On the determinants of institutional design
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ABSTRACT

Property rights are essential for economic development in a capitalist society but there may also be a need to control business. The institutional design of these rights could be based on a trade-off between the cost of regulation and the social cost of private expropriation. However, democracies follow their own dynamic pattern. The political history of the US shows that periods with regulation and periods with relatively more freedom for business alternate. In the paper the succession of periods is modelled by applying the Lotka–Volterra model of predator–prey interaction.

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1. Introduction

The idea that institutions matter is rediscovered in modern economic analysis. However, it is one thing to say that institutions matter but it is quite another thing to show in what respect they are important for our understanding of reality. Historical investigations may inspire economists to show what is at stake. Greif (1993, 1994), Engerman and Sokoloff (2002), and Acemoglu et al. (2001) present interesting examples of this approach. Another way to proceed is the study of comparative economics in a modern setting. Alesina and Glaeser (2004) compare the characteristics of the welfare states in Europe and the US, arguing that differences in redistribution of income can be explained by differences in political institutions and related ideologies, which have historical roots. Djankov et al. (2003) make a big leap forward by comparing capitalist economies in more general terms. In what they call “the new comparative economics” emphasis is put on the distinction between disorder and dictatorship.

These and other studies make clear that property rights take a central place in the discussions on the design of societies. However, rights are not always distributed equally. On occasion, elites may dominate in a way that strangles private initiatives. Such a form of collective leadership may induce stagnation followed by a transition, as the experience of the former Soviet Union shows. On the other hand, rigorous protection of individual property rights may lead to high inequality and violent resistance, as observed on several occasions in Latin America.

In rich capitalist countries the developments are less spectacular, but even so there are important changes over time, which need further study. The dynamics of regulations in the US are documented by the political scientist Phillips (2002), and several historians in Fraser and Gerstle (2005). According to the authors conservative and progressive periods alternate, because of inherent tendencies in society. Wars, technological revolutions and depressions complicate the historical picture. Nevertheless,
capitalism has its own intrinsic dynamics, as Marx and the authors of the German historical school knew well. Therefore, it is the main purpose of this paper to study in what way power and institutional design change as the social conflict evolves.

The paper is organised as follows. In Section 2 the already mentioned work of Djankov, et al. (2003) is discussed along with other studies on the subject. In their paper institutional design is based on choosing an efficient mix of disorder and dictatorship. It is argued here that the concept of social conflict is relevant in analysing institutional settings. To see what is at stake the economic history of the US is studied in Section 3. It is shown that democratic periods with regulation and less inequality alternate with plutocratic periods with untrammelled capitalist development and high inequality. How the social conflicts evolve over time is modelled in Section 4, applying the Lotka–Volterra model of predator and prey. The paper closes with conclusions.

2. The institutional possibility frontier

In discussing property rights Djankov, et al. (2003) concentrate on the problem of the social control in business. The authors distinguish four strategies for such a control: private orderings, private litigation, government regulation and state ownership. These strategies have different consequences. They are “associated with progressively diminishing social costs of disorder and progressively rising social costs of dictatorship” (p. 598). Social losses due to private expropriation include theft, violations of agreements, torts, bribes to courts or government agencies and monopoly pricing. To that list externalities of different kinds inside or outside the firm can be added. Social losses due to state expropriation relate to the violation of existing property rights, distortionary taxation, but also to restrictions of entry in markets for outsiders.

The authors refer to the twin dangers of dictatorship and disorder which can be controlled by proper institutions. The institutional trade-off is illustrated by introducing the Institutional Possibility Frontier (IPF) for a society, which may be convex to the origin as illustrated in Fig. 1. Social losses of disorder and dictatorship are measured relative to a world with perfect property rights. It is not made clear what is meant by such a perfect world, but one can imagine a fictive economy with perfect competition and complete markets as in standard welfare analysis. The position and shape of the IPF are different for each country and depend on the amount of “civic capital” in the economy. There are several determinants of civic capital like culture, prevailing norms, technology, education, ethnic heterogeneity, and the physical environment. Given such an IPF institutional efficiency can be realized by minimizing total social costs, which results in a point of tangency with a downward sloping 45° line as illustrated in Fig. 1.

The approach looks elegant but lacks clarity. Continuity with respect to institutional design may be a problem, but this is a minor point. More important is that the concept of social costs suggests that there is unanimity among citizens with respect to the design of the economy. Perhaps the authors have Pareto improvements in mind when searching for an optimum, but even then the distributions of income and wealth are problematic. In simple models it may be possible to determine the optimal institutional design. For instance, Grossman (2002) shows that protection of property rights by a proprietary state may be Pareto superior to a society where each producer is guarding against predators on its own. In the model there is one consumption good and the costs of protection are expressed in terms of consumption foregone. If predation is sufficiently effective a collective choice with respect to protection is better than a laissez faire economy, even if the state maximizes the consumption of a ruling elite. This may seem remarkable but as Grossman (2002, p. 33) observes: “This analysis formalizes the idea that producers individually would allocate too little resources to guarding against predators because deterrence of predation is a non-excludable public good”. Moreover, the

![Fig. 1. Institutional possibilities; source: Djankov, et al. (2003).](image-url)
state is constrained in its actions because a high tax rate may induce more people to opt for the role of predator and predators cannot be taxed in this model.

Things are not always so straightforward. Institutional design is to a large extent the outcome of a fight over power and over the distribution of income, as argued by Acemoglu (2005). If the poor form a majority they may redistribute on a large scale despite distortionary taxation that goes along with it. Political institutions may be designed to prevent this from happening. Indeed, the difference in welfare states between Europe and the US can be understood in these terms as convincingly argued by Alesina and Glaeser (2004). The rich may influence politics and ideology at the same time. Ideas about the poor as lazy and incompetent can be spread through different channels. Alesina and Glaeser (2004) provide ample evidence for the impact of ideology on differences in the design of the welfare state.

To bring these ideas to the forefront one may proceed in different ways. Acemoglu and Robinson (2008) develop a theory of institutional change based on the shift in political power between a given elite and the majority of the people. The elite invests in informal political power to influence economic and political institutions to their advantage. Such an investment should be profitable in economic terms. The equilibrium solutions are characterised by a Markov process resulting in society fluctuating between a democratic and a non-democratic regime with fixed switching probabilities. The model can be extended to allow for a solution whereby a democratic regime may survive, but with economic institutions favouring the elite. In this respect the authors speak of a “captured democracy”.

A second way to proceed in analysing the role played by social conflicts is to investigate what has happened in the past. A descriptive approach may be less rigorous than a mathematical model but it is not hampered by strict and simplifying assumptions. This may be illustrated by turning to the history of the US economy from the Early Republic to the present time. In the next section we investigate what can be learned in this respect from scholars like Phillips (2002) and Fraser and Gerstle (2005).

3. Political history of wealth and power in the US

The description of US history by Phillips (2002) is based on a number of broad perceptions. First, capitalist expansion is not only characterised by a growing per capita production but also by increasing inequality in the long run: “In just a little over two centuries the United States went from being a society born of revolution and touched by egalitarianism to being the country with the world’s biggest fortunes and its largest rich–poor gap.” (Phillips, 2002, p. XVIII). In the world as a whole there are much bigger gaps between the rich and the poor, but in the industrialised world Phillips has a point. American exceptionalism in the Western world is a well-known phenomenon (e.g., Glaeser, 2007). Second, capitalist expansion is cyclical. Periods in which democratic forces checked the accumulation of wealth and rising inequality alternate with periods where the United States could be said to have a plutocracy, in which the rich took a big stake in politics: “The essence of plutocracy has been the determination and ability of wealth to reach beyond its own realm of money and control politics and government as well” (Phillips, 2002, p. XV). Third, resistance against powerful capitalism has nothing to do with “class warfare” in a Marxian sense. Reforms have often been led by “upper class” men supported by the “middle class” and ordinary people. Fourth, huge profits from investing in new multiple purpose technologies induced gradual changes in the balance of power on many occasions.

The different stories told by Phillips (2002) can be summarized in the form of a classification of US history as presented in Table 1. The years of demarcation of the periods are approximations of the changes in economics and politics. The progressive periods of regulation and redistribution are indicated as democratic in contrast with the plutocratic eras of unchecked capitalism. Progressive and conservative periods alternate, characterising the intrinsic dynamics of American capitalism. Too much regulation may lead to stagnation, which induces forces calling for reform. Unequal development and rising inequality set the stage for a revival of democratic concern. As always, exogenous shocks like wars and major depressions complicate the picture.

In the Pre-Civil War period, the early days of the republic, democratic forces gained strength, despite important regional differences. Immigration and upcoming small landowners illustrate the idea of opportunity and equality, which inspired Alexis de Tocqueville in 1837 to make his famous statement on equality among the American people. However, the spread of capitalism had its own way and inequality rose. Evidence on this account is scarce, but Phillips (2002) gives a number of indications. For example, in New York the top 1% had 29% of total wealth in 1828, which had grown to 40% in 1845. Other calculations point in the same direction (e.g., Williamson and Lindert, 1980).

The Civil War (1861–1865) led to a realignment of American wealth, which set the stage for the rise of even greater fortunes during the Gilded Age. Railroads and steel laid the preconditions for scale and scope as documented in Chandler (1990). Capitalism showed its full dynamic force and no one seemed able to steer things in a different direction as Phillips (2002, p. 42) observes: “Whether presidents were Democrats or Republicans mattered little in philosophy or management of the economy between the

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mid-1870s and 1896, because the nation’s political culture was in the grip of laissez-fair and social Darwinism — the mock-scientific notion that millionaire capitalists represented a ‘survival of the fittest’ selection process”. No wonder inequality increased substantially as is confirmed by a number of data (Phillips, p. 43). According to one calculation, 1% of US families held more than 50% of total wealth in 1890 compared to about 29% in 1860. Compilation of data at the state level provides a similar message.

In terms of inequality distribution the entire nineteenth century shows a uniform pattern. The accumulation of wealth coincided with rising inequality. In the early days, the democratic period, there was still resistance, but “industrialism was too powerful a feature to be stymied” (Phillips, 2002, p. 31). From the perspective of institutional design and its consequence the whole nineteenth century can be considered as one long period of free enterprise and accumulation of capital and wealth. As Phillips (2002, p. 31) observes: “It did take half a century for the national reaction to industrialism – and with it, to ‘predatory wealth’ – to crystallize”.

Public concern and indignation grew to critical mass during the 1890s and early 1900s. No wonder the turnaround came just over the new century’s horizon with a number of remarkable institutional changes. In 1903 a US Department of Commerce and Labor was established with the possibility to investigate corporate behaviour. Railroad legislation was extended in 1906. In the same year President Theodore Roosevelt offered a substantial reform plan with income and inheritance taxes and prohibition of corporation political funds. These were years of high growth and gains for farmers and workers. Income statistics were still in short supply, but as observed by Phillips (2002, p. 54): “they do support a significant probability: that the progressive Era brought modestly significant changes in wealth and income to match its political rhetoric”.

The Progressive Era is also discussed in Djankov, et al. (2003), where the authors mark the beginning of the period by referring to the year 1887, when the Congress passed the Interstate Commerce Act. In their view technological change during the Gilded Age induced an outward shift of the IPF-curve as shown in Fig. 2. The turbulent years increased disorder in the economy. Moreover, Djankov, et al. (2003, p. 607) postulate a change in the slope of the curve, “so that the reduction in disorder from a marginal rise in dictatorship increases”. The result is that the efficient choice of institutions required more regulation to provide countervailing power to the big corporations. The reduction of disorder in the Progressive Era comes from more regulation in the form of antitrust policy, railroad pricing, food and drug safety, workplace safety and many other areas: “The regulatory state was born in the US” (Djankov, et al. 2003, p. 606).

The authors base this view on Glaeser and Shleifer (2003), who show that regulation can be more efficient than litigation in solving market failure if the scale of economic activity rises substantially. Large firms have the funds to subvert the legal system by paying bribes or intimidating judges. Under these circumstances regulation by government agencies may increase efficiency. Glaeser and Shleifer (2003) do not deny that redistribution played a role in some reforms, but they argue that efficiency considerations are the dominant factor in public policy. However, the robber barons and their allies used their power to accumulate wealth by all kinds of means, legal and illegal. The progressive reaction was more than a change for the sake of efficiency. It was a serious challenge to plutocracy and its implication for the distribution of income and wealth. Moreover, Glaeser and Shleifer (2003) have a problem with the timing of events. The increase in scale, that warranted in their analysis a switch to regulation, occurred a considerable time before the progressive reforms were implemented.

In turn, the progressive era came to an end with the involvement in the first World War (1914–1918). The interaction of antitrust suspension with federal subsidies for wartime research stimulated big business. After the war tax cuts were welcomed and the dynamics of the “Roaring Twenties” were determined by the interaction of consumer demand and commercial

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Fig. 2. Progressive reforms; source: Djankov, et al. (2003).
momentum. More than any other innovation, automobiles dominated the 1920s, causing substantial relocations of almost everything, from plants to residential patterns. The speculative nature of the boom ended with the unexpected stock market crash in 1929 followed by a severe depression. This induced subsequent reforms known as Franklin Roosevelt’s New Deal in 1935 and 1936. As Phillips (2002, p.68) puts it: “The 1920s’ admiration for wealth would become 1930s’ distrust.”

Restrictions in the capital market and tax measures contributed to a climate of egalitarianism, whereby unionization and blue-collar prosperity rose together. The effects of the New Deal lingered through the late sixties and into the early seventies, “years that remain the zenith of twentieth-century American egalitarianism” (Phillips, 2002, p. 69). However, the 1966–1982 period was one of uncertainty and malaise. Productivity growth was slow or absent and corporate executives were pessimistic about the future of the American free enterprise system. Inflation soared and interest rates were high, thus contributing to the “hidden depression”.

Things changed with President Reagan coming in office. Tax cuts and permissive regulation heralded a new era of liberalism. Supply side economists wiped out Keynesian ideas, and new initiatives were taken in finance and construction. At the same time in Silicon Valley and elsewhere the foundations were laid for a technological revolution. The great technology mania of the 1990s induced the internet bubble in the stock-market and the subsequent crash. But this time economic recovery lay around the corner. The elimination of moral hazard through bailouts and rescues by the Federal Reserve and US Treasury made a fundamental difference in comparison with financial problems experienced in the past. But the balance of power in politics did not yet shift in favour of reformists.

The classification as shown in Table 1 is corroborated by Fraser and Gerstle (2005). The authors discuss American history in terms of changing ruling elites. Centers of power are challenged from below by workers and farmers but also by upcoming elites and new oligopolistic power groups. Historical development is characterised by several moments of crisis of the ruling class and succession by other elites, often with a different view on public responsibility and the need to regulate capitalist expansion.

The first moment of crisis and succession occurred in the decade following the ratification of the Constitution (in 1789). The Federalists wanted to establish a British-style aristocratic republic in the US. They imposed repressive measures that caused the democratic opposition to coalesce. The Federalists were beaten by the democrats and: “subsequent elites had to accommodate themselves to a democratic politics that had become a defining feature of the American republic” (Fraser and Gerstle, 2005, p. 21). However, buccaneers, industrialists and financiers, who emerged during and after the Civil War caused a second moment of elite crisis and succession. These men did not think of themselves as public men. On the contrary, the new elite of the Gilded Age was both ignorant and contemptuous of the public realm.

The populist reaction to crony capitalism of the Gilded Age triggered a third moment of elite crisis and succession. The new leaders showed an interest in the commonweal that the robber barons had never possessed. The Progressive Era promised: “a capitalism supervised by the state that would ensure profitability for the owners of capital but also impose democratic checks on the ability of the wealthy to influence politics and dominate the economy” (Fraser and Gerstle, 2005, p. 18). However, after World War I things changed dramatically as elites chose to roll back democratic achievements. As Dawley (2005) points out two features mark the change of climate. First, “by turning plutocrats into patriots, the war temporarily furthered the upper-class quest for legitimacy” (p. 171).

The Great Depression put an end to unrestrained accumulation and speculation, and laid the foundation for the New Deal order “in which the state managed capitalism to ensure corporate profitability, high wages, and social welfare for those unable to live off
their own labor” (Fraser and Gerstle, 2005, p. 23). A more recent moment of elite crisis and succession occurred between the 1960s and 2000, when the New Deal coalition was overthrown by the conservative movement. What made this crisis particular was the emergence of the South as the center of economic and political power. As Lind (2003, p. 253) observes: “The southerization of American society was visible in many realms, from civil rights, where political polarization along racial lines came to define national politics, to economics, where the age-old southern formula of tax cuts, deregulation, free trade, and commodity exports came to define the national mainstream”.

As observed by Saez (2008), the US government has published statistics on income since 1913 when the federal income tax was introduced. Combining these data with other information one may provide an estimate of the share of total personal income accruing to the top 10% of income recipients. The result of the estimation by Saez (2008) is shown in Fig. 3. The figure gives a rough indication of changes in the distribution of income from 1917 to 2006. As may be expected inequality rose during the Roaring Twenties, but declined after the Great Depression and during the Second World War. After a considerable period of stability inequality rose again in the period characterised as Neo-Liberalism. These results support the view that shifts in political power induce long-lasting changes in the distribution of income.

In the present situation (2009) the economy is struck by a severe recession. After the age of Neo-Liberalism with unrestrained accumulation of wealth and rising inequality with respect to the distribution of income the balance of power has shifted again. Now regulatory measures in the financial sector and elsewhere (education, health care and taxation) are installed or announced. This may be the beginning of a new democratic period. In Table 1 the label ”Restoration” with a question mark is introduced to signal a possible turnaround in accordance with the ideas presented above.

4. A dynamic model of institutional change

The history of wealth and power in the US shows regularities, which can be modelled in a dynamic manner. Fraser and Gerstle (2005, pp. 24–25) conclude: “Elite rule in a nominally democratic political system seems to generate counterrevolution in recurring waves. By countercoultrel we mean elite campaigns to roll back or contain democratic advances”. As emphasized by the authors, the situation is different from that in Europe where dominant social groups, existing for a long time, struggle for government and power. In the US, ruling groups cohere either to stave off democratic advances or to check and regulate capitalist expansion.

The succession of elites in connection with technological change, generating new products and new possibilities for capital accumulation, is an important element in the dynamics of the system. New elites have to fight insiders and existing regulation to make room for their innovations. However, unrestrained capitalism fosters inequality, thus confronting democracy which stands for equality. Democratic forces, which may be weak or strong, depending upon the state of the economy, favour regulation and containment.

Capitalist expansion goes along with increasing social imbalance in the form of rising inequality of income and wealth.1 The situation for the poor is deteriorated by collateral damage in the form of negative externalities and psychological stress. The rich are able to shield themselves from evils like environmental deterioration, safety risks and health problems. In this respect Phillips (2002, p. 168) echoes the ideas of Hirsch (1977) on positional goods in observing that: “wherever space and attention were limited, more was going to the rich, while the services still available to the middle class became automated, digitized, and sparser.” Income distribution deteriorates and people at the lower end lose also in terms of accessibility to common social capital, to use a term introduced by Uzawa (2005). Unequal development leads in turn to political polarization and increasing support for measures to correct these abuses of capitalism. More government regulation may slowdown economic growth by hampering the introduction of new products and new techniques. In the end, there may be an overreaction, which sets the stage for a new period of unchecked expansion.

The ideas presented are summarized in the form of causal relations in Fig. 4. State variables are cast in rectangles, corresponding flow variables in ovals. The signs at the arrows show the nature of the relationships. The upper part of the figure indicates how regulation reduces social imbalance (x) because it impedes private innovation. Different forms of regulations (y) like taxes, constraints on pollution and provisions with respect to employment reduce the private profitability of investments. From a social point of view such measures may be desirable because they prevent tensions in society to build up. The lower part of Fig. 4 shows how the level of social imbalance in society leads to changes in regulation through polarization in the political battlefield. In a society with high inequality implementation of regulation may come through political decision making, supported occasionally by the activities of labour unions and other non-governmental organizations.

The idea of recurrent waves can be modelled by applying the Lotka–Volterra model of predator and prey.2 The biological analogue is not only convenient from a mathematical point of view but can also be applied in a conceptual manner. In a capitalistic system the underlying classes and groups can be conceived as a kind of “prey”. Without a certain level of regulation their position in society deteriorates. As a consequence, social imbalance (x) may grow without bounds. However, as the situation worsens the underprivileged may fight back and gain political power. The shifting balance of power leads to “predation” in the form of more

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1 The concept of social imbalance is introduced in Galbraith (1958).
2 Goodwin (1967) applies the model to explain changes in the distribution of income in a growing economy. The Goodwin model is much discussed in the literature. For a state of the art see Aguiar-Conraria (2008).
regulation \((y)\), which slows down the tendency towards increasing inequality. In the model these forces are cast in terms of the following non-linear differential equation:

\[ \frac{dx}{dt} = (\alpha - \beta y)x. \]  

(1)

At the threshold \(y = \frac{\alpha}{\beta}\) there is change of sign. For lower values of \(y\) social imbalance increases, whereas for higher values of \(y\) this process is reversed. Above the threshold regulation is sufficient to mitigate social imbalance.

As social imbalance rises above a certain threshold more voters in a democracy opt for change in the form of additional regulation \((y)\). This idea is captured by the second non-linear differential equation of the model:

\[ \frac{dy}{dt} = (\gamma x - \varepsilon)y. \]  

(2)

There is reversion in the direction of change at the threshold \(x = \frac{\varepsilon}{\gamma}\). For higher values of \(x\) regulation increases, whereas for lower values regulation decreases. Below the threshold there is not much opposition to the lobbyists of private business in the political arena.

The Lotka–Volterra model consisting of Eqs. (1) and (2) has two equilibrium points: the origin and point \(E\) shown in Fig. 5. The equilibrium point \(E\) is a focus, which is neither stable nor unstable. The Jacobian matrix evaluated at point \(E\) is:

\[ J = \begin{bmatrix} 0 & -\frac{\beta \varepsilon}{\gamma} \\ \frac{\gamma \alpha}{\beta} & 0 \end{bmatrix}. \]

The characteristic roots of the system are: \(\lambda_1 = i\sqrt{\alpha \varepsilon}\) and \(\lambda_2 = -i\sqrt{\alpha \varepsilon}\). The real parts of the roots are zero, so \(E\) is a center. The state variables oscillate around the equilibrium point. As shown in Kemeny and Snell (1962) formulae for the recurrent waves are easily obtained. Time can be eliminated by dividing Eqs. (1) and (2):

\[ \frac{dy}{dx} = \frac{y(\gamma x - \varepsilon)}{x(\alpha - \beta y)}. \]  

(3)

Integration of Eq. (3) results in:

\[ \frac{x^\gamma}{\varepsilon^{\gamma x}} \frac{y^\alpha}{\varepsilon^{\gamma y}} = k, \]  

(4)

where \(k\) is a constant of integration. For each value of \(k\) Eq. (4) generates closed curves in \(x\) and \(y\) as illustrated in Fig. 5 for parameter values: \(\alpha = 4, \beta = 2, \gamma = 1\) and \(\varepsilon = 3\). The curves represent trajectories in the state variables \(x\) and \(y\), which vary more widely as the curves are further away from the stationary point \(E\). Inspection of the phase diagram in Fig. 5 shows that the direction of change in each region is as indicated by the arrows. The motion along the curves is therefore counterclockwise. The average values of both state variables \(x = \bar{x}\) and \(y = \bar{y}\) are always the same and correspond to the coordinates of point \(E\): \(\bar{x} = \frac{\alpha}{\gamma}\) and \(\bar{y} = \frac{\alpha}{\beta}\). Larger trajectories need more time for completion.

The model can be used to illustrate the dynamic interactions, which lay at the base of the recurrent waves in US history as discussed above. Moreover, the model can be easily extended so as to generate cyclical trajectories towards the equilibrium point \(E\).
in Fig. 5. Recurrent waves can then be explained by the appearance of shocks in combination with a dynamic propagation mechanism. As is well-known from discussions of business cycles, it is difficult to discriminate between both options. Shocks do occur and the exact form of the propagation mechanism is not always known.

To illustrate these ideas, we turn to the Great Depression with its devastating effect on the distribution of income and wealth. It does not take much imagination to mark the event as a severe shock to the system. The reaction in the form of the New Deal made a substantial difference as “it subjected strategic economic institutions – banks, utilities, and capital markets – to the kind of public regulation and surveillance that they had never experienced before” (Fraser and Gerstle, 2005, p. 22). Nevertheless, the implementation of Keynesian concepts and new institutions did take time and met with opposition as is well documented by Parker (2005) in his informative Galbraith biography. The echo of the New Deal was still heard in the 1960s and 1970s, which period is coined by Reich (2007) as the “No quite Golden Age”. In this period a reaction was already under way which got momentum in the era of liberalisation and deregulation under President Reagan. Or, as Lind (2005, p. 285) puts it: “By enriching without revolutionizing the South, the New Deal empowered the most reactionary conservatives in the United States. And in the last third of the twentieth century and the beginning of the twenty-first, southern conservatives and their allies in other regions went from triumph to triumph in an America which increasingly resembled the traditional South: a low-wage society with weak parties, weak unions, and a political culture based on demagogic appeals to racial and ethnic anxieties, religious conservatism, and militaristic patriotism”.

Compared with earlier cycles the Great Depression may have put the system on a more outward trajectory in Fig. 5. It then takes a longer time to run a full cycle, as witnessed by the long-lasting impact of the New Deal and the subsequent perseverance of Neo-liberalism. However, the current crisis sets the stage for a change in the direction of more regulation. In times of crisis it seems easier to solve the problem of collective action. Restoration of democratic forces as called for by Reich (2007) seems now underway.

5. Conclusion

Capitalism fosters inequality through economies of scale and scope leading to the accumulation of wealth for economic elites. Democracy on the other hand starts from the presumption of equal rights of men. The resulting tension between capitalism and democracy becomes visible in the study of American economic history. It appears that plutocratic periods with deregulation and high inequality in welfare and democratic periods with more regulation by the government and a more equal distribution of welfare alternate. The question is then: what are the determinants of institutional change (regulation and deregulation) that are carefully documented in historical studies on the US economy since the days of the early republic by Phillips (2002) and Fraser and Gerstle (2005). According to Djankov, et al. (2003) and Glaeser and Shleifer (2003) efficiency considerations determine whether more or less regulation is necessary. For instance, regulation may be desirable in case the social costs of litigation become extreme high because firms causing externalities are able to subvert the legal system. However, as argued by Acemoglu (2005) institutions are not chosen on the basis of efficiency considerations but evolve in the solution of social conflicts. In a plutocratic society the ruling elite may go for inefficient institutions if this serves their interest.

Social conflict is inherent in American capitalism. If the social balance in society shifts at the expense of the underprivileged forces build up to counteract the development towards greater inequality. In reverse, if there is a high level of regulation opposition grows because investors and innovators cannot fully exploit potentially opportunities. In both cases it takes time to change because a growing number of people concerned must feel the need for action. As shown here, the dynamic interactions referred to can be modelled by applying the Lotka–Volterra model of predator and prey. The closed trajectories of the model show how recurrent waves of institutional design, observed in the history of the US economy, emerge. Moreover, the model predicts that after every plutocratic period there comes a new era with more democracy and more regulation. Recent developments in the US following the financial crisis are in line with this point of view.
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