The Socialist Experiment and Beyond:

The Economic Development of Eastern Europe from 1870 to the Present.

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Introduction

The path of Eastern Europe since the late nineteenth century has been one marked by a series of significant shocks and disruptions. However, as this chapter makes clear, there were also significant continuities in eastern Europe's economic position relative to other parts of Europe. We try here to assess the trajectory of eastern European economic development between 1870 and the present in light of recent economic history scholarship, and offer some explanations for the patterns that emerge from the quantitative evidence. This task is beset with challenges, ranging from changes in political boundaries to abrupt changes in political and economic systems, all against the backdrop of two devastating world wars. The political map of the region was altered three times in the period under examination: through the dissolution of the old empires at the time of World War I, followed by changes to national borders after 1945, and then the more recent changes to borders following the collapse of the Communist regimes. For many of these countries, all of this coincided with the imposition of new political and economic systems, beginning in Russia in 1917, and spreading outward after the Second World War. This was further complicated by the human and physical capital losses of the world wars, which took an enormous toll on economies that were only in the nascent stages of industrialization on the eve of war. Disentangling causes and effects is thus a considerable challenge; all of these factors must be taken into account when assessing the economic performance of these countries over the past 130 years.

This chapter relies on existing quantitative research, but will try to situate the findings in a larger political economic context and attempt to qualify them, where appropriate, using additional evidence. The quantitative dimension derives from a long-running research project on historical national accounts, which currently offer the best approximation of long-run trends in the economic development of eastern European economies. It also employs the work of Angus Maddison (e.g. Maddison 1995), who generated internationally comparable figures of the gross domestic product (GDP) per capita in 1990 international dollars. Notwithstanding the fact that the project is still far from

finished, with new and improved estimates of historical GDP constantly being incorporated, the existing estimates offer a reasonable starting point for measuring long-run economic trends. Our use of these data does not imply, however, that these estimates are unanimously agreed upon by economic historians. Concerns have been raised about the reliability of the data, the extent to which GDP is an adequate measure of pre-modern economic performance, and the ways the findings have been interpreted. We do our best to contextualize the estimates and qualify conclusions we draw. We see these figures as a useful starting point; they are the best sources we have at the moment for the kind of broad comparisons this volume undertakes.

Fortunately, some of the issues raised by the national accounts project can be addressed more straightforwardly, and where that's the case, we do so. For instance, the GDP figures offered by The Maddison Project were constructed using constant borders. This is one way of approaching the calculations, but it does distort historical realities in the process. We therefore prefer to take into account border changes to the extent that we can, despite the challenges that imposes. To do so, we use the border-adjusted GDP figures calculated by Broadberry and Klein (2012). So we refer to Czechoslovakia 1918-1992 rather than Czechoslovakia 1870-2010. We use two GDP per capita figures instead of one: one for the pre-WWI borders and one for the post-WWI borders. We are aware that other questions about defining the region are more difficult to address. What counts as 'eastern Europe' changes considerably over this period. What are the implications for such changes overtime? The inclusion of Austria in the earlier period could make growth appear stronger than it actually was in the areas that subsequently became the 'East Bloc'. The same is true for the inclusion of the Baltic region in the later period, as it was historically more economically advanced than the other Soviet republics. We acknowledge that these are significant issues, but maintain that they are unlikely to distort our attempt to *compare* rates of growth in the region with those in other parts of Europe.

An initial picture of Europe in GDP and population figures is presented below. Table 1 shows regional shares of GDP and population between 1870 and 2010, to put the east into comparative perspective. We can see that Eastern Europe, measured in population, is the largest region in 1913. When measured by total GDP, however, Eastern Europe falls well behind northwestern Europe, though

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it still exceeds southern Europe. What are the implications for standards of living measured by GDP per capita? Table 2 reveals a pattern: Eastern Europe has consistently exhibited the lowest GDP per capita relative to northwestern and southern regions from the late nineteenth century to the present day. This is even more pronounced when measured relative to Europe as a whole: GDP per capita in east European countries comprised between 60 and 74 percent of the GDP per capita of Europe throughout the entire period, suggesting a remarkable persistence in aggregate standards of living. Table 3 presents average annual growth rates for the European regions in four time periods: 1870-1913, 1913-1950, 1950-1990, and 1990-2010. These appear to have been rather unimpressive, except for the decades between 1950 and 1990. Given the low levels of GDP per capita in all regions, one might have expected a catching-up process in the east, but no discernible trend is apparent. Of course regional grouping conceals inter-country differences. This is highlighted in Table 4, which shows average annual GDP per capita growth rates along with GDP per capital levels for individual countries in Eastern Europe. Here the point of comparison is northwest Europe, the most economically advanced region at this time. The figures are suggestive of unconditional convergence among Eastern European countries, most notably in the period 1950-1990, and 1990-2010. However, it would be misleading to conclude that east European economies converged to the northwest Europe economies for two important reasons. First, the convergence in the period 1913-1950 is driven by Hungary and the USSR – two clear outliers – making it difficult to generalize across the region for these decades. Second, when we compare growth rates and levels of GDP per capita in the east with those of northwestern Europe, the growth rates are in almost all cases lower in the east (with the exception of the USSR and Czechoslovakia in 1913-1950 and Bulgaria in 1950-1990). This indicates that eastern Europe had *not* joined the convergence club of northwest Europe, as was already pointed out by Vonyo (2017) for the period 1950-1989.

The Late Nineteenth Century

Economic development in Eastern Europe was slow to gain momentum, even before the massive upheavals of the twentieth century. At the end of the nineteenth century, the region was still largely agrarian, characterized by weak central states beholden to strong corporative interests. In many areas, serfdom was only recently abolished; local factor markets were still impacted by mobility

restrictions and weak property rights. Institutional constraints in various forms – including town and guild privileges, noble privileges (including the residual effects of serfdom), and communal regulations – kept agricultural productivity low (Janoušek 1967). The decades just before the outbreak of the World War I witnessed some signs of economic life in distinct parts of the region (Klein 2011), but development was fairly lackluster, and failed to bring about any substantial convergence with northwest Europe, as the growth rates in Table 4 indicate. A closer look at the trends in specific countries can shed some light on the underperformance of the region as a whole.

The economic development of the Habsburg empire was a history of simultaneous successes and failures. While the empire was economically on par with other parts of German-speaking central Europe at the beginning of the nineteenth century, this was no longer the case as the century came to a close. The monarchy comprised regions varying widely in their economic performance – lower Austria and the Czech lands were among the most advanced and reached levels of development comparable (though not equal) to parts of Germany, while the territories of the future Yugoslavia were among the poorest (especially Dalmatia). Industrialization in the more precocious regions was well under way, and its origins can be traced back to the eighteenth century. The observed gradient confirms that proximity to western Europe played a role, with the Czech and Alpine territories leading the way. By the second half of the nineteenth century, large differences had developed, with Hungary growing significantly more rapidly than Austria. This occurred against the backdrop of the 1867 constitutional settlement, which established the dual monarchy with a customs and monetary union. Looking at sectoral composition, Hungary was dominated by agriculture with over 70 percent of the labour force in this sector in 1910 while in Austria, agriculture comprised only about 50 percent of the labour force in 1910, with manufacturing and distribution coming in second, followed by finance and transport (Schulze 2007). The large agricultural sector in relatively more advanced Austria was in stark contrast to Germany, where the agricultural sector had been steadily shrinking over 40 years. Growth rates in different sectors were uneven in the decades before WWI (Schulze 2000), though it is clear that growth in Austria was driven primarily by the expansion of manufacturing, where in Hungary it was driven by growth in agriculture. The relatively modest growth rates for the Habsburg monarchy might be

explained by the low rate of productivity growth in Austrian agriculture, and the very modest increase in manufacturing. The same rates were significantly higher in the German lands (Schulze 2007).

The proximate sources of economic growth, such as physical capital and human capital, as well as the extent of structural change, can provide some clues as to why the Habsburg lands underperformed relative to northwest Europe. It is possible for an economy to exhibit growth through the reallocation of labour from agriculture to the manufacturing sector. But the story of structural transformation in the Habsburg lands turns out to be complex. The structural change that occurred was growth-promoting; however, its effects were more pronounced in economically less developed parts of the empire. Standard growth accounting exercises suggest that aggregate productivity growth in Austria was hampered by a large rural sector with low rates of capital formation, in stark contrast with Hungarian agriculture, which exhibited rapid capital stock growth (Schulze 2007). Interestingly, industrial capital stock growth did not translate into respectable productivity growth – an observation that economic historians struggle to explain.

The growth patterns in southeastern Europe were not much better than those in the Habsburg lands. Growth rates were higher in Bulgaria and Serbia, but they started at considerably lower levels of GDP per capita. The economies of Bulgaria, Romania, and the Kingdom of Serbia were largely agrarian, with around 80 percent of the population employed in agriculture as late as 1913 (see Table 5). Interestingly, it was not the industrial sector but the service sector which employed the second largest number of workers (except in Serbia). Industrial dynamics were concentrated in large private industries, and in mineral and oil extraction. Existing light industries were not capital intensive; they produced goods with cheap labor. Growth in these areas initially surpassed that of agriculture, but it was short lived and failed to create conditions for sustainable industrialization (Kopsidis, 2012a, 2012b). Profound structural change did not occur.

The Russian empire faced similar challenges. Like most of its neighbours to the west, its largest sector was agriculture and grain was, by far, its main commodity. However, despite employing some 75 per cent of the population, agricultural productivity remained low, with per capita output figures

similar to those in the more sluggish regions of the Habsburg empire, and well behind western Europe (Gregory 1994). Industrial productivity was even lower, and remained so in heavy industry. The growth observed in this period was primarily in textiles and railroads. While the Russian economy did show signs of increased dynamism in the late nineteenth century, sustained long-term growth was inhibited by chronic political instability (manifestations of which included the assassination of Alexander II, continued rural uprisings, and the 1905 and 1917 Revolutions) and growth-inhibiting institutional features like communal land tenure and communal tax responsibility.

The causes of agrarian stagnation in eastern Europe have been debated among scholars, who note that low levels of urbanization and an underdeveloped industrial sector generated a low-productivity equilibrium (Kopsidis 2012a, 2012b). This is reflected in occupational structure, as shown in Table 5. But this is not so much an explanation as a restatement of the problem; these are two sides of the same coin. While lack of urban (or industrial) demand probably did contribute to stagnation, a poor agrarian sector could hardly release the labour required for urbanization and industrialization. The equilibrium remained entrenched; structural change in these conditions posed significant challenges. Policies aiming to promote industrialization were characterized by inefficiencies inherent in bureaucratic government, amplified by a policy of import tariffs which protected inefficient domestic industries. While there has been little work to date on the institutional barriers to growth in this region, the existing historical literature paints a picture of weak states beholden to powerful interests, struggling to build the infrastructure required for efficient tax collection, the assignment and enforcement of property rights, and the implementation of economic and social reform – all of which affected incentives for and perceived risks to innovation and improvements in productivity.

1913-1950

The institutional equilibrium that characterized eastern Europe became increasingly precarious in the decades before World War I. Various attempts at top-down industrialization did little to significantly raise standards of living for the majority of inhabitants, or to expand the range of economic opportunities available to those, who, as we have seen, still laboured predominantly in agriculture (Radice 1985). The weak development of property rights and those civil institutions required to enforce

them, as well as the enduring strength of corporative interests, limited the availability of capital, and undermined incentives to invest in projects that required longer time horizons. Frustration and dissatisfaction with the existing equilibrium, already apparent in the nineteenth century and bolstered by the new ideologies of nationalism and socialism, began to spread, and eventually erupted in a devastating series of conflicts. The inauspicious conditions created by the violent disruptions that characterized the first half of the twentieth century –the First World War, The Russian Revolution, the Great Depression, the Second World War – further undermined all earlier attempts of east European countries to generate growth and catch up to their more dynamic western neighbours.

The aftermath of World War I brought significant political changes to the region. Borders were redrawn and new national states emerged from the ruins of the Habsburg and Ottoman empires, including Czechoslovakia, Hungary, Poland, Yugoslavia, Albania, Bulgaria and Romania. The shock of these geopolitical changes affected economic development profoundly: access to foreign markets, transportation networks, and internal factor and commodity markets flows all had to be reconfigured; new economic policies were required. A different international economic environment emerged: the gold standard of the 'first globalization' era ended, international factor flows were disrupted, and domestic issues dominated the agendas of policy-makers everywhere. Furthermore, the former subject states of the old empires had to reorganize themselves politically along democratic lines for the first time in history. At the same time, on the eastern frontier of Europe, the Russian empire was busy reorganizing itself politically, but along 'Marxist-Leninist', rather than democratic, lines. The USSR emerged in the 1920s as the first socialist state in history – a vast territory comprised of 15 republics, with a planned economy managed by officials in Moscow. The political and economic challenges faced by the region were enormous.

The initial economic conditions of east European countries in this period differed significantly: at one end of the spectrum was the relatively advanced economy of the newly-formed Czechoslovakia, while at the other end were the mainly agricultural economies of the Balkans and the Soviet Union. The aggregate growth performance of the region was not impressive, and even though GDP per capita growth rates are higher for several of these countries than the northwest European average (in contrast

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to the findings for the period before 1913), we must bear in mind that they started at much lower initial levels. The occupational data presented in Table 6 suggests very little, if any, structural change.

The sudden creation of so many newly independent states, all trying to protect their emerging industries with high tariff walls, very likely had a negative effect on their longer run economic performances. Policies aimed at the protection of fledgling domestic firms likely resulted in the inefficient utilization of resources, thus suppressing growth and complicating these countries' attempts to adapt to the new external economic environment. The existing evidence is not entirely clear on this question. Some have argued that, on the contrary, the dissolution of the Habsburg monarchy had little impact on trade since the political borders erected after WWI still reflected pre-1914 economic reality (Wolf et al 2011). Tariffs appear to have been a mixed bag; on some commodities (e.g. rye) they were indeed low, while on others, such as iron and steel, they were set as high as 109 percent (Wolf et al 2011).

Generally, the region's performance in agriculture was disappointing; relatively little technological innovation occurred in this period. This was largely due to piecemeal reforms, low levels of investment, and land reforms that often maintained antiquated practices on small holdings (Aldcroft et al. 1995). This sector was still employing over sixty percent of the labor force as late as 1930 in countries like Bulgaria, Poland, Romania, and Yugoslavia (Table 6). The industrial sector in these countries fared better, as the figures for industrial output indicate (Table 7). We hesitate, however, to conclude that the expansion of industrial output implied an increase in labor productivity and the efficient allocation of resources. The industrial sector in Eastern Europe continued to suffer from low levels of capital investment, low agricultural productivity, skill-mismatch, and disorientation from the shocks of World War I and the Great Depression (see e.g. Eckstein 1955, Teichova 1988,). The protectionist policies of national governments did little to incentivize productivity growth. The industrial sector was dominated by consumer goods industries; the development of heavy industries was very uneven. For instance, metal, chemical and engineering production increased in Czechoslovakia (Teichova 1988) and Hungary's electrical engineering and railway industry raised

global market shares (Klein, Vonyo, Schulze 2017), while heavy industry failed to develop as a separate sector in countries like Yugoslavia and Bulgaria.

One key factor in the aggregate performance during the 1920s was the financing of the industrialization process. Given the low level of per capita income, domestic surpluses were limited. The revenue potential of exports was constrained by the foreign-trade policies of other countries, as well as by the dislocation of foreign trade once borders had been redrawn. That said, the export potential of most countries here was concentrated in agriculture and primary production goods, which were seeing few productivity gains and declining prices. Thus the optimal solution for these states was to borrow on foreign capital markets (Feinstein et al 2008). However, foreign capital flows appear to have had limited effects on industrialization in these countries. This conjecture is supported by import data, which show that the share of imported consumer goods in Bulgaria, Romania, Yugoslavia and Hungary stood at about 50 percent of total imports by the 1920s. Only in Czechoslovakia and Poland was it lower –just over 20 percent (Drabek 1985). While machinery imports increased in the second half of the 1920s, that share was still small compared to consumer goods.

The Great Depression years affected east European economies significantly (complicated in the USSR by shocks related to central planning and collectivization), as the primary goods they produced were highly exposed to price fluctuations. High levels of foreign debt, the collapse of agricultural prices, and the reversal of flows of foreign capital in the late 1920s (Eichengreen 1992) left these countries with difficult choices. Deflation made them increasingly dependent on foreign capital, which they used mainly to finance the import of consumer goods. Restrictive monetary policies implemented in compliance with the interwar gold exchange standard exacerbated the lack of capital, and ultimately pushed these countries into depression Aldcroft et al 1995). Vulnerability varied: agrarian countries were more vulnerable to changes in terms of trade and flows of foreign capital which financed their imports, while more industrialized countries were vulnerable to changes in the demand for their exports. By the early 1930s, however, all the countries of Eastern Europe were experiencing the Great Depression. The recovery process was uneven and depended on, among other things, monetary policies and adherence to the gold exchange standard. Indeed, countries which adhered to the gold standard such

as Poland, did not manage to return to pre-depression per capita GDP levels before the outbreak of the World War II.

In the newly formed Soviet Union faced many of the same challenges as its neighbours immediately to the west: the breakdown of old imperial institutions, border adjustments, and war-related devastation set economic reform efforts back considerably. There were both economic and ideological pressures to industrialize as quickly as possible, as the communist society the Bolsheviks intended to build required an urban, industrial economy with a proletarian citizenry. In their attempt to achieve this goal, the Bolsheviks lurched, in the space of a decade, from a system of total central command of the economy (War Communism), back to one of limited market freedoms (the New Economic Policy), before moving, finally, to an even more centralised command system, which would persist until the USSR's collapse in 1991.

Under the New Economic Policy (NEP), in the years from roughly 1921-28, industrial production figures recovered to their pre-WWI levels (Markevich and Harrison 2011). This recovery was uneven though, and concentrated mostly in capital goods industries (such as chemical or electrical goods), with consumer goods industries considerably behind (Davies 1994). The NEP plan to use market incentives to increase grain production and finance industrialization had limited success overall. The market incentives were effective, but peasants proved reluctant to sell their grain to the state at set prices and the state-subsidized industrialization project soon foundered. After Stalin's rise to power in 1928, the NEP was aborted, and the entire Soviet economy was brought under the control of the central state. Peasants were expropriated in the process of 'collectivization', after which agriculture was run as a state enterprise, with output goals set by the centre). Agricultural productivity plummeted in the process and famine devastated the western grain belt in the early 1930s. At the same time, transport, industry, and all services were nationalized and brought under central command. A central committee decided which goods would be produced, set all prices and production quotas, and organized distribution – all within the framework of "Five Year Plans". (The flaws inherent in this system and the outcomes it generated, as well as the rationale for its existence, have been discussed extensively in the literature – see, for instance, Gregory, 2003) The early years of command and Five-Year Plans saw

significant acceleration in the industrialization process. However, while existing figures may demonstrate growth and increased industrial output, they tell us little about chronic shortages, the poor quality of goods produced, the dearth of consumer goods, or the role of forced labour in the economy – all of which have been well established in the literature.

1950-199

The years after World War II saw watershed changes in the economic systems of eastern Europe. Following the rise of communist parties in east European countries (with support from the Soviet Union), central planning replaced market economies throughout the region. While state interventions in the economy were undertaken in most of Europe during the post-war period, these were trivial compared to the changes brought to eastern Europe. Private ownership of enterprises was abolished and the collectivization of agriculture was undertaken everywhere (with the exceptions of Poland and Yugoslavia). Soviet-style Five Year Plans launched in Yugoslavia in 1947, Czechoslovakia and Bulgaria in 1949, Poland and Hungary in 1950, and Romania and Albania in 1951. (Eichengreen 2007, Berend 2016). Centralized command economies, modeled on that of the USSR, were established throughout the region. Central planning commissions set targets that could be met by existing levels of production, using input-output models. Central planners not only set targets for production, they set prices, distributed wages, managed labour, investment, technological innovation, and foreign trade. (On the structural details, see Gregory, 2003, Eichengreen 2007, Berend, 2016). The eastern bloc of centrally-planned economies was united under an umbrella organization known as CMEA or Comecon – the Council for Mutual Economic Assistance – which operationalized bilateral trade agreements among affiliated countries. The effect was to consolidate trade within the bloc itself, such that, from the early 1950s, 60-75 percent of the overall foreign trade of east European countries was with other command economies.

After the death of Stalin, protests against Communist regimes spread across eastern Europe, and while the most pronounced forms of resistance were crushed in Hungary and Czechoslovakia by

the Soviet Army and the armies of the Warsaw Pact in 1956 and 1968 respectively, they marked significant points of divergence from the Soviet model. This became more and more apparent in the 1970s and 1980s, when partial reforms to relax central planning and introduce market mechanisms at the margins appeared in some countries, most notably Hungary. Yugoslavia followed a distinct path from the beginning, sometimes called the 'Yugoslav alternative' (Berend 2016, Jeffries 1993). There prices were partially liberalized already in the 1950s, collectivization was halted, and firms were managed by elected workers' councils, somewhat independent of central authorities. Still, neither Yugoslavia nor Hungary could have been called a market-oriented economy. That shift only happened after the collapse of the Soviet system after 1989.

The economic performance of these centrally planned economies in eastern Europe, to judge by their growth rates alone, was respectable. As shown in Table 4, GDP per capita growth rates are higher than in the period before World War II. However, their magnitudes relative to northwestern Europe again reveal that the East European countries were underperforming, and that, together with lower initial GDP per capita, suggests that they did not catch up to western economies. The growth rates over the entire existence of the centrally planned economies conceal two phases in their development, as seen in Table 8. The first one, from 1950 to 1973, often called the Golden Age, is a phase in which these countries showed high GDP per capita growth rates, comparable to and even higher than the average of northwest Europe. The second phase is from 1973 to 1989, and it shows a substantial decline in growth rates, now lower than the northwest average. The upward economic trajectory of the centrally planned economies in the early phase reflected their largely low level of economic of development, with agriculture being the dominant sector, in some countries employing more than seventy percent of the labor force (Vonyo 2017). That changed over time as the policies of industrialization were implemented. Table 9 shows the sectoral composition of Czechoslovakia, Poland, and Hungary from 1950 to 1989, indicating a decline in agriculture and increase in industry. These figures also suggest stagnation across all sectors in the 1980s and signs of significant economic decline in Poland.

The policies implemented for rapid industrialization skewed toward heavy industries such as metal, mining, and chemical industries. They relied on extensive growth: large investments in capital

goods and use of abundant labor from the agricultural sector. It is obvious from Table 10 that capital accumulation played an important role in most countries throughout the period of central planning. It is important to compare growth accounts with GDP per capita growth rates: the stagnation in growth accounts in the two decades before the collapse of the socialist system is consistent with stagnation in total factor productivity and the decline of capital accumulation. Focusing on industrialization had a positive effect on aggregate growth in the 1950s and 1960s, when many poor regions saw considerable improvement. However, diminishing returns soon set in. The lack of investment in light, consumer oriented industries and agriculture, as well as shortcomings in infrastructure, housing, and basic utilities meant that the standard of living was significantly lower than implied by the impressive GDP per capita growth rates. As noted above, one of the most salient features of central planning was chronic shortages (Kornai 1980). Long wait lists for consumer durables such as cars, televisions, and especially housing was the norm, long queues for basic foodstuffs such as meat and fruit were not uncommon, and the black market flourished, alongside rent-seeking by shop managers and clerks (Berend 1996; Gregory, 2003).

The 1970s and early 80s were the era of stagnation in the east Bloc. The Communist regimes attempted to reinvigorate their economies by replicating earlier investment-driven policies (as we see in Table 9, Berend 1996), only to slow them down again in the 1980s. Partial reforms were introduced in various countries in the 1980s. For example, price reforms in Hungary from 1968 had created a system in which 78 percent of industrial prices became free market prices while 70 percent of raw materials and energy sources were fixed. This was replaced with a reform in 1979-1980 which gradually linked domestic prices to world market prices.[1] Other countries tried to break out of stagnation through import-oriented growth and consumption (Berend 2016, Aldcroft et al 1995). The availability of cheap credit in the 1970s allowed some countries, including Hungary, Poland, Romania and Yugoslavia, to borrow heavily. However, once the cheap credit dried up in the early 1980s and interest rates increased, countries quickly depleted their foreign reserves servicing their debts (Berend 1996,). The import-oriented strategy included not only consumer goods, but also technology, in an attempt to bridge the

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[1] More on reforms in the 1970s and 1980s, see Jeffries (1993).

growing gap with the West. The results were not encouraging and many joint projects with Western counterparts either failed to materialize or turned out to be inefficient (Aldcroft et al. 1995). In the end, neither marginal reforms nor import-led growth bolstered these stagnating economies and, by end of the 1980s, GDP per capita in eastern Europe was only about sixty percent of the European level, down from about seventy-three in 1950.

One ambition of the early Communist parties was greater equality. Did they deliver on a more egalitarian society? This has been debated by scholars (see Atkinson et al 1992) and the consensus seems to be that, on average, money incomes in socialist economies were more equally distributed than in market economies. That said, there were subtle differences among socialist economies: some countries had more egalitarian income distribution than others, and some experienced even higher income inequality than market economies. Figure 1a and 1b present the evolution of the Gini coefficients and decile ratios (the latter defined as the ratio of earnings in the top decile to the earnings in the bottom decile) for Czechoslovakia, Hungary, Poland, and the USSR from 1970 to 1989 respectively. Great Britain is used as the comparison country. Both figures show qualitatively similar patters: the socialist economies had indeed, on average, lower income inequality than the market economy of Great Britain, with Czechoslovakia being the most egalitarian in that group. However, these figures must be treated with caution. First, income inequality in these countries was not static. Poland and the USSR experienced a significant increase in inequality in the mid-1970s and then again in the mid-1980s, while Hungary witnessed quite a dramatic rise in inequality in the 1980s. The reasons behind those patterns relate largely to changes in policies, such as minimum wage reforms and Gorbachev's *perestroika* (Atkinson et al 1992). Second, it is important to bear in mind that inhabitants of these countries did not view income as the main determinant of equality, since everyone was poor. Those who enjoyed some kind of privileged status (Party members, for instance) were granted greater access to goods and services, education, jobs, travel, and other perqs, which distinguished them from the majority. This kind of inequality pervaded all these societies; it is more difficult to capture, however, with Gini coefficients and similar metrics.

1990-2010

When the Berlin Wall fell in 1989, followed by the collapse of the Soviet Union in 1991, there was the widespread expectation – in both east and west – that the economic convergence which so long eluded the east would finally be realized. The immediate dismantling of the command system, accompanied by moves to implement market reforms, bolstered this expectation. New political parties were formed, elections were held, new constitutions were drafted. Foreign investment flowed into these so-called 'transition' economies. People and goods began to move between eastern and western Europe in ways that hadn't occurred since World War II. After a decade of reform, the cracks began to show, however, and optimism gradually began to fade. In many of the former East Bloc countries, the old system proved more difficult to dislodge than expected. At one end of the spectrum, the German Democratic Republic was peacefully reintegrated into Germany, while at the other end, the former Yugoslavia was plunged into a long and bloody civil war, resulting in a new constellation of nation-states. In between, there were protracted struggles to redefine political systems, establish new institutions, and privatize key industries. Success was largely uneven, from the earliest days of transition.

The problematic nature of the transition from central planning to markets is visible in Table 11, which shows five measures of economic growth between 1990 and 2010: initial GDP per capita, average annual growth rate, the year when a country reached the lowest GDP per capita after the fall of central planning, and the percentage of that lowest GDP per capita from the initial one in 1990. We see that the transition period witnessed a dramatic drop in the living standards in *all* countries, but especially among the countries of the former Soviet Union, and Yugoslavia. Indeed, some, such as Georgia and Ukraine, still have not reached their GDP per capita levels of 1990 some twenty years later. Central European countries were more successful, but even they experienced an initial drop in the early 1990s and recovered only later in that decade. The profound drop in GDP was unexpected and thus attracted a lot of scholarly attention. Two main explanations emerged: credit market imperfections and low liquidity due to restrictive macroeconomic policies (Calvo and Frenkel 1991; Calvo and Coricelli 1993), and the disruption of supply chains due to the breakdown of old regime (Blanchard and Kremer 1997, Roland and Verdier 1997).

Altogether, the transition process was characterized not only by output decline, but also by declines in capital stock and difficulties related to labor reallocation, trade reorientation, structural change, and institutional collapse (Campos and Coricelli 2002). The shrinking of capital stock was contrary to expectations, as it was assumed that the introduction of market forces would improve investment efficiency, and that foreign direct investment (FDI) would provide the necessary capital for restructuring. The evidence indicates, however, that investment fell more than GDP (Campos and Coricelli) and that the flow of FDI, though a significant source of technological transfers, was highly uneven among the transition economies. Labor reallocation was probably the most visible challenge of the transition process. Moving from zero unemployment in the command system, transition economies suddenly experienced unemployment in the double-digits, which, in many places, failed to decline in later stages of development (Jurajda and Terrell 2009). High levels of unemployment were accompanied by low levels of geographical labor mobility suggesting that significant barriers to mobility hindered the successful reallocation of labor under market conditions. The reorientation of the trade relationships came as a response to the collapse of the Comecon, leading to a decline in foreign trade in the early years of transition. Most countries increased their trade with western economies, and their openness increased relative to that under command conditions. The reorientation of external trade went hand-in-hand with restructuring the internal economy, as countries moved away from manufacturing and toward services. Overall, the performance of the transition economies in this region has fallen well short of expectations. There are many reasons for this, but underestimation of the challenge of transition together with questionable policy decisions were among the most critical (Svejnar 2002).

Radical economic reforms were undertaken to transition centrally-planned economies to the market. Debates raged over the nature, timing, and scope of reforms, with the majority of countries opting for the fastest option, often referred to as a 'big bang' reform strategy. The strategy involved macroeconomic stabilization, as well as microeconomic restructuring. The former included price liberalization, restrictive fiscal and monetary policies, wage controls, and in many cases fixed exchange rate regimes. Microeconomic restructuring included the privatization of state-owned enterprises, the creation of a competitive banking system, and the introduction of a welfare safety net. These reforms

simultaneously required the creation of a market-oriented legal framework, including labour regulations, banking regulations, and antitrust regulations. Privatization was one of the most contentious parts of the transition process and countries employed a range of approaches. Mass-scale and equal-access 'voucher' privatization was used in the Czech Republic, Lithuania, and to a certain extent in Slovakia; Poland and Slovenia transitioned more slowly, having state-owned firms run by independent supervisory boards rather than directly by state; Ukraine and Russia relied on subsidized management-employee buyouts, and Estonia and Hungary began to sell off state firms one by one to outside buyers. The success of privatization has been mixed, not only with regard to the macroeconomic performance, but also in terms of firm level productivity (Estrin et al 2009). Furthermore, it has varied enormously between the countries of the CEE and the former Soviet Union respectively. Overall, privatization has had a positive effect on total factor productivity, though the effect was larger when foreign owners took over than when domestic ones did. For the countries of the former Soviet Union, the effect is outright negative. The effect on labor productivity is visible among firms privatized by foreigners, while privatization by employees or management demonstrated no effect. Despite these mixed results, all transition countries managed to substantially increase the share of their private sectors irrespective of privatization methods, in a relatively short period of time, and by the year 2000, more than half of GDP in most of these countries was generated in the private sector (Svejnar 2002).

Conclusion

The persistence of low-growth equilibria in east European countries is generally viewed as the legacy of the socialist 'experiment'. But, as we have shown, the divergence between northwest Europe and the eastern countries was evident already in the nineteenth century; the countries of eastern Europe were struggling to industrialize on the eve of World War I. The institutional weaknesses associated with the communist era – insecure property rights and mechanisms for enforcement, imperfect factor markets, large-scale inefficiencies, and endemic corruption – were all present before the Russian Revolution of 1917 and in most countries of the east Bloc before Potsdam. The challenges of transition since 1991 are thus in many ways the same ones these countries faced in their late-nineteenth century

attempts to grow their economies and 'catch up' to their neighbours in the west. It seems the socialist

'experiment' did not result in the significant break with the past that its architects had envisaged.

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Table 1: Regional Shares of GDP and population, 1870-2010.

	Eastern Europe	North-Western Europe	Southern Europe
Regional share of GDP (% from total)			
1870	29.7	54.7	15.6
1913 pre-WWI borders	30.9	56.1	13.0
1913 interwar borders	27.5	58.4	14.1
1950	31.4	54.4	14.3
1950 post WWII borders	32.8	53.0	14.2
1990	30.6	48.0	21.4
1990 post 1990 borders	27.7	50.2	22.2
2010	24.1	41.1	34.8
Regional share of population (% from total)			
1870	40.2	41.3	18.5
1913 pre-WWI borders	47.2	37.2	15.6
1913 interwar borders	45.1	38.2	16.7
1950	43.7	37.4	18.9
1950 post WWII borders	45.1	36.0	18.9
1990	50.7	28.8	20.5
1990 post 1990 borders	45.6	32.6	21.8
2010	41.7	34.1	24.2

Sources: Broadberry and Klein (2012).

Table 2: GDP per capita, and relative per capita GDP, 1870-2010.

	Eastern Europe	North-Western Europe	Southern Europe	Europe
	Panel A: GDP per capital (1990 GK$)			
1870	1240	2227	1418	1680
1913 pre-WWI borders	1756	4037	2224	2678
1913 interwar borders	1597	4004	2207	2619
1950	2573	5213	2712	3586
1950 post WWII borders	2603	5273	2697	3582
1990	6407	17700	11051	10610
1990 post 1990 borders	6,618	16,954	11,051	10,939
2010	8,390	22,505	13,964	14,549
	Relative per capita GDP (% from Europe)			
1870	73.81	132.53	84.39	100.00
1913 pre-WWI borders	65.59	150.75	83.03	100.00
1913 interwar borders	60.99	152.87	84.26	100.00
1950	71.73	145.36	75.61	100.00
1950 post WWII borders	72.67	147.20	75.27	100.00
1990	60.39	166.83	104.16	100.00
1990 post 1990 borders	60.50	154.99	101.02	100.00
2010	57.67	154.69	95.98	100.00

Source: Broadberry and Klein (2012), Maddison project (2014).

Table 3: GDP per capita average annual growth rates (%), 1870-1913.

	Eastern Europe	North-Western Europe	Southern Europe	Europe
1870-1913	0.81	1.38	1.05	1.08
1913-1950	1.29	0.71	0.56	0.85
1950-1990	2.25	3.03	3.53	2.71
1990-2010	1.17	1.45	1.14	1.43

Sources: Broadberry and Klein (2012), Maddison Project (2014).

Table 4: GDP per capital average annual growth rates and GDP per capital levels, individual countries, 1870-1990.

	Austria-Hungary	Bulgaria	Romania	Russia	Serbia						North-Western Europe
1870-1913											
GDP pc in 1870	1584	809	1143	1129	599						2227
% annual growth	1.13	1.36	0.93	0.74	1.32						1.38

	Bulgaria	Czechoslovakia	Hungary	Poland	Romania	USSR	Yugoslavia				North-Western Europe
1913-1950											
GDP pc in 1913 interwar borders	1450	2112	2442	1941	1705	1020	1482				4004
% annual growth	0.23	1.31	0.04	0.63	0.19	1.76	1.02				0.71

	Albania	Bulgaria	Czechoslovakia	East Germany	Hungary	Poland	Romania	USSR	Yugoslavia	North-Western Europe
1950-1990										
GDP pc in 1950 post WWII borders	1001	1577	3429	3127	2481	2447	1176	2827	1546	5273
% annual growth	2.29	3.14	2.26	1.50	2.39	1.84	2.70	2.23	3.16	3.03

Sources: Broadberry and Klein (2012).

Table 5: Sectoral Employment, 1870-1913 (%).

	Agriculture		Industry		Services	
	c.1870	c.1913	c.1870	c.1913	c.1870	c.1913
Austria-Hungary	67	59.5	15.5	21.8	17.5	18.7
Bulgaria		81.9		8.1		10
Romania		79.6		8		12.4
Russia		58.6		16.1		25.3
Serbia		82.2		11.1		6.7
Northwest Europe	31.7	20.9	35	39.5	33.3	39.6
Southern Europe	58.6	49.3	23.2	26.8	18.2	23.9

Source: Broadberry, Federico, Klein (2010), Table 3.1

Table 6: Sectoral Employment, 1920-1950. (%).

	Agriculture			Industry			Services		
	c.1920	c.1930	c.1950	c.1920	c.1930	c.1950	c.1920	c.1930	c.1950
Bulgaria*	82.4	81.9	77.4	8.1	8.2	10.5	9.4	9.9	12.1
Czechoslovakia	40.9	37.5	37.8	37.4	37.7	37.5	21.7	24.8	24.7
Hungary	59.7	54.8	47.8	20.2	24.9	29.8	20.1	20.3	22.4
Poland	77.5	67.3	57.6	9.6	17.5	23.1	13	15.2	19.3
Romania*	80	80.7	70.1	8.1	9.3	16.8	12	10	13.1
Yugoslavia	82.2	79.7	66.9	11	11.2	18.2	6.7	9	14.9
Greece	57.1	61.1	51.3	18.7	18	20.7	24.2	20.9	28
Northwest Europe*	22.5	17.7	13.4	39.3	40.6	44.2	38.2	41.7	42.4
Southern Europe*	50.8	43.1	40.7	27.6	29.8	30.2	21.5	27.2	29.1

Notes: * denotes Bulgaria and Romania, Northwestern and Southern Europe in c.1913
Sources: Buyst and Franaszek (2010), Table 9.1.

Table 7: Manufacturing Production 1913-1938 (index number 1925-1929=100).

	Czechoslovakia	Hungary	Poland	Romania	UK
1913	65.9	104.1	135.1	85.7	101.6
1920	46	50	47.4	30	97.6
1921	65.9	66.6	63.2	40.4	58.2
1922	60.5	83.2	99.9	62.7	78.3
1923	63.7	58.9	96.2	62.7	84.6
1924	85	69.3	76.8	76.3	94.4
1925	89.9	79.8	85.3	79	93.3
1926	86	86.8	79.6	88.9	85.7
1927	101.4	102.7	102.8	101.8	105.1
1928	109.4	112.4	116.4	112.9	104.8
1929	113.2	118.5	116.1	117.3	111.1
1930	102.5	112.5	102.4	113.5	101.8
1931	91.3	102.6	87	120.5	92.3
1932	70.9	95	71.2	95.9	93
1933	66.8	105.2	80.3	116.7	100.2
1934	74.8	119	92.2	143.8	114.2
1935	79.2	128.9	100.3	141.6	123.9
1936	91.2	142.1	112.6	150	136.9
1937	108.6	156.1	131.9	156.7	146.9
1938	95.9	149.1	142.2	152.4	135.1

Source: Teichova, A. (1985:230).

Table 8: GDP per capital average annual growth rates (1990 GK$).

	1950	1973	1990	1950-1973	1973-1990
	GDP per capital levels			GDP per capital growth rates	
Albania	1001	2273	2499	3.57	0.56
Bulgaria	1577	5296	5537	5.27	0.26
Czechoslovakia	3429	7000	8464	3.10	1.12
East Germany	3127	8559		4.38	
Hungary	2481	5596	6454	3.54	0.84
Poland	2447	5334	5113	3.39	-0.25
Romania	1176	3457	3460	4.69	0.01
USSR	2827	6101	6888	3.34	0.71
Yugoslavia	1546	4237	5470	4.38	1.50
North-Western Europe	5273	12745	17700	3.84	1.93

Source: Broadberry and Klein (2012).

Table 9: GDP by sector of origin of product (% share)

	1950	1960	1970	1980	1989
			Czechoslovakia		
Agriculture	32.4	23.6	17.7	16.3	17
Industry	25.5	32.2	37.5	39.8	40
Construction	6.6	9.4	8.7	8.6	7.6
Transport and communications	4	7.2	7.7	8.2	8.3
Trade	5.5	6.3	7.9	8.5	8.7
Non-material services	25	21.3	20.5	18.4	18.4
			Hungary		
Agriculture	36.6	30	23.2	23.4	24.3
Industry	22.5	28.1	33.4	32.7	32.4
Construction	4.5	5.8	7.5	7	5.3
Transport and communications	5.1	7.8	8.3	9	8.2
Trade	3.4	4.3	6.1	7	7
Non-material services	27.8	23.9	21.7	20.9	22.8
			Poland		
Agriculture	49.5	42.4	32.3	24.1	28.9
Industry	15.5	23.1	30.7	33.7	29.1
Construction	2.5	4.5	5.5	6.6	5
Transport and communications	3.2	4.3	5.7	9.2	8.3
Trade	3.7	4.3	5.2	6.5	6.5
Non-material services	24.5	21.3	20.6	19.9	22.3

Notes: Agriculture includes farming, fishing, and forestry. Industry includes mining, manufacturing, and electrical power. Trade includes both wholesale and retail. Non-material services include finance, housing, water and gas utilities, government services, catering, and personal services.
Sources: Vonyo and Klein (2019).

Table 10: Growth Accounting Czechoslovakia, Hungary, Poland, 1950-1990.

	1950s	1960s	1970s	1980s
Czechoslovakia				
GDP per worker hour	4.1	2.6	2.1	1.1
Capital intensity	3.2	3.3	2.8	1.7
Capital deepening	1.3	1.3	1.1	0.6
TFP I	2.8	1.3	1	0.5
Education	0.3	0.3	0.3	0.3
TFP II	2.5	1	0.7	0.2
Hungary				
GDP per worker hour	3.1	4	2.6	2.5
Capital intensity	1.8	3.9	3.6	2.9
Capital deepening	0.7	1.6	1.4	1.2
TFP I	2.4	2.4	1.2	1.3
Education	0.2	0.4	0.5	0
TFP II	2.2	2	0.7	1.3
Poland				
GDP per worker hour	2.6	2.1	2.6	2.3
Capital intensity	−1.0	0.4	3.5	2.7
Capital deepening	−0.4	0.2	1.4	1.1
TFP I	3	1.9	1.2	1.2
Education	0.4	0.8	0.4	0.4
TFP II	2.6	1.1	0.8	0.8

Notes: TFP (I) and TFP (II) are the residuals of growth accounts not accounting and accounting for educational attainment respectively. 'Education' refers to human-capital deepening and is the weighted contribution of average improvement in educational attainment to aggregate labour-productivity growth.
*Sources*: Vonyo and Klein (2019).

Table 11: Economic Growth in Eastern Europe 1990-2010.

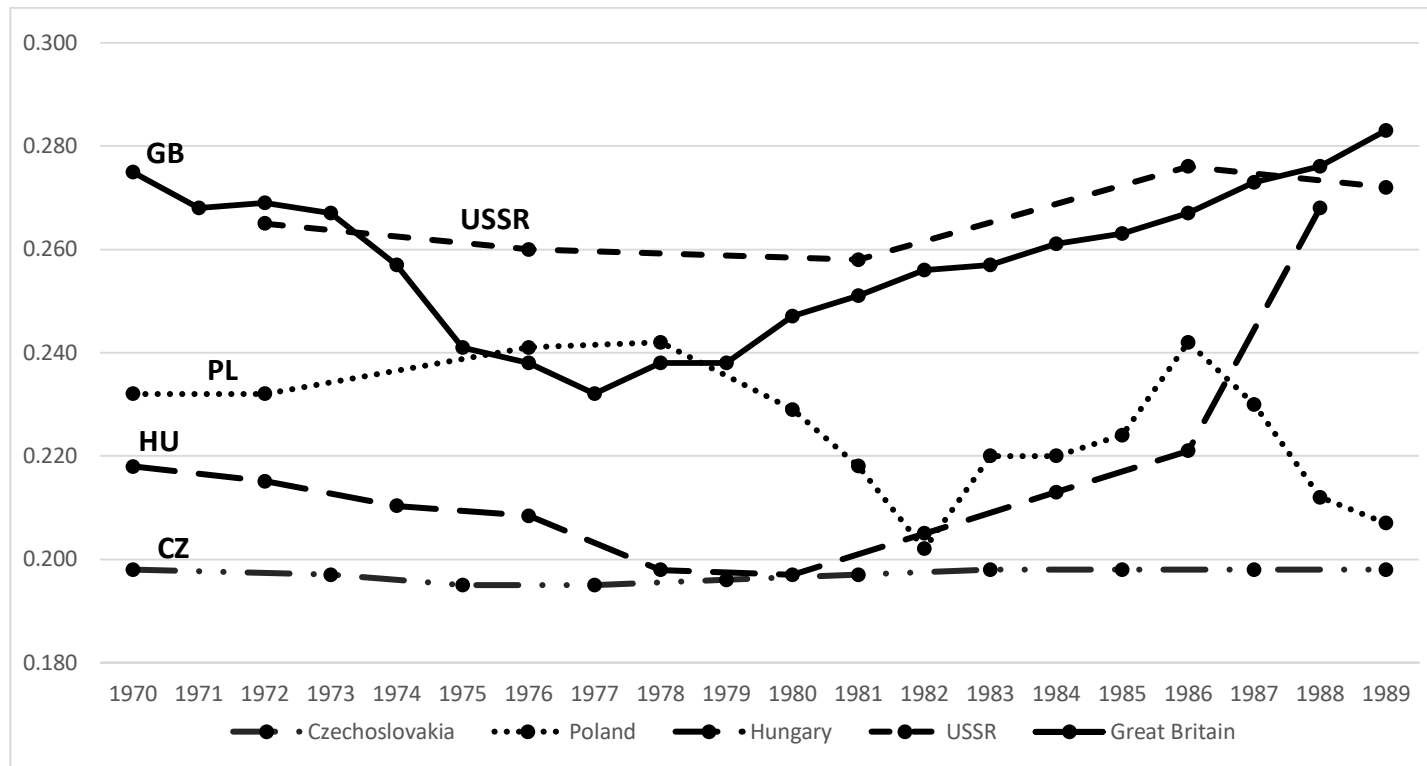|	GDP pc in 1990: post-1990 borders	% annual growth	Year of lowest GDP pc	Year when surpasses 1900 GDPpc levels	% of lowest GDPpc from 1990 GDPpc
Albania	2,499	3.83	1992	1999	70.6
Romania	3,511	1.41	1992	2003	79.8
Bosnia	3,697	1.74	1994	2002	24.8
Serb/Mont	4,144	2.85	1993	1996	69.3
Azerbaidjan	4,639	3.22	1996	2006	39.0
Poland	5,113	3.72	1991	1994	92.7
Bulgaria	5,597	2.34	1996	2001	82.7
Macedonia	5,755	0.32	1995	2007	76.6
Armenia	6,066	2.61	1993	2003	49.0
Moldova	6,170	-1.99	1999		35.3
Hungary	6,459	1.29	1993	1999	85.3
Belarus	7,194	3.21	1996	2003	65.1
Georgia	7,616	-1.05	1994		29.2
Slovakia	7,763	2.53	1992	1998	79.3
Russia	7,779	0.54	1998	2006	57.4
Croatia	8,123	0.96	1993	2002	66.0
Lithuania	8,663	1.20	1994	2003	56.4
Czech Rep	8,895	1.93	1993	1999	87.8
Latvia	9,916	0.91	1993	2004	54.6
Estonia	10,820	2.82	1994	1998	74.4
Slovenia	11,351	2.17	1992	1996	86.2
Ukraine	6,027	-0.01	1998		42.2

Source: Maddison Project (2014).

Figure 1a: Income Inequality 1970-1989, Gross Monthly Earnings, Decile Ratios
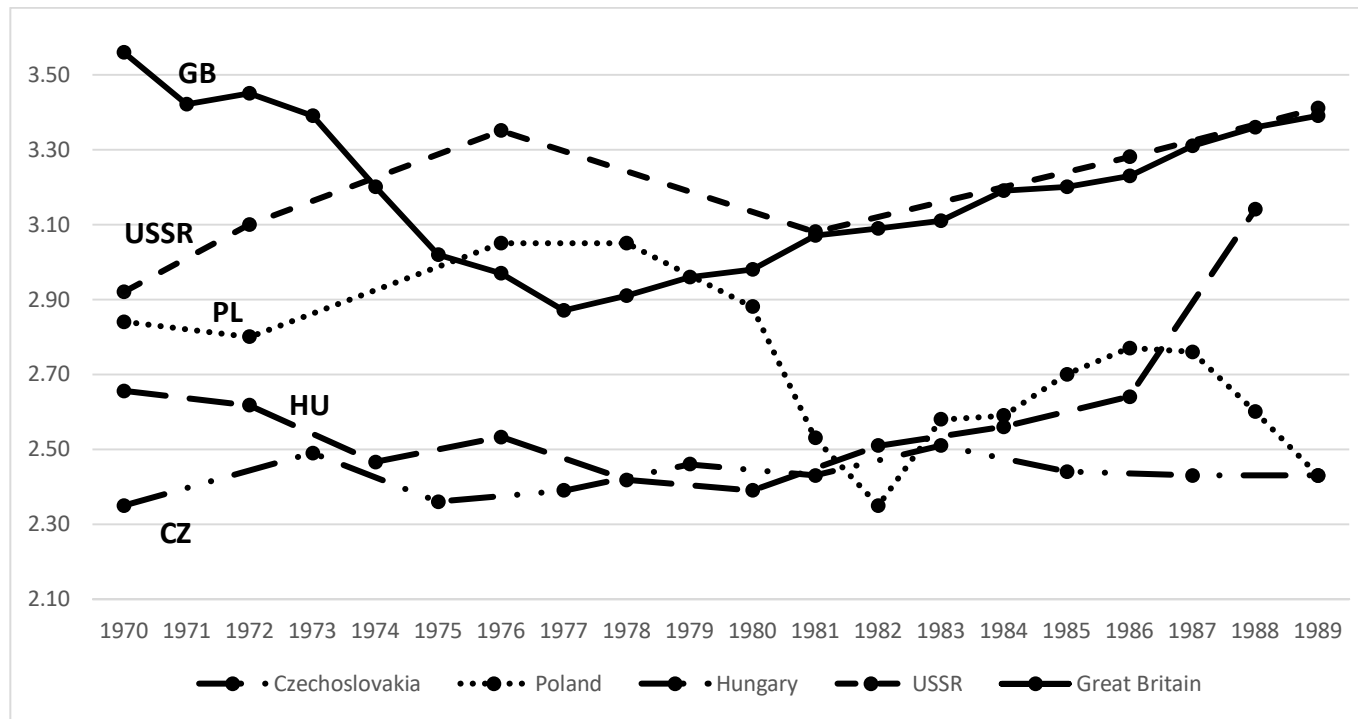
Source: Atkinson and Micklewright (1992), Tables CSE1, HE1, PE1, UE1, UE2, BE1.

Figure 1b: Income Inequality 1970-1989, Gross Monthly Earnings, Gini Coefficients

Source: Atkinson and Micklewright (1992), Tables CSE1, HE1, PE1, UE1, UE2, BE1.