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The Regulation of Bank Entry

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This paper analyzes the regulation of entry into banking through government chartering. Entry regulations are shown to be necessary for other anticompetitive regulations to succeed in raising industry profits to above-normal levels. Empirically, we find that although regulation reduced entry during the 1936–1962 period, entry restrictions appear to have been relaxed since then. If entry has been unrestricted for some time, the deregulation of deposit rates or other forms of banking deregulation are unlikely to affect the aggregate profits of the banking industry, at least in the long-run.

Commercial banking in the United States is a highly regulated industry. Banking regulations pervade almost every aspect of the business, including whether, how and where a bank can do business. Ostensibly, the primary rationale for banking regulation is to protect and promote the safety and soundness of the financial system. Indeed, recently, as bank failures have mounted, some have called for increased regulation.

As a legacy of the 1930s, many banking regulations were implemented that did not deal directly with safety and soundness issues, but instead, restricted competition among banks themselves and between banks and other financial institutions. For example, various restrictions on entry, such as government control of chartering, geographic restrictions on branching, and product-line restrictions, at least have the potential to reduce competition.

Other regulations that do not deal with entry, such as consumer deposit rate ceilings, also have the potential to lessen competition. In fact, some economists have argued that the regulation of entry as well as other anti-competitive measures reflect the “capture” of the regulators by the regulated firms. Since banks as

a group have an interest in restricting competition (and thereby generating economic rents), they would promote regulations that would eliminate or reduce interbank competition or reduce competition from nonbank firms that provide substitute services.

Currently, many of these restrictions on bank competition are breaking down. Deposit-rate ceilings essentially have been eliminated on all but business checking accounts. Geographic restrictions are diminishing through the liberalization of branching laws and through regional interstate compacts. They are also being evaded through various legal loopholes such as “nonbank” banks.¹ Product-line distinctions between banks and nondepository financial firms also are blurring. What will be the impacts of these changes? Is banking becoming more competitive and less profitable, and will bank failures consequently mount as profits decline?² Or, will deregulation merely change the way banks compete with each other rather than increase the overall degree of competition?

The answers to these questions depend in large part on how effective entry regulations have been in actually reducing entry.³ In general, anticompetitive regulations that fix prices would be effective in reducing the degree of competition only if entry also were restricted. This is because if entry is not limited, the regulation of prices will not be able to suppress nonprice competition by new entrants. Con-

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versely, if entry is restricted, the degree of competition generally will be reduced even without other anticompetitive restrictions.

Purpose and Organization

The objectives of this paper are threefold. First, we analyze, in general, the effects of the government regulation of entry into an industry and the interaction of entry regulation with other types of regulation. We show that without entry restrictions, other regulations seeking to limit competition will be ineffective in the creation of economic rents. However, anticompetitive regulations may very well alter the form of competition. Conversely, effective entry regulations generally will limit competition and

thereby create economic rents even in the absence of other anticompetitive restrictions. Second, we apply this general analytic framework to the banking industry. We analyze empirically how regulation has affected the rate of entry into banking and whether entry restrictions have been relaxed recently. Finally, the implications of the current deregulatory trend in banking are explored in light of our findings about the regulation of bank entry.

Section I examines how entry restrictions alone or in conjunction with other regulations in theory would affect competition in banking. Then, in Section II, data on bank entry are analyzed to assess whether actual entry has been limited. Section III presents the summary and conclusions.

I. The Theory of Entry and Competition

Entry plays a prominent role in the economic theory of competition. Free entry is the key economic force that ensures that there are an optimal number of firms (from society's viewpoint) in a particular industry and that individual firms charge competitive prices and operate at optimum scales.⁴

In an industry in which individual firms operate independently (that is, they do not collude), the short-run supply curve is the (horizontal) sum of the marginal cost curves of the firms in the industry (at a particular moment in time). If, at the price determined by supply and demand, price is above each firm's average cost (because individual firms have increasing marginal costs), new firms will be attracted to the industry until price is forced down to equal average cost. Thus, in long-run equilibrium, the entry of new firms ensures that price equals (minimum) average cost (which also equals marginal cost), that an optimal number of firms are in the industry, and that profits are normal.

If, however, entry were restricted at less than the socially optimal number of firms, firms would produce at levels above their minimum average costs, prices would exceed average costs, and firms would enjoy above-normal

profits (even in the absence of collusion) unless firms were able to produce at constant costs. If firms could produce at constant costs, so that marginal and average costs were equal, then restrictions on the number of firms in an industry would have no effects on prices or profits as long as the firms did not collude. Thus, constant costs of production are equivalent in a sense to unrestricted entry.

Although there is an empirical literature that suggests that banking is characterized by constant costs, at least for banks above some minimum size, these econometric results are inconsistent with a wide range of other evidence.⁵ First, the new theory of firm size, developed by Rosen (1982), Oi (1983) and others, argues that each firm may have a U-shaped cost function even though firms of widely differing sizes appear to have similar measured average costs.⁶ According to this theory, any given firm will be subject to increasing average (and marginal) costs if it expands output beyond its equilibrium level, holding managerial talent constant. The apparent equality of average costs of firms of different sizes is due to higher levels of managerial talent at larger firms and greater compensation of more able managers.

Second, there is anecdotal evidence that

there are very strong economic forces propelling the nation toward interstate banking. This suggests that there must be important scale economies, at least in banking. Finally, if banking were characterized by constant costs, it seems unlikely that such a wide variety of regulations regarding the scale of their operations, such as merger regulation, chartering, and geographic restrictions would exist since such regulations would have no effect on competition, interest rates, or the pricing of bank services. Thus, it seems likely that, in banking, firms do have U-shaped cost functions.

Entry and the threat of entry are also strong forces that tend to eliminate cartels. For example, if the firms in an originally competitive industry (where price equaled average cost) succeeded in forming a successful cartel that restricted industry output by allocating output to members (and consequently raising prices), new firms would have a strong incentive to enter because of the above-normal profits to be earned. New firms would continue to enter until price equalled average cost and profits returned to normal levels. Since potential cartel members are aware of the incentives for entry caused by a cartel, cartels rarely form if entry is unrestricted. Thus restrictions on entry are a necessary precondition for other restrictions on competition to succeed in raising firms' profits to above-competitive levels.

Regulation and Entry Restrictions

A large number of government regulations are either intended to restrict competition and thereby raise the regulated firms' profits or have that effect. However, just as private restrictions on competition (for example, cartels) will be unsuccessful in restricting competition unless entry is limited, so will government regulations. Despite the much stronger enforcement tools at the government's disposal, competition can take place along so many dimensions that it is virtually impossible to prevent it by regulation.

For example, suppose the government attempts to restrict competition in an industry by imposing a minimum price above the competi-

tive level. Such an above-competitive price (relative to costs) would make an industry highly profitable and thus attractive to enter. If price cutting were permitted, new firms would enter and force down prices and profits to competitive levels by increasing the quantity of the product and cutting prices.

However, even if price cutting were prohibited, new firms would still enter and compete along various nonprice dimensions. As George Stigler stressed in his classic 1968a article, "When a uniform price is imposed upon, or agreed to by, an industry, some or all of the other terms of sale are left unregulated". For example, competition through quality, advertising, convenience and by providing additional nonpriced or underpriced services may all be viable forms of nonprice competition.

Unless nonprice competition is also fully prohibited, something virtually impossible to do without assuming full control of an industry (for example, nationalizing it), new firms will enter and existing firms will expand their level of nonprice competition until average costs are driven up to equal price. Thus, without entry restrictions, firms will compete away any potential economic rents due to regulation through nonprice competition. With entry restrictions, however, things are much different.

First, consider the effects of entry restrictions alone. If there were fewer than the socially optimal number of firms in an industry, then firms would price competitively (price would equal marginal cost) but price would exceed average cost and the firms would earn above-normal profits. If a regulation, such as a minimum price, were then imposed on the industry (set to equate industry marginal revenue with industry marginal cost), then the industry would have the potential to earn even larger (above-normal) profits depending on whether the potential economic rents were entirely competed away through nonprice competition. Thus, regulation has the potential to reduce competition and increase profits only in an industry in which entry is restricted.

But will economic rents be competed away through nonprice competition even in an industry in which entry is restricted?

With restricted entry, only existing firms would expand the level of nonpriced services (and goods). Assuming such firms face increasing marginal costs of nonprice competition (as is likely), existing firms would expand output to the point where the total marginal cost of the product plus the nonpriced services equals demand. Thus, with entry restrictions, above-normal profits would not be competed away unless nonprice competition can occur at constant costs—something that seems highly unlikely. Thus, regulation has the potential to increase the profits of the regulated firms to above-normal levels, but only if entry is also limited. Moreover, nonprice competition alone is unlikely to lead to competitive profit levels.

Entry and Deposit Ceilings

As an example of how entry restrictions interact with other regulations, consider the effects of the regulation of deposit interest rates on consumer accounts. Initially, if a deposit-rate ceiling were imposed below the market rate, existing banks would earn supranormal profits by having lower costs of deposits. This above-normal level of profits would provide strong incentives for both new banks to enter and existing banks to increase levels of convenience or nonpriced services until (average) deposit costs were bid up to competitive levels and profits returned to normal levels. The effects of the ceilings, however, would differ if entry also were restricted.

First, consider the case where entry is unrestricted. As long as new banks could enter at no cost disadvantage to existing banks, any excess profits would be eliminated in the long-run. This is because firms would continue to enter and provide various forms of underpriced conveniences until any excess profits were eliminated. However, such non-priced services would be expanded beyond the level they would have attained in the absence of regulation and, consequently, average (and marginal) deposit costs would be higher because consumers value these services at less than their costs (that is, from a consumer's viewpoint, services and interest are not perfect substitutes).⁷

If existing banks could not provide such services and conveniences at constant costs (that is, if existing firms face increasing marginal costs of expanding the provision of such services so that marginal costs exceed average costs), new firms would be attracted to such a regulated industry. Thus, binding deposit ceilings, as well as other forms of anticompetitive restrictions, may attract new entrants. Counterbalancing this force would be the overall decline in the industry caused by its increased costs compared to industries providing substitute products that are not subject to regulation. With unrestricted entry, deposit ceilings may affect the type of competition and the number of firms, but they will not affect the degree of competition or the profitability (aggregate economic rent) of the industry.

The effects of deposit interest ceilings generally will be very different with restricted entry. First, entry restrictions alone reduce the demand for deposits so that rates paid on deposits would be below levels that would prevail in the absence of entry restrictions. Thus, if the number of banks were limited by entry restrictions, this alone would cause deposit costs to be lower, loan rates to be higher and, consequently, profits to be higher than normal. Second, if binding ceilings were then imposed on such an industry, limiting deposit rates to below the (already low) levels the firms would set through competition with one another, the existing banks would then expand nonpriced services up to the point where interest plus marginal service costs of deposits equaled their marginal revenue products.

If individual banks faced increasing marginal costs of providing nonpriced services, additional services would be provided up to the point where marginal deposit costs equaled the value of deposits' marginal products, but average deposit costs would be less. Thus, with entry restrictions, consumer deposit ceilings may confer economic rents on existing banks.

Since the effects of (nonentry) regulation and hence deregulation on industry profitability depend in large degree on whether entry was limited, we now turn to an empirical analysis of the effects of chartering regulation on entry into banking.

II. Empirical Analysis of Chartering Restrictions

The United States has a "dual" banking system. Currently, persons wishing to start a bank can apply for a federal charter from the Comptroller of the Currency or apply to the appropriate state banking agency for a state charter. However, to obtain federal deposit insurance, newly chartered state banks must either receive approval directly from the Federal Deposit Insurance Corporation (FDIC) or become members of the Federal Reserve System. (Federally chartered banks are all members of the Federal Reserve System and all have federal deposit insurance.)

In general, competition among chartering agencies would seem to limit any single agency's power to restrict entry. This is because if one agency restricted entry severely, firms seeking charters would go to another agency. Over time, an agency with an overly restrictive chartering policy would find itself with few firms to regulate.

Prior to the creation of the FDIC and the passage of the Banking Act of 1935, which set up a federally administered "needs" criteria for chartering federally insured banks, there was active competition between the states and the federal government for chartering banks. However, with the creation of the FDIC, the competition for the chartering of *insured* banks was probably reduced since the owners of state-chartered banks had to apply either to the FDIC or the Federal Reserve to obtain federal deposit insurance. Thus, the federal government could control the number of (federally) insured banks, although the power to do so was diffused through three agencies.

As thrifts have gained more bank powers recently, thrift charters may be becoming good substitutes for bank charters. If so, competition from the Federal Home Loan Bank Board (FHLBB), which controls the chartering of federally insured savings and loans, may be introducing a new element of competition among federal agencies for the chartering of depository institutions.

Although the diffusion of chartering powers

through several federal agencies may have introduced a significant degree of interagency competition and made entry regulation relatively ineffective in actually restricting entry, it is an empirical question whether and/or to what degree entry has been limited.

Previous Studies

In a classic study (1965) dealing with the effects of chartering on the rate of bank entry, Sam Peltzman concluded that chartering reduced the rate of bank entry by at least 50 percent compared to what would have occurred without such restrictions. His finding is based on a comparison of the rate of entry prior to the passage of the Banking Act of 1935 and the creation of the FDIC, which he characterizes as the "free-banking" era, to the 1936-1962 period, during which he argues federal-state competition for the chartering of insured banks was effectively eliminated.

In conducting a study to determine what the effects of the 1935 Banking Act were, ideally one would want to control for all factors other than the passage of the Act that might affect entry. Especially important would be the profitability of the industry because increased profitability would lead to greater entry (and lower profitability would lead to less entry) all other things equal. However, to control for variations in profitability properly is difficult because profitability itself depends on entry restrictions (that is, it is endogenous). (In fact, the whole point of entry restrictions is to increase profitability.)

Although Peltzman included profitability as a control variable, he ignored its endogeneity. Thus, his estimates may have been less reliable than estimates that ignored potential (exogenous) changes in profitability altogether. By neglecting the fact that limited entry itself would increase profitability, he likely overestimated the effect of the Act on deterring entry.

A more recent (1974) re-analysis of Peltzman's data by Linda and Franklin Edwards tries to address the endogeneity of profitability.⁸ They argue that although Peltzman overstated

the effects of chartering restrictions, his conclusion that chartering restrictions substantially limited the rate of entry is valid.

Below, I take another look at these data and extend the analysis from 1962 through 1983, the last year for which complete data are currently available. I do not attempt to control for the effects of varying profitability on entry because of the difficulty in properly controlling (statistically) for the effect of regulation on profitability.

A Further Analysis

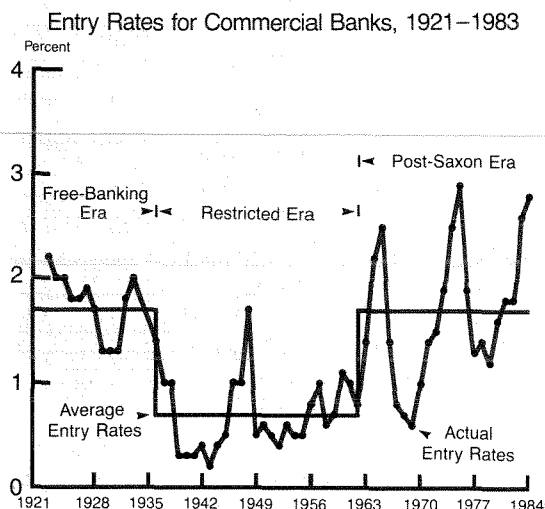
Although the Banking Act of 1935 did apparently substantially lessen state-federal competition for the chartering of insured banks during the 1936–1962 period, there was still interagency competition between the FDIC, the Comptroller, and the Federal Reserve.⁹

More recently, as S&Ls have gained more and more bank-like powers, the FHLBB may have increased the degree of competition among federal agencies for chartering. Because of this actual and potential competition among chartering agencies, it may well be that chartering would become a less and less *effective* restriction to entry over time. Below, we look at entry rates during the post-1962 period in addition to those during the 1921–1962 period analyzed by Peltzman to see whether entry rates have remained low or increased.

Entry rates (the number of banks opening in year t divided by the number of existing banks at year $t-1$) are plotted in Chart 1. The sources of the data used to calculate entry rates are the same as those used by Peltzman and are described in the Data Appendix. For the free-banking period, 1921–1935, it is somewhat difficult to define entry properly because of the relatively large number of reopenings of previously suspended banks and the difficulty in distinguishing new openings from re-openings. The re-openings of suspended banks was especially high during the 1931–1935 period before FDIC insurance reduced the number of bank failures.

I have chosen to define entry as simply the number of banks opening regardless of whether they were new openings or re-openings, partly

Chart 1



because this is the only consistent definition in the published data across the whole 1921–1983 period, and partly because re-openings also represent a new source of competition. Because entry rates might be somewhat overstated by this procedure, especially during 1933 and 1934 when the number of re-openings was very large, I have excluded data for these years from the analysis. This has the effect of reducing the average entry rate during the free-banking period.

For the period 1921–1935, the average rate of entry was about 1.7 percent per year. In contrast, during the 1936–1962 period, the average rate of entry declined to only .7 percent a year, a statistically significant decline (see Chart 1). This decline of approximately 50 percent is approximately the same magnitude found by Peltzman using his more complex but flawed statistical procedure. Thus, the evidence supports the notion that there was a significant decline in the rate of bank entry during the period following the passage of the Banking Act of 1935 until 1962.

On November 15, 1961, James Saxon was appointed Comptroller of the Currency. He was widely regarded as a proponent of the national banking system and was viewed as being much more liberal than his predecessors in his chartering policies. The data in Chart 1 suggest that initially his policies did have a significant effect

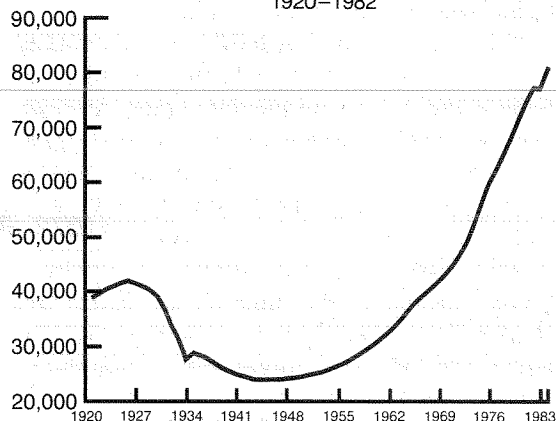
on raising entry rates. However, by the last year of his tenure (1966), entry rates had fallen back to the pre-Saxon level. Then, beginning in 1968, entry rates again began a sharp upward rise and continued to follow a cyclical pattern unique to the post-1962 period.

Looking at the 1962–1983 period as a whole, entry rates averaged essentially the same as during the 1921–1935 period. Thus, it appears that Saxon began an era where entry into banking was no more difficult than during the “free-banking” era. If correct, this means that banking has been a more competitive industry, at least since 1962.¹⁰ However, another interpretation of the data in Chart 1 would be that entry restrictions were gradually relaxed beginning perhaps as early as 1950 since the data would not be inconsistent with an upward trend in entry rates starting then. In either event, entry now does not appear to be significantly restricted, at least compared to the free-banking era.

Looking at entry in banking only in terms of entry by new banking organizations probably understates entry because of the possibility of entry through branching, entry by S&Ls, and increased competition by nondepository institutions (such as Merrill Lynch). For example, although the total number of banking and S&L offices was relatively constant from 1934 to the early 1950s, the number of offices has almost tripled since then (see Chart 2), and the number of offices per real deposit dollar has shown an upward trend since 1962 (although it has not reached anywhere near the level of the 1920s and 1930s).

The recent deregulation of banking, specifically the removal of consumer deposit-rate ceilings, appears to be taking place in an environ-

Chart 2
Total Banking & Savings Association Offices,
1920–1982



ment in which entry restrictions have been effectively eliminated or at least have been substantially relaxed. If so, deposit-rate deregulation should have little or no long-run effects on the profitability of the banking industry as a whole because free entry ensures that, in the long-run, profitability will be at normal, competitive levels.

However, individual banks may have different experiences as they make the transition from nonprice to price competition.¹¹ Further, if entry restrictions had been effectively removed prior to deregulation, then deregulation, by eliminating the inefficiencies inherent in nonprice competition, should have led to an expansion of the banking industry relative to its nonbank competitors and this in turn would increase incentives for entry. The effects of deregulation may explain the very high entry rates of the last few years shown in Chart 1. They are also consistent with anecdotal evidence that there has been a recent surge in new bank start-ups (see Brannigan 1985).

III. Conclusions

The data on bank entry suggest that the regulation of entry through chartering has been much less restrictive in the post-Saxon era. Since 1962, entry rates have on average been equal to those before 1936, a period during which, it is argued, entry was relatively unrestricted.

If, in fact, bank entry has been unrestricted since 1962, then various anticompetitive regulations, such as deposit rate ceilings, would not have been effective in reducing the degree of competition in banking. (They would, however, have made the banking industry less efficient.) This in turn means that bank profits were

not enhanced (or at least are not currently being enhanced) by these anticompetitive restrictions.

If the degree of competition and banking profits have been at the level they would have been without entry restrictions, then deregulation of consumer deposit rates is unlikely to af-

fect banking profits or the degree of competition, at least in the long-run. Thus, the current calls to reregulate banking—to reduce competition and bolster bank profits—to stem the recent spate of bank failures are not focusing on the real causes of these failures.

Data Appendix

All commercial banking data except those so noted, including the number of banks and branches¹ in existence in a given year, the number of new “primary” organizations and the total deposits data², come from publications of the Board of Governors (BOG) of the Federal Reserve System (FRS).

Series for the 1921–1940 period³ come from the U.S. BOG of the FRS, *Supplement to Banking and Monetary Statistics*, Section I, 1962. (Note: This supplement was originally released in Sections in 1943 as a revised version of available data from the period 1914–1941. It was published in 1962.)

The 1941–1970 series are from the U.S. BOG of the FRS. *Banking and Monetary Statistics*, 1941–1970, 1976.

Data for the 1970–1979 period were taken from the *Annual Statistical Digest*, 1970–1979, published in 1981 by the BOG.

Since 1979, the *Annual Statistical Digest* has been published yearly, and they were used on a yearly basis from 1980 through 1982.

Data for 1983 for commercial banks, branches, new openings, and total deposits were obtained directly from the BOG; 1983 data on savings and loans was obtained directly from the FHLBB.

Although these data are from several different publications (of primarily the same sources), all series are consistently defined, with the exception of those indicated.

¹ Commercial bank branch data for the year 1920–1934 were obtained from the *Historical Statistics of the United States*, Colonial Times to 1970, Part 2, U.S. Department of Commerce, Bureau of the Census, 1975.

Branch data for thrifts was collected from the *Savings and Home Financing Source Book*, 1952–1955, U.S. Federal Home Loan Bank Board, and the *Savings and Loan Fact Book*, 1962, 1965, 1980, U.S. League of Savings Association, and represent total insured (federal- and state-chartered) savings and loan associations.

² Total deposits data for savings and loan associations were taken from the *Source Book* (see above citing), 1955, Federal Home Loan Bank Board, for the years prior to 1955. Citibase was used from 1955 to 1983 (actually from BOG FRB Table 1.7).

Total Real Deposits were calculated using an implicit price deflator (wholesale) from the *Historical Statistics of the United States, Colonial Times to 1957* (see above).

Total offices per real deposit dollar was calculated by dividing total bank and thrift offices by the sum of their total real deposits.

³ The 1921–1940 portion of the total number of commercial banks in existence (at year-end) series was multiplied by a factor of 1.003919373 to correct for a change in the series definition from “All Incorporated” to “All Commercial” banks after 1940.

FOOTNOTES

1. The legal status of nonbank banks was unclear at the time this article went to press.
2. Failures are less likely in an industry where firms are earning above normal profits (economic rents). In such industries, it takes a larger random shock to reduce demand or increase costs to make earnings (or net worth) negative and drive the firm out of business.
3. Chartering regulation, branching restrictions, and product-line regulation are all forms of entry regulation.
4. Throughout this paper, I use the definition of a barrier to entry that was first formulated by George Stigler (1968b): "A barrier to entry may be defined as a cost of producing (at some or every rate of output) which must be borne by a firm which seeks to enter an industry but is not borne by firms already in the industry."
Free or unrestricted entry means there are no barriers to entry. This concept of a barrier to entry contrasts sharply with the view that any cost of doing business is a cost of entry. That is, I do not view capital requirements (or land or labor requirements for that matter) as costs of entry per se, as opposed to costs of doing business.
5. See Gilbert (1984) for a review of this literature.
6. See Keeley (1984) for evidence supporting this notion.
7. See Keeley and Zimmerman (1985) for an elaboration of this argument.
8. However, they do not employ a simultaneous equations technique. Thus, one may also question the validity of their estimates.
9. See Kenneth Scott (1979).
10. An alternative hypothesis consistent with these data is that some other force, such as an exogenous increase in banking profitability, caused the rate of entry to increase during these years. However, it seems unlikely that an increase in profitability would persist over a 20-year period.
11. It is conceivable that deregulation might have a short-run negative effect on profitability as specific capital used to support nonprice competition depreciates in value. However, this factor would have no lasting effect if entry had been unrestricted prior to deregulation.

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