

Divided We Stand, United We Fall: The Hume-Weber-Jones Mechanism for the Rise of Europe

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Abstract

The “great divergence” in incomes between Europe and the rest of the world occurred relatively recently. Why was it that Western Europe, once a backward outpost on the fringes of the Eurasian continent, able to dominate in terms of income and technology the previously successful Eastern economies? Several mechanisms have been identified to account for the rise of Europe. This paper formalizes one important mechanism, the intellectual origins of which can be traced back to Hume and Weber and which was fully, though informally, articulated by E.L. Jones. This mechanism emphasizes the contrast between the European states-system and the Eastern empires. Political competition for a mobile tax-base in a states-system forces rulers to expropriate less from their subjects and to supply relatively more “public services”. By effectively limiting the “exit” options of the ruled, an empire rewards its ruler with a captive tax-base that can be subjected to relatively higher levels of expropriation without a similar rise in “public services” provided. The states-system thus encourages higher levels of capital accumulation, while the empire stifles it. The successes of the Eastern empires in their consolidation phase are due to the competition they initially faced from neighboring states. Since Europe escaped such consolidation, the process of accumulation there never faced the impediments its Eastern counterparts did. The paper, thus, also provides a structural explanation for the emergence of institutions in Europe that led to relatively secure property rights.

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1 Introduction

Before the industrial revolution income differentials among broad geographic entities and main civilizations, such as Western Europe, India, or China, were quite small, of the order of 1.0 to 1.3 or even less according to one recent estimate (Bairoch, 1993). Yet, by the nineteenth century, Western Europe, that comparatively small and once-backward outpost on the fringes of the Eurasian continental mass, emerged as the technologically most advanced and dynamic region with a clear lead in terms of per capita income. Why?

The rise of Europe seems even more puzzling when compared with the potential displayed particularly by China as late as the seventeenth and eighteenth centuries. Many elements that appear to have contributed to the economic success of Europe seem to be present in China from comparatively early times onwards. For instance, on the eve of the European Renaissance, Chinese advances in science and technology were superior to those of Europe (see Needham, 1954 and Mokyr, 1990); Chinese commercialization and urbanization levels were impressive by premodern standards; the use of paper currency and credit institutions in China predates that of Europe; investment in infrastructure (highways, the ‘grand canals’, irrigation projects) and the use of standardized weights and measures facilitated the emergence of domestic markets in both luxury and agricultural commodities, with peasants trading considerable fractions of their produce; a rural based proto-industrialization system in China mirrored that of Europe until the nineteenth century (Wong, 1997, Deng, 2000, Pomeranz, 2000).

To see what is involved it is useful to start with one prominent attempt to grapple with this question, that of Braudel (1979) who argues that the “capitalist process” could only develop under certain conditions, namely (i) a vigorous and expanding market economy; (ii) an environment which favors the survival of dynastic households allowing for sustained accumulation of wealth; and (iii) openness to foreign trade. China, the countries of Islam and India had a proliferation of markets and merchants. But, Braudel contends, in their own ways states in these societies effectively controlled the process of wealth accumulation, punishing or taxing those who had obtained excessive wealth. Thus, Braudel concludes, it was the “totalizing tyranny” of the Chinese system and the “tyranny of an arbitrary prince” in the Ottoman Empire and Mughal India that prevented the process of patient wealth accumulation necessary for any further historical development.

Europe, in contrast, appears to have provided an environment that did not put up

insuperable barriers to the gradual and continuous accumulation of wealth by successive generations that characterized the “industrious revolution” of the sixteenth to eighteenth centuries.¹ This, in turn, paved the way for the industrial revolution and the “great divergence” between Europe and the other major economies.

What was it then that made it possible for this environment to emerge in Europe allowing it to avoid the fates of the eastern empires? In what follows, I clarify and formalize one popular argument that identifies what I will call the Hume-Weber-Jones mechanism to help explain this “European miracle”.² Its most clear contemporary formulation can be found in the following statements of E.L. Jones.

“The answer is a compound of processes, but what stands out is that the rulers of the relatively small European states learned that by supplying the services of order and adjudication they could attract and retain the most and best-paying constituents—for their subjects must be thought of as constituents in some degree. Within each state there was a clash between kingly interest in taxes and noble preoccupation with rents, an unsettled competition in which the royal concern offered the peasantry some faint protection and some provision of justice. Competition among states led later to programmes of services. Once more there was an environmental component, since, had the core areas of their states been larger and richer, kings might have felt less inspired to offer as much as they did in return for taxes (it was little, but in the *very* long-term it was enough to make European history special).” (Jones, 1981, p. 233.)

“Europeans lived in relatively small states and if they were badly treated—over-taxed, expropriated, or threatened with worse—it was physically possible for them to slip away over a frontier into a more tolerant country. This was not possible in anything like the same degree for merchants or entrepreneurs sealed, as it were, within the great Asian empires.” (Jones, 2002, p. 28.)

Thus, an environment favorable to the accumulation of (both physical and human) capital surfaced in Europe because the political division of the continent that led to a states-system limited the ability of the rulers to expropriate their subjects who found

¹On this now commonly-held view that the Industrial Revolution was a rather slow and gradual movement in its aggregate measures with a long preparatory era preceding it, see de Vries (1994) and O’Brian (1993).

²Section 6 below provides a short intellectual history of this mechanism.

that “exit” was not prohibitively costly in the presence of neighboring rulers competing for “tax” bases.³ Furthermore, facing competition, the European rulers were compelled to adopt policies that promoted the interests of their rising mercantile classes. The Eastern empires, however, at least after their consolidation, did not face the kind of inter-state competition in which the European states found themselves engaged.⁴ The rulers of these empires were, therefore, not as compelled as their European counterparts to sustain an economic environment necessary for the accumulation of capital that characterized the long preparatory period before the industrial revolution.⁵ These empires, of course, were not based on predation alone, nor was it the case that they did not offer anything in return for what they collected from their subjects. It would otherwise be impossible to explain their early successes, their near-parity with Europe before the Industrial revolution, or their sheer survival for centuries. For instance, the rulers of both the Ottoman and Mughal empires were inheritors of the near-eastern and islamic concepts of statecraft modified by the Turco-Mongol traditions of Central Asia that linked the power of a state to the prosperity of its subjects. One formulation of this tradition that goes back to sixth century states that “with justice and moderation the people will produce more, tax revenues will increase, and the state will grow rich and powerful. Justice is the foundation of a powerful state.”⁶ Justice, in this conception of state, meant, most importantly, prevention of what the rulers viewed as illegal taxation (Inalcik, 2000). Rulers of the Eastern empires, not unlike their European counterparts,

³Wallerstein (1979) and Braudel (1979) argue that China, India, and Europe have historically been world-economies: “economically autonomous” geographical areas “able to provide for most of their needs.”

⁴It is instructive to note that the states that eventually formed these empires offered lower tax and expropriation rates to potential subjects in the process of consolidation. The fledgling Ottoman state, for example, imposed taxes that were generally lower than its Balkan and middle-eastern neighbors it eventually conquered (Inalcik 2000). Taxes in seventeenth century India steadily rose from their base established initially by Akbar (Hodgson, 1974).

⁵For instance, “[i]n the Ottoman case, the main concern was always for the fiscal interests of the state and the protection of consumers in the internal market, while in the mercantilist [European] economies economic regulations were determined by a competitive international market. In the last analysis, the rift is linked to the contrast between a social structure which is controlled by an authoritarian ruler in an estate society and a civil society in which the class system and the participation in power of the rising bourgeois class prevailed...Also it is to be remembered that, for the Ottomans, wealth was expected to derive from new tax resources in the lands annexed by conquest, not by intensive methods such as maximizing the income from agriculture, industries, and commerce through new technologies” (Inalcik, 1994, p. 51).

⁶Quoted in Inalcik (2000), p. 66.

also provided public services: they invested in infrastructure, irrigation and drainage projects, maintained roads and caravanserais, adopted policies to encourage agricultural production, tried to provide a working judicial system as well as peace and security (Raychaudhuri, 1982, Inalcik and Quataert, 1994, Wong, 1997). However, in comparison to what they took what these rulers provided was, relatively speaking, too little.⁷ The differences between them and the European rulers might at times have seemed small but, compounded over centuries, even small differences in the resulting rates of accumulation and growth would lead to large differences in incomes.⁸

The thesis that the states-system of Europe promoted capital accumulation and growth by forcing rulers to treat their footloose subjects more gingerly than their counterparts trapped in the vastness of the eastern empires is the focus of this paper. The question “Why Europe” has been the focus of a vast informal historical literature that has put forward additional mechanisms which I briefly outline and critically discuss in Section 5 below. The first of these, which I refer to as the “Culture Makes Almost All the Difference” theory (see Landes, 1998 and 2000), emphasizes the role of cultural differences in explaining the path taken by different economies. The second thesis is that put forward by a group of historians called the “world historians” who believe Europe’s rise was due to some “chance” event (see Goldstone, 2000 and Pomeranz, 2000, Wong, 1997) . The third is the “Resource Grab” thesis most recently advocated by Frank (1998) that focuses on the European seizure of gold and silver in the New World. These mechanisms, I argue below, may have had some short-run effects, but ultimately they

⁷Thus, “[i]n constructing dams, canals, or artificial ponds for irrigation, the Ottoman state took the initiative only in some urgent cases, and private participation in such enterprises was encouraged mainly for the tax revenues to be gained. In contrast, as argued by economic historians, in Europe, the relatively small-sized state structures, fiercely in rivalry against each other, and also population pressure, led the Europeans to intensive agriculture and to systematic efforts for mercantile gains from foreign trade as well as the more intensive use of labor at home” (Inalcik, 1994, p. 51). Wong draws attention to the contrast between the support provided by the European rulers to mercantile interests and the lack thereof in the case of China: “[i]rrespective of the particular institutional mechanisms deployed by a particular European country’s merchants, all held a fundamental belief that state and merchant shared a common interest in exploiting economic opportunities. European notions of a merchant empire were absent from Chinese thinking not because the Chinese state was too weak to consider such an alliance between government and merchant but because it was too strong and successful in other ways to have reason to consider practices that would bring it revenue that it did not anxiously desire and potential problems it did not really want” (Wong, 2000 p.455). And “[t]he Chinese political economy was not ‘mercantilist’ since its policymakers did not conceive of themselves as competing for wealth and power with other like-minded governments” (ibid, p. 460).

⁸See Section 4 below on historical evidence of relative expropriation rates.

are not convincing as independent factors that can explain the contrasts between the long-run growth experience of Europe and the economies of the Orient.

Formal literature on the subject is as yet small. Most important for our purposes is Garner and Chaudhry (2001) that formulates a mechanism complementary to the one suggested in this paper, emphasizing the growth-promoting role of the states system: rulers that blocked technological change ran the risk of losing, at least partially, their possessions and revenue to neighbors who did. Since the risks were smaller for the rulers of empires who did not always face such menacing competitors close by, support for change was not as forthcoming in an empire.⁹ Interstate competition in Europe is also stressed by Findlay (1992) who points out that this rivalry promoted advances in military technology that enabled Europe to extract resources from the rest of the world.¹⁰ An intriguing recent formal literature (see, inter alia, Galor and Weil (2000) and Galor and Mountford (2003)) looks at the connection between the demographic transition from the Malthusian to post-Malthusian regime and the industrial revolution, an issue ignored here. This literature, in turn, abstracts from the political-economy issues and assumes that accumulated human capital is directly channelled into productive activities rather than rent seeking—an activity that has historically been quite dominant as the example of Chinese mandarins illustrates. A historically more accurate and richer account of the “great divergence” would therefore benefit from an analysis that combines the political economic concerns with this recent literature on endogenous population growth.¹¹

The mechanism emphasized in the paper, namely competition for a mobile tax base and the effect of this on tax rates, has been studied extensively in the literature.¹²

⁹A related paper is Acemoglu and Robinson (2000a) that emphasizes the willingness of political elites to block innovation when they fear this would lead to their loss of political power. Acemoglu and Robinson (2002a) show that external threats may reduce incentives to block economic development. The concern of these papers is to explain the experience of European late-comers, like Austria-Hungary and Russia, to industrialization. Garner and Chaudhry (2001) uses the mechanism in Acemoglu and Robinson (2000a) in a growth setting with an explicit focus on the states system and the political competition it fosters.

¹⁰The phrase in the title of this paper that aptly summarizes the mechanism involved also comes from Findlay (1992). Tilly (1990) emphasizes the role of interstate competition in determining the type of political institutions that eventually emerged in Europe.

¹¹Mokyr (2002) emphasizes the historical importance of political economic concerns for the process of human capital accumulation.

¹²See, for example, Epple and Romer (1991), who present a static closed-economy model where exit, that is the mobility of factors (à la Tiebout, 1956) subject to taxation, limits the extent of redistribution. Persson and Tabellini (1995) survey the literature on optimal taxation when the tax base is mobile internationally.

An earlier strand argued that cooperation among benevolent governments would have them setting capital taxes in accordance with some version of a Ramsey rule. Without cooperation, tax rates would be inefficiently low as governments/jurisdictions compete to attract the mobile capital in an attempt to form a larger tax base (see Gordon, 1983, among others). A more recent literature, as exemplified by Rogoff (1985) and Kehoe (1989), showed that when benevolent governments face credibility problems, cooperation among them would push the tax rate above the optimal level. The noncooperative equilibrium with tax competition would bring taxes closer to the optimum without, however, reducing them all the way down to the optimum. The model presented in this paper differs from this literature in a number of ways. First, the assumption of benevolent governments common to all of the existing literature is abandoned: rulers in what follows are purely self-interested. The problem here is not, therefore, the issues that arise when benevolent governments try to manipulate the expectations of the agents for their own benefit as in the existing literature. Rather, what surfaces in what follows is the conflict of distributional interests among the rulers and the ruled and its consequences for tax/expropriation rates. Second, we examine a long-run growth model, while the literature is typically at best only quasi-dynamic, restricting its attention at most to two-period setups. Third, we show that tax competition, even when governments cannot credibly commit, may force them to adopt tax policies that attain the first-best.

This paper also stands at the crossroads of several strands of recent literature on political economy. To see clearly its connection to this literature, note that the mechanism specified in the paper relies on two building blocks. First, there exist a number of agents (called the “ruler(s)” and the “subjects” here) and these agents have conflicting interests because wealth can be expropriated (or one can say redistributed to the extent that expropriation is legitimized through the political process). Secondly, under certain conditions it is possible for “subjects” to “exit”. Recent political economy literature has analyzed the consequences of the adoption of various strategies by agents as they try to expropriate others or to defend themselves against expropriation. In his account of the rise of England in the 18th century and the United States in the 19th and early 20th centuries, Weingast (1995) argues that the crucial factor that generated economic expansion in both cases was political competition among jurisdictions (which he labels “market-preserving federalism”) for the mobile capital and labor because this competition limited the ability of the state to confiscate wealth.¹³ Recent common property

¹³Weingast (1995) Montinola, Qian, and Weingast (1996) also point out the fundamental role played by “federalism” in the remarkable growth performance of China over the past two decades. North, Sum-

models of growth (see, for example, Benhabib and Rustichini, 1996, Lane and Tornell, 1996) focus on the negative effects of conflict among social groups on growth as they attempt to expropriate resources from each other. In Grossman and Kim (1996) agents adopt a “voice” strategy, namely arming themselves to the teeth against potential predators/expropriators.¹⁴ Another historically important alternative strategy is insurrection or revolt that, if successful, results in the expropriation of the rulers by their subjects (see Grossman, 1991). Thus, Acemoglu and Robinson (2000b) argue cogently that the extension of the franchise in the West was a response to the threat of revolution. Democracy was necessary because the only safeguard for sustained redistribution desired by the masses was possession of political power. This link between political power and the redistribution of wealth it affords those who happen to command such power has been used in a number of different contexts. Acemoglu and Robinson (2002a) exploit this link to argue that political elites may block technological and institutional developments for fear that it would lead to loss of political power, which would then translate into an economic loss. Alesina and Rodrik (1994), among others, point out that in majoritarian democracies, which give the median voter the decisive political power, this power could be used to redistribute wealth. To the extent that such redistribution has to be carried out by distortionary taxation, this would lower the rate of growth of the economy. There exist also a number of studies that examine the role redistribution and factor mobility plays in determining the size and number of nations in static settings. Bolton and Roland (1997), for example, study the question of the break-up or union of two regions in a voting equilibrium. One result they obtain that is relevant to the analysis in this paper is their finding that with perfect mobility of factors, the two countries in their setup must offer the same tax and public goods package even when agents differ in their preferences.¹⁵ Other papers relevant to the issues raised here include McGuire

merhill, and Weingast (2000) and Nugent and Robinson (2001) emphasize the importance of political competition for the growth performance of a number of Latin American countries.

¹⁴In their empirical investigation of the importance of institutions, Acemoglu and Johnson (2003) find that institutions which protect citizens against expropriation have a first order effect on long-run economic growth.

¹⁵Alesina and Spolaore (1997) analyze the solution of a world planner in determining the size and number of nations under different political systems. They show that the planner would choose to have fewer nations than in the decentralized democratic equilibrium. In a different setting, Bolton and Roland (1997) also show that democratic voting with the possibility of secession may lead to too many nations. Intuitively, both results rely on the (implicit) negative externalities associated with secessions. Obviously, the advantages of having multiple states in contrast to one large state (empire) emphasized in this paper, relies on the efficiency of the former in limiting expropriation. A related literature,

and Olson (1996) that demonstrates that even rulers with monopoly power would limit the expropriation of their immobile subjects and provide public goods to stimulate production and, thus, the expansion of their tax base.¹⁶ The role played by the provision of public goods in economic growth is the focus of Barro and Sala-i-Martin (1992) and Eicher and Turnovsky (2000) among others.

The paper is organized as follows. Section 2 outlines the environment, which is represented in its basics by an economy in which a ruler that monopolizes political power expropriates income from his subjects. In return, the ruler provides “public services” that enhance the productivity of the producers. In Section 3, I first show that even when the ruled have no means of “exit” as in an empire, the “encompassing interest” of the ruler leads him to restrict expropriation and provide a certain level of public services. Rulers that discount the future at higher rates, that have lower intertemporal elasticities of substitution and that inhabit relatively less productive economies are then shown to expropriate more. Rulers in economies where public services contribute more to the productivity of their subjects also tend to provide more of such services. In a states system where the ruled have the option of exit, political competition for paying subjects is then shown to lead to a lower expropriation rate and a higher growth rate than that obtains in an empire. This would then provide a structural explanation for the early successes of the Ottomans, Mughals, and the Song Chinese as they initially found themselves in competition with neighbors. The consolidation of these countries into empires would stifle growth later on. Since Europe was spared such consolidation, the emerging states system forced rulers to reduce the rates of expropriation relative to public services provided. The “privileges” obtained by the European subjects were gradually institutionalized giving rise to more secure property rights and allowed for rates of growth and eventually levels of income that exceeded the ones attained in the eastern empires where subjects were never able to obtain the political power to protect their rights. I briefly discuss the available historical evidence concerning mobility and tax/expropriation levels in Section 4. Alternative hypotheses for the rise of Europe are presented in Section 5. In Section 6, I provide a short intellectual history of the Hume-Weber-Jones mechanism. The last section concludes the paper.

including most importantly Findlay (1996) and Grossman and Mendoza (2001), studies the economics of the formation of empires, an issue that is complementary to the analysis in this paper.

¹⁶For a similar formalized argument see Findlay and Wilson (1987).

2 The Environment

I use a simple dynamic model to illustrate the main points. An economy consists of two types of agents, a ruler and his subject households.¹⁷ The subjects produce a good that can be used for consumption and investment. The ruler appropriates a portion of the good produced and in return may choose to supply public services that enhance the productivity of his subjects. I start by discussing the role and nature of these public services.

2.1 Productive “Public Services”

Each subject household i in economy j has access to a production technology summarized by

$$y_i^j = \alpha k_i^j f(G^j/Y^j), \quad f(0) = 0, f' > 0, f'' < 0, \quad (1)$$

where y_i^j is the quantity of the composite good produced by household i , α is a positive constant, k_i^j is the stock of “capital”¹⁸ that the subject household has in its possession, f is a function that depends on the total output of the economy $Y^j = \int y_i^j di$, and $G^j \geq 0$ denotes the amount of public good provided by the ruler of economy j . The formulation of the function $f(\cdot)$ reflects three considerations: (i) the higher is the level of public services provided, the more productive is each producer; (ii) the provision of public services is essential for “social order” and for production so that if the ruler fails to provide such services no production can take place ($f(0) = 0$); and (iii) typically the provision of public services such as security, adjudication, irrigation works, roads, and

¹⁷By endowing each economy with a unique ruler, I abstract from a number of issues that arise when the administration of an economy is carried out by a political class whose members do not necessarily share the same interests. Conflicts among the members of this class have typically taken political, military and economic shades in both the empires of the East and Europe and raise a number of interesting issues which will not be treated below. See Usher (1992) for a formal economic treatment of some of these issues.

¹⁸I interpret the “capital stock” k as a composite having physical and human capital components. It is straightforward to show that under certain conditions a model with both types capital can be formulated as in (1) (see Barro and Sala-i-Martin, 1995, pp. 144-146). I also interpret human capital as a “comprehensive stock of all knowledge” and human capital accumulation as including research, development, and invention. In this I follow Lucas (2002) who questions the usefulness and empirical validity of the models that interpret “human capital” as “schooling” and, thus, need to add a second state variable called “blueprints” to account for all sources of productivity growth.

waterways is subject to congestion, i.e. the public service is rival but not excludable.¹⁹ For a given amount of public services G^j , the quantity of the service available for each user falls as more users take advantage of the services provided. Thus, in (1) we have an increase in Y^j for given G^j reducing the level of public services available to each producer as well as leading to a decline in the output y_i^j of each producer.²⁰ Note for future reference that had there, unrealistically, been no congestion in the provision of public services, the resulting growth rate would display scale effects.

Equation (1) also implies that the output of an individual producer is subject to constant returns to the private capital, provided that the ruler maintains a constant level of public services to total output, that is a constant level of congestion.

I now turn to the description of the problem faced by subject households.

2.2 The Subjects

Subjects are infinitely-lived dynastic families. Each family i residing in economy j chooses its consumption c_i^j to maximize its lifetime welfare U_i^j given by

$$U_i = \int_0^\infty u(c_{i,t}^j) e^{-\rho t} dt, \quad u(c_{i,t}) = \frac{(c_{i,t}^j)^{1-\theta} - 1}{1-\theta} \quad (2)$$

subject to the budget constraint²¹

$$c_i^j + \dot{k}_i^j = (1 - \tau^j) y_i^j \quad (3)$$

where τ^j is the constant rate at which the ruler expropriates income. Henceforth, for simplicity I shall call τ^j the tax rate with the understanding that this need not coincide with the legal tax rate (legitimized by whatever political mechanism that may exist). This is important because, as the examples cited in the Section 4 suggest, extra-legal expropriation historically played an important role in the transfer of income from the ruled to the ruler.²²

¹⁹Note that G is a flow, so that the right interpretation say, for roads, would be total mileage per year, etc.

²⁰For a thorough analysis of this and other formulations as well as their implications, see Barro and Sala-i-Martin (1992) and Eicher and Turnovsky (2000).

²¹In what follows I drop the time subscripts except where there is risk of confusion.

²²Historically, of course, everywhere more than one agent taxed the producer and not every tax demanded by every collector was “legal”. I simplify by assuming that there exists one ruler per economy. However, allowing for other expropriators will not change the conclusions regarding the contrast between an empire and a states system and adds nothing to understanding the basic mechanisms involved in

An economy j starts life with a continuum of subjects whose mass is N^j . The subjects may choose to change the location of their residence, which coincides with the location of their productive activities. Changing a location is taken to imply migration from one economy to another. Subjects migrate, taking their capital with them, if doing so improves their welfare. Subjects who migrate incur a one-time migration cost $\xi \geq 0$.

2.3 Rulers

Each economy is ruled by one infinitely-lived ruler. Rulers derive utility from consumption. They also derive an additional benefit from ruling an economy with a minimum number, $\bar{N} > 0$, of inhabitants. We suppose that this is the minimum number required, *inter alia*, to sustain, for instance, an army to ensure the survival of the country and its ruler as independent entities. Formally,

$$U_r^j = \int_0^\infty u(c_{r,t}^j) e^{-\rho t} dt + \Omega(N^j), \quad u(c_{r,t}) = \frac{(c_{r,t}^j)^{1-\theta} - 1}{1-\theta},$$

$$\Omega(N^j) = \begin{cases} \Delta > 0 & \text{if } N^j \geq \bar{N} > 0 \\ 0 & \text{if } N^j < \bar{N} \end{cases}, \quad (4)$$

where the subscript r indicates a ruler and the function $\Omega(N^j)$ captures the additional benefits a ruler enjoys when the economy has at least \bar{N} subjects.²³

From subjects residing and producing in economy j its ruler collects tax revenues $\tau^j Y^j$ of which he uses a fraction $(1 - \mu^j)$ to finance the provision of public goods; thus, $G^j = (1 - \mu^j) \tau^j Y^j$. The rest is employed for the ruler's consumption; thus $c^j = \mu^j \tau^j Y^j$.

3 The Analysis

I now turn to the description of equilibrium first in an empire and secondly in a system of states.

that contrast.

²³The only role this additional benefit plays in the analysis that follows is to ensure that a ruler that chooses the optimal tax and appropriation rates is never indifferent between that choice and that of adopting policies that lead to the loss of all his subjects.

3.1 The Empire

An empire for our purposes is an economy from which its inhabitants find it impossible to emigrate. Formally, an empire is an economy where the migration cost $\xi \rightarrow \infty$. Thus, the ruler of the empire finds himself with a subject population on which taxes can be imposed without fear of losing at least some of them to a rival ruler. The problem that confronts such a ruler is to determine (1) the level of the proportional tax to be imposed upon his subjects and (2) the fraction of the tax revenue that can be used to finance the ruler's consumption. An increase in the tax rate has two contradictory consequences. On the one hand, it reduces the rate of return on investment and, thus, lowers the rate of capital accumulation by his subjects. This depresses future output and future revenues that can be appropriated by the ruler. On the other hand, given the existing capital stock, a higher tax rate yields, *ceteris paribus*, more tax revenue, enabling the ruler to supply a higher quantity of the public good. This, in turn, increases both the output and the rate of return on investment.

Formally, to solve the problem confronting the ruler of the empire, we start by describing the behavior of the households facing given τ and μ (thus, a given quantity of the public good relative to total output).²⁴ Households maximize their utility given in (2) subject to (1) and (3), facing an after tax rate of return on capital equal to $(1 - \tau)\alpha f(G/Y)$. It is straightforward to show that given constant τ and μ , the choices of the households yield growth rates for consumption, capital, and output all equal to the same constant g given by

$$g = (1/\theta) \{(1 - \tau)\alpha f[(1 - \mu)\tau] - \rho\}. \quad (5)$$

Given our restrictions on the function $f(\cdot)$, this growth rate initially rises with the tax rate τ at low values and falls with it as τ keeps rising, reflecting the trade-offs mentioned above. The value of τ that maximizes the growth rate g is implicitly given by $(1 - \tau)(1 - \mu)f'[(1 - \mu)\tau] = f[(1 - \mu)\tau]$. Since a higher rate of consumption μ reduces the amount of public good supplied by the ruler, it lowers the growth rate.

The welfare of an individual household, given this constant growth rate, (1), (2), and (3) can be expressed as

$$U_i = (1 - \theta)^{-1} \left[\frac{k_{i,0}^{1-\theta}}{\rho - g(1 - \theta)} - \frac{1}{\rho} \right], \quad \frac{dU_i}{dg} > 0. \quad (6)$$

²⁴In this section I drop the economy superscripts j because we are concerned with a single country.

Thus, the welfare of an individual household depends positively on the growth rate g .²⁵

Turning now to the problem faced by the ruler, we first observe that since his consumption is given by $c = \mu\tau Y$ it also grows at the common constant rate g given time-invariant choices for τ and μ . His lifetime welfare is hence given by

$$U_r = (1 - \theta)^{-1} \left[\frac{c_{r,0}^{1-\theta}}{\rho - g(1 - \theta)} - \frac{1}{\rho} \right] + \Omega(N), \quad c_{r,0} = \mu\tau a K_0 f[(1 - \mu)\tau] \quad (7)$$

where $K_0 = \int k_{i,0} di$ is the aggregate initial capital stock. The ruler uses the instruments at his disposal, τ and μ to maximize his lifetime welfare. The first-order conditions for his maximization problem can be expressed (with $\pi \in \{\tau, \mu\}$) as

$$\partial U_r / \partial \pi = \Lambda \{ [\rho - g(1 - \theta)] (\partial c_{r,0} / \partial \pi) + c_{r,0} (\partial g / \partial \pi) \} = 0, \quad \Lambda \equiv c_{r,0}^{-\theta} [\rho - g(1 - \theta)]^{-2} \quad (8)$$

where

$$\partial c_{r,0} / \partial \tau = (\mu/f) Y_0 [f(\cdot) + (1 - \mu)\tau f'(\cdot)] > 0, \quad \partial g / \partial \tau = (\alpha/\theta) [(1 - \mu)(1 - \tau)f'(\cdot) - f(\cdot)]$$

$$\partial c_{r,0} / \partial \mu = (\alpha\tau K_0) [f(\cdot) - \mu\tau f'(\cdot)], \quad \partial g / \partial \mu = -(\alpha/\theta) (1 - \tau)\tau f'(\cdot) < 0.$$

From (8) we can immediately derive a number of conclusions. First, note that since $\partial U_r / \partial \tau = 0$ for optimality and since $\partial c_{r,0} / \partial \tau > 0$, the choice of τ by the ruler here implies that $\partial g / \partial \tau < 0$. That is, the optimal tax rate for the ruler of the empire is not the one that maximizes the growth rate. One consequence of this is that the growth rate that results from the ruler's choice is not the one that maximizes the welfare of his subjects. To see this recall from (6) above that a subject household's lifetime welfare depends positively on the growth rate. Thus, the growth rate that would be optimal for this household is the maximum one that the economy can attain.²⁶ The growth rate chosen by the ruler is, however, less than this maximum. Further, given the relationship between the growth and tax rates discussed above, it is easy to see that the tax rate is higher than the one that would be chosen by a benevolent ruler that seeks to maximize the welfare of his subjects. Second, observe that since $\partial U_r / \partial \mu = 0$ for optimality and

²⁵In (6) the sign of the partial derivative follows from $\rho - g(1 - \theta) > 0$ which is required for the transversality condition to hold.

²⁶This would not in general be the case. It is true here because of the functional forms used. Allowing for more general cases neither affects the main conclusions of the paper nor does it add any significant new insights about the mechanisms formalized.

since $\partial g/\partial\mu < 0$, the choice of μ by the ruler implies that $\partial c_{r,0}/\partial\mu > 0$. Now with the restrictions imposed on $f(\cdot)$, $c_{r,0} = 0$ when $\mu = 0$ and $c_{r,0} = 0$ when $\mu \rightarrow 1$, we have $c_{r,0}$ increasing at low levels of μ and decreasing at higher values of μ . These considerations imply that the ruler chooses a rate of consumption μ that is less than the rate that would maximize his initial consumption $c_{r,0}$. Clearly, this is the case because of intertemporal considerations. Though a higher μ makes it possible to enjoy higher current consumption, it lowers the growth rate and thus the future consumption of the ruler. Finally (8) implies the familiar condition for efficiency

$$\frac{dY}{dG} = \frac{f'(\cdot)}{f(\cdot) + \tau(1 - \mu)f'(\cdot)} = 1. \quad (9)$$

Thus, the ruler chooses the level of G such that the marginal benefit, dY/dG , of public services provided equals its marginal cost in terms of output foregone (which is one unit). Note that the equation in (9) implicitly yields a unique value for $\tau(1 - \mu) = Y/G$ that only depends on the properties of the function $f(\cdot)$ and nothing else. One consequence of this is that changes in the underlying structure of the economy that lead to alterations in the optimum level of the tax rate τ would necessarily be accompanied by changes in μ of the same sign.

To see how the tax and consumption rates are affected by this structure start by focusing on the parameter a that measures the productivity of capital (see (1)) given public services. As the calibration-simulation example summarized in Table 1 shows rulers in more productive economies tax less and retain a lower fraction μ of tax receipts for their private consumption.²⁷ Intuitively, in a more productive economy where investment has a higher rate of return, the ruler is better off encouraging private investment by expropriating less in exchange for higher future consumption. The ruler also keeps a lower fraction of the tax proceeds for his consumption because the public services he provides are more productive as well. Note that given the unique level for $\tau(1 - \mu) = Y/G$ the lower tax rate raises the growth rate of the economy.

Table 1

a	0.1	0.5	1	2	3
τ	0.85	0.43	0.38	0.35	0.34
μ	0.61	0.23	0.12	0.06	0.03

One question the historical literature raises is the effect of changes in the rate at which the ruling classes—here consolidated into one ruler—discount their future. It has

²⁷The baseline values of the parameters in the following examples are $K_0 = 2$, $\rho = 0.03$, $\theta = 0.99$, $\delta = 0.02$, $a = 1$, $f(\cdot) = [(1 - \mu)\tau]^\beta$ with $\beta = 0.5$.

been argued, for instance, that intensified dynastic struggles in certain periods made sultans and emperors short-sighted. On the other hand, high-ranking officials found their tenures frequently cut short by emperors fearful of the rise of rival power-holders. This tended to make these officials in turn less concerned with a future they may not live to enjoy. This issue of a higher average rate of time preference for the rulers can be studied here by decoupling the ruler's rate of time preference from that of the ruled. The results of this straightforward exercise are summarized in a simulation example in Table 2 which shows that as expected a higher rate of time preference ν for the ruler tends to make him tax more and retain a higher proportion μ of the tax receipts for his own consumption. This lowers the growth rate of the economy and the welfare of his subjects.

Table 2

ν	0.03	0.04	0.05	0.06
τ	0.38	0.40	0.41	0.43
μ	0.12	0.16	0.20	0.23

A similar issue also arises in the historical literature regarding the subjects. As the examples cited in Section 4 suggest, rulers in eastern empires tended also to be less careful about the life and limb of their subjects. This would make these subjects discount the future, which may at any time be cut short, at a higher rate ρ . The effect of such higher levels of ρ on the choices of the ruler is summarized in the numerical example in Table 3 which shows that both μ and the tax rate τ is higher for those rulers whose subjects discount the future at higher levels. However, the rise in both μ and τ is less significant as compared to the previous case.

Table 3

ρ	0.03	0.04	0.05	0.06
τ	0.3794	0.3796	0.3798	0.3799
μ	0.1215	0.1219	0.1223	0.1227

One can also show that a decrease in the average intertemporal elasticity of substitution $\sigma \equiv 1/\theta$ raises the rate at which the ruler expropriates the ruled. Intuitively, as the preference for growth becomes less pronounced, the desire to increase current at the expense of future consumption leads to higher levels of μ and τ as the example in Table 4 suggests.

Table 4

θ	0.95	0.97	0.99	1.1	1.2
τ	0.35	0.37	0.38	0.44	0.48
μ	0.06	0.09	0.12	0.24	0.30

Finally, simulation results reported in Table 5 illustrate the point that in economies where public services are more efficient (as measured by the elasticity parameter $\beta \equiv d \ln f(\cdot) / d \ln(G/Y)$) the rulers choose to provide more of them. The financing of such services then requires a higher tax rate as well as a lower rate of retention of tax proceeds for the ruler's consumption.

Table 5

β	1/6	1/5	1/4	1/2
τ	0.18	0.20	0.24	0.38
μ	0.19	0.17	0.16	0.12

I now turn to the discussion of equilibrium in the case of a states system.

3.2 The States System (or Noblesse Oblige?)

Consider now an environment where households and rulers find themselves distributed over a number of states j ($j \in \{1, 2, \dots, M\}$). Initially, each state has $N^j \geq \bar{N}$ inhabitants and a ruler. Suppose that the cost of migration is low enough to allow movement of households across the states; for simplicity assume that this cost $\xi = 0$.

Households that can move around within this state-system will choose to reside in that state that offers them the highest level of lifetime welfare. Rulers will, therefore, have to compete to attract tax-paying subjects to ensure the continuing existence of a tax base and the viability of their states and rule. What will be the equilibrium outcome of the interaction of the M rulers and their subjects?

Given our bare-bones setup, the answer is straightforward and captures the essence of the empire vs. state system argument. To see what is involved, note first that each ruler j 's strategy space S_j is given by $S_j = [0, 1] \times [0, 1]$ with a typical strategy $s_j = (\tau_j, \mu_j)$. Given the payoff functions U_r^j in (4) and M rulers, the game Γ_M played by these rulers is formally $\Gamma_M = [M, \{S_j\}, \{U_r^j\}]$. The strategy profile $s = (s_1, \dots, s_M)$ constitutes the Nash equilibrium of the game Γ_M if for every $j = 1, \dots, M$, $U_r^j(s_j, s_{-j}) \geq U_r^j(s'_j, s_{-j})$ for all $s'_j \in S_j$. It is straightforward to see that the Nash equilibrium of the game Γ_M is that each ruler will choose $\tilde{s}_j = (\tau_m, \mu_m)$ which ensures the maximum growth rate. To see why, recall that the lifetime welfare of a household is maximized when the growth rate is at its maximum (see (6)). If other rulers do not adopt the combination \tilde{s}_j , the ruler

that does will be able to attract the subjects of others to his state, thereby receiving a payoff higher than he would otherwise get. If other rulers adopt \tilde{s}_j , a ruler that does not loses all his subjects and earns a payoff that is less than what he would earn had he adopted \tilde{s}_j . Note also that the growth rate maximizing tax rate is implicitly given by $(1 - \tau_m)f'(\tau_m) = f(\tau_m)$ and that competition among rulers results in $\mu_m = 0$.

We have thus established that competition among rulers in a states system, where subjects have the ability to move across jurisdictions, results in lower “tax” and, consequently, higher growth rates than would obtain in an empire. What do these results imply for an interpretation of historical evidence concerning the “great divergence” between Europe and empires of the East?

Historical evidence is quite clear on the point that at times the latter achieved levels of income and technological maturity that were at the global frontiers. The Chinese example is unequivocal. Indian manufactures were for long periods of time the marvel of the world. The Ottoman empire achieved periods of prosperity and dynamism and remained the main rival of the European powers for centuries. Europe, however, eventually surpassed all others in terms of levels of income and technological progress.

Our results suggest one mechanism that would help explain the initial success and later demise of the eastern empires, as well as the eventual rise of Europe. First, start by noting that the fledgling states that later became the eastern empires found themselves in competition with other neighboring states. This competition, as predicted by the Hume-Weber-Jones mechanism, also implied a competition for potential subjects in terms of what the state would offer. The Ottoman state, for instance, typically offered lower tax rates and provided security by putting an end to the power struggles among the small principalities that devastated the Balkan and Anatolian cities and countryside (see Inalcik, 2000). Similarly, as Akbar consolidated the Mughal empire by the conquest of neighboring regions, he offered peace, security, and relatively low taxes. It was during the Song dynasty, which was in fierce competition with other regional powers, that China experienced its most spectacular technological advances and achieved high levels of income. Once, however, these states succeeded in consolidating themselves into empires, expropriation rates started rising inevitably. At the same time, the security to property gradually eroded, with the ruling class extracting as much as it can from subjects trapped in the vast empires. The result was a substantial decline in or cessation of economic growth.

Europe, however, never experienced a similar development. Though there was some consolidation, an empire unifying the European continental mass did not emerge. The

resulting state system gave rise to political competition among rulers for the tax-paying subjects who found that it was not impossible, in the long-run, to move from one neighboring jurisdiction to another in search of better conditions. As a result expropriation rates declined and rulers were gradually forced to offer higher levels of “public services”. Given this favorable environment, the sustained rise in the rate of capital accumulation and economic growth eventually propelled Europe beyond the levels achieved by the eastern empires.

4 Historical Evidence

In this section I discuss the historical evidence related to the Hume-Weber-Jones thesis. In particular my objective is to provide evidence that (1) rulers in Europe competed to attract a (historically speaking) relatively footloose population by offering not only better material conditions but also improved legal conditions that ensured lower expropriation rates; rulers in Eastern empires had means to move populations around without having to offer similar concessions; and (2) tax (expropriation) rates in Europe were historically lower than those prevalent in the Eastern Empires.

4.1 Evidence on Mobility in Europe

Though it is clear that mobility in the medieval and the early modern periods remained low in comparison to contemporary levels, recent demographic research has established that in most parts of Europe there existed “a very considerable mobility arising out of what one might call the normal circumstances of social and economic life” (Flinn, 1981, p.69).²⁸

Evidence of footloose European merchants, financiers, and artisans moving across jurisdictions in the period in question is abundant.²⁹ The one that seems to fascinate observers is that of Christopher Columbus shopping around, moving from court to court, looking for financial backers to an enterprise that would change the world. But, he was not the only Italian who got around. Italian merchants were everywhere. Neither were they the only ones. Dutch families—the de Geers, the Cronströms, the Blommaerts

²⁸Flinn (1981) surveys the demographic research on Europe in the early modern period (1500-1820). Rösener (1992, 1994) summarizes the evidence for mobility for the Middle Ages (500-1500).

²⁹The ability of these groups to move and the consequences of such movements have been well-known and understood by economists since at least Adam Smith (see the section below). For literature on this see, among others, Braudel (1976) and de Vries (1984).

inter alia—settled in Sweden before the English started appearing in the 1670s; German merchants dominated trade even in such small Finnish market towns like Viborg in the 17th century; printers wandered at random settling in one European town before moving again; iron workers from Liege could be seen in Avelon in 1450; French artisans were extensively employed in Spain in the 1650s; Mirabeau was deeply concerned with the French workmen’s readiness to emigrate (Braudel, 1979). Even when they did not move Europeans could credibly threaten to exit. Thus, when the Spanish minister Olivares demanded higher taxes in the name of the crown the Catalonian Cortes resisted. In 1640, the 9,000 troops brought into the province to enforce the crown’s claims led to a popular rebellion and the Cortes called on Louis XIII of France to assume sovereignty in Catalonia. In 1652 when a Spanish army finally reconquered Barcelona, Philip IV granted amnesty and promised to respect the traditional liberties of Catalonia (see Tilly, 1990, p. 101).

Recent research also shows that in Europe even the traditionally immobile peasants started to move once the changing economic and social conditions in the high Middle Ages resulted in the dissolution of the manorial system. It is generally agreed that though this process was uneven across Europe, it began in the eleventh century and was almost complete by the late thirteenth century (Rösener, 1994). Peasants moved establishing at times new settlements which were “often encouraged and supported by lords who had a great interest in the enlargement of their arable land because this also extended their territories and increased their revenues” (Rösener, 1992, p.37). Two aspects of such mobility is significant for our purposes. First, peasants moved across established borders. Second, they were attracted by rulers who offered better material conditions and favorable legal rights. It is useful to have a deeper look at the evidence on peasant mobility in those earlier periods when such mobility is popularly considered to be nonexistent.

High Middle Ages (950-1350) This period witnessed an economic expansion that transformed the landscape of Central Europe from one of vast woodlands and marshes into farmland. The “settlement movement” was sponsored largely by lay and ecclesiastic lords who attracted settlers from quite distant lands with promises of improved conditions, that at times took the form of formal contracts. Thus, “[t]he development of a number of Hufendoerfer in the marshes of the River Weser has been recorded in 1106 in a contract between Dutch peasants from Utrecht and Frederick, the Archbishop of Bremen...Favorable property rights, low rents, and a far-reaching autonomy were for the

most part sufficient means to attract an adequate number of volunteers for colonization and settlement...[In Swabia] settlers enjoyed inheritance rights to their farms, and had their own village court as well as the concession of fixed rents and dues” (Rösener, 1992, p. 38-39).

Similarly, “[t]he majority of settlers in the eastern regions came from the densely inhabited north-western lands of the Empire, particularly the Low Countries, Westphalia, and eastern Saxony. They were lured by the prospect of larger holdings and greater personal freedom, lower dues and an end labor services” (ibid., p.40).

To attract the settlers, lords in the new settlements had to offer terms similar to those being offered elsewhere on the continent. Thus, “[t]he new villages in the east of Germany took as their model the legal rights of independent peasantry which had been established in assorted areas west of the Elbe and in particular in the Dutch settlements along the marshes of the North Sea and its rivers...The better legal position of the settlers eventually improved the condition of the indigenous population too: many Slav villages came under German law (*ius theutonicum*), as a result of which peasants were granted better property rights and adopted new agricultural techniques” (ibid., pp. 40-41).

Mobility was not restricted to Central Europe either. “Clearings and the founding of villages were not only carried out here [east of the Elbe and Saale] but also in the neighboring Polish, Bohemian and Hungarian countries...In order to develop their land and increase agrarian production, the eastern European nobility made great efforts to recruit experienced settlers from the west and the middle of Europe.” In Spain, recaptured Islamic territories, were recolonized in the thirteenth century. “The arable [land] was then assigned to peasants on favorable legal and leasehold turns, at practice typical for most clearing enterprises in medieval Europe” (ibid., p. 42).

Late Middle Ages (1350-1500) Despite popular misperceptions concerning the lot of peasants under the feudal system the evidence suggests that “...greater and lesser landlords displayed a notable lack of class solidarity in the manner in which they managed their estates in the later fourteenth and fifteenth centuries. They competed with each other for tenants as well as laborers by taking in migrants and varying the rent packages which they offered. Employers repeatedly broke the statutes of laborers, but were rarely fined for paying excess wages; landlords whose officials took in the runaway villeins of other lords were subject to no penalties; and little external assistance was made available to lords to assist them in the recapture of their runaways. Because landlords lacked

the willingness and capacity to act cohesively as a class, the potential for sustained class conflict was lessened. In the slack land market which generally prevailed from the closing decades of the fourteenth century onwards, most peasants seriously dissatisfied with their lot did not have to engage in protracted struggles with their lord: if better terms were on offer elsewhere they could simply move away” (Hatcher and Bailey, 2001, p. 116).³⁰

Mobility, even when it was not legal was common: “Flight was a much stronger weapon than any that landlords possessed. ‘Around 1400 on nearly all Ramsey [abbey] manors, the trickle of the emigrants burst into a veritable flood. The exodus was largely illegal.’ [Raftis, 1964].³¹ In many west midlands villages three-quarters of the surnames of the inhabitants changed every 40-60 years, as families died out and people moved around in order to take advantage of the abundant opportunities furnished by the availability of land and work. In order to keep his lands as fully occupied as possible a lord had to reach an accommodation with his tenants, since any attempt to restrain them by force or to recapture runaways was ultimately futile” (Hatcher and Bailey, 2001, pp. 100-101). Emigrating peasants caused severe problems for the Teutonic knights in the 15th century (Tilly, 1990); peasants deserted the Paris region in the 14th century, and came back to repopulate the region later (Braudel, 1979).

As a result “[i]f one surveys the legal status of Western and Central European ploughmen at the end of the Middle Ages, it becomes clear that the manifold attempts of feudal lords to heighten rustic dependency were largely unsuccessful. The opportunities peasants had to emigrate, the role of towns, and various other factors impinged upon the manor and frequently brought about a liberalization of the laws that applied to them” (Rösener, 1994, p.81).

Early Modern Period (1500-1800) International mobility of European peasants continued in the early modern period. In his influential survey Flinn (1981, p. 75) concludes that “[w]ithout doubt research into migratory movements, particularly, research employing quantitative methods, will continue; but enough has already been done to indicate that mobility was a very widespread characteristic of the early modern period.”

Instances of such mobility are everywhere to be seen. “During the sixteenth century the eastern parts of Central Europe also experienced a new wave of land clearance and

³⁰Brenner (1997, p.16) points out that “...under feudalism lords always took a surplus in some sense individually—rather than collectively via some sort of centralized taxation—and consequently they always faced the problem of implicit competition among lords for peasants.”

³¹See also Raftis (1997).

colonization. It was a process characterized by a variety of individual developments, each independent of the others. Lithuanian peasants moved into northern East Prussia. Dutch marsh farmers—Mennonites who left their home country for religious reasons—emigrated to the region at the mouth of the Vistula...Polish manorial lords were quick to draw upon the services of the expert Dutch colonists: villages founded by them could be found everywhere in the low country of the Vistula....The outlying spurs of these various individual population movements, resulting from the powerful demographic growth to the west, extended across West Prussia and Poznan as far as central Poland and Volhynia” (Rösener, 1994, p. 129). “Nadal and Giralt have traced the very considerable movement of French migrants from the central Pyrenees and the western side of the Massif Central through to Spain. It was a stream that reached its maximum flow in the middle and later sixteenth century. Between 1570 and 1620 from 10 per cent to 20 per cent of the male population of Catalonia was of French origin...On a larger scale, Chaunu has described the colonization from 1766 of the Sierra Morena of southern Spain by several thousand Germans to open on land deserted since the thirteenth century...After the Seven Years War an estimated eleven thousand German families—mainly those of discharged soldiers, supplemented by others from Lorraine, Belgium, and Italy—settled in the Banat area of present-day Hungary and Romania” (Flinn, 1981, pp.70-731).

Migrants were attracted by rulers who promised them not only better economic conditions but also improved legal rights. Thus, “[o]nly after the treaty of Passarowitz (Pozarevac) in 1718, according to which the Banat became a Habsburg crown domain, did a major wave of colonization begin; it reached its peak under Empress Maria Theresa a few decades later. It was not just Germans who arrived. Other nationalities were also persuaded to settle in what would turn into turned into the bread basket of the Balkans.. The immigrants came from Swabia, the Palatinate and even from as far away as Lorraine. They were personally free and given their farms on a hereditary basis. The same strategy was applied in Galicia and Bukovina. At almost the same time—the end of the Seven Years War (1763)—Tsarina Catherine the Great issued an invitation to participate in the resettlement of Russia. Newcomers would receive their farms free of dues for thirty years; they could continue to practice their own religion; and they would enjoy full rights of self-government. The imperial proclamation evoked a powerful response, particularly in certain German territorial states” (Rösener, 1994, p. 132).³²

³²It is instructive to note that wherever circumstances enabled rulers to impede mobility, the long-run economic consequences of doing so proved to be debilitating. Thus, in the early modern period, “[t]he economic crisis faced by the towns gave the [Eastern European] nobility, helped by its close links to

4.2 Mobility in Eastern Empires

Rulers of Eastern Empires were not averse to attracting tax-payers from outside their borders. But since they were not in competition with others in a state system they were not compelled to offer better property or political rights to potential immigrants. They were also able to use coercive measures more successfully to retain the existing taxpayers within their empires.

Ottomans, for instance, eager to attract a larger taxbase welcomed Jews and Moriscos expelled from Spain, Portugal, and Italy, as well as refugees fleeing from Russian invasions of the Caucasus. But these were of course instances where the push from the country of emigration was the decisive factor. The Ottoman state did at times offer lower taxes for a limited time to attract settlers, but offered neither improved legal conditions nor property rights on land settled since all land belonged to the Sultan. It is thus not surprising that "...the number of actual settlers who voluntarily came seeking economic opportunity seems to have been quite small" (Quataert, 1994, p. 794). Typically, like the Byzantines before them, Ottomans used forced deportations to colonize areas that were important to state. Thus, "[a] large scale colonization occurred under Mehmed II when he deported en masse peasants from newly conquered lands of Serbia and the Morea, and Turcoman nomads to the villages around Istanbul which had lost their Greek population during the siege of Constantinople" (Inalcik, 1994, p.32). Similarly, when peasants deserted their Anatolian villages during the upheaval caused by Celali bands in the period 1596-1610, "...the government took drastic measures to ensure the return of these peasants" (ibid., p. 32).

The Chinese state also promoted population movements insofar as they resulted in the formation of communities on the existing model with the *same rights and obligations* to the state. Thus, the "Chinese state ...when convinced no serious social problems between immigrants and natives would occur, encouraged migration to form new settlements so that populations and resource bases remained in relative balance...State efforts in these three general areas supported a range of economic situations, at the end points of which were two distinct types of agrarian economy: a series of small-scale, largely

the monarchy, the chance to break the bourgeois monopoly of foreign and domestic trade, to prohibit cities from granting asylum to runaway serfs, to outwit the burghers in commercial transactions and to secure price advantages for its own products by virtue of tariff reductions. Weakened by the measures rammed through diets by princes and noblemen, many Eastern European cities began to stagnate... This trend was accompanied by stagnating and in some instances declining productivity. Under such conditions peasant farming made little progress or even fell behind." (ibid., pp. 111-113)

self-sufficient economies reproduced across an expanding empire; and a complex, large-scale interdependent economy to be monitored and if necessary managed by the state to achieve social stability.” (Wong 2000, p. 453).

4.3 Burden of Taxation/Expropriation

I now turn to a brief discussion of the evidence concerning the relative rates of taxation/expropriation in Europe and the Eastern Empires.

Surveys of the extensive literature on the economic history of the Ottoman and Mughal empires are unequivocal in their conclusions concerning the high rates of taxation and expropriation these imposed on their subjects at their zenith. For instance, using the numbers from the budget for Egypt (which is the only part of the Ottoman Empire for which a complete budget for the sixteenth century has been preserved), Goldsmith (1987, p 92) estimates that “...the overall burden of taxation is not likely to have been below one-third of the province’s total income and may well have approached one-half when the numerous semilegal and extralegal levies of the authorities and of tax farmers are taken into account.” As a result, in the Ottoman Empire: “...the revenue of the fully 1.5 percent of householders represented by the sultan, governors, and holders of large fiefs of over 350 million akches would have represented about one-third of total agricultural revenue. Even if the latter should have been as high as 1.5 billion akches the share of the top 1.5 percent of rural income recipients would still have been as high as one-fourth” (ibid., p. 85). Faroqi (1994) points out that throughout the sixteenth and seventeenth centuries the Ottoman state placed its wealthy merchants and craftsmen under the strict control of its ‘political class’ which siphoned off wealth from the former through various means, including administered prices, illegal taxation, bribes, and outright expropriation. A telling example is the fate of Michael Cantacuzenus who grew immensely wealthy playing the Fugger to the Ottomans. Cantacuzenus was hanged on 13th March, 1578, on the orders of the sultan, without a trial, “from the gates of his own palace at Anchioli and his wealth was confiscated” (Braudel, 1976, p. 696). His was not an isolated case. “Under the Ottoman system, neither the towns nor anyone in them could expect the kind of security from interference which would encourage the technical experimentation, and the study of nature which were among the springs of growing power in the West” (McGowan, 1994).

Similarly, “[t]he Mughal state was an insatiable leviathan: its impact on the economy was defined above all by its unlimited appetite for resources” (Raychaudhuri, 1982, p. 173). Mughal merchants lived in fear, being constantly subjected to extortion, the

forms of which “...ranged from straightforward plunder to ostensibly legitimate taxation.”³³The testimony of the Jain merchant Banarasidas is particularly telling. He writes of “jewellers being thrashed with ‘thorny whips’ by the *jāgirdār* of Jaunpar who demanded ‘what they did not have’.”³⁴ Goldsmith (1987, p.122) estimates that the burden of the imperial government of India at the time of Akbar “...was of well over one fifth of the national product, excluding and fully one-fourth including the zamindars’ charges on the peasants.” The result was that “...the emperor [Akbar] and the 122 top ranking nobles—something like $6 \cdot 10^{-6}$ of all 22 million households—received on a gross basis nearly one-eighth of total national product” (ibid., p. 106). It is also useful to note that “[t]he emperor had in addition a substantial income from the escheat of all estates left by nobles, or by such wealthy commoners as he chose, except wives’ jewelry and what assets the decedent might have managed to hide, although the emperor might grant a small proportion to the heirs. The discouraging effects on saving and investment of this policy are obvious” (ibid., p.121)

As for China the evidence suggests that though the legal tax rates were not high, officials succeeded in expropriating much higher amounts through extra-legal means. Mote (1999, p.908) points out that “...the basic taxes were remarkably low...it has been calculated that the land tax took only 5 to 6 percent of the annual harvest of the principal cereal crops...The Qing tax system (like the Ming before it) thus left much of the surplus over subsistence in agricultural production to be consumed in the provinces...It seems probable that a substantial amount of that surplus was taken illicitly from the producers by various other means...” Chaudhuri (1990, p. 89) suggests that the Chinese state “...claimed a fifth or more of the total agricultural production as its share of income...” It has been calculated that by the eighteenth century the Chinese elite extracted a high fraction of the agricultural output in the Yangzi delta: “At the same time...these landlords had consolidated their ownership of the land and thereby their ability to take what was an essentially politically set level of rent, which, in the Yangzi delta, amounted to 40 to 50 percent of the summer harvest—rice in the paddy zone and cotton in the cotton belt (Bernhardt 1992, 21). Since the burden of the taxes had been shifted onto property owners, and rentier landlords paid their taxes out of the rent receipts, the Qing state upheld and enforced the right of landlords to garner rents from their tenants (Huang 1990, 42; 1996, 81; Bernhardt 1992, 13, 30; Jing 1994, 66-67; Mazumdar 1998, 214-16). In the Yangzi delta, the Chinese elite was thus able to extract roughly 30 to 40 percent of the

³³ibid. p. 186.

³⁴ibid. p.186. For similar observations and conclusions on Mughal India see also Rothermund (1993).

annual agricultural output (Huang 1990, 103)” (Brenner and Isett, 2002, 615). Furthermore, “...the state and legal traditions discouraged the accumulation of capital in the hands of merchants and repeated attempts were made to break up the concentrations of financial power within selected groups” (Chaudhuri, 1990, p. 386). “In China, the bureaucracy lay across the top of Chinese society is a single, virtually unbreachable stratum; any damage was spontaneously repaired...Local [Cantonese] mandarins practiced corruption as a matter of course, and grew rich with few pangs of conscience...[But] this was merely an accumulation that died with its owner, the reward of office...Neither the fortune nor the power of the mandarins was passed on smoothly to create dynasties of dominant families” (Braudel, 1979, p. 595).³⁵ Unlike the cities in Europe “[t]he [Chinese] city had nothing like a city charter, and no independent administration;... no laws and privileges that applied especially to its inhabitants; and no indigenous social groups that would have thought of demanding city dwellers’ “rights” from the central government. In short, Chinese cities had no separate legal or political status; they were not corporate entities and had none of the organizational features that set European cities apart...[The] Chinese city did not make people free in specific political and legal senses...” (Mote pp. 761-62). Moreover, “[t]he emergence of capitalism necessarily also depended on the expansion of the judiciary system to define the conditions under which private enterprise can grow; it has also required that economic interests be given relatively free rein to develop and that government allow rational implementation of business operations free of excessive interference. None of these conditions was being met in the late Ming and early Qing; there is no visible trend in that direction” (ibid., p. 769). Wong (2002, p. 455) is explicit as to the reasons: “Irrespective of the particular institutional mechanisms deployed by a particular European country’s merchants, all held a fundamental belief that state and merchant shared a common interest in exploiting economic opportunities. European notions of a merchant empire were absent from Chinese thinking not because the Chinese state was too weak to consider such an alliance between government and merchant but because it was too strong and successful in other ways to have reason to consider practices that would bring it revenue that it did not anxiously desire and potential problems it did not really want.” And “[t]he Chinese political economy was not ‘mercantilist’ since its policymakers did not conceive of themselves as competing for wealth and power with other like-minded governments” (ibid., p. 460).

It is also instructive to contrast briefly the picture that emerges for the eastern empires with that of two European countries lying on the high (United Provinces) and

³⁵See also Fairbank (1957, 1980) and Perkins (1967).

low (England) ends of the tax spectrum. The government of the former recovering from its long struggle with Spain had total government revenues in 1688 at one-fourth of the national product. The same ratio for Great Britain at the end of the seventeenth century was about 3 percent (Goldsmith, 1987). It is also useful to note that “[i]n England in 1688 the complete share of the top 136 families (temporal lords) was slightly above 2 percent” (ibid., p. 108).

5 Alternative Hypotheses

I now turn to a brief discussion of alternative hypotheses concerning the causes of the “great divergence.”

5.1 “Culture Makes Almost All the Difference”

The title of David Landes’ article in *Culture Matters* boldly declares the gist of this view: “Culture Makes Almost All the Difference”.³⁶ Differential economic performance, this view holds, can mostly be attributed to different cultural values. The rise of Europe is to be explained by the “protestant ethic”. The spectacular performance of the “dragons” of East Asia owe much to their Confucian values etc.

A number of objections have been raised to this view. The first one, recognized by Landes, is that having the same culture does not lead to similar economic outcomes. For example, while mainland China and some of the “dragons” share the same “Confucian values”, their development experience up to recent times have been quite different. One can also point out that the values that are now praised as promoting development were once condemned as blocking it. A typical retort to these criticisms is to argue, as Landes does, that “determinants of complex processes are invariably plural and interrelated” and “with policies that now encourage rather than suppress economic development” differences in economic performance of those in possession of the right cultural values will disappear (see Landes, 2000, p.2-3). This argument, however, leaves one wondering why then it is the case that it is “culture that makes almost all the difference” and not “policies that encourage economic development”?

A second objection to the view that privileges culture points out that “cultures are extremely contingent phenomena” (Jones, 2002, p.25). They respond to changes in eco-

³⁶See Landes (2000). Landes’ booklength treatment of world economic history draws the same conclusion (see Landes, 1998).

conomic and political conditions. The Ottoman Empire in its expansionary phase actively encouraged innovation, adopting the most advanced military technologies, attracting “many a talented Greek, Jew, and Gentile into the sultan’s service” (Kennedy, 1989, p. 11), with Ottoman muslim traders engaging in international trade, travelling throughout Europe. A century later, we see the Ottomans disinterested in technical advances and the muslim traders being replaced by their christian Ottoman counterparts. Similar vacillations occur in India and China. Do we then conclude that there are major widespread cultural switches from progressive to conservative, and, if so, what accounts for such switches?

A third and final point is that a culture is never a homogeneous, self-consistent entity. It typically has elements that can be used to support different and at times even contradictory attitudes. All the evidence is that the Ottomans, the Mughal Indians, or the Confucian Chinese did not feel themselves betraying their culture when there was a shift in attitudes. To suppose that a culture endows its practitioners with a unique set of unchanging attitudes or inner values is simply to ignore history.

5.2 “Chance Events” of the World-Historians

An alternative view of why Europe diverged particularly from China, is associated with the recent writings of a group of authors collectively called the world-historians (see Goldstone, 2000, Pomeranz, 2000, and Wong, 1997).³⁷ Though the authors differ in particulars, their common theme is that while China and Europe had economies more or less at par probably until the eighteenth or even the nineteenth centuries, some chance event led to the “great divergence”. The chance event is sometimes said to be the European discovery of the steam engine that turned coal into energy at rates unimaginable before. Other favorite candidates for the chance events are the geographic good fortune of having coal nearby in mines were cheap to operate and the European discovery of the New World that relaxed the resource constraints of northwest Europe. It has also been suggested that had William III’s invasion of England failed, Europe might not have risen to world economic and political dominance. Europe’s earlier experiences and its structural difference from, say China, are consistently downplayed by the world-historians.

In response one could point out that many European countries that, like China, did not have access to cheap coal did in fact manage to industrialize quite early and did

³⁷A useful summary of this view is to be found in Stokes (2001), Pomeranz (2002), and Wong (2002).

also diverge from China. What made the difference was the ability of these economies to adopt the new technologies developed elsewhere. This was, in turn, the consequence of the gradual but persistent accumulation of wealth made possible by the political structure that had evolved in Europe.³⁸

5.3 “Resource Grab”

This thesis credits the European rise to dominance to its grab of resources, gold, silver, and land, from the indigenous inhabitants of the New World. As the most recent proponent of this view, Frank (1998) sharply puts it, “Europeans did not do anything—let alone modernize—by themselves.” “The Europeans had no exceptional, let alone superior, ethnic, rational, organizational, or spirit-of-capitalist advantages to offer, diffuse, or do anything else in Asia” (Frank, 1998, p. 5, 284). Frank claims that with the price of silver being almost twice as high in China as in Europe, Europeans traded the silver they plundered in the New World for the goods produced in China, thus buying themselves “a seat, and then even a whole railway car, on the Asian train” (Frank, 1998, p. 277).

One should then question the supposed destination of this Asian train. It is one thing to agree that the resources seized by Europe in the New World partially fueled the European expansion.³⁹ It is another thing, however, to accept the view that had the Asian empires been the recipient of a similar windfall, the outcome in terms of technological breakthroughs or of rapid sustained increases in income would have been similar. Given what we know of the political and economic conditions prevailing in Asia at the time, it is very difficult to imagine a similar economic dynamic arising in the eastern part of the Eurasian continental mass. The good fortune of Europe was the political circumstances that had prepared on the ground a “stock of institutions” enabling its inhabitants, through perhaps no fault of their own, to take advantage of the windfall.⁴⁰

³⁸In criticizing Pomeranz, Brenner and Isett (2002) argue that between 1500 and 1750 the developmental paths of England and the Yangzi delta of China had already taken them on to very different trajectories and levels of income. This, according to Brenner was essentially because of the shift in the “social-property” relations in England that put an end to “coercive extraction” from peasants.

³⁹Findlay (1992) suggests that the New World was not only a source of “enormous resources” for Europe but it also provided a “Great Frontier” to be opened up as a market, a destination for investments as well as migrants. Bairoch (1993) disputes the importance of “third-world” raw materials and markets and colonialism, in general, as being crucial to European industrialization

⁴⁰In a recent paper, Acemoglu, Johnson and Robinson (2002b) point out to the role of colonialism and Atlantic trade in strengthening the commercial bourgeoisie and giving them the leverage to develop

6 A Brief Intellectual History

The basic idea that political fragmentation somehow provides a fertile ground for “economic progress” seems to have recently gained widespread currency. Though not every author is clear about the nature of the links that connect political fragmentation to economic success, it is useful first to elucidate several alternative mechanisms that have been suggested as possible links. One mechanism is the one formalized in this paper. Political fragmentation, by allowing the subjects to move across jurisdictions more easily, leads to competition among rulers for the mobile tax-base, lowering rates of expropriation and increasing the amount of public services provided. A second mechanism, formalized in Garner and Chaudhry (2001), emphasizes the idea that political competition in a system with many rulers and states makes it more difficult to *suppress innovations* (which may threaten the political power of incumbents) because those rulers who fail to innovate may fall prey to neighboring predators who do innovate.⁴¹ These two mechanisms are sometimes joined together as in everyone’s favorite story of that famous innovator Christopher Columbus shopping around, touring Europe, going from the Italian city-states to the Duke of Anjou in France, then to the king of Portugal, then to the duke of Medina-Sedonia, then to the count of Medina-Celi, and finally to the king and queen of Spain only to be rejected the first time and to be granted the resources he has been asking for only at appeal (see Kennedy, 1987 and Diamond, 1999).

In addition to these mechanisms, it is useful to note the sometimes explicit but mostly implicit connection the literature makes between the use of political power and its economic consequences. Terms like “tyranny” and “despotism” common in the historical and political science literature are typically employed in the sense that the rule being referred to is that of an absolute sovereign whose actions are arbitrary and “unjust.” However, especially when used in the context of an economic-historical analysis, the terms also imply an arbitrary loss or diminution of the security of the property rights.

Recent literature (see Kennedy, 1987, Mokyr, 1990, and Diamond, 1999, among

further the institutions that protected their property rights.

⁴¹The innovations in question may be purely civilian in their use or may involve military technologies. In the former case it is the fear that the innovators may use their increased economic power to obtain political power, which, in turn, can be used to wrestle political power away from the incumbent. This is to be feared because political power enables its holder to extract resources from others (see Acemoglu and Robinson, 2002a). Balanced against this should be the threat posed by foreign rulers who command superior resources because of having successfully innovated (Garner and Chaudhry, 2001). In the case of military innovations, the risk run by those rulers who fail to adapt would be losing their possessions to others who do (see Findlay, 1992).

others) typically traces both of these mechanisms back to Jones (1981), who in turn credits jointly Wallerstein (1974) and Wesson (1967, 1978). Wesson emphasizes the benefits of the states system and documents the “failings of the imperial alternative.” Wallerstein (1974) points out that in the sixteenth century the fate of the European economic development depended crucially on the transnational economic system and the failure of attempts to restore a European empire. For Wallerstein the mechanism at play seems to be a version of the combination of the two mechanisms identified above: his emphasis is on the lack of political power of the “commercial-urban middle stratum” in China which made them “constantly vulnerable to confiscatory measures whenever their economic profits become sufficiently swollen so that they might begin to create for themselves military strength” (Wallerstein, 1979, pp. 22-23). It was the good fortune of Europe to escape a similar fate that might have befallen it had the Habsburg dream of a “universal monarchy” materialized.

However, understanding of the mechanisms in question certainly does go farther back in time than the last decades of the twentieth century, for we find a version of it in Hume⁴² (1998, pp. 63-65) whose essay ‘Of the Rise and Progress of the Arts and Sciences’, first published in 1741 (*italics in the original*)⁴³:

“That nothing is more favorable to the rise of politeness and learning, than a number of neighboring and independent states, connected together by commerce and policy. The emulation which naturally arises among those neighboring states is an obvious source of improvement. But what I would chiefly insist on is the stop which such limited territories give both to power and to authority.”

“Extended governments, where a single person has great influence, soon become absolute; but small ones change naturally into commonwealths. A large government is accustomed by degrees to tyranny...[A] large government, though the whole may be discontented, may, by a little art, be kept in obedience...”

⁴²One can, with some anachronism, trace the germ of the idea even to Herodotus (c. 490-425 BC). The writer of the bookjacket for his *Histories* seems to do exactly this when he writes that “Its [i.e. that of the *Histories*] main theme is the heroic and successful struggle of a small and divided Greece against the mighty empire of Persia—with its underlying conflict between the absolutism of the East and the free institutions of the West” (Herodotus, 1985).

⁴³I owe the reference to Hume to Enrico Spolaore who pointed it out in a private conversation.

“But the division into small states are favourable to learning, by stopping the progress of *authority* as well as that of *power*.”

“Each [Greek] city produced its several artists and philosophers, who refused to yield the preference to those of the neighbouring republics;...and the sciences, not being dwarfed by the restraint of authority, were enabled to make such considerable shoots as are even at this time the objects of our admiration....But mankind having at length thrown off this yoke, affairs are now returned nearly to the same situation as before, and EUROPE is at present a copy, at large, of what GREECE was formerly a pattern in miniature.”⁴⁴

At about the same time, in his *Spirit of the Laws* published in 1748, Montesquieu was expounding a political theory that sharply distinguished “Oriental despotism” from the prevailing European political system and extolled the role of the mobility of capital in Europe (achieved through the invention and increasing use of the letter of exchange) in curbing the power of the sovereign:

“They invented letters of exchange, in this way commerce was able to avoid violence and maintain itself everywhere, for the richest trader had only invisible goods, which could be sent everywhere and leave no trace anywhere...Since that time princes had to govern themselves more wisely than they themselves would have thought, for it turned out that great acts of authority were so clumsy that experience itself has made known that only goodness of government brings prosperity” (Montesquieu, 1989, p. 389).⁴⁵

Furthermore, Montesquieu connects political liberty, which he defines as consisting in “security or in one’s opinion of one’s security,”⁴⁶ to wealth accumulation, predation, and “defensive action”: “As for the despotic state, it is useless to talk about it. General

⁴⁴Hume also has a geographical explanation that predates the modern account given in Diamond (1999) for the political fragmentation of Europe:

“If we consider the face of the globe, EUROPE, of all the four parts of the world, is the most broken by seas, rivers, and mountains, and GREECE of all countries of EUROPE. Hence these regions were naturally divided into several distinct governments; and hence the sciences arose in GREECE and EUROPE has been hitherto the most constant habitation of them” (See Hume 1998, pp. 65-66).

⁴⁵Like Hume, Montesquieu also provided a geographical explanation to account for the different systems observed in Europe and Asia (see Montesquieu, 1989, pp. 283-284).

⁴⁶*Ibid.*, p.187.

rule: in a nation that is in servitude, one works more to preserve than to acquire; in a free nation, one works more to acquire than to preserve” (ibid., p. 341).⁴⁷⁴⁸

Montesquieu’s contemporary Adam Smith echoed several of the themes already encountered. First, Smith emphasized the importance of “the liberty and security of individuals,” noting that it was because of this security in the cities that industry flourished and “stock accumulated” there before the country. Smith argued that cities in France and England were given their freedom as a consequence of the political competition between the sovereign and feudal lords. As he put it “[t]he burghers naturally hated and feared the lords. The king hated and feared them too; but though perhaps he might despise, he had no reason either to hate or fear the burghers. Mutual interest, therefore, disposed them to support the king, and the king to support them against the lords. They were the enemies of his enemies, and it was his interest to render them as secure and independent of those enemies as he could” (2000, p. 430).

Second, Smith, like Montesquieu recognized that mobility of the “capital stock” reduced the ability of the sovereign to tax it:

“The proprietor of stock is properly a citizen of the world, and is not necessarily attached to any particular country. He would be apt to abandon the country in which he was exposed to a vexatious inquisition, in order to be assessed to a burdensome tax,

⁴⁷However, Montesquieu also writes: “Taxes should be very light in despotic government. Otherwise, who would want to take the trouble to cultivate the land? Moreover, how can high taxes be paid in a government that does nothing to replace what the subject has given?” (ibid., p. 219). One way to interpret this in light of our results is to suggest that the eastern empires provided relatively little public services as compared to the taxes they collected, however low these may be in absolute terms.

⁴⁸Similar sentiments were voiced in the debate over the ratification of the US constitution of 1787. Those who were opposed to ratification, known as the Antifederalists, were concerned with the powers to be given to the federal government to the detriment of individual states. They believed that a “consolidated” republic would eventually lead to despotism with its power to levy taxes directly upon individuals. Under the then-existing Articles of Confederation, the Congress had only the authority to make requisitions from states without actually having any real power to force payment (see Kenyon, 1966). Antifederalists extolled the virtues of each state choosing its own level and kind of taxes and feared the “tyranny” of uniform federal taxes. As “Philadelphensis” put it in his letter of March 8, 1788 in the *Independent Gazetteer* of Philadelphia “[t]he truth of this matter is simply this: the taxes will hereafter be uniform in all the states, and as oppressive as tyranny can make them. In every state the face of the poor must be ground to dust; and where any appearance of prosperity or wealth is observed, an additional tax will be devised” (Kenyon, 1966, p.83). They also did not shy away from comparing the feared tyranny of the proposed federal government with the despotism of the “oriental empires”. In this, as in other areas, antifederalists were influenced by Montesquieu whose name carried great weight and was cited frequently.

and would remove his stock to some other country where he could either carry on his business, or enjoy his fortune more at his ease. ...A tax which tended to drive away stock from any particular country, would so far tend to dry up every source of revenue, both to the sovereign and to the society...The nations, accordingly, who have attempted to tax the revenue arising from stock, instead of any severe inquisition of this kind, have been obliged to content themselves with some very loose...estimation” (Smith, 2000, p.914).⁴⁹

Finally, Adam Smith also put forward another aspect of the modern idea when he emphasized the difference between Asian and European economies. The former, suggested Smith, were dominated by agriculture supported by “hydraulic works” constructed by the oriental states. The latter nations favored manufactures and foreign trade (Smith, 2000). This stress on the role of public services provided by the state was an integral part of a line of argument developed by Marx and Engels into the notion of an “Asiatic mode of production” and found its exaggerated culmination in the *Oriental Despotism* of Karl Wittfogel (1957).⁵⁰

We owe the first lucid twentieth century expression of the mechanism to Weber who in his monumental *Economy and Society* (first published in 1922) writes (italics in the original):

“The privileges of private capital in patrimonial states were always the more developed, the more the power competition of *several* states made it necessary for them to woo the mobile money capital. Politically privileged capitalism flourished in Antiquity, as longest several states fought for ascendancy and survival; in China, too, it seems to have developed in the corresponding past. It flourished during the age of mercantilism in the Occident, when the modern power states entered upon their political competition. It disappeared in the Roman Empire when the latter became a universal state and merely had to protect frontiers; it was almost completely absent in the Chinese Empire, and relatively weak in the Oriental and Hellenistic states—the weaker, the more these states were “universal”—and also in the Caliphate. Of course, not every competition for power led to privileges for capital; this could only happen when capital formation was already underway. Conversely, pacification and the resulting decline of political demands for capital on the part of the great universal states eliminated the privileged position of

⁴⁹Hirschman (1981) cites Montesquieu and Smith and adds Sir James Steuart (1767) to the list of early authors who celebrated the possible exit of capital as a restraint on arbitrary government.

⁵⁰See Anderson (1979) for a discussion of the intellectual history of the Asiatic mode of production.

capital” (Weber, 1968, p. 1103).

Here we have all the elements necessary for the proper functioning of the mechanism clearly outlined: several states in competition and mobile capital forcing rulers to attract capital by granting it “privileges”. On the other hand, the absence of competition among states, as would be the case the more “universal” the state is, eliminates the need to attract capital by providing privileges. Weber does not specify the “privileges” its “exit” possibilities procured for mobile capital. One can however, in light of our discussion, suggest that these included lower expropriation rates, protected in the long-run by political “voice” and formalized rights that, as Wallerstein and Jones point out, were conspicuously absent in the empires of the East, where “exit” was either a limited or a non-existent option.

7 Concluding Remarks

In this paper, I built a simple model which illustrates the Hume-Weber-Jones mechanism for the rise of Europe and the demise of the eastern empires. The mechanism is one where political competition in a states system leads rulers to expropriate less and to provide relatively more public services to their footloose subjects. Rulers who do not face such competition would be more likely to choose higher expropriation rates relative to what they provide in return. The Song Chinese, and the Ottoman and Mughal Indian states in their consolidation periods did in fact face such competition and chose to expropriate less from their subjects leading to their “golden periods”. However, their consolidation into unified, stable empires radically diminished the potential mobility of their subjects and removed a structural barrier to high levels of expropriation. The resulting fall in rates of capital accumulation and growth led these empires into a long period of decline. Europe, however, was fortunate in avoiding unification and consolidation into empire. The states system that emerged there led to political competition among its rulers to keep and expand a tax base composed of subjects that could, in the long run, move from one state to another in search of lower rates of expropriation and higher levels of “public services”. The economic and political privileges won by the footloose subjects translated into higher rates of capital accumulation and economic growth that propelled the rise of Europe.

References

- [1] Acemoglu, D. and J. Robinson (2000a) “Political losers as a barrier to economic development,” *American Economic Review Papers and Proceedings* 90: 126-130.
- Acemoglu, D. and J. Robinson (2000b) “Why did the West extend the franchise? Democracy, inequality and growth in historical perspective,” *Quarterly Journal of Economics* 115: 1167-1199.
- Acemoglu, D. and J. Robinson (2002a) “Economic backwardness in political perspective,” mimeo.
- Acemoglu, D., S. Johnson, and J. Robinson (2002b) “The rise of Europe: Atlantic trade, Institutional change and economic growth,” mimeo.
- Acemoglu, D. and S. Johnson (2003) “Unbundling Institutions,” mimeo.
- Alesina, A. and D. Rodrik (1994) “Distributive politics and economic growth,” *Quarterly Journal of Economics* 109: 465-490.
- Alesina, A. E. Spolaore (1997) “On the number and size of nations,” *Quarterly Journal of Economics* 112: 1027-56.
- Anderson, P. (1979) *Lineages of the Absolutist State*. Verso, London.
- Bairoch, P. (1993) *Economics and World History: Myths and Paradoxes*, The University of Chicago Press, Chicago, IL.
- Barro, R. and X. Sala-i-Martin (1992) “Public finance in models of economic growth,” *Review of Economic Studies* 59: 645-661.
- Barro, R. and X. Sala-i-Martin (1995) *Economic Growth*. McGraw Hill, New York.
- Benhabib, J. and A. Rustichini (1996) “Social conflict and growth,” *Journal of Economic Growth* 1: 125-142.
- Bernhardt, K. (1992) *Rents, Taxes, and Peasant Resistance: The Lower Yangzi Region, 1840-1950*. Stanford University Press, Stanford.
- Bolton, P. and G. Roland (1997) “The breakup of nations: A political economy analysis,” *Quarterly Journal of Economics* 112: 1057-90.
- Braudel, F. (1979) *Civilisation Matérielle, Economie et Capitalisme: XV^e-XVIII^e Siècle*, Librairie Armand Colin, Paris. English translation (trans. Siân Reynolds) *Civilization and Capitalism 15th-18th Century*, Harper &Row, New York, 1982.

- Braudel, F. (1976) *The Mediterranean and the Mediterranean World in the Age of Philip II*, Harper & Row, New York.
- Brenner, R. (1997) "Property relations and the growth of agricultural productivity in late medieval and early modern Europe," in A. Bhaduri and R. Skarstein (eds.), *Economic Development and Agricultural Productivity*. Edward Elgar, Cheltenham, UK.
- Brenner, R. and C. Isett (2002) "England's divergence from China's Yangzi delta: Property relations, microeconomics, and patterns of development," *Journal of Asian Studies* 61: 609-662.
- Chaudhuri, K.N. (1985) *Trade and Civilization in the Indian Ocean: An Economic History from the Rise of Islam to 1750*. Cambridge University Press, Cambridge.
- Chaudhuri, K.N. (1990) *Asia Before Europe: Economy and Civilization of the Indian Ocean from the Rise of Islam to 1750*. Cambridge University Press, Cambridge.
- de Vries, J. (1984) *European Urbanization 1500-1800*, Harvard University Press, Cambridge, MA.
- de Vries, J. (1994) "The industrial revolution and the industrious revolution," *Journal of Economic History* 54: 249-270.
- Deng, K.G. (2000) "A critical survey of recent research in Chinese economic history," *Economic History Review*: 53, 1-28.
- Diamond, J. (1999) *Guns, Germs, and Steel. The Fates of Human Societies*. Norton. New York.
- Eicher, T. and S. Turnovsky (2000) "Scale, congestion, and growth," *Economica* 67: 325-346.
- Epple, D. and T. Romer (1991) "Mobility and Redistribution," *Journal of Political Economy* 99: 828-858.
- Fairbank, D. (1957) *Chinese Thought and Institutions*. Chicago.
- Fairbank, D. (1980) *The Cambridge History of China*. Cambridge University Press, Cambridge.
- Faroqhi, S. (1994) "Crisis and change, 1590-1699," in Inalcik, H. and D. Quataert (eds.), *An Economic and Social History of the Ottoman Empire, 1300-1914*. Cambridge University Press, Cambridge.

- Frank, A. G. (1998) *ReOrient: Global Economy in the Asian Age*, Berkeley, CA.
- Findlay, R. (1992) "The roots of divergence: Western economic history in comparative perspective," *American Economic Review Papers and Proceedings* 82: 158-161.
- Findlay, R. (1996) "Towards a model of territorial expansion and the limits of empire," in Garfinkel, M. and S. Skaperdas (eds.) *The Political Economy of Conflict and Appropriation*. Cambridge University Press, New York.
- Findlay, R. and J. Wilson (1987) "The political economy of Leviathan," in Razin, A. and E. Sadka (eds.) *Economic Policy in Theory and Practice*, MacMillan, New York.
- Flinn, M. W. (1981) *The European Demographic System 1500-1820*. The Johns Hopkins University Press, Baltimore, Maryland.
- Galor, O. and D. Weil (1999) "From Malthusian stagnation to modern growth," *American Economic Review Papers and Proceedings* 89: 150-154.
- Galor, O. and D. Weil (2000) "Population, technology and growth: From the Malthusian regime to the demographic transition," *American Economic Review* 90: 806-828.
- Galor, O. and A. Mountford (2003) "Trade, demographic transition, and great divergence: Why are a third of people Indian or Chinese?" mimeo.
- Garner, P. and A. Chaudhry (2001) "Political competition between countries and economic growth," Brown University mimeo.
- Goldsmith, R.W. (1987) *Premodern Financial Systems*. Cambridge University Press, Cambridge.
- Goldstone, J. (2000) "Europe's peculiar path: Would the world be modern if William III's invasion of England in 1688 had failed?," mimeo, University of California, Davis.
- Gordon, R. (1983) "An optimal taxation approach to fiscal federalism," *Quarterly Journal of Economics* 98:567-586.
- Grossman, H. (1991) "A general equilibrium model of insurrections," *American Economic Review* 81: 912-921.
- Grossman, H. and M. Kim (1996) "Predation and accumulation," *Journal of Economic Growth* 1: 333-351.

- Grossman, H. and J. Mendoza (2001) "Annexation or conquest? The economics of empire building," NBER Working Paper 8109.
- Hatcher, J. and M. Bailey (2001) *Modelling the Middle Ages: The History and Theory of England's Economic Development*. Oxford University Press, Oxford.
- Herodotus (1985) *The Histories*. Penguin, Harmondsworth.
- Hirschman, A. (1981) *Essays in Trespassing*. Cambridge University Press, Cambridge.
- Hodgson, M. (1974) *The Venture of Islam, Conscience and History in a World Civilization*, Vol. 3: *The Gunpowder Empires and Modern Times*. The University of Chicago Press, Chicago.
- Huang, P.C. (1990) *The Peasant Family and Rural Development in the Yangtze Delta, 1350-1988*. Stanford University Press, Stanford.
- Hume, D. (1998) *Selected Essays*. Edited by Copley, S. and A. Edgar. Oxford University Press, Oxford.
- Inalcik, H. and D. Quataert (1994) *An Economic and Social History of the Ottoman Empire, 1300-1914*. Cambridge University Press, Cambridge.
- Inalcik, H. (2000) *The Ottoman Empire: The Classical Age 1300-1600*. Phoenix Press, London.
- Jing, J. (1994) "Legislation related to the civil economy in the Qing dynasty," in K. Bernhardt and P. Huang (eds.) *Civil Law in Qing and Republican China*. Stanford University Press, Stanford.
- Jones, E.L. (1981) *The European Miracle. Environments, Economies, and Geopolitics in the History of Europe and Asia*. Cambridge University Press, Cambridge.
- Jones, E.L. (2002) *The Record of Global Economic Development*, Edward Elgar, Cheltenham, UK.
- Kehoe, p. (1989) "Policy cooperation among benevolent governments may be undesirable," *Review of Economic Studies* 56: 289-296.
- Kennedy, P. (1989) *The Rise and Fall of Great Powers*. Vintage Books. New York.
- Kenyon, C. (1966) *The Antifederalists*. The Bobbs-Merrill Company, Indianapolis, IN.
- Lane, P. and A. Tornell (1996) "Power, growth, and the voracity effect," *Journal of Economic Growth* 1: 213-241.

- Landes, D. (1998) *The Wealth and Poverty of Nations: Why Some Are Rich and Some So Poor*, Norton, New York.
- Landes, D. (2000) "Culture makes almost all the difference," in Harrison, L. and S. Huntington (eds.), *Culture Matters. How Values Shape Human Progress*. Basic Books, New York.
- Lucas, R. (2002) *Lectures on Economic Growth*. Harvard University Press, Cambridge, MA.
- Mazumdar, S. (1998) *Sugar and Society in China: Peasants, Technology and the World Market*. Harvard University Press, Cambridge.
- McGowan, B. (1994) "The age of the *ayans*, 1699-1812, " in Inalcik, H. and D. Quataert (eds.), *An Economic and Social History of the Ottoman Empire, 1300-1914*. Cambridge University Press, Cambridge.
- McGuire, M. and M. Olson (1996) "The economics of autocracy and majority rule," *Journal of Economic Literature* 34: 72-96.
- Mokyr, J. (1990) *The Lever of Riches*, New York.
- Mokyr, J. (2002) *The Gifts of Athena: Historical Origins of the Knowledge Economy*. Princeton University Press, Princeton, NJ.
- Montesquieu, C. (1989) *The Spirit of the Laws*. Cambridge University Press, Cambridge.
- Montinola, G., Qian, Y., and B. Weingast (1996) "Federalism, Chinese style: The political basis for economic success," *World Politics* 48: 50-81.
- Mote, F.W. (1999) *Imperial China 900-1800*. Harvard University Press, Cambridge, MA.
- Needham, J. (1954 –) *Science and Civilization in China*, Cambridge.
- North, D. W. Summerhill, and B. Weingast (2000) "Order, disorder, and economic change: Latin America versus North America" in B. de Mesquita and H. Root (eds.), *Governing for Prosperity*, Yale University Press, New Haven and London.
- Nugent, J. and J. Robinson (2001) "Are endowments fate?" mimeo.
- O'Brian, P. (1993) "Introduction: modern conceptions of the Industrial Revolution," in O'Brian, P. and R. Quinault (eds.), *The Industrial Revolution and British Society*. Cambridge University Press, Cambridge.

- Perkins, D. (1967) "Government as an obstacle to industrialization: the case of nineteenth-century China," *Journal of Economic History* 27: 478-492.
- Persson, T. and G. Tabellini (1995) "Double-edged incentives: Institutions and policy coordination," in G. Grossman and K. Rogoff (eds.), *Handbook of International Economics*. Vol. 3. North Holland, Amsterdam.
- Pomeranz, K. (2000) *The Great Divergence*, Princeton University Press, Princeton, N.J.
- Pomeranz, K. (2002) "Political economy and ecology on the eve of industrialization: Europe, China, and the global conjuncture," *American Historical Review* 107: 425-447.
- Quataert, D. (1914) "The Age of Reforms, 1812-1914," in Inalcik, H. and D. Quataert (eds.), *An Economic and Social History of the Ottoman Empire, 1300-1914*. Cambridge University Press, Cambridge.
- Raftis, J.A. (1964) *Tenure and Mobility: Studies in the Social History of the Medieval English Village*. Pontifical Institute of Medieval Studies, Toronto.
- Raftis, J.A. (1997) *Peasant Economic Development within the English Manorial System*. McGill-Queen's University Press, Montreal.
- Raychaudhuri, T. (1982) "The Mughal empire" in Raychaudhuri, T. and I. Habib (eds.), *The Cambridge Economic History of India* vol. 1: c. 1200-c.1750, Cambridge University Press, Cambridge.
- Rogoff, K. (1985) "Can international monetary policy coordination be counterproductive?" *Journal of International Economics* 18:199-217.
- Rothermund, D. (1993) *An Economic History of India. From Pre-colonial Times to 1991*. Routledge, London, (2nd edn.)
- Rösener, W. (1992) *Peasants in the Middle Ages*. University of Illinois Press, Urbana and Chicago.
- Rösener, W. (1994) *The Peasantry of Europe*. Blackwell, Oxford.
- Shih, J. (1992) *Chinese Rural Society in Transition: A Case Study of the Lake Tai Area, 1368-1800*. Berkeley: Institute of East Asian Studies, University of California, Center for Chinese Studies.
- Smith, A. (2000) *An Inquiry into the Nature and Causes of the Wealth of Nations*. [ed. E. Cannan, Modern Library, New York].

- Spence, J. (1990) *The Search for Modern China*, W. W. Norton & Company, New York.
- Steuart, J. (1767) *Inquiry into the Principles of Political Oeconomy*, I. A.S. Skinner (ed.) University of Chicago Press, Chicago, (1966).
- Stokes, G. (2001) "The fates of human societies: A review of recent macrohistories," *American Historical Review* 106: 508-525.
- Tiebout, C. (1956) "A pure theory of local expenditures," *Journal of Political Economy* 64: 416-424.
- Tilly, C. (1990) *Coercion, Capital, and European States, AD 990-1992*. Blackwell, Cambridge, MA.
- Usher, D. (1992) *The Welfare Economics of Markets, Voting, and Predation*. University of Michigan Press, Ann Arbor, MI.
- Wallerstein, I. (1974) *The Modern World-System I*. Academic Press, San Diego, CA.
- Wallerstein, I. (1979) *The Capitalist World-Economy*. Cambridge University Press, Cambridge.
- Weber, M. (1968) *Economy and Society. An Outline of Interpretive Sociology*. Bedminster Press, New York.
- Weingast, B. (1995) "The economic role of political institutions: Market-preserving federalism and economic development," *Journal of Law, Economics, and Organization* 11: 1-31.
- Wesson, R. (1967) *The Imperial Order*. University of California Press, Berkeley, CA.
- Wesson, R. (1978) *States-Systems*. The Free Press, New York.
- Wittfogel, K. (1957) *Oriental Despotism*. New Haven.
- Wong, R.B. (1997) *China Transformed: Historical Change and the Limits of European Experience*, Cornell University Press, Ithaca, NY.
- Wong, R.B. (2002) "The search for European differences and domination in the early modern world: A view from Asia," *American Historical Review* 107: 447-467.