

# Research Paper

**THE HIDDEN HAND AND THE LICENSE RAJ:  
AGE AND THE GROWTH OF FIRMS IN INDIA**

**WORKING PAPER #9705-14**

**BY**

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# THE HIDDEN HAND AND THE LICENSE RAJ: AGE AND THE GROWTH OF FIRMS IN INDIA

## *Abstract*

The study examines the relationship between firm age and growth for a large sample of Indian firms using contemporary data. Firms are classified into three categories: those incorporated prior to 1956; those incorporated between 1956 and 1980; and those incorporated after 1980. No relationship between age and growth is established for firms incorporated prior to 1956, while a negative relationship is established for firms incorporated between 1956 and 1980, the years when the command and control industrial policy regime (popularly known as the “license raj”) was in operation. Conversely, for firms incorporated after 1980 when market forces began to be encouraged the age and growth relationship is established to be positive. Additionally, the relationship between size and growth is found to be negative, suggesting that a process of industrial fragmentation may be taking place in Indian industry.

## 1. INTRODUCTION

This paper examines the relationship between the era of birth and subsequent growth patterns for a large cross-section of firms in India. Post-independence Indian industrial policy regimes are classified by three eras (Ahluwalia, 1985; Majumdar, 1996). The first era includes the period upto 1956, before the industrial policy resolution was passed in which the role of the state as manager of industrial progress was articulated in detail. The second era, between 1956 and 1980, is one when the full force of the command and control regime was felt, following the promulgation of the industrial policy resolution of 1956. This era has been popularly called the "license raj." The third era, after 1980, is when "reforms by stealth" (Bhagwati, 1993) commenced; in this era the role of market forces, competition and entrepreneurship were recognized as the drivers of industrial progress (Marathe, 1989).

Guha (1990) notes that the balance of opinion on the relative success of market mechanisms versus control over economic activities has rested on the ability of one system to mobilize incentives. The issue of whether free-markets, or command and control systems, generate the right incentives so as to induce superior performance by firms becomes an issue which depends on the nature of policies in place. Items which figure in industrial policy lists can be macro-oriented: as to the role and weightage assigned to light, medium and heavy industries, ownership patterns desired, the roles of foreign capital, foreign technology and institutional finance, and location guidelines. At micro-levels, where impact on firms' growth patterns are observed, issues can relate to: the operating size of units and scale, maximum production possible given market demand and factor-supply conditions, and choice of operating technologies permissible to firms. In addition, the third major element includes an appraisal mechanism to monitor progress according to the stated objectives (Marathe, 1989). Whether Indian

industrial policy eras have marshaled the right sorts of incentives which influence economic agents to maximize firm-level outcomes remains an empirical question.

A question is why should the era in which firms are born influence their subsequent growth patterns? Stinchcombe (1965: 154) has argued that “organizations formed at one time typically have a different social structure from those formed at a different time;” indeed, a substantial body of evidence (Boeker, 1988; Kimberley, 1975; Meyer and Brown, 1977; Romanelli, 1993; Tucker, Singh and Meinhard, 1990) establishes the importance of founding conditions on firms’ subsequent performance. Founding conditions define the institutional environment for firms (DiMaggio and Powell, 1983), and thereby the normative framework within which firms operate. While conformity with norms increases a firm’s chances of being successful in its current operations (Meyer and Rowan, 1977; Oliver, 1991), behavior according to the framework also increases the chances of firms being imprinted by the norms. Such imprinting has long-term consequences on firms’ performance (Boeker, 1989; Kimberley, 1979), and the study of the relationship between the time of birth and firms’ subsequent growth abilities is important in the analysis of industrial behavior.

Additionally, the times of birth for the present study - prior to 1956, between 1956 and 1980 and after 1980 - helps define firms’ age. Marshall (1920) had suggested that as firms become older they become lazier; and, the limited evidence that exists supports this view. For the United Kingdom, Dunne and Hughes (1994) found that younger companies grew faster than older companies. Comparatively for the United States, Evans (1987) also found that firms’ growth decreased with age. Contemporary models, however, demonstrate that as firms become older they become wiser and make less mistakes, because learning has taken place (Jovanovic, 1982). Therefore, there are two alternative perspectives

with which to evaluate the relationship between a firm's age and its rate of growth. The analysis thus also sheds light on an important theoretical issue in the industrial organization literature for a set of key Indian firms. The paper unfolds as follows. The following section describes the analysis carried out. Section 3 describes the results obtained, while section 4 sums up the paper.

## 2. THE ANALYSIS

The sample for which the empirical analysis is carried out consists of over 1,000 firms which are listed on the Bombay Stock Exchange. Initially, a random sample of over 3,000 firms were extracted from the data-base, but missing variable problems finally brought the sample down to just over a thousand firms. This is a very large sample, anyway, compared to previous studies of the Indian industrial experience which have been based on aggregate industrial statistics, and firm-level analyses of Indian industrial issues are extremely rare in the literature. This sample has been used to address other relevant issues with respect to Indian industry (Majumdar and Chhibber, 1997). If firm-level analyses do exist for Indian industry, often the data used are over ten years old and the generalizations drawn from such studies have no meaning in the currently-changed Indian context.

The source of the data is the Center for Monitoring the Indian Economy in Bombay, India. The data collected for each firm relates to a specific year between 1988 and 1994, with the reason for data collection ranging over a number of years being the availability of information with respect to several key variables. The dependent-variable in the regression model is measured as sales growth between the year for which the data are reported and the previous year. In the literature on firms' growth, growth is normally measured as either growth in sales (Geroski,

Machin and Walters, 1996), growth in employment (Evans, 1987) or growth in assets (Dunne and Hughes, 1994). Because of data availability limitations, we use growth sales as the relevant dependent variable.

The era of birth, or age categories which are the primary explanatory variables of firm-level growth, are measured as the year for which the information is available for firms in this data set minus the year of incorporation. The year of incorporation can be: during era 1, before 1956; or during era 2, between 1956 and 1980; or during era 3, after 1980. Specifically, each age category, or the era in which the firms were incorporated, captures a time of birth in which the founding conditions were unique.

*Era 1 - The period prior to 1956:* In the post-independence period, after 1947, the government has always had a hand in India's industrial policy and development. Two mechanisms to implement industrial policy have been systems of industrial licensing, and import licensing, to foster import-substituting indigenous industrial development. A 1948 Industrial Policy Resolution sought government control of industrialization, operationalized through the Industries (Development and Regulation) Act of 1951 (IDR Act, 1951). It stated that the role of government was to create industrial wealth, rather than develop guidelines for devolving industrial assets into dispersed hands as a means of redistribution. Thus, the role of the state as an important industrial entrepreneur was articulated and the role of the state-owned sector legitimized. If, however, private firms existed in certain industries where the state was to assume a dominant role such as steel, these firms had full freedom to undertake efficient production and expansion. The role of market processes was recognized with the role of government being an owner of firms. The policy ethos was the development of national capabilities; the



state's role was both primary, to step in where private capital was not forthcoming in actual quantity, and secondarily also to correct regional lop-sidedness in location.

*Era 2 - The "License Raj" period between 1956 and 1980:* In 1956 a fundamental mind-set shift took place among policy makers, and a second Industrial Policy Resolution was enunciated. This resolution guided industrial policy-making in India for almost a quarter of a century. The principle that the state was to be the dominant industrializer was maintained. However, the resolution went further and operationalized precisely the nature of public ownership. While private firms were likely to be occasionally authorized to produce items which were reserved for the state sector, the state sector could enter at will into sectors where private firms were dominant players. The resolution also specifically mentioned that industrial undertakings ought to behave in consonance with the social and economic policy objectives of the state, howsoever defined. For instance, the second five-year plan document explicitly stated that: "a comprehensive plan cannot be seen through as the basis of merely overall fiscal and monetary controls" (1956, 38).

Mohan and Aggarwal (1990) list how in the 1960s and 1970s control over resources got operationalized into a number of steps that had to be gone through by an entrepreneur before production could commence. There were many major and comprehensive controls which had been negotiated by any industrial unit. These included, inter-alia, procedures relating to acquiring: a letter of intent to start an industrial firm, capital goods imports clearances, foreign-technology collaboration clearances, capital issue clearances, raw materials import clearances, essentiality clearances, indigenous non-availability of equipment and materials clearances, monopolies clearances, small-scale sector clearances and clearances for locating in non-municipal areas. The multiplicity of administrative hurdles

not only reduced flexibility in launching projects, but inevitably tended to increase both project and production costs.

In the 1960s several review committees were also set up. An inquiry, chaired by Mr. T. Swaminathan, into procedural issues reported in 1964, and an inquiry, chaired by Dr. R. K. Hazari, into the role of industrial policy as an instrument for development reported in 1967. The 1967 report concluded that whether industrial licensing served to channelize investment into desired directions appeared doubtful. There was very little follow-up of licensing to see that approved projects were completed on time. Also, in attempting to cover almost the whole range of large-scale industrial development licensing, the act (I(D and R) Act, 1951) inevitably lost sight of the relative importance of different projects and products; i.e., whether critical to the economy or otherwise, all applications underwent similar processing.

Concomitantly, during the 1960s two key bodies were appointed to study the concentration of economic power in Indian industry, and evaluate whether the licensing regime had a role to play in fostering such concentration. These committees were the Monopolies Inquiry Commission of 1965, chaired by Justice K. C. Dasgupta, and the Industrial Licensing Policy Inquiry Committee (ILPIC) of 1969, chaired by Mr. S. Dutt. Paranjape (1988: 2343), who was a member of the ILPIC, has paraphrased some key findings of the ILPIC: "in respect of licensing, the system had failed practically on all counts.....Licenses were issued in excess of capacity targets even in nonessential industries.....Influential parties and large houses were permitted to pre-empt capacities."

The industrial policy system permitted administrative excesses to take place, which in turn fostered rent-seeking; this has been commented on, inter-alia, by Bardhan (1984) and Bhagwati and

Desai (1970). Bhagwati (1993: 49) has also written "Few outside India can appreciate in full measure the extent and nature of India's controls until recently. The Indian planners and bureaucrats sought to regulate both domestic entry and export competition, to eliminate product diversification beyond what was licensed, to penalize unauthorized expansion of capacity, to allocate and prevent the reallocation of imported inputs, and indeed define and eliminate virtually all aspects of investment and production through a maze of kafkaesque controls. This all-encompassing bureaucratic intrusiveness and omnipotence has no rationale in economic or social logic; it is therefore hard for anyone who is not a victim of it even to begin to understand what it means."

Because there were a number of government agencies in the overall set-up to implement many parts of the system, not only did a nexus of industrialists and managers develop who wanted to see the system stay, but an equally large nexus of bureaucrats developed. Among the large number of agencies within the government each sought to enforce the idiosyncratic aspects of control they possessed over industry, so that they too could enjoy bureaucratic rents. Each agency and its supporting interest group could have reforms measures stalled if they went against their specific interests. Marathe (1989: 100) has written: "the system seemed to have acquired a momentum of its own; any attempts to reduce its procedural rigors or to make peripheral improvements were rejected by the system like an unwanted transplant. Over the years a formidable and pervasive vested interest had been built up in the continued operation of an elaborate system of regulation in which different agencies within the government and at different levels of responsibility had to be involved."

The industrial policy regimes moved in the decades from the 1950s to the 1970s from being development-oriented to being regulation-oriented. While the role of the state as an investor had

grown, the role of government as continuously influencing micro-level decisions had also widened very considerably, but implementation of policy was ad-hoc and confusing to industry. For example, the late 1970s were characterized by the presence of contradictory policy-related actions. IBM and Coca-Cola, as multinational corporations, were given marching orders out of India; at the same time, Siemens was welcomed into India as a major supplier for power generation equipment projects by the administration. After the installation of the short-lived [1977 to 1979], coalition-based government of Morarji Desai initial attempts were made at liberalization, but they miserably floundered. In the even more short-lived [1979-1980] Charan Singh regime all economic policy was made subservient towards agricultural development.

*Era 3 - The period after 1980:* With the return of Mrs. Indira Gandhi to power after the elections in 1980, the aim of industrial policy as being one which would engender progress and development, through enhancement of the competitive process, began. The seventh five-year plan (1985-1990) document is unique among plan documents in spelling out the role of firm-level, micro-economic factors which would drive industrial progress, and in laying out the appropriate policy regimes which would foster the development of firm-level capabilities.

For example, product development was thought to be a significant area for industries. In their abilities to introduce new products, at competitive costs, industries would show their mettle. However, to do so needed the articulation of policy regimes which encouraged adoption of new foreign technologies and the establishment of plants with globally-competitive scale parameters, as opposed to fragmentation of capacity among numerous firms. That empirical realities were being recognized, and evidence that a major change of heart was taking place is reflected in a statement in the seventh-plan

document: that the approach of government bodies lay "not in the extensive powers to control and regulate, but in their efforts to provide technical and administrative guidance to industries. The performance of these tasks will be informed less by legal or procedural codes but by better access to data and knowledge" (1985, 7.42). Presumably, data and knowledge would enable the government to enhance the market process which would then generate competition.

In the early 1980s the ratification of surplus capacity as part of actual capacity also commenced, and the need to use existing capacity in place was well-recognized by senior policy advisers. 1982 was declared as the Productivity Year, and in that year a scheme of re-endorsement of capacity was introduced. Till then, existing capacity in place could not be used to meet production quotas, even if market demand existed, if such capacity was in excess of authorized limits (Ahluwalia, 1985). Now, such excesses were allowed to be used for productive purposes. Subsequently, the seventh five-year plan document recognized the important role of technological modernization and the upgrading of manufacturing capabilities in enhancing firm-level growth.

*The Impact of Size:* While the impact of age on firms-level growth is a topic that has been studied, an issue that has been studied in considerably more theoretical and empirical detail is the relationship between size and firms' growth (Adelman, 1958; Chesher, 1979; Dunne and Hughes, 1994; Evans, 1987; Geroski, Machin and Walters, 1996; Hall, 1987; Hart, 1962; Hart and Prais, 1956; Hymer and Pashigian, 1962; Ijiri and Simon, 1964; Mansfield, 1962; Samuels, 1965; Samuels and Chesher, 1972; Simon and Bonini, 1958; Singh and Whittington, 1975; Steindl, 1965; Sutton, 1997). While the literature is large, the results depend on time and place and no generalizations can be made.

The key theoretical insight was provided by Gibrat (1931), who suggested that there should be no difference between the proportionate rates of growth between small and large firms. In other words, the ability of firms to grow is independent of their absolute size; this implies that given the presence of a reversion to the mean effect, whereby larger firms will not grow faster than smaller firms, market or industry concentration is unlikely to occur. Whether or not Gibrat's law of proportionate effect holds up in the Indian context has important implications because the results will provide evidence as to whether or not a process of industrial concentration is currently at work in India. Given the conceptual implications involved in the size and firm-level growth relationship, we control for size in the model.

*Model Estimation:* To test the impact of age on growth two testing strategies are feasible. First, the approach is to introduce age as a continuous variable ranging between 0 and 100 percent. Under this approach we can evaluate if there is a general relationship between age and growth. In India, as discussed earlier, there are three critical policy eras: prior to 1956, between 1956 and 1980, and after 1980. These lead to different age categories and potentially different growth outcomes. A general problem arises as a result of this categorization of birth. There cannot be a linear function that best represents the data; rather the age and growth relationship is likely to be non-linear. While linearity is attractive theoretically, given institutional considerations underlying the age and growth nexus it is empirically untenable. Therefore, a second testing strategy has to be adopted.

One way to determine the influence of these different age categories is to estimate the independent impact of the various categories of age through a series of separate estimations, or through a series of dummy variables, which is tantamount to estimating separate regressions for

each ownership category (Maddala, 1977). These approaches, however, rule out any continuous movement from one age category to another (Greene, 1990), and also do not use all the information contained in the data for model estimation (Boyce, 1987). An alternative approach builds a relationship between the various categories through a series of linear segments, but forces these linear segments to meet at the end-points of each age category. This approach is captured by a class of models called spline or kinked-regression models (Johnston, 1984; Poirier, 1976).

Originally, spline regression were used for time-series regression models, where the dependent variable could have time-varying relationships with the independent variables (Boyce, 1987; Garber and Poirier, 1974). A spline model is equally appropriate for cross sectional analysis, especially when the key independent variable is continuous with very definite breaks or kinks, and there have been a number of uses of spline-regression models in the literature with cross-sectional data to estimate important relationships (Geroski, 1981; Schwalbach, 1991).

The general function to be estimated is:

$$GROWTH = \alpha^0 + \beta^0 AGE \quad \text{if } DATE\ OF\ BIRTH < 1956 \quad (1),$$

$$GROWTH = \alpha^1 + \beta^1 AGE \quad \text{if } DATE\ OF\ BIRTH \geq 1956 \text{ and } \leq 1980 \quad (2),$$

$$GROWTH = \alpha^2 + \beta^2 AGE \quad \text{if } DATE\ OF\ BIRTH > 1980 \quad (3),$$

where *AGE* is the observation year minus the date of incorporation and *DATE OF BIRTH* is the year of incorporation.

The values for the various categories of ownership or the threshold levels of ownership, are called knots. The knots are determined based on the discussion, with natural kinks in the data being provided by the government policy eras. As a result, we have 2 knots, at 1956 and at 1980.

The function can be specified using dummy variables:

$$d_1 = 1 \quad \text{if } AGE > t_1 \quad (4),$$

$$d_2 = 1 \quad \text{if } AGE > t_2 \quad (5),$$

where  $t_1 = 1956$  and  $t_2 = 1980$ .

Combining all three equations yields:

$$GROWTH = \beta_1 + \beta_2 AGE + \gamma_1 d_1 + \delta_1 d_1 AGE + \gamma_2 d_2 + \delta_2 d_2 AGE + \varepsilon \quad (6).$$

To ensure continuity, the segments should be joined at the knots, or

$$\beta_1 + \beta_2 t_1 = (\beta_1 + \gamma_1) + (\beta_2 + \gamma_1) t_1 \quad (7),$$

and

$$(\beta_1 + \gamma_1) + (\beta_2 + \gamma_1) t_2 = (\beta_1 + \gamma_1 + \gamma_2) + (\beta_2 + \delta_1 + \delta_2) t_2 \quad (8).$$

These represent linear restrictions on the coefficients. Collecting terms in (7) and (8), we obtain:

$$\gamma_1 = -\delta_1 t_1 \quad (9)$$

$$\text{and } \gamma_2 = -\delta_2 t_2. \quad (10).$$

Inserting (9) and (10) in (6), we obtain:

$$GROWTH = \beta_1 + \beta_2 AGE + \gamma_1 d_1 (AGE - t_1) + \gamma_2 d_2 (AGE - t_2) \quad (11).$$

Introducing these constraints adjust the intercepts so that slopes for the various categories join at the knots.

### 3. RESULTS

The regression results are obtained after controlling for a number of other additional factors which may affect firms' growth. These are: capital intensity, fixed assets growth, leverage, debt usage pattern, level of inventory holdings, liquidity, level of exports, exports growth, level of imports, level of



foreign ownership, level of government ownership, level of indirect taxes borne, level of employment costs, level of advertising and marketing expenditures, diversity of operations, holding company effects, and time effects as to whether the observation is for the period prior to the current liberalization which began in 1991 or later.

The coefficient value capturing the relationship between growth and birth of firms prior to 1956 is  $0.677$  (*standard error: 0.813*) and is not significant. The coefficient value capturing the relationship between growth and birth in the period between 1956 and 1980 is  $-2.776$  (*standard error: 1.426*) and is significant at the 95 percent level. The coefficient value capturing the relationship between growth and birth prior in the period after 1980 is  $21.764$  (*standard error: 5.229*) and is significant at the 99 percent level. The coefficient of the size variable is  $-23.318$  (*standard error: 10.764*) and is significant at the 95 percent level, indicating that a process of industrial concentration is not taking place in India. Rather, smaller firms are growing faster than larger firms and a process of fragmentation may well be taking place within Indian industry. The overall regression is significant at the 99 percent level.

The findings are extremely important and interesting with respect to the behavior of Indian industry. Younger firms are more dynamic and grow more rapidly. Older firms are, however, not necessarily all laggards. Firms incorporated prior to 1956 are neither slow growers or fast growers. However, is the firms which were born in the "license raj" which are the slow growers in contemporary India. Founding conditions, therefore, do matter in significantly influencing firm-level growth, and for firms born in the period 1956 to 1980 in India inertia and path dependencies may well constrain their

ability to grow in the liberalized environment. Conversely, firms born after 1980, in the period when markets did begin opening-up, are likely to do well.

It is useful to analyze the environmental conditions for firms born in the 1956 to 1980 period. During the "license raj" there were little or no incentives for firms to enlarge production as a result of emergent competitive market pressures. Decisions on raw material inputs, foreign exchange, foreign technology purchases, types of collaborations to be undertaken, and the amount of domestic capital to be made available to any given industrial unit were also decision items that the state began to control, apart from controlling capacity dispensations themselves. Activities normally undertaken by firms, such as pricing and acquisition of raw materials, distribution of the final product, and how to allocate foreign exchange within a project, were all guided and heavily influenced by functionaries in the Ministry of Industrial Development.

In the late 1950s, there was an abandonment of indicative planning for the industrial sector. Industries were given explicit directions as to the areas that they could enter, and the amount of investments possible in each sector. Particularly from the second-plan onwards, there were increasing concerns with quantity controls and capacity management. Rather than provide macro-level incentives to participants in product and factor markets that were progressively becoming competitive, control over resources became the policy premise and the focus of strategic and operational decisions began to be taken away from the hands of industrial enterprises, with a likely impact on subsequent performance since explanations for poor performance could be laid at someone else's door.

The regimes that existed in India in the 1960s and 1970s were "more of the same" 1950s approach (Ahluwalia, 1985). Coupled with a foreign-exchange crisis arising after the 1962 China war,

at the start of the third-plan, 1961, there was realization that lack of monitoring allowed entrepreneurs to exploit the system, and the administrative burden of expanding industrial activity created such delays that criticisms of the system could no longer be avoided. However, in spite of conclusions that the industrial policy had failed, and concentration of industry was taking place as a result of licensing, the status-quo continued.

The policy framework starting from the late 1960s is characterized as one of detailed administrative day-to-day direction (Jalan, 1991; Marathe, 1989). Controls over all facets of operations of firms became detailed and all-pervasive, not just control over strategic issues as to whether particular industrial houses could enter certain sectors of industry. Because the license specified the maximum capacity of any undertaking, over time these limits became the maximum actual production permissible. Production beyond these limits were deemed to be contravention of law, even though demand shortfalls might exist. Also, enterprises desiring to merely alter product-mixes at their plants, even with existing capital equipment, had to seek approval. In the approval process, the judgment of the policy makers in the government prevailed in all areas, including areas such as the size, nature of the equipment, processes used and physical plant location, over that of entrepreneurs.

Similar controls were placed over foreign trade. Bhagwati and Srinivasan (1975) have extensively analyzed the trade policy regime in India, the origins of which lie in two laws passed in the late 1940s and mid 1950s: the Imports and Exports (Control) Act of 1947 and the Import Trade Control Order of 1955. The order of 1955 brought imports under the control of bureaucratic discretionary licensing, particularly those items for which a "domestic angle" and infant industry protection argument could be made (Ahluwalia, 1985). The scope of quantitative imports licensing via

the Import Trade Control Order of 1955 increased, particularly in the 1960s, and rules were designed to allocate imports by specific product type and by product user category. Along with these quantitative import restrictions, there were price restrictions in many key industries: coal, drugs, edible oils, fertilizer, steel and sugar, and restrictions on foreign investments with promulgation of the Foreign Exchange Regulation Act (FERA) in 1973.

In spite of lacunae, the system continued well into the 1970s and the regime easily transited into one in which administrative direction-giving became the primary task of policy makers. While such administrative procedures were ostensibly democratically-oriented, with a great deal of checks and balances, these checks showed the process of development and, more important, each administrative agency attempted to broker power by delaying the whole chain. In the 1970s, particularly after the 1975 "emergency," various licensing policy liberalization measures were announced. But none of these measures had any impact because no measures were automatically implemented (Marathe, 1989), and every liberalization measure was treated as a new policy instrument, rather than as a negation of past policy. Firms had to go back to the policy makers to have these liberalization measures enforced.

Environmental forces define the norms of behavior that firms adopt, influence the nature of incentives firms face and enhance or retard motivations for attaining high performance. Because every major strategic and operational decision was relegated to the bureaucracy, even if a license had been obtained there were no factors over which entrepreneurs had control. Licensing allowed a finite market size to be made available to each entrepreneur who succeeded in acquiring a license. Hence, there were no incentives for survival in a competitive battle-ground. How the officially-sanctioned market was to be served was dictated to by the authorities. Thus, there were no incentives left for industrialists to

display any creative or craftsmanship skills, for example in product differentiation. Rather, expertise in managing the bureaucratic interface was critical. Since the government dictated all strategic and operational decisions, firms merely had to go through the motions of undertaking industrial activity, as Bhoothalingam (1993) has recounted. The mind-set engendered by growing-up and operating during the "license raj," which still seems to be present in firms born during that period constraining their ability to operate successfully in the contemporary liberalized environment, has been one of rent-seeking and managing the bureaucracy rather than one oriented towards success in the market place.

Conversely, opening up of the market to foreign technology purchases, allowing plants with sufficient economic scale to be established, and encouraging the establishment of "sunrise" industries are characteristics of the policy environment from the early 1980s (Marathe, 1989). In import licensing, particularly with respect to capital goods, the realization that India had to learn skills and adapt new technology from abroad led to significant lessening of import restrictions. This occurred from the early 1980s, after a Committee on Imports-Exports Policies and Procedures (headed by Dr. P.C. Alexander) had reported. The realization industry faced was that business practices "as usual" in managing the bureaucratic labyrinthine were less critical than the prowess needed in managing operations, production processes, marketing strategies, and the onslaught of potential competition. Changing incentives and norms, and the alteration of factors which earlier guaranteed industrial survival, means that a growth and efficiency orientation carries a high premium. Thus, firms born after 1980, and which are relatively untainted by the operational competencies acquired during the "license raj," display a predilection for growth that is not displayed by the older firms. It is these firms which are likely to propel future Indian industrial progress forward.

#### 4. CONCLUSION

This paper has evaluated the relationship between firms' age and growth for a very large cross-section of Indian firms, using contemporary data. Specifically, firms were classified as being born, or incorporated, in either the period prior to 1956, the period between 1956 and 1980 which was the "license raj," and the period after 1980. A negative relationship was found for firms born during the "license raj," suggesting that the command and control regime which the "license raj" was based on has had a deleterious influence on the ability of firms to adapt themselves to the contemporary liberalized industrial environment. Comparatively, firms born after 1980 display a positive relationship between age and growth, implying that the spirit of entrepreneurship is very much alive in India. Additionally, the relationship between size and growth is negative, suggesting that a process of industrial concentration is currently not in progress in India.

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