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GOVERNMENT REGULATION OF BUSINESS IN A FEDERAL STATE: ALLOCATION OF POWER UNDER Deregulation

By ELI M. NOAM*

I. INTRODUCTION

The reduction in federal controls of business activities, generally described by the term "deregulation", has been the policy of three successive United States' Administrations. While the economic impact of this policy has been closely watched, its effects on the federal structure of government has received scant attention. Yet in a federal state, deregulation affects the division of responsibility among different levels of government, and consequently regulation itself, in unanticipated ways. Federal deregulation has led to a great deal of turmoil at the state level: "It's clear the battlegrounds are shifting from Washington to the state capitals," says the President of the Minnesota Association of Commerce & Industry. "The spending interests know they have no clout in Washington, so they are focusing on state legislatures... where they think they can be most productive." The Director of Environmental Quality for Dow Chemical U.S.A. reports that: "We perceived after the election that environmentalists were deactivating themselves in Washington and moving to the states. There was a conscious decision that we had to be more active in state affairs."

Clearly, regulatory policy in the federal sector of government has secondary effects at all levels of a federal state. It is the purpose of this paper to discuss some of these interactions. In order to do so, the paper investigates first the regulatory policies that may be expected to flow from alternative jurisdictional arrangements. It analyzes five different distributions of regulatory power by way of a formal model of regulation and shows that the alloca-

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Associate Professor Business and Lecturer in Law, Columbia University.


3 Id.

4 Id.
tion of regulatory power has an important impact on policy outcomes; suggesting that the choice of regulatory jurisdiction is not merely procedural, but policy determinative.

If the allocation of regulatory power affects regulatory policy, one would expect an interest group to support regulation by that level of government whose policy is more likely to be favourable to its interests. The empirical section of the paper confirms this. Furthermore, the abolition of federal regulation may result in an equilibrium of state regulation of higher strictness than before, or in a highly non-uniform regulation across the nation. Neither outcome may be preferable to the previous federal policy—even to the proponents of federal deregulation. Hence, over time, preference for a central solution may again increase, and the pendulum may swing back to a federal regulation. Federal regulatory policy is thus an important variable in the allocation of governmental authority, and its dynamic fluctuations affect the nature of a federal state.

II. LITERATURE

Although much has been written on intergovernmental relations, there are surprisingly few studies that deal with regulation in a federal setting, and no body of research exists that is comparable to the models of fiscal federalism. Concerning related areas, perhaps most useful is the literature of the "theory of clubs". Other authors discuss the rivalry between jurisdictions and inter-jurisdictional mobility. Recent contributions are Rose-Ackerman's public choice analysis and Oster's study of diffusion of legislation.

The legal literature of regulatory federalism is of little help, being primarily focused on constitutional issues. Most useful are discussions of federal pre-emption of uniform laws, and of industry studies such as banking and cor-

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porate charters. There is some discussion by political scientists of the determinants of the regulating level of government. But an extensive bibliography of federalism concludes that:

There are weaknesses in the literature on federalism. These include an overabundance of historical summaries and descriptive works, undertaken without relation to a stated theory. . . . Yet to be done is a more empirical comparison of centralized unitary systems and federal systems. . . . Too few studies now exist which pair careful observation with explicitly stated hypotheses derived from theory.

One basic question which has not been satisfactorily answered is why economic activities are regulated by different levels of government. There are, broadly speaking, two kinds of conventional explanations for the existence of a particular jurisdictional arrangement. The first is traditionalist in outlook and historico-constitutional in methodology. Each level of jurisdiction, it is said, has a traditional role, specified by constitution or custom. In the United States, the roles of the federal government are specified in its constitution, though the interpretation of their extent has expanded over time. Local governments' regulatory roles, on the other hand, are those vested by the states, either explicitly through statute or through traditional police powers; and the states occupy much of the rest. It is characteristic of this historical view to see the determination of the governmental level of regulation as a product of political agreements, periodically modified as necessary. One learns how allocations of power among governments came about, but not necessarily why they did so. To answer the latter question a second, broader, more analytical set of explanations exists which may be called "functionalist". Functionalist observe that there are economies of scale in the provision of regulation, just as there are for many services, at least over some range of production. Some regulatory activities, for example zoning, are handled most efficiently on a small scale, close to the object of regulation. Others, such as airline regulation, are undertaken most efficiently on a large scale, by formulating nationwide rules. The choice of jurisdictional level therefore requires finding the scale economy of a regulating activity and vesting authority in the most efficient size of jurisdiction. A related version of the functional explanation, favoured by many economists, uses externalities as a criterion.

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17 McGuire, supra note 6.


logical jurisdicational level is said to encompass the area within which regulatory policies have externalities, that is, where regulation, “internalizes the externalities”. Implicit in the functionalist explanation is the belief that the regulatory level is determined by “objective” economic criteria; in holding this view the explanation is an extension of the wider public benefit theory of regulation.

This paper, in contrast, argues that the determination of the regulatory level is not primarily a question of historical tradition, functional efficiency, or externalities, but rather a question of variations in interest group power at different levels of government. It shows that the determination of the regulatory level is in itself a decision about the strictness of regulation that will prevail. Interest groups pragmatically desire the regulatory level whose outcome they like best, and the relation between group strengths and benefits on the different governmental levels determines the preferred governmental levels of regulation.

III. THE MODEL

Let A be a jurisdiction with two interest groups L and F (which may be imagined as labour unions and firms) and let there be a type of regulation that affects only these two groups and that can be set by a regulating agency at some variable degree of restrictiveness (R). This regulation will affect each member of group L positively and each member of group F negatively, according to the restrictiveness of the regulation, such that benefits \( w \) from the regulation are, for each group member:

\[
W_L = a_0 + a_1 R^{a_2} \\
W_F = b_0 - b_1 R^{b_2}
\]

(1)

(2)

with the first derivatives:

\[
\frac{dw_L}{dR} > 1
\]

(3)

\[
\frac{dw_F}{dR} < 1.
\]

(4)

The constants \( a_0 \) and \( b_0 \) illustrate the benefits to members of a group when there is no regulation. The exponents are assumed to be positive such that:\n
\[
0 < a_2 < 1
\]

\[
1 < b_2
\]

Less mathematically inclined readers may skip this section and proceed to section IV.

These assumptions simplify calculations considerably by eliminating corner solutions.
Both interest groups exert pressures on the regulating agency by granting support to or withdrawing support from the regulator according to the stake that they have, as a group, in achieving or perpetuating a certain regulatory strictness. This stake is the aggregate benefit due to regulation \( R \), which is the product of average member benefit \( w_i \) times the number of group members \( N_i \). Total benefits from regulation are hence:

\[
W = w_L N_L + w_F N_F = (-a_0 + a_1 R^{a_2}) N_L + (b_0 - b_1 R^{b_2}) N_F.
\]

Regulation is set by the agency according to some optimization criterion. This criterion is, of course, the subject of some debate.\(^{22}\) For those who hold the "public benefit" view of regulation, the agency’s objective is to maximize the benefits to society; for others, such as Niskanen,\(^{23}\) it is to maximize the agency’s self-interest. These two criteria are not necessarily inconsistent if we assume that an agency, whether state or federal, sets the restrictiveness of regulation to maximize its total support \( S \), and that such support is a monotonously increasing function of aggregate benefits \( W \):

\[
S = F(W); \text{ where } F_W > 0. \tag{8}
\]

The optimizing restrictiveness of regulation, denoted by the asterisked \( R^* \), is then found by maximizing benefits. To do so, we set the first derivative at zero:

\[
\frac{dW}{dR} = 0 ^{24}
\]

This results in the optimal regulation \( R^* \) at the strictness:

\[
R^* = \left[ \frac{b_1 b_2 N_F}{a_1 a_2 N_L} \right]^{- \frac{1}{a_2 - b_2}}
\]


\(^{23}\) Niskanen, Bureaucracy and Representative Government (Chicago: Aldine, Atherton, 1971).

\(^{24}\) It can be shown that the second order conditions for a maximum in \( R^* \) are fulfilled, and that regulation \( R^* \) increases with the influence of group \( L \) and decreases with that of \( F \), as one would expect.

\(^{25}\) If conditions (5) and (6) are relaxed, there will normally be a corner solution, either \( R^* = 0 \), (in other words, no regulation,) or \( R^*_N = \), (i.e., total prohibition of the activity).
We now introduce a second jurisdiction, B, making identical assumptions (1) through (8) about the effects of regulation on each member of B's interest groups $L_B$ and $F_B$, and about the decision rule of its regulator. The size of the two groups—denoted by $M_L$ and $M_F$—may be different in B from that in A. B's regulatory restrictiveness is then analogous to that of state A. We assume at this point that the regulation of one state does not affect the other state, that is, there are no spill-over effects. This assumption will be relaxed soon.

Suppose now that the two states agree that the regulation be centrally set at a common national strictness ($R_N$) and that a central regulating agency be established. National (that is, federal) regulation, it is assumed, is set by the central regulator at its support maximizing level, which is determined by the size of combined groups and influences, aggregated nationally. It is given, analogously to (9), by the expression:

$$R^*_N = \frac{1}{a_2^{-b_2}} \left[ \frac{b_1 b_2 (N+M_F)}{a_1 a_2 (N+M_L)} \right]$$

National regulation is less strict than state regulation for state A if $R^*_N < R^*$.\(^{25}\)

Comparing (10) with (9) one can see that this is the case when:

$$\frac{(N+M)_F}{(N+M)_L} > \frac{N_F}{N_L}$$

that is, when the ratio of group sizes (termed "power ratio") is more favorable to the pro-regulation group $L$ on the state level than it is on the national level. This is quite intuitive. Hence, one can expect the anti-regulation group $F$ in state A to be in favour of regulation on the national level, because on that level its influence is greater and regulation is lower, while group $L$ will be opposed because of the dilution of its position on the national level. In state B, the opposite position will be taken by the two interest groups.\(^{26}\)

For a state's predominant interest group to support a national form of regulation, the power ratio on the national level must amplify that ratio which exists within the state. National regulation is not sought where states are heavily dominated by one of the interest groups—and it is immaterial which one it is—because this predominant group will normally not want its influence diluted on the national level. The most favourable condition for a state opting for national regulation occurs where one group has a slight majority that it can lever into a larger majority by joining a national regulatory scheme.

The model is now expanded so that the regulation in one state affects the interest groups in the other state as well. For example, environmental regulations in state B will improve A's air quality and hence the well-being of its

group $L_A$. Group $F$ in state $A$ is also benefitted by $B$'s regulation if, for instance, it has competitors in state $B$ which must contend with the added costs from regulation. This can be described by benefit equations of the form:

$$ w_{LA} = -a_0 + a_1 R_A^{a_2} R_B^{a_3} $$  \hspace{1cm} (12) $$

$$ w_{FA} = b_0 - b_1 R_A^{b_2} R_B^{b_3} $$  \hspace{1cm} (13)

where $a_3$ and $b_3$ are the cross-elasticities. Given the benefit functions, the optimal regulation $R$ for the support minimizing regulator in state $A$ is therefore found to be:

$$ R^*_A = \left[ \frac{b_1 b_2}{a_1 a_2} \frac{N_F}{N_L} R_B^{b_3-a_3} \right]^{1/a_2 b_2} $$ \hspace{1cm} (14)

Thus we have a regulatory strictness in $A$ which is, among others, a function of state $B$'s regulation:

$$ R^*_A = m R_B^t $$ \hspace{1cm} (15)

where $m$ and $t$ are a short notation for the remaining parameters of (14). The analogous relations hold for $R_B$, so that $R^*_B = n R_A^t$. Thus we have a Cournot-type reaction model in which each state adjusts its regulation in response to the other state's. This is shown in Appendix 1. Given an initial $R_{AI}$, $R_{BI}$ is determined by $B$'s reaction, which in turn generates $R_{A2}$, and so on. This process leads either to an equilibrium or to corner solutions; the latter occurring where states drive each other into total deregulation or into total prohibition. An example of such a competitive deregulatory trend is the increasing liberalization of state corporation statutes in the United States, a process which has been described by a former Chairman of the American Securities and Exchange Commission (SEC) as a "race to the bottom". An example for a "race to the top", in which each state attempts to shift undesirable activities to its neighbours, or at least tries to avoid becoming the recipient of their undesirable exports, is the regulation of nuclear reactors and of radio-active waste.

The point of intersection of the two reaction functions is at:

$$ R_A = \left( mn^t \right)^{1-t^2} $$ \hspace{1cm} (16)

A stable equilibrium exists when $R_B = f(R_A)$ is steeper than the inverse of $R_A = g(R_B)$ at the point of intersection. It can be shown that this holds when:

$$ a_2 - b_2 > b_3 - a_3 $$ \hspace{1cm} (17)

that is, when the difference in the elasticities of benefits with respect to a state's own regulation exceeds the difference of the cross-elasticities with respect to the other state's regulation. When this condition is met, the strictness of regulation for A in such an interactive setting is, from (16), after substitutions:

\[
R^*_A = \left[ \frac{(b_1 b_2) a_1 - b_2 + b_3 a_3}{(a_1 a_2)} \frac{1}{a_2 b_2} \frac{b_3 a_3}{(a_2 b_2)^2 - (b_3 a_3)^2} \frac{(a_2 b_2) (N_F) + (M_F)}{(N_L) (M_L)} \right].
\]

Suppose, however, that the reactions of both states are such that no equilibrium is reached, but rather a "race to the bottom" takes place to the detriment of both states. In this situation several remedies are possible; the first possibility is federal regulation, the second, agreement among the states on common regulatory strictness. These arrangements are close relatives of mergers and price fixing in their private sector. With federal regulation, the expected national regulatory strictness \(R_N\) is found by maximizing the support function to a federal regulator by the interest groups. This occurs at:

\[
R^*_N = \left[ \frac{b_1 (b_2 + b_3)}{a_1 (a_2 + a_3)} \frac{1}{(a_2 + a_3) - (b_2 + b_3)} \right].
\]

Other jurisdictional arrangements are also possible. Thus, states may agree directly among themselves on regulatory policy, the most frequent procedure being the mutual passing of pre-written acts of legislation known as uniform laws. Such agreements share the problem of private cartel agreements, since each state holds some veto power if uniformity is sought. Just as a convoy travels at the speed of its slowest ship, so too, regulation by uniform law does not extend beyond the point where each state is at least as well off as before, assuming that no interstate compensation exists, and that unanimity is required. This occurs at:

\[
R^*_U = \left[ \frac{b_1 (b_2 + b_3) F_G}{a_1 (a_2 + a_3) L_G} \right] \frac{1}{(a_2 + a_3) - (b_2 + b_3)}
\]

where \(\frac{F_G}{L_G}\) is the larger of \(\frac{F_A}{L_A}\) and \(\frac{F_B}{L_B}\).

It is also possible that regulation is not uniform but discriminatory, where discrimination is defined as the imposition of different measures of strictness in different jurisdictions by one government. This can occur, for example, where one state is able to impose some regulation on another, or where the national government does not treat states alike. In the first situation the regulatory agency of state A can impose regulations not only on its own state,
but is can also set state B’s regulations, with the sole goal of benefitting A. This arrangement may be called “colonialism”. An example is Britain’s regulation of the opium trade in China and of textile spinning in India in the nineteenth century. Analytically, \( R_A \) and \( R_B \) are set to maximize \( (W_L + W_F)_A \) where both \( R_A \) and \( R_B \) are variable.\(^2\) The second form of discrimination involves the federal regulator’s setting of different degrees of strictness in states, either by an outright fixing of different regulatory rules, or by setting floors or ceilings of regulatory restrictiveness in such a way that they effectively constrain only one state. Discriminatory regulation can improve the combined benefits of the regulated groups; its strictness is given by the solutions to the equation:

\[
R_B a_2-b_2 R_A a_2-b_3 = \frac{b_1}{a_1} \frac{(F_A + F_B)}{(L_A + L_B)} \frac{(b_2 R_B + b_3 R_A)}{(a_2 R_B + a_3 R_A)} .
\]

Let us now take stock: the model has generated analytical results for the regulatory strictness that can be expected to prevail for a variety of jurisdictional arrangements, including state regulation, federal regulation, uniform laws, colonialism and discrimination in federal regulation. Only in unusual circumstances will any such strictness be identical to that of another jurisdictional arrangement. Because the regulatory strictness depends in each case on the size and direction of the parameters, it is impossible to assert that any one level of government or intergovernmental arrangement is invariably stricter than another. Appendix 2 is a schematic illustration of a hypothetical regulation. Corresponding to each jurisdictional distribution is a pair of regulatory strictness \( (R_A) \) and \( (R_B) \), each of which is different from the other. Thus, the question which level of government is endowed with regulatory authority, seemingly a procedural issue, may in fact be seen to be, in part at least, a substantive determination of the strictness of the regulation itself.

One would expect that interest groups, if they behave rationally, will seek that level of government whose regulatory outcome is most favourable to them, regardless of their official ideology. Historical examples come to mind, such as the United States railroads’ support for a national railroad commission in the 1880s, after state regulation began to be onerous, or the establishment of federal occupational safety and health regulations in the response to union

\(^2\) We find that the optimal regulation to be set in the ruling state A is then:

\[
R^*_{CA} = \left| \frac{1}{(b_2 + \frac{b_1 b_2 a_1}{a_3 a_2}) \cdot \frac{(b_2-a_2)}{b_3-a_3} \left( \frac{F_A}{L_A} \right) \frac{b_3}{a_3} + 1 \cdot \left( \frac{b_1 b_2}{a_3 a_1} \right) \frac{b_3}{a_3} }{2(a_2-a_2)} \right|
\]

and in the dominated state B it is:

\[
R^*_{CB} = \left| \left( \frac{b_2 b_1 F_A}{a_3 a_1 L_A} \right) \left( b_2 + \frac{b_1 b_2}{a_3 a_1} \cdot \frac{b_2-a_2}{b_3-a_3} \frac{F_A}{L_A} \frac{b_3}{a_3} + 1 \cdot \left( \frac{b_1 b_2}{a_3 a_1} \right) \frac{b_3}{a_3} \right) \frac{1}{2(b_3-a_3)} \right|
\]
pressure. Both instances were "upward" shifts of regulation from the state to the federal level at the urging of interest groups otherwise philosophically and economically in conflict. The unifying principle is that they expected national regulation to be more advantageous to their interest than state regulation. The preferences for national regulation over local regulation by a group will depend on the outcomes that it can expect at each level. This theoretical conclusion is tested empirically in Part IV of this paper.

The following section concentrates on the difference between regulation by the federal government and by the states. For both pro- and anti-regulatory interest groups the important question is which of the two levels of government supplies a stricter regulation. The underlying assumption of advocates of federal deregulation is that their policy eliminates or reduces regulation as such. But this may well be incorrect. As long as federal rules exist, states are prevented, under the Supremacy Clause of the United States Constitution, to enact concurrent regulations that are in conflict with the federal ones. Furthermore, the existence of a national regulatory mechanism focuses the efforts of interest groups on the activities of the central agency. But if such an agency—or its rules—is abolished, state regulation cannot be expected to remain the same as before. The problems that federal rules were originally enacted to remedy usually still exist, and there is no dearth of support for the replacement of abolished federal laws with state regulation.

One consequence of this development is that multiple state standards are likely to emerge whose non-uniformity may often be expensive to comply with. If, for example, each state enacted its own automobile emission rules, as California did, the results could make car production inefficient and costly. Even where uniformity is not a problem, the strictness of the state regulation that may emerge will not necessarily please the advocates of deregulation. The spill-over effects from changes in other states' regulatory policies may force a reaction much in the way that the Cournot model in Appendix 1 suggests. This is easy to see in a "race to the top" situation, where the states drive each other to higher and higher strictness as they try to shift undesirable activities to their neighbours. But even within a stable equilibrium situation, the emerging strictness in a given state may be greater than the preceding federal regulation. This will be the case, generally speaking, if one interest group experiences substantial positive externalities from the regulation in another state, or when all interest groups experience at least some positive spill-overs, or when the anti-regulation group is particularly sensitive to changes in its own states' regulation.

It is helpful to refer again to Appendix 1. Contrasted with state regulation, federal rules are stricter when federal regulation is at a point similar to $P_3$ on the graph, and $P_1$ is the state regulatory equilibrium. On the other hand, if the federal regulation had been at $P_2$, state regulation will actually be higher. Or, where federal regulation is at $P_3$ and its removal triggers a "race to the top" in state regulation, a federal ceiling will be lower than the decentralized outcome. The common assumption of federal deregulation is that of a $P_3$ type of situation. However, as we can now appreciate, this is only one of several possibilities. It may be objected that federal regulation would not have been abolished in the first place if this had resulted in a stricter state regulation,
since to do so would be counterproductive. Yet for this objection to be true
one must presuppose a political decision process of considerable foresight.
When the abolition of federal regulation is sought there are only limited con-
current state regulations in existence. Yet once federal regulation is abolished,
the interest group pressures may generate regulation in some states, and
precipitate adjustment to it by others.

It is interesting to speculate what sets this process in motion. One explana-
tion is that a previously existing point of equilibrium that determined federal
regulation has been disturbed by a shift in the relative influence of the interest
groups. It is also possible that no shift in interest group powers has occurred
but that a slow and cyclical process of oscillation between federal and state
regulation exists even in the absence of changes in the power balance. Such
cycles are possible even with quite stable preferences within the body politic
for regulatory strictness. The level of government that will be vested with
regulatory authority is the one whose regulatory strictness most resembles the
preferences of the interest group body-politic. This choice would be different
at varying times because the states’ regulation and, hence, attractiveness
changes. For example, state regulation may be, at an initial point \( P_1 \), too high
relative to expected national regulation \( P_2 \), given the prevailing influence of in-
terest groups L and F. The result is a decision for national regulation, which
eliminates most state regulation by federal pre-emption. At that point national
regulation may become unfavourably high in comparison to the state alter-
native; hence federal deregulation occurs. But now the states’ regulation in-
creases and their regulatory strictness moves towards equilibrium in \( P_1 \). From
there, the cycle can start anew.29

One way to deal with unanticipated state responses is to forbid them.
States may thus be “pre-empted” from regulating on their own, and this is in-
deed the trend that has accompanied the recent United States’ experience with
deregulation. This, however, implied an increase in the powers of central
government, the opposite result from the one desired by many proponents of
deregulation.

IV. APPLICATION OF THE MODEL: EMPIRICAL INVESTIGATION

The final section of the paper reports an empirical test for the impact of
interest groups on the choice between two levels of regulation. We have
asserted that the choice of jurisdictional level is a way of obtaining interest
groups’ most preferred regulatory outcome. It is difficult to empirically prove
this hypothesis because there is normally no observable choice of jurisdictional
level. The regulatory arrangement simply exists, and one cannot measure a
preference for the alternative. However, there are some instances where a
choice of regulatory levels is observable. In the United States, banks can
choose whether they want to be chartered and supervised federally or by a
state.30 In other instances, firms can choose to avoid certain regulations of the
United States’ federal government by reducing the scope of their activities to

29 This section is part of Noam, The Choice of Governmental Level in Regulation
(1982), 35 Kyklos 278.
30 Supra, note 5.
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intrastate commerce, thus exempting themselves from federal jurisdiction. Airlines, for example, can free themselves from Washington's regulations by flying only within one state, and a number of carriers have done so in California and Texas. In all of these instances, however, we deal primarily with management choice rather than with a political decision about which level of government should be in charge of controlling a particular economic activity. For an empirical analysis of how the political process determines which governmental level should have regulatory powers, an investigation of American building codes provides a unique source of data. Building codes are the technical standards for the construction of residential and commercial buildings. They deal with the thickness of walls, the materials permissible for plumbing, the insulation of electrical wiring, etc. In the United States, these codes are set in two possible ways. The first is to enact a code that is written locally, and is therefore known as a "local code". The second possibility is to adopt a "national code" that is set by an outside national body. A national code association is in effect a single-issue national level; while it does not have the federal government's powers. But this actually makes for better data since national standards are not mandated, and their adoption is a revealed choice.

Building code standards are of great importance to the interest groups involved in construction, particularly where codes involve the approval of labour saving construction methods such as prefabrication. American construction unions have traditionally advocated codes that restrict labour saving techniques because of their fear that they would reduce the demand for skilled craftsmen. Builders, on the other hand, prefer unrestrictive codes, because new building techniques reduce the cost of construction and the importance of unionized skilled labour. The interest of the general public in building codes is much more limited due to their low visibility and highly technical nature. Therefore, the relevant interest groups A and B of the model can be identified as construction firms and construction unions.

Data for the building codes of over 1100 American cities and towns is available from a 1970 survey by the International City Manager Association (ICMA)\(^3\), and is described in Field and Ventre.\(^3^2\) Additional data on housing, construction firms, and demographics originated with the U.S. Census Survey of Housing,\(^3^3\) the U.S. Department of Labor,\(^3^4\) and Oster and Quigley.\(^3^5\)

The question for empirical analysis is how the choice for a national versus a local code can be explained. The "functionalist" hypothesis for the regulatory level, based as it is on economy of scale considerations, would

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\(^3\) Data made available by R. Ventre, National Bureau of Standards, and gratefully acknowledged.


\(^3^5\) Data made available by J. Quigley and gratefully acknowledged.
predict that the size of the jurisdiction or the workload of an agency are explanatory variables. The second hypothesis, which we termed the historicolegal explanation, would predict that political ideology, history, or tradition are determinative. Finally, the interest group hypothesis that was developed in this paper predicts the choice to be dependent upon interest group strengths on the local level relative to the ones on the national level.

The validity of these different hypotheses may be tested by an analysis of the factors that explain the probability of the adoption of a national code by a community. They are expressed by the PROBIT function of the form:

\[
\text{NATCODE} = b_0 + b_1 \text{POP} + b_2 \text{BUILDPERM} + b_3 \text{EMP} + b_4 \text{LAND} + b_5 \text{CONSERV} + b_6 \text{REGI} + b_7 \text{TOWN} + b_8 \text{CODEAGE} + b_9 \text{CITYMAN} + b_{10} \left( \frac{\text{PN}}{\text{SFIRM}} \right). 
\]

Where the variables are described by:

- **NATCODE**: Adoption of a national code in a local community
- **POP**: Population in jurisdiction
- **BUILDPERM**: Number of building permits issued per year
- **EMP**: Number of employees in building department
- **LAND**: Land area of jurisdiction
- **CONSERV**: Conservative voting in jurisdiction
- **REGI**: Geographical regions of country
- **TOWN**: Town (vs. suburb or city)
- **CODEAGE**: Length of existence of code in jurisdiction
- **CITYMAN**: City manager form of government
- **SUNION**: Strength of construction unions
- **SFIRM**: Strength of construction firms
- **PN**: Ratio of national strength of unions to firms

Note the last variable of the equation above. It shows the difference between the national ratio of interest group strengths \( P_N \) to the locally existing ones. According to our hypothesis, the larger the absolute difference, the smaller should be the preference for national regulation.

### A. Results

The results are given in the Table in Appendix 3. Let us first look at the factors that would support the functional, that is, efficiency hypothesis of the determination of the jurisdictional level. For example, one expects that the larger a town and the greater the activity level of its building department, the

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36 Unless otherwise noted the data are from the above mentioned ICMA figures, *supra* note 31.

37 Defined as percentage of vote for Goldwater in the Presidential election of 1964.

38 Percent unionization in building crafts times number of construction workers, normalized for national average. Data from U.S. Dep't. of Labor (1972, 1974), and provided by J. Quigley (1977).

39 Construction volume times concentration ration of building firms, normalized for national average. Data U.S. Dep't. of Commerce (1972), and provided by J. Quigley.
more likely it is that it will regulate locally if there are economies of scale. One finds indeed a statistically significant negative relationship between national regulation and population size, but it is extremely small. Second, using the number of building permits that are processed by an agency as a measure of its activity level, one finds a co-efficient that is both small and insignificant. Third, for the number of employees (as a measure for the size of the department), and for the land area of the community (as a measure of geographical scale) the co-efficients are small, insignificant, and with counter-intuitive positive signs. In short, no evidence is found for an economies of scale explanation of jurisdictional choice.

The historico-ideological hypothesis ought to be reflected in the determination of the jurisdictional level by political, regional, or historical variables. Yet the empirical analysis does not support this theory. First, no effect of political ideology may be found. Whereas the conservative ideology in the United States normally favours localism, here it is actually associated with a greater likelihood of national standards. Similarly, neither the Southern nor the Western regions of the United States, despite their historical tradition of anti-centralism, show a preference for local regulation. In fact, towns and cities of these areas are more likely to be regulated by a national code than those of the North and Midwest.

The “political constitution” of a locality seems to make no difference either. There are two major forms of administration in American municipalities. The first is the mayor-city council system, in which the elected officials wield administrative powers. The alternative is for the elected bodies to appoint a professional “city-manager” who is in charge of the administrative affairs of local government. One may expect that under the more professional city-manager system, building codes are less affected by politics. However, when a variable for a city manager form of government is introduced as a measure for a separation of building codes from politics, it is found to have but little explanatory power. On the other hand, it seems to make a difference how old and established a building code is, judging from the high significance of the factor CODEAGE. But the magnitude of the co-efficient is very small.

If functional and ideologico-historical factors are found to have only little effect on the choice of local regulation, the relative strength of interest groups is a strong explanation. This co-efficient is of fairly good size and statistical significance ($t = 2.2641$). With both its size and negative sign it confirms that where relative extremes exist in the local power relation between the two affected interest groups, the likelihood for national regulation is small since the locally dominant group will not wish to dilute its influence on the national level.

These results are even more strongly confirmed when one splits the set of observations into two groups, those where unions are predominant and those where firms are predominant. 40 Using the same statistical PROBIT analysis

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40 To do so we separate those observations where union strength—normalized relative to the national average—is higher than that of firms also normalized, from those where it is lower.
over these sets, we find that both interest groups reverse their preference, depending on whether they are predominant or not, as can be seen from the results in Appendix 4. Thus, where unions are strong locally they prefer local regulation, while those firms that are strong nationally prefer national regulation. Yet, when it is the firms that dominate locally, the opposite is true.

What are the implications of these findings? It seems that locally weak interest groups, regardless of their attitude towards regulation as such, seek national regulation to overcome their local lack of strength. Locally dominant groups, do not want their influence diluted on the national level. Hence, one sees that preferences are result-oriented, with groups switching their positions according to the regulatory results that they can expect locally or nationally. Their preference for regulatory level is pragmatic and outcome-oriented, not ideological or absolute.

V. SUMMARY

Proponents of deregulation usually assume that their actions lessen the interference of government with business and that they also reduce the powers of central government. Yet, as has been discussed, neither of these expectations may be fulfilled, because of the way in which state and local regulation may offset federal deregulation. The setting of the strictness of regulation is a dynamic process in which interest groups seek the most advantageous outcome. They favour the governmental level whose expected regulatory strictness conforms most closely to their interest, and this hypothesis has been confirmed by the empirical investigation of this article. Deregulation may thus lead to the emergence of state laws that are more onerous to business than the previous federal rules, or, alternatively, may result in the strengthening of federal powers over states. Instead of the states gaining more regulatory powers, they may become subject to federal restrictions of those powers. Deregulation of private business can thus lead to an increased regulation of another form: that of the federal government against other governments. One may therefore have to choose between deregulation and decentralization, rather than achieving both, and advocates of deregulation must consider this trade-off.
Reaction Functions of State Regulations

\[ R_B = f(R_A) \]
\[ R_A = g(R_B) \]
CATCH—Appendix 2

(Schematic)
APPENDIX 3

DETERMINANTS OF THE PROBABILITY FOR NATIONAL CODE ADOPTION

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t-statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>POP</td>
<td>-.00025</td>
<td>(1.9261)</td>
</tr>
<tr>
<td>BUILDPERM</td>
<td>-.00024</td>
<td>(.5377)</td>
</tr>
<tr>
<td>EMP</td>
<td>.0038</td>
<td>(.4926)</td>
</tr>
<tr>
<td>LAND</td>
<td>.00012</td>
<td>(1.5219)</td>
</tr>
<tr>
<td>CONSERV</td>
<td>.0261</td>
<td>(1.3217)</td>
</tr>
<tr>
<td>REG 1 (South)</td>
<td>.2629</td>
<td>(.1291)</td>
</tr>
<tr>
<td>REG 2 (West)</td>
<td>.1412</td>
<td>(.4896)</td>
</tr>
<tr>
<td>TOWN</td>
<td>-.0026</td>
<td>(.8661)</td>
</tr>
<tr>
<td>CODEAGE</td>
<td>-.0041</td>
<td>(3.9487)</td>
</tr>
<tr>
<td>CITYMAN</td>
<td>.0803</td>
<td>(.2295)</td>
</tr>
<tr>
<td>( P_N - )SUNION</td>
<td>-.3499</td>
<td>(2.26411)</td>
</tr>
<tr>
<td>SFIRM</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ R^2 = .3126 \]

\( t \)-statistics in parenthesis

APPENDIX 4

DETERMINANTS OF THE PROBABILITY FOR NATIONAL CODE ADOPTION

Co-efficients of Union and Firm Preference for National Regulation

<table>
<thead>
<tr>
<th>Variable</th>
<th>Localities with Union Predominance</th>
<th>Localities with Firm Predominance</th>
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<tr>
<td>SUNION</td>
<td>-.3338</td>
<td>.0715</td>
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<td></td>
<td>(3.1519)</td>
<td>(1.7271)</td>
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<td>SFIRM</td>
<td>3.0852</td>
<td>-.1789</td>
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<tr>
<td></td>
<td>(3.1566)</td>
<td>(1.9316)</td>
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