PROMISCUOUS ELITES 
AND 
ECONOMIC DEVELOPMENT 

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Abstract

This paper analyzes the inter-connection between elites. For decades, the bureaucratic elite enters the business elite after leaving office and this in growing numbers. This type of connection has been termed “revolving door” in English, “pantouflage” in French, and “amakudari” (descent from heaven) in Japanese.

The purpose of this paper is to explain why this social behavior takes place, and why the political elite does not try to prevent it. Moreover, this paper shows that the bureaucratic elite obtains excessive bureaucratic power, and that promiscuous elite leads to lower growth.

Keywords: elites, bureaucracy, economic growth, privatization, political system. 
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I. Introduction

This last decade, the tempo of the waltz of prominent figures moving from governmental positions to the business world has become brisker. The list of these people is long, and to name a few: Alan Greenspan, from chairman of the Fed to the hedge fund Paulson & Co.; Glenn Hubbard from the U.S. Treasury Department to KKR Financial Corporation; Robert Zoellick from the State Department to Goldman and Sachs; Dick Cheney from Secretary of Defense to private military contractors; and of course, Larry Summers, who pressed for the deregulation of financial markets while being the Treasury Secretary and moved to the hedge fund D.E. Shaw, Goldman Sachs and lately to the venture capital firm Horowitz.1

Europe has adopted the same phenomenon, and Israel, is not waterproof to this behavior. For instance, Ohad Marani and Eli Youness moved from the Ministry of Finance to the Banking Sector, and especially Yossi Bachar who, after deregulating the financial market, was appointed at the head of one of the banks.

For decades, the bureaucratic elite enters the business elite after leaving office and this in growing numbers. This type of connection has been termed “revolving door” in English or “pantouflage” in French, and “amakudari” (descent from heaven) in Japanese.

The purpose of this paper is to explain why this social behavior takes place, and why the political elite does not try to prevent it. Moreover, this paper shows that promiscuous elite leads to lower growth, and that the bureaucratic elite obtains excessive bureaucratic power.

In most countries, there are three groups of elite which composes the power elite: the political, bureaucratic and business elites.2 The relation between the different elites is a follows: The bureaucratic elite have two main effects on the economy. On one hand, the bureaucrats are appointed by the political elite in order to regulate the economy, and they do so in order to increase the productivity of the economy. Yet, on the other hand, the bureaucrats do not just enact efficient regulation; they also create rules and regulations, that complicate procedures in the economy. As the enactor of these rules and regulations, the regulator has better knowledge of the ins-and-outs of the system, including any loopholes that might exist. This way, the bureaucrat increases its income. He does it in a legal way by enacting regulations during his term in office that will enable him to cash-in in the future, after going through the revolving door, and joining the business firm he has previously regulated.3

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1 See Table 1 and “Inside Job” directed by Charles Ferguson.
2 In some countries, the religious elite has real power and therefore is part of the power elite.
3 Of course, this intertwining can also give place to wrong doing, but in the Western world, the amount of wrong doing and corruption of the bureaucratic elite is not wide. See Besley and McLaren (1993),
This knowledge is valuable to the business elite, and thus, once he has left the public service, the regulator will indeed be proposed a job, such as joining the board of directors, allowing him to cash-in on the red-tape he has created. Hence, the creation of red-tape is a means of creating bureaucratic capital. While this behavior maybe not highly ethical, nonetheless, it does not incorporate any illegality.

Why does the political elite, for which efficiency and economic growth is a priority, not find a way to prevent the bureaucratic elite from creating this bureaucratic capital, which hurts the economy, but advantages the bureaucratic elite? The political elite will find it optimal to let the bureaucratic elite create these redundant laws, which actually have negative effect on the economy, because it leads to choose regulators of higher quality.

Indeed, the intuition behind our results is the following: Bureaucrats are heterogeneous in their abilities, and more able bureaucrats do a better job of regulation. A better head of an agency enables higher productivity of his sector, in turn enabling higher economic growth.

In order to recruit bureaucratic elite with high quality, the government must pay them well. An easy way to let them have high income, so that they will be of high quality, is that they can cash-in the bureaucratic capital they have created while serving as the head of an agency, at the social costs of excessive and redundant laws.

Thus, the political elite faces a tradeoff between having high-quality bureaucrats and letting them create red tape. The optimal solution is a non-corner one, in which red tape is created. Creation of these redundant regulations is accepted by the political elite, because it is bringing economic growth to a higher level. So the first result of this model is that in order to obtain higher rate of growth, it is necessary to accept the creation of bureaucratic capital. The second result of this paper is that the market equilibrium will not bring the economy to the highest rate of growth, and the amount of bureaucratic capital is higher than the optimal one.

This result bears some similarity to those of Besley and McLaren (1993), that show that when governments cannot pay high wages to regulators, they permit a certain level of corruption. Besley and McLaren’s structure is adapted to developing countries, wherein corruption is widespread. The structure presented in my paper better fits the developed world, wherein bureaucrats do not ordinarily behave in a corrupt way; they are simply behaving selfishly, and by doing so create too much redundant red-tape.

The paper is divided in four parts. In the next section, we present the related literature. In part III, we present an intuitive description of the model, presented in part IV. In Part V we present the equilibrium, and Part VI concludes.

and Mauro (1995). In many countries, there is a legal period of cooling-off in order to refrain corruption. See Brezis and Weiss (1997).
II. Facts and Related literature

The economic literature on the role of elites is not very large and is mainly centered around three topics. The first one is the elite structure, the second is the inter-relation between the elite and society, and the third one is the interconnection within elites, what is coined as intertwining, which is the topic of this paper.

The elite structure examines primarily the nature of the elite’s social background, their recruitment and promotion pattern, as well as geographic or ethnic origin. The recruitment analysis investigates the openness of selection and the channels whereby such choice takes place. Some of the sociologists also explore the elite’s attitude formation and behavior.\(^4\)

The economic literature on the inter-relation between the elite and society is quite large and is mostly analyzed by the field of political economy, which pays a special attention to distributive conflicts and political institutions. The research in its different forms stresses that members of the elite who have power and wealth establish institutions that serve their own interests and exclude the masses from benefits.\(^5\) For example, one line of research argues that wealthy elites with enough political power to block changes will not accept adopting institutions that would enhance growth, since they might hurt them. Acemoglu, Johnson and Robinson (2001) developed this line of thought in relation to colonial impacts, showing that, wherever colonial governments were composed of few elite members, economic progress was reduced.

The third topic is the interconnection within elites. In non-democratic polities, it is quite obvious that there is collusion between elite which have political and economic power, and typically acts on behalf of their own interests. But democracy should a priori impose some control on the power of the ruling elite. Indeed, Schumpeter (1954) claimed that the democratic process permits ‘free competition among would-be leaders for the vote of the electorate’ and that the masses can choose between various elites.

This “pluralist-democratic” position was presented by sociologists such as Dahl (1957, 1959), Aron (1960) and Parsons (1960, 1963). They argued that in Western democracy, the existence of groups within the power structure is not an empty fiction. Western social order is characterized by a dissociation and diversification of power, a “polyarchy,” in contrast to the social order in the communist countries, where all such

\(^4\) which is coined as “positional and decision-making” in their jargon. On the relationship between recruitment pattern and economic growth, see Brezis and Crouzet, (2006).

\(^5\) See Engerman and Sokoloff (1997), Justman and Gradstein (1999), Sokoloff and Engerman (2000), Bourguignon and Verdier (2000), and Easterly (2001). It should be noted that in these last decades, this literature has mainly focuses on the transition process which occurred in Eastern Europe. It started by analyzing conflicts between the nomenklatura and the masses and went also to discuss more broadly social conflicts.
groups are unified in the single party system. This plurality of elites ensures competition, and that they do not form a “power elite” separated form the “mass society.”

In contrast, classical elite theorists such as Mosca (1939), Pareto (1935), Michels (1915) and Mills (1956) emphasized that despite the democratic character of a given regime -- where power is meant to reside in the demos (the people) -- power is really concentrated in the hands of a few, the oligarchy, which Mills (1956) called the “power elite.” This view was followed by Hunter (1959) and Domhoff (1970) for the US, and Aaronovitch (1961) and Miliband (1969) for England. In consequence, there can be collusion even in democracies. Numerous elites may not be mutually competitive and may not control and balance each other; instead, they may be intertwined as a unanimous, cohesive power elite.  

A strong interconnection among elites has the consequence that all sectors of the economy are ruled by a group that thinks in a monolithic way. Two lines of thoughts have related a monolithic group to economic growth. The first one underlines that a monolithic group leads to the stagnation of ideas and attitudes, which in turn may prevent the adoption of major technological breakthroughs (Bourdieu, 1977). The second line focuses on the lack of competition in a monolithic powerful group, which generates corruption, which has harmful consequences for growth.

Following the same line of reasoning, Acemoglu and Robinson (2000) and Gradstein (2007) stressed that elite plurality, in which the political and economic elites are separate, explains the adoption of political franchise and industrialization in western Europe; while 19th-century eastern Europe, where elite unity was strong, did not adopt growth-enhancing institutions, since its elites held on to their wealth and power.

The literature on the bureaucratic elite related to the revolving door started with the pioneering works of Stigler (1971) and Peltzman (1976) followed by Eckert (1981). It mostly focused on corruption, and was coined “regulatory capture”. In this line of thought, Laffont and Tirole (1996) stressed that: “Monetary bribes are feasible although not common due to their illegality. More pervasive are the hoped for future employment for regulators with the regulated firms.”

Most researchers have focused on the potentially undesirable effects of such a practice and solutions that could be implemented (Spiller, 1990, and Brezis and Weiss, 1997), but there are also works that show that there may be positive aspects to the revolving door that should not be overlooked (Salant, 1995, and Che, 1995). In all instances, what is suspect is the regulator’s behavior during his term of office, which may benefit or harm both the firms in the industry and the industry itself.

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6 For a summary on the economic consequences of the absence of elite competition, see Brezis and Temin, (2008).
The literature has mostly focuses on corrupted behavior, but some papers have focuses on the excessive complexity of bureaucracy, related to red tape.\footnote{For works on corruption, see Shleifer and Vishny (1993), Mauro (1995) and Bardhan (1997). See also Niskanen (1971, 1975), Margolis (1975) and Banerjee (1997).} Wilson (1989) took the view that red-tape results from a set of highly rigid rules developed with the sole intent of limiting the amount of corruption within a bureaucracy by limiting the discretionary power the regulator has. Banerjee (1997) has a model in which red-tape is being determined endogenously, since red tape is a device which increases the price of operating, and thus screens firms.

In the next section, we present a model relating these different literatures.

III. The Model

1. Intuitive description of the model

The originality of this paper is in the relationship between the different power elites, and especially the business and bureaucratic elite. This relationship leads to the creation of redundant bureaucracy, which we term bureaucratic capital. The supply of bureaucratic capital is determined by the bureaucratic elite, while the demand is determined by the business elite, and the equilibrium between supply and demand determines the amount of bureaucratic capital. The third party -- the political elite -- chooses the optimal bureaucrat given the entire economic constellation. This will then determine the optimality of this behavior. In consequence, this paper presents a model that explains why we face such a strong relationship between the various power elites.

The social sphere presented in this paper is a bit dichotomous, for purpose of simplicity but it has a lot of resemblance with the stratification in the society of the Western world. The economy is divided into two groups, the elite and the people. This paper focuses on the passage between elites, and ignores movement from the demos into the elite. The reason for this dichotomy is that in the literature on recruitment of elite, it has been shown that recruitment is in fact very tight (See Brezis and Crouzet, 2006 and Brezis and Temin, 2008).

The workers, as in the economic growth model of Romer (1990), can work in two sectors: the production sector, and the R&D sector. The workers are homogenous in their ability and get wages determined endogenously in the model. There is no growth of population, and capital is constant. The only factor that leads to growth is the increase in the number of new technologies existing, which are developed in the R&D sector, and which are embedded in new intermediate goods available on the market.
The elite are divided into two mains groups: on one hand, the power elite, and on the other hand, the non-power elite. The non-power elite is composed of independent workers as lawyers, doctors etc., for whom their income is a function of their ability. Following the literature in which income is a positive function of ability, we assume that in this social stratum, wages are a function of ability (see Weiss, 1980).

The power elite itself is composed of political, business and bureaucratic elite. In democracies, since elections are held periodically, the political elite’s goal is to be reelected, so this elite is interested in maximizing the economic growth in order to please the citizen, and to get maximum votes in the upcoming elections.

The bureaucratic elite want to maximize their income, and the business elite who is at the head of monopolies maximize profits. The monopolistic sector is regulated by bureaucrats. During his time in office, the regulator regulates and get paid an income, but at the same time, he can develop regulations that complicate procedures in the industry—it is the bureaucratic capital. As the enactor of these rules and regulations, the regulator has better knowledge of the ins-and-outs of the system, and of any loopholes that might exist. This knowledge is valuable to the firms in the industry, and thus, once he has left the public service, the regulator can cash-in on the red-tape he has created.

The effect of bureaucratic capital on the production is not straightforward. In this model, when a firm hires a bureaucrat with its bureaucratic capital, the production of output becomes more efficient. This is so, because the regulator has a better knowledge of the system and of the loopholes that exist. But, the effect of this bureaucratic capital in the firm which hires him depends on the amount of bureaucratic capital of other firms, since what matters is the relative effect of the regulator. So, the production function depends on the relative amount of bureaucratic capital by the different regulators of the different sectors. This determines the demand of bureaucratic capital.

So, on one hand, there is the supply of bureaucratic capital by the bureaucratic elite, and on the other hand, the demand by the business elite. The equilibrium stock of bureaucratic capital is determined by equating demand and supply. This is the first result of the paper.

Then, the model analyzes whether this equilibrium leads to the highest rate of economic growth, which is the goal of the political elite. Since, regulators are heterogeneous in their ability, and their ability affect the productivity of the workers in the R&D sector, we get that the rate of economic growth is a function of two elements related to the bureaucrats: their ability and the amount of bureaucratic capital.

This paper shows that it is optimal from the point of view of the political elite to let the bureaucrat create these redundant laws. However, the amount of bureaucratic capital determined by the bureaucratic elite and business elite is higher than the optimal one for the political elite.
The model will be presented in the following way. We start by presenting the production functions, we then turn to the behavior of the different elites, and then we display the rate of economic growth as a function of the behavior of the elites.

2. The final good sector

Following Romer (1990), the economy produces one final homogenous good, which is consumed and exhibits constant returns to scale. This good is produced with labor and intermediate goods, so that:

\[ Y = L^{-\alpha} \int_{0}^{A} x_j^{\alpha} dj \]  

(1)

where \( Y \) is the output at each period; \( L \) - the number of workers in the production sector; \( x_j \) the number of machines from type \( j \); and \( A \), the level of technology, measured by the range of capital goods available.

The firms involved in the production sector, \( Y \) are maximizing profits:

\[ \text{Max } L^{-\alpha} \int_{0}^{A} x_j^{\alpha} dj - w_j L - \int_{0}^{A} p_j x_j dj \]  

(2)

\( w_j \) are the wage paid for labor in sector \( Y \), and \( p_j \) is the price of the intermediate good \( j \).

From the profit maximization in the production sector, we get:

\[ w_j = (1 - \alpha) \frac{Y}{L} \]  

(3)

and

\[ p_j = \alpha L^{-\alpha} x_j^{\alpha - 1} \]  

(4)

3. The bureaucratic elite and the supply of bureaucratic capital

Since the intermediate-goods sector consists of monopolistic firms, which produce intermediate goods, they are regulated by the bureaucratic elite, who consist of regulators nominated by the political elite.

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The bureaucratic elite maximizes the present value of their income. During his time in office, the regulator regulates and get paid an income, but at the same time, he can develop and accumulate regulations that complicate procedures in the industry—it is bureaucratic capital. The regulator develops these redundant and superfluous regulations because once he has developed them, his knowledge is valuable to the firms in the industry, and thus, once he has left the public service, the regulator can cash-in on the red-tape he has created.

The structure of the model is quite simple. During his term as a regulator, he acquires bureaucratic capital of size $H_i$, which costs him effort of size $E_i$ in monetary terms. We assume that the amount of bureaucratic capital is a concave function of the amount of effort invested: 9

$$H_i(E_i) = [(1 + \gamma) E_i]^{1/1+\gamma} \quad \gamma > 0$$

(5)

Then comes another regulator, which succeeds him. After leaving his job as regulator, the bureaucrat works for a period of length $\tau$, in the industry that he regulated. He receives in top of his “regular” salary, a rent related to the "bureaucratic capital", $H_i$ he has accumulated. The regulator maximizes his lifetime income which consists of (i) earnings which are not related to the creation of bureaucratic capital, denoted $\Omega$, and (ii) of income related to the creation of bureaucratic capital, which equals to the net income he gets when having moved to the industry. He will be able to sell his bureaucratic capital, $H_i$ at price $q$ for a number of years $\tau$ so that his total income is:

$$V_i = \Omega - E_i + \tau q H_i(E_i)$$

(6)

Equation (6) can be rewritten as a function only of the amount of bureaucratic capital, by substituting $E$ from equation (5). We get:

$$V_i = \Omega - \frac{H_i^{1+\gamma}}{1+\gamma} + \tau q H_i$$

(7)

From the point of view of the bureaucrat, there is an optimal amount of bureaucratic power, $H^*$ he wants to stock, which maximize his income - equation (7) and is:

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9 We assume that amount bureaucratic capital is only a function of the amount of effort and time he invests, and not a function of his ability; it is so, because the potential to create bureaucratic capital is linked to ethic values and not to ability and intelligence. The effort can describe either the loss of leisure, or bad feeling and hurting his virtue, all of these in monetary terms.
\[ \hat{H}_i = (\bar{q})^{1/\gamma} \]  \hspace{1cm} (8)

Equation (8) describes the “supply” function of bureaucratic capital by the bureaucratic elite as a function of the price \( q \). It is an increasing function of \( q \) and it is displayed as the \( S \) function in Figure 1, section I. We now turn to discuss the behavior of the business elite and its demand for bureaucratic elite.

4. The Business elite and the Demand of Bureaucratic Capital

The business elite is composed of entrepreneurs, who are at the head of intermediate-goods firms, who own a patent developed by the R&D sector, and who produce goods, \( x_j \), as in the Romer model.

The output is a function of two factors of production. The first is real capital, \( k_j \) the company use, and the standard Romer model assumes that the manufacture production function takes the simple form:

\[ x_j = k_j. \]

However, in our model, the output \( x_j \) is also function of a second factor of production, which is the amount of bureaucratic capital the firm gets from the ex-regulator, it has hired. When a firm \( j \) hires a bureaucrat with a bureaucratic capital of size \( H_j \), the production of output \( j \) becomes more efficient. This is so, because the regulator has a better knowledge of the system and of the loopholes that exist. But, the effect of this bureaucratic capital in firm \( j \) depends on the amount of bureaucratic capital of other firms, since what matters is the relative effect of the regulator. In fact, it depends on the relative amount of bureaucratic capital by the different regulators of the different sectors.

So the production function in sector \( j \) takes the form:

\[ x_j = k_j \left( \frac{H_j}{\bar{H}} \right)^{\phi} \quad \phi > 0 \]  \hspace{1cm} (9)

Where \( H_j \) is the amount of bureaucratic capital produced by the regulator of firm \( j \), and \( \bar{H} \) is the average amount of bureaucratic capital owned by the other firms.

Note that if \( H_j = \bar{H} \), then the output is just: \( x_j = k_j \), no matter the average level of bureaucratic capital. Although having hired a bureaucrat to increase the productivity of the firm may bring advantage from an individual point of view, it is pure waste from a social point of view.

So the profit maximization for an intermediate good firm is:

\[ \text{Max} \pi_j = p_j(x_j)x_j - rk_j - qH_j \]  \hspace{1cm} (10)
The two costs of factors of production are (i) capital, $k_j$ when $r$ is the cost of real capital, and (ii) the bureaucratic capital. The last term in equation (10) is the amount paid to the regulator for his bureaucratic capital. Each year, the bureaucrat who owns bureaucratic capital of amount $H$ will “sell” it to the firm. The “price” $q$, for which this amount of capital is purchased is endogenous. This last term is also included in the life income of the bureaucrat (equation 7).

Each firm maximizes profits by finding the optimal amount of output, $x_j$ and bureaucratic capital, $H_j$. Note that equation (10) can be rewritten in the following way:

$$\text{Max } \pi_j = p_j(x_j)x_j - rx_j(H/H_a)^{-\phi} - qH_j$$

(10a)

where $p_j$ is given by equation (4). Since the business elite are monopolists who see the price of their good as negatively related to the demand, the two first-order conditions for maximizing profits are:

$$p_j'(x_j)x_j + p_j(x_j) - r(H/H_a)^{-\phi} = 0$$

(11)

$$qH_a = \phi r x_j(H/H_a)^{-\phi-1}$$

(12)

From equation (4), we note that the demand elasticity of $p_j(x_j)$ is equal to $\alpha \cdot 1$. Substituting into equation (11), and in a symmetric equilibrium all $H_j$ are the same. Thus we get that:

$$p_j = p = \frac{1}{\alpha} r$$

(13)

$$H_j = H_a = \frac{\phi r K}{q \alpha}$$

(14)

where the total amount of capital in the economy $K$ is given, and

$$K = \int_0^A k_j \, dj .$$

Moreover, since all intermediate-goods firms sell for the same price, $p$, we get that: $x_j = x$, and $k_j = k$.

Equation (14) represents the demand by the firms for bureaucratic capital, as a decreasing function of $q$, which is displayed as the $D$ function in Figure 1, section (I).
5. The equilibrium of bureaucratic capital

From the side of the bureaucratic elite, described in section 3.1, we get the supply equation of bureaucratic capital (equation 8), and from the side of the business elite, described in section 3.2, we get the demand for bureaucratic capital (equation 14). By equating demand with supply we get the equilibrium stock of bureaucratic capital:

\[ H^* = \left( \frac{\tau \phi K}{A} \right)^{1/\gamma} \]

and

\[ q^* = \left[ \frac{(\phi^* K / A)^\gamma}{\tau} \right]^{1/\gamma} \]

This equilibrium is presented in figure 1, part(I). It is quite intuitive to note that one of the elements which affect the total amount of bureaucratic capital which is produced in the economy is the effect of the regulation on the economy, \( \phi \).

Summarizing this section, the intertwining of the bureaucratic and business elite have led to the formation of bureaucratic capital of an amount of \( H^* \). The creation of this capital has permitted to the bureaucratic elite to cash in after leaving his job, and entering the business he has regulated. The intertwining between the bureaucratic and business elite is thus the consequence of the supply of bureaucratic capital by the bureaucratic elite, and its demand by the business elite.

Is this amount of bureaucratic capital optimal from the point of view of the political elite? In the next sections, we show that this is not the case, but we also show that the optimal amount from the point of view of the political elite is also not zero. In order to do so, we define the rate of growth of the economy which is determined by the R&D sector, and we describe the behavior of the political elite.

6. The R&D sector

Following Romer, in the economy, there is a R&D sector which develops new designs for new intermediate goods. The only factor that leads to growth is the increase in the number of new technologies existing.

Following Romer, we assume that the number of new inventions is a function of the size of the labor force in the R&D sector, and also of the amount of machines already in existence, A. This assumption is the usual externality of spillover effects which leads to a “size effect” in economic growth. Moreover, since the economy is regulated, the ability
of the regulator affect the productivity of the workers and we get that the number of new inventions is:

$$\dot{A} = \delta(Q_i) L_r A$$  \hspace{1cm} (16)

where $\delta$ is a positive parameter function of the quality of the bureaucrat $i$, $Q_i$, $\delta' > 0$ and $\delta'' < 0$. $L_r$ is the size of the labor force in the R&G sector, and $A$ the amount of machines already in existence. In consequence we get that, in steady state, the rate of growth of the inventions, $g$, which is also the rate of growth of the economy, as it will be shown later on, is constant:

$$g = \frac{\dot{A}}{A} = \delta(Q_i) L_r$$ \hspace{1cm} (17)

The two elements affecting economic growth are the size of the labor force in the R&D sector, and the ability and quality of the bureaucratic elite. In the next section, I explain how the political elite choose the bureaucratic elite.

7. The political elite

Models of political economy of different degrees of sophistication all put as the main goal of politicians to be elected again, which take into account the well-being of citizens. In consequence for matter of simplicity, I assume that the political goal of the elite is to maximize the rate of growth of the economy given by equation (17), in order to be reelected.10

One of instruments in the hand of the political elite is to determine the regulation in the economy. The political elite, i.e., the government appoints the bureaucratic elite, i.e., the regulators who regulate the monopolistic firms. Regulators are usually appointed for a given period of time, and then, new regulators succeed them.11

Candidates for the regulatory post are heterogeneous in their ability, and have also the opportunity to work in the alternative sector in which income depends on the ability of the person, as explained above. This sector comprises for example the lawyers, doctors, financiers, etc.

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10 Another alternative is to maximize consumption.
11 In some countries, the regulator can be re-appointed for one more term, so that the period will be of two consecutive terms. In this paper, we ignore this possibility, and the length of the term is known to all.
As emphasized by Weiss (1980), when ability affects the productivity of a person, then wages are not equal for all: “workers’ wage is an increasing function of his ability”. Individuals with high ability and quality earn more than ones with less ability.

In consequence, without loss of generality, we assume the following form: \[ W_s = \xi Q_s \] \hspace{1cm} (18)

Where \( W_s \) is the life income of an individual working in the alternative sector, and \( Q_s \) is the ability of this individual.

Since quality of the regulator affects economic growth, the political elite want to choose the regulator with highest ability possible among the set of people in the economy who can play this role, and who can get in the alternative sector an income given by equation (18). We assume that the legislator possesses perfect knowledge of each candidate's ability.

In consequence, the political elite know that the reservation wage of the potential bureaucrat is given by (18) and therefore the choice faced by the political elite is to hire a bureaucrat with ability such that:

\[ Q_i = \text{Max} \{ Q_s \mid \xi Q_s \leq V_i \} \] \hspace{1cm} (19)

and the solution is:

\[ Q_i = \frac{1}{\xi} V_i \] \hspace{1cm} (20)

Substituting equation (20) into equation (7) we get the relationship between ability and amount of bureaucratic capital faced by the political elite and the public:

\[ Q_i = \frac{1}{\xi} \left[ \Omega \frac{H_i^{1+\gamma}}{1+\gamma} + \tau qH_i \right] \] \hspace{1cm} (The QH curve) \hspace{1cm} (21)

This QH equation describes the trade-off faced by the political elite in choosing the bureaucratic elite: Appointing a regulator with higher ability means letting him accumulate a higher amount of bureaucratic capital. This equation is therefore the production possibility frontier between bureaucratic capital and ability faced by the political elite.

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12 We are aware that there are models in which this relationship in not linear. For instance in the theory of “winners take it all”. But except for the very top (which then, will not take a post in the public sector), the assumption of linearity seems reasonable. See Greenwald, 1979.
political elite. This QH equation (which is described for the equilibrium price $q^*$) is depicted in figure 1, quarter (II). The maximum amount of quality is reached at $H=H^*$. In the next section, we develop the equilibrium rate of growth faced by the political elite.

### IV. Determination of the equilibrium and of the rate of economic growth

In this model, the determination of the equilibrium is as in Romer, by equating wages earned by workers in both sectors: output and the R&D sector. So, we get:

$$w_r = w_y$$  \hspace{1cm} (22)

As previously mentioned, the total labor force working in the production and the research sectors is constant and denoted by $L$.

$$L_r + L_y = L$$  \hspace{1cm} (23)

where $L_r$ is the size of the labor force in the R&D sector, and $L_y$ the labor force in the output sector.

Since the salary earned by workers in the R&D sector is the value of the patent of their invention, we have that:

$$w_r = \frac{\dot{A}}{L_r} P_r$$  \hspace{1cm} (24)

where $P_r$ is the price of a new-design patent, and $\dot{A}$ is the number of new inventions developed.

Moreover, remember that:

$$w_y = (1 - \alpha) \frac{Y}{L_y}$$  \hspace{1cm} (3)

---

13 The QH equation describes the amount of income (and therefore ability) the regulator gets for each amount of $H$ he produces. For the amount $H^*$, the price faced by the regulator is $q^*$, but what price does he take into account for each amount of $H$ which is not the equilibrium $H^*$? Following, the theory of focal point (and correlated equilibrium), the most obvious price is still $q^*$ (see Aumann, 1987).
In order to solve equation (22), we use the relationship between profits and price of the patent. By applying the asset pricing arbitrage equation, we get that:

\[ r P_r = \pi + P_r^* \quad (25) \]

Since there is no increase in population, output \( Y \), and inventions, \( A \) grow at the same rate, so that patent prices also are constant, and we get:

\[ P_r = \frac{\pi}{r} \quad (26) \]

Moreover, from equations (13), (1) and (4) we get that the profit for each of the business elite, equation (10) becomes:

\[ \pi = \alpha(1 - \alpha) \frac{Y}{A} - qH \quad (27) \]

Equating equations (3) and (24) and substituting \( \pi \) from equation (27), and using the fact that by substituting \( x \), output can be written in the following way (see appendix):

\[ Y = A \beta L_y \quad \text{where} \quad \beta = \frac{\alpha}{\alpha r^{\gamma_f/\gamma_h}} \quad (28) \]

we get:

\[ L_y = \frac{r}{a \delta(Q)} + \frac{qH}{a(1 - \alpha)\beta} \quad (29) \]

and in consequence the rate of growth in the economy is:\(^{14}\)

\[ g = \delta(Q)[L - L_y] = \delta(Q)[L - \frac{r}{a \delta(Q)} - \frac{q^* H}{a(1 - \alpha)\beta}] \quad (30) \]

Equation (30) describes the growth rate of the economy in all the states in which \( Q \) and \( H \) are exogenously given, and all the other variables corresponds to the first order conditions described above. In other words, equation (30) shows the rate of growth the

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\(^{14}\) Interest rate is determined on the demand side, and in a simple model equals the discount rate, and is not a function of the endogenous variables of equation (30). Therefore, for simplicity, we do not develop the demand side of goods.
market economy will be at as a function of the behavior of the bureaucrat described by H and Q.

It is easy to see from equation (30) that the rate of growth in the economy is a positive function of the ability of the bureaucrats, and a negative function of the amount of bureaucratic power, H. In figure 1, quarter (II), we present the iso-growth curve as a function of Q and H. The rate of substitution is positive, and given the fact that \( \delta'' < 0 \), we get that the iso-growth curves are concave.

On one hand, there is the economic growth determined by the market economy in terms of quality Q, and red tape H, which is represented by the iso-growth curves, and on the other hand, there is the production possibility frontier by the bureaucrat also in terms of quality and red-tape, the QH equation. This permits us to find the optimal amount of bureaucratic capital and maximal economic growth rates.

1. Maximum rate of growth of the market economy

In the following proposition, we present the optimal amount of bureaucratic capital for the political elite.

Proposition 1

*From the point of view of the political elite, who wants high economic growth, the optimal amount of bureaucratic capital is positive: It is in their interest that the bureaucratic elite create redundant and wasteful regulations.*

Proof

The best solution from the point of view of the political elite is given by M in figure 1. (Remember that moving towards the right is to increase economic growth). At this point, the amount of H is positive.

This proposition stresses that despite the negative effects of red-tape on the economy, the political elite have no other choice but to accept it. The economy has an optimal mix of amount of redundant bureaucracy and the quality of the bureaucrat. The political elite could restrict the possibility of "revolving door", but this would mean to reduce the level of the bureaucrats in the economy, which is not a good solution. In other words, this proposition stresses that a market equilibrium, which leads to the highest rate of growth, is attained when there is a creation of bureaucratic capital which is non zero. The reason for this result is that in order to hire bureaucrats of high quality, the government has to pay them higher income. The way to propose higher income is to let the bureaucrats accumulate bureaucratic capital, which will permit them to cash in, in the future.
2. Equilibrium of the economy

Although point as M reaches the highest economic growth, the market economy could attain, is there a way that the system will bring the economy to such a point? In the next proposition, we show that the bureaucrats will always choose an amount of red-tape which is higher than the one, the political elite would prefer.

**Proposition 2**
*The amount of red-tape chosen by the bureaucratic elite is higher than the amount the political elite would choose.*

**Proof**
The bureaucratic elite chooses to create bureaucratic capital at the level of \( H^* \). At this point, the derivative \( dQ / dH \) is zero. Therefore, always the optimal amount of bureaucratic capital from the point of view of the political elites, such as in point M, is lower.

This proposition stresses that the will of the bureaucrats leads to a higher amount of bureaucratic capital than the one chosen by the political elite as shown in proposition 1. In consequence, this model shows that the possibility of the revolving door and *pantouflage* leads the system to have bureaucrats with high ability, but producing too much bureaucratic capital and red tape. The equilibrium is at a point in which the ability is at the maximum. The political elite would have preferred less red-tape even at a price of having less able bureaucrats.

V. Conclusion

This paper has focused on the relationship between the various power elites. The literature on the relations between the elite and economic outcomes have emphasized the importance of conflict of interests, either among the elite or between the elite and the public. In this paper, I focus on a different line of research- the intertwining between the three power elites.

This paper has stressed the rational of the behavior of the elite, and why the revolving door from the bureaucratic elite into the business elite is so widely in use in the Western world.

This paper has shown that the political elite will allow the existence of a revolving door and the creation of bureaucratic capital. The political elite could restrict the possibility of the revolving door, but this would mean to reduce the ability of the
bureaucrats in the economy, which would lead to lower economic growth. In other words, this paper has shown that an equilibrium, which leads to the highest rate of growth, is attained when there is a creation of bureaucratic capital.

The standard political economy literature has focused mostly on conflicts of interests and has shown the negative effects of these conflicts on economic growth. In this paper, I have shown that harmony of interests and promiscuous elites are not less pernicious and can also have negative effects on economic growth.

Bibliography


Breizes, E.S., J. Parush, and A. Weiss. 2007. “Red Tape as oil on the hinges of a revolving door”. mimeo


Appendix 1: Proof of equation (28).

From equating equation (13) and (4), we get that:
\[ \frac{1}{\alpha} r = \alpha L_y^{1-\alpha} x^{\alpha-1}. \]  \hspace{1cm} (A1)

Since equation (1) can be rewritten as:
\[ Y = A L_y^{1-\alpha} x^\alpha. \]  \hspace{1cm} (A2)

By substituting \( x \) into equation (A1) we get:
\[ x = \frac{Y \alpha^2}{Ar}. \]  \hspace{1cm} (A3)

By substituting into equation (A2) the term \( x \) from equation (A3) we get:
\[ Y = A \beta L_y \text{ where } \beta = \frac{\alpha^{2\alpha/(1-\alpha)}}{r^{\alpha/(1-\alpha)}}. \]  \hspace{1cm} (28)

Appendix 2: Proof of equation (29).

From equation (22), (24), (16), (26) and (27), we get that:
\[ \frac{(1-\alpha)Y}{L_y} = \delta A \left[ \frac{\alpha(1-\alpha)Y}{A} - qH \right]. \]  \hspace{1cm} (A4)

By substituting \( Y \) from equation (28), we get:
\[ L_y = \frac{r}{\alpha \delta(Q)} + \frac{qH}{\alpha(1-\alpha)\beta} \]  \hspace{1cm} (29)
Figure 1. Supply and Demand of Bureaucratic Capital, and the Trade-off between Quality and Bureaucratic Capital
Table 1. A list of “revolvers” from Bureaucracy to the Business sector

<table>
<thead>
<tr>
<th>The Elite</th>
<th>Government Employer</th>
<th>Private Sector Employer</th>
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<tbody>
<tr>
<td>Alan Greenspan</td>
<td>Chair, Fed</td>
<td>Paulson and Co.</td>
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<td>Glenn Hubbard</td>
<td>Treasury Department</td>
<td>KKR Financial Co.</td>
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<tr>
<td>Robert Zoellick</td>
<td>State Department</td>
<td>Goldman Sachs</td>
</tr>
<tr>
<td>Larry Summers</td>
<td>Treasury Secretary</td>
<td>Goldman Sachs</td>
</tr>
<tr>
<td>Mark Gitenstein</td>
<td>Chief Counsel (Biden)</td>
<td>Semi-Conductor equip. and materials</td>
</tr>
<tr>
<td>Jacob Lew</td>
<td>Office of Management and Budget, Director</td>
<td>Citigroup, CEO/alt-investments</td>
</tr>
<tr>
<td>Todd Stern</td>
<td>Treasury Department</td>
<td>Wilmerhale</td>
</tr>
<tr>
<td>Madeleine Albright</td>
<td>White House</td>
<td>Albright Stonebridge Group (ASG)</td>
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<tr>
<td>Samuel Berger</td>
<td>NS advisor-WH</td>
<td>ASG</td>
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<td>Warren Rudnam</td>
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<td>ASG</td>
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<tr>
<td>Dick Cheney</td>
<td>Defense Secretary</td>
<td>Halliburton Co.</td>
</tr>
<tr>
<td>Justin McCarthy</td>
<td>USTR - Assistant USTR for Congressional Affairs</td>
<td>Pfizer, Assistant Director of Government Relations</td>
</tr>
<tr>
<td>Billy Tauzin</td>
<td>U.S. Congress</td>
<td>PhRMA, President</td>
</tr>
<tr>
<td>Claude Burcky</td>
<td>USTR</td>
<td>Abbott Laboratories,</td>
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<tr>
<td>Sean Darragh</td>
<td>USTR</td>
<td>Biotechnology Industry Organization, PhRMA</td>
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<td>Randall L. Tobias</td>
<td>White House - Global AIDS Coordinator</td>
<td>Eli Lilly</td>
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<tr>
<td>Michael Friedman</td>
<td>Food and Drug Administration, Acting Commissioner</td>
<td>PhRMA Pharmacia</td>
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<td>Donald Rumsfield</td>
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<td>Gilead, G. D. Searle</td>
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<tr>
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<td>Eli Lilly</td>
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<tr>
<td>Dr. Harvey E.</td>
<td>USTR</td>
<td>IFPMA</td>
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<tr>
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<tr>
<td>Bale, Jr</td>
<td>Deputy Assistant to the President for Intergovernmental Affairs, Deputy Assistant Secretary for Import Administration-Commerce Department, General Counsel-USTR, Deputy U.S. Trade Representative</td>
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</tr>
<tr>
<td>Alan F. Holmer</td>
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</tr>
<tr>
<td>Susan K. Finston</td>
<td>State</td>
<td>PhRMA</td>
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Sources: Cptech.org and OpenSecrets.org.