

Why Did the West Extend the Franchise? Democracy, Inequality and Growth in Historical Perspective*

Daron Acemoglu[†] James A. Robinson[‡]

First Version: August 1996

Revision: December 1998

Abstract

During the nineteenth century, most Western societies extended voting rights, a decision that led to unprecedented redistributive programs. We argue that these political reforms can be viewed as strategic decisions by political elites to prevent widespread social unrest and revolution. Political transition, rather than redistribution under existing political institutions, occurs because current transfers do not ensure future transfers, while the extension of the franchise changes the future political equilibrium and acts as a commitment to redistribution. Our theory also offers a novel explanation for the Kuznets curve, whereby the fall in inequality follows redistribution due to democratization. We characterize the conditions under which an economy experiences the development path associated with the Kuznets curve, as opposed to two non-democratic paths: an “autocratic disaster”, with high inequality and low output, and an “East Asian Miracle”, with low inequality and high output.

Keywords: Democracy, Enfranchisement, Growth, Inequality, Political Commitment, Redistribution, Revolution.

JEL Classification: D72, O15.

* We would like to thank Pranab Bardhan, Steven Durlauf, Jeffrey Frieden, Ed Glaeser, Claudia Goldin, Peter Lindert, Torsten Persson, Dani Rodrik, John Roemer, Kenneth Sokoloff, Peter Temin, Jaume Ventura, Michael Wallerstein and seminar participants at Boston University, Chicago, Cornell, Harvard, NBER, Universidad de los Andes, Singapore National University and the World Bank for helpful comments and suggestions.

[†] Massachusetts Institute of Technology, Department of Economics, E52-371, Cambridge, MA 02139; e-mail: daron@mit.edu

[‡] University of Southern California, Department of Economics, Los Angeles, CA 90089; e-mail: jacobins@usc.edu.

1 Introduction

The nineteenth century was a period of fundamental political reform and unprecedented changes in taxation and redistribution. Britain, for example, was transformed from an “autocracy” run by an elite to a democracy. The franchise was extended in 1832, then again in 1867 and 1884, transferring voting rights to portions of the society with no previous political representation. The decades after the political reforms witnessed radical social reforms, increased taxation, and the extension of education to the masses. Finally, as noted by Kuznets, inequality, which was previously increasing, started to decline during this period: the Gini coefficient for income inequality in England and Wales had risen from 0.400 in 1823 to 0.627 in 1871, but fell to 0.443 in 1901. Two key factors in the reduction in inequality were the increase in the proportion of skilled workers (Williamson, 1985) and redistribution towards the poorer segments of the society. For example, taxes rose from 8.12% of National Product in 1867 to 18.8% by 1927, and the progressivity of the tax system increased substantially (Lindert, 1989). During the late nineteenth and early twentieth centuries, the franchise was also extended in most other Western societies. Democratization was again followed by increased redistribution, and in most cases, by the downturn of the Kuznets curve.

These events are hard to understand with our existing theories. If democratization is likely to lead to increased taxation and redistribution (e.g., Meltzer and Richard, 1981), why should the elite extend the franchise? Our answer is that the political elite were forced to extend the franchise because of the threat of revolution.¹ We argue that extending the franchise is a commitment to future redistribution and prevents social unrest. In contrast to democratization, the promise by the elite to redistribute in the future, while maintaining political power, is not credible. Somewhat paradoxically, our model predicts that in economies where the masses are politically organized, the promise of future redistribution is more credible, and so the elite can avoid a revolution without extending the franchise. This may explain why in the face of the heightened social unrest and inequality of the nineteenth century, Britain and France extended the franchise, but Germany, which had the most organized working class in Europe, did not and instead instituted the welfare

¹The threat of revolution can intensify either because of some unusual event such as wars, depressions and famines, or because inequality increases (see, for example, Muller and Seligson, 1987, on the positive relation between income inequality and political instability).

state.

The second contribution of our paper is to point out the link between democratization and the Kuznets curve. Democratization opens the way for redistribution and mass education, and reduces inequality. As predicted by our approach, in a number of Western economies, the peak of the Kuznets curve coincides with the extension of the franchise. Although our model explains the Kuznets curve in European countries, it does not predict that this pattern should be a feature of all development processes (which accords with the empirical findings of Anand and Kanbur, 1993, Fields, 1995 and Fields and Jakubsen, 1993). Instead, we predict that a Kuznets curve should be observed when a society democratizes due to social pressure. Alternative development paths, the “autocratic disaster” and the “East Asian miracle”, do not feature Kuznets curves. In an autocratic disaster, inequality is high, but there is no democratization or redistribution, because the masses are not well organized. The poverty of the masses slows down accumulation and leads to stagnation at a low level of output. In an East Asian miracle, however, initial inequality is low, so the economy accumulates rapidly and converges to a high level of output. Also because gains from growth are more equally shared, social pressure does not emerge until much later, and political reform is considerably delayed.

The thesis that the elite extended the franchise in order to avoid a revolution or social unrest is at the heart of our paper. Although we are aware of no other papers in the economics literature, an informal literature in political science, starting with the seminal work of Lipset (1960) and Moore (1966), has studied the origins of democracy (see, for example, O'Donnell and Schmitter, 1986, and Przeworski, 1991). To the best of our knowledge, however, no previous work explained franchise extension as a commitment device to future redistribution nor pointed out the link between democratization and the Kuznets curve, though Rueschemeyer et al. (1992) have recently stressed the role of social conflict in democratization, and Przeworski (1991) has argued that political reform should be modeled as a game between the elite and citizens. Despite the absence of a literature on this topic, there are natural alternative theories of franchise extension. In Section 4 below, we outline three alternative theories and discuss whether any of these appear to give a better description of the historical events than our preferred story. The first, which we refer to as the Whig Version of History (see Macaulay, 1849-1861), is that the elite extended the franchise because their social values changed, perhaps due to the Enlightenment movement. The second is that political competition within the elite led to the extension of the franchise by one of the parties bringing in new groups to increase their vote (see Himmelfarb, 1966,

Collier, 1998). The third, which is akin to the famous thesis of Moore (1966), is that the middle-class was the driving force behind the extension of the franchise, in part hoping to shift the future balance of power. We believe that all three stories have contributed to some of the political reforms taking place throughout Europe at the end of the 19th and the beginning of the 20th centuries. Nevertheless, our reading of the historical evidence suggests that in Britain, France, Germany and Sweden, the threat of the revolution was the major factor.

Our paper is also related to the growing literature on the political economy of development. For example, Roemer (1985) provides the first economic model of revolution, Grossman (1991,1993,1995) models predation by the unprivileged against the rich, and Ales (1995) and Ales and Verdier (1993) investigate a model where there is concentration of power in the hands of an elite. As in our paper, Benabou (1996), Galor and Zeira (1993), Perotti (1993) and Banerjee and Newman (1993) model investment opportunities as indivisible and show that distribution of income matters for growth and development. Our contribution also shares a common theme with North and Weingast (1989) who argue that political reform can be a method of commitment, but in the context of the introduction of the English Parliament in the seventeenth century.

The plan of the paper is as follows. In Section 2, we develop a model where political power is concentrated in the hands of an elite and the masses can initiate a revolution to contest this power. We show that the elite can prevent a revolution either by redistributing, or by extending the franchise. We characterize the conditions under which current and promised future redistribution is not sufficient to stave off a revolution, making a firm commitment to future redistribution, the extension of the franchise, necessary. In Section 3, we simplify this model in a number of dimensions and add (human) capital accumulation. We show that an increase in inequality can intensify the threat of revolution, and analyze the dynamics of inequality and output in this model. We outline how a Kuznets curve, an autocratic disaster, an East Asian miracle, and a revolution may arise along the equilibrium path. In Section 4, we return to the historical evidence and investigate which approach receives support from the major events of the period. We also argue in this section that for many countries in which a Kuznets curve is detected the peak coincides with political reform triggered by social unrest. Section 5 briefly discusses some extensions. Section 6 concludes.

2 A Model of Democratization

In this section, we develop our main model of democratization. The elite can attempt to prevent a revolution either by redistributing and promising to redistribute in the future, or by extending the franchise. We postpone a discussion of alternative models of franchise extension until Section 4.

2.1 The Environment

We consider an infinite horizon economy with a continuum 1 of agents. A proportion λ of these agents are “poor”, while the remaining $1 - \lambda$ form a rich “elite”. Throughout the paper superscript p will denote a poor agent and r will denote a rich agent (or member of the elite). We will treat all poor agents as identical, and all members of the elite will also be identical. Initially, political power is concentrated in the hands of the elite, but $\lambda > \frac{1}{2}$, so if there is full democracy, the median voter will be a poor agent.

There is a unique consumption good y with price normalized to unity, and a unique asset, h (which should be thought as a combination of human and physical capital). We begin our analysis of the economy at time $t = 0$ where each poor agent has human capital h_0^p and each member of the elite has $h_0^r > h_0^p \geq 1$. In this section these stocks are exogenous, so we drop time subscripts. Accumulation is investigated in Section 3.

There are two methods of producing the final good, both linear in capital. The first is a market technology, $Y_t^m = AH_t^m$ where H_t^m is the amount of human capital devoted to market production. The second is an “informal”, or home production technology, $Y_t^h = BH_t^h$, where H_t^h is the amount of human capital used in home production. Naturally, we have $H_t^h + H_t^m = H \equiv \int h^i di$. We assume that $A > B$, thus market production is always more productive. The only role of home production in our analysis is to ensure an equilibrium tax rate less than 100%, because while taxes can be imposed on the market sector, home production is not taxable.

All agents have identical preferences represented by a linear indirect utility function over net income, and a discount factor $\beta \in (0, 1)$. Post-tax income is given by, $\hat{y}_t^i \equiv (1 - \tau_t)Ah^i + T_t$, for $i = p, r$, where τ_t is the tax rate on income, and $T_t \geq 0$ is the transfer that the agent receives from the state. We assume throughout that taxes and transfers cannot be person specific, hence T_t and τ_t are not indexed by i . The government budget constraint therefore implies $T_t = \tau_t AH^m$, where we used the fact that only human capital

used in market production, H^m , can be taxed.²

The “masses” (λ poor agents), though initially excluded from the political process, are endowed with a *revolution technology*. They can overthrow the existing government and take over the capital stock in any period $t \geq 0$. We assume that if a revolution is attempted, it always succeeds, but the poor only retain a fraction μ_t of the output, and the rest gets destroyed.³ So, if there is a revolution at time t , then each poor agent receives a per period return of $\mu_t AH/\lambda$ in all future periods: total wealth in the economy is AH , and they capture a fraction of μ_t of this and share it between λ agents. A low value of μ implies an ineffective revolution technology, for example, because the poor are unorganized. We assume that μ is stochastic and changes between two values: μ^h and $\mu^l = 0$, with $\Pr(\mu_t = \mu^h) = q$ irrespective of whether $\mu_{t-1} = \mu^h$ or μ^l . The fact that μ fluctuates captures the notion that some periods may be more conducive to social unrest. It will also enable us to model that a promise to redistribute today may not materialize due to changes in circumstances tomorrow.

Finally, in each period the elite have to decide whether or not to extend the franchise. If it is extended, the economy becomes a democracy, and now the median voter, a poor agent sets, the tax rate.⁴ We assume that if voting rights are extended, they cannot be rescinded, so the economy always remains a democracy.⁵

The timing of events within a period can be summarized as follows.

1. the state μ is revealed.
2. the elite decide whether or not to extend the franchise. If they decide not to extend the franchise, they set the tax rate.
3. the poor decide whether or not to initiate a revolution. If there is a revolution they share the remaining output. If there is no revolution and the franchise has been extended, the tax rate is set by the median voter (a poor agent).
4. the capital stock is allocated between market and home production and incomes are realized.

²We think of time $t < 0$ as governed by a different model, for example with less inequality, so that there was no threat of revolution and no need to redistribute by the elite, thus $T_t = \tau_t = 0$ for all $t < 0$.

³The assumption that the elite receive nothing after a revolution is only for simplicity.

⁴Notice that democratization is all-or-nothing. Extending the franchise only to a segment of the citizens would not be useful in this model: if the poor become majority, the consequences are the same as in here, and otherwise, this reform has no commitment value.

⁵This is not to deny that coups happen. Nevertheless, once voting rights are extended and political parties are formed, it is relatively costly for any group to exclude the rest from the political process. We discuss some reasons for this in Section 5.

2.2 Analysis

The analysis can be simplified by exploiting two features of the model. First, the capital allocation decision takes a simple form: if $\tau_t > \hat{\tau} \equiv \frac{A-B}{A}$, then all agents allocate their capital to home use, thus $H_t^m = 0$. If, on the other hand, $\tau_t \leq \hat{\tau}$, then $H_t^m = H_t$ is a best-response. It is clear then that no voter would ever choose $\tau_t > \hat{\tau}$, and we can restrict attention to $\tau_t \leq \hat{\tau}$ and $H_t^m = H_t$, which reduces the number of actions to be considered. Second, all members of the elite have identical preferences, so we can treat them as one player. Also, all poor agents have the same preferences, and when it comes to whether or not to participate in a revolution, there is no “free-rider problem”, because if an agent does not take part in the revolution, he can be excluded from the resulting redistribution. So, we can treat all poor agents as one player. This economy can therefore be represented as a dynamic game between two players, the elite and the masses.

In the text, we characterize the Markov Perfect Equilibria of this game, in which strategies only depend on the current state of the world and not on the entire history of the game. Although the focus on Markovian equilibria is natural in this setting, for completeness, in the Appendix we discuss non-Markovian equilibria, and show that they do not change our general results. The state of the system consists of the current opportunity for revolution, represented by either μ^l or μ^h , and the political state (democracy or elite control). More formally, let $\sigma^r(\mu, P)$ be the actions taken by the elite when the state is $\mu = \mu^h$ or μ^l , and $P = E$ (elite in power) or D (democracy). This consists of a decision to extend the franchise ϕ when $P = E$, and a tax rate τ^r when $\phi = 0$ (i.e. when franchise is not extended). Clearly, if $\phi = 0$, P remains at E , and if $\phi = 1$, P switches to D forever. Similarly, $\sigma^p(\mu, P|\phi, \tau^r)$ are the actions of the poor which consist of a decision to initiate a revolution, ρ ($\rho = 1$ representing a revolution), and possibly a tax rate τ^p when the political state is $P = D$. These actions are conditioned on the current actions of the elite who move before the poor agents according to the timing of events above. Then, a (Markov Perfect) equilibrium is a strategy combination, $\{\sigma^r(\mu, P), \sigma^p(\mu, P|\phi, \tau^r)\}$ such that σ^p and σ^r are best-responses to each other for all μ and P .

We can characterize the Markov Perfect Equilibria of this game by writing the appropriate Bellman equations. Let us start by defining $V^p(R)$ as the return to poor agents if there is a revolution (starting in state $\mu = \mu^h$ since in the other state a revolution will never occur). Clearly, $V^p(R) = \frac{\mu^h AH}{\lambda(1-\beta)}$, which is the per-period return from revolution for the infinite future discounted to the present (note that only the value of μ^h at the time of the revolution matters, hence the per-period return is constant over time). Also, since the

rich lose everything, we have $V^r(R) = 0$.

Next, suppose there is a democracy. Since $\lambda > 1/2$, the median voter is a poor agent and wants as much redistribution as possible. Redistribution has no allocative cost as long as $\tau \leq \hat{\tau}$, so the equilibrium tax rate is $\tau_t = \hat{\tau} \equiv \frac{A-B}{A}$, and $T_t = (A-B)H$. The return to poor and rich agents are therefore: $V^p(D) = \frac{Bh^p + (A-B)H}{(1-\beta)}$ and $V^r(D) = \frac{Bh^r + (A-B)H}{(1-\beta)}$.

Now, consider the state (μ^l, E) . The elite are in power and there is no threat of revolution, so in any Markov Perfect Equilibrium, $\phi = 0$ and $\tau^r = 0$. Therefore, the values of poor and rich agents, $j = p$ or r , are given by:

$$V^j(\mu^l, E) = Ah^j + \beta \left[(1-q)V^j(\mu^l, E) + qV^j(\mu^h, E) \right]. \quad (1)$$

Finally, consider the state (μ^h, E) , and suppose that the elite play $\phi = 0$ and $\tau^r = 0$. Then, we would have $\tilde{V}^p(\mu^h, E) = \frac{Ah^p}{(1-\beta)}$. The revolution constraint is equivalent to: $V^p(R) > \tilde{V}^p(\mu^h, E)$, so that without any redistribution or franchise extension, the masses prefer to initiate a revolution when $\mu = \mu^h$. To make the analysis interesting, we assume that this constraint binds. That is:

Assumption 1 $\frac{h^r}{h^p} > \frac{\lambda(1-\mu^h)}{\mu^h(1-\lambda)}$.

This assumption ensures that the poor prefer revolution to the status quo with no redistribution. Since the revolution is the worst outcome for the elite, they will attempt to prevent it. They can do this in two different ways. First, they can extend the franchise, $\phi = 1$. Then, the poor receive their return under democracy, $V^p(D)$. Second, the elite can choose to maintain political power, $\phi = 0$, but redistribute through taxation. In this case, the poor obtain $V^p(\mu^h, E, \tau^r)$ where τ^r is the tax rate chosen by the rich. With either action by the elite, the poor may still prefer a revolution, thus:

$$V^p(\mu^h, E) = \max \left\{ V^p(R); \phi V^p(D) + (1-\phi)V^p(\mu^h, E, \tau^r) \right\}.$$

The return to the poor when the elite choose the redistribution strategy is:

$$V^p(\mu^h, E, \tau^r) = (1-\tau^r)Ah^p + \tau^r AH + \beta \left[qV^p(\mu^h, E, \tau^r) + (1-q)V^p(\mu^l, E) \right] \quad (2)$$

The rich redistribute to the poor, taxing all income at the rate τ^r . The poor therefore receive net income $(1-\tau^r)Ah^p$ from their own capital and a transfer of $T = \tau^r AH$. If in the next period we are still in state $\mu = \mu^h$, then redistribution continues. But, if in the next period the economy switches to $\mu = \mu^l$, redistribution stops and the poor receive

$V^p(\mu^l, E)$. This captures the discussion in the introduction that the elite cannot commit to future redistribution, unless the future also poses an effective revolution threat. Notice that $\tau^r \leq \hat{\tau}$, that is the elite cannot tax themselves at a rate higher than $\hat{\tau} \equiv \frac{A-B}{A}$; if $\tau > \hat{\tau}$, then each (rich) agent would privately prefer to put all their assets to the home sector, reducing aggregate tax revenues to zero.

We now simplify the exposition by restricting attention to the area of the parameter space where democratization prevents a revolution, i.e., $V^p(D) > V^p(R)$. Thus, we assume:

Assumption 2 $Bh^p + (A - B)H > \frac{\mu^h AH}{\lambda}$.

Let $\hat{V}^p(\mu^h, E|q)$ be the maximum utility that can be given to the poor without extending the franchise, as a function of the parameter q . This maximum utility is achieved by setting $\tau^r = \hat{\tau}$ in (2). Therefore, combining (1) and (2), we obtain:

$$\hat{V}^p(\mu^h, E|q) = V^p(\mu^h, E, \hat{\tau}) = \frac{Bh^p + (A - B)H - \beta(1 - q)(A - B)(H - h^p)}{(1 - \beta)} \quad (3)$$

Now, if $\hat{V}^p(\mu^h, E|q) < V^p(R)$, then the maximum transfer that can be made when $\mu = \mu^h$ is not sufficient to prevent a revolution. It is clear that $\hat{V}^p(\mu^h, E|q = 1) = V^p(D) > V^p(R)$ by Assumption 2, and $\hat{V}^p(\mu^h, E|q = 0) = \frac{Ah^p}{(1 - \beta)} < V^p(R)$ by Assumption 1. Moreover, $\hat{V}^p(\mu^h, E|q)$ is monotonically and continuously increasing in q . Therefore, there exists a unique $q^* \in (0, 1)$ such that $\hat{V}^p(\mu^h, E|q^*) = V^p(R)$. Finally, note that $V^r(\mu^h, E, \tau^r)$ is decreasing in τ^r , and for all τ^r , it is greater than $V^r(D)$. The latter fact follows because when there is a democracy, $\tau = \hat{\tau}$ in all periods, whereas with the power in the hand of the elites, $\tau \in (0, \hat{\tau}]$ whenever $\mu = \mu^h$, but $\tau = 0$ when $\mu = \mu^l$. From this discussion, the following characterization of the equilibrium follows immediately:⁶

Suppose Assumptions 1 and 2 hold. Then, for all $q \neq q^$, there exists a unique Markov Perfect Equilibrium such that:*

1. *If $q < q^*$, then $\sigma^r(\mu^l, E) = (\phi = 0, \tau = 0)$, $\sigma^r(\mu^h, E) = (\phi = 1, .)$. $\sigma^p(\mu^h, E|\phi = 0, \tau) = (\rho = 1)$, $\sigma^p(\mu^h, E|\phi = 1, .) = (\rho = 0, \tau = \hat{\tau})$ and $\sigma^p(\mu^h, D) = (\tau = \hat{\tau})$.*

2. *If $q > q^*$, then $\sigma^r(\mu^l, E) = (\phi = 0, \tau = 0)$, $\sigma^r(\mu^h, E) = (\phi = 0, \bar{\tau}^r)$ where $\bar{\tau}^r \in (0, \hat{\tau})$ is defined by $V^p(R) = V^p(\mu^h, E, \bar{\tau}^r)$. Also $\sigma^p(\mu^h, E|\phi = 0, \tau) = (\rho = 1)$ for all $\tau < \bar{\tau}^r$,*

⁶When $q = q^*$, the equilibrium is no longer unique: there exists an equilibrium which takes the form in part 1 of the Proposition, and one which is similar to part 2. Also, in the Appendix, we allow for non-Markovian strategies and find that even when $q < q^*$, there exist subgame perfect equilibria with redistribution and no democratization, but there exists a cutoff $q^{**} < q^*$ such that when $q < q^{**}$, the unique equilibrium has franchise extension in the state (μ^h, E) .

$\sigma^p(\mu^h, E|\phi = 0, \tau) = (\rho = 0)$ for all $\tau \geq \bar{\tau}^r$, and off the equilibrium path, $\sigma^p(\mu^h, E|\phi = 1, \cdot) = (\rho = 0, \tau = \hat{\tau})$ and $\sigma^p(\mu^h, D) = (\tau = \hat{\tau})$.

Starting with the elite in power, if $q < q^*$, then the rich set a zero tax rate when $\mu = \mu^l$, and extend the franchise when the state switches to $\mu = \mu^h$. The poor play the optimal strategy of initiating a revolution if the state is $\mu = \mu^h$ and the franchise has not been extended. After the franchise extension, the median voter is a poor agent and sets the tax rate $\tau = \hat{\tau}$. In contrast, when $q > q^*$, the rich can prevent a revolution by redistributing. So in the state $\mu = \mu^l$, they set $\tau = 0$, and in the state $\mu = \mu^h$, they set a tax rate, $\bar{\tau}^r$, just enough to prevent the revolution. This strategy combination is the unique (Markov Perfect) equilibrium of the game.

In the Appendix, we show that even without the restriction to Markov Perfect equilibria, we obtain similar results. Although redistribution can be sustained for a larger set of parameter values, if q is sufficiently small, the elite can prevent a revolution only by extending the franchise.

There are two important conclusions to be drawn from this analysis:

First, even though the elite face a lower future tax burden with redistribution than under democracy, they may prefer to extend the franchise. This is because when $q < q^*$, redistribution is not sufficient to prevent a revolution. With q low, the revolution threat is transitory, thus the poor realize that they will only receive transfers for a short while. Redistribution when $\mu = \mu^h$ can therefore be viewed as a noncredible promise of future redistribution by the elite. Unconvinced by this promise, the masses would attempt a revolution. The revolution is only prevented by franchise extension.

Second, perhaps paradoxically, a high q makes franchise extension less likely. A high q corresponds to an economy in which the masses are well organized, so they frequently pose a revolutionary threat.⁷ A naive intuition may have been that in this case, franchise extension is more likely. This is not the case, however, because with a frequent revolutionary threat, future redistributions become *credible*. This result may explain why Germany, which had the most developed socialist party, instituted the welfare state in the nineteenth century without franchise extension, while Britain and France extended the franchise. We return to this issue in Section 4.

⁷Alternatively, we could have assumed $\mu^l > 0$ so that even in this state, with the elite in power, we would have $\tau^r > 0$. In this case, a high value of μ^l would also lead to the same result.

3 A Model of Growth and Inequality Dynamics

3.1 The Environment

The previous section established why the elite may be forced to extend the franchise, even when they can use taxation and redistribution to reduce inequality. We now alter the focus of the analysis to explore the implications of political reform on growth and inequality. To simplify the analysis, we consider a non-overlapping generations model with bequests. A continuum of agents now live for only one period and each beget a single offspring. Technology is identical to that in Section 2, but human capital accumulates over time. This allows us to study how political transition interacts with the dynamics of inequality.

We assume that all agents have identical preferences defined over their own consumption and “educational bequests” given by:

$$\begin{aligned} u^i(c_t^i, e_{t+1}^i) &= (c_t^i)^{1-\gamma} (e_{t+1}^i)^\gamma & \text{if } e_{t+1}^i > 1 \\ u^i(c_t^i, e_{t+1}^i) &= (c_t^i)^{1-\gamma} & \text{if } e_{t+1}^i \leq 1 \end{aligned} \quad (4)$$

for $i = r, p$ and $\gamma \in (0, 1)$. Here c_t^i is the consumption of a member of group i alive in period t , and e_{t+1}^i is the investment in the offspring’s education. These preferences imply a constant savings rate equal to γ , and an indirect utility function linear in income as in the previous section. Both the consumption and bequest decisions are made at the end of the individual’s life. The form of the utility function implies that there is a minimum amount of bequest, $e_{t+1}^i = 1$, and when the agent cannot afford this amount, he will leave nothing to his offspring. This non-convexity captures the feature that very poor agents will not be able to accumulate assets (see Galor and Zeira, 1993).

The offspring’s human capital is given by:

$$h_{t+1}^i = \max \{1; Z e_{t+1}^i{}^\beta\} \quad (5)$$

where $Z > 1$, and also $\beta < 1$, guaranteeing that accumulation does not continue indefinitely. The presence of $\max\{1; \cdot\}$ in (5) implies that even in the absence of any investment, there is a minimum amount of human capital that each agent would have.

The timing of events within a period is:

1. education bequests are received.
2. the elite decide whether or not to extend the franchise.
3. the poor decide whether to initiate a revolution. If there is a revolution, they share the remaining output of the economy. Otherwise, the political system decides the tax rate (i.e. a poor median voter if there is democracy, and a rich agent if not).

4. the capital stock is allocated between market and home production, and consumption and bequest decisions are made.

Although the timing of events is quite similar to Section 2, there is a major difference. Now, there is no possibility of choosing redistribution to prevent a revolution, because taxes are set after the revolution decision within the period. This implies that we are focusing attention in the case of $q < q^*$ in terms of the analysis of the previous section.

3.2 Analysis

As noted above, the preferences in (4) imply a constant savings rate: $e_{t+1}^i = \gamma \hat{y}_t^i$, if $\gamma \hat{y}_t^i > 1$ and $e_{t+1}^i = 0$, if $\gamma \hat{y}_t^i \leq 1$. So if an agent can afford it, he will invest a fixed proportion of his post tax income in the education of his offspring, but when his income is below a minimum, he will consume all of it. At this stage we make the following assumption:

Assumption 3 $\gamma A < 1$ and $(\gamma B)^\beta Z > 1$.

The first part implies that with no taxation ($\tau_t = T_t = 0$), an agent with the minimum level of human capital, $h_t^i = 1$, will leave no education to his offspring, thus $h_{t+1}^i = 1$ also. It is therefore possible for some households not to accumulate while others do so. The second part of the assumption guarantees that when accumulation of human capital takes place, and even if the rate of return on human capital is $B < A$, a steady state level of human capital $h_{SS} > 1$ can be reached. This second part will not only enable accumulation by the rich in the absence of taxation, but also ensure that taxation will never be severe enough to stop accumulation.

In all of our analysis, we only consider initial conditions such that:

$$h_{SS}^r > h_0^r > (\gamma A)^{-1},$$

where h_{SS}^r is the steady state value of the rich agents' human capital. The first part of the inequality ensures that we start with less than steady state human capital, thus there will be *growth* (rather than decumulation of capital). The second inequality ensures that rich agents are beyond the point of non-convexity, and are able to leave positive bequests to their offspring. Once again, we think of the periods $t < 0$ as governed by a different technology so that no one accumulates and inequality is stable.

3.3 Equilibrium Dynamics without the Threat of Revolution

We first analyze accumulation and inequality in the absence of the threat of revolution.

Case 1: Autocracy and Only the Rich Accumulate Since we have the elite in control of the political system (no democracy), $\tau_t = 0$. Suppose also that $h_0^p < (\gamma A)^{-1}$, then given Assumption 3, we have that $h_t^p = 1 \forall t > 0$, and the poor are unable to accumulate. The rich, on the other hand, accumulate and the human capital dynamics for this group are given by: $h_{t+1}^r = Z \left(e_{t+1}^r \right)^\beta = Z (\gamma A h_t^r)^\beta$. This dynamic equation has a unique steady state:

$$h_{SS} = \left((\gamma A)^\beta Z \right)^{\frac{1}{1-\beta}}. \quad (6)$$

Since $(\gamma B)^\beta Z > 1$ by Assumption 3, and $A > B$, we have that $h_{SS} > 1$.

Inequality in this economy can be measured by the income ratio of the rich to the poor: $y_t^r/y_t^p = A h_t^r/A = h_t^r$. On the way to the steady state, h_t^r is increasing, so inequality is increasing too. Finally, the steady state level of aggregate income is: $Y_{SS}^1 = A \left[\lambda + (1 - \lambda) \left((\gamma A)^\beta Z \right)^{\frac{1}{1-\beta}} \right]$.

Case 2: Autocracy and All Agents Accumulate Suppose $h_0^r > h_0^p > (\gamma A)^{-1}$ and $\tau_t = 0$. Then, $h_{t+1}^j = Z(\gamma A h_t^j)^\beta$ for $j = r$ and p . Since $h_0^p > (\gamma A)^{-1}$, the poor will also be able to accumulate, and $h_t^p > 1 \forall t$. This implies that both groups will converge to the same steady state, h_{SS} . Since the poor start with less human capital and converge to the same level, along this equilibrium path, inequality is decreasing. The steady state level of aggregate income is given by: $Y_{SS}^2 = A \left((\gamma A)^\beta Z \right)^{\frac{1}{1-\beta}} > Y_{SS}^1$. Therefore, this economy converges to a more equal distribution of income and also to a higher level of aggregate output than the previous case (recall that in Case 1, a fraction of the agents were unable to accumulate, causing a partial poverty trap).

Case 3: Democracy We now consider the dynamics under democracy. In this case, the poor median voter sets the maximum tax rate, $\tau_t = \hat{\tau} \equiv \frac{A-B}{A}$. Accumulation dynamics are then determined by:

$$h_{t+1}^j = \max \left\{ 1, Z \left(\gamma \left[B h_t^j + (A - B) H_t \right] \right)^\beta \right\} \quad (7)$$

for $j = r$ and p . The second part of Assumption 3, $(\gamma B)^\beta Z > 1$, is sufficient to ensure $h_{t+1}^r > 1$ if $h_t^r > 1$. Therefore, taxation will not stop accumulation by the rich. This does not however guarantee that the poor accumulate. If $h_0^p > (\gamma A)^{-1}$, so that in the absence of redistributive taxation the poor would be able to accumulate, they will also be able

to accumulate when they receive transfers. Now consider the more involved case where $h_0^p < (\gamma A)^{-1}$ so that the poor are unable to accumulate without transfers. Suppose $h^p = 1$, then equation (7) implies that the capital of the rich converges to the steady-state level:

$$h_{SS}^D = \gamma Z \left[(A(1 - \lambda) + \lambda B) h_{SS}^D + (A - B)\lambda \right]^\beta.$$

It is straightforward to see that h_{SS}^D is uniquely defined and $h_{SS}^D < h_{SS}$. Let also Y_{SS}^D denote the steady-state level of output when $h^p = 1$; thus $Y_{SS}^D = A \left[\lambda + (1 - \lambda)h_{SS}^D \right]$, which is strictly less than Y_{SS}^2 and Y_{SS}^1 .

Whether the poor will ever be able to accumulate capital in this case depends on:

Condition 1 $\gamma \left[B + (A - B) \left((1 - \lambda)h_{SS}^D + \lambda \right) \right] > 1$

This condition states that when $h_t^p = 1$ and $h_t^r = h_{SS}^D$, redistributive taxation is sufficient to enable the poor to accumulate. To see this note that the term in square brackets is the post tax income of a poor household with $h_0^p = 1$: he receives an after tax return B on his human capital and the total per capita transfer given that $h_t^p = 1$ and $h_t^r = h_{SS}^D$. Condition 1 is necessary and sufficient for accumulation by the poor. If it holds, at some point the rich will have a high enough level of income (human capital) so that redistributive taxation will enable the poor to grow richer. When it is violated, there exists no $h_t^r \leq h_{SS}^D$ that will generate enough tax revenue to enable accumulation by the poor.

If Condition 1 holds, then the poor will start accumulating and the economy converges to Y_{SS}^2 with both the poor and the rich converging to h_{SS} , so inequality will also decrease as in the previous case. On the other hand, when the poor do not accumulate, inequality, given by $\frac{\hat{y}_t^r}{\hat{y}_t^p} = \frac{(A-B)((1-\lambda)h_t^r + \lambda) + Bh_t^r}{(A-B)((1-\lambda)h_t^r + \lambda) + B}$, will increase despite increased transfers to the poor. Further, when Condition 1 holds, it is also possible for the poor to start accumulating from period $t = 0$, so that inequality falls monotonically. The necessary and sufficient condition for this is:

Condition 2 $\gamma [Bh_0^p + (A - B) ((1 - \lambda)h_0^r + \lambda h_0^p)] > 1,$

which ensures that at time $t = 0$, the after-tax income of the poor times the savings rate (γ) is greater than 1, thus $\gamma \hat{y}_0^p > 1$. It is useful to notice that whenever $h_0^p \leq 1$, Condition 1 is less restrictive than Condition 2 because $h_0^r < h_{SS}^D$.

We can now summarize equilibrium dynamics without the threat of revolution. Let h_{SS} be defined as in (6):

Suppose that Assumption 3 holds, $h_0^r \in ((\gamma A)^{-1}, h_{SS})$ and the political system is controlled by the elite. Then, we have $\tau_t = 0$ and:

1. If $h_0^p \leq (\gamma A)^{-1}$, then $h_t^p = 1 \forall t > 0$, h_t^r monotonically converges to h_{SS} , aggregate output converges to Y_{SS}^1 , and inequality increases monotonically.
2. If $h_0^p > (\gamma A)^{-1}$, then both h_t^p and h_t^r monotonically converge to h_{SS} , aggregate output converges to $Y_{SS}^2 > Y_{SS}^1$, and inequality decreases monotonically.

Suppose that Assumption 3 holds, $h_0^r \in ((\gamma A)^{-1}, h_{SS})$, and the political system is democratic. Then we have $\tau_t = \hat{\tau}$ and:

1. If $h_0^p > (\gamma A)^{-1}$, then both h_t^p and h_t^r monotonically converge to h_{SS} , aggregate output converges to $Y_{SS}^2 > Y_{SS}^1$, and inequality decreases monotonically.
2. If $h_0^p \leq (\gamma A)^{-1}$ and Condition 2 holds, then inequality is monotonically decreasing, and h_t^p and h_t^r converge to h_{SS} , and aggregate output converges to Y_{SS}^2 .
3. If $h_0^p \leq (\gamma A)^{-1}$ and Condition 1 fails to hold, then inequality increases monotonically, $h_t^p = 1 \forall t > 0$, and h_t^r converges to h_{SS}^D . Output converges to $Y_{SS}^D < Y_{SS}^2$.
4. If $h_0^p \leq (\gamma A)^{-1}$ and Condition 1 holds and Condition 2 fails to hold, then there exists \hat{t} such that $h_t^p = 1 \forall t \in (0, \hat{t})$, and h_t^p is growing $\forall t \geq \hat{t}$. Inequality is increasing until \hat{t} and decreases thereafter. Aggregate output converges to Y_{SS}^2 .

There are a number of features to note. First, in the absence of redistributive taxation, there is no Kuznets curve: inequality is always increasing or decreasing. But, a Kuznets curve is possible when the political regime is democratic (Proposition 3.3): when the rich are not sufficiently wealthy, the transfers from them to the poor will not ensure accumulation, and inequality will increase. But when the rich become sufficiently wealthy, transfers reach a crucial threshold, the poor start accumulating, and inequality falls. Thus in this model, redistributive taxation is key for the Kuznets curve. This configuration of the Kuznets curve is not totally compelling, however; as noted earlier and discussed in more detail in Section 4, Western societies did not start out as democratic and were not so when inequality was increasing, and there was no redistributive taxation. We will see that the Kuznets arises for a larger set of parameter values when we add the possibility of revolution and franchise extension to an economy with the elite in power, and this, we believe, is a much more plausible explanation for the Kuznets curve.

Second, inequality and especially the poverty of the masses are harmful to development. When the poor have $h_0^p > (\gamma A)^{-1}$, the economy converges to the higher steady state Y_{SS}^2 , whereas otherwise it may get stuck in the lower steady state with per capita income Y_{SS}^1 . This relation between inequality and prosperity applies both for a democracy and

an autocracy. This result is a direct consequence of the nonconvexity in the accumulation technology as in Galor and Zeira (1993).

Finally, in this model democracy is good for economic performance, if it enables accumulation by the poor, but detrimental otherwise. In the absence of democracy, $h_0^p < (\gamma A)^{-1}$ condemns the economy to the lower level of steady state output Y_{SS}^1 , but with democracy, the conditions for “stagnation” are much more stringent. On the other hand, if there is democracy but the poor cannot accumulate, the economy converges to Y_{SS}^D which is strictly less than Y_{SS}^1 . So the impact of democracy on performance is ambiguous. With some of the costs as emphasized by Alesina and Rodrik (1994) and Persson and Tabellini (1994), democracy would have an ambiguous effect even when it enables the poor to accumulate. Therefore, the empirical results that show no robust correlation between democracy and growth should not be too surprising.

3.4 The Threat of Revolution

We now analyze an economy which starts with the elite in power. If the revolution constraint never becomes binding (e.g. if μ is very small), then the equilibrium dynamics of Proposition 3.3 will apply. If on the other hand revolution becomes a real threat, the rich have to redistribute to the poor in order to prevent a revolution. Given the timing we have assumed, a promise to redistribute by the elite is not credible, thus would not prevent revolution. The only way to make a credible commitment is to transfer political power to the poor, i.e. *to extend the franchise*. Therefore, when the revolution constraint becomes binding, the franchise is extended and the dynamics of Proposition 3.3 are replaced by those of Proposition 3.3 where the median voter is a poor agent.

The general revolution constraint when the rich are in power is the same as in the previous section. But now μ is constant and h_0^r/h_0^p is changing over time. Therefore, the revolution constraint becomes:

$$\frac{h_t^r}{h_t^p} \leq \frac{\lambda(1-\mu)}{\mu(1-\lambda)}. \quad (8)$$

When (8) holds, there will be no revolution at time t . Two points to note about this revolution constraint are: first, the higher is μ , the tighter is the revolution constraint, which is fairly intuitive. Second, the higher is λ , the less tight is (8); this is because the benefit of the revolution is to takeover the wealth of the rich, and when there are fewer of them with the same income level (i.e. h_t^r is given), the return from revolution falls.

Therefore, the threat of revolution is more serious when a society has more inequality (a larger gap between h^r and h^p) and is less segmented (λ relatively low).⁸

Case 1: The Threat of Revolution When Only The Rich Accumulate In this case, the economy converges to Y_{SS}^1 with increasing inequality on the way with the poor trapped at $h_t^p = 1$. If (8) is not binding at the point of steady state (which has maximal inequality), it will never bind. Thus we have:

Condition 3 $h_{SS} > \frac{\lambda(1-\mu)}{\mu(1-\lambda)}.$

If Condition 3 holds, the threat of revolution will become effective at some point as the rich accumulate. If it fails to hold, then we can ignore the revolution constraint.

Case 2: The Threat of Revolution When All Agents Accumulate In this case, inequality is decreasing, so it is highest at time $t = 0$. Then we have:

Condition 4 $\frac{h_0^r}{h_0^p} < \frac{\lambda(1-\mu)}{\mu(1-\lambda)}.$

If Condition 4 is satisfied, there is no revolutionary threat at time $t = 0$, and since inequality is lower after this point, there is never any threat of revolution thereafter. The configuration in which Condition 4 fails to hold but Condition 3 does is of interest. In this case, if the poor are excluded from the accumulation process, at some point they will want to force redistribution. If, in contrast, they are also accumulating along the development path, they will not see revolution as a worthwhile activity.

As discussed above, when the revolution constraint binds, the elite have no choice but extend the franchise. We then have to ensure that the extension of the franchise generates sufficient redistribution to stave off a revolution. The necessary condition for this is related to Assumption 2 in Section 2: $(A - B)((1 - \lambda)h_t^r + \lambda h_t^p) + B h_t^p \geq A\mu[(1 - \lambda)h_t^r + \lambda h_t^p] / \lambda$. The LHS is what a poor agent gets after redistributive taxation, and the RHS is what he gets with revolution. We are particularly interested in whether this condition holds at the point where the revolution constraint binds while the poor are not accumulating. Equation (8) implies that $h_t^r = \frac{\lambda(1-\mu)}{\mu(1-\lambda)}$ at this point. So to ensure that in this case franchise extension prevents a revolution, we need to impose:

Condition 5 $A(\lambda - \mu) \geq B(1 - \mu).$

⁸In other, also plausible, models, the threat of revolution could be increasing in λ as it may be easier to overthrow a small elite. Comparative statics with respect to this variable are not essential to our results.

3.5 Results: Implications For Growth and Democratization

In this subsection, we combine the analysis of the previous two subsections and outline a number of possible paths of development. Throughout we assume that the elite start in power and Assumption 3 holds.

The Kuznets Curve The following result is immediate from our analysis:

Result 1 Suppose the economy starts in Case 1, and Conditions 1, 3 and 5 hold. Then the at $t = 0$, the rich accumulate and the poor do not. At \hat{t} , inequality reaches a critical threshold, $h_{\hat{t}}^r \geq \frac{\lambda(1-\mu)}{\mu(1-\lambda)}$, the revolution constraint binds, and the elite extend the franchise. From this point on, the poor also start to accumulate, inequality falls, and aggregate output converges to Y_{SS}^2 .

In our view, this sequence of events corresponds to the experience of Britain, France, Sweden, and Germany (in 1919), where, as discussed in more detail in the next section, after a period of increased inequality accompanied by wars and depressions, the threat of revolution intensified. This forced the extension of the franchise and increased redistribution. As a result, inequality declined. This case is the main focus of our analysis. In the rest of this section, we outline alternative paths of development to contrast with the Kuznets curve.

Autocratic Disaster

Result 2 Suppose the economy starts in Case 1, and Condition 3 does not hold. Then, the rich start to accumulate at time $t = 0$, but the poor do not accumulate. The revolution constraint never binds, the economy remains an autocracy with high inequality, and converges to aggregate output Y_{SS}^1 .

This is the path of an economy where initial inequality is high, but the masses do not pose a revolutionary threat. This might be because of the absence of a well-developed civil society or other factors making it hard for the poor to organize, implying a small μ . If μ were large so that revolution became a real threat, this economy could democratize, redistribute to the poor, and reach a higher level of income. Therefore, contrary to conventional wisdom, political and social instability may sometimes be good for growth. In particular, whether a good “revolution technology” hinders or enhances growth depends on which case the economy is in.

East Asian Miracle

Result 3 Suppose the economy starts in Case 2 and Condition 4 does not hold. Then, all

agents accumulate starting at time $t = 0$, inequality declines and the revolution constraint never binds. Aggregate output converges to Y_{SS}^2 .

In this case, along the development path the poor segments of the society are sharing in the benefits of rising average per capita income, and therefore do not find it worthwhile to instigate social unrest.

This last case reminds us of Taiwan and South Korea. In the early post war period, both countries were in a situation very similar to that of the Philippines except that, as in the case of the autocratic disaster, inequality was much higher in the Philippines than in the other two countries.⁹ In all three, political power was concentrated in the hands of an elite, not unlike nineteenth century Britain. In Britain per capita income and inequality grew and political transition took place. In the Philippines, aggregate income stagnated at a high level of inequality, and there was no political transition. In contrast to these cases, Taiwan and South Korea experienced fast growth but no democratization,¹⁰ and inequality fell somewhat.¹¹ Our model suggests that this may have been because benefits of growth were equally shared between different social classes in South Korea and Taiwan, so the poor did not organize, and the elite did not have to extend political power to wider groups until much later (see also the discussion in Rodrik, 1994; and Campos and Root, 1996; in support of such a view).

Revolution

Result 4 Suppose we are in Case 1, Condition 3 holds, but Condition 5 does not. Then the rich start to accumulate at time $t = 0$ and the poor do not. The revolution threat binds at time \hat{t} when $h_t^r \geq \frac{\lambda(1-\mu)}{\mu(1-\lambda)}$, and a revolution takes place.

The main difference of this case from the Kuznets curve is that B is large relative to

⁹The Gini coefficient was 0.34 in 1965 in South Korea and 0.31 in 1964 in Taiwan whereas it was 0.45 in Philippines in 1957 (see Fields, 1995).

¹⁰A process of democratization is now occurring rapidly in the Philippines, South Korea and Taiwan. Nevertheless, for the purposes of the present study it is interesting to understand the prolonged undemocratic regimes in these countries as opposed to the experiences of much faster democratization in Britain and other developing countries such as India, Colombia and Turkey. To get a sense of how delayed democratization was in these countries, observe that prior to its democratization, per-capita GDP increased by a factor of 6.89 (over the period 1960-1990). During the period 1820-1870, the same figure for Britain was 2.75 (in fact, Britain did not reach the figure 6.89 until 1929 - all data from Maddison, 1995). Section 5 discusses how a simple extension of our model can account for delayed, rather than no, democratization in South Korea and Taiwan.

¹¹For example, the average Gini coefficient over the period 1965-1970 was 0.34 for South Korea and 0.32 for Taiwan, and these averages fell to 0.33 and 0.30, respectively, for the period 1981-1990, see Campos and Root (1996) Table 1.1, or the data in the Deininger and Squire dataset. These changes are small enough, however, that they may be simply due to measurement error.

A. This implies that there is only a limited ability to tax the rich in a democracy, and it is more profitable for the masses to take over the means of production. As a result, a revolution takes place along the equilibrium path. This case is similar to pre-revolutionary Russia where social unrest increased, and attempts to bring more moderate groups, such as the Mensheviks, to power were unsuccessful.

4 Historical Perspective

In this section, we discuss the historical evidence related to the extension of the franchise. Our objective is to provide a preliminary assessment of whether our theory gives a good description of the salient features of the process of Western democratization. We start by outlining the major events of the period and documenting the importance of the threat of revolution. We then discuss three alternative hypotheses that could explain why the franchise was extended and the evidence in favor and against these approaches.

In the second part of the section, we discuss other empirical implications of our model, documenting that:

1. Inequality was increasing before, and decreasing after, the extension of the franchise.
2. Democratization was directly (redistribution) or indirectly (via expanded education or labor market regulation) a key factor in the reduction in inequality.
3. There were differences in social conditions that made some periods more conducive to social unrest, and in line with the predictions of our model, differences in the level of organization of the masses across countries influenced political outcomes.

In all cases, our most detailed evidence is from Britain, but evidence from France, Sweden and Germany also supports our model. The U.S. evidence, however, is more mixed.

4.1 The Threat of Revolution, Alternative Theories and Franchise Extension

4.1.1 The Threat of Revolution and the Franchise

Britain: In Britain, the franchise was extended in 1832, and then again in 1867 and 1884 (and later in 1919 and 1928 when all women were finally allowed to vote).¹² When introducing the electoral reform to the British parliament in 1831, the prime minister Earl Grey said “There is no-one more decided against annual parliaments, universal suffrage and

¹²In our formal model we considered a one time franchise extension. The model can be extended to allow for multiple gradual extensions.

the ballot, than am I... The Principal of my reform is to prevent the necessity of revolution... I am reforming to preserve, not to overthrow.” (quoted in Evans, 1983). This view of political reform is shared by modern historians such as Briggs (1959) and Lee (1994). For example, Darvall (1934) writes: “the major change of the first three decades of the nineteenth century was the reform of Parliament by the 1832 Reform Act, and this was introduced by the Whigs... as a measure to stave off any further threat of revolution by extending the franchise to the middle classes.” In fact, the years preceding the electoral reform were characterized by unprecedented political unrest, including the Luddite Riots from 1811-1816, the Spa Fields Riots of 1816, the Peterloo Massacre in 1819, and the Swing Riots of 1830 (see Stevenson, 1979, for an overview). The reforms that extended political power from a narrow elite to larger sections of the society were immediately viewed as a success not because of some ideal of enlightenment or democracy, but because the threat of revolution and further unrest were avoided (see Lee, 1994).

The 1832 Reform Act reduced property and wealth restriction on voting and increased the total electorate, which previously stood at 478,000 out of a population of 24 million, to 813,000. Nevertheless, the majority of British people could not vote, and the elite still had considerable scope for patronage, since 123 constituencies, the ‘rotten-boroughs’, contained less than 1,000 voters. There is also evidence of continued corruption and intimidation of voters until the Ballot Act of 1872 and the Corrupt and Illegal Practices Act of 1883.

The process of increased representation gained momentum with the Chartist movement during the 1830’s and 1840’s (see Briggs, 1959). The response of the elite to the Chartist movement was again one of preventing further unrest. For example, during the 1850’s Lord John Russell made several attempts to introduce reform arguing that it was necessary to extend the franchise to the upper levels of the working classes as a means of preventing the revival of political radicalism. But as Lee (1994, p.137) notes “The House of Commons was largely hostile to reform because, at this stage, it saw no need for it.” This had changed by 1867. Lee writes “as with the first Reform Act, the threat of violence has been seen as a significant factor in forcing the pace [of the 1867 Reform Act]; history was repeating itself.” This interpretation is supported by many other historians, for example Trevelyan (1937) and Harrison (1965). The Act was preceded by the founding of the National Reform Union in 1864 and the Reform League in 1865, and the Hyde Park riots of July 1866 provided the most immediate catalyst. Searle (1993, p. 225) argues “reform agitation in the country clearly did much to persuade the Derby ministry that a Reform Bill, any Reform Bill, should be placed on the statute book with a minimum of delay.” As a result of these

reforms, the total electorate was expanded from 1.4 million to 2.52 million, and working class voters became the majority in all urban constituencies. The electorate doubled again by the Reform Act of 1884, and the Redistribution Act of 1885 removed many remaining inequalities in the distribution of seats (see Wright, 1970). Once again social disorder appears to have been an important factor behind the 1884 act. Hayes (1982) argues “At the bottom the course of events in mid-November reflected the importance of the battle out of doors” (see also Biagini, 1992, pp. 295-302, on the role of reform agitation in the passing of the Third Reform Act).

Other Countries: In Germany, democracy was established with the creation of the Weimar Republic in 1919, and there is no controversy amongst historians that this was due to the threat of social disorder and conflict following the defeat in the War (see, for example, the classic account in Gerschenkron, 1943, and also Mommsen, 1981, or Abraham, 1986).

The history of modern democracy in Germany starts earlier, with the 1848 revolution when nearly all German states significantly increased popular participation in government, again in the face of revolutionary pressures (see Blackbourn, 1998, Chapter 3). The effects of this democratization were strongly mitigated by institutional restrictions, however. It featured a three class voting system and was controlled initially by Junker landlords, and after the 1870’s by the coalition of “iron and rye”. Also the parliament could not appoint ministers or discuss foreign policy, and voting was oral. Although after 1870 all adult males over the age of 25 had the right to vote, voting was controlled in rural areas by the landlords (see Gosnell, 1930 and Goldstein, 1983). As Abrams (1995, p. 10) puts it, during this period “the German Empire was, in theory, a constitutional monarchy, yet in practice it was governed by a Prussian oligarchy.” So the arrival of democracy in Germany was in fact in 1919. The transition to the Weimar Republic came with the collapse of the German armies on the Western Front in August 1918. The military withdrew and tried to engineer a transition to the Social Democratic Party, at this point a very significant political force. As Collins (1998, Ch.3, p. 35) notes “The Social Democrats had always pressed for democratic reform, and like the right...saw it in a further light: a means to pre-empt the forces which had emerged to the party’s left and their threatening working class revolution.... The democratic reform of October 1918....was thus based on a combination of distinct strategies and a common fear of revolution on the part of the army, the government and the centrist and Majority Social Democratic parties.”

In France, the 1830 revolution led to a highly restricted democratic regime where prop-

erty restrictions limited the electorate to about 0.75% of the population (see Cole and Campbell, 1989). The collapse of the Orleanist monarchy in the 1848 revolution led to the Second Republic with the introduction of universal male suffrage in 1849. Collier (1998, Ch.2, p. 10) concludes, “The 1847 campaign for broadening the suffrage was radicalized in the beginning of 1848, culminating in the February insurrection. The Republicans, who seized power and set up a provisional government, were socially conservative. Nevertheless, the workers’ movement forced the government to introduce a number of measures including manhood suffrage and a number of social reforms of interest to the working classes.” The effect of this was cut short, however, first by restrictions on voting rights introduced in 1850, disenfranchising 2.8 million men, mostly workers, and then by the coup of Louis Napoleon in 1851 and the declaration of the Second Empire in 1852. Historians split this period into two phases: the ‘authoritarian’ phase from 1852 to 1860 and the ‘liberal’ phase from 1860 until the collapse of the regime with the defeat of the French armies in the Franco-Prussian war of 1870 (see Zeldin, 1958, Plessis, 1985, and Price, 1995). This collapse created the Third Republic and the Paris Commune of the following year. The voting reforms of 1849 therefore only started to become effective after 1860, with the general elections of 1863 and 1869. Price (1995, p.5), for example, notes that the Second Empire, “by means of liberalization and the institutionalization of protest through elections, sought a method of moderating opposition and of more effectively ensuring long-term stability...” After the defeat of the French army at Sedan, the 1871 general elections took place under the 1849 electoral law. There then ensued a seven year democratic struggle for power as Orleanist and Legitimists tried to suppress worker parties, restrict the franchise, and find some way of restoring the Monarchy. Nevertheless, the Republicans under Gambetta emerged victorious in 1877, and democracy was secure in France (see Carstairs, 1980, Cole and Campbell, 1989, Elwitt, 1975). So democratization in France took place as a slow process between 1860 and 1877, forced on the elites by revolutionary threats.

In Sweden, democracy arrived via a series of gradual franchise extensions, starting in 1866 with the creation of a bicameral parliament with First and Second Chambers. Universal male suffrage was introduced in 1909 in the First Chamber, but true parliamentary government arrived only in 1918 when the political power of the Conservative Party and the monarchy were limited (see Rustow, 1955 and Verney, 1957). Tilton (1974, p. 567) argues that “neither [of the first two reform acts] passed without strong popular pressure; in 1866 crowds thronged around the chamber while the final vote was taken, and the 1909 reform was stimulated by a broad suffrage movement [and] a demonstration strike.” Dur-

ing the 1880's both the Liberal and Social Democratic parties emerged to contest elections under the 1866 franchise and were able to win seats in the First Chamber which even before 1909 was elected from a more democratic franchise. The reform in 1909 had been preceded by strikes and demonstrations, and even though Sweden was not a participant in the First World War, the revolution in Russia and the situation in Germany forced the concession of democratic rights. In 1917, the Liberals and Social Democrats formed a coalition government and proposed full male suffrage, but this was defeated by the Conservative dominated Second Chamber. Collier (1998, Ch.3, p. 9) explains that "it was only after the economic crisis of 1918 and ensuing worker protests for democracy led by the Social Democrats that the Reform Act was passed. Indeed, in November 1918, labor protests reached such a point as to be perceived as a revolutionary threat by Sweden's Conservative party and upper classes." Tilton (1974, p. 568) writes that in 1918, the Swedish Minister of War characterized the sentiments of the army and navy as "very revolutionary", a view supported by Verney (1957), Castles (1973) and the essays in Stråth (1988). Based on this evidence, Tilton (1974, p. 568) concludes that "Swedish democracy had triumphed without a revolution - but not without the *threat* of a revolution" (*italics in original*).

4.1.2 Alternative Theories of Democratization

We have documented that the threat of revolution was important in leading up to the political reforms of the period, which supports our main thesis. It is also useful, however, to review alternative theories and to investigate whether they receive support from the events surrounding the reform process.

A1. *The Whig Version of History*: This theory is that the elite extended the franchise because their social values changed.¹³ For example, the Enlightenment movement may have made it harder for the elite to view a society in which a large fraction of the population had no representation as fair and just.

A2. *Political Party Competition*: This theory is inspired in part by the British experience, where the competition between Disraeli and Gladstone was a major factor in political reform. According to this theory, politicians have a strong preference to stay in power, and may extend the franchise to new segments of the society with the expectation that the newly enfranchised will return the favor by voting for their party.

¹³The "Whig Version" is the interpretation of history that sees it as a continuous process of improvement towards objective moral goals from the earliest times to the present. See, for example, Macaulay (1847-1861) and Lord Acton (1906).

A3. *Middle Class Drive*: This story is similar to the previous one, except that economic incentives rather than political competition is the driving force. The main point can be illustrated with a very simple model related to our analysis of Section 2. Suppose there are three groups, lower, middle and upper class, with respective fractions, λ_L , λ_M and λ_U and human capital, h_L , h_M and h_U . Let $\bar{h} = \lambda_L h_L + \lambda_M h_M + \lambda_U h_U$ be the average human capital. Suppose that when the lower classes are excluded from the political process, the middle class are in power with probability v , and when the political process includes the lower classes, the lower classes are in power with probability v_L and the middle classes are in power with probability v_M . As before only linear taxes and universal subsidies are allowed, and the group in power can also decide whether to extend the franchise (if it was not extended before). It is now straightforward to see that if $\bar{h} > h_M$, the middle classes prefer taxation to no taxation, and also realize that this is also what lower classes want. So if $v_L + v_M > v$, that is if franchise extension increases the likelihood of taxation, the middle classes will extend the franchise when they control power during the pre-franchise era. In other words, in this theory, the middle classes extend the franchise because they hold power only temporarily and realize that by including the lower classes in the political processes, they will shift the balance of power in their favor.

4.1.3 Evidence on Competing Theories

We now discuss the empirical evidence in favor of and against these theories.

A1. *The Whig Version of History*: It is undoubtedly true that changes in social values have a real effect on political reform, and one could point out that Gorbachev's Glasnost was in part influenced by the changing values of the Soviet elite. The question is, however, whether changes in social values were the major driving force behind the reforms of the period. The main argument against the importance of social values is the timing of democratization. Since the ideas of the Enlightenment and the writings of Rousseau and Paine were widely disseminated in Europe by the early decades of the 19th century, it is hard to understand the timing of democratization, and especially why these ideas influenced political elites in Sweden and Germany long after they had persuaded those in France and Britain. Rather, the time pattern of democratization is tied much more closely to that of industrialization, inequality, and political unrest. Perhaps more important, the evidence discussed in this and the previous section suggests strongly that franchise extension was forced on elites and not willingly given as the Whig Version would suggest. We therefore conclude that although changes in the ideology of the elite may have played a role in the

radical political reforms of the period, they are highly unlikely to have been the major force behind them.

A2. *Political Party Competition*: This theory is the one which has attracted some attention from scholars. For example, Himmelfarb (1966) and Collier (1998) both argue that the 1867 and 1884 Reform Acts in Britain can be understood as the outcome of non-cooperative vote seeking interaction between the Liberal party (under Gladstone) and the Conservative party (under Disraeli). According to this story, each party thought they could gain advantage by extending voting rights since the recipients would vote for them. Collier accepts, however, the role of external and revolutionary pressure as the central force behind democratization in France, Germany and Sweden, leaving Britain as the only case for which this story could be the major explanation. We therefore focus on Britain, returning to the other countries at the end.

In 1866, Russell's Liberal government proposed a relaxation of the property restrictions on voting. This measure was defeated by a coalition of Conservatives led by Disraeli and right wing Liberals, the "Adullamites", who thought the extension too generous. The Liberal government then collapsed and Disraeli formed a minority administration (290 to 360). Disraeli's first move was to introduce a less generous franchise extension, but he realized that this would not gain majority support. He then switched to a proposal even more radical than the initial Liberal measure, which passed by gaining the support of a heterogeneous group of Liberals (Disraeli allowed various subgroups of Liberals to attach amendments to the Bill as it passed through the House of Commons in order to get their support). Disraeli can then be argued to have extended the franchise that he first opposed to encourage the newly enfranchised to vote Conservative.

In our view, the evidence does not support this interpretation of the British experience. We have already discussed the views of a wide spectrum of historians who all assert the importance of revolutionary threats to the established political order. The most important problem for this theory, however, is that the Conservatives lost the 1868 election immediately after having passed the franchise extension and the Liberal party lost the election of 1885.¹⁴ So if the strategy was aimed at winning elections, it was clearly a failure.¹⁵

¹⁴The Conservatives held power between 1874 and 1880, losing the election to the Liberals in that year, possibly because of the large industrial depression. The Conservatives won in 1885 initiating a long period of practically unbroken domination which was ended by the Asquith Liberal victory of 1906.

¹⁵Although Collier argues that the Conservative victory of 1874 was secured with working class support, due to Disraeli's franchise policy, this is not the mainstream view of political historians who see the election as the beginning of the movement of the middle-classes out of the Liberal party. For example, Adelman (1997, p. 17) writes "the most important reason of all for the Liberal defeat was, quite simply, the swing

Furthermore, as the result of the split over the Corn Laws, support for the Conservative party was essentially concentrated in rural areas, with Tory landowners exerting substantial control over the electorate in the absence of a secret ballot. The reform measure passed under Disraeli increased the voting population by only 45% in counties compared to 145% in the boroughs, which does not seem consistent with a strategy designed to maximize Conservative votes.¹⁶

Overall, the most plausible interpretation of the inter-party rivalry in Britain during the 1860's and 1870's was that, while both parties regarded the extension of voting rights as inevitable due to mounting social pressure, they clearly saw that it could be structured in ways which were more or less advantageous to each of them. This created a complicated 'end game'. Cowling (1967, p. 89) argues that the Conservative party supported Disraeli in 1867 because if the Act failed "the Liberals might then do precisely what Derby and Disraeli had striven in 1866 to prevent their doing - carry Reform on their own lines." The one triumph of the 1867 for Disraeli was the fact that it severely limited the redistribution of seats away from the counties to the boroughs, and this reduced the impact of the franchise extension for the Conservative party. Searle (1993, p. 226) confirms this in writing "On one thing all historians are agreed: that the Conservatives, by successfully sponsoring reform, were at least able to shape, to a very large extent, the accompanying Redistribution measure." Smith (1967, p. 97) also agrees and argues that "Derby and Disraeli...in 1867, did not determine to trust the people, or put their faith in a Conservative democracy. They did what they felt they had to do, to satisfy the popular agitation and reconcile the upper strata of the working classes to the established political system".

As noted above, the party competition theory does not fit well with any of our other cases. With army units in revolt and the economy collapsed in Germany of 1918-1919, of the middle class voter." Smith (1967, p. 192) notes that Conservative gains in 1874 derived from "the defensive reaction [of the middle classes] against the challenge of Radicalism and labor". He further argues (1967, p. 29) "The gulf between the Conservative party and the urban working classes in 1866 was a wide one. As the party of land and agriculture, with little strength in the great towns and manufacturing regions, the Conservatives were largely out of touch with urban and industrial Britain and its inhabitants...They had very slight appeal for the politically conscious working man." Lee (1994, p. 140) argues that the view that the Tories tried to attract working class votes was "a Conservative myth which was popularised by Money Penny and Buckle, the original biographers of Disraeli....This still has a few influential advocates, including Himmelfarb...but has been extensively criticised, not least by the modern biographer of Disraeli, R. Blake," (see Blake, 1966 Chapter 21). In Blake's view Disraeli and Derby "had the wide franchise of 1867 forced upon them."

¹⁶The notion that the Liberals and Conservatives were prepared to extend the franchise simply to keep their party in power is also not completely persuasive. Between 1859 and 1865 the Liberal prime minister Palmerston, who was opposed to franchise extension, and the Conservative leader Lord Derby, colluded so that the issue of suffrage would never be raised in parliament (Lee, p. 138).

the former political elites attempted to prevent revolution by generating a transition which would cause minimal damage to their interests. In France, there were more distinct subsets within elites. Orleanists and Legitimists formed separate factions within the Monarchist camp, and the Republicans, though democratic, were basically middle class and were not in favor of universal male suffrage in 1848. When the Monarchy collapsed in 1848, these groups had to concede to the demands of the revolutionaries. In support of this view, Aminzade (1993, p. 35) argues “French workers, mainly artisans, constituted the revolutionary force that put the Republican party in power in February 1848...and working class pressure from the streets of Paris forced liberal Republican leaders....to reluctantly conceded universal male suffrage.” The same is true for the period after 1870. The conflict at the time, particularly the Commune, forced democracy along the lines of 1849, and this time defeated restrictive strategies by elites. Although no group within the elite were committed to universal male suffrage, they were forced to reintroduce it.

The Swedish case is perhaps the most similar to Britain. In 1906, the Liberal party’s first ever government fell after failing to pass a law introducing universal male suffrage. The reform measure of 1909 was then passed (in 1907) by the Conservative government under Lindman. As with Disraeli in 1867, “Karl Lindman and his Conservative ministry that took office a year after the Liberals’ 1906 failure saw an opportunity to pass a political reform on its own terms” (Collier, 1998, Ch.3, p. 9). Although male suffrage was conceded in one house, the Conservatives kept control over the other through the maintenance of multiple voting and tax-payer suffrage. As with the British case, this pattern of events was not the result of attempts by the Conservatives to gain votes, but rather a damage limitation exercise in the face of mounting social pressure for a full democracy.

A3. *Middle Class Drive*: There seems little evidence in Britain that the middle classes, other than a few radical MP’s such as Bright elected in the large industrial cities, wanted to allow the working classes to vote. It was well understood that this would lead to redistribution at their expense. As Lord Elcho, a leading Adullamite put it, democracy meant “handing the country over to the Trade Unions and the rule of numbers, enabling the poor to tax the rich” (quoted in Cowling, 1967 p. 51). Cowling further notes (p. 54) “Disraeli and Gladstone were attempting to push members of parliament into doing what they had no *desire* to do...far from wishing to extend the franchise [they were] intensely suspicious of any attempt to do so. This applies to the great body of Liberals as well as to the Conservative party” (*italics in original*). Viscount Cranborne, a leading Conservative, saw the reform struggle, as we do, as “a battle not of parties, but of classes” and “a portion

of the great political struggle of our century - the struggle between property...and mere numbers” (quotes in Smith, 1967, pp. 27-28).

This theory does not seem to explain well the other instances of democratization either. In Germany in 1918-1919, the middle classes were either part of the coalition supporting the Monarchy, or moderates within the Social Democratic party. There is no evidence that in any of these cases, these groups saw suffrage extension to be to their advantage. Even the Social Democrats saw this as likely to help the more left-wing parties, like the Spartacists, which had split from the party in 1917. In France, the middle class could best be associated with the Republican party, which opposed universal male suffrage. In Sweden, the Liberal party partially represented the middle classes, and entered into a tactical coalition with the Social Democrats to force full democracy on the intransigent Conservatives and the Monarchy. Nevertheless, the Liberals in Sweden were very different from the Liberals in Britain. As Verney (1957, p. 138) puts it, “among its demands were factory inspection, state insurance for accidents, legalized collective agreements, arbitration, home ownership and sick pay. It was clearly not a party of economic-liberals.” Indeed, while it was not a socialist party like the Social Democrats, it was significantly more left wing than its British namesake and included many workers and left-wing intellectuals. The struggle for democracy in Sweden should therefore be seen as a battle between the Conservatives and two left-wing parties. As our discussion and the above quotes from Tilton (1974) illustrate, however, the driving force behind this process was social unrest and not an attempt to alter the structure of parliament to ensure future economic policies beneficial to the middle class.

4.2 Other Major Predictions

4.2.1 Inequality

Britain: Data on income inequality for the nineteenth century are not extremely reliable. Nevertheless, a number of studies using different data sources on Britain reach the same conclusion: inequality increased substantially during the first half of the nineteenth century, then started falling in the second half. The turning point appears to be sometime after 1870. This picture is also consistent with the findings of Crafts (1989), and of Lindert (1986) on wealth inequality, but is not completely uncontroversial (see Feinstein, 1988). Table 1 taken from Williamson’s (1985) Table 4.2 gives a representative picture:

Table 1 - British Income Inequality

	Share of the Top 10%	Gini Coefficient
1823	47.51	0.400
1830	49.95	0.451
1871	62.29	0.627
1891	57.50	0.550
1901	47.41	0.443
1911	36.43	0.328
1915	36.46	0.333

A similar pattern also emerges from earnings inequality data reported in Williamson (1985) Table 3.2 where the Gini coefficient increases from 0.293 in 1827 to 0.358 in 1851 and falls to 0.331 in 1901. It appears therefore that inequality peaked approximately at the time of the major political reforms, and fell sharply after the extension of the franchise, as predicted by our model.

Other Countries: Morrisson (1997), in his authoritative survey, argues that Germany, France and Sweden all went through a Kuznets curve. In Germany, inequality rose during the nineteenth century and most researchers place the peak around 1900. For example, Kuznets (1963) finds that the income share of the top 5 per cent went from 28% in 1873-1880 to 32% in 1891-1900, stayed at 32% during 1901-1910, declining to 31% in 1911-13. Dumke (1991) finds the same income share to be 28.4% in 1880, rising to 32.6% in 1900, and falling to 30.6 % in 1913. Following the First World War inequality fell rapidly during the Weimar Republic. Kraus (1981) records that by 1926 the income share of the top 5% had fallen by 6.2%. Overall, Morrisson (1997) argues that the Kuznets curve in Germany peaked in 1900, went flat and started to fall in the 1920's. This date corresponds closely to the major democratization of 1918-1919.

For France, Morrisson (1991, 1997) argues that inequality rose until 1870, with the income share of the top 10 percent peaking at around 50%. Inequality started to fall, however, in the 1870's, and in 1890 the income share of the top 10 percent was down to 45%, further falling to 36% by 1929. The major political reforms of 1860-1877 in France are therefore approximately around the peak of the Kuznets curve. Finally, Soderberg (1987, 1991) records that income inequality grew in Sweden, peaking just before the First World War, levelling off or falling slightly during the 1920's, and then falling rapidly thereafter. Once again, there is a close correspondence between the decline in inequality and the extension of the franchise.

Overall, therefore, our discussion so far suggests that in Britain, France, Germany and Sweden, the peak of the Kuznets curve followed democratization, itself a response to

revolutionary threats and social pressure in all cases. This pattern supports the mechanism proposed in this paper.¹⁷

4.2.2 Redistribution, Education and the Decline in Inequality

Britain: The Reform Acts of the 1867-1884 were a turning point in the history of the British state. In 1871 Gladstone reformed the civil service, opening it to public examination and making it meritocratic. Liberal and Conservative governments introduced a considerable amount of labor market legislation, fundamentally changing the nature of industrial relations in favor of workers. During 1906-1914, the Liberal Party, under the leadership of Asquith and Lloyd George, introduced the modern redistributive state into Britain, including health and unemployment insurance, government financed pensions, minimum wages, and a commitment to redistributive taxation. As a result of the fiscal changes, taxes as a proportion of National Product more than doubled in the 30 years following 1870, and then doubled again. In the meantime, the progressivity of the tax system also increased (see Lindert, 1989). Consistent with these trends, Lindert (1994) has recently shown that between 1880 and 1930, variables measuring democracy, in particular voter turnout, had a significant positive effect on the expansion of government expenditures on social programs (welfare and unemployment compensation, pensions, health care and housing subsidies), again supporting the interpretation that democratization has been a key driving force of the radical shift towards redistributive fiscal and social policy.

Meanwhile, the education system that was only open to the elites during most of the nineteenth century became more and more open to the masses (see Schofield, 1973, and Mitch, 1992 and 1993, on the poor educational standards of the British workforce during the early 1800s). First, school leaving age was set at 11 in 1893, then increased to 12 in 1899, and special provisions for the children of needy families were introduced. Finally, the reform act of 1902 introduced public schooling as a duty of the government towards

¹⁷An exception to these patterns is the U.S., where early democratization was not followed by a fall in inequality. The universal white male suffrage of the late 1840s is widely attributed to increasing social pressure by the disenfranchised masses (see, for example, Albright, 1942, Williamson, 1960, Crotty, 1977, and Engerman et al., 1998). But the peak of the Kuznets curve was not reached until the 1930's, despite increased redistribution in the latter half of the nineteenth century. We conjecture, together with a number of historians, that the U.S. was exceptional, especially because of the high levels of immigration. Historical sociologists such as Kaelble (1986) argue that the citizens saw themselves as upwardly very mobile, partly because the lower ranks of the society were taken by migrants. Poor citizens therefore did not initiate social unrest. This may have changed in the late 1920s with the depression and the severe limitations on immigration. Although these arguments may justify why our simple model does not fit the U.S., more research is certainly required.

its people. As a result of these changes, the proportion of 10-year olds enrolled in school that stood at a disappointing 40% in 1870 increased to 100% in 1900 (see Ringer, 1979, p. 207). Many educational historians argue that the democratization of British society was the key driving force behind these changes (e.g. Simon, 1960), and the leading Chartists of the period saw increased representation precisely as a means to guarantee a more equitable distribution of the gains of growth (see Briggs, 1959).

Williamson (1985) sees the increase in the supply of skills as the key reason for the fall in inequality. Hence, to the extent that mass schooling contributed to this increase in the supply of skills, the education policies were an important factor in reducing inequality. This is summed-up by Lindert and Williamson (1985) who write that “the rate of skill deepening reached impressive levels in the era following the educational reforms of the 1870’s, coinciding with the drop down Britain’s Kuznets Curve.” The data already reported in the previous subsection also suggests that the reduction in income inequality was faster than the compression in earnings inequality, which is consistent with the view that increased and more progressive taxation and more transfers to the poor played a key role in reducing inequality.

Other Countries: In Germany, during the period where the Kuznets curve peaked, primary school enrollments were flat. Social conflict was instead met by the creation of a welfare state by Bismarck.¹⁸ This was initiated in the early 1880’s and is widely regarded by historians of the period as a strategy to diffuse potential revolutionary sentiments (see, for example, Tampke, 1981, and Baldwin, 1990). Williamson (1998) writes that “the main aim of [Bismarck’s] welfare program was to avoid revolution through timely social reform and to reconcile the working classes to the authority of the state.” While this was a small amount of redistribution by contemporary standards, it seems to have been enough to stop the rise in inequality. Moreover, the fall in inequality that began in the 1920’s coincides with the large increase in redistribution initiated by the Weimar state (see Flora, 1983).

In France, as in Britain, democratization coincided with important educational reforms. During the Second Empire, there was a significant expansion of government support for

¹⁸Another possible method of redistribution, which has received recent attention in the context of the “East Asian Miracle”, is land reform (see Campos and Root, 1996). Whether or not land reform is attractive to the elite, and acceptable to citizens, depends on where revolutionary threats come from. Typically it is urban workers who pose the biggest threat to regimes, and they were the target of Bismarck’s reforms, not rural peasants. In Germany, the proportion of the labor force in agriculture in 1870 was around 45% (see Flora, 1983) while for Britain it was already down to 20% by this date (Michell, 1962). In South Korea and Taiwan, this percentage was around 80%, and other conditions were also different. In particular, the Communist revolution in China had successfully exploited the discontent of peasants and this constituted the real threat to the Korean and Taiwanese regimes.

education with the illiteracy falling from 39% to 29% of adults and the primary school enrollment rate increasing from 51% to 68% (see Plessis, 1985, Table 14, p.100). In 1881 the government abolished fees in public primary schools, and in 1882, it introduced 7 years of compulsory education for children. The primary enrollment rate increased from 66% in 1863 to 82% in 1886. The ‘liberal’ phase of the Second Empire saw significant labor market legislation with strikes legalized in 1863, and unions finally officially tolerated in 1868. Moreover, central government expenditure as a percentage of GDP increased by one third from 9.4% in 1872 (a figure itself inflated by the war) to 12.4 % in 1880 (Flora, 1983).

For Sweden, as for Germany, there was little impact of democratization on educational enrollments. Nevertheless, Lindert’s (1994) data shows that before 1920 there was no redistribution at all in Sweden, while after this date it jumped up sharply, leading to the decline in inequality.

In the U.S., despite failing to reduce inequality, the democratization of the first half of the nineteenth century induced significant government provision of primary education in a process known as the “common school” movement (see Cubberly, 1920). As Engerman et al. (1998) put it, “the “common school” movement was one of a number of campaigns for democratization in various social and economic policies that coincided with, or followed shortly after, widespread extension of the suffrage.” Limited fiscal redistribution also followed the Civil War (see Skocpol, 1992), but only began in earnest during the 1930’s as did attempts to pass labor market regulations favoring workers such as the Wagner Act.

Overall, we can summarize our discussion by quoting Easterlin (1981): “to judge from the historical experience of the world’s 25 largest nations, the establishment and expansion of formal schooling has depended in large part on political conditions and ideological influences” and “a major commitment to mass education is frequently symptomatic of a major shift in political power and associated ideology in a direction conducive to greater upward mobility for a wider segment of the population.” So it appears that democratization has historically been a major driving force towards redistribution and the institution of formal schooling for the masses. This is consistent with this paper’s emphasis that democratization was instrumental in reducing inequality by forcing the elite to increase the extent of direct and indirect redistribution.

4.2.3 Revolution Opportunities

Finally, we would like to illustrate that there were important differences in the extent of revolution opportunities across periods and in the organization of the working classes across

countries.

An important part in the timing of political reform was played by economic depressions and wars. In Britain, the move towards democracy in 1867 was spurred by a sharp business cycle downturn (Lee, 1994). Moreover, after 1873, the world economy went into a prolonged slump, widely recognized to be the worst of the nineteenth century, and this slump caused increasing distress over the next decade. In France, democracy was precipitated by the 1848 revolution and was consolidated after the social unrest following the collapse of the Second Empire in the Franco-Prussian war, to the Paris Commune, and to the Third Republic. In Sweden, the end of the First World War appears to have increased the revolutionary sentiment (Verney, 1957, and Castles, 1973). And finally, in Germany, the defeat in the First World War was instrumental in creating social unrest, leading to the founding of the Weimar Republic. In all these cases, unusual events appear to have intensified the threat of revolution, implying that promises made during these periods may have been reversed when the society returned to normal times.

Social unrest was certainly as strong in Germany during the mid nineteenth century as it was in Britain and France. While there were no strong socialist parties in Britain and France (a point stressed by Stephens, 1989, for example) and trade unions were of little importance, Social Democratic Party in Germany was by far the largest left-wing party in Europe at that time and labor movement was strong.¹⁹ At first sight, one might expect franchise extension in Germany rather than in Britain and France. Our model, in contrast, predicts that German elites should have had more flexibility in dealing with social unrest by promising future redistribution. This is consistent with the facts. While there was relatively early democratization in Britain and France, Germany instituted the first welfare state, but without a real transfer of political power to the working classes, and democratization had to wait until the Weimar Republic of 1919.

5 Extensions

In this section we informally discuss some extensions, focusing especially on those which are relevant for the model of Section 3.

¹⁹The relative strength of the working classes in Germany during the 19th century seems completely accepted by scholars, see the essays in Katznelson and Zolberg (1986). For example, Nolan begins her chapter (p. 354) by stating, “Although Britain experienced the first industrial revolution and France developed the first significant socialist associations, Germany produced the largest and best-organized workers’ movement in the late nineteenth century.”

Heterogeneity Among the Rich It is straightforward to extend the model so that there is a distribution of asset levels, $G_t(h)$, among the rich, with lower support $\underline{h} > 1$. In this case, $H_t = \lambda h_t^p + (1 - \lambda) \int h dG_t(h)$. The rest of our setup and results remain unchanged, except that now the tax rate may be positive even when the elite are in power. First, suppose that $G_t(h)$ is skewed to the right. In this case, the median rich agent would like a zero tax rate, and none of our results need to be modified. In particular, given decreasing returns to human capital, all rich agents converge to the same level of human capital, h_{SS} . In contrast, if $G_t(h)$ is skewed to the left, then the median rich may set a positive tax rate. Whether the revolution constraint becomes binding or not depends on this tax rate. If $G_t(h)$ is sufficiently skewed, then this tax may be high enough to ensure accumulation by the poor and avoid the revolution constraint. The interesting feature is that in this case the amount of conflict among the elite has an impact on the conflict *between* the elite and the poor.

Imperfect Substitution Among the Rich and the Poor We can think of the rich agents supplying skilled labor and the poor supplying unskilled labor, with imperfect substitution between these two types of labor. For example: $Y_t = A(\lambda h_t^p)^\alpha ((1 - \lambda)h_t^r)^{1-\alpha}$. In this case, differences in λ would have another, perhaps more intuitive, effect on the likelihood of revolution. When λ is high, unskilled wages will be depressed, so a given h_t^r/h_t^p would translate into a higher level of income inequality.

Costs of Redistributive Taxation In order to make our point in the simplest model, we have assumed redistributive taxation to be without distortions. It is straightforward to see that if this assumption is relaxed, then a democratic society would actually tend to an income level $Y_{SS}^3 \leq Y_{SS}^2$. Whether this inequality is strict or not will depend on a number of other features, which are not crucial for our story. This case would strengthen the conclusion that the lack of robust correlation between democracy and growth may not be surprising.

Targeted Taxes and Transfers We have not allowed the transfer T_t to be negative or person specific, implying that the elite preferred no intervention. With person specific transfers or lump-sum taxes used to subsidize production, the elite, when in power, would want to use their political power to redistribute in their favor (one can interpret the Corn Laws, or Combination Acts which outlawed unions in the nineteenth century Britain in this light). In doing this, however, they have to respect the revolution constraint again: a high tax on the poor would make a revolution worthwhile. The interesting implication is that, in this case, the elite will often tax the masses just enough to make them indifferent

between the existing system and a revolution, making increasing inequality more likely in an autocracy. This may fit the example of some African cases where state power appears to have been used more often to redistribute from one group to another.

Why is Democracy Irreversible? We have assumed that once the elite extend the franchise, they cannot rescind it. This is clearly unrealistic, since there are examples of coups which have restricted the political participation of the masses. This issue also raises the question of why the poor are initially excluded from the political process? Part of the answer appears to be that political power depends on wealth (e.g. Ades and Verdier, 1993). The elite, initially, are much wealthier than the masses, and can use their wealth in order to control the political process. Once the franchise is extended, the distribution of income and wealth becomes more equal, implying that the masses now possess the resources to take part in the political process, and making a return to autocracy much harder. We could easily introduce this in our model by making μ a function of the income level of the poor, for example, $\mu(y^p)$ (with the restriction that $\mu(y^p) \leq \bar{\mu}$ so that democracies do not necessarily lead to a revolution). In this case, once the franchise is extended and y^p increases, the poor are much better organized, so even if inequality falls, the threat of revolution does not totally disappear.

This reasoning also suggests a reason why South Korea and Taiwan may have started the democratization process over the past ten years. Our simple model predicts that they should remain an autocracy forever. Yet, if we think of political power as related to income, at some point μ will increase sufficiently so that the elite have to extend the franchise, despite the low level of inequality. With this modification, our approach predicts that, as in the case of South Korea and Taiwan in practice, economies which start with relatively low inequality should experience high growth and no democratization for a while, and then, once the masses become sufficiently wealthy, social unrest should force democratization.

Forward Looking Elites Finally, in the model of Section 3 (as opposed to Section 2), the agents are “myopic” because they live only one period and do not care about the dynamics after they die. If we introduce more general kinds of altruism or long horizons for the agents, this aspect will change. In this case, one might conjecture that the elite may accumulate slower than otherwise in order not to hit the revolution constraint. Intuitively, the members of the elite may realize that if they collectively have assets worth $H^* = \lambda(1 - \mu)/\mu$, the revolution threat will become active. So they may stop accumulation at some level less than H^* . The important point to note, however, is that this requires some kind of coordination from the “state”. If each member of the elite is deciding individually,

he would ignore his impact on the aggregate stock of assets, and thus would “free-ride” by accumulating more. Such behavior by all the members would take the economy to H^* .

6 Concluding Remarks

This paper has offered a simple model of political transition and reform, and investigated the implications for the dynamics of growth and inequality. The two main contributions of this paper are: (1) it explains why the rich elite may want to extend the franchise, even though this implies higher taxation in the future. (2) it offers a new explanation for the presence of a Kuznets curve in the development experience of Western societies.

Our emphasis on political reform as a way of changing future political equilibria may have a number of other applications. Recall that the important feature of franchise extension is that it changes who the median voter will be in the future, and thus commits the elite to future redistribution. Other reforms also affect future political balances. For example, electoral systems and relations with international institutions may act as commitments to certain policies. Also, programs differ in how easily they can be reversed. In most countries, for example, social security entitlement programs appear to be more difficult to cut other redistributive programs. This raises the question of whether there was a commitment motive in play when these programs were instituted.

Although the historical experiences of Britain, Germany, France and Sweden support our story, the U.S. evidence is more mixed. In the U.S., the common school movement appears to have emerged, at least in part, in response to democratization, but this was not sufficient to reduce inequality. A more careful appraisal of the U.S. case, research into the historical experiences of other countries, and a study of whether these forces are also important in more recent political reforms in Latin America and Asia are obvious areas for future research.

Our model predicts that democratization is more likely when inequality is high. This result however ignores another important effect. In general, when inequality is high, democratization is quite damaging to the elite who will be taxed more heavily. This implies that the impact of inequality on democratization will be determined by the interplay of two offsetting forces, which appears to be an interesting issue to study. Furthermore, we have not allowed the elite to use a “repression” strategy, clearly a relevant option in the experiences of Latin American and African countries.

Finally, as already noted, there are also major differences in the form of redistribution

across countries. In Britain, education increased substantially after the franchise due to increased government support. In contrast, in Germany, early redistribution was via the welfare state. It is important to understand what might cause these differences, and whether the same forces are also important in shaping the differences in the extent and form of redistribution we observe today.

7 Appendix

We now analyze the model of Section 2 without the restriction to Markovian strategies. More specifically, we look for subgame perfect equilibria. We will find that there exists a cutoff probability of state μ^h , $q^{**} < q^*$ such that when $q > q^{**}$, there will be redistribution without democratization which prevents a revolution. In contrast when $q < q^{**}$, the only equilibrium will feature the extension of the franchise when $\mu_t = \mu^h$.

First, note that if the masses initiate a revolution at time t , then effectively the game ends with $V^p(R) = \mu_t AH / \lambda(1 - \beta)$. Therefore, in any subgame perfect equilibrium, $\sigma_t^p(\mu^h, E | \cdot, \cdot) = (\rho = 1)$ only if $V^p(R) > \bar{V}_t^p$ where \bar{V}_t^p is the payoff of the masses in the continuation game at time t without a revolution.²⁰ This immediately implies that $\sigma_t^p(\mu^l, E | \cdot, \cdot) = (\rho = 0)$. Next, note that after $\phi_t = 1$, and ignoring revolution, the elite are down to their minimum payoff, since $\tau = \hat{\tau}$ in all future periods. Therefore, $\sigma_t^p(\mu^h, E | \phi = 1, \cdot) = (\rho = 1)$ only if $V^p(R) > V^p(D)$. Assumption 2 ensures that this inequality never holds, thus in any subgame perfect equilibrium, $\sigma_t^p(\mu^h, E | \phi = 1, \cdot) = (\rho = 0)$ irrespective of the history of the game up to this point. So we have pinned down all of the strategies by the masses other than $\sigma_t^p(\mu^h, E | \phi = 0, \tau^r)$. Now consider this.

Let $\bar{V}_t^p(\mu^h, E | \phi = 0, \tau^r)$ be the continuation payoff of the masses, conditional on $\phi = 0$ and τ^r , when they play $\rho_t = 0$. Then, in any subgame perfect equilibrium, $\sigma_t^p(\mu^h, E | \phi = 0, \tau^r)$ will only put positive probability on $\rho = 1$ if and only if $V^p(R) \geq \bar{V}_t^p(\mu^h, E | \phi = 0, \tau^r)$ and will play $\rho = 1$ with probability 1 if $V^p(R) > \bar{V}_t^p(\mu^h, E | \phi = 0, \tau^r)$.

Suppose $q < q^*$. Recall from Proposition 2.2 that in this case, there were no Markov Perfect Equilibria with redistribution and no democratization. Let $\tau^r(\mu_t)$ be the tax rate chosen by the elite in state μ_t at time t . Consider the following candidate equilibrium strategy combination. For the elite: $\sigma_t^r(\mu^h, E) = (\phi_t = 0, \tau_t^r = \hat{\tau})$ and $\sigma_t^r(\mu^l, E) = (\phi_t = 0, \tau_t^r = \bar{\tau})$ where $\bar{\tau} \leq \hat{\tau}$. For the masses, $\sigma_t^p(\mu^j, E | \phi_t = 0, \tau_t^r) = (\rho = 0)$ if $\tau^r(\mu_s) \geq \hat{\tau}$ if $\mu_s = \mu^h$ and $\tau^r(\mu_s) \geq \bar{\tau}$ if $\mu_s = \mu^l$, for all $s \leq t$, and $(\rho = 1)$ otherwise. Then, the payoffs in this candidate equilibrium are given by:

$$\bar{V}^j(\mu^h, E) = (1 - \hat{\tau})Ah^j + \hat{\tau}AH + \beta [q\bar{V}^j(\mu^h, E) + (1 - q)\bar{V}^j(\mu^l, E)] \quad (9)$$

$$\bar{V}^j(\mu^l, E) = (1 - \bar{\tau})Ah^j + \bar{\tau}AH + \beta [q\bar{V}^j(\mu^h, E) + (1 - q)\bar{V}^j(\mu^l, E)] \quad (10)$$

for $j = p$ and r . Now define $\bar{\tau}$ such that $\bar{V}^p(\mu^h, E) = V^p(R)$. $\bar{\tau} < \hat{\tau}$ exists by Assumption 2. Therefore, the above strategies are best response for the masses in all subgames. Next, we

²⁰We are now using σ_t instead of σ , which stands for σ conditional on the public history of the game up to time t . The public history includes all past actions (but not mixing probabilities when these are used).

need to check whether they are best response for the elite. Clearly, if the elite reduce the tax rate in state (μ^h, E) , this will immediately cause a revolution, thus $\sigma_t^r(\mu^h, E) = (\phi_t = 0, \tau_t^r = \hat{\tau})$ is optimal conditional on the history up to time t characterized by $\tau^r(\mu_s) \geq \hat{\tau}$ if $\mu_s = \mu^h$ and $\tau^r(\mu_s) \geq \bar{\tau}$ if $\mu_s = \mu^l$, for all $s \leq t$. In contrast, if the elite deviate from $\sigma_t^r(\mu^l, E) = (\phi_t = 0, \tau_t^r = \bar{\tau})$ to $\sigma_t^r(\mu^l, E) = (\phi_t = 0, \tau_t^r = 0)$, this will not cause a revolution immediately. It will only do so when the state changes to (μ^h, E) . But in this case, the elite can play $\sigma_t^r(\mu^h, E) = (\phi_t = 1)$ and as we saw above, the best-response of the masses is always $\sigma_t^p(\mu^h, E | \phi = 1, \cdot) = (\rho = 0)$ irrespective of the history of the game up to this point. The payoff to the elite from following this deviant strategy starting in the state (μ^l, E) is:

$$V_d^r(\mu^l, E) = Ah^r + \beta [qV^r(D) + (1 - q)V_d^r(\mu^l, E)]$$

Therefore, the above candidate equilibrium strategy combination is a subgame perfect equilibrium if and only if $\bar{V}(\mu^l, E)$ given by (9) and (10) is greater than or equal to $V_d^r(\mu^l, E) = \frac{Ah^r + \beta q V^r(D)}{1 - \beta(1 - q)}$. It is straightforward that if $q = q^*$, $\bar{V}(\mu^l, E) > V_d^r(\mu^l, E)$ and at $q = 0$, $\bar{V}(\mu^l, E) < V_d^r(\mu^l, E)$. Also, $\bar{V}(\mu^l, E)$ falls faster in q than $V_d^r(\mu^l, E)$. So there exists q^{**} , such that for all $q < q^{**}$, $\bar{V}(\mu^l, E) < V_d^r(\mu^l, E)$, and there exists no equilibrium with redistribution and democratization.

Finally, when $q > q^*$, the Markov Perfect Equilibrium with redistribution and no democratization continues to be a subgame perfect equilibrium, and with a similar reasoning to the above, we can construct others which feature some redistribution both in state $\mu_t = \mu^h$ and $\mu_t = \mu^l$, but all these equilibria have the same structure of keeping the masses just indifferent between revolution and no revolution in the state (μ^h, E) , thus give the same payoffs to the elite and the masses.

8 Bibliography

- Abrams, L. (1995)** *Bismarck and the German Empire, 1871-1918*, Routledge, NY.
- Adelman, P. (1997)** *Gladstone, Disraeli and Later Victorian Politics*, 3rd Edition, Longman, New York NY.
- Ades, A. (1995)** "Economic Development with Endogenous Political Participation," *Economics and Politics*, 7, 93-117.
- Ades, A. and T. Verdier (1993)** "The Rise and Fall of Elites: Economic Development and Social Polarization in Rent-Seeking Societies," Unpublished Paper, DELTA.
- Albright, S.D. (1942)** *The American Ballot*, Washington DC.
- Alesina, A. and D. Rodrik (1994)** "Distributive Politics and Economic Growth," *Quarterly Journal of Economics*, 109, 465-490.
- Aminzade, R. (1993)** *Ballots and Barricades: Class Formation and Republican Politics in France, 1830-1871*, Princeton University Press, Princeton NJ.
- Anand, S. and R.M. Kanbur (1993)** "Inequality and Development: A Critique," *Journal of Development Economics*, 41, 19-44.
- Baldwin, P. (1990)** *The Politics of Social Solidarity: Class Bases of the European Welfare State, 1875-1975*, Cambridge University Press, Cambridge.
- Banerjee, A.V. and A.F. Newman (1993)** "Occupational Choice and the Process of Development," *Journal of Political Economy*, 101, 274-298.
- Bénabou, R. (1996)** "Unequal Societies," NBER Working Paper #5583.
- Blackbourn, D. (1998)** *The Long Nineteenth Century: A History of Germany, 1780-1918*, Oxford University Press, New York NY.
- Blake, R. (1966)** *Disraeli*, Carroll and Graf, New York NY.
- Briggs, A. (1959)** *The Age of Improvement*, Penguin, London.
- Campos, J.E. and H.L. Root (1996)** *The Key to the Asian Miracle: Making Shared Growth Credible*, Brookings Institution, Washington DC.
- Carstairs, A.M. (1980)** *A Short History of Electoral Systems in Western Europe*, George Allen and Unwin, London.
- Castles, F.G. (1973)** "Barrington Moore's Thesis and Swedish Political Development," *Government and Opposition*, 8.
- Cole A. and P. Campbell (1989)** *French Electoral Systems and Elections since 1789*, Gower Press, Aldershot.

Collier, R.B. (1998) *Paths Towards Democratization: The Working Class and Elites in Western Europe and South America*, Unpublished book manuscript, Department of Political Science, University of California, Berkeley.

Cowling, M. (1967) *1867: Disraeli, Gladstone and Revolution*, Cambridge University Press, Cambridge.

Crafts, N.F.R. (1989) "Real Wages, Inequality and Economic Growth in Britain, 1750-1850: A Review of Recent Research," in P. Scholliers ed. *Real Wages in Nineteenth and Twentieth Century Europe*, Berg, Oxford.

Craig, F.W.S. (1989) *British Electoral Facts, 1832-1987*, Gower, Brookfield VT.

Crotty, W.J. (1977) *Political Reform and the American Experiment*, Thomas Crowell Company, New York.

Cubberly, E.P. (1920) *The History of Education*, Cambridge University Press, Cambridge UK.

Darvall, F.O. (1934) *Popular Disturbances and Public Order in Regency England*, MacMillan, London.

Dumke, R. (1991) "Income Inequality and Industrialization in Germany 1850-1913," in Y. Brenner et al. eds. *Income Distribution in Historical Perspective*, Cambridge University Press, Cambridge UK.

Easterlin, R.A. (1981) "Why Isn't The Whole World Developed?" *Journal of Economic History*, 41, 1-19.

Elwitt, S. (1975) *The Making of the Third Republic*, Louisiana State University Press, Baton Rouge.

Engerman, S.L., E. Mariscal and K.L. Sokoloff (1998) "Schooling, Suffrage, and the Persistence of Inequality in the Americas, 1800-1945," Unpublished Working Paper, UCLA.

Evans, E.J. (1983) *The Forging of the Modern State: Early Industrial Britain, 1783-1870*, Longman, New York.

Feinstein, C. (1988) "The Rise and Fall of the Williamson Curve," *Journal of Economic History*, 48, 699-729.

Fields, G.S. (1995) "The Kuznets Curve: A Good Idea, But..." Unpublished Working Paper, Department of Economics, Cornell University.

Fields, G.S. and G.H. Jakubson (1994) "New Evidence on the Kuznets Curve," Unpublished Working Paper, Department of Economics, Cornell University.

Flora, P. (1983) *State, Economy and Society 1815-1975*, Campus Verlag, Frankfurt.

Flora, P. and A. J. Heidenheimer (1981) "The Historical Core and Changing Boundaries of the Welfare State" in Flora, P. and A. J. Heidenheimer, *The Development of the Welfare State in Europe and America*, Transaction Books, 1981

Galor, O. and J. Zeira (1993) "Income Distribution and Macroeconomics," *Review of Economic Studies*, 60, 35-52.

Goldstein, R.J. (1983) *Political Repression in Nineteenth Century Europe*, Croom Helm, London.

Gosnell, H.F. (1930) *Why Europe Votes*, University of Chicago Press, Chicago IL.

Grossman, H.I. (1991) "A General Equilibrium Theory of Insurrections," *American Economic Review*, 81, 912-921.

Grossman, H.I. (1993) "Production, Appropriation and Land Reform," *American Economic Review*, 84, 705-712.

Grossman, H.I. (1995) "Robin Hood and the Redistribution of Property Income," *European Journal of Political Economy*, 11, 399-410.

Harrison, R. (1965) *Before the Socialists: Studies in Labour and Politics, 1861-1881*, Routledge & Kegan Paul, London.

Hayes, W.A. (1982) *The Background and Passage of the Third Reform Act*, Oxford University Press, Oxford UK.

Heidenheimer A. J. (1981) "Education and Social Security Provisions in Europe and America" in Flora, P. and A. J. Heidenheimer, *The Development of the Welfare State in Europe and America*, Transaction Books, 1981.

Himmelfarb, G. (1966) "The Politics of Democracy: The English Reform Act of 1867," *Journal of British Studies*, 6, 97-138.

Kaelble, H. (1986) *Social Mobility in the 19th and 20th Centuries: Europe and America in Comparative Perspective*, St. Martin's Press, New York NY.

Katznelson, I. and A.R. Zolberg (1986) *Working-Class Formation: Nineteenth Century Patterns in Western Europe and the United States*, Princeton University Press, Princeton NJ.

Kraus, F. (1981) "The Historical Development in Income Inequality in Western Europe and the United States," in Flora, P. and A. J. Heidenheimer, *The Development of the Welfare State in Europe and America*, Transaction Books, 1981.

Kuznets, S. (1963) "Distribution of Income by Size," *Economic Development and Cultural Change*, 1-80.

Lee, S.J. (1994) *Aspects of British Political History, 1815-1914*, Routledge, London.

- Lindert, P.H. (1986)** "Unequal English Wealth since 1670," *Journal of Political Economy*, 94, 1127-1162.
- Lindert, P.H. (1989)** "Modern Fiscal Redistribution: A Preliminary Essay," University of California at Davis, Agricultural History Center, Working Paper No. 55.
- Lindert, P.H. (1994)** "The Rise in Social Spending, 1880-1930," *Explorations in Economic History*, 31, 1-37.
- Lindert, P.H. and J.G. Williamson (1985)** "Growth, Equality and History," *Explorations in Economic History*, 22, 341-377.
- Lipset, S.M. (1960)** *Political Man: The Social Bases of Politics*, Anchor Books, Garden City NJ.
- Lord Acton (1906)** *Lectures on Modern History*, Macmillan and Co., London UK.
- Macaulay, T.B. (1849-1861) [1913-1914]** *The History of England from the Accession of James II*, Macmillan and Co., London UK.
- Meltzer, A.H. and S.F. Richard (1981)** "A Rational Theory of the Size of Government," *Journal of Political Economy*, 89, 914-927.
- Mitch, D. (1992)** *The Rise of Popular Literacy in Victorian England: The Influence of Private Choice and Public Policy*, University of Pennsylvania Press, Philadelphia.
- Mitch, D. (1993)** "The Role of Human Capital in the First Industrial Revolution," in J. Mokyr ed. *The British Industrial Revolution: An Economic Perspective*, Westview Press, San Francisco.
- Mitchell, B.R. (1961)** *Abstract of British Historical Statistics*, Cambridge University Press, Cambridge UK.
- Mokyr, J. (1993)** "Introduction," in J. Mokyr ed. *The British Industrial Revolution: An Economic Perspective*, Westview Press, San Francisco.
- Mommsen, W.J. (1981)** "The German Revolution 1918-1920: Political Revolution and Social Protest," in R. Bessel and E.J. Feuchtwanger eds. *Social Change and Political Development in Weimar Germany*, Croon Helm, London.
- Moore, B. (1966)** *The Social Origins of Dictatorship and Democracy*, Beacon Press, Boston MA.
- Morrisson, C. (1991)** "La Répartition des Revenues en France depuis 1880," in J-C. Casanova and M. Lévy-Leboyer eds. *Histoire économique de la France*, Gallimard, Paris.
- Morrisson, C. (1997)** "Historical Evolution of Income Distribution in Western Europe," chapter forthcoming in A.B. Atkinson and F. Bourguignon eds. *Handbook of Income Distribution*, to be published by North-Holland, Amsterdam.

- Muller, E.N. and M.A. Seligson (1987)** "Inequality and Insurrections," *American Political Science Review*, 81, 425-451.
- North, D.C. and B.R. Weingast (1989)** "Constitutions and Commitment: Evolution of the Institutions Governing Public Choice in 17th Century England," *Journal of Economic History*, 49, 803-832.
- O'Donnell, G. and P.C. Schmitter (1986)** *Transitions from Authoritarian Rule: Tentative Conclusions about Uncertain Democracies*, Johns Hopkins University Press, Baltimore MD.
- Perotti, R. (1993)** "Political Equilibrium, Income Distribution and Growth," *Review of Economic Studies*, 60, 755-776.
- Persson, T. and G. Tabellini (1994)** "Is Inequality Harmful for Growth? Theory and Evidence," *American Economic Review*, 84, 600-621.
- Plessis, A. (1985)** *The Rise and Fall of the Second Empire, 1852-1871*, Cambridge University Press, Cambridge UK.
- Przeworski, A. (1991)** *Democracy and the Market*, Cambridge University Press, Cambridge UK.
- Price, R. (1997)** *Napoleon III and the Second Empire*, Routledge, New York NY.
- Ringer, F. (1979)** *Education and Society in Modern Europe*, Indiana University Press, Bloomington.
- Roemer, J.E. (1985)** "Rationalizing Revolutionary Ideology: A Tale of Lenin and the Tsar," *Econometrica*, 53, 85-108.
- Rodrik, D. (1994)** "King Kong Meets Godzilla: The World Bank and the *East Asian Miracle*," in A. Fishlow et al eds. *Miracle or Design? Lessons from East Asia*, Overseas Development Council, Washington DC.
- Rueschemeyer, D., E.H. Stephens and J.D. Stephens (1992)** *Capitalist Development and Democracy*, University of Chicago Press, Chicago IL.
- Rustow, D.A. (1955)** *The Politics of Compromise: A Study of Parties and Cabinet Government in Sweden*, Greenwood Press, New York NY.
- Schofield, R. (1973)** "Dimensions of Illiteracy, 1750-1850," *Explorations in Economic History*, 10, 437-454.
- Searle, G.R. (1993)** *Entrepreneurial Politics in Mid-Victorian Britain*, Oxford University Press, Oxford UK.
- Simon, B. (1960)** *Studies in the History of Education*, Lawrence and Wishart, London.

- Skocpol, T. (1992)** *Protecting Soldiers and Mothers: Political Origins of Social Policy in the United States*, Harvard University Press, Cambridge MA.
- Smith, F.B. (1966)** *The Making of the Second Reform Bill*, Cambridge University Press, Cambridge UK.
- Smith, P. (1967)** *Disraelian Conservatism and Social Reform*, Routledge, New York.
- Soderberg, J. (1987)** "Trends in Inequality in Sweden, 1700-1914," *Historical Social Research*, 38-58.
- Soderberg, J. (1991)** "Wage Differentials in Sweden, 1725-1950," in Y. Brenner et al. eds. *Income Distribution in Historical Perspective*, Cambridge University Press, Cambridge.
- Stephens, J.D. (1989)** "Democratic Transition and Breakdown in Europe, 1870-1939: A Test of the Moore Thesis," *American Journal of Sociology*, 94, 1019-1077.
- Stevenson, J. (1979)** *Popular Disturbances in England, 1700-1870*, Longman, NY.
- Stråth, B. (1988)** *Democratization in Scandinavia in Comparison*, University of Gothenberg Department of History, Gothenberg, Sweden.
- Tampke, J. (1981)** "Bismarck's Social Legislation: A Genuine Breakthrough?" in W.J. Mommsen ed. *The Emergence of the Welfare State in Britain and Germany, 1850-1950*, Croom Helm, London.
- Tilton, T.A. (1974)** "The Social Origins of Liberal Democracy: The Swedish Case," *American Political Science Review*, 68, 561-571.
- Trevelyan, G.M. (1937)** *British History in the Nineteenth Century and After, 1782-1919*, Longman, Green and Co. Publishers, London.
- Verney, D. (1957)** *Parliamentary Reform in Sweden 1866-1921*, Clarendon Press.
- Williamson, C. (1960)** *American Suffrage: From Property to Democracy 1760-1860*, Princeton University Press, Princeton.
- Williamson, D.C. (1998)** *Bismarck and Germany, 1862-1890*, 2nd Edition, Longman, New York NY.
- Williamson, J.G. (1985)** *Did British Capitalism Breed Inequality?* Allen and Unwin, Boston MA.
- Williamson J.G. and P.H. Lindert (1980)** *American Inequality: A Macroeconomic History*, Academic Press, New York NY.
- Wright, D.G. (1970)** *Democracy and Reform 1815-1885*, Longman, London.
- Zeldin, T. (1958)** *The Political System of Napoleon III*, St. Martin's Press, New York.