Volume Title: Aspects of Labor Economics

Volume Author/Editor: Universities-National Bureau

Volume Publisher: Princeton University Press

Volume ISBN: 0-87014-305-0

Volume URL: http://www.nber.org/books/univ62-2

Publication Date: 1962

Chapter Title: The Economics of Occupational Licensing

Chapter Author: Simon Rottenberg

Chapter URL: http://www.nber.org/chapters/c0601

Chapter pages in book: (p. 3 - 20)

The Economics of Occupational Licensing

SIMON ROTTENBERG
UNIVERSITY OF BUFFALO

ENTRY into certain vocations has been regulated in this country since colonial times. During the early national period, many states required licenses for the practice of law and medicine; but the restraints were eased after about 1820, and by mid-century entry into these professions was open to almost anyone.

The present system of occupational licensing began in the final quarter of the nineteenth century. Since then, states have licensed more and more trades; in 1956, Gellhorn found some eighty occupations that needed state licenses to practice, "exclusive of owner-business."[1]

Municipalities as well as states regulate entry, the number of licensing jurisdictions varying among occupations. Some municipalities license occupations also licensed by their states; some license occupations that are not state-regulated.

The distinction between occupational and business licensing is hard to draw: to license banks is to license bankers; the license for a liquor shop also regulates the shopkeeper. In still other ways, occupational licensing may be indirect rather than direct. In some cases, persons are not licensed but places, things, or uses are. For example, New York City licenses billiard and pool tables, and a person desiring to enter the pool hall trade requires licenses for his tables. In many places weapons must be licensed, and such a license requirement might restrict entry into trades (e.g., bodyguard, watchman) that call for use of weapons. The discussion here, however, is limited to vocational licensing.

To what extent does licensure limit entry into trades? If virtually *all* persons can qualify, the requirement that practitioners be licensed is either a low-cost device for enforcing rules of behavior, or a revenue measure. At the other extreme, the cost of the license may be implicitly infinite, as when licenses are not transferable and there are explicit limitations of numbers, as of taxicabs in some cities or of taverns per-

NOTE: The preparation of this paper was aided by a grant from the Relm Foundation. The paper was written while the author was a member of the faculty of the University of Chicago.

[1] Walter Gellhorn, *Individual Freedom and Governmental Restraints*, Louisiana State University Press, 1956, p. 106.

mitted per police district. Beyond the specified number, *no* person may qualify for entry.

Costs of entry into a trade may be imposed in other ways than by licensure. Hygienic standards for restaurants may require investment in special dishwashing equipment and check entry of those for whom the return would be larger in restaurant keeping than in the next best alternative, *but only if* dishwasher capital costs did not have to be incurred. Similar rules are those requiring licensed funeral directors to maintain large inventories of caskets and laws requiring small coal mines to enforce federal safety standards. In principle, therefore, licensure is not different from other rules that increase costs of entry into occupations.

From the earliest times, licensing statutes and ordinances have been adopted by legislatures on the alleged ground of defense of the public health, safety, and morals. In colonial America, "The people who carried on the Indian trade were, as a class, disreputable and not to be trusted. The most natural solution was to allow only responsible and trustworthy people to engage in this traffic, and, to secure this end, it was enacted that no one should engage in the Indian trade without a license therefor from the colonial governor."[2]

It is true, nevertheless, that (1) when pleas are made to legislatures for new licensing statutes or for amendments that raise standards (costs) for qualifying, they are almost invariably made by practitioners of those trades, not by consumers of their services; and (2) standards are established and examinations conducted by boards of examiners composed of practitioners. The vested interest of the incumbent practitioners in restricting numbers in their trade will be discussed later.

Licenses may be a prerequisite for the practice of a trade or they may only certify as to competence. In the former case only licensed persons may legally practice the trade; in the latter, anyone may practice, but only licensed persons may use some specified occupational title. The Illinois Physical Therapy Registration Act, for example, forbids a practitioner to "hold himself out to the public to be a registered physical therapist unless he is registered by the Department as a physical therapist," but does not "prevent the practice of physical therapy by

[2] Thomas K. Urdahl, *The Fee System in the United States*, Madison, Wisconsin, 1898, p. 102.

a person not registered under the Act."[3] Such a law may limit entry into a trade if some consumers can be convinced that only registered practitioners are competent.

The enforcement of license laws is vested in the diverse authorities administering the police power of government. Often, however, the real enforcing power lies in the hands of trade associations and trade unions that may maintain inspectors to detect practice by unlicensed persons. They may enforce the laws by direct action or bring cases to the attention of the public authorities. The process of detection and enforcement is costly. Some unlicensed practice will be undetected or "winked at"; a plumbers trade union might "enforce" the licensing law in building construction, but not in building maintenance.

While some licenses are required in the construction industry, the laws fall more heavily on occupations in the tertiary sector of the economy. Within that sector they are concentrated in occupations with high self-employment and in which services are offered to diverse buyers and rendered for short periods. Since the license purports to attest to the quality of the licensed person, it supplies information that, in these occupations, cannot be learned from the experience of continuous and long-period employment. Information obtained from other buyers is presumably more imperfect than that found out more directly.

Only a small proportion of the total labor force is in licensed trades, despite the continuous increase in the number of licensed trades since the turn of the century. Of about 3.8 million persons in the labor force in Illinois, for instance, it is doubtful that more than 275,000 are in trades licensed by the Department of Registration and Education. The numerically important licensed trades, with approximate numbers of licensees in that state are:[4]

Barbers	14,500	Nurses, practical	7,600
Beauty culturists	45,500	Pharmacists	8,600
Embalmers	4,600	Plumbers	5,000
Funeral directors	4,500	Professional engineers	15,800
Physicians and surgeons	15,000	Real estate brokers	19,000
Nurses, registered	60,500	Real estate salesmen	14,700

Informal evidence is convincing that the licensure laws are administered with intent to produce favorable income effects for practitioners. Complaints against the practice of a trade by unlicensed persons and

[3] *Illinois Physical Therapy Registration Act*, Springfield, 1951, pp. 1-2.
[4] *Annual Report*, Illinois Dept. of Registration and Education, June 30, 1958.

against the checks on entry imposed by licensing laws come not from consumers but rather from people in competitive trades; beauty culturists protest prohibition of their cutting hair by barber licensing laws; drain layers protest limitations imposed upon them by plumber licensing laws; dental hygienists object to constraints imposed upon their permissible activities by dental licensing boards; and osteopaths, chiropodists, chiropractors, and physical therapists complain of their treatment by medical boards. The reasons are obvious. Consumers spend only a small proportion of their income on the services of people in licensed trades and a rise in the prices of these services affects them only slightly, while for tradesmen laws limiting the services they may perform are serious.

In the few cases involving explicit limitation of numbers and in which licenses are transferable (as in some taxicab or liquor dealer cases), monopoly rents produced by limitation can be capitalized and transacted. If the condition of perfect foresight is fulfilled, the buyer pays the seller the full value of expected rents in the transaction price and the buyer derives no monopoly income. If licenses are not transferable or if anyone may acquire a license by meeting stipulated standards, no rents are earned by those who must incur the costs of qualifying. Persons who have entered a trade at a lower cost, however, do receive rents, if they can impose higher costs upon new entrants. Thus incumbents in any trade have the incentive to perpetuate a license requirement and at ever higher standards. Incumbents in unlicensed trades may be expected to promote licensing for new entrants, with entry costs, but only if a "grandfather clause" which licenses incumbents routinely is included. Without that clause incumbents would be required to withdraw from the trade and pay the re-entry costs, thus being deprived of their rents. Gellhorn reports that in a single session of the New Jersey legislature practitioners asked that licensure be required for bait-fishing boats, beauty shops, chain stores, florists, insurance adjusters, photographers, and master painters, and that usually grandfather's clauses appeared in the draft proposals.[5] Each amendment to a licensure law which imposes successively higher entry costs upon new entrants will create new rents for incumbents.

The degrees to which earnings rise and employment declines, because entry has been made more costly, are functions of the elasticities of supply and demand of the relevant trade and of the magnitude of

[5] Gellhorn, *Individual Freedom*, p. 110.

the increase in entry costs. Since monopoly rents produced by a given increase in entry costs for new entrants will be the larger, the more inelastic the demand curve confronting the trade, one would expect that licensure restricting entry will be more common in trades facing inelastic than elastic demands. This can be expressed in the following form: Assume that the cost to incumbents of achieving an increase in entry costs of given magnitude is indifferently distributed among trades and thus equal in all. Assume also that the magnitude of an incremental increase in cost of entry is directly proportional to the costs of lobbying, and so forth, incurred by incumbents. On these assumptions, quasi-rents of given magnitude can be acquired by incumbents the more cheaply, the more inelastic the demand for the services of the trade.

Are there too few people in the licensed trades? Would the economy gain if more were in these trades and fewer in unlicensed trades? In other contexts—as where a maximum price is put on the services of some class of labor which is below the competitive price—insufficiency of resources in the relevant trade is manifested by the failure of the market to clear and the formation of queues on the demand side of the market. Alternatively, if a floor is placed under prices at higher than the competitive price, the market will not clear and queues will form on the supply side. This may be manifested by work sharing through short workweek schedules and by higher relative hourly wages than weekly or annual earnings.

If, however, the license restricts entry by imposing higher entry costs, the market clears and queues do not form, since the numbers entering will cause the return to effort, adjusted for different quantities of entry-investment in licensed and unlicensed trades, to be the same for both. The price of services in the licensed trades will be higher than they would have been if entry into them were free, and it will be higher than the price of services in comparable unlicensed trades; but it will be a price that will clear the market.

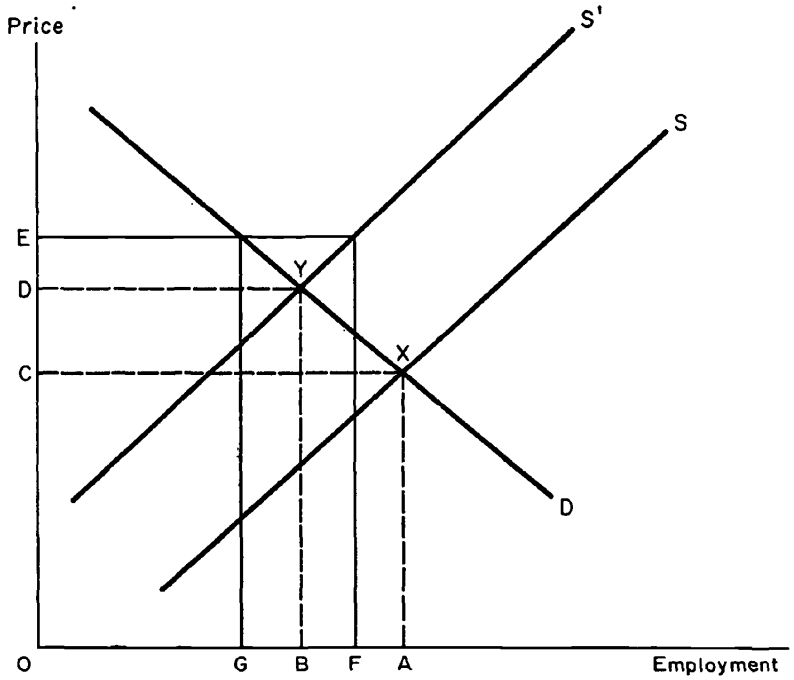
Thus in Figure 1, if entry is checked only by increasing entry costs, the supply schedule falls from S to S′; the number employed falls from OA to OB; and the price rises from OC to OD. The market cleared at X before licensing, and clears at Y after licensing.

If entry is checked only by increasing entry costs, and, in addition, a floor (E in Figure 1) is put under prices at higher than the new equilibrium rate, queues will form and work will be nonprice rationed

among those who have entered, since supply OF will exceed demand OG, at that price.

If entry is checked not only by increasing entry costs but also by absolutely limiting the number who may enter, there will also be

FIGURE 1



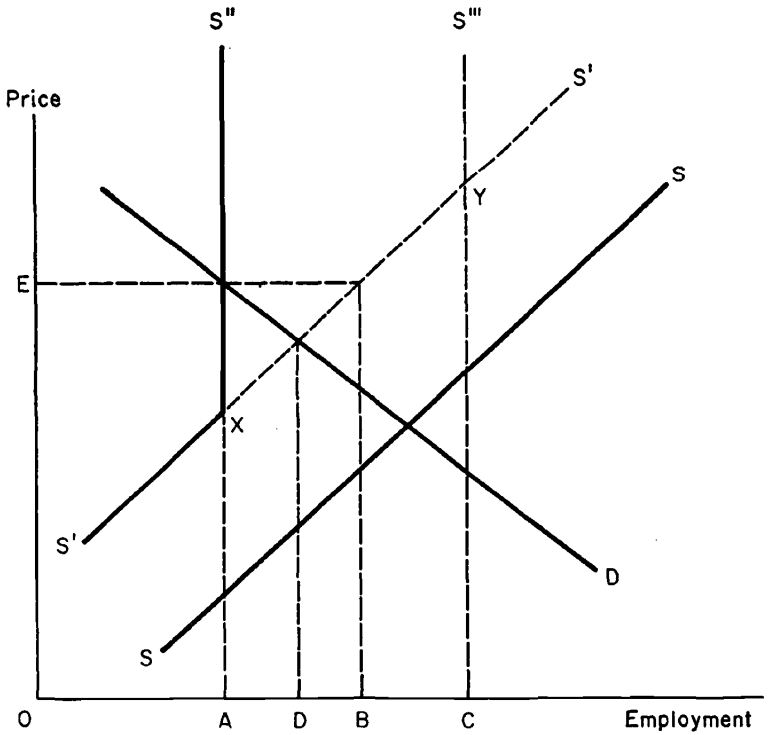
queueing and rationing, but only if the number to which entry is limited is smaller than the number at which the market will clear; here entry will be rationed among those who aspire to enter.

Thus in Figure 2, the supply schedule would be SS if entry were perfectly free and license entry costs were not imposed; S'S', if license entry costs were imposed; S'XS," if they were imposed and, in addition, an absolute numerical check is made effective at the number OA. The price OE will prevail and, at that price, OB would enter, if the numerical check had not been set at OA. AB, therefore, is the number excluded by the entry-rationing rule. If, of course, the numerical limit were established at OC (or any other number larger than OD), the

numerical check would be irrelevant, and there would again be neither queues nor any other form of nonprice rationing.

What is the specific nature of the checks on entry imposed by licensing statutes? The licensing "industries" produce, to a certain extent, homogeneous products because unions and associations have drafted model laws and lobbied for them—with some success. An

FIGURE 2



examination of the experience of a single state, therefore, has something to tell about the practice of all states. In Illinois the following different kinds of checks are imposed by licensing laws: age, general schooling to specified standards, trade or professional schooling, apprenticeship, and examination. For example, the Funeral Directing and Embalming Law limits the practice of funeral directing to registered funeral directors. Requirements for registration are that the applicant be at least twenty years old and a citizen of Illinois, of good moral character and temperate habits, be certified as a registered embalmer and have

passed an examination. For the prior qualifying test for registration as an embalmer, requirements are to be at least twenty-one years old and of good character, to have completed one academic year in an approved college or university, to be a graduate of an approved school of embalming (at least nine months' course), to have been apprenticed to a registered embalmer in Illinois for at least one year, to have passed an examination and be "properly protected against communicable diseases."[6]

This is not an uncommon set of qualifying rules. Each rule separately will check entry to a trade, either by imposing explicit costs or implicit costs. For instance, requirement of general or professional schooling at specified standards imposes tuition and foregone income costs during the period of schooling. These higher entry costs in the licensed trade cause the supply curve of labor to fall and the price of services of labor in the trade to rise. The return to effort in a licensed trade, adjusted for the relative costs of entry, will be the same as in unlicensed trades, but only if, at each possible price of labor, new entrants are fewer than would have been attracted to it in the absence of higher entry costs. On the principle that people distribute themselves among employments in ways that make net advantage equal in all, the latter outcome can be expected. If, with higher entry costs, the supply curve did not fall, the price of labor would not be higher and the yield to effort (adjusted for entry costs) would be lower in licensed than in unlicensed trades. When the qualifying rules impose entry costs, employment in the licensed trade is rationed by price.

An example of nonprice rationing rules is the previously mentioned requirement of a specified age. The result is the same as in the case of price-rationing rules, except that the age composition in the trade will be different from what it would be if entry were free. The age requirement will demand a higher price to attract a given number of new entrants (i.e., the supply schedule will fall), because some entrants to the licensed trade will have acquired skills with experience in other employments while "waiting" to meet the age limit. In addition, their opportunity costs will have risen; they will have better alternatives than they would have had if they had been permitted to enter the trade at an earlier age. As before, the adjusted return to effort will be the same in all trades, licensed and unlicensed. The number employed in the licensed trade will be smaller than if entry into it were free, if

[6] *Illinois Funeral Directing and Embalming Law*, Springfield, 1956.

the demand schedule for labor in the trade is negatively sloping; numbers employed will be unaffected only if the demand schedule is perfectly inelastic.

If there is an explicit numerical check on entry (as when the number of licenses is limited), if licenses are not rationed by price, and if licenses are nontransferable, a different result from those of the foregoing cases ensues. The number in the trade will be less, the price of labor of the trade will be higher, just as in the other cases, but the return to effort will be higher than in other trades. Sufficient additional numbers cannot be transferred to the trade to wipe out the real differential in it because of the constraint on the number of entrants permitted. If, however, the number of licensees is equal to or greater than the number who would have made their way into the trade, if there were no licensing, none of these consequences follow and the licensing becomes nonrestrictive and irrelevant. If licenses are transferable, even in the case of explicit numerical checks, there will be no difference between the case of numerical checks and the other cases, and the return to effort (adjusted for entry costs) will be the same in all trades.

In trades where licensing checks are imposed on new entrants but not on incumbents, the return to effort will be higher for incumbents than in other trades because of their freedom from the additional costs of entry, but it will not be higher for new entrants who do incur these costs. Since only incumbents earn quasi-rents from checking entry by imposing new costs of entry, it is to be expected that there will be successive demands for making entry costs higher. Each generation of entrants will seek to make entry more costly for succeeding generations. That process was noted above: legislatures are not only continuously confronted by requests of unlicensed trades that they be licensed but also by requests of licensed tradesmen that qualifying standards for their trades be raised. Usually, legislatures are offered a package which includes blanket exemption from the new costs of those already practicing the trade.

The history of Illinois barber licensing is a case in point.[7] In 1909, a law was passed requiring that a person not then practicing barbering would have to serve an apprenticeship or attend a barber school and pass an examination to be licensed to practice. A 1927 law specified that only those who had completed eight grades of school could qualify

[7] Smith-Hurd, *Illinois Annotated Statutes*, Chap. 16 3/4, "Barbers, Historical Note."

to become apprentices. A 1929 amendment required both six months' barber schooling and an apprenticeship for a license. Further rises in standards followed: 1937, age standards; 1939, entry only to citizens and aliens who had filed intention to be naturalized; 1947, the course of instruction in barber school lengthened from six to nine months; 1951, completion of ten years of school for enrollment as a student barber.

If foresight is perfect, the rejection rate (the ratio of failures to numbers examined) will be zero. If the rejection rate is positive, and if the qualifying standards are honestly applied and not used as a covert strategy for hiding explicit numerical entry checks, it is because foresight is less than perfect.

Less than perfect foresight is a necessary condition for the existence of gains from licensing (through use of increased entry costs). Incumbents free of entry costs imposed on new entrants gain by increased income. The gain is equivalent to that accruing to the sellers of transferable licenses after the capital value of the licenses has risen. In both cases, the gain is produced by lack of foresight. If the market had been estimated correctly there would be no rise in transferable license capital values. If the behavior of legislatures had been estimated correctly, entrants would have crowded into the trade before higher costs of entry had been imposed, so that earnings would have been lower in the prelicensing period and higher in the postlicensing period, but equal to adjusted earnings in other similar trades over the long run. In conditions of uncertainty, the more shrewd estimate correctly the probability that higher entry costs will be required of new entrants and take advantage of the lower entry costs, while the less shrewd underestimate the probability. If there is overestimation of the probability, too many crowd into the trade, and returns fall below those in comparable employments.

The larger the cost of entry relative to the current value of the expected income from a trade, compared with other trades, the smaller will be the number who enter; therefore, the magnitude of the entry cost imposed by licensing is an index of the power of the license to check entry. The larger the relative cost of entry and, therefore, the higher the price of labor in the trade, the larger is the incentive to engage in unlicensed practice. Aspirants will seek to be illegally licensed—as by buying passing grades on examinations—if the cost

is less than the cost of acquiring the information necessary to pass the examination.

Why do licensing arrangements usually check entry by imposing entry costs rather than in other ways, say, by explicit numerical checks? The answer is that the costs can be defended on grounds that standards are being raised and consumers are being protected against the consequences of error. Pleas can be made for the public interest. Explicit numerical checks must be defended on grounds of external diseconomies; too many taxis, racing for customers, will cause accidents on the streets, or too many taverns will cheapen liquor and increase drinking. Legislatures appear to consider adverse third-party effects less plausible than higher standards as grounds for licensing for most trades.

Costs of entry imposed by licensing are of diverse classes. Some who gain from increased entry costs for others are indifferent to the nature of the costs and interested only in their aggregate magnitude. Others gain only if costs are increased by requiring that *their* services be bought by aspirants in order to qualify for entry. For example, owners of colleges of embalming and teachers in them prefer that all prospective registered embalmers be required to enroll in such colleges, that the course of instruction to be taken be for longer rather than shorter periods, and that the whole cost of entry be spent for embalming college instruction. Some evidence of this attitude is found in attempts to monopolize the required services by owners of barber schools, who oppose the teaching of barbering in public vocational schools and prisons.

The age composition of persons in licensed trades can be expected to be different from that in similar unlicensed trades, and the mean age in licensed trades is higher. New entrants to the labor market, making their first occupational choices, choose indifferently between free-entry occupations with low earnings and positive entry-cost occupations with high expected earnings, so long as the yield to effort, adjusted for entry costs, is the same in both. If the rules for rationing licensed employments among first-job choosers are indifferent to age, new entrants into licensed and unlicensed trades will be random with respect to the age of new entrants to the labor market. But where entry into the licensed trades is postponed by age or educational qualifications for admission, the age of entry of first-job takers into licensed trades will be higher than into similar unlicensed trades.

There will be little movement between the two kinds of trades during the middle years of working life. Once having entered a licensed trade, the licensee will be reluctant to leave. The skills and knowledge which the licensing requirements compelled him to acquire are specialized to the licensed trade and will yield income to him only in that trade. Outmigration from licensed trades will be low also among those in a licensed trade who entered the trade when entry was free or when the cost of entry was lower than that currently prevailing. They will earn quasi-rents in that trade, but they will earn no rents in any other. Inmigration to licensed trades of unlicensed tradesmen in their middle years will also be low for two reasons. Where the acquisition of a license requires full-time schooling or apprenticeship, income is foregone. Since earnings of persons in their middle years are higher than for younger men, the cost, in foregone income, of training for entry into the licensed trades will be higher. Furthermore, the period of payoff for investment in training will be shorter for older men than for younger.

The mean age of retirement from licensed trades will be higher than from similar unlicensed trades. The cost of retirement is the loss of earnings that would have been received, if retirement had been postponed. Since licensing, by checking entry, causes earnings to rise, this cost will be higher in licensed than in unlicensed similar employments. Aggregating these components—higher age of entry into licensed trades and of exit from them, and small net movements between licensed and unlicensed trades—produces a higher mean age in licensed trades.

Postscript on Barber Licensing in Illinois

I propose now to examine licensure in the barber industry with special reference to the State of Illinois. Forty-seven of the old forty-eight states license barbers.

Barber examining boards are almost always composed of practitioners. Some years ago Chicago proposed to license barbers municipally (state licensing has been in effect since 1909). The barber trade unions and associations opposed municipal licensing, unless the city examining board be composed of barbers but, failing the mayor's consent, the licensing ordinance was not adopted.

It is evident that barbers desire to use licensure to restrict entry.

One of the vice presidents of the Barber's Union (Journeymen Barbers, Hair Dressers, and Cosmetologists) wrote in the union journal:[8]

> While the barber boards, barber schools and the International Union are separate organizations, there is much in common between them. We are particularly pleased to see the Barber Boards of 47 States giving heed to the law of supply and demand. Good schools and well-trained students are necessary for future progress of the barber profession, but too many schools and too many students . . . can stop progress and shatter the hopes of the future. . . . Operators of schools and colleges should put teaching and sufficient training ahead of accumulating dollars. . . . This cannot be done if students do not have sufficient practice on the chair. Too many students mean too many poorly trained students and too many poorly trained students mean too many cut-rate barbers. The law of supply and demand must be heeded if we are to continue to hold our present price structure and go forward to make our profession what it should be.

The union's president enumerated the achievements of the union in its seventy-two year history: "established individual health requirements for practitioners, shop sanitation standards, professional educational requirements, educational programs calling for practical training, examinations, apprenticeship terms, State license laws. . . ." All these achievements have the effect of limiting numbers in the trade. There is a network of organizations through which the restrictive strategy is made effective. These include the state barber associations, which are the legislative arm of the union, a National Association of Barber Examiners, a Barber Schools Association, and associations of employing and self-employed barbers.

In Illinois the number of barbers has been declining relative to total and active population. The census of 1950 counted fewer barbers (males in the occupational class, "barbers, beauticians, and manicurists") than did the 1920 census.

	Illinois Census Count	
Barbers per 1,000:	1950	1920
Total population	1.4	2.0
Active population	3.2	4.9

[8] *Journeyman Barber*, Nov. 1958, pp. 395, 397.

The relatively diminished number of barbers is not conclusive proof that licensing has checked entry. It may simply be evidence that barbering is a declining industry and that others perform the services formerly done by barbers. It may also be evidence of technological progress, as the invention of electric hair clippers, which caused a given demand schedule for barber services to be transformed into a fallen demand schedule for barbers.

The demand for barber services seems to be somewhat inelastic. While the invention of the safety razor produced a good substitute for barber shaving services, there does not seem to be a good substitute for haircutting services. Some degree of elasticity is produced by the possibility of diminishing the frequency of haircuts as prices rise, and the do-it-yourself movement can make some progress. Indeed the union is aware of the threat posed by do-it-yourself. The president of the union wrote:[9]

> Certain manufacturing interests and supply dealers . . . have aided and abetted the so-called 'Do-It-Yourself' slogan. They have advertised and sold to the general public hair cutting sets, cosmetics and other supplies used in barber and beauty shops. The International Union [is] . . . opposed to the 'Do-It-Yourself' program. We believe that the manufacturers of products used in barber and beauty shops should sell directly to those shops—not disperse to drug and department stores for over-the-counter sales. . . . When manufacturers advertise . . . that the general public can perform these services, they are in competition with our people. . . .

Some elasticity is probably introduced by employment of unlicensed barbers. It would be difficult for them, however, to operate in street shops, and most unlicensed barbering is probably confined to itinerants who cut hair out of sight of licensing board inspectors.

The cost of entry into the occupation, in the absence of licensing requirements, would be low. The legislative representative of the union estimated in 1958 that the cost of equipping a one-chair barber shop was $1,500.[10] Another estimate puts entry costs at $1,000 per chair for a three-chair shop and less per chair for larger shops where plumbing and electrical installation overhead can be distributed over a larger number of chairs.[11]

[9] *Ibid.*, June 1958, p. 197. [10] *Ibid.*, April 1958, p. 127.
[11] Interview with proprietor of Moler Barber School, Chicago.

The Illinois barber licensing law requires annual renewal of licenses. The flow of new entrants into the trade seems to be insufficient to compensate for deaths and retirements, so that in Illinois the stock of licensed barbers has declined somewhat, as shown in the next tabulation.[12]

Year	*New Barber Licenses as Percentage of Renewed Licenses*	*Sum of New and Renewed Barber Licenses*
1950	4.41	14,822
1953	3.33	14,993
1956	2.80	14,748
1958	2.87	14,484

The price of barber services in Chicago has risen relatively in recent years. The Bureau of Labor Statistics sample for measuring price changes for barber services consists of two union shops, one in the central city and one outlying. Only one item—male haircuts—is priced, once each quarter. The prices since December 1952 have been:

December, 1952 to June, 1955	$1.50
September, 1955 to March, 1959	1.75
June, 1959—	2.00

Since some barber services are sold in Chicago at less than the union rate, the BLS price is not accurate, but no better index is available. The "all-items" BLS consumer price index for cities rose by 10 per cent from 1952 to July, 1959.

The Illinois barber licensing law is sufficiently comprehensive to make it appear unlawful for any person to shave himself, if he is not a licensed barber. The law reads, in part (paraphrased):[13] It is unlawful for any person to practice barbering without a certificate of registration as a registered barber. Anyone of the following constitutes the practice of barbering: to shave or trim the beard or cut the hair.

A barber committee (three barbers, each licensed for at least five years) must consent to the following standards before they can be applied by the state government: ascertain the fitness of applicants for licenses; prescribe rules for examining applicants; establish standards for barber schools; establish standards of prior education for admission

[12] *Annual Reports*, Illinois Dept. of Registration and Education.
[13] *Illinois Barber Law*, Dept. of Registration and Education, 1959.

to barber schools; conduct hearings on license revocations and suspensions.

The law requires student barbers to have certificates of registration; to qualify they must be sixteen and one-half years old, be U.S. citizens, and must have completed two years of high school. Apprentice barbers must also have certificates of registration. Qualifying standards require seventeen and one-fourth years of age; successful completion of a course of study in a recognized barber school (1,872 hours completed in not less than nine months); passing an examination in the primary theory and practice of barber science and art, including anatomy, physiology, skin diseases, hygiene and sanitation, bacteriology, barber history and law, pharmacology, electricity and light, haircutting, shaving and shampooing, massaging, and implements. No barber shop may employ more than one apprentice for each registered barber it employs. The period of apprenticeship must be at least two and one-quarter years.

Requirements for the certificate as a registered barber (the barber license) are: age, nineteen and one-half years; completion of the period of apprenticeship; success in a second examination covering scientific scalp and facial treatments for cosmetic purposes, use of creams, lotions, and other preparations in conjunction with galvanic, faradic, and high frequency electricity, ultra violet radiation, vibratory appliances, barber shop management, ethics, salesmanship, standardized services, advanced haircutting and shaving technique (including scientific finishing and artistic grooming), and professional courtesy.

The law also defines standards for recognized barber schools with respect to curriculum, teaching staff, location, etc.; establishes standards of practice for barbers; and provides for the three types of licenses for barber teachers—theory, practice, and joint theory and practice.

It is clear from a mere recital of the law that it imposes entry costs of some magnitude, and that consumers searching for a qualified person merely to cut hair must pay for a tie-in package of many other skills superfluous for this purpose. Presumably, most people seek haircutting rather than scalp care services in barber shops. A recent issue of a barber's magazine suggests that incumbents do not know "barber science" well, unless they know whether the discovery of bacteria is credited to Louis Pasteur, whether Vitamin D is effective against scurvy, whether proteins contain traces of phosphorous, and whether arrector muscles pass from the surface of the true skin.[14]

[14] *Master Barber and Beautician Magazine*, January 1958.

The barber case exhibits a common characteristic of occupational licensing: by requiring longer periods of schooling than is objectively required for the learning of skills and knowledge relevant to the practice of the craft, things relevant to other crafts are also learned. The system defines high minimum standards for practitioners. It raises (albeit unnecessarily) the mean quality of legal practitioners (when quality is measured by the sum of knowledge commanded) and diminishes the dispersion about the mean. Put otherwise, it diminishes specialization in skill acquisition and (somewhat less certainly) specialization in the exercise of skill, by insisting that all practitioners be qualified in many disciplines.

It should be noted parenthetically that, while licensing causes the mean quality of *legal* practitioners to rise, by excluding those at the lower part of the qualitative range who could have practiced legally in the absence of a licensing statute, it does not necessarily cause the mean quality of the relevant service to rise. Whether it does or not turns on the behavior of consumers of the service after the trade has been licensed, who in the absence of licensing would have employed the qualitatively low tradesmen who sold their services at correspondingly low prices. If consumers substitute for low-quality barbers, who are now not permitted to practice, the haircutting services of their wives, the qualitative mean falls; if they substitute the services of higher-quality barbers, the qualitative mean rises. If both occur, as is likely, the outcome is an arithmetic consequence of the magnitudes of opposite movements.

Barber licensing laws are more restrictive in some states than in others. Both the Barbers' Union and the Master Barbers' Association oppose reciprocity of licensing among the states.[15] This is a rational policy for them, for, if reciprocity prevailed, people would enter through the widest door, and high entry costs in some states would be vitiated by low costs in others.

In addition to restricting entry into the trade, barbers also fix prices for their services either directly or by lobbying for state minimum-price laws for barber services. Fourteen states have such laws. It is reasonable to surmise that the fixed price is higher than a price determined by the demand and the (restricted) supply schedules. If the higher price is secured by price fixing rather than by imposing still higher entry costs, it may be either because the cost of pursuing price-fixing strategy

[15] *Journeyman Barber*, October 1957, p. 293; and June 1958, p. 197.

is lower than the cost of the latter, or because practitioners are impatient to have higher prices and seek to avoid the long run during which higher entry costs check new entrants.

The additional numbers who may be attracted to the barbering trade by the higher prices may be prevented from entering by the imposition of additional entry costs. Alternatively, when prices for barber services are fixed at levels above what would be determined by the intersection of the demand and supply schedules, there will be an excess of supply. Demand will then be rationed among incumbents in the industry. Hypothetically, the rationing could occur by having employing barbers choose among licensed barbers. But any barber unemployed as a result of this rationing process would be able to establish his own firm (i.e., to employ himself in an own-account business), since there are no legal restraints on establishing new barber shops, and the cost to already licensed barbers of entry into the industry is low. Therefore, the excess supply would cause demand to be rationed by the choices of consumers among barbers who present themselves for employment. The result would be an average less-than-full workweek in the barbering trade.

The specification and enforcement of a minimum price does not mean that barber services will be uniformly priced in all establishments. In some, prices higher than the minimum will be charged, and the products offered for sale will be of higher quality than those in lower-priced establishments. The same variation in prices and product quality will obtain in the absence of minimum price enforcement. The effect of minimum pricing is to cut off products at the lower range of the qualitative hierarchy and to cause consumers who would have bought them to turn to substitutes.