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2

LIVING STANDARDS IN THE VERY LONG RUN

The place of Central, Eastern and South-Eastern Europe in the divergence debate

Stephen Broadberry and Mikołaj Malinowski

In 2000, Kenneth Pomeranz coined the phrase the ‘Great Divergence’ to capture the growing gap in productivity and living standards between the West and the rest (Pomeranz 2000). Focusing on regional differences within both Europe and Asia, Pomeranz argued that there was no substantial difference between the two continents as late as 1800. In particular, he claimed that the Yangzi delta, one of the richest parts of Asia, was just as developed as Britain and Holland, the richest part of Europe. Although these claims are now widely seen as exaggerated, and Pomeranz (2011) has pushed back the first appearance of the Great Divergence to the first half of the 18th century rather than the first half of the 19th century, the emphasis on regional variation in both Europe and Asia has continued to have a profound effect on our understanding of the first transition to modern economic growth. Rather than seeing the whole of Europe as developed and the whole of Asia as backward, a more nuanced picture of the process of development on both continents has emerged.

In Europe, economic historians have come to see the North Sea area as the location of the first transition to modern economic growth, with Britain and Holland first catching up with the richer parts of Mediterranean Europe in Central and North Italy and in Spain, and then forging ahead after 1500 (Broadberry 2015; de Pleijt and van Zanden 2016). This process has become known as the ‘Little Divergence’, but whilst the debate has tended to focus on Western Europe, there is also an eastern dimension covering the territories of Central, Eastern and South-Eastern Europe. Bringing the east of Europe into the divergence debate will involve two aspects. First, it is important to provide reliable measures of economic performance, to ensure that we know when the region fell behind and by how much. Although data are not always available for the whole of this area, we will provide city-level estimates of living standards for Istanbul, Leipzig, Vienna, Cracow, Warsaw, Gdansk, Lviv and Moscow, and macro-level estimates for Germany,

Poland and the Ottoman Empire. Second, having established the economic under-performance of the East, it is natural to seek to explain that under-performance.

The first part of this chapter will thus focus on issues of measuring economic performance, focusing on real wages and gross domestic product (GDP) per capita. Issues of income distribution will be addressed by considering (1) the differential between skilled and unskilled wages; (2) wages compared to the cost of a subsistence or 'bare-bones' basket of basic commodities and a 'respectability' basket containing a greater variety of items; and (3) the relationship between real wages and GDP per capita. We will see that, if attention is confined to how much grain or other basic products can be purchased with an unskilled labourer's wage, living standards in the eastern part of Europe did not lag substantially behind those in the North Sea area between 1500 and 1800. However, if more luxury items are added to the consumption basket, then the gap between the East and the North Sea area emerged earlier and grew larger. Living standards in the region thus lagged behind those in North-Western Europe largely as a result of the restricted growth of the non-agricultural sector, providing processed foodstuffs and other manufactured goods and services. The East-West gap widened especially in the 18th century.

In the second part of the chapter, we turn to explaining why the divergence between the eastern part of Europe and North-Western Europe occurred. In part, of course, this involves explaining the success of Britain and Holland, which forged ahead of the rest of the world as well as the rest of Europe. However, different regions of the world began the process of catching up at very different times, which suggests that the factors holding them back were not identical. In addition to providing a very brief overview of the reasons for the breakthrough to modern economic growth in the North Sea area, we will therefore consider two main factors which have been seen by economic historians as helping to explain economic under-performance in the East. These issues are (1) the re-emergence and persistence of serfdom and (2) trade dependency. Although some have argued that serfdom can be seen as an efficient solution to various adverse economic and political conditions, the majority view has remained that serfdom was a rent-seeking institution that had a negative impact on economic development. Criticisms of the trade dependency view and the whole World Systems approach that underpins it have been more damaging, and this view no longer commands much support amongst economic historians. To a large extent, then, a full explanation of the under-performance of the East must rely on the absence of the forces making for success in North-Western Europe, including (1) late and limited adoption of fertility restriction; (2) limited access to dynamic markets; and (3) poor institutions of governance.

Measuring economic performance

Material standards of living: wages

One of the simplest and most intuitive ways of comparing material standards of living in different places and different periods of time is to measure wages and the

amount of goods and services that they can purchase. An important issue that arises here is the units of comparison, since wages are typically paid in different currencies across space, and currencies can also change over time. One simple way of making the comparison during the period 1500–1800 is via the silver content of daily wages paid to an unskilled building worker, since the world was largely on a silver standard at this time: different currencies could be converted to their intrinsic silver content, which thus determined their exchange rates. The silver wage is defined here as the value of the daily wage expressed in grams of silver. Data on the wages of building workers have been systematically collected for many cities in all regions of Europe, including the East, and the unskilled wage is most representative of the urban working class, although the wages of skilled building workers can also be used to shed light on the distribution of income. It is important to keep in mind, however, that wages tended to be significantly higher in urban than in rural locations. For this reason, urban wages are not representative of the standard of living of the majority of the population living in the countryside. However, urban wages do nevertheless depict economic conditions in the most advanced sectors of the economy and hence allow for a meaningful comparison of different trajectories of economic development.

To establish the purchasing power of these wages, it has been common to divide the silver wage by the silver price of the common local grain to yield the grain wage, which has often been taken as a crude measure of the standard of living in very poor societies, where most income has to be spent on basic foodstuffs. However, Engel's law states that as income rises the proportion of income spent on food falls, so that the grain wage becomes a less accurate indicator of living standards. Since we are interested in measuring the growing gap between the developing North Sea area and the lagging eastern parts of Europe, we also need to consider real wages based on the wider range of commodities that were available for consumption in early modern Europe. Here we will consider the purchasing power of wages measured against a 'subsistence' basket of commodities that were essential for survival, and also measured against a 'respectability' basket that also included some more luxurious items available for those workers who could afford more than the subsistence or 'bare-bones' basket and sought to lead a 'respectable lifestyle'.

The baskets are defined in terms of the amounts of consumables needed to support a family consisting of two adults and two children. Allen (2001, 2009) established the cost of these baskets using expenditure weights derived from the budget studies of Sir Frederick Eden and other social investigators from the late 18th and early 19th centuries, making sure that they provided sufficient calories to enable the family to work. Allen expressed the real wage as a 'welfare ratio', or the number of baskets of consumables that can be purchased with the daily wage. If the welfare ratio using the subsistence basket (known as the *subsistence ratio*) is above 1, then the worker earns enough to work and reproduce, but if it falls below 1 then the family will be living in absolute poverty. If the welfare ratio using the respectability basket (known as the *respectability ratio*) is below 1, then the worker can still support a

family, but will be forced to do without some of the more luxurious items making up the respectable lifestyle.

Silver wages

The silver wage, or daily nominal wage represented in terms of its intrinsic silver content, has commonly been used to compare material standards of living around Europe. Figure 2.1 depicts daily silver wages of unskilled building workers for various time periods between 1500 and 1800 in the North Sea area cities of London and Amsterdam, in the Central European cities of Vienna, Leipzig, Gdansk, Warsaw and Cracow, in the Eastern European cities of Moscow and Lviv and in the South-Eastern European city of Istanbul. Since the second half of the 16th century, the wages of unskilled urban workers in London and Amsterdam were higher than wages in Central, Eastern, and South-Eastern Europe. Figure 2.1 also depicts differences in incomes within the East. Within the studied sample, Lviv and Moscow were the poorest cities and Istanbul, Gdańsk, Leipzig, and Vienna were the richest.

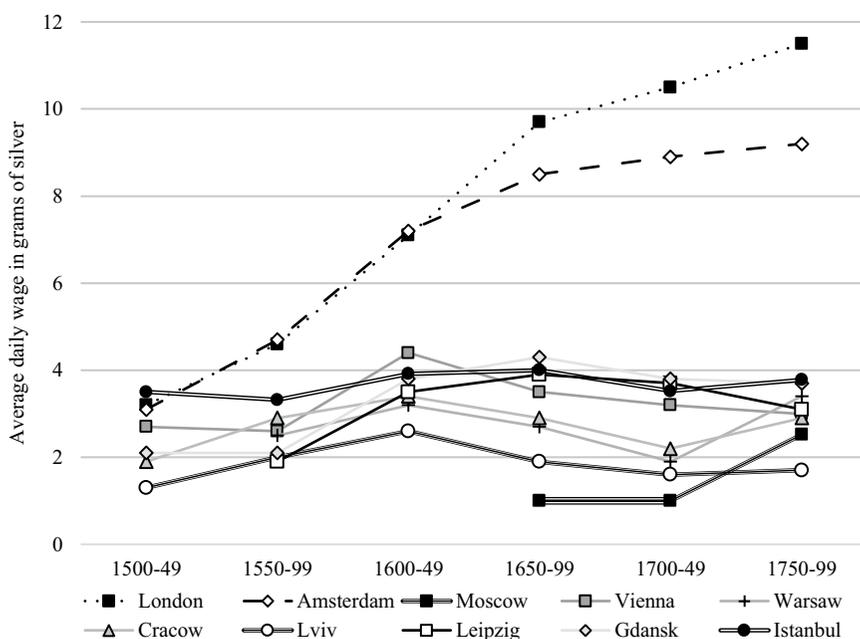


FIGURE 2.1 Silver wages of unskilled construction workers in London, Amsterdam and a range of Central, East and South-East European cities, 1500–1800

Sources: Broadberry and Gupta 2006; Allen 2001; Moscow from Malinowski 2013; Istanbul from Özmocur and Pamuk 2002.

The picture based solely on silver wages suggests that Eastern Europe might have been less economically successful than Central and South-Eastern Europe already in the early modern era. None of the cities in the more successful regions holds the position of uncontested leader throughout the whole period. This indicates that there has been no stable hierarchy of income levels between the Baltic and Marmara seas. In the cities shown in Figure 2.1, silver wages generally increased during the 16th century and into the early 17th century in both eastern and western parts of Europe. This was a direct result of substantial silver flows from the New to the Old World, which resulted in a decrease in the value of the precious metal. For this reason, in order to gauge if the increase in silver wages was indicative of an increase in living standards, it is necessary to examine real wages.

Real wages

The simplest real wage is the grain wage, or the amount of grain that can be purchased with the daily silver wage. Figure 2.2 shows the average number of litres of wheat or rye that could be bought by unskilled workers living in a range of European cities. The figure depicts grain wages in the Central European cities of Warsaw, Cracow and Gdansk, and in some West European cities of Southern England and Northern Italy. The figures for the Central European cities are based on prices of rye, the principal grain consumed in those cities, while the Western wages are deflated by the price of wheat, more widely consumed there. In general, grain prices were substantially lower in the eastern part of Europe, which specialised in exports of raw materials and unprocessed foodstuffs, compared with the

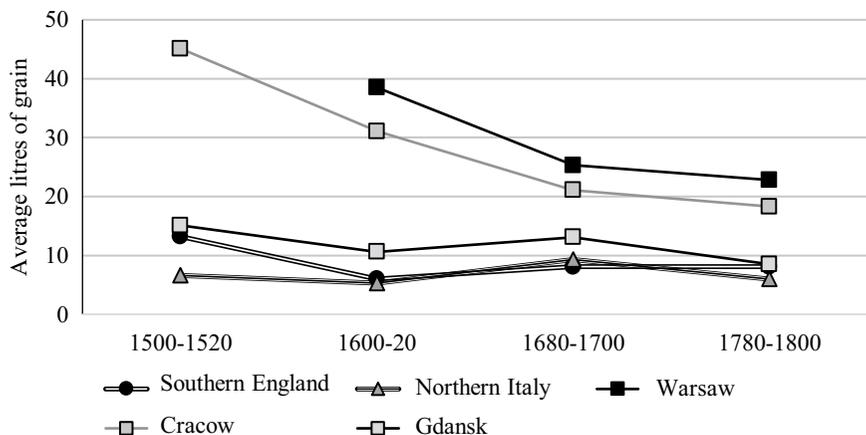


FIGURE 2.2 Grain wages, i.e. purchasing power of an unskilled daily wage in Southern England, Poland, and Northern Italy, 1500–1800

Source: van Zanden 1999.

West, which specialised in exports of manufactured goods. Based on this measure, material standards of living were thus higher in the East than in the West. The only exception to this general rule was Gdańsk – the entrepôt of the grain trade in the Baltic Sea. Due to its close economic ties with the North Sea region, the city was characterised by much higher prices than the other eastern localities (Malinowski 2016a). Whereas grain wages in Cracow and Warsaw followed a clear downward trend between 1500 and 1800, wages in Western Europe remained at a stable and lower level throughout the period. Figure 2.2 thus shows that the higher silver wages of Western Europe did not translate into higher grain wages, which were in fact higher in Central Europe throughout the period. However, before concluding that the East performed relatively well during the early modern period, it is necessary to widen the range of products that could be purchased with the silver wages earned in the different parts of the continent. It is also necessary to broaden the analysis geographically beyond Central Europe to include Eastern and South-Eastern Europe into the comparative framework.

Figure 2.3 shows welfare ratios obtained using the subsistence or bare-bones basket. This is composed of a selection of goods that were indispensable for a single breadwinner to support a household of two adults and two children for a

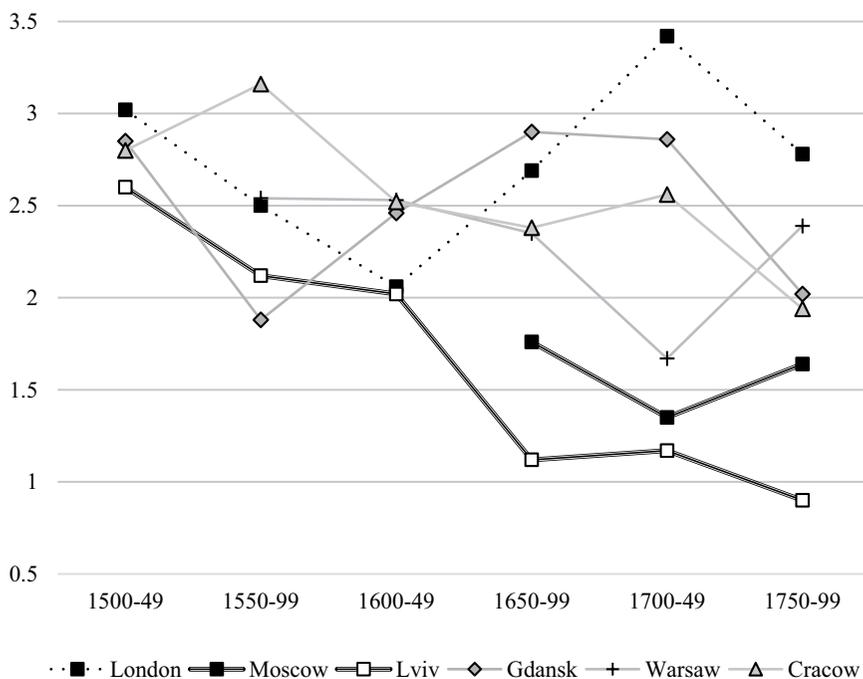


FIGURE 2.3 Average real wages of unskilled workers in London and a range of Central and East European cities expressed in terms of subsistence ratio, 1500–1800

Sources: Malinowski 2016a; Moscow from Malinowski 2013.

year. Allen (2009) assumed that the minimum daily nutritional needs of an adult are 1,945 calories and 78 grams of protein. In the subsistence basket, the family are assumed to purchase the cheapest available source of calories and protein, grain. The bare-bones basket does not contain processed, and therefore more expensive, foods like beer or bread, even though they were widely consumed. In addition to foodstuffs, the subsistence basket includes small quantities of soap, light, clothing, and fuel. The bare-bones basket also includes the cost of housing. Given that historical information on house rents is very limited, accommodation is assumed to be an additional 5 per cent premium on top of the cost of the listed commodities, in line with historical budget studies. Finally, the consumption needs of a child are assumed to be half those of an adult. All in all, a household is assumed to need 3.15 times an adult's basket (one for the woman, one for the man, one for the two children, and 0.15 for housing). In order to compute the annual income, a male labourer is assumed to work for 250 days at the average daily wage. If we divide the annual income by the cost of the bare-bones basket for the household, we obtain the real wage expressed as a subsistence ratio. If the ratio is greater than unity, this hypothetical household was able to sustain itself. It is notable that the methodology does not account for any source of income other than paid labour of the male breadwinner. It does not, therefore, include (1) female labour participation, which as we will see later could have differed between regions; (2) income from various rents or savings; or (3) consumption of food produced by the workers themselves, which was not uncommon in preindustrial cities. For this reason, ratios smaller than one indicate that, in order to survive, households had to seek additional sources of income or adjust their size.

Figure 2.3 shows subsistence ratios for North-Western Europe (London), Central Europe (Gdańsk, Warsaw and Cracow) and Eastern Europe (Lviv and Moscow). Unfortunately, however, it does not include any information about South-Eastern Europe. These ratios indicate that in the 16th and 17th centuries, real wages based on the subsistence basket were no higher in London than in Central and Eastern European cities. In fact, between 1500 and 1650, all observations in the sample oscillated within a similar range of values and did not show any signs of the Little Divergence. Higher subsistence ratios in England can be seen only for the 18th century. At that time, real wages in London were higher than those in Gdańsk and any other Central and Eastern European city for which data are available. Moreover, according to Figure 2.3, there was a divergence between Central and Eastern Europe. Whereas in the 16th century real wages were at a similar level in all the included cities, by the 18th century there was a growing income gap between the successful cities like Gdańsk, Cracow and Warsaw, which maintained their standards of living from the 16th century, and Lviv and Moscow which became impoverished. This suggests that the General Crisis of the 17th century, a period of unrest in Europe related to economic, military, political and ecological instability, affected different regions in different ways, resulting in a wide range of economic outcomes.

Finally, Figure 2.4 shows respectability ratios, based on a basket of consumables that contains bread and beer instead of grains and also contains larger amounts

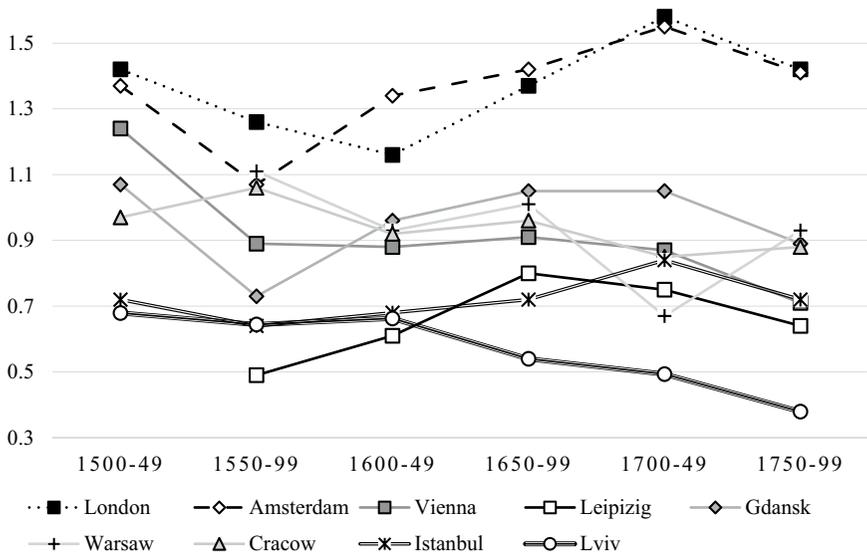


FIGURE 2.4 Average real wages of unskilled workers in London and a range of Central, East and South-East European cities expressed in terms of respectability ratios, 1500–1800

Sources: Values for London, Amsterdam, Vienna, Leipzig, Gdansk and Warsaw from Table 6 in Allen 2001. Values for Istanbul from Figure 2 in Özmocur and Pamuk 2002. Respectability ratios for Lviv based on own computations; Wages in Lviv from Table 3 in Malinowski 2016a. Costs of the respectability basket in Lviv calculated using information in Tables 3 and 4 in Allen 2001.

of manufactured products than the bare-bones basket. In contrast to Figure 2.3, based on subsistence ratios, the available research on respectability ratios allows us to bring Istanbul and thus South-Eastern Europe into the comparative framework. Whereas the bare-bones basket represents the biological minimum of consumption, the respectability basket denotes a more accurate ‘historical’ consumption behaviour. Substitution of grains with beer and bread when measuring real wages has a tremendous impact on the picture of the Little Divergence between the East and West of Europe. According to the respectability ratios in Figure 2.4, London and Amsterdam were clearly richer than the Central European cities. This is very different from the impression given by the subsistence ratios in Figure 2.3, which identified cities in the East that had similar standards of living to Amsterdam and London, and it is even more different from the picture painted by grain wages in Figure 2.2, which suggested higher living standards in the East. However, it is clearly much more consistent with the general conclusions based on the silver wage in Figure 2.1, which suggested a clear economic supremacy in the West. Figure 2.4 shows living standards in London and Amsterdam clearly ahead of Central, Eastern and South-Eastern European cities throughout the period 1500–1800, with the gap widening during the 17th and 18th centuries as real wages grew in the North

Sea area and stagnated in the East. Moreover, it is notable that whereas Istanbul and Leipzig were among the richest of the studied eastern cities in terms of silver wages, they were also the poorest in terms of real wages. Lastly, the evidence based on respectability ratios also suggests that there was a divergence in economic development between Central and Eastern Europe after the 17th century with most Central European cities defending a certain equilibrium level and Lviv slowly declining.

It is instructive to consider the evidence of Figures 2.2 to 2.4 together to shed light on the nature of the emergence of the West to economic leadership. Western supremacy only shows up as the comparison of real wages moves away from basic grain products to more highly processed foods (such as bread and beer) and other manufactured goods (soap, candles, linen and oil). Figure 2.5 provides a convenient demonstration of the importance of the composition of the basket of consumables for the comparison of living standards between the West and the East over three periods from the first half of the 17th century to the second half of the 18th century. The figure compares the welfare ratios of unskilled building workers in London with the welfare ratios of unskilled workers in three Polish cities: Gdańsk, Cracow and Warsaw. A value above unity indicates higher real wages in London, and a value below 1 indicates higher real wages in Poland. The baseline ratio is based on the bare-bones basket (i.e. the subsistence ratio) and shows at best only

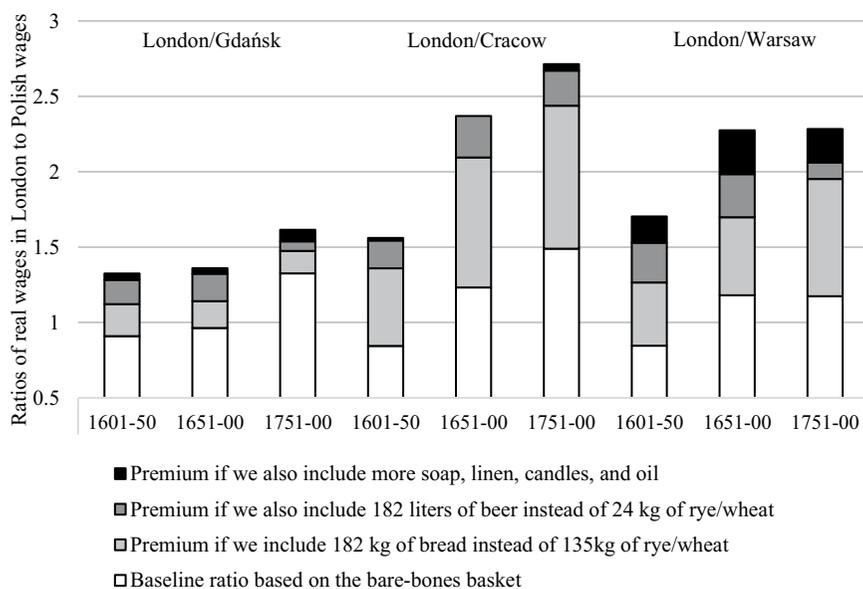


FIGURE 2.5 Real wages of unskilled workers in London based on different baskets of goods divided by real wages of unskilled workers in a range of Polish cities based on the same baskets, 1600–1800

Source: Malinowski 2016a.

a slightly higher real wage in London, with the Polish cities even slightly ahead in the first half of the 17th century. The London premium increases somewhat if processed foodstuffs such as bread and beer are substituted for unprocessed grains. As further manufactured products such as soap, candles, linen and oil are added, and the basket of consumables approaches the respectability basket, the London premium increases further. The reason for the growing London premium as more highly processed foods and other manufactured products are added is that these products were relatively more expensive in the East than in the North Sea area.

The low relative price of manufactures in the West and the low relative price of grain in the East reflected the comparative advantage of the two regions, with the West increasing its comparative advantage in manufacturing as it developed. This difference between the two regions can also be seen in the skill premium (i.e. the inequality in incomes between the skilled and unskilled labourers). The ratio of the skilled urban wage to the unskilled urban wage was much higher in the East, as was the difference between the urban and rural unskilled wage (van Zanden 2009; Malinowski 2016a). This suggests that skilled labour involved in manufacturing was expensive. The relative price of processed foods was high because the price of grain was being kept low by the effects of serfdom on the cost of production. We will return to the economic impact of serfdom later.

Gross domestic product per capita

Gross domestic product (henceforth GDP) is a measure of the annual flow of all goods and services in an economy. It can be measured from the production, income and expenditure sides, and in principle all three measures should yield the same total. In historical national accounting, however, GDP is normally calculated primarily from the output side, but also making use of some income data, particularly on wages. It is worth distinguishing between the estimates of GDP for economies such as Britain and the Netherlands, where data are relatively abundant, so that the total can be built up from highly disaggregated data on individual sectors, and economies for which data are more limited, for which a ‘short-cut’ method has been developed. These GDP data can be combined with estimates of population to produce GDP per capita, which is often taken as a measure of the average standard of living. However, caution must be exercised in using these estimates for international comparisons of living standards, since the distribution of income varies considerably across societies. That is a strong argument for considering the GDP per capita data together with the data on real wages of unskilled workers presented in the previous section.

The GDP per capita data for early modern Britain and the Netherlands have been constructed by Stephen Broadberry et al. (2015a) and Jan Luiten van Zanden and Bas van Leeuwen (2012) using a wide range of information on production and prices in each of the main sectors: agriculture, industry and services. For the other European economies considered in this section, GDP per capita estimates have been constructed using the short-cut method (Malanima 2011; Álvarez-Nogal and

Prados de la Escosura 2013; Malinowski and van Zanden 2017). This involves the use of a more limited range of data, covering wages, prices, population and urbanisation rates. Agricultural output per capita is estimated from a demand function, with the demand for food related to real wages and the relative price of food, and this is scaled up to total output per capita by using the urbanisation rate as a measure of the relative importance of the non-agricultural sector. A number of authors have shown consistency between the short-cut and direct methods where sufficient data are available to conduct cross-checks (Broadberry et al. 2015b; Álvarez-Nogal and Prados de la Escosura 2013).

Table 2.1 presents GDP per capita estimates for Great Britain and the Netherlands in the North Sea area, Central and Northern Italy and Spain in Mediterranean Europe, Germany and Poland (Voivodship of Cracow) in Central Europe, with the Ottoman Empire including all the Balkan states from the 16th century, but excluding present-day Egypt and Iraq from the estimates (Pamuk 2009), thus offering coverage of South-Eastern Europe. Japan and India are included to represent Asia. The global comparison of GDP per capita yields several important generalisations about the place of Central and South-Eastern Europe in the narratives of the Great and Little Divergences of income levels around the world and within Europe.

In general, the region was already lagging behind North-Western Europe during the early modern era. According to the figures presented in Table 2.1, GDP per capita differed between the studied Central European countries. Poland was already poorer than Western Europe in the 15th century, and its level of economic development was closer to that of Asian rather than Western European countries. By 1600, as a result of economic expansion during its Golden Age of the 16th century, Poland had grown richer, but its relatively high growth rate at the time was insufficient to reach the level of Western European countries. During the 17th

TABLE 2.1 GDP per capita around the globe, 1400–1820, in 1990 USD PPP

<i>Year</i>	<i>GB</i>	<i>NL</i>	<i>Italy CN</i>	<i>Spain</i>	<i>Germany</i>	<i>Poland^d</i>	<i>Ottoman Empire</i>	<i>Japan</i>	<i>India</i>
1400	1,053	920	1,596	892	–	562	–	545 ^f	–
1500	1,041	1,119	1,398	919	1,146	702	622	–	–
1600	1,037	2,049	1,243	1,005	807	810 ^a	640	667	682
1700	1,513	1,620	1,346	905	939	569 ^b	730	675	622
1820	2,074	1,886	1,378	1,062	986 ^e	634 ^c	788	828 ^e	520

Sources: Great Britain (GB): Broadberry et al. 2015a; Netherlands (NL): van Zanden and van Leeuwen 2012; Italy Central and North (CN): Malanima 2011; Spain: Álvarez-Nogal and Prados de la Escosura 2013; Germany: Pfister 2011; Poland: Malinowski and van Zanden 2017; Japan: Bassino et al. 2019; India: Broadberry et al. 2015b, The Ottoman Empire based on Pamuk 2009 who calculated GDP per capita in the empire (excluding Egypt and Iraq) as a share of British GDP in 1820. We converted these estimates into 1990\$PPP by linking it to the British figure for 1820 used in this table.

Note: (a) value for 1578; (b) value for 1662; (c) value for 1776; (d) Voivodship of Cracow; (e) value for 1804; (f) value for 1450.

century, the Polish economy contracted even below the low levels characteristic of India and Japan, so that Poland became the poorest country in the sample. By the end of the 18th century, despite a return to growth, Polish GDP per capita was barely above that of India and had fallen further behind the level in the more rapidly growing Japan.

On the other hand, standards of living in Germany were on a par with most of Western Europe around 1500, lagging only behind Central and Northern Italy. However, according to Pfister's (2011) GDP per capita estimates, German standards of living declined during the 16th century and stagnated in the 17th and 18th centuries. As a result of economic growth in England and the Netherlands, Germany fell substantially behind the North Sea area from 1600.

Turning to South-Eastern Europe, which was a part of the Ottoman Empire, the levels of GDP per capita in the region were already significantly lower than in the North Sea area by the beginning of the early modern period. Standards of living in the empire were similar to those in India and Japan. However, it must be borne in mind that these results are based on averages for the whole of the empire (excluding Egypt and Iraq), and it is possible that the situation in the Balkans was significantly different from that in Anatolia.

The GDP per capita data tend to support the pessimistic interpretation of economic performance in Central and South-Eastern Europe during the early modern period derived from the welfare ratios based on the respectability basket. The more optimistic picture obtained from welfare ratios based on the subsistence basket can only be sustained by leaving out of account those parts of the economy associated with modernisation and economic development: the move to higher value added processing of foodstuffs and the wider availability of manufactured goods. Unfortunately, there are no comparable estimates of GDP per capita for preindustrial Eastern Europe – an important gap that needs to be filled. It would be particularly useful if researchers could establish how Russia and eastern parts of the Polish-Lithuanian Commonwealth fit into this picture. However, since real wages (Figure 2.3) and urbanization levels in these areas were relatively low, it is likely that Eastern European GDP per capita levels fell somewhere between Central European and Asian levels.

Explaining economic performance: why did Eastern Europe lag behind the North Sea area?

One way of understanding why the eastern part of Europe lagged behind the North Sea area is to focus on the reasons for the success of the North Sea area and note their absence in the East. However, this would not be entirely satisfactory for at least two reasons. First, explaining the transition to modern economic growth in the North Sea area at the time of the Industrial Revolution is the Holy Grail of economic history, and it would be impossible to do it justice within the confines of this short chapter. But second, not all regions of the world lagged behind

the North Sea area to the same extent, and different regions began to catch up at very different times, which suggests that local factors must also have been of some importance.

Factors explaining retarded Central and Eastern European economic performance

Here we will focus on two factors which have featured in the literature on explaining the retarded economic performance of the East. One of the most widely cited factors is the re-emergence and persistence of serfdom in early modern Central and Eastern Europe, in contrast to its disappearance in the West. Second, this re-emergence of serfdom is sometimes linked to trade relations, with Central and Eastern Europe characterised as becoming a peripheral region in a system of unequal trade with the North Sea area as the core. The 'second serfdom' has been seen by some as underpinning the growth of exports of agricultural goods and raw materials within this system of unequal trade. These discussions will not offer an explanation of the economic underperformance of South-Eastern Europe, where the institution of serfdom was not widespread and trade relations with North-Western Europe were not strong. Moreover, because South-Eastern Europe was a part of the Ottoman Empire in the early modern period, its economic circumstances were very different to those of the independent states located in Central Europe (see more in Lampe and Jackson 1982).

The second serfdom

In the early Middle Ages, serfdom, the signature social relation of feudalism, was prevalent all over Europe. This system of surplus extraction from peasantry weakened gradually throughout the continent in the late Middle Ages. In Western Europe, the rise of powerful monarchs, towns, and an improving economy weakened the manorial system during the 13th and 14th centuries. However, east of the river Elbe serfdom was never fully abolished, and coerced labour re-emerged as the 'second serfdom' in the late Middle Ages and in the early modern period (Cerman 2012). This created an institutional division between East and West, which is often regarded as one of the fundamental causes of underdevelopment of Eastern Europe, although it should be noted that the absence of serfdom did not lead automatically to early development in much of Western Europe.

The definition of serfdom differs between individual studies, partly because the precise nature of the institution and its severity varied over time and across regions. In general, serfdom was most severe in Russia and least harsh in Prussia. Serfdom was based on a contractual relationship between a legally privileged group of landowners and their tenant farmers and landless peasants. Coerced workers were forced to work on the manors and demesnes of their landlords in exchange for the right to use land. The system rested on lack of juridical protection of the

peasants by the state against the landlords. In Poland and Russia, serfs were not allowed to appeal to the ruler if their rights were violated. This allowed landlords to make one-sided changes to the contractual obligations of the villagers and increase their rent and labour duties. Serfdom was also based on limitations on peasants' mobility, which allowed landlords to charge higher rents. Therefore, serfdom is different to wage slavery, a situation where poorly paid workers are free to move, but are unlikely to find better-paid work. Moreover, serfdom is closely connected with landownership. Landlords could trade in land with serfs tied to it but could not trade in serfs themselves. This is a crucial difference between serfdom and slavery. Serfdom, however, could become very like slavery when the nobility held the right to sell their serfs without families and independent of the land to which they were attached, as briefly occurred in late 18th-century Russia (Markevich and Zhuravskaya 2018).

There are three main hypotheses to explain why serfdom re-emerged and persisted in Central and Eastern Europe. According to the first point of view, serfdom is likely to appear in societies that have abundant land but scarce labour. Evsey Domar (1970) argued that high land-labour ratios in the East forced landlords to compete over workers. Had labour been abundant, workers would have competed with each other over employment, which would have kept the incomes of the landlords high. However, labour scarcity potentially allowed workers to demand favourable contracts. This motivated the landed elite in the region to use their political influence and change the 'rules of the game' by limiting peasants' mobility and introducing forced labour on their demesnes. The fact that the landlords needed political leverage to organize the society in their favour links to the second point of view, which interprets serfdom as a front line in the ongoing class conflict over redistribution of resources. Most notably, Robert Brenner (1976) argued that serfdom had little to do with the land-labour ratio and all to do with the success of the elites in banding together collectively against the peasants. According to Brenner, serfdom was primarily an extractive institution imposed by landlords to exploit the villagers. This point of view links directly to the World Systems interpretation of economic history developed by Immanuel Wallerstein (1974). In this approach, the rise of international trade between the Baltic region and the West increased the demand for grain produced in the East, which in turn, increased the demand for labour in Central and Eastern Europe. Export opportunities are thus seen as having encouraged landlords to increase the output of their demesnes, which they accomplished by increasing the labour duties of the peasants (Małowist 2010; Topolski 1965). We will discuss the World Systems school in more detail later in this chapter.

Serfdom is usually seen as having a negative impact on economic growth and development, being characterised as a rent-seeking institution tailored to the benefit of landlords. In the older qualitative and theoretical literature on the subject, serfdom has been held responsible for (1) constraining mobility between the agricultural and non-agricultural sectors; (2) discouraging improvements in agricultural

productivity by undermining incentives; (3) hampering the accumulation of human capital; (4) being wasteful because of the costly way that it transferred resources from workers to employers; and (5) decreasing the purchasing power of villagers (Ogilvie and Carus 2014; Acemoglu and Wolitzky 2011). Recently, a number of authors have complemented these qualitative and theoretical investigations with quantitative analysis. Alexander Klein and Sheilagh Ogilvie (2016), by analysing a dataset covering nearly 7,000 villages in mid-17th-century Bohemia, have established that serfdom discouraged rural non-agricultural activities of the peasants. These authors demonstrate that, even though landlords might have stimulated some demand for non-agricultural goods and services, they tended to crowd out serf crafts and commerce by siphoning off labour and stifling enterprise through surveillance and rent extraction. The negative economic impact of serfdom has also been documented by Jörg Baten and Mikołaj Szoltysek (2016), who identify a negative correlation between the proportion of serfs in a population and the level of human capital in the 19th century Russian Empire. Similarly, Andrei Markevich and Ekaterina Zhuravskaya (2018), who investigate the economic effects of the abolition of serfdom in the country, document that emancipation resulted in a substantial increase in agricultural productivity, industrial development and living standards. These findings suggest that serfdom was hindering the development of the economy.

This negative assessment of the impact of the second serfdom on economic development in Eastern Europe remains the dominant view. However, a number of writers have also challenged the view that serfdom was a very damaging institution that held back growth. One of the strongest statements of this view is by Douglass North and Robert Thomas (1971, 1973), who argue that serfdom can also be seen as an efficient solution to various adverse economic and political conditions rather than just a rent-seeking practice. North and Thomas (1971: 778) write: ‘serfdom in Western Europe was essentially not an exploitative arrangement . . . [it] was a contractual arrangement where labour services were exchanged for the public good of protection and justice’. A related argument is that serfdom can be seen as an institutional response to the risk- and market-aversion of peasants (Chayanov 1966). According to Stephan Epstein (2000), even if the enserfed villagers had been provided with secure property rights, they would still have been unwilling to increase their market participation above the bare minimum. According to Michael Bush (1996), *corvée* duties (unpaid manual labour duties) and high monetary rents provided a solution to this unwillingness of the peasants to commercialise their production. Surplus extraction by the demesne allowed for large-scale commercial farming in societies with scarce supplies of labour and thin markets. Mikołaj Malinowski (2016b) has recently tested this idea empirically by investigating the impact of serfdom on urban growth in early modern Poland. The author identified that even though labour coercion constrained the long-term growth of urban settlements, it also made them less vulnerable to market crises in the short term. This could have delayed the abolition of serfdom.

Trade dependency and the World Systems approach

Dependency theory emerged at the time of deepening globalisation in the 1960s and 1970s. A question that concerned economists at the time was why, despite the growing liberalisation of international trade and increasing economic specialisation, so many countries around the world were failing to develop. A group of scholars was not convinced by the dominant explanation that the lack of growth in the underdeveloped countries was primarily a result of poor policies and corruption. They suggested an alternative explanation: that the underdevelopment and income inequality between countries was the result of a particular international ‘system’ that perpetuated economic stagnation of the poorer countries to the benefit of the rich nations. In particular, Immanuel Wallerstein (1974) hypothesised that the global economy was governed by a so-called World System that was exploitative in nature and was characterised by the political and economic dominance of some countries over others. Economic historians who shared this point of view, such as Marian Małowist (2010), argued that the system originated in the late Middle Ages and developed and expanded throughout the early modern period. As a result of this system, England and the Netherlands flourished economically at the time, whereas other regions – Central and Eastern Europe in particular – remained stagnant.

Dependency theorists argue that there are different kinds of states within the World System. There are two ideal types of countries at both ends of the system’s spectrum, the ‘core’ or ‘centre’ countries and their ‘peripheries’. According to dependency theory, there is an international division of labour within the World System, with different roles assigned to different kinds of countries. The division is fuelled by trade and integration of international markets. The core countries dominate in terms of industry and technology, producing capital-intensive and high-value-added final products. On the other hand, the peripheral countries specialise in resource extraction, agricultural production and cheap labour availability. They supply raw materials and manpower, and they create a demand for the high-end products from the core. As a result of this division, the peripheral countries serve the economic interests of the core states. The core countries have the political, economic and military power to enforce unequal rates of exchange between the core and the periphery. Furthermore, according to dependency theorists, there is a class distinction within each country between the elite and the working class, with the elites, even in the poorer countries, having a vested interest in maintaining the status quo. In order to ensure the continuation of the system, the elites cooperate with one another internationally, and this perpetuates the underdevelopment of the periphery. According to dependency theorists, the whole system of international surplus extraction is made possible and reinforced by trade rather than formal political mechanisms, with trade in the system seen as a zero-sum game where the weaker side of the exchange loses to the stronger trade partner.

According to economic historians such as Jacek Kochanowicz (1989), the trade that developed during the early modern era between the North Sea and the Baltic Sea had a tremendous impact on the development of economies on both sides of the trade route. Significant amounts of grain, wood and other raw materials were shipped west in exchange for manufactured products. The demand for raw materials and foodstuffs in the West is seen by Jerzy Topolski (1965) as leading to an increase in exports from the East, which led to the reintroduction of serfdom east of the river Elbe, as discussed in the previous section. The landed elites (such as the Polish *Szlachta*, the German *Junkers*, or the Russian *Dvoryanstva*) extracted surplus from disenfranchised peasants in order to cheaply produce export goods.

This World Systems approach is very much at odds with orthodox economic analysis, which sees specialisation according to comparative advantage leading to benefits for all, to be shared out through a competitive process determining the terms of trade. The World Systems approach has therefore been very much a minority view amongst Western economic historians, but has had some influence in Central and Eastern Europe, particularly during the socialist era (for a discussion, see Sosnowska 2004). However, the idea that market access can play a role in the success or failure of individual countries or regions has now been incorporated within the orthodox approach through the ‘new economic geography’. Recognising the importance of agglomeration effects in a world of increasing returns, Paul Krugman and Anthony Venables (1995) show how declining transport costs can lead to a reorganisation of activity so that industry concentrates in a rich core and agriculture in a poorer deindustrialising periphery. In these circumstances, being located in the wrong region can make it very difficult for a country to succeed, however good its institutions. Nicholas Crafts and Anthony Venables (2003) apply this approach to the historical record since 1750, concluding that it is helpful in understanding unequal growth from the 1870s, when transport costs declined sharply. However, this is too late to aid the understanding of the divergence of the East during the 17th and 18th centuries.

These conclusions, drawn from the work of Crafts and Venables (2003), are echoed by recent empirical studies of market integration between East and West and within Eastern Europe. According to David Jacks (2004), there was a decline in the extent of market integration between East (Poland) and West (Amsterdam and London) during the 17th and 18th centuries. Similarly, Mikołaj Malinowski (2016c) has identified a corresponding crisis of the Polish domestic market. This underperformance of international and domestic markets occurred at precisely the time of the increase in the income gap between the North Sea region and the East. These findings challenge the importance of the World Systems as the driver of the Divergence. In fact, after investigating a link between real wages and market conditions, Malinowski (2015) has also suggested that the decline in Central and Eastern European living standards might have been caused by segmentation of the domestic market. In short, it is possible that it was the decline rather than the rise of markets in the East that reinforced the East–West Divergence.

Factors explaining the success of the North Sea area

In this section we highlight three approaches to explaining the success of the North Sea area, which point to factors where developments in Eastern Europe were very different: (1) the Malthusian approach, based on the work of Thomas Malthus (1766–1834), focusing on the balance between population and resources; (2) the Smithian approach dating back to Adam Smith (1723–1790), with its emphasis on access to markets and the division of labour; and (3) the more recent Northian approach developed by Douglass North (1920–2015), which sees institutional change as the key to development.

Demographic factors

According to the Malthusian view, persistent economic growth in the preindustrial period was only possible if a society managed to regulate its population so as to remain within limits determined by its resources. Malthus assumed feedback from income per capita to fertility (the preventive check) and mortality (the positive check) together with diminishing returns to land (the resource constraint). Growth of per capita income occurs in response to anything which reduces population (an increase in mortality or a decline in fertility) or increases the availability of land. This approach points to the family system in the North Sea area as a driver of development, with Hajnal (1965) arguing for the emergence of what he called the European Marriage Pattern in Western Europe. This (Western) European Marriage Pattern involved late marriage for women, a high proportion of singles, and nuclear families, which all helped to control fertility and prevent countries like Britain and the Netherlands from having wages driven down to subsistence levels.

The (Western) European Marriage Pattern has been linked by de Moor and van Zanden (2010) to their hypothesis that late-age marriage of women in North-Western Europe resulted from the strong position of women in those societies (what they call ‘Girl Power’), as a result of inheritance patterns and labour market opportunities. This late-age marriage led to greater accumulation of human capital, both as a result of the labour market experience of women and the higher levels of education that could be afforded for the smaller number of children resulting from later marriage. This increased the productivity of labour and, in turn, economic growth. Despite its benefits, not all of Europe followed this fertility pattern, however. In particular, Hajnal (1965) proposed that there was a divide, known in the literature as the Hajnal line, stretching from St. Petersburg to Trieste that split Europe into a ‘West’ – characterised by the supposedly beneficial fertility regime – and an ‘East’, with a higher quantity but lower ‘quality’ of offspring.

Jörg Baten and Mikołaj Szoltysek (2016) have recently demonstrated that family systems in general and female autonomy in particular had a strong impact on human capital formation. They showed that numeracy in early modern Central and Eastern Europe was strongly correlated with the late age of marriage of women. The authors also demonstrated that numeracy levels in the East were lower than in

the West. Their findings suggest that the difference in marriage patterns could have significantly affected economic outcomes and could therefore have contributed to the Little Divergence.

The supposed causal link between the differences in marriage patterns and economic growth has been challenged by Tracy Dennison and Sheilagh Ogilvie (2014), who compiled information from 365 individual research studies to construct a dataset on historical demographic behaviour. They argued that, according to the empirical evidence, the (Western) European Marriage Pattern was not a predictor of early industrialisation or economic success. Furthermore, the authors have identified that the regions of Slovenia and Bohemia were characterised by relatively late female marriages. The very existence of the Hajnal line has also been challenged by Mikołaj Szołtysek (2015) and Piotr Guzowski (2013), who have identified numerous regions characterised by the (Western) European Marriage Pattern within the Polish-Lithuanian Commonwealth.

Trade and market access

Turning to the Smithian approach, the origins of economic growth in England and the Netherlands can be linked to their access to international markets. Access to the Atlantic coast and active participation in the trans-continental trade could have affected economic growth by allowing England and the Netherlands to profit from market exchange, specialising according to comparative advantage and raising productivity through the division of labour. For example, the Netherlands, a country with limited natural resources but with high population density and a relatively skilled labour force, was able to specialise in its areas of comparative advantage, the production of a range of manufactured products and tradeable services with high value added (de Vries and van der Woude 1997). This generated economic growth in the country. In this framework, rather than seeing the falling behind of Eastern Europe as a result of unequal exchange or class struggle, as in the World Systems approach considered earlier, any advantage or disadvantage arises in the orthodox Smithian approach simply as a result of accidents of geography. Due to their convenient position, the countries located in the North Sea area profited from being the ‘middle man’ between the Baltic and the Mediterranean trade zones (van Tielhof 2002). In short, suitable geographical position gave access to markets which promoted economic growth in the North Sea area, while Eastern Europe remained too distant from those markets to reap the same benefits. This is also broadly consistent with the new economic geography approach of Paul Krugman and Anthony Venables (1995). Moreover, as has been mentioned, by studying the Polish-Lithuanian Commonwealth, Mikołaj Malinowski (2016c) has recently demonstrated that market conditions in the East worsened at the time of increasing market development of the West in the 18th century (i.e. precisely at the time of the increase in the income gap between the regions). This new evidence reinforces the Smithian explanation of early economic growth.

Institutions and economic development

In the Northian framework, the key to development lies in institutional change. Institutions are defined as the ‘rules of the game’, which set the incentives for economic agents so as to either encourage or discourage socially productive activities such as investment and innovation rather than socially unproductive or rent-seeking activities. Daron Acemoğlu and James Robinson (2012) argue that inclusive political institutions, which allowed for representation of the political interests of significant parts of the population and constrained the executive, brought about a fruitful balance between citizens and political elites. This argument has been especially well developed for England. According to Douglass North and Barry Weingast (1989), the English Glorious Revolution of 1688, a political change that weakened the king and reinforced Parliament, was the dividing line between ‘absolutism’ and some form of ‘parliamentary’ government, and thus an important cause of the Industrial Revolution. However, it has also been argued that these growth-fostering institutions did not materialise from thin air, and that forms of power sharing between the ruler and his subjects go back to the Middle Ages (van Zanden et al. 2012). The idea that constraints on the executive was a predictor of economic growth has been challenged by Stephan Epstein (2000), who argued that far from constraining over-strong rulers, what was needed to break out of medieval stagnation was the strengthening of the central state so that sufficient tax could be raised to provide the public goods necessary for the integration of fragmented markets and the enforcement of property rights. According to Epstein, political centralisation deprives local elites of jurisdictional power and displaces rent-seeking from the local to the ‘national’ arena. This makes rent-seeking more transparent and, therefore, harder to implement. Furthermore, political centralisation reduces the costs of coordination, allowing for concerted decisions and policies. This should result in a convergence of legal, monetary and measurement systems, which should lower transaction costs. Although the views of Epstein (2000) and North and Weingast (1989) may at first sight appear contradictory, Mark Dinuccio (2011) shows that in early modern Europe, economic success depended on both fiscal centralisation and parliamentary control. The state needed to be strong enough to ensure market integration and enforcement of property rights but not so powerful as to be able to intervene arbitrarily in business affairs. Britain and the Netherlands led early modern Europe in both the fiscal revenue per capita that they were able to raise, and also in the frequency with which parliaments met to exercise control over how those revenues were spent (Karaman and Pamuk 2010; van Zanden et al. 2012).

Central and Eastern European states lagged a long way behind in both respects: per capita fiscal revenues stagnated at a low level and parliamentary control was weak. Germany unified only in the 19th century while the Holy Roman Empire of the German Nation through the early modern period remained a union of semi-independent polities that kept various degrees of autonomy from the central institutions. At the same time, the Polish-Lithuanian Commonwealth managed to integrate laws within its vast territory and establish a strong parliamentary regime

in the 16th century. This even resulted in a period of economic growth known as the Golden Age of Poland. However, the country succumbed to protracted political crisis and political fragmentation that eventually even led to its partitions in the late 18th century. At the other end of the spectrum, Russia managed to create an empire with a strong and largely unconstrained absolutist ruler.

Conclusions

This chapter juxtaposes known accounts of silver and real wages in the North Sea area with the figures for cities located in Central, Eastern and South-Eastern Europe between 1500 and 1800. It also discusses the available estimates of gross domestic product per capita in Germany, Poland and the Ottoman Empire at the same time, with the latter being used as an imperfect proxy for living standards in South-Eastern Europe. The comparison indicates that the North Sea area was more economically successful than the East already before the Industrial Revolution. The income gap between the regions widened especially in the 18th century. However, according to the GDP per capita evidence, the dissimilarity can be observed even before 1500. The picture based on wages is more complex and dependent on the composition of the basket used to deflate them. If we look only at the silver wages, the Divergence happened already in the Middle Ages. The same conclusion can be made if we divide the wages by the cost of a basket that is rich in processed grains and manufactured products. However, due to the relative cheapness of grains and raw materials in Eastern Europe, the use of a basket containing only grains or very basic products provides a more favourable picture of the East. However, this simply reflects the fact that economic development involved the production and consumption not of an increased volume of basic grains but rather of more processed foodstuffs and other manufactures. Excluding such products from the comparison may show the East in a more favourable light, but it does not remove the fact that Eastern Europe was falling behind economically.

The historiography suggests many potential explanations of the Divergence in development levels between the West and the East of Europe during the early modern period. To some extent, the Divergence can be explained simply by the economic development of England and the Netherlands in this era, which can be linked to late marriage and demographic restraint, a favourable location to benefit from international trade and favourable political institutions. However, there were differences between the performances of lagging economies, which suggests a need to consider some specific regional factors. The stagnation or even decline of living standards in Eastern Europe between 1500 and 1800 has been linked traditionally to the re-emergence of serfdom and also, perhaps less plausibly, to a complex system of exploitative trade dominance by the West. New research has suggested that the underdevelopment could have been stimulated by underperformance of the domestic markets that has been most likely related to inadequate institutions of governance. Adverse market conditions not only stifled Smithian growth processes but also reinforced the coercive institution of serfdom.

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