Introduction

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Modern economic growth, defined as a sustained rise in per capita income with population growth (Kuznets 1966), has created higher levels of prosperity for many more people on earth than was ever thought possible before it began. Moreover, it began not so very long ago, perhaps as late as the middle of the nineteenth century and certainly not before the end of the seventeenth century. As modern economic growth emerged within a favored few nations and modern capitalism began to take on its distinguishing features, the wealth of nations began to diverge at the same time. Capitalism both shaped and responded to the structural changes required to sustain modern economic growth up to the present. The higher standards of living that came with modern economic growth stimulated efforts to imitate the successes of the first British and American examples. But the visible hardships that early capitalism inflicted on existing societies repelled others. Further, the connection between capitalism and modern economic growth was difficult to see in its early stages. Consequently, the spread of both modern economic growth and capitalism after the middle of the nineteenth century was fitful and uneven.

Even as the beneficial effects of modern economic growth became increasingly evident in the leading industrial nations, the spread of capitalism was restrained by local social, political, and cultural conditions in other countries, as demonstrated by the essays in Volume II, *The Spread of Capitalism*.

Collectively, however, those essays provide evidence that the capitalist system of coordinating economic activity through market signals to all the participants concerned was the root cause of the material advances so evident across the world at the beginning of the twenty-first century. Identifying capitalism as an economic system that generates modern economic growth, however, raises the question of whether continued growth in per capita income can be sustained and therefore whether capitalism as an economic system can be sustained. Those are questions dealt with throughout the essays in Volume II.

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The question that the essays in Volume II do not raise, however, is: "Why did capitalism and modern economic growth take so long to get started in the first place?" The essays in Volume 1, The Rise of Capitalism, try to answer that question. Their answer, essentially, is that it was hard - very hard - to coordinate the various factors needed to build and sustain permanent settlements in the first place, although such efforts usually raised per capita incomes (what economists term "economic growth on the intensive margin"). Then, it was even more difficult to sustain coordination over the long run in the face of successive shocks that arose naturally, either from external events or internal conflicts. Whether setbacks occurred from natural disasters, epidemic diseases, military defeats, or failures of leadership, they had the common feature of undoing whatever advances had been achieved earlier without laying a foundation for subsequent recovery. A consistent theme throughout the essays in Volume 1 therefore is to determine what features of modern capitalism were present at each time and place and, further, why the various precursors of capitalism did not survive setbacks and then subsequently continue the growth of both population and per capita incomes from their earlier levels.

Concepts of capitalism

What are the salient features of modern capitalism and how were these features manifested in earlier times? The scholarly literature refers variously to agrarian capitalism, industrial capitalism, financial capitalism, monopoly capitalism, state capitalism, crony capitalism, and even creative capitalism. Whatever the specific variety of capitalism denoted by these phrases, however, the connotation is nearly always negative. This is because the word "capitalism" was invented and then deployed by the critics of capitalists during the first global economy that clearly arose after 1848 and the spread of capitalism worldwide up to 1914. In the resurgence of a global economy at the beginning of the twenty-first century, however, scholars accept that there can be many varieties of capitalism and that there are comparative advantages to each variety (Hall and Soskice 2001).

Four elements, however, are common in each variant of capitalism, whatever the specific emphasis:

- I private property rights;
- 2 contracts enforceable by third parties;
- 3 markets with responsive prices; and
- 4 supportive governments.

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Each of these elements must deal specifically with *capital*, a factor of production that is somehow physically embodied, whether in buildings and equipment, or in improvements to land, or in people with special knowledge. Regardless of the form it takes, however, the capital has to be long lived and not ephemeral to have meaningful economic effects. That means that each of the four features listed above has to have a long time horizon, spanning at least several years and preferably several human generations. Capital should also be productive and therefore in use throughout its economic lifespan, which may be shorter than its physical life due to obsolescence. Ownership of productive capital in whatever form it takes may be separated from its management, which leads one to consider explicitly the organizations and procedures created to operate, maintain, and expand or modify the capital stock.

Beyond these technical terms used by modern economists to define "capital" objectively for purposes of academic research, however, "capitalism" must also be considered as a system within which markets operate effectively to create price signals that can be observed and responded to effectively by everyone concerned – consumers, producers, and regulators. The effectiveness of the market-driven capitalist system depends upon the incentives its institutions create for all concerned, as well as the openness it provides to enable participants in the system to respond to incentives. Douglass C. North defines institutions as:

the rules of the game of a society and in consequence [they] provide the framework of incentives that shape economic, political, and social organizations. Institutions are composed of formal rules (laws, constitutions, rules), informal constraints (conventions, codes of conduct, norms of behavior), and the effectiveness of their enforcement. Enforcement is carried out by third parties (law enforcement, social ostracism), by second parties (retaliation), or by the first party (self-imposed codes of conduct). Institutions affect economic performance by determining, together with the technology employed, the transaction and transformation (production) costs that make up the total costs of production. (North 1997: 6)

Beyond the basic elements of economic activity that are physically observable, therefore, the history of capitalism must also pay attention to the organizations such as guilds, corporations, governments, and legal systems that operate within and enforce the "rules of the game." Further, less observable elements such as informal institutions and mental models that govern individual responses to external conditions may determine the effectiveness of markets in creating and then sustaining economic growth (North 2005). Continued reallocation of resources within an economy is essential for

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economic growth to be sustained, or regained after any setback, whether caused by external factors such as war, famine, natural disaster, disease, or internal factors such as a financial crisis or failures of leadership. Market signals are necessary to guide the reallocation of resources and to direct the effort required to continue or resume growth. The source of finance for the transition to the new state of the economy, however, may or may not be driven by market signals, depending on the existence of capital markets and the exigencies of command economies. Much attention has to be paid, therefore, to sources of financing and its effective deployment in the past, especially for the financing of long-distance trade and of long-lived projects that would be essential for sustaining economic growth, given the technology of the time.

Moreover, while a thoroughgoing market system with markets for labor, land, and capital as well as final consumption goods and services has its internal logic, it is necessarily embedded within broader political, cultural, and social systems. So the price signals generated within the capitalist market system have to be observed and responded to by political, cultural, and social groups as well as by consumers and producers within the economy (Ogilvie 2007). Capitalism, therefore, can be defined usefully as a complex and adaptive economic system operating within broader social, political, and cultural systems that are essentially supportive.

This operational definition of capitalism leads us to search for characteristics that may have been present in different historical settings when economic growth was achieved for a significant period (at least a couple of centuries, as with modern capitalism). Archaeological evidence of settled agriculture combined with urban complexes sets the earliest limit for useful historical inquiry into complex economic systems that may, or may not, evince signs of incipient capitalist institutions. Modern archaeology, for example, can identify the composition of food sources for ancient sites to determine the variety of cultivars and domesticated animals. Evidence of olive oil, wine, and preserved fruits might demonstrate that economic agents operated with time horizons of at least the several years required to bring olive trees, grape vines, or date palms to maturity for repeated harvesting. Aerial surveys that show up remains of irrigation works and canals, as well as ancient raised or terraced fields next to concentrations of housing, also provide tantalizing evidence of capital formation with long time horizons and increased productivity. With appropriate attention to documentation that may have been preserved for whatever reason, sources of finance and issues of contract enforcement may be adduced as well. Clay tablets found throughout the Middle East with arithmetic exercises and comparisons of different alphabets

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indicate the possibility of training specialists in record-keeping and disseminating market information, a very special kind of human capital and one found only within urban settings.

Whether these early efforts to maintain the flow of economic activity through reliable payments systems could be the basis for longer-lived economic projects remains open to question, basically because the evidence needed to demonstrate the connections of finance capital to real capital remains elusive. European scholars have the benefit of merchant accounts, correspondence, and even newspapers after the invention of the printing press, combined with repositories of legal disputes and decisions. Scholars in the rest of the world, however, have increasingly been able to uncover comparable evidence of their merchant entrepreneurs, especially after European contact. While the Italian development of the foreign bill of exchange has long been seen as an essential element in facilitating the rise of European capitalism, it is clear that the Arab empires that arose with Islam beginning in the seventh century used similar financial instruments. Both hawala (transfers of credits from one place in one currency to another place in another currency) and saftaja (transfer of credit from one place in one currency to another place in the same currency) financed the extensive trade of Arab and other merchants throughout the Mediterranean and into central Asia and northern India (Pamuk, Chapter 8). Hundi were the same technique used in southern India long before European contact when cotton textiles were doubtless exported to the rest of Eurasia (Roy, Chapter 7). Chinese merchants used fei-ch'ien (flying money) or pien-huan (credit exchange) as analogous financial instruments in their trade (Thompson 2011: 98; Wong, Chapter 6).

In the European case, these techniques of financing long-distance trade eventually interacted with the techniques of war finance to become the financial basis for European domination of global trade in the early modern period (Neal 1990). By contrast, the earlier emergence of comparable empires seemed to finance military efforts by the equivalent of capital levies, which not only disrupted the existing payments systems but also despoiled previous accumulations of merchant capital. While long-distance trade sustained and was sustained by both capitalism and economic growth, repeated wars, rebellions, and raids disrupted both capitalism and economic growth, making the eventual success of British mercantilist policy exceptional, as argued by Patrick O'Brien in Chapter 12.

It has long been accepted that the start of modern economic growth was due to industrialization as practiced first in Great Britain, although precursors

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of industrialization were evident in much of Europe, the Middle Eastern civilizations, and especially China and India well before the eighteenth century. Most books catalogued under the subject heading of "Capitalism, history" therefore deal with developments in western Europe from, at earliest, 1500 (Appleby 2010; Beaud 2001), but usually from 1700 on (e.g. Broadberry and O'Rourke 2010). They then expand their coverage to include mainly the United States, Canada, Australia, and perhaps Japan and Russia for the nine-teenth century and later. More recently, however, scholars have attempted to take a much longer time perspective (Graeber 2011, Jones 1988; Morris 2010), and a much broader geographical range (Parthasarathi 2011; Pomeranz 2000; Rosenthal and Wong 2011).

In keeping with these initiatives, we take the view that the current world economy has been a long time in the making, so we look for the beginnings of the "rise of capitalism" as far back as archaeologists have been able to detect tangible evidence of some human activity that was consistent, if not fully congruent, with the practices of modern capitalism. Organized market activity that took place over long distances, and consequently with long time horizons and long-lived structures, has left archaeological remains as well as an occasional historical record. Most useful are signs of rising population density along with increasing consumption per capita, what Jones (1988) has called economic growth on the intensive margin, which coincided with economic growth on the extensive margin. These apparent contradictions to classical Malthusian theory that population growth before the advent of modern economic growth would dissipate temporary gains in per capita income from whatever source, can be called "Malthusian singularities."^{II}

A variety of evidence acquired by using the tools of modern science has convinced archaeologists and many historians of the ancient world that high levels of per capita income did emerge episodically well before modern economic growth began in capitalist economies. Even more interesting, these episodes typically were accompanied by extended periods of population growth as well as technical improvements that seemingly presaged aspects of modern, high-income societies. Why they failed eventually to realize what might have been much earlier achievements of modern economic growth and rapid technical progress, however, remains a mystery, but a mystery that has stimulated all sorts of conjectural histories.

I James Hutton (1795) coined the term "singularity" for modern geology when he observed two quite separate strata of rock juxtaposed off the coast of Scotland. Exploring the possible incidents of such singularities worldwide then launched geology as a modern, truly global science.

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It appears that the earliest evidence of Malthusian singularities is from the ancient civilizations of what is now known as the Middle East, mainly Babylon and Egypt. Most tantalizing in light of later developments in the Mediterranean world are the economic activities of the Phoenicians (Aubet 2001; Moscati 2001). The Phoenicians clearly developed cities and a market structure to support the inhabitants with provisions in return for specialized artifacts and protection over very long periods of time, periods certainly longer by orders of magnitude than the era of modern capitalism, and their trade routes covered the entire Mediterranean and the Atlantic coasts of Africa. It is an article of faith of Phoenician archaeologists that the first circumnavigation of Africa was by the Phoenician admiral Hanno, in the years around 425 BCE, for example. But they can only conjecture the economic significance of the artifacts they have uncovered and the quotidian functions of the sites they have identified, extensive as they are around the Mediterranean.

Unlike the contemporary civilizations in Mesopotamia and Egypt and later in Greece and Rome, there is very little textual evidence from the Phoenicians that can enlighten us about their economic organization. Aubet (2001), for example, infers that the extensive Phoenician settlements in Spain were mainly enclaves designed in the first case to gain access to the silver mines accessed upriver from Cadiz, but how the extensive trade was organized and financed first from Tyre and then from Carthage remains a matter of conjecture. Archaeological evidence of luxury goods obviously imported into Spain by the Phoenicians may indicate that these were gifts to local tribal elites to initiate profitable export trade for Phoenicians, much as Hudson's Bay agents did in the beaver trade of eighteenth-century North America (Carlos and Lewis, Chapter 15). But how Phoenicians organized, controlled, and sustained their long-distance trade remains unknown.

For later civilizations, modern archaeology has the benefit of classical texts that provide rich contexts for assessing the economic consequences of the material evidence that archaeologists have uncovered in overwhelming quantities. The huge archives of clay tablets and bullae uncovered from the excavations of ancient Babylon since the late nineteenth century, and now stored in museums around the world, have gradually been decoded. The mind-numbing details of their economic records, both from temples and private merchants, have been pieced together by teams of archaeologists to give us a compelling picture of a vibrant economy lasting for centuries starting 1200 BCE at the outset of the Iron Age and extending to the conquest of Mesopotamia by Alexander the Great in 332 BCE.

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The case studies for the rise of capitalism

Michael Jursa (Chapter 2) introduces the archaeology-based reinterpretations of the economic experiences of ancient economies, based on his extensive analysis of the Babylon evidence. In his earlier work (Jursa 2010), he concluded that Babylonia in the sixth century BCE had reached higher levels of prosperity than in earlier periods of its history. "[T]he economy was growing, the productivity of (frequently market-oriented) agriculture was increasing, a substantial part of the urban population worked in non-agrarian occupations, there was a high degree of labour specialization, and the economy was largely monetized" (Jursa 2010: 815). In a word, basic elements of what became Western capitalism as described in later chapters made their documented appearance well before the rise of Greek city-states or of the Roman empire. Nevertheless, the life of individuals was uncertain and many remained ill and hungry while even members of the elite were on occasion arbitrarily put to death and had their property confiscated, and laborers were forced to work without food or clothing being provided. Moreover, the extensive building projects carried out by royal authorities seem to have been financed mainly from the spoils collected by continued raids into surrounding territories, especially that of the Phoenicians. This was hardly the basis for sustained economic growth, much less for embedding capitalist mental models in society.

Babylon's economic efflorescence lasted through Persian domination. Then it was interrupted by Alexander the Great's conquest in 331 BCE and the subsequent division of the previous empire into separate satrapies. Nevertheless, right up to the rise of Islam the basic elements of Babylon's economic success – irrigated fields of grain and groves of date palms combined with herds of sheep and cattle to produce high agricultural productivity – sustained higher standards of living in the cities created between and alongside the two rivers of Mesopotamia (Pamuk, Chapter 8).

Meanwhile, the Greek city-states began to proliferate, dominating the eastern Mediterranean from 1000 BCE until the rise of the Roman empire. In the process of establishing the concept of republican government and laying the intellectual basis for Western philosophy they also managed to combine rising population densities with rising per capita incomes. Recent discoveries by modern archaeologists demonstrate that a considerable amount of intensive economic growth took place in ancient Greece, growth that was based on technical innovation, division of labor, extensive trade, and radical improvements in financial and contracting practices, all within a favorable global

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institutional framework, as demonstrated by Alain Bresson, Chapter 3. Roman legions, however, effected another military revolution by establishing a standing professional army in place of mercenary hoplite troops favored by the dispersed Greek city-states, combining the legions with naval support on lines well established by Athens at the peak of its classical glory (Hale 2009). Extending the Grecian principles of finance, law, and contract enforcement to the furthest reaches of an expanding empire, the Romans took the Grecian precedents to yet another level of population growth and higher standards of living. It took the Antonine plague of the second century to bring down both population and per capita income in the western empire and the Justinian plague of the seventh century to halt progress in the eastern empire according to Willem Jongman, Chapter 4.

Demonstrating that even populations confined to the interior of the Eurasian land mass could engage in long-distance trade and generate independent technical innovations, the fabled Silk Road was traversed for centuries by profit-seeking merchants. The best known were the Sogdian traders, long before Marco Polo made Europeans aware of the existence of the Silk Road and the incredible wealth of Kublai Khan in the thirteenth century. Again, modern archaeologists have uncovered astonishing evidence of the prosperity centered on the trading emporia of Samarkand and Bukhara, which not only connected the various Chinese states over time with the Black Sea and the eastern Mediterranean but also extended trade routes south into India and north as far as the Baltic. All this trade, however, was conducted under the oversight of competing warlords upon whose favor depended the fortunes of the various merchants, not a favorable setting for the rise of capitalism according to Étienne de la Vaissière, Chapter 5.

All of these early experiments with combining intensive economic growth with extensive trading relations within the confines of the Eurasian land mass and extending into northern Africa came to a sudden stop at various times, but most generally and pervasively in the middle of the fourteenth century with the Black Death. At the time, all of Eurasia and much of northern Africa were actively engaged in long-distance trade, the reason why the bubonic plague spread so quickly and so completely across the continent (Abu-Lughod 1989). Chapters 6 through 8 take up the great civilizations that participated in the pre-Black Death trade across Eurasia and then responded to the disruption of trade and the devastation of population in distinct ways up to the modern period.

Imperial China takes precedence as the most advanced and most populous economy anywhere in the world at this time. Ray Bin Wong, Chapter 6, traces the complexity of China's political and economic arrangements through

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successive plagues, famines, and barbarian invasions cumulating with the challenge of the sea barbarians from their initial contact until the Taiping Rebellion lasting from 1850 to 1864. Rather than seeing the long course of Chinese history as unrelieved oriental despotism based on control and maintenance of large-scale irrigation works, he finds that the central government's capacity to command was limited by the scale of its empire, so that it needed to negotiate with its subjects, especially the regional elites, to create conditions desirable for them. This meant sustaining markets, both in land and labor as well as consumer necessities and luxuries, and the institutional arrangements that developed over time proved quite viable through successive changes of dynasties. Managing the resource constraints faced by a densely populated, by European standards, society was challenging but accomplished with light taxation, no central government long-term debt, or private corporations, in contrast to the European style of capitalism.

Tirthankar Roy, Chapter 7, examines the subcontinent of India where a variety of military states sought and established authority in the interior valleys while sundry trading ports tried to profit from trading relations either with the rest of Asia or with the competing empires to the west until the dynamism of the English East India Company subsumed both the competing warlords and the sea merchants. The commercial centers turned increasingly to meet the demands of the European markets, but at the expense of traditional industry, especially cotton goods. India's cotton textiles became the first victim of the deindustrialization that was to prove so general in the nineteenth century. Warlords in the interior retreated to their original territories where they could retain their rent-seeking privileges. The disastrous economic consequences of political rule by a profit-seeking corporation, which Adam Smith had derided in the case of the Dutch East India Company's rule over the Spice Islands and the Indonesian archipelago in the eighteenth century, became even more evident with the rule of the English East India Company in nineteenth-century India.

Şevket Pamuk, Chapter 8, extends his magisterial history of the Ottoman empire, which arose after the Black Death, back to its origins in the rise of Islam from the seventh century on and the economic practices that accompanied it. While the Middle East experienced much institutional change over the centuries preceding the Black Death, and indeed afterwards, independent city-merchant elites did not play the key roles that they did in western Europe (and earlier in the Phoenician and Grecian city-states). Cities were often under the rule of the central state and the economic responses of local artisans and merchants were directed by the priorities of the central authorities. Rather