of British capital exports went to areas of recent settlement (Table 1.4) where natural resources could be exploited, not to where labour was cheap (Africa and Asia). If New World land was to produce food for European consumers, and raw materials for factories, railways had to make it accessible, land had to be improved, and housing and infrastructure had to be provided for the new frontier communities. Clemens and Williamson (2004) provide econometric evidence in favour of this view, showing that British capital exports went to countries with abundant supplies of natural resources, immigrants, and young, educated, urban populations. While they also find that the gold standard and empire promoted foreign investment, supply and demand, rather than the presence or absence of frictions leading to price gaps between markets, were what was really crucial. The French and the German cases appear somewhat different and await further investigation. While foreign investment in Africa and Asia was rather unpopular in all three countries, France and Germany sent 61.1% and 53.3%, respectively, of their capital exports to other European countries. Investment in areas of recent settlement, by contrast, played a substantially reduced role for both countries.

1.4. Migration, 1870-1914

It is in the area of migration that the late 19th century was most impressively globalized, even compared with today. At the beginning of the century, intercontinental migration was still dominated by slavery: during the 1820s, free immigration into the Americas averaged only 15,380 per annum, about a quarter of the annual slave inflow. Twenty years later, the free inflow was more than four times as high as the slave flow, at 178,530 per annum (Chiswick and Hatton 2003, p.68), and the numbers rose to more than a million per annum after 1900 (Figure 1.2), with Italians and Eastern Europeans adding to the traditional outflow from northwest Europe. Some of the country-specific migration rates were enormous (Table 1.5): during the 1880s, the decadal emigration rate per thousand was 141.7 in Ireland, and 95.2 in Norway, while an emigration rate of 107.7 per thousand was recorded in Italy in the first decade of the 20th century. It should be noted that these figures are gross, not net, and that the extent of return migration varied over time and across countries, rising from about 10% of the outflow initially to around 30% at the turn of the century (ibid, p. 70). While return migration was significant among Italians and Greeks, for

example, it was very low among other groups, such as the Irish or Eastern European Jews. In addition to these transoceanic migrations, there were significant migrations within Europe, for example from Italy to France, and from Ireland to Britain. The average Western European annual outmigration rate was 2.2 per thousand in the 1870s and 5.4 per thousand for the 1900s, very large numbers that are far in excess of any reasonable projections of African emigration between now and 2030 (Hatton and Williamson 2005, p. 261), although the latter would presumably be far higher than they actually are in the absence of today's very tight immigration restrictions in rich countries.

The causes of this mass migration are by now well understood (Hatton and Williamson 1998, 2005). On one level, the causes are obvious: the New World was endowed with a higher land-labour ratio than Europe, and hence American and Australian workers earned higher wages than their European counterparts. British real wages in 1870 were less than 60% of wages in the New World destinations relevant to British workers, whereas the equivalent figure for Irish workers was just 44%, and for Norwegian workers just 26% (Hatton and Williamson 2005, p. 55). The gains from migration were thus potentially enormous, and once the new steam technologies had lowered the cost of travel sufficiently, mass emigration became inevitable. This was particularly so since 19th century immigration policy was relatively liberal, notwithstanding the policy developments which we will note later on.

On another level, there is the issue of what determined the timing of emigration streams from different European countries: why did emigration from relatively rich countries such as Britain take off before emigration from poorer countries such as Italy, where the gains to migrants were presumably higher? What explains the fact that so few French emigrated, while so many Irish and Italians left? What explains the initial rise, and subsequent decline, of emigration rates in several countries, documented in Table 1.5? Hatton and Williamson provide a simple explanation for all these questions, which can be represented in Figure 1.3. EM is a downward-sloping function relating emigration rates from a given European economy to home wage rates: as home wages rise, emigration rates should fall, ceteris paribus. The initial rise in emigration rates experienced in the typical economy (say from e_0 to e_1) must then have been due to rightward shifts in the emigration function, from EM to EM', since wages were rising (say from W_0 to W_1), not falling, in late 19th century Europe. In turn, such rightward shifts were caused by a variety of factors. First, would-be emigrants were initially constrained by the cost of trans-oceanic transport, but as transport costs fell, more migrants were able to leave their homelands. Second, these poverty traps could also be overcome by previous emigrants sending home remittances or pre-paid tickets, thus directly financing the cost of travel. Emigration rates thus tended to increase as

countries built up stocks of emigrants overseas, the so-called "friend and relatives" effect. Third, fertility rates were on the rise throughout Europe during this period, leading to an increase in the supply of young, mobile adults. And finally, it has often been argued that the industrialisation documented in Chapter 3 led to workers being detached from the land, again increasing their mobility.

Rising fertility, structural transformation and falling transport costs thus increased emigration rates, initially in the richer economies whose workers could best afford the cost of transport, and then in poorer economies as living standards rose across the continent. This emigration was initially self-reinforcing, as a result of the friends and relatives effect: all these factors led to EM shifting rightwards. But eventually, the emigration function stabilised, and when this happened, emigration became self-limiting: by lowering labour supply at home, it pushed up real wages (say from W_1 to W_2), and economies thus moved up their EM schedules, experiencing lower emigration rates (e_2). Hatton and Williamson show that low French and high Irish emigration rates can be explained on economic grounds alone without appealing to cultural behaviour in either country, since this one-size-fits-all European model explains most countries satisfactorily. Thus, high Irish emigration rates can be explained by the Famine of the 1840s, which created a large Irish migrant stock in the New World, while low French rates can be explained by such factors as a precocious fertility transition. Economic rationality turns out to do a pretty good job of explaining European emigration during this period.

1.5. Trade in knowledge, 1870-1914

Economic globalization is not simply about the movement of goods or factors of production. It also includes technological transfers and the deepening of other intellectual exchanges.

Technology circulated relatively freely in the late 19th century. In Europe and in the Atlantic world, despite laws forbidding the emigration of skilled workers (repealed in the United Kingdom in 1825) and machinery exports (repealed there in 1842), technologies had been circulating for a long time. Textile mills around the world used similar machines, often imported from Britain (Clark 1987). Ship building, iron and steel, telegraph and telephone technologies transferred quickly, unless slowed by adaptation issues. Europe was internally exchanging new technologies, diffusing them – both to European offshoots and to the rest of the world –and receiving new technologies, mainly from the United States. Japan was an especially keen learner (Jeremy 1991).

Several new factors increased the speed and the reach of technological transfers.

Migration was easy. Imperialism allowed European entrepreneurs to invest overseas, taking advantage of low wages, with no fear of expropriation by hostile governments. The decline in transport and communication costs helped the diffusion of ideas, new goods and machines. This last effect was especially important because more and more technology was embedded in machines rather than in individual know-how, even if training was still necessary. Firms could now export capital goods on a large scale. For example, Platt, a Lancashire firm, exported at least 50 % of their cotton spinning machines between 1845 and 1870 (Clark and Feenstra 2003). Explicit policies aiming at import substitution encouraged domestic technological emulation with mixed success. Japan was able to replace its English suppliers of textile machinery, but France had difficulties in replacing its American telephone suppliers, and had to postpone the diffusion of this important technology.

To circumvent these restrictions and better protect their intellectual property, several firms set up production in foreign countries and transformed themselves into multinationals during this period. Sometimes, the motive was to produce inside protected markets: for example, by 1911 International Harvester was producing harvesting machines in France, Germany, Russia and Sweden as a result of those countries' protectionist policies (Wilkins 1970, pp. 102-3). Ericsson, a Swedish firm, and Western Electrics, an American firm, both had to establish overseas branch plants in order to win telephone contracts in various European countries (Foreman-Peck 1991). Sometimes direct foreign investment arose simply because, as the theory of the firm predicts, it proved difficult or impossible to transfer intangible assets such as new technologies abroad at 'arms length', via the market: thus, Singer's attempts to profit from its invention of the sewing machine by licensing the technology to a French merchant proved a complete disaster, the latter refusing to pay what he owed, or even disclose how many sewing machines he was producing (Wilkins, pp. 38-9).

The diffusion of technologies was also helped by the creation of international scientific and technical organizations. The Institution of Naval Architects was founded in 1860 in the United Kingdom, but organized meetings in different countries and through its membership created an international network of professional and learned bodies (Ville 1991). The number of international scientific conferences and organizations increased dramatically (Figure 1.4). Paradoxically however, at the same time, science was seen as one of the weapons in the struggle between European nations. Besides straightforward military applications, academic activity was used a diplomatic weapon. Inviting foreign scientists and participating in scientific congresses was part and parcel of the rivalry between France and Germany, as each hoped to tighten their links with allied and neutral countries, especially the United States (Charle 1994, ch. 8).

Governments increased formal technical cooperation. The International Telegraph Union was founded in 1865 and the Universal Postal Union in 1874. Humanitarian cooperation was expanded as well: the Red Cross was founded in 1863 and the first Geneva Convention signed in 1864. Most sovereign states, both European and non-European, joined these global institutions. Another form of rising globalization was the growing number of international exchanges and competitions. The World Fairs were official showcases for the technical prowess of each nation. The 1876 World Fair in Philadelphia was the first not to take place in Europe, and included official exhibitions from Japan and China. The first Venice Biennale took place in 1895. The modern Olympics began in 1896. The first five Nobel prizes were awarded in 1901.

Labour movements were increasingly globalized as well. Socialist ideals rejected nationalism and advocated the international defence of the interests of labour. The first international was founded in 1864 and the second in 1889, the latter having Japanese and Turkish members. The significance of these events is difficult to assess. International, especially pan-European, scientific and cultural cooperation between individuals had existed for a long time. De facto agreements about the rules of war and the management of public goods – e.g. the high seas – pre-dated the first globalization. To some extent, the heyday of elite cultural globalization was before 1870. Nationalist cultural identities gained in importance in the second half of the 19th century, leading to the fragmentation of cultural activities as they became more popular. The formalisation of international cultural and scientific cooperation can be seen as an attempt to counteract the rise of nationalism, but in the end it was too weak for the task.

Section 2. The effects of globalisation

2.1. Globalization and factor price convergence

As we have seen, the late 19th century was characterised by booming commodity trade and mass migration from the Old World to the New. How did this influence income distribution within and between countries?

Let us begin with trade. According to Heckscher-Ohlin logic, the land-abundant and labour-scarce New World should have exchanged food and raw materials for European manufactured goods, and trade should have led to the wage-rental ratio, w/r, converging internationally. In New World economies, where w/r was high, w/r should have declined, as farmers exported more, and manufacturing suffered from foreign competition. In land-scarce European economies, where w/r was low, it should have increased, as workers were hired by expanding manufacturing industries, and land rents were undermined by cheap food imports. Furthermore, trade should have led to absolute factor price convergence, with low European

wages catching up on high New World wages, and expensive European land falling in price relative to cheap New World land.

By and large, these predictions hold good for the late 19th century (O'Rourke and Williamson 1999). Between 1870 and 1910, real land prices fell in countries such as Britain, France and Sweden -- in Britain by over 50% -- while land prices soared in the New World. Furthermore, the 40 years after 1870 saw substantial relative factor price convergence, with wage-rental ratios rising in Europe, and falling in the New World (Williamson 2002a, Table 4, p. 74). Between 1870 and 1910, the ratio increased by a factor of 2.7 in Britain, 5.6 in Ireland, 2.6 in Sweden, and 3.1 in Denmark. The increase was less pronounced in protectionist economies: the ratio increased by a factor of 2.0 in France, 1.4 in Germany, and not at all in Spain. This suggests a link between trade and factor price trends, which is confirmed by both econometric evidence and CGE simulations. In turn, these wage-rental ratio trends implied that the European income distribution was becoming more equal, since landowners were typically better off than unskilled workers.

In addition to these Heckscher-Ohlin predictions, there was a more mundane reason why declining transport costs were good for European workers. In an era where a large fraction of labourers' budgets was still spent on food, cheaper transport meant cheaper food, and thus higher real wages. What was bad for farmers was directly beneficial to urban workers, then as now, which explains why, by and large, socialist parties tended to support free trade in Europe. British workers should have particularly benefited from free trade: not only did it lower the price of food, but any negative impact on agricultural labour demand would have only a small effect on the overall labour market, given agriculture's small share in overall employment there (just 22.6% in 1871). O'Rourke and Williamson (1994) estimate that British real wages rose by 43% between 1870 and 1913, and that no fewer than twenty percentage points of this increase can be directly attributed to declining transport costs. On the other hand, in more agricultural economies the net impact of cheap grain on wages could have been negative, if it sufficiently depressed agricultural employment and wages.

Migration was the dimension of globalization that had the greatest impact on European workers' living standards during this period. Figure 1.5 shows the (PPP-adjusted) wages of unskilled male urban workers in three countries of mass emigration, Ireland, Italy and Norway, relative to wages in the leading European economy of the day, Britain. Between 1870 and 1910, emigration lowered the labour force by 45% in Ireland , by 39% in Italy, and by 24% in Norway (O'Rourke and Williamson 1999, Table 8.1). The figure shows that living standards in these three economies rose more rapidly than in Britain. In Ireland, real wages rose from 73% to 92% of the

British level during this period, while Norwegian wages rose from 48% to 95%. In Italy there was no convergence until the turn of the century, which is when Italian emigration rates exploded; thereafter, real Italian wages rose from 40% of British wages in 1900 to 56% in 1913. Similarly, Norwegian wages continually converged on US wages, while Italian wages converged after 1900; Irish wages converged over the period as a whole, although very rapid US growth in the final two decades of the period implied Irish divergence after 1895 or so.

Both econometric and simulation studies show that emigration was an important source of living standard convergence for countries such as Ireland. To what extent can these findings be generalised? Taylor and Williamson (1997) calculate the labour market impact of migration in 17 Atlantic economy countries between 1870 and 1910. They find that emigration raised Irish wages by 32%, Italian by 28% and Norwegian by 10%. International real wage dispersion fell by 28% between 1870 and 1910, reflecting a convergence of poorer countries on the rich, but in the absence of the mass migrations international real wage dispersion would have increased by 7%. Wage gaps between New World and Old in fact declined from 108 to 85% during the period, but in the absence of the mass migrations they would have risen to 128% in 1910. The results suggest that more than all (125%) of the real wage convergence between 1870 and 1910 was attributable to migration. Even when allowance is made for the possibility that capital may have chased labour, lowering the impact of migration on capital-labour ratios, migration emerges as a major determinant of living standards convergence, explaining about 70% of the convergence. Mass migration accounted for all of Ireland's and Italy's convergence on the United States, and for 65-87% of their convergence on Britain. The biggest lesson of 19th century migration history is that emigration is of major benefit to poor economies (Williamson 2002b).

2.2. Capital flows, peripheral development and core welfare

Assuming identical production functions with capital and labour as the only inputs, lower wages in the European periphery should have been due to lower capital-to-labour ratios, which in turn should have implied higher returns to capital. Did the European periphery attract capital imports as this logic suggests, and, if so, did these capital imports have the desired effect of raising the capital-to-labour ratio and hence wages?

We shall start with Sweden, one of the few cases for which we have relatively reliable data. Capital imports after 1870 served to make the Swedish capital stock 50% bigger than it would have been in their absence, increasing Swedish real wages by 25% (O'Rourke and Williamson 1999). Sweden may have been the European country that benefited most from capital imports before World War I. Denmark and Norway also benefited, albeit on a reduced scale as

capital imports were substantially smaller.

These results cannot be easily replicated for other countries in the European periphery, as a result of poor or contradictory data. This may be illustrated with reference to Austria-Hungary, by far the largest peripheral economy in pre-1914 Europe bar Russia. Looking from the "outside", i.e. considering the foreign investment of the European core countries, the dual monarchy seems to have enjoyed substantial capital imports (Table 1.4). A recent reconstruction of the Austro-Hungarian balance-of-payments, by contrast, concluded that, over the period 1880-1913, Austria-Hungary exported rather than imported capital (Morys 2006). Similar uncertainty surrounds the Italian, Spanish and Portuguese cases, while there are indications that Ireland, another peripheral economy, also exported capital after 1870.

Even if some of the peripheral economies might turn out on closer examination to have imported capital, the general question remains: Why was the European periphery not able to attract more capital from the European core? This is the 19th century equivalent of the Lucas paradox: capital usually flows to rich rather than to poor countries today, despite the fact that wages are lower in poor countries (Lucas 1990). Three explanations have been offered for late 19th century Europe. First, lower labour productivity in the European periphery can potentially explain why capital did not flow there (Clark 1987). However, this only begs the question as to why labour productivity was lower in the European periphery. Second, non-adherence to gold might have dissuaded foreign investors. In support of the latter theory, the Scandinavian countries had the best record of adherence to gold among the peripheral economies. And finally, it may simply be that these countries were not as attractive to investors as the land-abundant New World.

We now turn to the capital exporting core countries and ask what were the effects of capital flows on welfare levels there. Superficially, the answer seems straightforward. As investors preferred foreign investment opportunities to domestic ones based on their relative profitability, capital exports should have been beneficial to the core countries, lowering GDP (output) but raising GNP (income). However, some have argued that channelling funds abroad could have harmed the domestic economy. The 1931 Macmillan Report claimed that the City of London systematically discriminated against domestic borrowers, preferring instead to invest overseas. British industry, starved of capital, grew more slowly than it would otherwise have done. In other words, to the long debated question as to why late Victorian Britain failed (as measured by its growth performance relative to the US and Germany, its main economic rivals at the time) another debate was added: Did late Victorian capital markets fail?

In a monumental study, Edelstein (1982) showed that overseas portfolio investments yielded a higher realized return than domestic portfolio investment during 1870 – 1913. This

result was true even when adjusting for risk. While this finding exculpated late Victorian and Edwardian investors (see also Goetzmann and Ukhov 2006), the question still lingered as to whether Britain could have done better by retaining more savings in the domestic economy, for example by imposing a tax on capital exports (Temin 1987). But here one has to question what were the real constraints facing the British economy at the time. Research has shown that entrepreneurs had strong internal sources of funding and easy access to local, provincial financing. Rather, what was missing was the highly skilled workforce required to take full advantage of the opportunities offered by the Second Industrial Revolution. Restrictions on overseas capital exports almost certainly would not have been the best way to encourage domestic, scientifically based industry; publicly supported general and technical education might have been.

The debate on the alleged trade-off between capital exports and domestic industry has also frequently neglected the positive externalities of European overseas investments benefiting European consumers. Since much of the investment went into the construction of railways and other social overhead projects, it implied cheaper imports of food stuff and raw materials, which represented a major contribution to European core welfare.

2.3. Imperialism and European welfare

In 1880, European colonies (not including any part of Russia) ranged over 24.5 million square kilometres and had 312 millions inhabitants. In 1913, they totalled 52.5 million square kilometres, more than a third of the earth's land surface, and had 525 millions inhabitants. The United Kingdom, France, the Netherlands, Spain and Portugal had been colonial powers for a long time. Belgium, Germany and Italy now joined them. The United Kingdom controlled 93% of the surface and 87% of the population of these colonized territories (including dominions) in 1880, and 61% and 71% of the surface and population respectively in 1913 (Etemad 2006).

As noted earlier, Lenin, inspired by Hobson and others, suggested that the mature European economic system could only be sustained through imperialism. These arguments have been discredited. Capital exports to colonies were important, but not dominant. Europe was self-sufficient in coal and nearly self-sufficient in iron ore and other minerals. Textile raw materials were more of an issue as cotton, for example, could not be produced in Europe in great quantities; but it was largely supplied by the United States. Colonial empires did not represent vital outlets for European goods either, absorbing less than 15% of all Western European exports (Bairoch 1993).

Yet, it is true that one of the driving forces behind imperialism was the influence of

European traders, who saw in political control a way to facilitate their economic exchanges with African and Asian producers and consumers. Some industrialists also believed that the creation of a reserved market would be a suitable answer to international competition, and they managed to convince certain politicians, like Joseph Chamberlain (British Colonial Secretary from 1895 to 1903), Jules Ferry (French Prime Minister from 1880 to 1881 and from 1883 to 1885) and Francesco Crispi (Italian Prime Minister from 1887 to 1891 and from 1893 to 1896).

It is not certain that empires represented a net benefit for the European powers. The debate has centred on the British Empire as it was by far the largest, and was the only empire controlling economically advanced settler colonies. According to Davis and Huttenback (1986, p. 107), private British investment in the empire after 1880 yielded higher returns than did investment in the domestic economy, but smaller returns than investments in foreign countries. The direct cost of empires was limited, as the United Kingdom, like the other colonizers, tried to have its colonies pay for themselves and provided mainly disaster relief, funds for military campaigns, and shipping and cable subsidies. The indirect military cost was more important since, India excepted, the British Empire contributed very little to general military spending. While all these points have been extensively debated, the final word must go to Avner Offer (1993), who makes the obviously correct point that the military "debts" of the French and British empires were paid in full during the First World War.

To determine the effect of empire on European economic welfare, it is crucial to decide on the appropriate counterfactual (Edelstein 2004). Without formal imperialism, would Africa, Canada, South Asia and Oceania have been as developed as they actually were, but with the ability to erect high tariff barriers against European exports, as did the United States? Or would they have been substantially less developed and less involved with the world economy? Was the alternative to a British Canada the United States, or Argentina? In the absence of empire, would the African states (as some imperialists feared) have remained independent backward territories, mostly closed to foreign trade like Ethiopia? Depending on the answer to such questions, Edelstein has shown that the benefits of empire for the United Kingdom might have been somewhere between 0.4% and 6.8% of its GDP in 1913, up from -0.2% to 4.5% in 1870. These figures probably overestimate the benefits of imperial trade, as Edelstein supposes that there would have been no re-direction of trade to compensate for lower imperial demand, but they do not take into account any impact of empire in facilitating emigration from the United Kingdom, especially to Oceania. No such calculation has been made for other European countries. Their empires were much smaller, but, as they were not committed to free trade, they could manipulate the terms of trade to maximize their commercial profits. For example, Portugal gained foreign

currency from re-exporting African products through Lisbon. The net result was different for each country, but on the whole, whether positive or negative, it was probably small compared to the size of domestic economies (O'Brien and Prados de la Escosura 1998).

Even if the global economic effect of empires was small, they might have had an important redistributive role. Certainly, the military and state apparatus benefited everywhere, while there was an obvious cost to taxpayers. In the United Kingdom, Cain and Hopkins (2001) have argued that the economic benefits of imperialism accrued mainly to "gentlemanly capitalists", the financial and rentier interests of London and South-East England, to the detriment of more "modern" forces in the country such as industrial entrepreneurs. Elsewhere, some industrial exporting groups certainly benefited as well. On the whole, the European benefits from imperialism were small and uncertain. More importantly, they were probably smaller than the costs of imperialism for colonized countries, although this remains an under-explored field of research.

Section 3. Globalization backlash

3.1. Trade

While 19th century European trade policy trends initially reinforced the impact of falling transport costs (Chapter 1.4), this changed after the 1870s as a result of the growing impact of intercontinental trade on factor prices. As we have seen, trade hurt European landed interests, and wherever these were powerful enough, the legislative reaction was predictable. In Germany, Bismarck protected both agriculture and industry in 1879; in France, tariffs were raised in the 1880s, and again in 1892; in Sweden, agricultural protection was re-imposed in 1888 and industrial protection was increased in 1892; in Italy, moderate tariffs were imposed in 1878, followed by more severe tariffs in 1887. As a grain-exporter, Russia hardly feared free trade in agricultural products, but it was the first to backtrack from what had in any event been a rather half-hearted liberalization, increasing tariffs substantially in 1877, 1885 and again in 1891. The purpose was to stimulate industrialization, and tariffs were combined with export subsidies for cotton textile producers. Austria-Hungary and Spain also sharply increased protectionism in the 1870s or 1880s. The Balkan countries had inherited liberal tariff policies from their Ottoman masters, but they too gradually moved towards higher protection, albeit at a slower pace than the Germans or Russians. The Ottomans themselves were allowed to slowly raise their tariffs, which reached 11% on the eve of the Great War (Bairoch 1989).

Some small countries remained relatively liberal: the Netherlands, Belgium, Switzerland, and Denmark, which transformed itself from a grain-exporter to a grain-importing exporter of

animal products. The United Kingdom also maintained free trade, despite the efforts of Joseph Chamberlain. What explains these exceptions? Economic considerations were surely important: countries such as Denmark and the United Kingdom which retained agricultural free trade were less vulnerable to the price and rent reductions which globalization implied. In the Danish case grain prices had been low to begin with, while the country was exceptionally well suited to meet the growing British demand for butter, eggs and bacon, in part due to the success of its cooperative societies. In the British case, agriculture had already shrunk significantly, and further decline had little impact on the overall economy. Elsewhere, globalization undermined itself. Moreover, this switch towards agricultural protectionism would turn out to be permanent, the precursor of today's Common Agricultural Policy.

3.2. Immigration

While emigration benefited European workers, mass immigration hurt their counterparts overseas. Hatton and Williamson (1998) show that immigration lowered unskilled wages in the United States, although this is a *ceteris paribus* finding, since economic growth was raising living standards generally during this period. Nonetheless, the effects were large. Relative to what they would have been in its absence, immigration lowered unskilled real wages by 8% in the US, 15% in Canada, and 21% in Argentina (Taylor and Williamson 1997). Counterfactual or not, such impacts did not go unnoticed, and the result was a political backlash, resulting in gradually tightening restrictions on immigration in the main destination countries (Timmer and Williamson 1998). For example, in 1888 the United States banned all Chinese immigration for twenty years, while in 1891 it banned the immigration of persons "likely to become public charges" as well as those "assisted" in passage (ibid., p. 765). The screw continued to be tightened on immigration until 1917, when a literacy test was imposed on would-be migrants, effectively blocking much of the low-skilled immigration of the day. Very similar trends can be discerned in Canada and Argentina. This shift away from a relatively laisser faire immigration policy implied that interwar European economies no longer had the emigration safety valve that had helped sustain living standards during the population boom and slow transition to modern growth of the late 19th century.

3.3. Democracy, the gold standard and capital flows

Global financial integration collapsed virtually overnight in the summer of 1914. Does it follow that pre-war levels of capital market integration would necessarily have been sustained in the absence of war?

Widespread – by 1913 almost universal – adherence to the gold standard was a central pillar of the pre-World War I financial system. This implied a commitment to a policy of external balance, even when that conflicted with domestic economic imbalances, notably unemployment. According to Eichengreen (1992), one of the factors undermining attempts to reinstate the gold standard after 1918 was the fact that the war had given a boost to the extension of the franchise, and thus to workers' political power: it was no longer clear that gold standard discipline – i.e. raising the discount rate when needed – would be adhered to if this conflicted with domestic policy objectives. However, Eichengreen also notes that the franchise was already being extended before the war in many countries, and that unemployment was becoming a growing social issue. One can therefore speculate that, even in the absence of war, democratisation would have ultimately succeeded in undermining the gold standard, and with it the foundations of the pre-war international financial system. Indeed, one could even interpret the extension of franchise as being in part a consequence of late 19th century globalization, which gave rise to countervailing calls to regulate the market (Polanyi 1944). To this extent, one might yet again see globalization -- the extension of the market -- as having undermined itself.

Several objections could be raised against such reasoning, however. First, the single largest push for universal suffrage and democratisation came, as Eichengreen says, in the wake of World War I, not as a result of globalisation. Second, even if the gold standard had proved unsustainable, this would not necessarily have implied the end of global financial integration. Today, most capital circulates among rich countries which are (with the notable exception of the Eurozone) no longer connected by fixed exchange rates. Indeed, as Obstfeld and Taylor (2004) point out, abandoning fixed exchange rates makes it possible for countries to pursue both independent monetary policies and a commitment to open capital markets. It was the attempt to combine fixed exchange rates with Keynesian macroeconomic policies which, in their view, condemned Bretton Woods capital markets.

3.4. Domestic policy responses

There were thus powerful political forces undermining late 19th century globalisation. However, European governments of this period did not just face a binary choice between open and closed international markets, between resisting or giving into protectionist anti-globalization backlashes. Rather, there was a range of complementary domestic policies which governments could – and did – put in place during this period in order to shore up support for liberal international policies. Thus, Huberman and Lewchuk (2003) show that there was extensive government intervention in European labour markets in the late 19th century, a period that also

saw a sustained rise in social transfers and the beginnings of what eventually evolved into the modern welfare state (Lindert 2004). A range of labour market regulations was introduced across the continent, for example prohibiting night work for women and children, prohibiting child labour below certain ages, and introducing factory inspections. The period also saw the widespread introduction of old-age, sickness and unemployment insurance schemes. Moreover, this 'labour compact' was more widespread in the more open European economies. Huberman and Lewchuk use this evidence to argue that unions were persuaded to back free trade, or openness more generally, in return for pro-labour domestic policies. In related work, Huberman (2004) finds that working hours in Europe and her offshoots declined between 1870 and 1913 as a result of labour legislation and union pressure, and that the decline was greatest in small open economies such as Belgium, where the Labour Party supported free trade after 1885 (Huberman forthcoming). Not only did governments not indulge in a race to the bottom during the late 19th century globalization boom: in some cases governments cooperated so as to ensure a general raising of standards. Such was the case, for example, with the Franco-Italian labour accord of 1904, which raised labour standards in Italy as a *quid pro quo* for granting Italian workers in France benefits which their French colleagues already enjoyed.

To some extent, therefore, late 19th century governments successfully managed the political challenges posed by globalization, sometimes defusing protectionist demands by means of domestic legislation, and sometimes giving in to them. World trade might have grown more slowly after 1914 than it did before, even had war not intervened, and the political challenges facing governments might have been exacerbated; but the 1920s and 1930s would have been utterly different had it not been for the Great War.

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Table 1.1. European real trade 1870-1913

	1870 (million 1990 $)	Growth 1870-1913
Austria	467	+333%
Belgium	1,237	+492%
Denmark	314	+376%
Finland	310	+415%
France	3,512	+222%
Germany	6,761	+465%
Italy	1,788	+158%
Netherlands	1,727	+151%
Norway	223	+283%
Spain	850	+335%
Sweden	713	+274%
Switzerland	1,107	+418%
UK	12,237	+222%
Weighted average		+294%
Weighted average, rest of the world		+379%

Source: Maddison (2001)

Table 1.2. Exports plus imports as share of GDP

	1870	1880	1890	1900	1913
Austria	29.0%	25.5%	25.2%	26.8%	24.1%
Belgium	35.6%	53.2%	55.6%	65.4%	101.4%
Denmark	35.7%	45.8%	48.0%	52.8%	61.5%
Finland	31.7%	50.8%	39.3%	47.6%	56.2%
France	23.6%	33.5%	28.2%	26.8%	30.8%
Germany	36.8%	32.1%	30.1%	30.5%	37.2%
Greece	45.6%	42.3%	39.4%	42.3%	29.4%
Hungary	19.4%	23.7%	22.1%	22.3%	20.8%
Italy	18.3%	18.3%	15.9%	19.0%	23.9%
Netherlands	115.4%	100.5%	112.3%	124.1%	179.6%
Norway	33.9%	36.1%	43.6%	43.4%	50.9%
Portugal	33.7%	43.8%	45.3%	48.9%	57.4%
Russia		14.4%	15.0%	11.4%	13.8%
Spain	11.7%	13.9%	19.2%	21.9%	22.7%
Sweden	29.4%	37.3%	44.9%	39.4%	34.7%
Switzerland		78.2%	81.9%	67.2%	64.5%
UK	43.6%	46.0%	46.6%	42.4%	51.2%
Best guess, European trade to GDP ratio	29.9%	33.4%	32.6%	31.9%	36.9%
Idem, net of intra-European trade	9.2%	10.7%	10.8%	11.1%	13.5%

Notes: Ottoman Empire, Albania, Bulgaria, Romania and Serbia not included

Source: Bairoch (1976), and data graciously provided by Leandro Prados de la Escosura.

Table 1.3. Foreign Investment of England, France and Germany, 1870 - 1913

	England			France	Germany
	Saving / GDP	Foreign Investment / GDP	Foreign Investment as % of Saving	Foreign Investment as % of Saving	Foreign Investment as % of Saving
1870 - 79	12.3%	4.0%	32.5%	23.9%	10.2%
1880 - 89	12.2%	4.7%	38.5%	5.1%	18.8%
1890 - 99	11.0%	3.4%	30.9%	16.5%	12.1%
1900 - 09	12.6%	3.7%	29.4%	19.1%	8.3%
1905 - 14	13.1%	6.5%	49.6%	17.3%	7.5%

Net national wealth held overseas in 1914	32.1%		
Share of global foreign investment	41.8%	19.8%	12.8%

Sources: Edelstein (1982, 2004), Feis (1930), Jones & Obstfeld (2001), Lévy-Leboyer & Bourguignon (1990), Maddison (1995, 2003).

Table 1.4. Destination of English, French and German Foreign Investment 1870 - 1913

	England	France	Germany
Europe			
Russia	3.4%	25.1%	7.7%
Ottoman Empire	1.0%	7.3%	7.7%
Austria-Hungary	1.0%	4.9%	12.8%
Spain and Portugal	0.8%	8.7%	7.2%
Italy	1.0%	2.9%	17.9%
Other Countries	2.5%	12.2%	
Total (Europe)	9.7%	61.1%	53.3%
Areas of recent settlement (outside Latin America)			
USA	20.5%	4.4%	15.7%
Canada	10.1%		
Australia	8.3%		
New Zealand	2.1%		
Total	41.0%	4.4%	15.7%
Latin America			
Areas of recent settlement		13.3%	16.2%
Argentina	8.6%		
Brazil	4.2%		
Total (areas of recent settlement)	53.8%		
Other countries			
Mexico	2.0%		
Chile	1.5%		
Uruguay	0.8%		
Cuba	0.6%		
Total (Latin America)	17.7%	13.3%	16.2%
Africa	9.1%	7.3%	8.5%
Asia			
India	7.8%	4.9%	4.3%
Japan	1.9%		
China	1.8%		
Total (Asia)	11.5%	4.9%	4.3%
Rest	11.0%	9%	2%
Total	100.0%	100.0%	100.0%
Colonies	16.9%	8.9%	2.6%

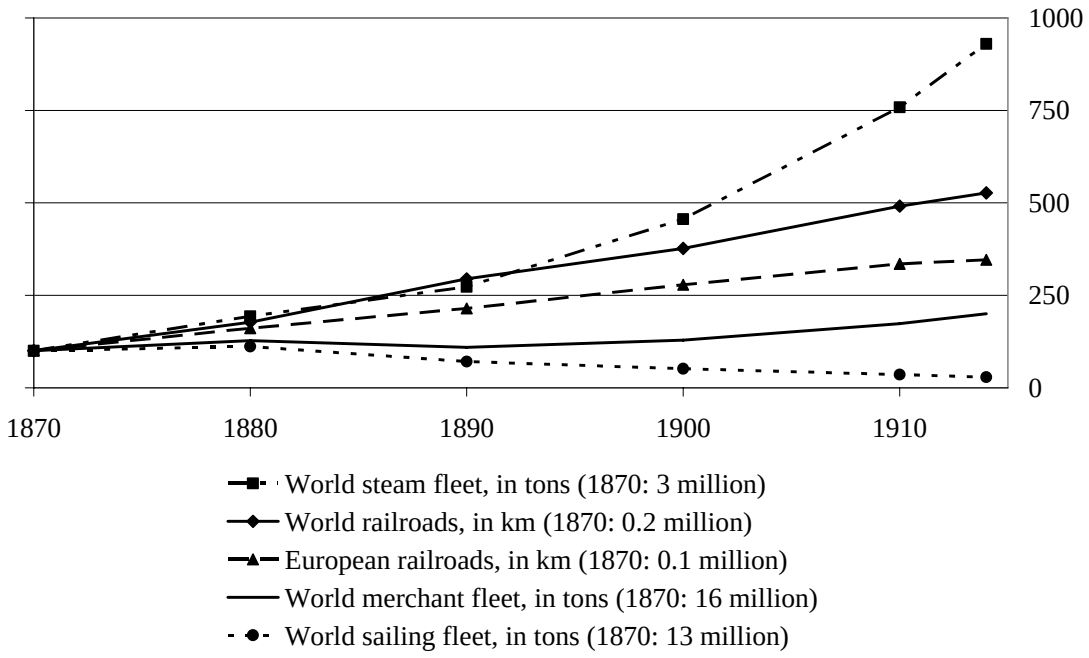
Notes: Numbers for Russia and the Ottoman Empire include Asia. "Colonies" does not include Australia, Canada or New Zealand.
Sources: Esteves (2007), Feis (1930), Stone (1999).

Table 1.5. Migration Rates by Decade (per 1000 mean population)

Country	1851-60	1861-70	1871-80	1881-90	1891-00	1901-10
European Emigration Rates						
Austria-Hungary			2.9	10.6	16.1	47.6
Belgium				8.6	3.5	6.1
British Isles	58.0	51.8	50.4	70.2	43.8	65.3
Denmark			20.6	39.4	22.3	28.2
Finland				13.2	23.2	54.5
France	1.1	1.2	1.5	3.1	1.3	1.4
Germany			14.7	28.7	10.1	4.5
Ireland			66.1	141.7	88.5	69.8
Italy			10.5	33.6	50.2	107.7
Netherlands	5.0	5.9	4.6	12.3	5.0	5.1
Norway	24.2	57.6	47.3	95.2	44.9	83.3
Portugal		19.0	28.9	38.0	50.8	56.9
Spain				36.2	43.8	56.6
Sweden	4.6	30.5	23.5	70.1	41.2	42.0
Switzerland			13.0	32.0	14.1	13.9

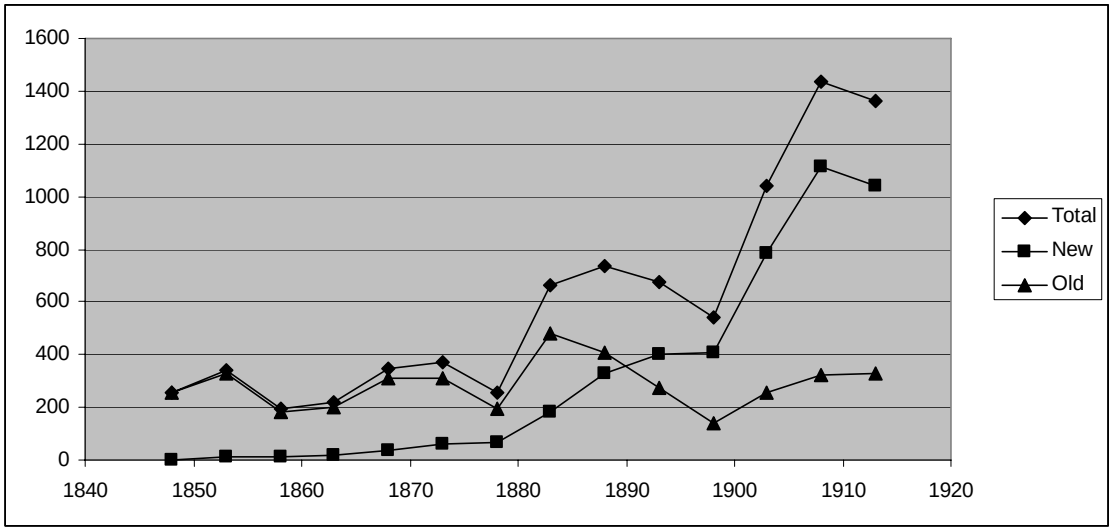
Source: Hatton and Williamson (1998: Table 2.1).

Figure 1.1. Transport infrastructure, 1870-1913



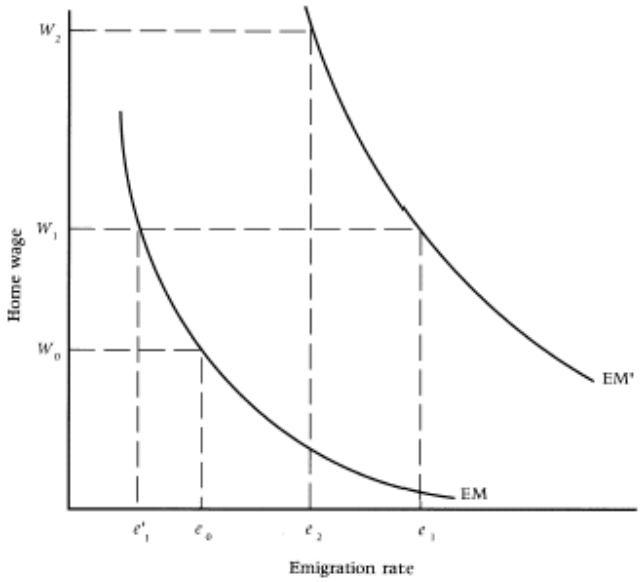
Sources: Bairoch (1976), pp. 32 and 34.

Figure 1.2. Average annual extra-European emigration from Europe, 1846-1915 (thousands)



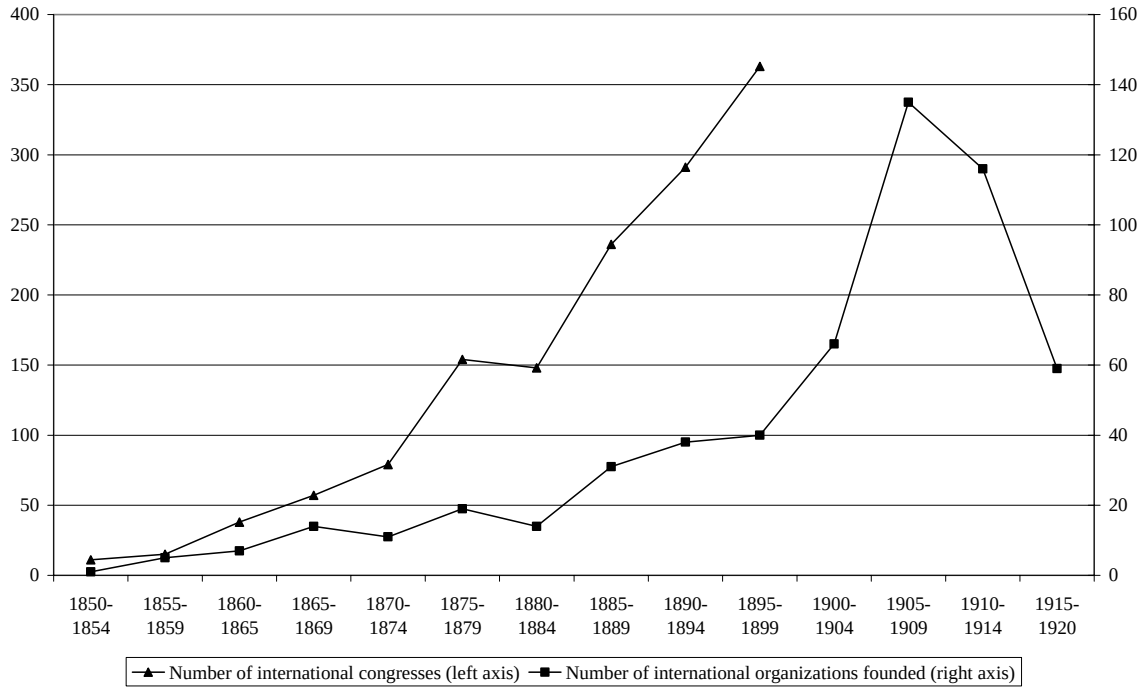
Source: Kirk (1946), p. 279. Note: 'Old' consists of Britain and Ireland, Germany, Scandinavia, France, Switzerland and the Low Countries. 'New' consists of Italy, Austro-Hungarian Empire, Russian Empire, Iberia and the Balkans.

Figure 1.3. A stylised model of emigration



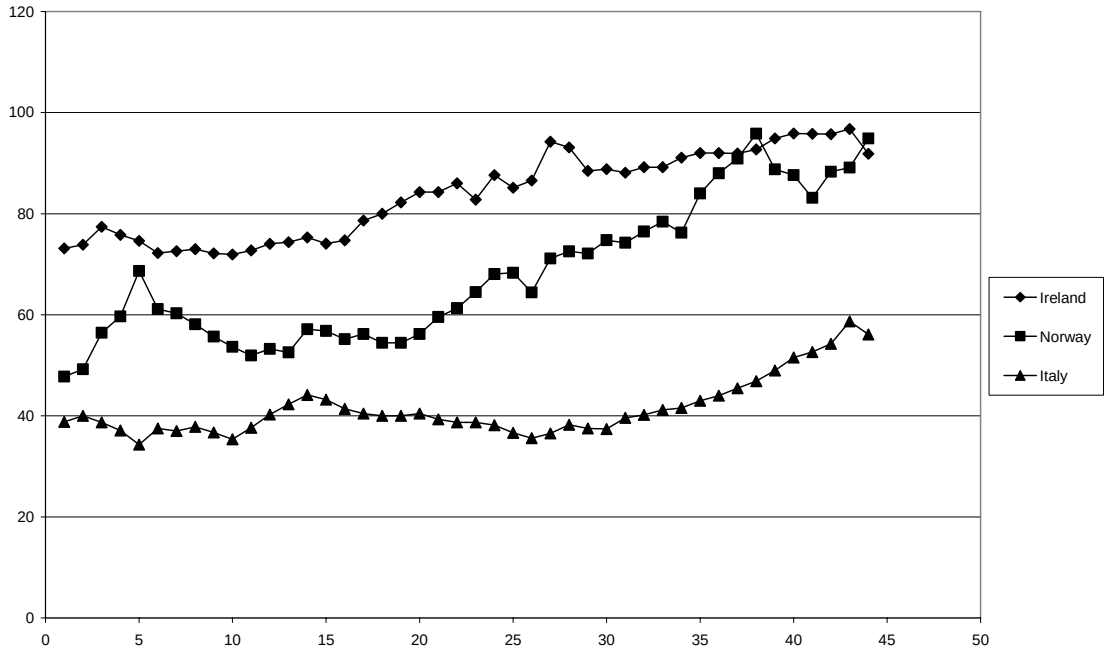
Source: Hatton and Williamson (1988, p. 36).

Figure 1.4: The rise of the international scientific community



Sources: Union des Associations Internationales (1957,1960).

Figure 1.5. Wages relative to Britain, 1870-1913



Source: database underlying O'Rourke and Williamson (1999).