"State and Local Regulatory Restrictions as Fixed Cost Barriers to Small Business Enterprise"

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1. Executive Summary

1.1 Introduction

The executive summary seeks to present the primary accomplishments of our study of "State and Local Regulatory Restrictions as Fixed Cost Barriers to Small Business Enterprise." The objectives of this research are:

- to review the research that has already been done in the field
- to provide a complete taxonomy of regulatory barriers
- to examine possible models to analyze the barriers
- to suggest a research plan to study this important area

Each of these objectives is detailed below.

1.2 Summary of Results

1.2.1 Profile of the Literature

Economic regulation at the state and local level is as old as that in the federal codes and considerably more pervasive and varied. Yet no available body of systematic analysis focuses directly on state and local regulatory costs and their impact on small business.

Research concerning the impact of governmental regulation of small businesses falls into at least three major categories:
1. Research on direct impact of federal regulations on existing firms. Econometric techniques form one branch; other branches include theoretical models that relate firm performance to size, analyze specific barriers to entry, and explore the use of the regulatory apparatus as a strategic tool in maintaining market share and in decreasing inter-group mobility within an industry.

2. Research on professional regulation. This research is concerned primarily with the effect of specific regulations on workers in an occupation and on delivery of their services to consumers. Many practitioners of these occupations are small business people -- barbers, plumbers, electricians, optometrists, real estate brokers and attorneys, to name only a few -- whose business activity is controlled in large measure by state and local regulations.

3. Research on specific industries in which participants are normally small business people -- dry cleaners, T.V. repairmen, opticians, denturists, and dairy farmers.

All three research categories offer limited insights into the impact of regulations. As yet, however, these insights are isolated, and form no cohesive picture of the total scene and costs of state and local regulation.

1.2.2 Taxonomy of Regulatory Barriers

To help define the scope and sources of regulations, complete taxonomy is provided:

Taxes and Fees

- Sales Taxes
- Payroll Taxes
- License Fees
- Permit Fees
Franchise Taxes (privilege fees)
Estate and Inheritance Taxes
Organizational Taxes
Property Taxes
Inventory Taxes
Inspection Fees
Excise Taxes
Miscellaneous Fees and Taxes

Non-Monetary Regulations
Reciprocity Rules
Allocative Powers
License Requirements
Certification Requirements
Registration Requirements
Information Costs
Capital Requirements
Permit Stipulations
Miscellaneous Regulations

In practice, these are all closely intertwined and mixed between state and local authorities as suggested below.

State Level Mixture

State regulations take the form of taxes directly upon the firm (incorporation, payroll, estate, franchise and license, for example) or require firms to serve as agents for the state (as in the collection of sales taxes). In addition, groups as different as automobile dealers, cosmetologists, real estate brokers, and many others have their competitive rules codified in state law. Entry into many small businesses, trades, occupations, and professions is blocked for all unable to meet these state statutes.
Local Level Mixture

Numerous restrictions originate at the local level. For example, cities, counties, and their commissions and boards regulate such diverse businesses as taxicab fleets, airports, beer, alcoholic beverage or restaurant licenses, and many others. Property taxes are assessed locally, and frequently by more than one authority. Other local taxes which affect some small businesses are hotel and motel taxes, and amusement taxes. Planning commissions issue zoning restrictions. Inspectors enforce regulations concerning fire, plumbing, sanitation, elevator, building, and electrical standards. Many boards issue licenses which must be allocated among competing firms. Liquor boards, medical authorities, and automobile commissions are among the most prominent. Whenever this situation arises, the board attains power from the allocative process itself. Without the board's approval, new entrants are barred from selling liquor, new cars, or establishing health care facilities. Many occupational groups (service businesses) are controlled at the local level. This can result in substantial variation in the requirements that aspirants must meet in order to practice their chosen fields in, say, urban or rural parts of one state. Moreover, requirements can differ substantially in different cities within a given state.

The fabric of laws, rules, statutes and regulations is woven so tightly that few researchers have tried to unravel it.

1.2.3 Analytical Modelling

Description of the regulatory tangle affecting an individual business and analysis of the impact of such regulation can best be approached by financial impact modelling. For example, a concrete financial model of costs in an industry would be tailored to encompass the unique aspects of a business, relating investment, costs and revenues under various assumptions.
Then, using sensitivity analysis, the impact of a given change in one parameter at a time could be assessed. This is only one of many models which might shed light on the impact of regulation upon a small business. Others could include general cost curve models, cash flow analysis, and econometric studies of existing firms projecting back to excluded firms -- those that never began operations owing to the regulations.

1.3 Conclusions

1.3.1 Character of Existing Research

A thorough study of the existing research work leads to the following conclusions:

- There is no comprehensive data or analysis of state and local regulations or their impacts. (Commerce Clearing House does tabulate state level business taxes and fees.)

- The main limitations of existing research to a comprehensive assessment of non-federal regulation include:
  - Theoretical orientation, or if empirical
  - Oriented toward federal level regulations
  - Anecdotal
  - Industry-specific case studies
  - Regulation-specific case studies

- Taxation and regulation are apparently very uneven in incidence and magnitude with respect to:
  - Benefits received
  - Industries
  - Political jurisdictions
  - Products vs. services
  - Firm size
  - Ability to pay
1.3.2 Data vs. Analysis

Meaningful comprehensive analysis does not exist because comprehensive primary data have not been collected in any significant amount or usable form.

1.3.3 Relative Impact of Monetary and Non-Monetary Regulation

Non-monetary regulation appears to have significantly more impact on small business than do taxes and fees (monetary regulation).

1.3.4 Non-Monetary Regulations are Most Often Manifest as Barriers to Entry (Market Closure)

The existing literature emphasizes a single theme: the active and effective agents of non-federal regulation are rules and regulations that make small business creation more difficult. Barriers to entry (market closure) include the array of civil code rules imposed on business:

- Codification of competitive relationships in the market
- Codification of firms' production functions (especially capital/labor ratios)
- Codification of pre-entry capital expenditures to qualify politically for market entry

Examples of such market closure regulations abound:

- Outright prohibition of some markets (e.g., public auction of used cars)
- Numerical limits on number of businesses in a jurisdiction
- Exclusive or nearly exclusive franchises
- Certificates of need (protected geographical market areas)
- Certificates of moral character
In so far as non-federal regulation acts primarily as a fixed cost barrier to market entry, its victims are not often directly seen. The victims are the firms that were never born or that failed early from the regulatory mis-allocation of their risk capital. In either mode they are rarely observable. That entry regulations are effective is strongly suggested by the almost universal inclusion of "grandfather" clauses in new legislation and by incumbent firms' vigilant policing for compliance by new firms.

As a consequence, market closure regulations can stifle and mis-allocate:

- small business creation rates
- survival chances of new firms
- employment growth
- industry distribution of small firms
- entrepreneurial incentives
- aggregate economic dynamics
- risk capital availability and use
- aggregate economic efficiency
- popular concepts of equal business opportunity

1.4 Research Recommendations

1.4.1 Objective

Replace anecdotal and case study evidence with meaningful and comprehensive national projections and comparisons.

1.4.2 Methodology

Sampling across political jurisdictions is essential since each of the following jurisdictions can enact regulations:

- 50 States
- 3,143 Counties
- 19,057 Incorporated places
1.4.3 **Low Priority Research Avenues**

Our study leads to the conclusion that some research areas have low priority. Among them:

- Industry and case studies
- Anecdotal research
- Research that is geographically limited and does not allow national comparisons
- Research on specific regulations and their impacts
- Land zoning regulations
- Proposals emphasizing taxes and fees (we do not suggest their complete exclusion however)

1.4.4 **High Priority Research Elements**

By contrast, effective research should stress the following elements:

- Taxonomic approach (comprehensiveness of regulations researched)
- Comprehensive political jurisdictions (state, county, and city)
- Emphasis on market closure regulations (codification of market relationships)
- Key personnel experienced in state and local regulatory analysis with emphasis on experience in innovative quantification of costs and benefits
- Primary data gathering
- Analysis of primary data for basic hypothesis testing
- Quantification of results whenever possible
- Inter-disciplinary research team
- Narrow focus during research toward the more important:
- Types of regulation
- Jurisdictions
- Industries

- Data summarized and delivered to facilitate further work by others
- Estimation of capital resource mis-allocation (quantified where possible)
- Sensitivity testing by appropriate models of the impact of regulation on minimum firm size or other size implications.

1.4.5 Scope of Work

12-18 person-months of effort over a period of 9-15 calendar months should be sufficient to carry out the above research objectives.
2. "State and Local Regulatory Restrictions as Fixed Cost Barriers to Small Business Enterprise": Introduction

The imposition of economic regulations upon citizens by local governing authorities is as old as organized society. In the United States, at least until recent years, state and local regulation of business from both economic and non-economic aspects had greater impact than federal regulation.

One of the most extensive areas of regulation is that of business or occupational licenses. In North Carolina a 1979 study found:

"There are currently 232 different classifications of state privilege licenses and over 100 different bases for determining license fees. The variations have evolved over the years as new taxes were added in piecemeal fashion and have resulted in cases of outmoded and unfair taxes. Often the tax has no relation to the volume of business, income, ability to pay, or amounts charged similar businesses."(1)

The impact of state and local licensing on the conduct of individual occupations is widely recognized. Recent research documents 992 jobs that currently require practitioners to be registered, licensed, or certified by the appropriate local or state authority before beginning operation. (2) They run the gamut from alligator hunter to neurosurgeon.

Licensing is but one example of the regulatory thicket faced by small business. The morass at the state level is composed of a similar tangle of local levies and laws. The Commerce Clearing House, which documents the tax laws of each state, declares that it will consider only those regulations codified in the unified revenue measures, even though other fees and taxes frequently exceed those explicitly stated in the basic revenue codes. Thus Commerce Clearing House completely avoids dealing with local restrictions. (3) Nevertheless, local regulations abound and have great impact upon the formation of small businesses within a community. They determine, among other things, what types of businesses are allowed and the circumstances of their existence.
Widely regulated businesses include liquor stores where sanctions may include limitations on the number of stores in a city, what products the stores may sell, and characteristics of store owners; and automobile dealerships where entry and product limitations are carefully transcribed into state law. Regulatory bodies range from state and local governments to various local commissions which regulate such businesses as taxicab fleets or determine the number and type of medical services needed in a community.

These regulations clearly affect the ability of an individual to start a new business. There is a tremendous variation in the initial requirements depending upon the field selected. In some cases, registration with the local authorities and the payment of a business tax is sufficient. However, in many fields a web of regulations requires new entrants to meet certain standards, thus eliminating those who cannot measure up. These laws -- some state, some local -- can be extremely broad or almost unbelievably detailed and are frequently designed by current practitioners of the regulated field. Typical rules require a potential entrant to meet educational standards, pass entrance tests, meet apprenticeship or bonding requirements, or have good moral character. Others define where the business must be located, the size of the signs used, or who within an organization may perform certain tasks. Minimum capital requirements, whether implicit or explicit, often must be met.

Once the potential firm has established its eligibility to exist initially and has complied with various initial state and local requirements, it faces burdens of a different type -- those associated with a continuing business. Small businesses are concentrated in retail trade. Thus, the proprietor of a small dress shop must collect sales taxes for the city and state. Another business, for instance, a nursing home, may be required to provide extensive survey data to the state department of health on a continuing basis. All firms with employees must pay payroll taxes for unemployment insurance and workers' compensation to the state government. Time is thus taken from the entrepreneur's pursuit of business and devoted to satisfying a regulation.
Empirical research to determine the effects of such demands upon small business is woefully lacking.

No ready made body of systematic analysis focuses its main attention directly on the complete set of connections between regulations, their costs, and their effects on small business. The purpose in the remainder of this report is to review the research that has already been done, to provide a complete taxonomy of regulatory barriers, to examine possible models, to analyze the barriers, and finally, to suggest a research plan to study this important area.
3. **Examples of State and Local Regulation**

The overwhelming network of state and local regulations affecting small businesses is so complex that it has defied any systematic or comprehensive study. Regulations are imposed by state legislative bodies directly, by the regulatory commissions they spawn, and by city and county governments and their subordinates. Each entity acts at times without regard for actions taken at other levels of government.

The impact of these regulations has been impossible to quantify satisfactorily since in many cases we lack one key statistic; the number of businesses that were never formed owing to barriers to entry. Even deciding which laws do apply can itself deter entry for a small businessman. From zoning laws to business license taxes to local and state licenses and fees to the size and location of signs, regulations abound, and an eager enforcement cadre exists, aided by those already in business, to make sure newcomers comply with existing statutes.

Several examples should suffice to illustrate the scope of the regulatory maze. First, we present an extended discussion of the regulations facing a potential automobile dealer in the state of Tennessee. These regulations are similar in focus to others on the books of many states and to those covering other business activities. Next, we provide brief discussions of some recent developments in health care, occupational licensing, and the real estate industry.

3.1 **Automobile Dealers in Tennessee**

The State of Tennessee requires a person interested in becoming an automobile dealer to meet a number of requirements which are codified in state law and administered by the Tennessee Motor Vehicle Commission. (4) The members of this Commission are appointed by the Governor from a list furnished by the Tennessee Automotive Association. The list contains names selected from
those persons who hold a valid license issued by the Commission and have actually engaged in the manufacturing, distribution, or sale of motor vehicles in the state for not less than five consecutive years. Anyone who wishes to be an automobile manufacturer, distributor, factory branch or representative, distributor branch or representative, motor vehicle dealer, motor vehicle salesman, automobile auctioneer, or automotive dismantler and recycler must have a license with fees ranging from $6 for a retail auto salesman to $100 for an automotive dismantler and recycler.

The prospective licensee must provide information "touching on and concerning the applicant's character, honesty, integrity, reputation and business relations and ability as the commission may deem necessary." In addition, he must state that this business will constitute his principal business.

The license can be denied or revoked for many reasons, among them these: if the individual commits any act or practice which in the opinion of the commission is fraudulent or deceptive, was previously a stockholder of a business whose license was revoked and the terms of suspension have not been terminated, has been convicted of a crime of moral turpitude within the past five years, has practiced fraud in the conduct of business, has resorted to misleading representation, or has allowed outside tie-in sales. The Commission is empowered to act "whenever the Commission has determined that a person possessing a license issued pursuant to this chapter is violating, has violated, OR IS ABOUT (emphasis added) to violate any provision" of the act. The Commission assumes one to be guilty until proven innocent: "any fact not expressly denied or knowledge thereof disclaimed, shall be considered admitted." If convicted by the Tennessee Motor Vehicle Commission, the maximum criminal penalties which can be assessed are a $5,000 fine and imprisonment of up to six months.

Perhaps the most important Commission powers granted are those to deny a license unless the existing dealers agree on the entrant and to determine relevant market area. Physically the business must have a repair facility, be apart from any other
business, and the signs must consist of letters no less than eight inches in height and shall not advertise any other business or product. Salesmen are forbidden from changing employment without PRIOR (emphasis added) permission of the Commission.

The constraints on and powers of manufacturers and their agents are similarly numerous and explicit:

- no tie-in contract review sales
- no interference with dealer capital structure or financing
- veto power over ownership changes
- no servicing of a dealer's customers
- no influence on the composition of dealership personnel
- no payment delays for last year's cars in inventory
- all refunds must be offered to all dealers
- no factory-owned dealerships with the exception of a few truck dealers who were grandfathered in
- no contracts with a business that does not have repair facilities
- cannot unfairly or without regard to the equities or without just provocation cancel or fail to renew the franchise or selling agreement of a motor vehicle dealer
- no price increases after the car is ordered
- no unfair discrimination among franchisees on warranty work
- no sales to unlicensed dealers
- delivery of cars within 60 days after order
- reimbursement at retail labor rates for warranty work

Automobile auctioneers are forbidden from dealing directly with the public. Consequently, there are no public car auctions (minor exceptions include state owned cars, antiques, etc.). Unlike other motor vehicle licensees, auto auctioneers must post a $50,000 corporate surety bond.
The Tennessee Dealer-Manufacturer Licensing Law is typical of statutes in many states. The laws are normally written by those who are regulated, they are in effect for many years, and they carve away large segments of the marketplace from potential entrants. Such regulation codifies the complex web of market relationships reaching from the manufacture of new cars, the used car market and to final dismantling. It is interesting to note that, at least in this one instance, the law provides for criminal penalties for an economic "crime." There has been no comprehensive examination of the extent or economic impact of these laws.

3.2 Health Care

Health care is an area rife with regulation at all levels. A 1976 survey in New York found that hospitals were ruled by no fewer than 164 regulatory agencies including 124 at the state or local level. The study concluded that the agencies raised costs by 25 percent of the total hospital budgets or a statewide average of $38.66 per patient day. (5) The conflicting interests of hospitals, free standing emergency clinics, and day surgery centers trying to attract patients, of nurse midwives fighting with physicians for the right to deliver babies at hospitals, and of proposed new methods of delivering medical services competing with established groups are all mediated in arenas in which state and local laws are paramount.

A commission is empowered by the state to determine the "need" for new health facilities in a community, and a positive finding by the commission is required before a new clinic can be established. The costs of a proposed facility, say an emergency clinic, are greatly affected when the permit requires that the center be open 24 hours a day. If there is more than one applicant for a particular service, the commission has the power to allocate the license.
Practical control in the field of medicine lies at the hospital level. Denial of staff privileges to a doctor prevents him from admitting patients to that hospital. Critics of the current system say that when physicians deny staff privileges to a potential colleague, they are effectively protecting their franchises. In addition to medical doctors, chiropractors, osteopaths, podiatrists, and midwives are suing in some cases to gain access to medical facilities. (6) Recently, two registered midwives brought suit in Nashville, Tennessee after they complied with the state law, but three hospitals denied them privileges, and the doctor associated with them lost his malpractice insurance. (7) The continuing problem with the lack of admittance to hospital staff, along with a desire to streamline some areas of medical care, has itself spawned a variety of new facilities such as birthing clinics. In most cases the innovative new services are small businesses.

State regulatory laws can limit the ownership of the business or limit the ability of some groups to deal directly with the public. In many states, professionals such as pharmacists or optometrists are prohibited from working for firms not owned or controlled by a licensed professional in that field. (8) False teeth makers (denturists) claim they have the skill to fit dentures and assert that repeal of the 49 state laws requiring them to sell only to dentists could cut false teeth prices in half. (9) In response to the denturists' claim, the dentists set up a program of referrals in 17 locales to help old and needy persons get dentures for as little as $200 compared with the national average of $521. "The programs are designed to head off state laws that would license denturists to fit dentures." (10) At least 30 states have adopted laws allowing psychologists to bill insurance companies directly, relaxing the older restriction that such billing must be done through a psychiatrist. As a result, between 1976 and 1981 the number of psychologists in private practice rose 50%. (11)
The costs to small health care businesses of complying with regulations at all levels are frequently not calculated. However, documentation exists of the cost to one nursing home, Metacom Manor of Bristol, Rhode Island, of complying with state and federal survey forms.

"The unorganized and fragmented approach of bureaucracy is one of the factors adding unnecessarily to this escalating cost. Repetitive surveys which duplicate and in many cases triplicate a process certainly are wasteful, confusing, and add nothing to patient care. In fact, in many instances they detract from this care. The following review of a new nursing home with 120 beds and costing $3 million demonstrates how regulations waste money needlessly.

After thirty-six months of planning, building, and administrative processing by appropriate public agencies this facility opened February 21, 1977. In 1978, the first complete year following the opening, inspections were made. We use this year as a typical example. The same data are available for 1977 and 1979.

A compilation of the hours spent reveals the following:

1) In 1978 a total of 229 3/4 hours were used to complete surveys by the R.I. Department of Health

2) Number of hours to complete Pre-survey forms

3) Number of hours to complete Federal survey

4) Number of hours for other surveys

5) Utilization and Review Committee Meetings

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Total hours: 989 1/4
Divided by 8 equals: 123 1/4 days

Additionally, a nurse must document all the procedures performed on any patient which further takes time away from the care of the patient or increases the cost of care to satisfy bureaucratic demand for paper." (12)
3.3 Business and Occupational Licensing

Licensing is now estimated to affect directly one-third to one-fifth of the American labor force. (13) A recent compilation found that almost one thousand businesses and occupations are licensed, certified or registered somewhere in the United States. (14) The range of regulations is from trivial to profound. State laws in Virginia mandate that beauticians take 2,000 hours of training, and that their mirrors must be a minimum of 30 inches tall. (15) Tennessee barber laws specify how far from the wall barber chairs must be. (16) In California 61 types of construction contractors' licenses are required by state law. Dade County, Florida tops that issuing some eighty licenses in a variety of construction occupations. (17) Eighteen states restrict home work or require licenses or fees for the privilege. (18)

The effectiveness of licensing in assuring the greatest variety and lowest cost service has been questioned often. A recent compendium of research in the field of professional regulation raises this question anew, and the papers present wide ranging evidence on the impact of licensing laws on the rise to power of professions, the dismal efforts at self discipline, and the impact on consumers of these state statutes. Some startling practical conclusions are reached. For instance, where there are fewer electricians, whatever the cause, the number of accidental electrocutions rise. (19) Electricians typically run or work for small businesses. Other occupations discussed here do likewise, in general.

Occupations without a licensing arrangement frequently seek one. Marriage counselors, masseurs, and dog groomers are among these. Other examples include the new Madison, Wisconsin statute which requires every certified bartender to take 12 hours of training in server liability and responsibility (20) or the New York City Taxi and Limousine Commission ruling requiring all new cabbies to attend 20 hours of classes in courtesy, safe driving, and the geography of the city. (21) Those who would like
minimum standards set, for instance, include doctors performing In Vitro Fertilization, (22) or aerobic dance instructors who, untrained, can unknowingly induce heart attacks in students. (23) As technology introduces new methods of practicing medicine, new problems are presented in determining who can use the technology. A barrier to more widespread use of lasers in health care is the question of which health specialists will be authorized to use them. (24)

3.4 Real Estate Brokers

Real estate laws tightly control activities in the industry at each level. Advertising, contract specifications, and financing restrictions are codified at several levels. Candidates to become a real estate agent must have completed certain courses, have a guaranteed job with a currently licensed broker who will provide training and supervision, and be sponsored by an active broker in order even to apply for a license. Brokers, prior to applying for a license, must have offices which have been approved by the zoning commission, appropriate prior experience and schooling, and have a valid business license. In multi-office firms, each office must have a separate full-time broker. (25) The associations of realtors who control the multiple listing service in the industry can readily affect the practice of an individual realtor.

3.5 Conclusion

Given the vast number of rules and localities in the U.S., no one has attacked the job of cataloging the regulations arising from government at all levels. Specific categories of regulations have been analyzed, relating the law to its effects, but the difficulty of determining how the plethora of restrictions affects the ability of an individual to begin a business, and to keep it alive, has made the research task a difficult one. The importance to the economy of the new jobs created by the formation
of new small businesses, the high rate of business failure of these enterprises, and the dearth of information regarding the impact of state and local regulation upon small businesses make this a fertile and important area for research.
4. Previous Studies and Literature: A Review

The difficulty of unravelling the effects of state and local regulation on business in general and on small business in particular is recognized. Notwithstanding the formidable difficulties, there is evidence that research in this area should pay handsome rewards.

Previous research has focused upon an examination of existing firms and the impact of specific government regulations upon them. One study which illustrates possible methodologies is Improving Economic Impact Analysis of Government Regulations on Small Business by the JACA Corporation (12) in 1981. Using the "model plant" approach and net present value or coverage ratio financial measures, the study investigates costs of various regulations as a function of size of establishments measured by sales. The approach can be practically modified to use employment, rather than sales, as a measure of firm size.

Of the more theoretical papers, the studies of Cole and Summers, "Costs of Compliance in Small and Moderate-Sized Business" (7) and of Oster, "Industry Rivalry and Strategy in the Regulatory Process" (14) are the most interesting. Cole and Summers examine the theoretical impact of various types of government action on firm performance as it relates to size. Oster, on the other hand, sees firms using the regulatory apparatus as a strategic tool in maintaining market share and in decreasing inter-group mobility within an industry. In our context this means, "How might large firms use regulations to impede small firms from growing?" Or, alternatively, "How might existing firms use regulation and government action to prevent potential entrants from entering the industry?" (27)

Regulations are often invariant with respect to the scale of the business operation, i.e., they are true fixed costs of operation. They are not only fixed in the sense of invariance with output,
but unavoidable in the sense of a true sunk cost. Once paid they are unrefundable and irretrievable and are thus unalloyed barriers to entry. Recent literature speaks to the particularly pernicious effects of such governmentally imposed barriers to entry (and exit). Baumol in his 1982 Presidential address to the American Economic Association says:

"(... an) obvious conclusion is the questionable desirability of artificial impediments to entry, such as regulators were long inclined to impose. The new analysis merely reinforces the view that any proposed regulatory barrier to entry must start off with a heavy presumption against its adoption. Perhaps a bit newer is the emphasis on the importance of freedom of exit which is as crucial a requirement of contestability as is freedom of entry. Thus we must reject as perverse the propensity of regulators to resist the closing down of unprofitable lines of activity." (28)

Sunk costs of these types are inversely proportional to the size of the business operation. Any such fixed burden, when given monetary expression, assures higher average costs as operations become smaller. A multiplicity of such complexities to operating a business results in a stultifying effect on the possibility of entry by an operation at small scale. This type of market closure impairs efficient market performance. In addition to sunk costs, some costs of operating vary with size but less than proportionately, i.e., have the nature of quantity discounts. These also fall disproportionately on small firms.

Major research has also been done in the field of business, occupational, and professional licensing. A recent compendium in Law and Human Behavior briefly summarizes the history of such licensing, then addresses the current controversies, providing theoretical and empirical insights on a variety of professions with a discussion of important issues in licensing as viewed by lawyers, economists, sociologists, and psychologists. (29)

One theme is familiar throughout these papers:

"Suggesting that licensing may not only fail to accomplish its intended purpose, but may be counter-productive, the author asserts that licensing may not improve the quality of professional services, that licensing boards fail to
discipline unethical or incompetent practitioners, and that actions taken against the unlicensed are often aimed at eliminating competition, not competence. In addition licensing laws may have negative side effects, including an increase in the cost of professional services, the creation of shortages and maldistributions in supply, ineffective use of paraprofessionals and impediments to needed reforms in education, training and services. He concludes that equally effective alternatives may be available that are less expensive and have less negative impact, and advocates a system of registration for all practitioners." (30)

The third body of research is much sparser. It examines small firms to determine the impact of regulations upon them, cataloging the practical barriers to starting a business. Rosapepe, Fuchs and Associates in Project to Explore the Impact of State and Local Taxes on Small Businesses Compared to Their Impact on Large Businesses have provided detailed state-by-state tabulations of the taxes imposed on small businesses and discussions of the probable effect of these taxes on the firms. (31) Very little work has been done from the standpoint of a potential entrepreneur wanting to enter business and the entry barriers he encounters.

In sum, research concerning the impact of governmental regulation of small businesses falls into at least three major categories. The first examines existing firms and the direct impact of federal regulations upon them. Econometric techniques using a variety of modelling approaches form one sub-branch; theoretical works directed toward relating firm performance to size, analysis of barriers to entry, and exploration of the use of the regulatory apparatus as a strategic tool in maintaining market share and in decreasing inter-group mobility within an industry are examples of other approaches. The second major body of research deals with professional regulation. It asks how regulations affect both those in an occupation and the delivery of services to the consumer. Many practitioners of these occupations are small business people whose livelihood is controlled in large measure by state and local regulations. The third important, but not very extensive, body of research concerns a tabulation of the types of taxes imposed upon small firms and
the possible impact of such taxes. All three research areas offer insights into the impact of restrictions, no matter what the source, as a small business is conceived, initiated and successfully or unsuccessfully pursued.
5. Taxonomy of State and Local Regulatory Barriers

5.1 Introduction

Small businessmen face a formidable force of potential regulators -- cities, counties, states, commissions, occupational licensing boards, and others. In addition, a ready made enforcement cadre has compelling self interest in seeing that regulations are scrupulously observed. Possible motivations for groups to act to ensure enforcement are numerous: cities and counties desiring revenue, the established businessman anxious to see that competitors meet all regulations with which he must comply, those in professions or occupations jealously guarding standards which prevent aspirants without "proper" credentials from entering, and public guardians eager to prevent unnecessary new health care facilities. Below is a taxonomy of regulatory barriers affecting small businesses. This taxonomy is divided between Taxes and Fees, that is, monetary regulations that have an explicit revenue and monetary element written into the enabling legislation, and Non-monetary Regulations that explicitly compel or deny entrepreneurial action without using taxes or fees.

5.2 Taxes and Fees

5.2.1 Sales Taxes

Small businesses are concentrated in the retail trade segment of the economy. This group is doubly affected by sales taxes. They are required both to pay the tax in the course of business and to collect it on retail sales.

Many factors affect the cost of collections. Significant ones include the number of exemptions to the tax, the type and length of time records must be kept, the frequency with which the tax must be paid to the collecting body, the number of levels of government to which the tax must be remitted, the costs of
licenses which must be obtained and paid for, and the time required to execute the above tasks. In some cases, compensation is paid the entrepreneur for collecting the tax, but rarely does the amount cover the entire cost of collection. A survey of retailers in seven states reports small businessmen's claims that "most retailers feel they are losing their tails on that now." (32) In a small non-computerized business, the cost of collection is higher than the same task when mechanized.

5.2.2 Payroll Taxes

Surveys of small business owners indicate that payroll taxes are viewed as the greatest tax burden. These are federally induced taxes, even though they are state regulated. The two major taxes that fall into this category are unemployment insurance and workers' compensation. Both taxes are paid "up front" regardless of the firm's cash position, and there are frequently detailed reporting requirements. Since small businesses tend to be labor intensive, the burdens imposed by these taxes are magnified.

5.2.3 Estate and Inheritance Taxes

Newspapers and TV ads regularly report horror stories about businesses lost because families or partners did not have the cash to pay estate and inheritance taxes upon the death of an owner. Small businesses usually have non-liquid assets, and the imposition of estate and/or inheritance taxes by both the state and federal government can force the sale of the business to pay the tax. In many cases, the state death taxes are more complicated than the federal. These taxes are levied without regard to the cash position of the business.

5.2.4 Organizational Taxes

Minimum taxes required to organize a business are common, frequently assessed at a nominal fee of $50 but added to a
percentage based on the amount of capital stock issued. This is normally a one-time tax. While relatively unimportant in total cost to even a small firm, there is still the requirement that the firm know about the tax and pay it.

5.2.5 Franchise Taxes

The franchise tax is imposed for the privilege of doing business in the state. The amount is determined either as a percentage of the value of capital stock and other assets or of the net income of the firm.

5.2.6 License and Excise Taxes

License and excise taxes are among the most numerous and far reaching taxes imposed on those in business and are required for the privilege of doing business in the state. While they may be a simple fee, the payment of which grants some privilege automatically, they can differ from other taxes in that their main purpose is not raising revenue, but controlling entry into a particular field.

Other licenses such as the New York horse-license law are designed to prevent the abuse of working horses. (33) Playing cards are tightly licensed in New Jersey where card makers who want to sell to casinos must first make a $2,500 deposit and then pay regulators $30 an hour to inspect their company for security, quality and moral integrity. The tab could reach $60,000. (34) Businesses as diverse as those of automobile dealers, liquor store owners, physicians and nursing home operators are required to be state licensed. In many cases, these licenses are granted only to those who meet certain tests, with only a few licenses available for a given area, giving the allocating body political and financial power.
5.2.7 Property Taxes

Property taxes can be levied by the city or the county, and frequently, both. To many small businesses this is an implicit rather than explicit tax -- they rent rather than own, paying the tax as part of the rent.

Assessment practices have a great impact on small businesses. Since the process is subjective, there is little uniformity within and across classes of property within jurisdictions and between sections of the state. Small businesses begin and fail more frequently than larger entities, and thus are subject more frequently to the vagaries of buying and selling property, the time when reassessment frequently occurs. The property taxes must be paid without regard for the income or cash flow of the firm. Some state assessments are based on the property tax levies. The assessment supplied by the local jurisdiction is used in the federal income tax depreciation allowances. Many small businessmen do not know that they can have an independent appraisal done at the local level which will have beneficial effects on both state and federal tax filings. Frequently, such reappraisals cost more than the possible tax saving.

5.2.8 Inventory Taxes

State governments impose annual taxes on business' inventory as of a specific date. Stories abound of firm's shipping their inventory out-of-state temporarily to minimize such taxes. While these firms may gain, it is clear that society as a whole loses by this tax-induced behavior.

5.2.9 Inspection Fees

While common, inspection fees are not always used for joint revenue purposes. State regulation of the fireworks industry often requires inspection of each product of each distributor
and each manufacturer by approved laboratories. The resulting inspection fees paid by the firms are upwards of $250 per item! (35)

5.3 Non-Monetary Regulations

5.3.1 Allocative Powers

One of the most jealously guarded powers is the right to determine which of several applicants will be allowed to enter a given field. The power of two groups are particularly notable in this regard -- those allocating liquor licenses, and the issuers of "certificates of need" for new health care facilities.

The number of package liquor stores and liquor serving permits in a community is an issue fraught with controversy. There is tremendous variation among the states and even within cities in this area of regulation. Some states run the liquor stores; elsewhere, control is quite loose. Local option frequently is used so that some parts of a state may be dry while others are wet. Columbus, Ohio, where township option is in effect, has wet and dry areas within the city. The number of stores in an area may be based on population, or on other characteristics of the individual community. However, whenever there is a limit on the number of licenses available in the area, the group issuing the licenses becomes important.

Groups issuing "certificates of need" to those contemplating the construction or purchase of new health care facilities wield enormous power. Restrictions can be imposed which will make a new venture less profitable, e.g., the requirement that a free standing emergency clinic be open 24 hours a day. A change in medicare payments for psychiatric facilities recently brought a rash of requests for new beds at established or new facilities. Only those obtaining a certificate of need are allowed to operate. Many new forms of medical care are evolving, such as
midwife services. In order to be allowed to operate, each must prove a "need" to the licensing commission. Naturally, strong opposition from existing health care providers who stand to lose business to the newcomers is appearing.

5.3.2 Licensure, Certification, and Registration

In one locality or another in the United States nearly a thousand occupations are currently licensed, certified, or registered. These laws control entry into businesses as diverse as animal carcass transporters and school teachers. In great detail these statutes specify who may go into business, who may be hired and under what circumstances, the physical aspects of the business, the relationships between owners, customers and suppliers, what financial structures are legal, how and when advertising is legitimate, where, how many and what kinds of signs may be posed, what continuing education is required, if any, and the type and length of schooling, among others. These regulations are designed both to protect the public from the entry of "low quality" applicants, and to ensure the maintenance of present income levels among those already licensed. Self-policing of licensed occupations has not been notably successful.

The small businessman is sometimes at a disadvantage in a number of important ways. Paraprofessionals may be more efficiently used by a large business than a small one. Hierarchies of professions are codified so that it is possible for physicians to control business opportunities for other occupations, e.g., midwives. Control is established by not allowing midwives to use hospital facilities.

Conversely, licensing laws have been successfully used in some areas by small businessmen to deter chain stores from entering the pharmacy business. Pharmacies in some states are required by law to be owned by a properly licensed pharmacist. The laws controlling occupations are detailed, far reaching in their implications for applicants and for related occupations, and are tightly controlled by the licensees.
5.3.3 Inspections and Permits

Local property owners use permits to control businesses and the health and safety of citizens. Building permits are required before new structures are begun or older ones improved. The health department must issue a permit for a private sewer system; electrical and plumbing inspections must be completed before a structure can be occupied.

Inspectors are employed to ensure that the standards designated in local codes are met. Commonly, a community will have a corps of inspectors -- sanitation, plumbing, electrical, elevator, fire and building -- to certify compliance with all standards.

Small businesses, like others, must obtain all pertinent permits and inspections -- and pay whatever fees are charged -- in order to remain in business. Normally, these fees are fixed, regardless of the size of the construction project involved. While they may be relatively unimportant to a large firm, the expenditure may represent a significant cost to a small business.

The use of permits may easily be observed. For example, "each of 83 municipalities in the Los Angeles area has its own fees and regulations. They require payment of up to $1,000 for a filming permit that, once you get it, may still severely limit the hours and places at which you can do your filming. Most non-California communities don't require permits, or don't charge for them if they do. . ."(36)

5.3.4 Buy "Locally" Laws (Domestic Preference Laws)

Forty-one states have laws that give preference to local workers or companies when spending state money on goods and services. For instance, Minnesota offers a 10% break to Minnesotans when they bid on state-financed public works jobs. Eleven states have laws that punish contractors who come from
states that have domestic preference laws. Predictably, the impact of these laws has caused controversy in many states. (37)

5.3.5 Explicit Capital Requirements

Regulation often specifies how much and what types of plant and equipment must be used prior to obtaining a permit to open this business. For example, Tennessee law which is similar to many other states requires new car dealers to obtain a free-standing building to house their businesses. In addition each dealer must provide its own service facilities, requiring significant capital funds. Pooling or sub-contracting is explicitly outlawed.

5.3.6 Information Costs and Uncertainty

One of the most difficult problems faced by any business is how to keep abreast of changes in regulations which govern that business. The tangle of rules is legally imposed by many groups, any one of which is empowered to shut down an organization not meeting its requirements. Large organizations hire staff to handle this problem. Commerce Clearing House produces annually a State Tax Guide which is a comprehensive summary of standing laws and changes at the state level for each state. They note at least two areas in which their tabulation is incomplete:

- "The range of regulatory and revenue license taxes and fees is extremely wide (reaching into the hundreds in each state), and the line between the two classes is often tenuous. There appears to be no clear criterion of when the legislature is exercising the police power and when it is exercising the taxing power. The basis for this division of the Guide (State Tax Guide) is to include only license taxes and fees included in the unified revenue measures (or so codified) commonly enacted in the southern states and to disregard scattered taxes and fee provisions incidental to other legislation. Many taxes and fees in the latter class exceed in amount the taxes in the former class." (38)
License taxes and fees are chiefly state taxes, administered locally, though there is a very extensive field of municipal licensing. This is subject not only to the distinctions made above with respect to the regulation and revenue, but also to a distinction between mandatory and permissive powers. In the Guide it is necessary to exclude all permissive provisions and licenses of municipalities except those connected with general revenue law." (39)

In short, there is no simple method for a business owner or executive to determine what laws apply to a particular small business. Information costs can be high -- both in research costs and in the cost of failure to comply with a regulation simply because the firm was unaware of it. Information sources -- such as the Commerce Clearing House publications -- are quite expensive. Frequently small firms must depend on the local public library as a source of information.

Groups at the local level are frequently able to change rules with little public notice. City and county regulations normally must be processed in public sessions by local boards, but commissions, airport authorities, and the like may be free to change rules by less formal means. This creates both the opportunity for abuse of power and uncertainty on the part of the small business.

5.3.7 Permit Stipulations

Permit issuing is often a routine action by state and local authorities but often stipulations on the permits can significantly affect small business. For example, the State Fire Marshall in Nebraska issues permits for the sale of fireworks after the items are inspected (fees and approvals included) and has limited their sale to only two days per year. (40) What happens to this small business if it rains?

5.3.8 Exclusive Franchises

Local government often uses its ownership of public facilities to grant exclusive business markets to some businesses at the
expense of consumers and competitive businesses. Local airport authorities frequently create monopolies for concession vendors inside terminal building. Some authorities have also granted exclusive monopoly rights for the provision of ground transportation to deplaning persons. In Knoxville, TN the traveler has no practical choice of taxi companies when being picked up at the airport.

5.3.9 Bonding Requirements

This often rational business regulation can easily be abused, as it appears to be in the example of requiring Tennessee auto auctioneers to post a $50,000 bond.

5.4 Summary

An extensive taxonomy has been provided to help categorize the scope and sources of regulations. Regulation from the state can be manifested in the form of taxes to be paid or collected by the small business. States impose taxes directly upon the firm (incorporation, payroll, estate, franchise and license, for example) or require firms to serve as an agent for the state (as in the collection of sales taxes). In addition, many groups as different as automobile dealers, cosmetologists, and real estate brokers have their governing rules codified in state law. Entry into numerous trades, occupations, and professions is blocked for all unable to meet these state statutes.

Numerous restrictions originate at the local level. Representative of this group would be cities, counties, and the commissions and boards which direct activities of taxicab fleets, airport authorities, beer, alcoholic beverage or restaurant licenses, and the like. Property taxes are assessed locally, and frequently by more than one authority. Other local taxes which affect some small businesses are hotel/motel taxes, and amusement taxes. Planning commissions issue zoning restrictions.
Inspectors enforce laws concerning fire, plumbing, sanitation, elevator, building, and electrical standards. Many boards issue licenses which must be allocated among many who would choose to have one, liquor boards being one of the most notable. Whenever this situation arises, the board attains power issuing from the allocative process itself. Without the document from the liquor board, an individual is barred from becoming a small businessman who sells liquor. It is at the local level that many occupational groups are controlled; primarily among these are plumbers and electricians. This can result in substantial variation in the requirements an aspirant must meet in order to practice his chosen field in, say, urban or rural parts of one state and among cities in a single state (e.g., Washington, D.C. metropolitan area). Many groups are bound by some legal requirement, for example, that they be bonded in order to serve or that they be certified by the court before beginning business.

Other costs faced by small business come as a result of the maze of regulations sketched above -- information costs, for example. Small firms may be less able to efficiently evaluate and use technological advances (computers) than larger firms. Trade organizations, which can be enormously effective in protecting turf of an entrenched group, have rules of their own.

The fabric of laws, rules, statutes, and regulations of myriad types is woven so tightly that few researchers have tried to unravel it. However, those who wish to have a small business must try to do so, in order to start their enterprises and to avoid costly errors of non-compliance once the business has begun.

5.5 Conclusions

Market closure regulations often appear to be little more than artificial fixed cost barriers to the market entry and
survival of new small firms. They tend to consume and misallocate especially scarce small business risk capital toward non-economic objectives of uncertain social value. They act as if they were a fixed unavoidable tax, often imposed without regard to firm size, cash flow, benefits received or other relevant considerations. Their economic cost seems out of proportion to any social gains and seems to serve primarily as a market closing device whose impact is proportionally larger the smaller the enterprise. The rationale for these closure regulations is often cloaked in the same rhetoric and logic once used to justify the numerous labor laws "protecting" women from the rigors of the labor market while effectively hobbling their ability to compete for jobs.

In so far as non-federal regulation acts primarily as a fixed cost barrier to market entry, its victims are not often directly seen. The victims are the firms that were never born or that failed early from the regulatory mis-allocation of their risk capital. In either case, they are rarely observable. That entry regulations are effective is strongly suggested by the almost universal inclusion of "grandfather" clauses in new legislation and by incumbent firms' vigilant policing for compliance by new firms.

As a consequence, market closure regulations can stifle and mis-allocate:

- Small business creation rates
- Survival chances of new firms
- Employment growth
- Industry distribution of small firms
- Entrepreneurial incentives
- Aggregate economic dynamics
- Risk capital availability and use
- Aggregate economic efficiency
- Popular concepts of equal business opportunity
6. Modeling

Modeling the economics of regulation is a challenging task, given the problems of incidence and information already mentioned. In this section, three important classes of models are presented, each of which was sought, with varying degrees of success, to grapple with these problems.

6.1 Financial Modeling

A concrete financial model of the costs of entry into the industry based on knowable parameters can be constructed. Such a model would be tailored to encompass the unique aspects of a business relating investment, costs, and revenues under various assumptions. For example, one attempting to analyze the potential profitability of a satellite master antenna system (SMATV) might proceed in this manner.

The analysis pertains to the SMATV operator -- the firm that provides the equipment and services necessary to supply programming from satellites to consumers in multiple dwelling units. The analysis considers only the investment, costs, and revenues of establishing and maintaining such a service. Not included are salaries and office expenses for a parent operating firm or assessment of any income taxes. The purpose here is to isolate each of the elements involved in an SMATV investment and carefully scrutinize the range and magnitude of each variable and its possible impact on overall financial results.

The number of living units (UNI) and the penetration rate (PEN) (fraction of units who subscribe to the basic service) form the basis for the equations and must be provided to the model. The number of subscribers (SUB) is then calculated. This procedure gives greater flexibility and accuracy than a simple assumption about the number of subscribers.
The first element of the model, investment, represents initial costs -- sunk and remaining -- and is specified this way. "Dish" represents the cost of the satellite antenna and related electronic equipment needed to receive and distribute the signal. "Boxes" reflects the initial cost of the boxes required for the subscriber to receive the signal. "Entry" includes all initial costs such as promotion, startup, licenses and fees. "Wiring" covers the cost of connecting the system to each unit within the building. Hence, the cost of investment can be stated as:

\[ \text{Investment} = \text{Dish} + \text{Boxes} + \text{Entry} + \text{Wiring} \]

Annual revenue is a function of the number of subscribers and the monthly payments they make for this service, adjusted both for the fees which the operators must pay the owner of the units as a franchise fee and for the copyright fee which must be paid those who provide the programming. In addition, the interest derived from the refundable deposit made by subscribers for the boxes is credited to revenue.

\[ \text{Annual Revenue} = 12 \times (\text{Subscribers} \times \text{Basic Fees}) \times \left(1 - \text{Franchise Fee} - \text{Copyright Fee}\right) + \text{(Interest on box deposits)} \]

There are four components to annual costs: (1) provision of programming plus promotion; (2) maintenance of wiring, antenna, and boxes, billing and collection costs, depreciation on the boxes, and an allowance for turnover in the tenants; (3) depreciation on all the original investment excluding the boxes; and (4) insurance, local, state, and federal fees and licenses; parts, inventories, etc. This equation becomes:

\[ \text{Annual Costs} = 12 \times \text{Subscribers} \times (\text{Cost of Programming} + \text{Box Depreciation} + \text{Maintenance} + \text{Billing} + \text{Turnover}) + \text{Depreciation of Investment} + \text{Fixed Costs} \]
In its financial section this model uses both rates of return and payout period criteria and focuses on the barrier-to-entry problem relative to the size of the operation. It is easy to see how this could be modified to include the effects of state and local regulations as an element of cost. The strengths of this kind of approach lie in:

1) Its specificity with regard to the industry. Given an industry the pertinent parameters and their relationships can be determined, and the model applied.

2) Its direct inclusion of the size of the business. Results are primarily a function of the number of units served.

3) Its numerical grounding does not require statistical surveys of existing businesses.

4) Its flexibility in the use of sensitivity analysis which would allow the variation of policy parameters to understand the effects of such variation on the viability of a small business.

If the need is to determine what impact a 5% entertainment tax would have upon the sale of cable TV services, the tax can be incorporated into the model, and the changes in annual cost, revenue, and rate of return can be quantified.

The above example deals with an entrepreneur running a master satellite antenna firm. The salient features of a retail firm, a janitorial service, of a day care center could have been analyzed just as easily for the financial impact of a change in regulations.
6.2 General Cost Curve Model

The general cost curve model is related to the equilibrium approach of Berkeley Professor Joe Bain. It examines the relative disadvantage of operation at sizes smaller than the minimum efficient scale. It allows cost disadvantages for small entrants to be quantified. This could be used to supplement the financial model approach.

A simple analytical model can be constructed using the hypothetical situation of a one-person proprietorship.

Suppose, first, that the potential entrant to this business faces, as is normal, fees that must be paid irrespective of the level of operation of the establishment. These are fixed fees such as franchise fees, licenses, educational attainment costs, and other monetary entrance costs that are independent of the size or sales volume of the actual operation. Let these fixed fees be represented by the symbol $F \, (\$)$. Their annual carrying cost is $rF$ where $r$ is the cost of capital.

A second component of costs is the cost outlays which vary with output directly but tend to be lower as the level of operation increases. This can be due to learning curves, quantity discounts, or any other real or artificial advantages of larger scale operations including any preferences given larger businesses. This can be represented by a term $AX^B \, (\$)$ where $X$ is annual sales ($\$), A is an appropriate constant and B is an exponent between 0 and 1.

Finally in this abbreviated model, there are costs that are strictly proportional to the level of annual sales $X$. Denote these by $P \times X$ with $P$ being a constant for proportionality. We can now see that the level of total annual costs (TC) must be the sum

$$TC = rF + AX^B + PX$$
By definition average annual cost (AC) is total cost divided by output so that

\[
AC = \frac{rF}{X} + AX^{B-1} + P
\]

This average cost of operation is crucial because it reflects average disadvantage of entering related to annual sales.

The formulation above of average cost can provide some concreteness if we attempt to determine reasonable values for the constants in the equation. First, consider F. If entrance fees (education, licensing, bonding, opportunity costs) and monetized non-monetary barriers of a fixed variety amount to $100,000 and there is an assumed cost of capital of 15% (r) to be applied to the $100,000, then .15 F is $15,000. Secondly, to determine A and B, assume that various discounting elements generate costs of $2,000 for the first $10,000 of operating costs and $1,600 for the next $10,000 and a similar attenuation for each subsequent doubling of output. Finally, assume that unit costs, P, are .8 per dollar of sales, which is merely an assumption of a 25% markup on variable. This yields an average cost per dollar of sales of

\[
AC = \frac{15,000}{X} + .73X^{0.14} + .8
\]

Note the following profit, revenue and cost comparisons.

<table>
<thead>
<tr>
<th>Annual Revenues</th>
<th>Annual Total Costs</th>
<th>Annual Profits When Fixed Costs Are</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$20,000</td>
<td>$50,000</td>
</tr>
<tr>
<td>$ 40,000</td>
<td>$ 53,000</td>
<td>-$1623</td>
</tr>
<tr>
<td>100,000</td>
<td>109,565</td>
<td>2435</td>
</tr>
<tr>
<td>200,000</td>
<td>201,436</td>
<td>10564</td>
</tr>
<tr>
<td>400,000</td>
<td>382,984</td>
<td>29016</td>
</tr>
</tbody>
</table>

It is clear that the breakeven point comes at generally lower output for reduced fixed costs.
6.3 Other Models

Other models such as a cash flow analysis may also be appropriate. An econometric study of existing firms might prove useful, particularly in making inferences about excluded firms -- those that never got into business owing to the regulations.

As might be expected, the researcher finds many interesting elements present in questions of regulation. How are chain operations and franchised establishments institutionalized to attack the problems of the very small business? Do state and local bodies tend to enforce regulations against the smallest businesses while the federal statutes begin to be rigidly enforced for larger small businesses?

The two models described in previous sections can be easily modified to measure output (or size) in terms of number of employees. All that is needed is the relevant production function information, and one can readily use these models to directly relate the number of employees to relative disadvantage of firm.

One final observation. Study of this problem forces one conclusion. State and local regulations are likely to affect two types of business entities most strongly: (1) smaller small businesses and (2) businesses never born because of complete exclusion by regulatory barriers. To the extent that progress or life of these two types are significantly hindered, the population of vibrant, new, is creative forces for growth and change is limited, with predictable results for competitive markets and efficient resource use.

6.4 Summary

Analysis of the regulatory tangle affecting an individual business and the impact of such regulation can best be approached
by financial modeling. A number of models are possible. A concrete financial model of costs in an industry based on knowable parameters can be constructed. Such a model would be tailored to encompass the unique aspects of a business, relating investment, costs, and revenues under various assumptions. Then, using sensitivity analysis, the impact of a given change in one parameter at a time could be assessed. This is only one of many models which might shed light on the impact of regulation upon a small business. Others could include general cost curve models, cash flow analysis, and econometric studies of existing firms projecting back to the excluded firms -- those that never got into business due to the regulations.
7. Future Research Recommendations

7.1 Research Objectives

Research and analysis that explore state and local economic regulatory impact stand at a juncture. Future work could be an extension of the past, emphasizing specific industries and regulations, or future effort could be directed towards a comprehensive assessment of the incidence and impact of the full scope of state and local regulatory activity. Significant advances have been accomplished in the past with case studies, but to our knowledge no serious attempt has been made at any comprehensive research. We, therefore, recommend that we replace our exclusive reliance on anecdotes and case studies with meaningful and comprehensive national projects and comparisons of state and local regulatory activity and impact. Thus, future research should embrace the following considerations:

- It should begin with basic primary data gathering.
- It should incorporate the wide variance in state and local regulatory activities.
- It should be comprehensive in regulatory scope.
- Data collected should address both state and local (i.e., city, county, special district) regulation.
- Research results should allow nation-wide inference, projections, and comparisons.

7.2 Research Method

Research objectives (see previous section) are one thing, and research methods another. The recommended method to achieve the objectives should conform, in a general way, to the following elements:

- Since there exists no systematic, comprehensive compilation of state and local regulation outside the statute records of these jurisdictions, the basic data must be carefully culled from the statute books themselves.
The burden of this task clearly suggests the reason why it has previously not been done. However, much work has been done for specific industries and types of regulations and future researchers should exploit this literature thoroughly. In brief, to be comprehensive we must examine the only comprehensive source documents: The statutes.

- Sampling across political jurisdictions is absolutely essential since each of the following jurisdictions can enact regulations:

  - 50 States
  - 3,143 Counties
  - 19,057 Incorporated places

- Strictly statistical sampling is not practical for this exploratory research. Instead, the approach most likely to produce sound results would be to select a sample of jurisdictions whose regulations can be broadly classified as "light," "medium," and "heavy." Such categorization could be accomplished by the use of appropriate regulatory proxies, such as the number of occupations licensed by the state or other available regulatory variables.

7.3 Research Areas of Low Priority

The present study leads to the conclusion that some research areas should have low priority. Among them:

- Industry and regulatory case studies
- Anecdotal research
- Research that is geographically limited and does not allow national comparisons
- Research on specific regulatory impacts
o Land zoning regulations since these are extremely complex and unlikely to produce clearly useful results.

o Research emphasizing taxes and fees which are primarily revenue measures. While we do not recommend their complete exclusion, evidence suggests that non-monetary regulation is much more important. This is not meant, however, to minimize the importance of estimating the economic impact of non-monetary regulatory measures.

7.4 High Priority Research Elements

Here we list those areas of research which appear most productive for future research funding. To some extent they are the reverse of the low priority areas listed in 8.3 above, coupled with additional elements to enhance project results.

o Primary data gathering

o Taxonomic approach (comprehensiveness of regulations researched)

o Emphasis on market closure regulations (codification of market relationships)

o Analysis of primary data for basic hypothesis testing

o Narrow focus during research toward the more important:
  - Types of regulation
  - Jurisdictions
  - Industries

o Quantification of results whenever possible

o Key research personnel experienced in state and local regulatory analysis with emphasis on experience in innovative quantification of costs and benefits

o Interdisciplinary research team; economics and legal qualifications

o Estimation of capital resource mis-allocation (quantified where possible)

o Sensitivity testing by appropriate models of the impact of regulation by size of firm

o Data summarized and delivered to facilitate further work by others.
7.5 Estimated Resource Requirements

Our first-hand familiarity with the research area in conjunction with our practical experience in contract empirical research leads us to estimate that the above research objective and method would be adequately funded at about:

- 12-18 professional person-months of effort.
- A program that lasts 9-15 calendar months.
- Appropriate ancillary support (e.g., travel, consultants, clerical, materials, etc.).
8. Summary

The intent of this paper was to review the extent research, to catalog the regulatory barriers, to examine methods of analyzing these barriers, and to suggest a research plan for further study. Current research has centered on the direct impact of federal regulations upon small businesses, upon professional regulation, and upon industries. The focus of this work has not been from the vantage of a small business person, but rather upon an analysis of the structure of an industry or profession and the impact of this structure brings to bear both on those desiring to participate in a particular business and those whom the business serves.

A taxonomy of regulatory barriers was devised covering briefly a variety of monetary and non-monetary regulations that are imposed by states, cities, counties and miscellaneous other governmental authorities. Various taxes and fees were discussed, and the impact of capital, licensing, certification, and registration requirements, information costs, permit stipulations and other non-monetary barriers were considered.

Three possible models designed to aid in analyzing these barriers were formulated and briefly discussed. The conclusion reached in this preliminary study is that market closure regulations often appear to be little more than artificial fixed cost barriers to the market entry and survival of new small firms.

A detailed discussion of this paper's summary and conclusions is contained in Section 1.0 entitled, "Executive Summary."
9. Footnotes and References

1. North Carolina Department of State Auditor, Operational Audit: Privilege Taxes, 1979, p.9


27. The newer literature as reflected by Oster emphasizes how resources can be used to erect "credible threats" or regulatory hurdles of either legal or monetary dimension. For related treatments see Contestable Markets by Baumol, Willig and Panser (3), "Investment Strategy and Growth in a New Market" (Spence, 20), "Recent Developments in Oligopoly Theory" (Dixit, 8a), "Contestable Markets: An Uprising in the Theory of Industry Structure" by Baumol with comments and reply (2), "Entry, Capacity, Investment and Oligopolistic Pricing" (Spence, 19), "A Model of Duopoly Suggesting a Theory of Entry Barriers" (Dixit, 8); and "Advertising and Welfare" (Dixit and Norman, 9).


31. Rosapepe, Fuchs and Associates (16) provide an excellent summary of the impact of taxes upon small businesses.

39. Ibid.
40. *Fireworks Business, op. cit.*
10. Bibliographies

10.1 Annotated Bibliography


This study, a supplement report to the original Andersen report on the electrical machinery industry, summarizes several types of costs of regulation.


This paper presents work on a unifying theory as a foundation for the analysis of industrial organization.

Weitzman, Martin.
Schwartz, Marius, and Reynolds, Robert J.
Baumol, William J., Panzar, John C., and Willig, Robert D.


This book aspires to provide a unifying theory as a foundation for the analysis of industrial organization.


This study finds that federal regulatory influence on small business may not be of great influence due to non-enforcement. That is, federal regulations have not, as a general rule, imposed substantial fixed cost on smaller businesses.


"Occupational Restrictions and the Quality of Service Received: Some Evidence," Southern Economic Journal, 1981b, 47: 595-976.


These are empirical studies relating specific occupational requirements to the quality of service received by the consumer.


These researchers assert that "an economic theory of the formation and dissolution of businesses is presently available only in a rudimentary form... This project develops a model of business formation and dissolution based on rational profit maximizing behavior, uses the model to evaluate the dynamic effects of existing and alternative federal tax and regulatory policies on small businesses and uses the model to estimate for small businesses in several selected industries the dynamic welfare gain from certain alternative policies." The study is focused at the federal level and is quite abstract and technical.


"This paper considers theoretical reasons for expecting small businesses (less than 50 employees) to have more variable, but on average proportionately higher, costs of compliance with government requirements than moderate-sized businesses (50 or more employees)." The conclusion is that the Federal government concentrates on assuring compliance of moderate-sized rather than very small businesses, an interesting result.

There are no significant economies of scale in newspaper manufacturing because of tax laws.


"The paper analyzes a model of duopoly with fixed costs."


This paper discusses "research into strategic behavior yielding credible threats of entry deterrence and ... specification of conditions under which all such threats are empty, so that the prospect of entry exercises severe discipline on incumbents."


"This paper applies conventional welfare-theoretic methods to study advertising which changes consumer tastes."


As the abstract states: "This study presents an examination of the broad methodologies and specific techniques of analysis that are employed in the economic impact studies of federal regulatory agencies. The specific aims of the research are to identify those methodologies and techniques of analysis that are most appropriate for assessing differential impact, and to also explore means by which existing methodologies can be improved or enhanced to achieve higher levels of accuracy in their prediction of small business impact." Three models are examined.


Specific to the financial services industry, this work assesses developments in getting capital for small businesses.

This paper concerns the use of the regulatory apparatus as a strategic weapon in the battle for market shares and explores barriers to mobility within the industry.


The drug industry is used to explore the role of the regulatory process in altering the competitive balance within an industry.


This work is concerned with the design of a research strategy using a general model showing how the most familiar sort of supply-demand apparatus can be converted into a constraint on regulatory behavior. This is used to analyze the impact of regulation.


This paper examines "public interest theory," and "interest group" or "capture theory" as argued by political scientists and economists.


Hogan, Daniel B., "Professional Regulation: An Introduction to the Issue"

Jonathan Rose, "Professional Regulation: The Continuing Controversy"

Hogan, Daniel B., "The Effectiveness of Licensing: History, Evidence, and Recommendation"

Carroll, Sidney L., and Gaston, Robert J., "Occupational Licensing and the Quality of Service: An Overview"

Ryack, Elton, "Medical Licensure: Social Costs and Social Benefits"

White, William D., "Labor Market Organization and Professional Regulation: A Historical Analysis of Nursing Literature"

Dorsey, Stuart, "Occupational Licensing and Minorities"
Leffler, Keith, "Economic and Legal Analysis of Medical Ethics: The Case of Restrictions on Interprofessional Association."

Derbyshire, Robert C., "How Effective is Medical Self Regulation?"

Dolan, Andrew K. and Urban, Nicole D., "The Determinants of Effectiveness of Medical Disciplinary Boards: 1960-1977"


McGuire, Thomas G., and Moore, Sylvia F., "Private Regulation in Mental Health: The JCAH and Psychologists in Hospitals:

Orzack, Louis, "International Authority and National Regulation: Architects, Engineers, and the European Economic Community"

Friedson, Eliot, "The Reorganization of the Professions by Regulation"

Olson, Paul A., "Credentialism as Monopoly, Class War, and Socialization Scheme: Some Historical Reflection on Modern Ways of Determining Who Can Do a Job"

These articles present the current state of research in the field of professional regulation.


Detailed state by state tabulations of taxes imposed are supplemented by discussions of the impact of these taxes upon small businesses. This is a quite useful compilation and analysis and has been an important source of data for the present study.


Salop argues that "all deterrence instruments act as "capital" and a binding commitment corresponds to "irreversible" investment. In limit-pricing models, the preentry price is effectively converted to capital by its role in forming the basis of the entrant's expectation of costs, elasticity, and conjectural variation."

The objectives of this project were to develop a methodology for simulating the effects of national governmental policies and macroeconomic variables on the financial performance of small businesses and to evaluate the feasibility of using this methodology with financial data taken from the Dun & Bradstreet Financial Statement File. It is not helpful for our purposes.


"Entry barriers are a combination of structural and technological factors on the one hand and obstacles that are put in place by the existing industry on the other."


"This paper analyzes a model of duopoly with fixed costs." Spence suggests "a general theoretical approach to the entry of new firms which are comparable in size to existing ones. The approach does not take entry-prevention as a prior constraint, it allows existing firms to choose their best strategy bearing in mind the reactions of prospective entrants. The analysis allows for fixed costs and differentiated products."


This paper focuses upon specific SIC two digit industries, noting the importance of small business in the economy and considering the sources of impact of increasing concentration. The problems of state and local regulation are not addressed.


This paper asserts that important aspects of economic organization take on a new meaning when they are considered from the viewpoint of the search for information.


"The potential uses of public resources and powers to improve the status of economic groups (such as industries and occupations) are analyzed to provide a scheme of the demand for regulation. The characteristics of the political process which allow relatively small groups to obtain such regulation is then sketched to provide elements of a theory of supply of regulation. A variety of empirical evidence and illustration is also presented."
10.2 Expanded Bibliography


Commerce Clearing House. State Tax Guides.


Kafoglis, Milton Z. and Hutchinson, Bruce, The Impact of Costs of Pollution Control on Small Business, Emory University, January 11, 1980.


