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Equality and Convergence in Nordic Societies in the Long Run: Europe and Other Comparative Mirrors

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Equality and Convergence in Nordic Societies in the Long Run: Europe and Other Comparative Mirrors

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1. Introduction

Convergence of wages, prices, and commodities – i.e., globalisation – between different parts of the world in different time periods is a popular topic among economists, sociologists, and historians – for example, economic historians have recently become particularly interested in earlier periods of economic integration, like the so-called first era of globalisation from the early part of the 19th century to the First World War.¹ For economists and economic historians globalisation typically means convergence; a flattening of differences and of prices between two places due to market competition; increased interaction and better economic information; and other types of globalisation infrastructure such as banks and monetary instruments. To most economic historians the 19th century was the first true “wave” of globalisation, only to be broken apart by the First World War. Another “wave” did not emerge until the post-Second World War period.²

While the focus on global historians is generally on the Great Divergence between Europe and China since the 15th century, the so-called Little Divergence, i.e. divergence in the last couple of centuries between regions inside Europe (with Western Europe pulling ahead of others), is an important research focus as well. It is intricately connected to the history of European integration and the European Union. However, most of those studies either do not

¹ Allen, Robert C.; Jean-Pascal Bassino; Debin Ma; Christine Moll-Murata and Jan Luiten van Zanden. 2011. "Wages, Prices, and Living Standards in China, 1738–1925: In Comparison with Europe, Japan, and India." *Economic History Review*, 64(1), 8-38, Williamson, Jeffrey G. 1996. "Globalization, Convergence, and History." *The Journal of Economic History*, 56(2), 277-306.

² K. H. O'Rourke and J. G. Williamson, "When Did Globalisation Begin?" *European Review of Economic History* 6, No. 01 (2002). On the changing trade flows and economic development, see especially R. Cameron and L. Neal, *A Concise Economic History of the World. From Paleolithic Times to the Present*, 4th ed. (Oxford: The Oxford University Press, 2003), A. Maddison, *Monitoring the World Economy 1820-1992* (Paris: OECD, 1995), ———, *The World Economy. Historical Statistics* (Paris: OECD, 2003).

discuss Nordic polities or do so in a rather cursory manner. In fact, the question we want to investigate is how the Nordic economies compare in these large global processes, namely whether they were part of the Little Divergence or other similar phases. Also, we want to investigate the timing of Nordic development during crucial phases, such as the 19th century globalisation and the 20th century economic expansion. Typically Nordic countries are studied because of their rather spectacular economic performance in the 20th century; their remarkable societal trend toward equality; similar historical pasts; the emergence of extensive welfare states; and the currently extremely well-performing educational systems.³

But was there an economic development “path” that they followed? If convergence toward common economic, social, and institutional policies emerged in the late 20th century, does this apply to long-term economic development of the Nordic countries? And how did they fare in comparison with other European nations, including those in Eastern and Southern Europe? Were the Nordic countries part of the Little Divergence?

Here we look at long run macroeconomic data only as we are interested in the convergence (or divergence) of the national economies and wages in Denmark, Finland, Norway, and Sweden. Recent studies, in particular, have analysed the wages in a number of European towns from a period starting from the Middle Ages until our time, converted the data to real wages, and compared the long term wage series across different countries.⁴ These type of data enable us to study economic and societal structures in the very long run.

This working paper is part of a larger project to study the Finnish economy in the long run, and the authors are in the process of gathering long-run data on prices and wages, Nordic studies offer fairly good data on long-run economic growth, i.e. GDP data, as well as newer data on the development of real wages over several centuries. Thus, we combine the discussion on

³ See e.g. Arnesen, Anne-Lise and Lisbeth Lundahl. 2006. "Still Social and Democratic? Inclusive Education Policies in the Nordic Welfare States." *Scandinavian Journal of Educational Research*, 50(3), 285-300, Christiansen, Niels. 2006. *The Nordic Model of Welfare: A Historical Reappraisal*. Museum Tusulanum Press, Esping-Andersen, Gøsta. 1990. *The Three Worlds of Welfare Capitalism*. Polity press Cambridge, Esping-Andersen, Gøsta. 1996. *Welfare States in Transition: National Adaptations in Global Economies*. Sage, Kettunen, Pauli. 2001. "The Nordic Welfare State in Finland." *Scandinavian Journal of History*, 26(3), 225-47, Kuhnle, Stein. 2004. *The Survival of the European Welfare State*. Psychology Press, Petersen, Klaus. 2011. "National, Nordic and Trans-Nordic: Transnational Perspectives on the History of the Nordic Welfare States." *Beyond Welfare State Models: Transnational Historical Perspectives on Social Policy, Cheltenham: Edward Elgar*, 41-64.

⁴ Allen, Robert C. 2001. "The Great Divergence in European Wages and Prices from the Middle Ages to the First World War." *Explorations in Economic History*, 38, 411–47, Broadberry, Stephen and Bishnupriya Gupta. 2006. "The Early Modern Great Divergence: Wages, Prices and Economic Development in Europe and Asia, 1500–1800." *Economic History Review*, LIX(1), 2-31, Clark, Gregory. 2005. "The Condition of the Working Class in England, 1209–2004." *Journal of political Economy*, 113(6), 1307-40, Van Zanden, Jan Luiten. 1999. "Wages and the Standard of Living in Europe, 1500-1800." *European Review of Economic History*, 2, 175-97.

wage convergence and dispersion by, first, analysing whether the Nordic countries themselves experienced economic convergence in the 19th and 20th centuries (=first comparative mirror). Then we examine the long-run real wage data for Sweden and Finland to see how these two Nordic economies fared compared to the leading European economies and some of the smaller ones (=second comparative mirror). Finally, we analyse the wages of Swedish and Finnish seamen in various occupations in comparison with other unskilled and skilled European labourers, which also reflects landward opportunities at home and abroad (=third comparative mirror).

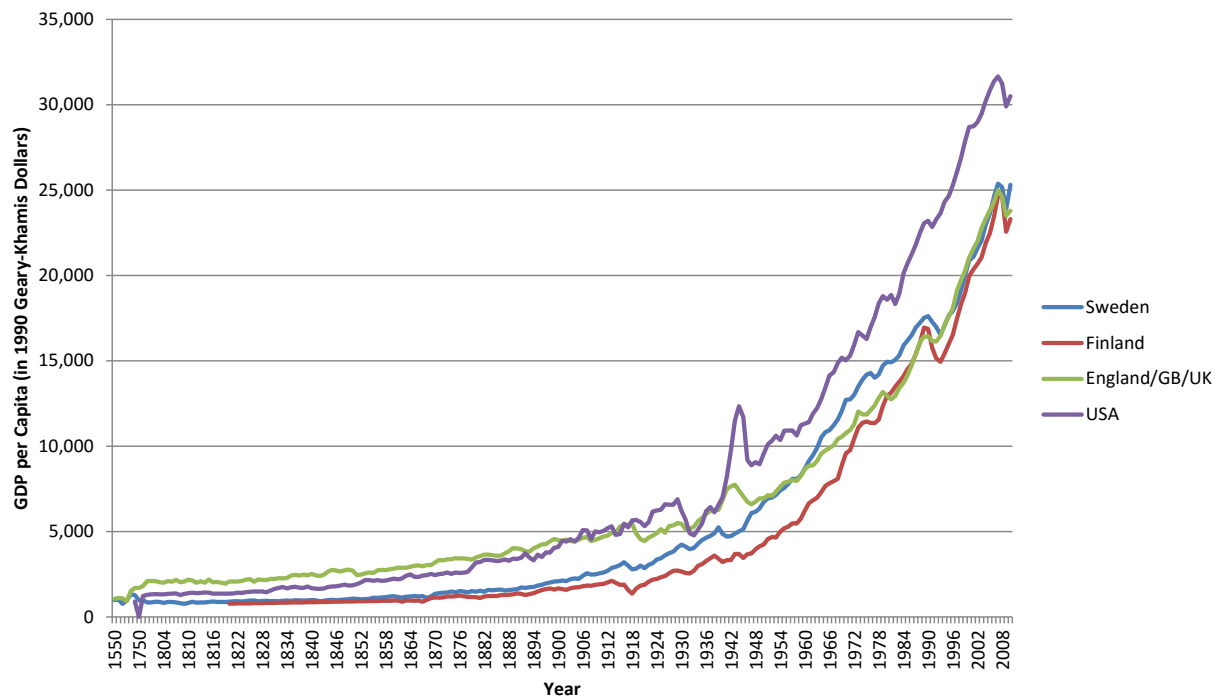
Our results indicate that Nordic countries did experience an economic catch-up process, but mostly in the 20th century. Moreover, it seems that Swedish and Finnish real wages developed fairly similarly from the 16th to the 20th centuries, although Sweden experienced higher economic growth rates in the 18th and 19th centuries. Both countries, but especially Finland, diverged from the West European economic development in the 18th and 19th centuries. However, in the 20th century the Nordic economies converged on the leading world economies. Furthermore, based on a large sample of seamen's wages, not all sectors of the Nordic economies diverged from the 19th century European expansion, driven by globalisation. The wages of Nordic sailors rose dramatically in the 19th century, even exceeding the landward opportunities in many major European cities.

2. Globalisation, Convergence and the Nordic Economies: A structural perspective

In order to start examining the performance and development of the Nordic economies, we want to place them in various comparative mirrors. First, we wish to utilise the real GDP per capita data for these nations. In general, in the early modern era Nordic economies fell behind Great Britain (and also the emerging United States). The catch-up process for the Nordic countries began mostly in the 20th century, especially after World War I. In the post-World War II period, the British economy slowed resulting in convergence with the Nordic GDP per capita levels. Unfortunately, we do not yet have very detailed information on all of these economies since, for example, the Finnish historical national accounts only go as far back as 1860. The most meaningful way to form longer economic time series, short of reconstructing national accounts and/or estimating them backwards is to utilise real wages. Here, we first wanted to examine Swedish and Finnish economic development in comparison with the economic leaders of the 19th and 20th centuries, respectively the UK and the USA (see Figure 1). It seems that Sweden and

Finland were rather consistently behind the leading economies, although they were able to keep pace with those economies for most of the period, even prior to the 19th century. And some significant catching up occurred in late 20th century, with the UK, for example.

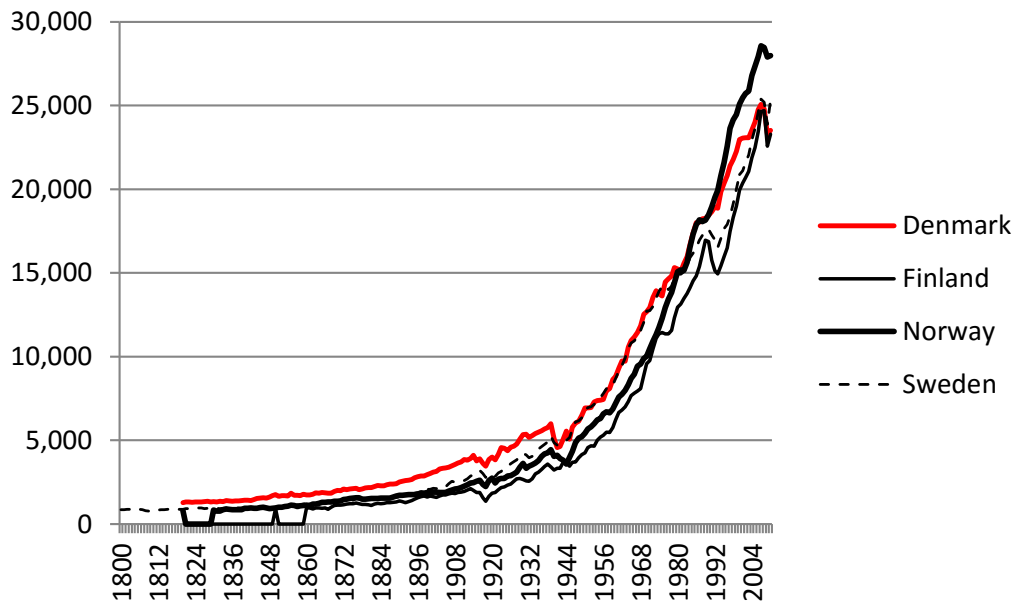
Figure 1. Swedish and Finnish Real GDP per Capita in the Long-run Comparisons with the UK and USA



Source: Bolt and Van Zanden (2013). The First Update of the Maddison Project; Re-Estimating Growth Before 1820, Maddison Project Working Paper 4. Available from: <http://www.ggdc.net/maddison/maddison-project/home.htm> [cited 10.10.2013]. Please note that the data is very sporadic beyond the 19th century, often just point estimates for selected years.

We next plotted the real GDP per capita for all the Nordic countries during the 19th and 20th centuries. In general, the economic development of the Nordic countries has been fairly uniform, especially in the 20th century, as seen in Figure 2. Denmark was clearly above the rest until the 1930s when the others started to catch up. Norway took the lead in the 1980s, and the rest converged toward similar levels of development by the end of the 20th century, although the economic recession of the 1990s affected them in different ways. The story, however, seems to be one of convergence in the long run.

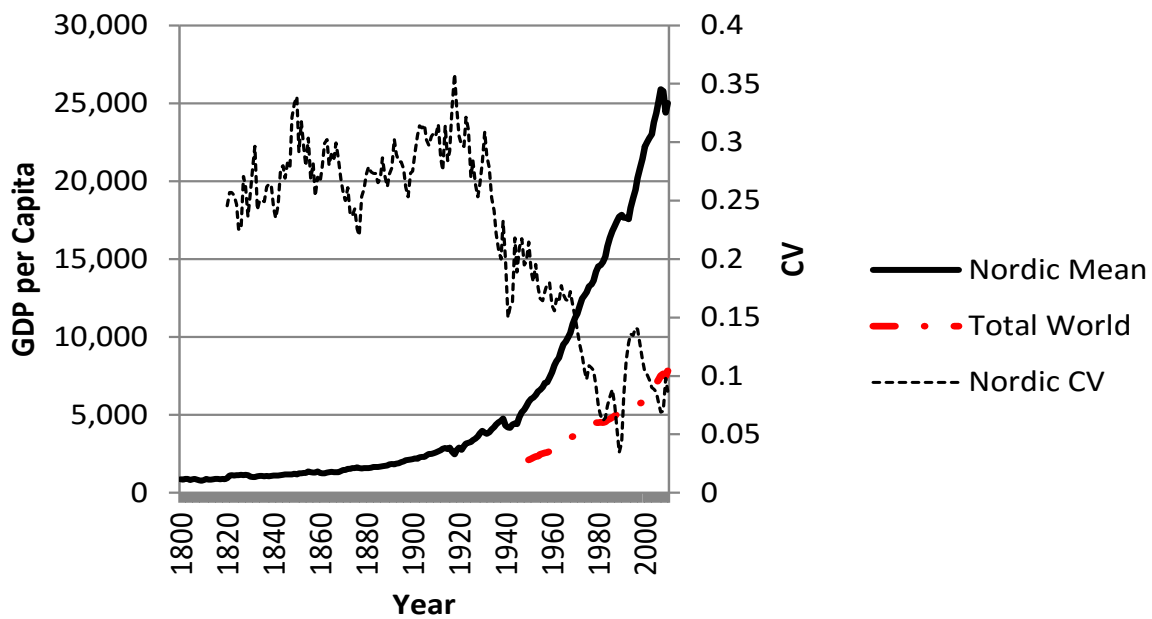
Figure 2. Real GDP per Capita for Denmark, Finland, Norway, and Sweden, 1800-2010



Source: Bolt and Van Zanden (2013). The First Update of the Maddison Project; Re-Estimating Growth Before 1820, Maddison Project Working Paper 4. Available from: <http://www.ggdc.net/maddison/maddison-project/home.htm> [cited 10.10.2013].

What about convergence and divergence between the Nordic countries themselves and in terms of their relationships to the economic leader nations? As seen in Figure 3, there was much divergence among the Nordic economies until the beginning of the 20th century. The coefficient of variation, which is one way to measure so-called sigma (σ) convergence along with standard deviation (measuring dispersion in the real GDP per capita levels over time), declined sharply after that and almost continuously until the 1980s and 1990s, when there was a temporary increase in the value. On average, the Nordic economies have experienced steady and accelerating economic expansion from the early 20th century onward. While Denmark was the early leader, in the 20th century Sweden and especially Norway have surpassed it.

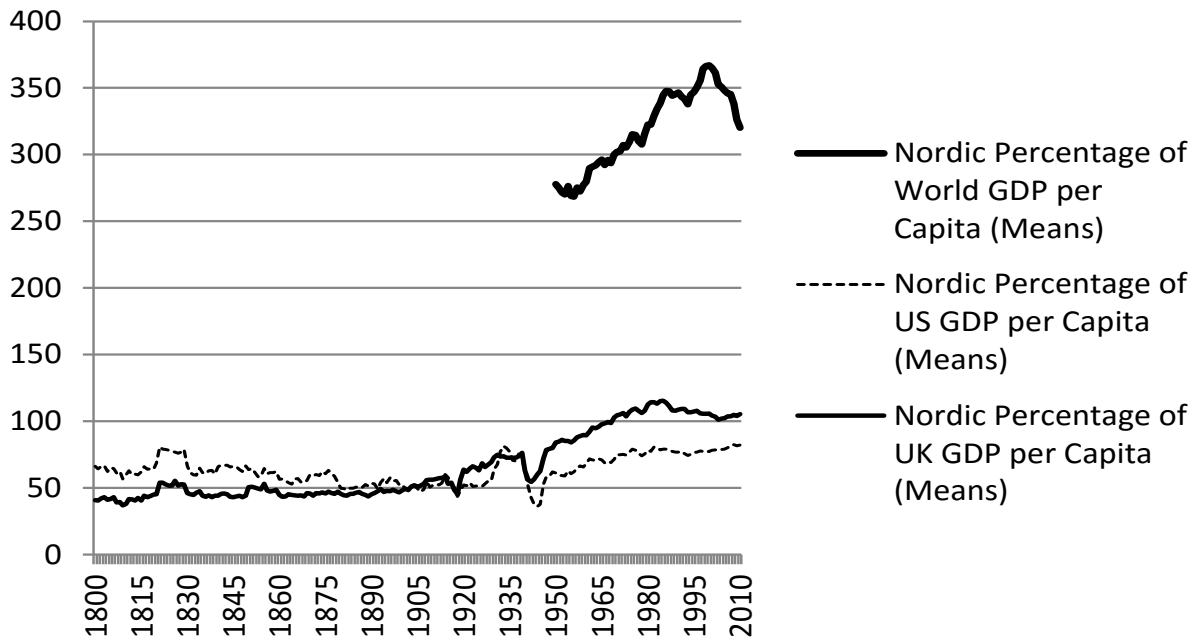
Figure 3. Nordic Economic Performance and Convergence, 1800-2010



Source: As for Figure 2. CV = coefficient of variation.

Nordic economies have certainly fared much better than the world, on average (see Figure 4). However, when compared with the leading economy of the 19th century (UK) and the leading economy of the 20th century (USA), the picture gets a bit murkier. Nordic economies started to slowly catch up to the UK from the early 20th century onwards, reached parity in the late 1960s and maintained a dwindling edge until the early 21st century. As for the USA, the Nordic economies steadily lost ground in the 19th century until the 1920s, when they temporarily regained some ground, only to lose it again during the Second World War. In the postwar period, however, they have experienced some catching up, although never gaining (on average) parity.

Figure 4. Nordic Economic Performance Compared to the Leading Economies (UK, USA) in the Long Run



Source: As for Figure 2

3. Nordic Wages in Long Run European Wage Mirrors

The limitations of the real GDP data are rather obvious, namely that they become scarce toward the early 19th century (or beyond). Even though there are now efforts underway in the various Nordic countries, it is still difficult to obtain real GDP per capita figures for the period prior to 1800, with Sweden being one of the few exceptions.⁵ Given these problems, we wish here to analyse the development of the Finnish and Swedish economies in the long run through real wages.⁶ Real wages themselves are not without problems. In particular, they are an imperfect

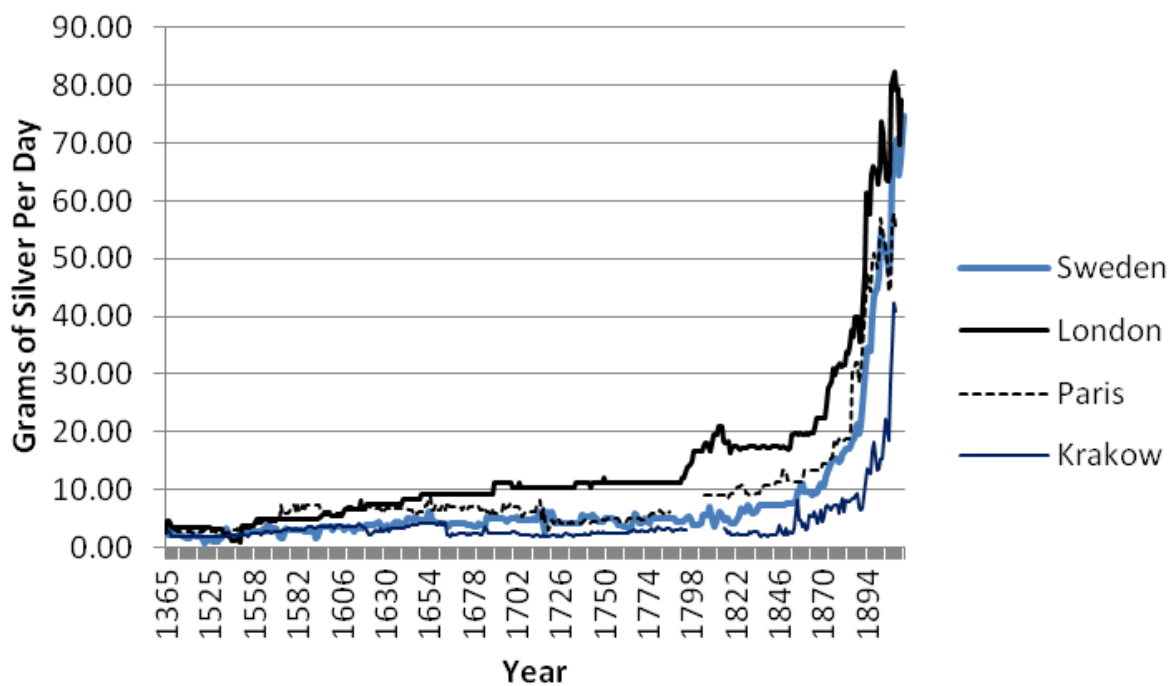
⁵ See esp. Broadberry, Stephen and Alexander Klein. 2012. "Aggregate and Per Capita Gdp in Europe, 1870–2000: Continental, Regional and National Data with Changing Boundaries." *Scandinavian economic history review*, 60(1), 79-107, Edvinsson, Rodney. 2013. "New Annual Estimates of Swedish Gdp, 1800–2010." *The Economic History Review*, Schön, Lennart and Olle Krantz. 2012. "The Swedish Economy in the Early Modern Period: Constructing Historical National Accounts." *European Review of Economic History*, 16(4), 529-49.

⁶ The data on Norwegian or Danish real wages is not readily available. On Swedish real wages, see Söderberg, Johan. 2011. "Long-Term Trends in Real Wages of Labourers," R. Edvinsson, T. Jacobson and D. Waldenström, *Historical Monetary and Financial Statistics for Sweden: Exchange Rates, Prices, and Wages, 1277-2008*. Stockholm: Sveriges Riksbank in cooperation with Ekerlids Förlag, 453-78. Finnish real wages were obtained from Ilkka Nummela, and utilised in conjunction with the data collection efforts in the bigger project on the Finnish economy.

proxy for real GDP per capita.⁷ Nonetheless, they do tell us about broad trends in development over time.

What do the data tell us? For example, Sweden’s long run development, as depicted in Figure 5, seems quite similar to most European cities, with the exception of London that is clearly ahead of the rest. Sweden in fact looks rather more like Paris than Krakow. In a sense, Sweden is clearly following a West European development path over the longer term.

Figure 5. Real Wages in Sweden Compared to Major European Cities, 1365-1914



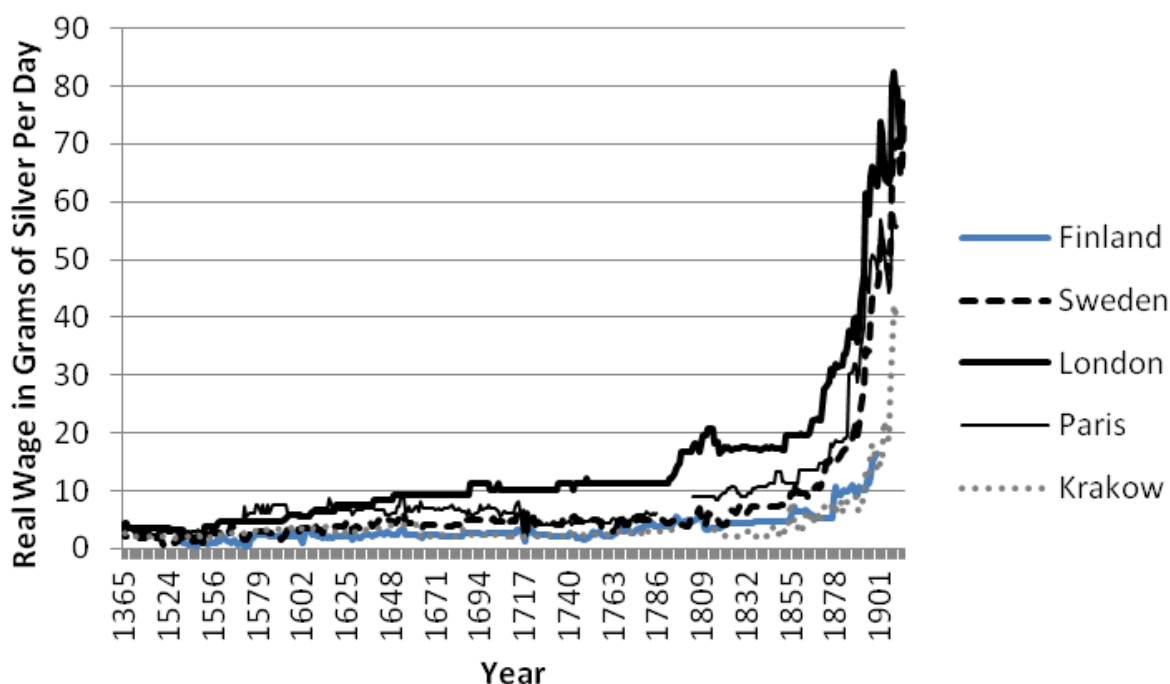
Sources: As for Figure 2.

When we add Finland to the mix (Figure 6), the comparison becomes less apparent. Clearly there is no uniform Nordic development path for the entire period. In particular, a divergence emerged between Finland and Sweden starting in the 18th century, and this gap widened in the 19th century. Moreover, Finland’s development is more in line with Eastern European cities like Krakow, in essence putting Finland in a different category from Sweden prior to the 20th century.

⁷ Regardless, the correlation between real wages and real GDP per capita is very high for Sweden (in 1560-1914: 0.94) and Finland (1860-1900: 0.88) in the 19th and early 20th century.

Of course, both Poland and Finland were part of the Russian Empire in the 19th century, and subjected to similar institutional and economic constraints, so this is not entirely surprising.⁸

Figure 6. Swedish and Finnish Real Wages in the Long Run, in Comparative Mirrors, 1365-1914



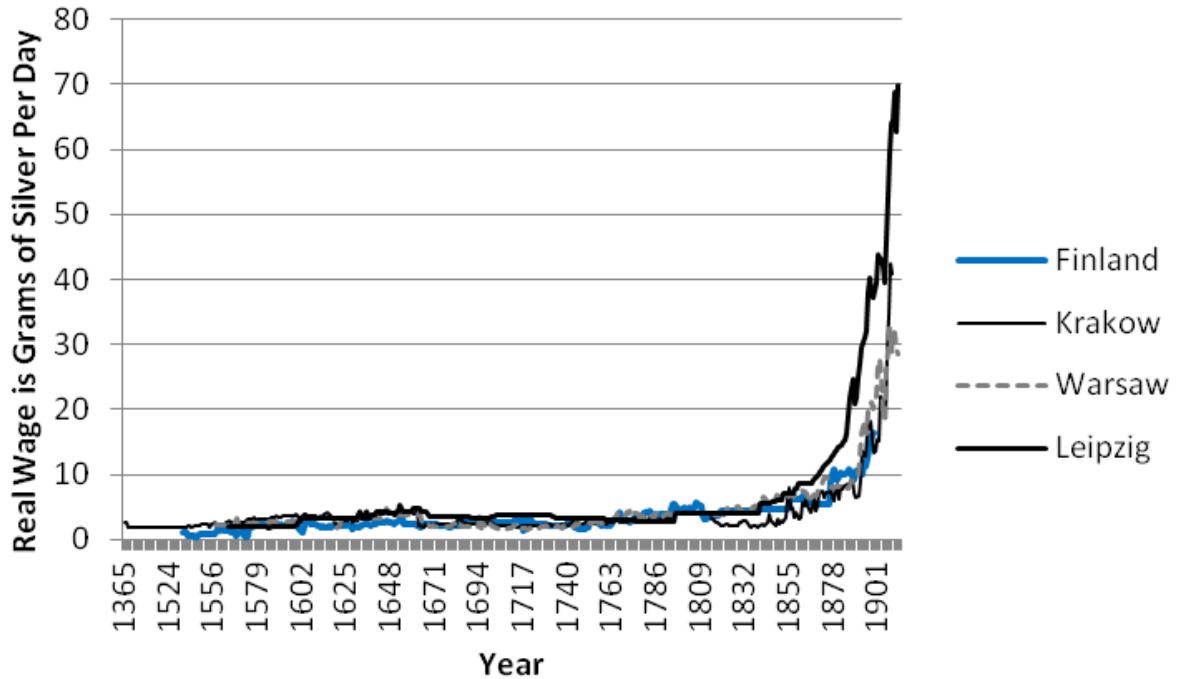
Sources: As for Figure 2. Please note that the Finnish series starts in 1541.

Figure 7 shows this even more clearly: In the 18th and 19th centuries, Finland followed the Eastern European development path. For example, real wages in Leipzig in the 19th century were substantially higher than in Finland, which was not true a century earlier.

What about Southern Europe? How do Sweden and Finland compare to the Mediterranean economies? This is particularly relevant for the discussion of the Little Divergence, i.e. did the Nordic economies stagnate in a similar fashion to the Mediterranean economies. We see some of those patterns in Figure 8. Both Milan and Madrid were likely substantially ahead of Finland until the mid-18th century.

⁸ See also Allen, Robert C. 2001. "The Great Divergence in European Wages and Prices from the Middle Ages to the First World War." *Explorations in Economic History*, 38, 411–47.

Figure 7. Finnish Long-run Real Wages in Comparison with Eastern Europe



Sources: As for Figure 2. Please note that the Finnish series starts in 1541.

In essence, a European periphery emerges in the 18th and 19th centuries compared to the more rapidly industrialising West European nations. However, the timing of the Nordic divergence was completely different: whereas the Mediterranean economies lost ground to Western Europe from the 15th century, the Nordic economies actually kept pace with the West until the 18th century. Then the later timing of their industrialisation most likely caused them to diverge from the West European path until the mid-20th century. Of course, there were differences among the Nordic countries too.

4. Seamen’s Wages in the Nordic Countries in the Age of Globalisation

How widely did trade and economic convergence happen in the 19th century in the Western World (mainly in Europe)? While the history of European integration emphasises developments

like the emergence of late-century free trade and relative dearth of great power conflicts, what about specific regions of Europe? For example, did wages in all Nordic occupations diverge from leading European economies? When did convergence start when looking beyond the macro-level aggregate data? Here we wish to provide yet another comparative mirror by examining the real wages of Swedish and Finnish sailors from the 18th to the 20th century.

In fact, maritime wages are especially interesting as one could assume a certain amount of convergence in wages across the countries in international shipping. Thus, previous historical studies on maritime wages have analysed possible wage convergence during the first era of globalisation.⁹ However, a number of studies have shown that this kind of convergence did not exist, which, in turn, shows up for example in desertion by Nordic sailors who were on a quest for better pay in foreign ports.¹⁰ Indeed, previous studies have shown that the seamen's wages were considerable higher on British, German, and North American ships than on the Nordic ones.¹¹

Here we focus on the Seamen's House data that begins in the 1750s and covers the period up to the 1950s, and it includes about 650,000 hiring cases from Sweden and Finland. The data is compiled from the Swedish National Archives' project "Arkion" that combined a database from nine Swedish and one Finnish Seamen Houses from the period in question. Based on this data we are able to analyse possible wage convergence between the Nordic countries and other European countries for a particularly trade-centric sector of the economy, i.e. shipping. In this case, we have only included data from some of the most important destinations. The salaries paid to

⁹ Fischer, Lewis R. and Helge W. Nordvik. 1989. "Sail in the Baltic, 1863-1900: The Case of Maritime Wages," *The Baltic as a Trade Road: Timber Trade in the Baltic Area, Competition between Steam and Sails*. Kotka: Provincial Museum of Kymenlaakso, Royen, Paul C. van; Jaap R. Bruijn and Jan Lucassen eds. 1997. "*Those Emblems of Hell*"? *European Sailors and the Maritime Labour Market 1570 - 1870*. St. John's, Newfoundland: International Maritime Economic History Association.

¹⁰ Fischer, Lewis R. 1980. "A Dereliction of Duty: The Problem of Desertion on Nineteenth Century Sailing Vessels," R. Ommer and G. Panting, *Working Men Who Got Wet*. St. Johns': Maritime History Group, Fischer, Lewis R. and Helge W. Nordvik. 1988. "Finländare in Den Kanadensiska Handelsflottan 1863-1913." *Historisk Tidskrift för Finland*, (3), Kindleberger, Charles. 1992. *Mariners and Markets*. New York-London: Harvester Wheatsheaf, Ojala, Jari; Jaakko Pehkonen and Jari Eloranta. 2013. "Desertions in Nineteenth-Century Shipping: Modelling Quit Behaviour." *European Review of Economic History*, 17(1), 122-40.

¹¹ Fischer, Lewis R. 1980. "A Dereliction of Duty: The Problem of Desertion on Nineteenth Century Sailing Vessels," R. Ommer and G. Panting, *Working Men Who Got Wet*. St. Johns': Maritime History Group, Kaukiainen, Yrjö. 1997. "Finnish Sailors, 1750-1870," P. C. v. Royen, J. R. Bruijn and J. Lucassen, "*Those Emblems of Hell*"? *European Sailors and the Maritime Labour Market, 1570 - 1870*. St. Johns', Newfoundland: International Maritime Economic History Association, 211 - 32, Kaukiainen, Yrjö. 1991. *Sailing into Twilight. Finnish Shipping in an Age of Transport Revolution, 1860-1914*. Helsinki: Suomen Historiallinen Seura, North, Michael. 1997. "German Sailors, 1650 - 1900," P. C. v. Royen, J. R. Bruijn and J. Lucassen, (Eds.), "*Those Emblems of Hell*"? *European Sailors and the Maritime Labour Market, 1570 - 1870*. St. Johns', Newfoundland: International Maritime Economic History Association, 253 - 66.

(un)skilled workers at home enable us to analyse in more detail the landward opportunities and possible converging or diverging patterns of wages.

In order to analyse the convergence (or divergence) of wages paid for landward and maritime occupations, we first compared the Finnish data on unskilled workers with the Finnish seamen's wages derived from the dataset (Table 1).¹² This late 19th century data includes able-bodied (AB) and ordinary sailors (OS) wage data from one Finnish town (Kokkola) and wages of urban unskilled outdoor and manufacturing workers in Finland. The opening of opportunities on land in Finland from the late 19th century onwards offered new possibilities for unskilled workers, as well as for sailors. Furthermore, the bulk of these new domestic opportunities opened up for unskilled workers capable of using their "brawn" – thus, for men just like ordinary seamen (OS). The analysis suggests (Table 1) that the landward wages first converged with the maritime wages, and from the turn of the century there was a diverging pattern within the wages. Especially AB wages which outperformed urban wages up to the 1880s. There seems to have been a decline in the AB wages at the turn of the century. As regards the OS wages, the development was even more dramatic, especially in relation to the manufacturing workers. Here, however, one must note that the OS wages in the case of Kokkola might have been under the mean from the late 1880s onwards, when deep sea shipping in the town practically ceased to exist.¹³

¹² Heikkinen, Sakari. 1997b. *Labour and the Market: Workers, Wages and Living Standards in Finland, 1850-1913*. Finnish Society of Sciences and Letters Helsinki.

¹³ Ojala, Jari. 1996. *Tuhannen Purjelaivan Kaupunki. Kokkolan Purjemerenkulun Historia*. Kokkola: Keskipohjanmaasäätiö.

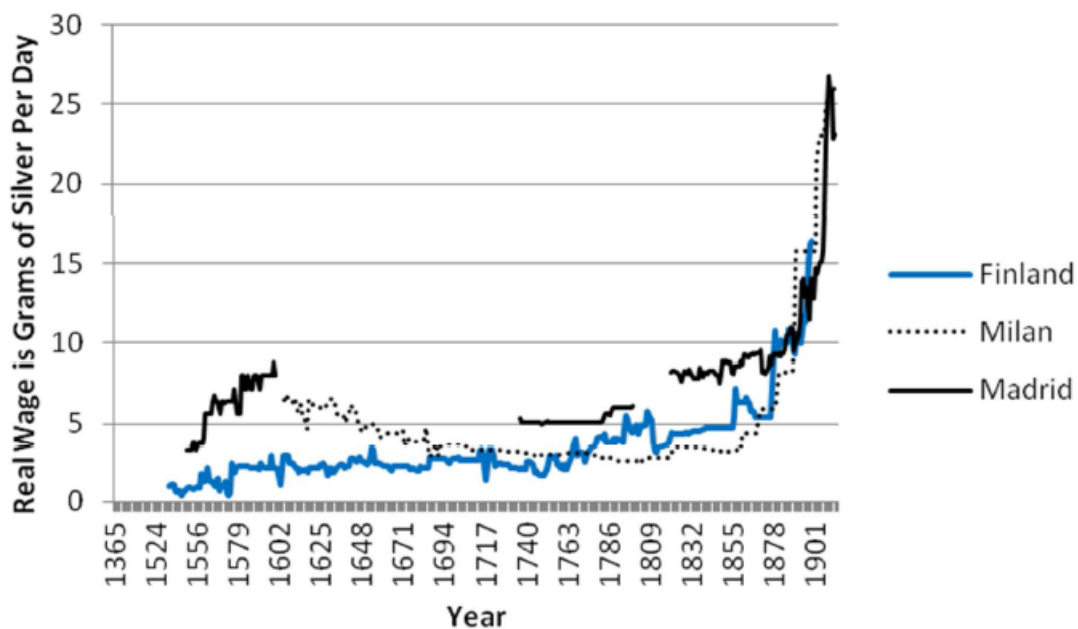
Table 1. Kokkola AB and OS Wages in Proportion to Finnish Urban Unskilled Outdoor and Manufacturing Workers, 1864–1914

	AB/Urban Unskilled Outdoor	OS/Urban Unskilled Outdoor	AB/Manufacturing Workers	OS/Manufacturing Workers
1860	1.40	0.74	1.51	0.80
1870	1.08	0.57	1.23	0.65
1880	0.88	0.52	0.82	0.48
1890	0.97	0.57	0.82	0.48
1900-09	0.64	0.47	0.63	0.46
1860-1913	0.85	0.52	0.84	0.50

Sources: The data on nominal wages of urban unskilled outdoor and manufacturing workers is derived from (Sakari Heikkinen, 1997a).

Notes: AB=Able-bodied; OS=Ordinary seamen

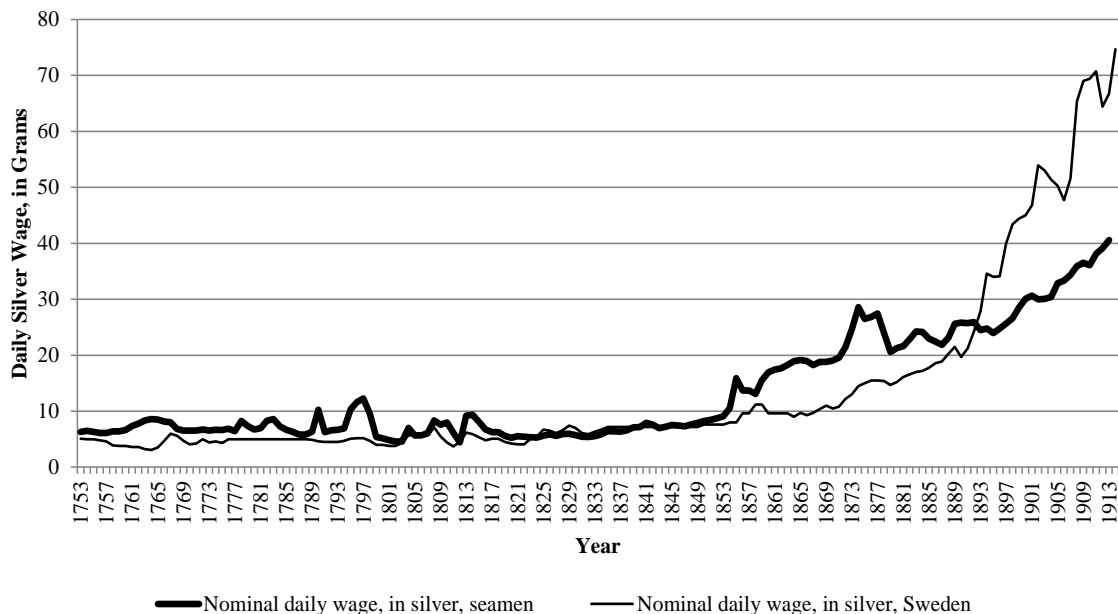
Figure 8. Finnish Real Wages in Comparison with Milan and Madrid, 1541-1914



Sources: see previous figures.

Another perspective on the issue can be gained by comparing Swedish seamen's and labourer's wages over time (in nominal terms), Figure 9. Wages stagnated in the 18th century, by and large. Seamen's wages were substantially higher, both in Finland and Sweden as the labour market was highly mobile during the expansion period, from the 1840s to the 1860s. After that, they seem to have followed a slower pattern of growth, for example compared to Swedish silver wages as a whole. Thus, the wages paid in Stockholm and the seamen's wages were converging from the mid-18th century up to the late 1840s. Thereafter the wages diverged due to better maritime wages until the 1890s. From the early 1890s onwards, the nominal daily wages in Stockholm clearly outperformed the wages paid to sailors. This comparison, though, is partly misleading, since the maritime wages of skilled occupations (like Ships' Mates) are also included in the dataset.

Figure 9. Seamen's wages compared to Stockholm labourers' wages: 1753-1913



Sources: Arkion Database (National Archive of Sweden) and Söderberg (2011).

5. Some Conclusions and Further Challenges

This working paper forms part of a larger project to study the Finnish economy over the long run. In this paper we focused on Nordic long-run economic performance and wages by investigating whether convergence (or divergence) emerged over time among those countries. We also examined whether they converged towards the economic leaders of the 19th and 20th

centuries, namely the UK and USA. Our first comparative mirror was the development of real GDP per capita from the early 19th century to 2010. Our analysis suggests that there was a catch-up process that surfaced among both the Nordic economies themselves and in their relationship with the economic leaders, especially from the early 20th century up until the 1970s.

Our second comparative mirror was the development of Swedish and Finnish real wages from the 16th to 20th century, and the results indicate very similar development between these two countries, though with Sweden having higher standards of living, up until 18th century. After that, both countries diverged from the West European “path”, and Finland especially seemed to stagnate during the 19th century. Our third comparative mirror pertained to the analysis of a large sample of seamen’s wages in Sweden and Finland from the mid-17th century to the First World War. These data suggest that divergence was not a uniform phenomenon in the 19th century Nordic sphere, since sailors’ wages increased substantially during the so-called first era of economic globalisation. It is possible that the export-led growth path of the Nordic countries already emerged in the late 19th century, although the impact and implementation would not materialise fully until the post-Second World War period.

Obviously our comparative mirrors and this paper are still works in progress. We still need to do more to flesh out the various institutional and other changes that are linked to these processes of change over time. Moreover, we need to refine the convergence analysis performed in the first part of the paper, and look for more data on Denmark and Norway. However, the early findings are interesting, for example from the perspective of the large body of literature on the Great Divergence and Little Divergence. It seems that the Nordic countries did not fit neatly into this pattern. Furthermore, our findings also suggest that we should be careful in generalising from real wages for entire countries – sometimes certain sectors (like shipping) could thrive amidst a general trend of divergence from growing economies. The Nordic path towards high equality, thriving schools and extensive welfare states, while accompanied by relatively rapid economic growth¹⁴ seems to have occurred mostly in the 20th century, although the roots of these processes can surely be traced further back in time. In this paper we have barely scratched the surface of these larger questions.

¹⁴ Peter Lindert would call this the “free lunch puzzle”. See esp. Lindert, Peter H. 2004. *Growing Public: Volume 1, the Story: Social Spending and Economic Growth since the Eighteenth Century*. Cambridge University Press, Lindert, Peter H. 1994. "The Rise of Social Spending, 1880-1930." *Explorations in Economic History*, 31(1), 1-37, Lindert, Peter H. 1996. "What Limits Social Spending?" *Explorations in Economic History*, 33(1), 1-34, Lindert, Peter H. 2003. "Why the Welfare State Looks Like a Free Lunch," National Bureau of Economic Research,

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