

The bureaucracy trap*

Ascensión Andina-Díaz[†], Francesco Feri[‡] and Miguel A. Meléndez-Jiménez[§]

February 9, 2023

Abstract

In this paper, we study the incentives of an elected government to reduce bureaucracy and increase institutional flexibility in a context of dynamic elections. We show that high levels of bureaucracy are very likely to persist over time, leading to a bureaucracy trap. Moreover, we find that regardless of the initial levels of bureaucracy, traditional long-life parties may have no incentive to undertake such a reform. These results provide a new argument to explain why, in some countries, an oversized bureaucratic apparatus persists over time.

Keywords: Gradual policy implementation; political alternation; institutional reform; bureaucracy trap

JEL: D02; D72

1 Introduction

Regulatory quality is crucial to economic performance. Excessive regulation and bureaucracy can be the dark side of government-regulation. There is general consensus that high bureaucracy levels create financial costs for producers and consumers alike, imposing a drag on productivity and economic growth.¹ Analysts and academics had debated the nature of excessive regulation and bureaucracy for decades. Williamson (1964) suggests that excessive regulation may be rooted in politicians and bureaucrats employing excessive staff as a way of enhancing power and prestige. Banerjee (1997) suggests market failures in the provision of a scarce resource and agency problems in the relationship government-bureaucrats, as determinants of excessive regulation. Glaeser and Shleifer (2003), Aghion et al. (2010), and Pinotti (2012), use instead demand-side driven arguments, suggesting a demand for regulation when there is lack of trust in a country and perceived unfair outcomes. Gratton et al. (2021) argue that

*We gratefully acknowledge the financial support from Ministerio de Ciencia e Innovación through project PID2021-127736NB-I00 and Junta de Andalucía-FEDER through project P18-FR-3840. Declarations of interest: none.

[†]Dpto. Teoría e Historia Económica, Universidad de Málaga, Málaga, Spain. E-mail: aandina@uma.es

[‡]Department of Economics, Royal Holloway, University of London, United Kingdom. E-mail: Francesco.Feri@rhul.ac.uk

[§]Dpto. Teoría e Historia Económica, Universidad de Málaga, Málaga, Spain. E-mail: melendez@uma.es

¹See “The drag on productivity from excessive regulation”, *Fraser Institute* 2021, and “The impact of regulation on growth”, *Frontier Economics Ltd* 2012.

bureaucratic inefficiency may be rooted in the overproduction of low-quality laws by less competent politicians who, by passing laws, boot the public belief of them being skillful reformers.

All these papers consider short-sighted politicians. We argue that high bureaucracy levels may persist even with long-life and far-sighted political agents. To make this point, we build on Andina-Díaz et al. (2021) (AFM hereafter), where we propose a dynamic model of elections with endogenous status quo and show that rigid institutions induce political parties to push policies as far as the political system allows, whereas more flexible institutions can foster more moderate alternation. A key assumption in AFM is that policies are progressively rather than instantaneously implemented. This novel ingredient gives the median voter an incentive to vote, every election, to a new party, producing equilibria with political alternation. Additionally, it makes punishment be contingent on the country's institutional flexibility.

We use this setup to study the incentives of an elected government to undertake reforms to reduce bureaucracy. Our results show that if benefits from reforms are experienced late in time, which is likely to occur in scenarios in which the stock of bureaucracy is already high, no party will undertake such reforms; it leading to a bureaucracy trap. In contrast, if benefits arrive earlier, there is room for reforms. Nonetheless, even in this case, only sufficiently impatient parties will undertake them. Traditional parties, with long-life concerns, will never choose to reduce bureaucracy. The results in this paper thus suggest persistence of excessive rigidities.

To have an intuition for our result, note that although greater flexibility allows political parties to enjoy more preferred policies for longer period when in office, it also exposes parties to less preferred policies when out of office. Then, political parties that care about policies and foresee future alternation will anticipate that, under certain conditions, cons of a reform can clearly offset pros. These conditions hinge on political parties suffering from disliked policies and them foreseeing alternation in power.

The remainder of the paper is organized as follows. Section 2 presents the model, Section 3 the results, and Section 4 concludes. The proofs are in the Appendix.

2 The alternating policy framework

Consider the dynamic model of elections with endogenous status quo in AFM, where elections run at discrete time $t \in \mathcal{N} \equiv \{1, 2, \dots\}$. In each election the median voter M selects the party to govern during the term. There are two parties, L and R , with preferred policies $\bar{x}^L = -1$ and $\bar{x}^R = 1$. The median voter's preferred policy is $\bar{x}^M = 0$. Let $v_t \in \{L, R\}$ be the choice of the median voter in t . The elected government in term t , v_t , observing the (endogenous) status quo policy x_{t-1} , announces the pursued policy p_t for t . We assume $p_t \in [-1, 0]$ if $v_t = L$, and $p_t \in [0, 1]$ if $v_t = R$.

The implementation of p_t is a gradual process with speed r (the institutional rigidity of the country, i.e. the level of bureaucracy). In particular, given $r > 0$, x_{t-1} , and p_t , the policy implemented at time

$\tau \in [0, 1]$ of term t , with $\tau = 0, 1$ representing the beginning and end of the term, is

$$\varkappa_\tau(x_{t-1}, p_t) = \begin{cases} \min\{p_t, x_{t-1} + r\tau\} & \text{if } p_t \geq x_{t-1}, \\ \max\{p_t, x_{t-1} - r\tau\} & \text{if } p_t < x_{t-1}. \end{cases} \quad (1)$$

The utility to player $i \in \{M, L, R\}$ at time τ in term t depends on the distance between the policy implemented at time τ and the player's preferred policy \bar{x}^i . Since the policy transits continuously during the term and the player receives utility from the full policy path, the utility to player $i \in \{M, L, R\}$ in term t is

$$u_i(x_{t-1}, p_t) = \int_{\tau=0}^{\tau=1} -\left(\bar{x}^i - \varkappa_\tau(x_{t-1}, p_t)\right)^2 d\tau. \quad (2)$$

Let $s = (s_M, s_L, s_R)$ denote a strategy profile, with $s_M : \mathcal{H} \rightarrow \{L, R\}$, $s_L : \mathcal{H} \rightarrow [-1, 0]$, and $s_R : \mathcal{H} \rightarrow [0, 1]$. Let $\mathcal{H} = \bigcup_{t \geq 1} H^t$, with H^t being the set of all possible histories at term t .

For any $s \in S$ and discount factor $\delta \in (0, 1)$, player i 's payoff in the dynamic game is given by

$$U_i(s) = \sum_{t=1}^{\infty} \delta^{t-1} u_i(x_{t-1}, p_t). \quad (3)$$

The equilibrium concept is subgame perfect equilibrium. As in AFM, we focus attention on a particular set of strategies: the *alternating a-profile* strategies.

Definition 1. (Alternating a-profile) For each $a \in [0, 1]$, a strategy profile is a (symmetric and stationary) *alternating a-profile* if the median voter chooses $v_t = L$ if $x_{t-1} > 0$, $v_t = R$ if $x_{t-1} < 0$, and $v_t = v \in \{L, R\} \setminus \{v_{t-1}\}$ otherwise, and political parties propose:²

- i) At $t = 1$, $|p_1| = a$ if the median voter at $t = 1$ behaves as described; and $|p_1| = 1$ otherwise.
- ii) For any $t > 1$, $|p_t| = a$ if for all $t' \leq t$, the median voter at t' behaves as described and $|p_{t-1}| = a$; and $|p_t| = 1$ otherwise.

In words, the alternating a -profile prescribes the voter to vote for a different party each election and the parties to propose policy $|p_t| = a$ in term t if and only if no player has previously deviated. Otherwise, the voter continues alternating but the parties propose their party lines forever.

Proposition 4 in AFM characterizes the set of *alternating symmetric equilibria*. For length reasons we only discuss the specific results that we use in this work. First, the extreme alternating \hat{x} -profile, with $\hat{x} = \min\{\frac{r}{2}, 1\}$, is always an equilibrium. Likewise, it directly follows that for any $a \in (\hat{x}, 1]$ the corresponding alternating a -profile, outcome equivalent to the alternating \hat{x} -profile, is also an equilibrium. Second, if institutional flexibility is sufficiently low ($r < r_1 \equiv \sqrt{3}$), the extreme alternating \hat{x} -profile, and all the

²With some abuse of terminology and in order to make the game fully symmetric and the stationary path (induced by the alternating a -profile) be present in the initial conditions, if $a \in [0, \hat{x}]$, with $\hat{x} = \min\{\frac{r}{2}, 1\}$, AFM assumes that the initial conditions are either $(v_0, x_0) = (R, a)$ or $(v_0, x_0) = (L, -a)$, each with probability one-half. If $a > \hat{x}$, which is outcome equivalent to $a = \hat{x}$, we assume $x = \hat{x}$.

outcome-equivalent profiles with $a > \hat{x}$, are the only (alternating) equilibria. Last, if $r > r_1$, there is a continuum of (sufficiently moderate) alternating equilibria for patient enough agents. In particular, there exists $\bar{a}(r) \leq \hat{x}$ and, for all $a \in [0, \bar{a}(r))$, there exists $\bar{\delta}(a, r) \in (0, 1)$ such that, for all $\delta \geq \bar{\delta}(a, r)$, the alternating a -profile is an equilibrium strategy. (For a description of $\bar{a}(r)$ and $\bar{\delta}(a, r)$, see point (iii) of Proposition 4 in AFM.)

3 The bureaucracy trap

The description above provides the ground for the analysis of the incentives of an elected government to reduce bureaucracy, allowing policies to move quicker. Formally, this corresponds to an increase in r . An implication of Proposition 4 in AFM is that if for a given r , an a -profile is an alternating equilibrium, then this a -profile is also an alternating equilibrium for any $r' > r$.

Lemma 1. *Fix $\delta \in (0, 1)$ and let $r'' > r' > r_1$. For any $a \in [0, \bar{a}(r')] \cup \{1\}$, if the alternating a -profile is an equilibrium when $r = r'$, it is also an equilibrium when $r = r''$.*

In light of this result, hereafter we consider alternating equilibria described by an a -profile, with $a \in [0, \bar{a}(r')] \cup \{1\}$. This approach allows us to abstract from stability considerations, since by focusing on such alternating equilibria, after any increase in r the system can remain in the same alternating equilibrium, i.e., same a -profile. Note that, in practice, this is without loss of generality, since any additional alternating equilibrium (i.e., any equilibrium with $a \in [\hat{x}, 1)$) is outcome equivalent to that one with $a = 1$.

We now analyze the decision of an elected government who at term t is given the choice to reduce bureaucracy so as to increase institutional flexibility. We do it for two scenarios. First, we consider that changes in r take one term to be operative. The idea is that existing institutions make it impossible that institutional reforms apply right after approval.

Proposition 1. *Assume that changes in r take one term to be implemented. Then, no party in power has an incentive to institute reform to reduce bureaucracy.*

The argument is that more flexible institutions allow a party to enjoy more preferred policies for a longer period when in office, but it also exposes it to less preferred ones when out of office. Cons clearly offset pros when changes in r take time to be operative, as the party instituting the reform will not be able to benefit from it till its next mandate. Thus, as long as benefits are not experienced earlier in time, no reform will be initiated. However, if benefits arrive earlier, there may be room for institutional reforms. To explore this idea we propose a second scenario, where changes in r have no delay.

Proposition 2. *Assume that changes in r become effective immediately in the same term. In this case, patient governments do not have incentives to reduce bureaucracy, whereas sufficiently impatient governments have. In particular:*

1. If $a \in [0, \bar{a}(r))$, there exists function $\tilde{a}(r)$ such that the party in power has an incentive to reduce bureaucracy if and only if $\delta < \frac{3-a}{3+a}$ and either (i) $r < 2.5$ and $a < \tilde{a}(r)$, or (ii) $r \geq 2.5$. For all $r < 2.5$, $\tilde{a}(r) < \bar{a}(r)$.
2. If $a = 1$, the party in power has an incentive to reduce bureaucracy if and only if either (i) $r < 2$ or (ii) $r \geq 2$ and $\delta \leq 0.5$.

The result in this proposition states that even in the case in which institutional reforms apply right after approval, if parties are sufficiently patient (e.g., traditional parties, given their desire to survive and endure in time), no elected government that foresees future alternation will have incentives to institute reforms, unless alternation is extremely polarized. If there is room for reforms, they will come from parties mainly concerned on present returns.

4 Conclusion

This work builds on AFM to show that, in a system of political alternation, if institutions are rigid enough, so that reforms are implemented slowly and with delay, parties do not have incentives to institute reform that reduces bureaucracy, which leads to a bureaucracy trap. Moreover, even if institutions are sufficiently flexible and reforms can be implemented swiftly, the incentives to initiate them require of sufficiently impatient parties. Hence, our results suggest that, even in the latter case, traditional long-life parties may not have incentives to reduce excessive regulation.

References

- Aghion, P., Y. Algan, P. Cahuc and A. Shleifer (2010), 'Regulation and distrust', *Q. J. Econ.* **125**(3), 1015–1049.
- Andina-Díaz, A., F. Feri and M.A. Meléndez-Jiménez (2021), 'Institutional flexibility, political alternation, and middle-of-the-road policies', *J. Public Econ.* **204**, 104532.
- Banerjee, A. (1997), 'A theory of misgovernance', *Q. J. Econ.* **112**, 1289–1332.
- Glaeser, E.L. and A. Shleifer (2003), 'The rise of the regulatory state', *J. Econ. Lit.* **41**, 401–425.
- Gratton, G., L. Guiso, C. Michelacci and M. Morelli (2021), 'From Weber to Kafka: Political instability and the overproduction of laws', *Am. Econ. Rev.* **111**(9), 2964–3003.
- Pinotti, P. (2012), 'Trust, regulation, and market failures', *Rev. Econ. Stat.* **94**, 650–658.
- Williamson, O.E. (1964), *The economics of discretionary behavior: Managerial objectives in a theory of the firm*, Prentice-Hall, Englewood Cliffs, N.J.