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Introduction

In the second half of the twentieth century, the lives of Europeans were transformed almost beyond recognition. In 1950, many of the continent's residents heated their homes with coal, cooled their food with ice, and lacked even rudimentary forms of indoor plumbing. Today, their lives are eased and enriched by natural-gas furnaces, electric refrigerators, and an array of electronic gadgets that boggles the mind. Gross domestic product per capita, what the income of a typical resident of Europe will buy, tripled in the second half of the twentieth century. The quality of life improved even more than suggested by this simple measure. Hours worked declined by one-third, providing an enormous increase in leisure time. Life expectancy lengthened as a result of improved nutrition and advances in medical science. To be sure, not all was sweetness and light. Unemployment rose. Tax burdens soared. Environmental degradation, political repression, and limits on consumer sovereignty were pervasive under the authoritarian regimes that dominated Eastern Europe for four decades after World War II. But by any objective standard, the last half century has left Europeans today enormously better off than their grandparents were fifty years ago.

Not all parts of the continent shared equally in this prosperity, of course, and not all portions of the last half century were characterized by equally rapid growth. Southern Europe grew faster than Northern Europe. Western Europe grew faster than Eastern Europe. Growth was slower after 1973 than before. This slowdown was most pronounced in Eastern Europe, where it culminated in a crisis of

central planning that brought down not just the command economy but its authoritarian political superstructure as well. These are important qualifications, but they do not change the fact that the post–World War II period, and specifically the quarter century from 1948 to 1973, was a period of extraordinarily rapid change and a veritable golden age of economic growth.

What made possible the rapid economic growth of a continent that was devastated by World War II? Initially, Europe could grow rapidly simply by repairing wartime damage, rebuilding its capital stock, and redeploying men drafted into the wartime task of destroying output and productive capacity to the normal peacetime job of creating them. The rapid economic expansion of the early postwar years largely reflected this process of "catch-up growth."[1] The continent could then sustain its rapid growth by exploiting the backlog of new technologies developed between the two world wars but not yet put to commercial use. The 1920s and 1930s had been decades of instability and crisis, to be sure, but they were also a period of rapid technical change. Among other things, they saw the development of Lucite, Teflon, and nylon, improvements in the design of the internal combustion engine, and organizational changes such as the spread of assembly-line methods and modern personnel-management practices.[2] Most of these innovations were developed in the United States. But a depressed investment climate and then the disruptions of war made the 1930s and 1940s less than propitious times for Europe to emulate America's example. Consequently, by the end of World War II, the United States had opened up a huge lead in levels of output and productivity. But this also meant that there existed an extraordinary backlog of technological and organizational knowledge ready for Europe's commercial use. By licensing American technology, capitalizing on American produc-

[1] The term *catch-up* has been used in different ways in the literature on economic growth. It is used here to refer to the tendency of countries recovering from economic disruptions to catch up to their own potential levels of output.

[2] Similarly, World War II stimulated significant developments in computing, atomic energy, the production of jet engines and radar, and a variety of other fields, many of which also had considerable unexploited commercial potential.

ers' knowledge of mass-production methods, and adopting American personnel-management practices, Europe could close the gap. This aspect of growth in the second half of the twentieth century is known as "convergence," the tendency for levels of per capita income and productivity to converge toward those prevailing in the United States.[3]

For all these reasons, 1945 was a favorable jumping-off point for the European economy. Looking back on the extraordinary economic progress of the subsequent fifty years encourages a tendency to regard what followed as preordained. In fact, many things had to go right, and there was considerable uncertainty about whether they would. Catch-up, which entailed capital formation, the reallocation of labor, and the efficient use of these factors of production, required Europe to mobilize savings, finance investment, and maintain wages consistent with full employment and respectable profit rates. It required getting a range of complementary industries, each of which was necessary for the viability of the others, up and running simultaneously. Convergence required mechanisms for transferring to Europe and adapting to its circumstances the backlog of technological and organizational knowledge developed in the United States.

These were complex tasks. When we place ourselves in the position of contemporaries at the start of the period, as we will do in chapter 3, it becomes clear that any number of things could have gone wrong, as they had in the 1920s and 1930s.

That they did not go wrong now reflected the fact that Europe possessed a set of institutions singularly well suited to the task at hand. Catch-up was facilitated by solidaristic trade unions, cohesive employers associations, and growth-minded governments working together to mobilize savings, finance investment, and stabilize wages at levels consistent with full employment. The problem of getting a set of interdependent industries up and running simultaneously

[3] To be clear, there is also a literature on convergence within Europe (convergence of per capita incomes to the levels prevailing in, say, Germany or France). See, for example, Caselli and Tenreyro (2004). The bureaucracy of the European Union has developed its own terminology to denote this phenomenon, known as "cohesion."

was solved by extramarket mechanisms ranging from government planning agencies, state holding companies, and industrial conglomerates in Western Europe to wholesale nationalization and central direction of the economy in the East. The capacity expansion needed to efficiently operate these scale-intensive technologies was financed by patient banks in long-standing relationships with their industrial clients.

In a nutshell, then, opportunities for catch-up and convergence were realized because of the conformance, or more colloquially the "fit," between the structure of the Western European economy and the economic and technological imperatives of the day. The result was a period of exceptionally rapid growth from the end of World War II through the 1960s.

Critical to Western Europe's success was the security of private property rights and reliance on the price mechanism. But the rapid growth of the postwar golden age depended on more than just the free play of market forces; in addition it required a set of norms and conventions, some informal, others embodied in law, to coordinate the actions of the social partners and solve a set of problems that decentralized markets could not. Hence the "coordinated capitalism" of this book's title.

This codified set of norms and understandings—what economists mean when they refer to institutions—did not materialize overnight. To a large extent it was inherited from the past. It is not surprising that inherited institutions could be adapted to the needs of post–World War II growth, since the challenges of this period resembled those that had confronted Europe in earlier years. Modern industry had developed later on the continent than in Britain and the United States, at a time when the capital intensity of industrial technology was greater. These more demanding capital needs were met by great banks capable of mobilizing resources on a large scale.[4] As industrial production grew more complex and industrial sectors grew increasingly interdependent, it became more pressing to get a range of industries up and running simultaneously; hence the more

[4] This point, famously, is made by Gerschenkron (1962).

prominent role of the state.[5] Late-industrializing economies whose initial growth spurt depended as much on assimilating and adapting existing technologies as on pioneering new ones naturally developed systems of human capital formation emphasizing apprenticeship training and vocational skills as much as university education.[6] Thus, it was no coincidence that Europe had in place following World War II a set of institutions useful for relaxing the constraints on growth. It was also fortuitous that the inheritance was favorable, since these kinds of deeply embedded social institutions are slow to change.

Catch-up was similarly the forte of planned economies organized along Soviet lines. Bureaucrats decided how many factories to build, instructed state banks to mobilize the necessary resources, and limited consumption to what was left. They decided what foreign technologies to acquire, whether through licensing or industrial espionage. Because success measured in tons of steel production depended more on brute-force capital formation and the assimilation of standard technologies than on entrepreneurship and innovation, the centrally planned economies of Eastern Europe were able, initially at least, to perform tolerably well. The institutions of the command economy had severe limitations, as we will see, but they were best suited to the circumstances of catch-up growth.

Just as this inheritance of economic and social institutions contributed to the extraordinarily successful performance of the European economy in the third quarter of the twentieth century, it was equally part of the explanation for Europe's less satisfactory performance in the subsequent twenty-five years. As the early opportunities for catch-up and convergence were exhausted, the continent had to find other ways of sustaining its growth. It had to switch from growth based on brute-force capital accumulation and the acquisition of known technologies to growth based on increases in efficiency and internally generated innovation. This transition is some-

[5] This big-push approach to industrialization had already been emphasized by Rosenstein-Rodan (1943).

[6] A quick introduction to the literature on this subject is Sleight (1993).

times described as the shift from extensive to intensive growth. By *extensive growth* I mean growth based on capital formation and the existing stock of technological knowledge. It is the process of raising output by putting more people to work at familiar tasks and raising labor productivity by building more factories along the lines of existing factories.[7] *Intensive growth*, in contrast, means growth through innovation.[8] A larger share of the increase in output is accounted for by technical change, and less by the growth of factor inputs.[9]

Thus Europe, which had relied on extensive growth in the 1950s and 1960s, had no choice but to switch to intensive growth from the 1970s on. The problem was that institutions tailored to the needs of extensive growth were less suited to the challenges of intensive growth. Bank-based financial systems had been singularly effective at mobilizing resources for investment by existing enterprises using known technologies, but they were less conducive to growth in a period of heightened technological uncertainty. Now the role of finance was to take bets on competing technologies, something for which financial markets were better adapted.[10] The generous employment protections and heavy welfare-state charges that had given labor the security to accept the installation of mass-production technologies now became an obstacle to growth as new firms seeking to explore the viability of unfamiliar technologies became the agents of job creation and productivity improvement. Systems of worker co-determination, in which union representatives occupied seats on

[7] This is not to deny the existence of technical change but rather to emphasize the importance of capital formation—and the tendency for technological change to be embodied in new machinery and equipment—in this first phase of Europe's postwar growth. In economic models, the signature of extensive growth is a strongly rising capital–labor ratio such as that evident in the 1950s and 1960s, when Europe's capital stock grew at a rate of more than 5 percent a year while employment grew by about 1 percent. Extensive growth also took the form of shifting workers from agriculture to industry, where productivity was higher (thereby effectively augmenting the number of "efficiency units" of labor), while equipping them with prevailing levels of capital.

[8] Or at least more heavily through innovation.

[9] Some economists use these terms (*extensive* and *intensive growth*) differently, referring to the growth of gross domestic product (GDP) in the aggregate as extensive growth and the growth of GDP per capita as intensive growth. This is not their meaning here.

[10] These strengths and weaknesses of bank- and market-based financial systems are described in Allen and Gale (2000).

big firms' supervisory boards, had been ideal for helping labor to verify that owners were investing the profits resulting from its wage restraint but now discouraged bosses from taking the tough measures needed to restructure in preparation for the adoption of radical new technologies. State holding companies that had been engines of investment and technical progress were no longer efficient mechanisms for allocating resources in this new era of heightened technological uncertainty. They were increasingly captured by special interests and used to bail out loss-making firms and prop up declining industries.

Increasingly, then, the same institutions of coordinated capitalism that had worked to Europe's advantage in the age of extensive growth now posed obstacles to successful economic performance. In this sense, the continent's very success at exploiting the opportunities for catch-up and convergence after World War II doomed it to difficulties thereafter. And the durability and persistence of institutions, which had worked to Europe's advantage after World War II, were now less positive attributes than impediments to growth.

Eastern Europe manifested this problem in its most extreme form. The centrally planned economies were particularly inept at innovation, since new knowledge generally bubbles up from below rather than raining down from above. More than nearly any other activity, innovation responds to incentives, which were in chronic short supply in the command economies. This weakness of central planning came back to haunt the Eastern bloc once the party was over, the technological pantry was bare, and a premium was placed on innovation.

This, in bare-bones form, is the story told in this book. It is a way of understanding the golden age of growth that prevailed for twenty-five years after World War II and the subsequent slowdown. It explains how the average annual rate of growth of gross domestic product (GDP) per capita in Western Europe could have fallen by more than half between the 1950–1973 period and the 1973–2000 period.[11] It similarly explains why the deceleration between these

[11] Although Europeans reduced their hours worked after 1973, as discussed in chapter 12, causing the growth rate of GDP per hour worked to exceed the growth rate of GDP per

periods was even more dramatic in Eastern Europe and why the planned economies collapsed at the end of the 1980s. To be sure, no single explanation for these complex phenomena can possibly be complete. For example, Europe's growth deceleration was surely also affected by global factors beyond its control. It is revealing, though, that the rate of growth of output per hour declined more sharply in Europe than in the United States, which was affected by the same global forces. The exhaustion of the technological backlog and the difficulty of adapting inherited institutions to changed circumstances go a long way toward explaining this fact.

As these last sentences remind us, the story of Europe's postwar growth—indeed, the story of its growth over the entire second half of the twentieth century—cannot be told in isolation from developments in the rest of the world. This directs our attention to another aspect of the inheritance shaping growth in the third quarter of the twentieth century: the Great Power conflict. Countries falling within the ambit of the United States or the Soviet Union came under pressure to adopt the same form of economic and social organization as the power under whose security umbrella they sheltered. After a brief period of uncertainty, Western Europe was decisively propelled toward market capitalism and Eastern Europe toward state socialism. This choice became the single most important determinant of growth performance in the two halves of the European continent.

The nature of the conflict permitted Western Europe to free ride on the security system provided by the United States. Less defense spending allowed Western European countries to devote more government revenues and investment to private ends. In effect, the subsidiary role that Europe played in the Great Power conflict yielded a peace dividend that freed up resources for productive capital formation.[12] Eastern Europe was the recipient of an analogous

capita, the same was true in the earlier period, shorter hours being a corollary of higher living standards. Hence the growth rate of GDP per hour worked also fell, by roughly the same proportion.

[12] This leaves open the question of whether defense spending, and defense-related research and development in particular, had important commercial spin-offs. I return to this in chapter 9.

dividend; it imported energy and raw materials at submarket prices from the Soviet Union in return for the stationing of Soviet troops in the region.[13]

In addition, the Cold War provided an impetus for regional integration. The United States would not have acquiesced to the creation of a customs union of European nation-states capable of discriminating against American exports except for the priority it attached to building a bulwark against communism. And the Soviets would not have insisted so strongly on the integration of the Eastern bloc but for the example of Western Europe and the incompatibility of their own economy with those of Western European countries.

To be sure, European integration was never mainly a matter of external influence. This brings us to yet another aspect of the inheritance with implications for Europe's post–World War II experience. Europe inherited from the earlier period a deep and abiding strand of integrationist thought. To be sure, that Europe's national economies were deeply interdependent and that the fruits of their interdependence had been squandered in the first half of the twentieth century predisposed some toward the integrationist project. American influence also mattered, as noted earlier. Still, it is revealing of the predisposition toward regional integration that the postwar constitutions of France and Italy included clauses allowing for abrogating national sovereignty in favor of a supranational European authority. It is hard to imagine similar provisions in national constitutions in other parts of the world.

European integration was related to the wider process of globalization and was in turn driven by technological advances—such as high-speed road and rail transport, containerization, and, later, broadband and satellite telephony—that reduced the costs of transacting across borders. But integration went further and faster in Europe. In the 1950s, six European states put planning for their iron and steel industries under multinational control. In the 1960s, Europe became the first major region to create a full-fledged customs

[13] One can question, of course, whether it had much choice in the matter. See chapter 5.

union (a free trade area with a common external tariff). It built on this achievement by creating a single market in which barriers behind the border were dissolved by the mutual recognition of national regulations and the application of a single European competition policy, and then by establishing a single European currency, the euro, whose issuance was overseen by a transnational institution, the European Central Bank.

From an economic point of view, these were important achievements. They gave Western European governments confidence that German industrial capacity would be put to peaceful use, allowing ceilings on that country's industrial production to be lifted. They gave a boost to intra-European trade and encouraged restructuring along export-oriented lines. They exposed cosseted producers to the chill winds of competition and supported their efforts to navigate the transition from extensive to intensive growth. They enhanced the liquidity and efficiency of European financial markets. They helped to cement the economic and financial stability that stood in contrast to the disasters of the 1930s.

From a political standpoint, this achievement was still more remarkable. Barely five years after the conclusion of the deadliest war in modern history, irreconcilable enemies agreed to cede control of the coal and steel industries that were considered critical to their national security to a new transnational entity, the European Coal and Steel Community. Barely five years later, they agreed to surrender another key element of their national sovereignty, the ability to use trade policy to regulate the national economy. These were extraordinary accomplishments by any standard. Nothing analogous had occurred previously, either in Europe or elsewhere.[14]

The institutions of European integration were designed to solve a specific set of postwar problems. They were intended to lock Germany into Europe and ensure that the continent's largest producer of capital goods would apply its industrial might to peaceful uses.

[14] Compare, for example, East Asia, where it has taken more than a half century for the wounds of war to heal and for leaders, inspired in part by the European example, to begin taking the idea of regional integration seriously.

They were designed to lend legitimacy to national governments, freeing them to use their stabilizing and coordinating powers to stimulate the growth of productive capacity, since their destructive tendencies were now contained by the transnational structures of which they were part.[15] They fostered the international solidarity required by the Great Power conflict: the United States encouraged its Western European allies to forge closer economic and political ties, while the Soviet Union prohibited the participation of Eastern European countries that might have been tempted to collaborate in the integrationist initiatives of the West. In all these ways, the institutions of European integration formed another aspect of the coordinated capitalism that is the focus of this book.

In the 1970s and 1980s, efforts were made to adapt these institutions to the challenges created by the end of the postwar era and by the advent of a more competitive, innovation-intensive economy. The European Monetary System of 1979 responded to the breakdown of the Bretton Woods System of pegged exchange rates by instituting adjustable ones. The Single European Act of 1986, by integrating the product markets of the member states, made for a more competitive environment. In turn, competition ratcheted up the pressure to adapt, confronting firms with the need to change or die. The intensity of product market competition being especially important for explaining the speed of uptake of new technologies, information and communications technologies in particular, there is reason to think that product market competition has been especially beneficial for productivity in the recent period of intensive, innovation-based growth.[16] Creating more competitive and flexible capital and labor markets, another goal of the European project, was designed to make it easier for firms to undertake the necessary adjustments. This effort was more successful in the case of capital markets,

[15] See Milward (1992). The importance of European integration for relegitimizing state action and allowing economic growth to resume was particularly clear in the case of Germany, about whose renewed economic strength the rest of Europe would otherwise have had significant reservations (Berger and Ritschl 1995). For more on this, see chapter 6.

[16] See Organisation for Economic Co-operation and Development (2002) for discussion and evidence on this point.

where the advent of the euro created a truly pan-European financial market, than in the case of labor markets, where entrenched interests more successfully resisted change.[17] Still, and notwithstanding these caveats, Europe moved some way in the final quarter of the twentieth century toward the creation of more flexible and competitive markets in response to the pressure of integration.

Once more, however, there were limits to how effectively a set of inherited institutions could be adapted to changed circumstances. Simply encouraging the expansion of iron and steel production, liberalizing trade, or facilitating product market competition, tasks for which the institutions of European integration had been designed, was no longer enough now that it was necessary to fundamentally restructure the entire constellation of socioeconomic arrangements. Following earlier precedent, governments sought to make the European Union (EU) their agent for pushing through these changes. But such reforms were more invasive and therefore even more contentious than their predecessors. Those with a vested interest in existing arrangements naturally pushed back against pressure for reform and specifically against the EU's reformist influence. The fact that the EU's political dimension, which was needed to provide legitimacy for those making these difficult decisions, was less developed than its economic dimension now became more troubling. In addition, the end of the Cold War and the accession to the EU of the formerly "neutral" countries of Austria, Finland, and Sweden, followed by a long list of so-called transition economies, meant that the cozy decision-making rules of the Europe of the six founding members were no longer viable.

Committed federalists had always seen economic integration as a stepping-stone to political integration, but the vast majority of Europeans had resisted ceding sovereign national prerogatives to the European Commission (the European Community's protoexecutive branch) and the European Parliament. They rejected ambitious initiatives for developing the political dimension of their union, in

[17] Although, as we shall see, the euro did more to create a pan-European market in government securities than in intermediary services.

1954 with the French Assembly's rejection of the European Defense Community and the European Political Community, and in 2005 with French voters' rejection of the EU constitution.[18] As the fifty-plus years separating these events reveal, tension between the advantages of economic integration and reservations about political integration is an enduring characteristic of the European project. This tension did not prevent the European Community from being used to promote the recovery of heavy industry, the liberalization of trade, and the deregulation of product markets. But when more far-reaching and socially invasive reforms were required, a set of institutional arrangements whose economic dimension was more advanced than its political aspect became less effective. Again, a set of institutions tailored to the imperatives of postwar growth proved less suited to the circumstances of this later period, and adapting it to new conditions was no easy task. As a result, it was increasingly argued that the EU had become an obstacle rather than a facilitator of growth.

The Eastern European countries under the influence of the Soviet Union took an extended detour on their way to this destination. Following the breakup of the Council on Mutual Economic Assistance, their regional trade bloc, and of the Soviet Union itself, they sought to repair their historic ties with Western Europe, which now meant building links with the EU. They first joined the European Economic Area composed of the EU and its neighbors, a quasi free trade zone that exempted agricultural goods and the products of heavy industries, sectors that were politically sensitive in the West. From the start, however, the Eastern European countries' goal was to become members of the EU. Admission to the EU in 2004 of the first cohort of eight former East-bloc members symbolized their return to Europe. Qualifying required them to establish functioning democracies; through this channel the lure of EU membership played an important role in the development of their political sys-

[18] That France was the country putting the kibosh on these initiatives is revealing since, as we shall see, it was also the country most committed to the larger project of European integration.

tems. Admission to the club was further conditioned on economic reform. Indeed, the incentive to reform was the most tangible benefit of EU accession.

In Eastern and Western Europe alike, reforms remain incomplete. Europe's markets are derided as "inflexible" and "rigid." Its generous welfare state is criticized as corrosive of effort. Its economy is dismissed as "stagnant." A population reluctant to embrace radical change is criticized as "complacent" and "unproductive." In a world of quicksilver markets and intense global competition, questions are increasingly being raised about the viability of the European model.

Are things really so dire? Is it really true that the European model has no future? Understanding the point to which Europe has come and answering these questions require going back to the start of the postwar period.