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Theoretical Framework of Competition as Applied to Banking

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Abstract

This paper lays out a fundamental approach that revises our understanding of the theoretical framework of competition. First, it critically examines classical and neo-classical approaches to competition. Second, through eight elements the new approach lays out our new understanding of the framework of competition as applied to banking. Role of basic conditions in S-C-P, dynamic S-C-P, modified S-C-P as adapted to banking, entry, concentration and competition, goals and strategic groups in banking, importance of banking theory, dynamics of banking markets; and the new concept of entry facilitator; these are all the eight new dimensions that adapt competition theory to banks.

Keyword: Competition, Structure-Conduct-Performance (S-C-P), Entry Facilitator, Basic Conditions, Strategic Groups

JEL Codes: D4, D21, E5, E42, 44.

Introduction

While there has been an perennial interest in the concept and theory of competition, there has been little emphasis on the concept and theory of competition as applied to banking presumably so because the theory of competition is seen to be all pervasive, so as to include banking industry. In this context, there are studies like Demsetz (1995) that virtually rule out conceptualization and measurement of competition. On the other hand there are studies that seek the convenient position of equating competition with concentration (Murugkar *et al*., 2007). We differ from these strands of literature. We believe that the competition can be rigorously conceptualized and measured and that it cannot be subsumed in the measurement of concentration. Finally, there is a strong need to position theory of competition in the context of banking as distinct from the general notions of competition.

The plan of the paper is as follows.

Evolution of the Concept of Competition

Concepts evolve through time and over time they assume different connotations. Competition is no exception. This paper discusses the evolution of the concept of competition with a view to derive a theoretical framework for analysis of competition in banking industry.

The literature on competition is vast and varied. Our review covers the major contributions to the concepts of competition due to Smith (1976), Chamberlain (1933), Schumpeter (1934), Hayek (1948) and Stigler (1995). It also covers some old and new commentaries on the concept including McNulty (1968) and Richardson (1975) on the one hand and Vickers (1995) on the other. A number of attempts have been made since then to develop the concept. However, lack of clarity remains.

During the process of evolution, the concept got mixed with different other entities, and any attempt to understand the true essence of competition is rendered difficult. There exists a voluminous literature in the area, but the concept remains surrounded by ambiguities and confusions in a

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large measure. A few reviews of the concept remained confined to only selected interpretations of competition. Some of them also cut across each other. To substantiate the above point we refer to McNulty (1968) and Vickers (1995).

According to McNulty (1968), there exist two fundamentally distinct interpretations of the concept of competition, which have led to the ambiguity and confusion surrounding the concept of competition.

- In one interpretation, competition is conceived as a descriptive term characterized by an idealized market structure.
- In the second interpretation, it has been identified with a force, which through equating prices with marginal costs assures allocative efficiency in the system.

According to the first interpretation, competition is a seemingly tranquil equilibrium state in which informed agents treat price parametrically. This is the concept of perfect competition, which is compared to the idea of a perfect vacuum. In the second form, it has been identified with a force, which through equating prices with marginal costs assures allocative efficiency in the system. Through competition resources gravitate towards their most productive use and price is forced to the lowest level to be sustained over the long run. This standpoint views competition as assuring order and stability in the economic world as does the gravitation to the physical world. As opposed to the earlier interpretation, the second interpretation looks at competition as a rivalry with respect to prices. As opposed to McNulty (1968), Vickers (1995) argued that the two concepts are not two distinct concepts of competition. He analyzed Cournot and Edgeworth models to show that the notion of perfect competition has its roots in the broad concept of competition as rivalry.

We now set out for a review of the concept of competition. It is clear that the current review cannot but begin with Adam Smith's concept of competition. While Smith's contribution holds a pride of place in any discussion of competition, there are conflicting interpretations of his notion of competition. These interpretations are analyzed in order to understand the true substance of the concept of competition, as understood by Smith.

McNulty (1968) has reduced Smith's notion of competition to a process of price competition alone. It is this view of competition as an ordering force, which dominated the classical economics. Adam Smith referred to competition in connection with the forcing of market price to its natural level and lowering of profits to a minimum. The classical view of competition looks at competition as a process for allocating resources to their optimal use through the instrument of price mechanism. When price mechanism functions properly, equilibrium emerges with prices equal to marginal social costs of production. When it does not, equillibria exist with some prices above marginal cost. In such a situation, the society suffers a welfare loss from the under consumption of these goods. Such malfunctions are immediately attributed to an insufficient number of buyers or sellers. Monopoly is seen as an antithesis of competition. This view sees competition as a process for determining prices and quantities, the allocation of resources for a given set of tastes and technological opportunities. Competition produces an equilibrium set of prices that induce a Pareto optimal allocation of economy's goods and services. Such equillibria are anticipated so long as monopolistic elements are absent. There was no systematic association between the idea of competition and market structure in classical economics, which viewed competition as a price determining force operating in market.

It may be argued that the concept of competition, which he incorporated in his Wealth of Nations, was already developed in the then literature by a number of scholars like Cantillon, Turgot, Hume, and Stuart etc. It is indeed surprising how the mercantilist's overwhelming concern with price continued to be main subject matter with Smith, who was aware of the importance of the dynamic changes in productive techniques and industrial organisation within the business enterprise in the era of English industrial revolution. The moot point being that concept of competition need not be associated only with exchange, when economic activity consists of both production and exchange.

While McNulty (1968) argued that Adam Smith's concept of competition mainly related to price mechanism alone, Vickers (1995) pointed out that Adam Smith's vision of competition goes beyond price determination within markets. In order to support his viewpoint, he quoted from Wealth of Nations referring to means like new division of labour, new improvements in art, which would have been never thought of in absence of competition among producers. However, he argued that Adam Smith

and other classical economist's related competition more to the issues of resource allocation and theory of value than to productive efficiency. He drew references from Hayek and Schumpeter and pointed out that productive efficiency is more important than allocative efficiency for economic well-being.

Richardson (1975) argues that the concept of competition in the Wealth of Nations relates to two distinct phenomena.

- The first meaning related to balancing of supply and demand in particular markets.
- Evolution of structural and technological forces is the second interpretation.

Smith offers a theory of economic equilibrium on the one hand and a theory of economic evolution on the other in Wealth of Nations. Competition has a role to play in both of them. Let us elaborate.

Smith describes how actual prices tend to gravitate to their natural or cost determined level. Competition is shown to be necessary to the process. It is pointed out monopoly by raising prices and reducing supply would "derange more or less the natural distribution of the stock of money". Smith identifies the tendency towards equilibrium and implies the resulting allocation of resources is optimal from society's point of view.

In his theory of economic evolution, Smith has advanced a disequillibrium theory in which he views the economy as in a state of constant and internally generated change. Perpetual motion results from the fact that division of labour is both a cause and effect of economic progress. Smith discusses how division of labour increases wealth on the one hand and widens market on the other. Widening of the market would lead to increased wealth, which in turn would lead division of labour be carried forward. The dynamic character of the interaction may not be fully appreciated till one recognizes that the extent of market also depends on wealth, which in turn is created by division of labour (Young, 1928).

While there are two distinct interpretations of competition in Wealth of Nations, problems arose later. It is because of the fact theorists succeeding Smith (except Marshall) attended things that could be easily handled. They focused on that interpretation of competition, which is easier between the two. The equilibrating and allocative functions of competition are discussed exclusively reducing technical progress to an exogenous variable and ignoring structural evolution. Later writers, concerned with more analytical rigour, developed the theory of equilibrium in a way, which is clearly very different from that implicit in Smith's theory of evolution. Existence of Smith's theory of economic evolution went unnoticed, and so the notion of competition contained therein.

While the classical economists viewed competition as a market process, the emergence of the concept of competition as a market structure is a distinctive contribution of the neoclassical economics. The groundwork for this development was laid by Cournot followed by attempts by Jevons and Edgeworth at marrying the concepts of competition and market. Such an attempt finally led to the current concept of perfect competition. Stigler (1961) viewed this marriage as unfortunate as each deserved a separate treatment. Interestingly, the concept of competition has been accorded a subsidiary status to the concept of market.

Hayek (1948) argues that the theory of perfect competition has little claim to be called competition. He stresses that perfect knowledge and foresight would create a paralyzing influencing effect on all action. It is not possible to argue that perfect competition is a model of competition because it is only through competition that knowledge will be discovered. The real basis for comparison with existing competition is not perfect competition; Perfect competition would exist if competition in the Smithian sense were prevented from operating.

The classical view regards competition as the antithesis of monopoly. Thus competition was viewed as absence of monopoly power. It was left to Chamberlain to reconcile economic theory with the fact that it is not possible for a firm to compete without monopolizing and hence much of the business world is a mixture of competition and monopoly. Every act of competition on the part of a businessman is evidence of some degree of monopoly power in economic theory. Thus while he recognized that most markets are to some extent both controlled and controlling, it has limited relevance as a guide in implementing policies in order to be meaningful for economic policy seeking to restrain monopoly and promote competition. While the traditional distinction between competition and monopoly is a non-starter, the merging of these two concepts in a theory of monopolistic competition avoided defining a concept of competition.

Chamberlain's concept of monopolistic competition as a market structure characterized by large numbers with free

entry and product differentiation but without recognition of interdependence is now regarded as being only trivially different from perfect competition and may be as rare as perfect competition. Product differentiation takes place typically in a market environment of competition among the few. Chamberlain's contribution in section 4 of Chapter 3 of his book relating to "mutual dependence recognized" is not a core part of his contribution and constitutes original contribution to theory of oligopoly.

The root of the ambiguity of the meaning of the term competition is attributed to the failure to distinguish between the idea of competition and the idea of market structure. The common feature of perfect competition and monopoly is that both rule out the possibility of any competitive behaviour. In monopoly, there is no one to compete. Perfect competition, ironically is a state of passive adjustment. Neither is there any competition through quality, because products are homogenous, nor is there any price competition because there can be no price-cutting. Also there can be no non-price competition, because there is no product differentiation. So the only form of competition can be cost reducing competition. It should be seen that in Indian private banking, ultimately it is this source of competition that has played a role in ushering in competition. But, again, ironically this arises out of the Schumpetarian framework. What is insufficiently emphasized is that perfect competition is a state of affairs totally incompatible with the idea of any and all competition. All other forms of competition except perfect competition are an admixture of monopoly and competition.

Schumpeter's notion of competition views of competition sees it less as a process for allocating given stock of resources and reduction in prices for an existing set of products and in the form of new and improved ideas, new products, new production processes, new marketing techniques, new organisational structures etc. Such competition strikes at the foundations of the life of the existing firms and not merely at their outputs and profits. Twentieth century competition apparently resembles Schumpeter's notion of competition as price competition between firms has given way to competition on the basis of product improvements and cost advantages generated by developments in methods of production and organisation. In this view, innovation is the major mechanism by which firms compete. According to Schumpeter, there are three stages in the process of change.

The first stage is invention: It relates to the generation of a new idea and its subsequent development to a point where the conceptual and practical difficulties of its implementation have been overcome. The second stage is innovation, which occurs when entrepreneur believes that it is worthwhile to commercialize the invention. There is a tendency to narrowly focus on introduction of new products, and processes, which incorporate technological change. His broader definition of innovation covers more of the ways in which use of resource may be improved. This includes improvement in the quality of existing products, development of a new market, exploitation of new source of supply and adoption of improved organisational routines. Successful innovation creating transitory monopolies create pockets of profits which in turn provide the incentive for the imitators to step forward and thereby drive these profits to zero. This is Schumpeter's third stage: diffusion. As a result of widespread imitation, the innovation becomes established as the basis for future invention and innovation.

Schumpeter's notion of competition is a process of creative destruction. Innovation creates monopoly, and monopoly creates profits, hence, profits create imitators which lead to competition and wipes out monopoly. This continues till until a state of normalcy returns only to be followed by new innovations and repeat of a cycle. Thus, whereas one view sees monopoly as antithesis of competition, this view looks at monopoly as an integral part of dynamically competitive process and a passing stage in industry's evolution. Competition displaces existing products and methods of production by new ones.

The ideas of the Austrian school originate in Karl Menger and its proponents include Mises and Hayek (1948). Economic freedom is the hallmark of competition and is deemed to be limited only in so far as the rights of other people are not infringed. Hayek (1948) argued that individual freedom gives rise to spontaneous order which has not been deliberately designed by any one. The spontaneity of individual behaviour gives rise to an open ended process the outcome of which cannot be predicted. As opposed to a static market structure of perfect competition, Austrians look at competition as a process of discovery by which economic agents seek to enhance their welfare and thus attempt to reach an optimum over time in an uncertain and changing world. Most efficient techniques and products appealing most to the consumers cannot be anticipated with certainty

without putting unknown and untried techniques and novel products to the test of the market. The price of a successful product commands may exceed average costs. Success is thus rewarded by profitability, which in turn provides incentives for further innovations. A deficient state of knowledge is thus overcome by competition as a process of discovery.

Within the new institutional economics, the Austrian and evolutionary approaches have more in common with each other than with neoclassical economics. In both approaches competition is characterized by uncertainty and flux. Experiments must be conducted by firms to identify, which actions lead to improved performance and must judge for example, whether to imitate the other firms or innovate in more fundamental ways. Uncertainty thus prevails not only with the strategy of the firms but also the result of adoption of any particular strategy.

A definition of competition has been provided by Stigler (1961). Competition is rivalry between two individuals (or groups or nations) and it arises whenever two or more parties strive for something that all cannot obtain. Vickers (1995) points out the following characteristics of this definition.

1. The breadth of the definition encompasses all forms, instruments and objects of rivalry.
2. It is a behavioural definition of competition as opposed to the analytical concept of perfect competition.
3. Identification of competition with rivalry does not mean more competition is an end in itself.

Review of Literature

The literature review has intentionally been kept brief so that we could concentrate upon the proposed new framework. In terms of the traditional industrial organisation paradigm of S-C-P, previous writers like Bains (1959) and Mason (1939), laid down the fundamental basis of competition through the Structure-Conduct-Performance approach. The range of literature on competition continues from the traditional notions (Smith, 1776; Chamberlain, 1933; Schumpeter, 1934; Hayek, 1948 and Stigler, 1961) to some of its latest approaches (Northcott, 2004; Neuberger, 1998; Toolsema, 2003; Bolt and Tieman, 2001). The extant approaches to competition in industry, in general, and banking industry in particular, invoke the industrial organisation paradigm with two arguments. The first is based on price cost margin (Gerosky, 1989, Mueller, 1986, Shaffer, 1993), while the second takes recourse to oligopoly (Molnar-Marton and Horvath, 2007, Uchida and Tsutsui, 2005 and Capie and Billings, 2004).

A Framework to Analyze Competition in Banking

There are eight elements in our new approach to understand the framework of competition as applied to banking.

1. The role of basic conditions: Basic conditions are placed alongside different elements of S-C-P (Structure-Conduct-Performance) approach. The whole framework put together determines the market form under different competitive conditions (Figure 1), and not just S-C-P alone.
2. Dynamic S-C-P: We also believe that unless we take account of feedback effects from Performance to Conduct; Conduct to Structure; and Structure to Basic Conditions (Figure 1), we cannot explain competition in banking.
3. Modification of S-C-P as applied to banking: Here we modify and expand the list of variables that are identified as belonging to Structure, Conduct and Performance, respectively (Table 1).
4. Entry and competition: Often entry, hence, numbers are seen to be the basis of increased as competition. It is argued that a low level of concentration can be equated with competition. In our approach, we denounce concentration as a rather simplistic basis of competition.
5. Implications of banking theory: For a framework of competition theory as applied to banking it is necessary to include banking theory. Here we argue that ordinary firm theory is not sufficient to explain competition in banking.
6. Goals and Strategic Groups: The understanding of conduct in banking needs to be reconciled to the goals and the concept and theory of 'Strategic Groups.' These concepts have been modified from their original form. The theory of 'Strategic Groups' is originally attributed to Chandler (1962) and followed by Newman (1978). In our approach to com-

petition we propose serious deviations from the original formulation.

7. Market Dynamics of Banking Markets: Another perspective that we lend to the new theory competition as applied to banking we argue for the importance of an understanding of the dynamics of banking markets.
8. Entry facilitator: In addition to the basic concept of entry barriers we introduce the new concept of 'entry facilitators' in our new approach to competition in banking. Figure 4 summarizes the latter part of our approach as an analytical framework to analyze competition in banking.

S-C-P and Basic Conditions

A caveat on the analysis of changing basic conditions relates to the Schumpeterian line of argument on evolutionary competition. While apparently Schumpeter also talks of technological progress and growth, it must be understood that his notion of innovation and growth is distinct from the present one. In Schumpeter we have endogenous technical progress generated from within the firm that is supported by monopoly and patents. Our concept of competition goes against monopoly.

In our framework technological progress arises outside the individual firms and is incorporated in the basic conditions such that it is available to all firms provided they have the willingness to internalize it. The more efficient and dynamic firms internalize faster and better and thereby can capture a greater market share. In as much as they do it at the cost of other firms this creates rivalry. Efficiency occurs on the rebound.

The impetus to change in industry arises from innovations from the basic conditions which could be due to public policy and the state but is not necessarily so. Such externalities are available to banks with minimal risk as compared to the risk-ridden process of 'creative-destruction'. In so far as public policy is responsible for changes in basic conditions such policy must be subsumed in the S-C-P framework as a part of basic conditions.

Neuberger (1998) has separated public policy from basic conditions and put it in a separate box. Aspects of public policy including restrictions on entry, size of investment and public monopoly (public sector banks) have mostly been dismantled. This led to a blurring of the box containing public policy in Neuberger's scheme of S-C-P paradigm. Whatever remains of public policy boils down to monetary and prudential controls. The monetary controls involve cash reserve ratio, bank rate, variable reserve ratio etc. While prudential regulations relate to asset classification and income recognition norms and norms related to NPA and capital adequacy ratio. All these may be subsumed under basic conditions which again affect all the three dimensions of S-C-P. Most of monetary controls are general and therefore they can be subsumed under basic conditions because rules are essentially part of basic conditions. Rules include regulations. By this count since most of the regulations would be subsumed under the basic conditions, what remains are specific regulations that relate to specific segment or specific market forms. For instance, anti-trust regulations could be applicable only if the market form approached monopoly. The liberalization of interest rate is across the board. Our point is how efficiently do firms internalize the liberalized policy regime. Efficient firms internalize these changes better and they are adding to efficiency. We have shown that efficiency in the dynamic context implies growth unlike the Austrian world. It is not governed by price which is responsible for static efficiency. However, it must be stated that in profitability alone cannot be criterion of efficiency the case of banking. An equally important criterion is stability. Therefore in the dynamic context in banking, efficiency cannot be equated with Paretian efficiency which may suffice for any other ordinary market.

The way we envisage the process of competition is through the basic conditions influencing structure, conduct and performance. In fact the source of competition and efficiency arise out of dynamics of basic conditions. By keeping basic conditions constant, we will be constrained to observe only one aspect of competition. Our view of competition would be restricted to inter-firm rivalry. Such rivalry is often explained in extant studies through oligopoly models, while there could be other approaches to rivalry.

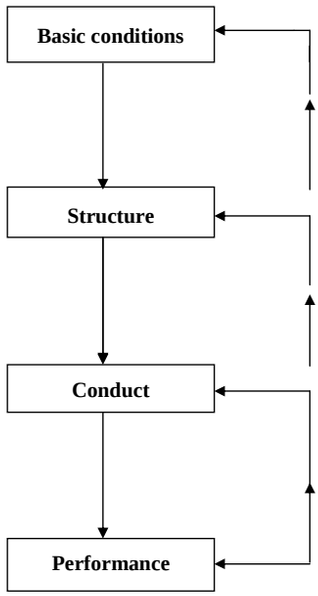
Dynamic S-C-P

The broader view of competition as we envisaged includes the right market structure and competitive conduct along

with rivalry for internalizing the externalities caused by basic conditions. Last but not the least any notion of competition especially if it is to address growth and dynamics must also account for stability. Some of the new approaches to competition are restricted to rivalry for deposits and loans while some of them touch upon risk. From the above discussion, it becomes clear that there is a need to have comprehensive framework which encompasses all the aspects enlisted above. There is none better than the S-C-P framework including feedbacks with changing basic conditions incorporated in it such that competition can be defined and understood as a process that unfolds from basic conditions up to performance. The market from that defines competition has be set in reference to and captured through the entire S-C-P framework.

Figure 1 clearly shows how there could be feedback effects from performance to conduct; then conduct to structure; and finally, from structure to basic conditions. Traditional competition theory does not take account of such an approach. For instance, advertising by a particular bank may be a conduct variable, but it may lead to a rise in general banking and hence may change the market structure. Better profits may lead to re-investment in banking development and banking technology. This may in turn change the way banks conduct themselves (e-banking). Similarly, adoption of technology is conduct but this may lead to better demand for banking services which may modify basic conditions of demand.

Figure 1: S-C-P and Nature of Competition



The above argument leads us to believe that a simultaneous causal framework is desirable in order to capture the entire complexity of competition, which is based on a different notion of competition than purely price competition. A framework to study such a notion of competition has been developed in the following sections. It assimilates traditional elements of S-C-P paradigm including entry, economies of scale, product differentiation and price cost margin as well as other elements including basic conditions and strategic groups.

Modification of S-C-P as Applied to Banking

Table 1: Scheme of the S-C-P Construct as Adapted for Banking

Basic Conditions	*Market Structure*	*Conduct*	*Performance*
History	Concentration	Branch network	Rate of return over asset
Policy: CAR, asset classification, etc.	Economies of scale	Spread	Rate of return over equity
Technology	Product differentiation	NPA	Stability
Dynamic demand and supply conditions	New banks and old banks	Metro Branches	Profitability per branch
		Staff / Branch	Productivity per staff
		New Technology	Productivity per branch
		Diversification	Allocative efficiency
		Advertising	Technical efficiency
		Financing	X efficiency
		Merger	
		Operating Expenditure	

One of the major dimensions of the new framework of competition as applied to banking is the modification and expansion of the list of variables under Structure, Conduct and Performance so as to reflect the framework of banking. Table 1 clearly shows how the new list of variables is different and is pertinent to banking as opposed to an ordinary firm.

Entry, Concentration and Competition

The notion of entry and competition in S-C-P paradigm is associated with the following problems. Traditional theory discuses the concept of entry barrier, which gives an advantage to the existing, firms. In terms of the S-C-P paradigm, competition has been classified as a conduct variable (Bedenhorn, 1990). Secondly, the traditional S-C-P does not take account of the influence of basic conditions, conduct and performance on competition. Thirdly, the underlying construct in S-C-P paradigm to understand competition is price cost margin.

Concentration is a summary measure of the market structure. It is often taken to be a summary measure of the market form as a whole (which consists of S-C-P) or to represent competition itself (Murugukar, *et al*., 2007). For instance, we talk of tight and loose oligopoly[1]. In fact, it is degree of competition, which defines the nature of market form and not the degree of concentration. Moreover, there may be mixed market forms as well. Even the relationship between entry, number and concentration has been shown to be a very complex one. It manifests through a non-linear relationship. The impact of concentration on competition works through a number of factors that affect competition, consisting of S-C-P factors and basic conditions. The supposed negative impact of concentration on competition is among many other influences on competition. Concentration exerts only a partial effect. However, if the concentration is high but also has high variance, it may not show up as a determinant of competition. Therefore, it means that while entry effects numbers and numbers influence concentration along with the average size of the firm and distribution of firms still impact of entry on concentration may not be determinate. Therefore, the relationship between entry and market form is not determinate as well. On the other hand, if along with entry, the size and distribution is favourable, then it may be said a consistently falling concentration. Falling concentration associated with a low variance may certainly increase competition. In such a case, the coefficient of concentration in the structural equation would be highly significant. Thus there could be situation where entry may unambiguously increase competition. But it is clear that certain conditions are needed for entry to increase competition.

Impact of entry on concentration has received some attention in the literature on industrial economics. While Bodenhorn (1990) and Denizer (1997) argued that entry would reduce concentration, Davies and Lyons (1991) argued that entry might as well increase concentration ratio. It was left to Deb (2004) to use some algebra to specify the precise conditions in which entry would have positive and negative impact on concentration. Clearly then, entry does not always reduce concentration. As for the second part of the argument, assumptions have been already worked out by Saving (1970) under which there will be a systematic relationship between concentration ratio and monopoly power. Using the above contentions, Deb (2004) concluded that there exists no general relationship between entry and concentration, or between concentration ratio and monopoly power.

Implications of Banking Theory

Price-cost margin forms the fundamental basis of competition under the S-C-P approach. As competition increase the price-cost margin reduces. An analytical framework to analyse spread has three distinct components. One relates to a discussion on the inter-linkages amongst asset composition, asset liability management and spread management in the conduct of a bank. The other two relate to market structure under which the bank functions deregulation of interest rate, and macro and monetary policy variables, which provides a typical interest rate stance. The first function of the bank is to generate liabilities through collection of deposits with its own strategic means. Now it is imperative for the bank to pay the depositors the agreed interest in a timely manner, cover the operational expenditure and earn profit so as to justify its existence.

1 A tight oligopoly is defined in terms of four-firm concentration ratio of above 60%, and a loose oligopoly in terms of below 40% four-firm concentration ratio.

Determination of asset structure follows deposit mobilization by bank. Since the bank has a twin objective of profitability and liquidity, the bank has to strike a balance between the liquid and non-liquid components of its asset. With this objective in view, it has to determine the appropriate asset structure. There are two theories about asset structure of a bank. The earlier theory is called the shiftability theory. It recommends that assets should be maintained in the form of liquid (monetary) and near money assets, like commercial bills of exchange. The bank should attempt should be to invest in short term credit instruments, which are highly liquid, yet, not money. The shiftability theory says that a bank should hold its assets in such a form that they are shiftable. It should be possible to shift them from relatively non-liquid form as and when required, into liquid form so as to satisfy customers' needs for liquidity so that there is no instability due to a run on the bank. At the same time, some return is to be reaped from these assets. Bills of exchange satisfy this characteristic.

Anticipated income theory suggests that the funds would have to be invested in non-liquid assets ensuring high rate of return. However, if funds were invested in such assets, there would be an immediate crunch in terms of liquidity. But liquidity problem will be eased when funds are returned with a higher interest rate (more than what is available on short term instruments) in the medium and long term. While the shiftability theory seeks lower return but higher turnovers, the anticipated income theory talks about higher return, which is associated with lower turnovers. Both address the trade-off between liquidity and profitability, but adopt different means.

Goals and Strategic Groups

Conduct, in the conventional S-C-P paradigm, has been conceptualized in a narrow way. Two dimensions need to be included while conceptualizing a broader approach to conduct. They include goals and strategic groups. The distinction between goals and conduct may not merit separation of goals from conduct as components of the paradigm, since certain types of goals result in a certain conduct. For instance, profit maximization, as a goal, would result in a conduct wherein the pricing decisions are geared to maximizing the price cost margin. However, the conduct of the firm will differ if objective is to maximize profits in the short run or long run. If firms are interested in short run maximization of profits, then firms must feel that barriers to entrants are sufficiently high to ensure that their profits will not induce entry. Alternatively, pursuit of the objective of long run maximization of profit requires that entry into the industry should be restricted.

As for the role of goals in the context of conduct in the case of banking industry, the primary goal is not unique but dual. For a bank both the goals of profitability and liquidity are equally important. Hence, the analysis of conduct in banking needs to consider the role of asset structure and a corresponding analysis of performance cannot be restricted only to profit.

To achieve goals banks could strategize in different ways. This was recognized by Chandler (1962) in the context of firms. Chandler, hence, provided the original insight into the concept of strategic groups, albeit, in the context of firms and not banks, as follows:

"Strategy can be defined as the determination of the basic long terms goals, objectives of an enterprise, and the adoption of courses of action and allocation of resources necessary for the carrying out of these goals."

This idea was followed by Newman (1978), which led to a contentious issue in the context of the S-C-P paradigm, as to whether strategic groups are an aspect of structure or conduct. It is a critical issue and a quotation from Newman (1978) is would be in place:

"If corporate strategies can differ persistently among direct market rivals, we can speak of strategic groups-each group consisting of firms highly symmetrical in their corporate strategies-as a stable element of market structure. Strategic groups are elements of market structure because strategic choice affects the preference system employed by the firm's decision makers in selecting short term operating policies."

However, the reasons cited by Newman to justify the treatment of strategic groups as an element of market structure are related to difference in 'corporate strategies', on the one hand, and 'strategic choice' influencing 'decision making mechanism' of firms, on the other hand. Corporate strategies and strategic choice clearly fall in the realm of conduct and not structure. Basic conditions may allow for creation of strategic groups, but the distinction between the strategic groups may be understood only in terms of differential behaviour. The stable 'elements'

arise out of continued pursuit of a certain type of strategic behaviour. The existence and continuance of different strategic groups within an industry rests on the members of a particular strategic group following similar strategies or conduct. Hence it may be argued that a strategic group should logically relate to aspect of conduct, which may in turn have a feedback effect on market structure. Newman failed to emphasize the fine line of distinction between formation of strategic groups on the basis of basic conditions, which are prior to structure, and the implication of the presence of such groups for conduct. Our approach is to refine the conventional S-C-P paradigm by including strategic groups within the ambit of conduct. We study strategic groups by analyzing the contrasting behaviour in terms of key decision variables, which is very much a part of conduct. It further, it needs to be added that mere entry by itself does not necessarily lead to the formation of a separate strategic group. The crucial difference lies between basic conditions allowing the possibility of the establishment of different groups, however, the actualization of such group formation would be a matter of conduct. This is further buttressed by the continued success in pursuance of such strategic behaviour. Thus, formation of strategic groups is one thing and sustenance is yet another thing.

This understanding clearly leads to the formation of two 'strategic groups in banking – 'old banks' and 'new banks'; in other words, incumbent and entrant banks. Here onwards, we cannot treat banking industry as one. The moot point, therefore, is that, as per our approach these sectors (as they are usually referred to) are in fact banking 'segments' belonging to one (banking) industry and are not merely distinguishable in terms of the ownership difference. This implies that competition lends a different perspective to banking as distinct from institutional and policy perspectives. Studies that compare performance in terms of ownership are indifferent to such fundamental differences in conduct arising out of strategic behaviour. They tend to attribute performance directly to ownership. By this count there should be only two groups: private and public. In fact there are strategic groups even with in the private 'sector' space. Hence, our understanding of strategic groups tells us that there are four strategic groups in banking industry – namely, public sector banks, old private banks, new private banks and foreign banks, since each group is distinct, not by ownership but by conduct.

Market Dynamics of Banking Markets

In banking market is defined as the sum total of deposits plus loans and advances. The peculiarity of baking markets is that due to the process of credit creation one banks deposit is another banks credit. Thus, banking markets are endogenous. One bank creates the market for the other. This situation is entirely different from other industries.

Coming back to tradition competition theory, in the long run, competitive forces tend to wipe out the margin. In the short run, because of restrictions on entry, the scarcity price creates supernormal profits which act as an incentive for new producers to enter. In the long run, entry would ease out the supply. But once entry takes place and long run equilibrium is established in the industry, then price cost margin is wiped out and it no longer acts as a signal form entry. Therefore, further growth beyond long run industry equilibrium is independent of price. Under monopolistic competition, the further prognosis of industry is a mere dropping off of inefficient firms to be replaced by new firms. Such an understanding of banking industry and its growth in the dynamic context is faulted.

The oligopolistic models are usually set in the short-run. Therefore they are not aimed at explaining industrial growth and dynamics. The limited dynamics which is inferred related to current output and price. It eludes all issues of entry, which by nature is not incumbent upon oligopolistic markets, and hence all questions of industrial growth. Since the main question of interest in understanding competition in banking industry relate to growth and dynamics arising out of entry, thus the second approach is not adequate for the purpose. The real question does not pivot on restrictive behaviour because the present study is set in at a time period which augurs for growth in industry rather than any trend towards restriction. The moot question then is as to which is the market form that promotes competition and what is the nature of competition that permits such growth. Which is the theoretical framework that allows such analysis? In as much as oligopolistic models do essentially concentrate on conduct on existing firms; such approaches are faulted in two ways. Firstly, a basic objection to this approach is that it presupposes oligopoly as the market form. Secondly, they do not arise out of a complete framework that spans all dimension of S-C-P.

Figure 2: Long-Run Industry Supply Curve

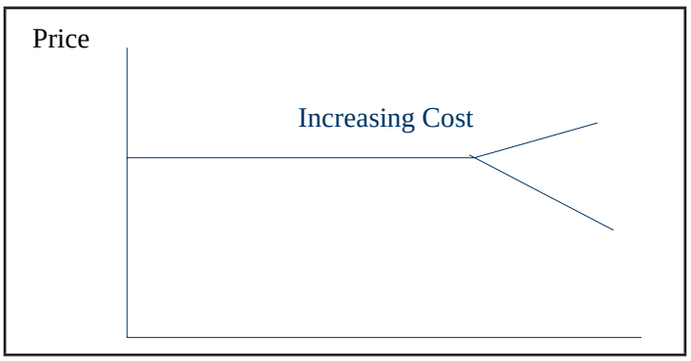
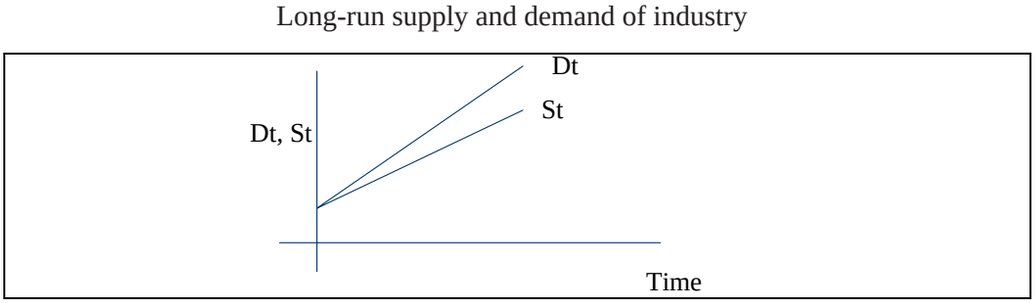


Figure 3: Dynamic Equilibrium



This conservative approach cannot explain the phenomenal growth of banking industry. Growth in the long run cannot be price-led. Needless to say, the industrial organisation approach cannot be restricted to short-run analysis, on the one hand, and long run equilibrium, as described above, on the other hand, is incapable of explaining industrial dynamics and growth. Even the extended textbook approach of long run supply curve of industry does not explain the basis of further growth. All that it explains is the long run cost conditions which are usually expected to be a case of rising costs. Anomalously though, under such conditions, the long run supply gets re-linked to rising price.

We are therefore led to believe that the only complete framework that could help in understanding competition in general and in banking in particular is the modified Structure-Conduct-Performance paradigm. Even here, the three primary dimensions of the S-C- P paradigm are not sufficient to explain the phenomenon of competition and growth in banking industry. Unless the basic conditions argument is invoked, we cannot explain the phenomenon nor can we reconcile it to the evolved and modern notion of competition.

Basic conditions clearly determine the growth in demand and supply. In the very long run, both demand and supply functions could be upward sloping (Figure 4). They are not equilibrated by price. Since basic conditions augment both supply and demand, and both the demand curve and supply curve are rising over time price no longer plays an equilibrating role

Therefore, the very instrument of competition called price cost margin is no longer of any great relevance. On the other hand, independent of price, basic conditions create new demand and simultaneously augment supply. Amongst other things, one of the most important basic conditions is technology. It is therefore clear that the long run supply curve of industry is more likely to be

facing declining cost rather than increasing cost. The implication is that in the dynamic context, price can not be instrumental in raising the supply in industry. Since basic conditions augment both supply and demand, and both the demand curve and supply curve are rising over time price no longer plays an equilibrating role.

The source of growth of industry (banking industry) lies in basic conditions. Basic conditions include technology, structure of the economy, institutions, availability of substitutes, availability of trained manpower, and public policy and rules. It influences growth of industry by creating new demand and attracting new resources. The change in basic conditions creates different types of externalities – technological and pecuniary. Therefore the sustained growth and dynamics of the industry is not price led. Growth arises out of changing basic conditions and dynamics arises out of sharing the new market created by basic conditions. Hence the prime mover of competition is rivalry among firms to control market share rather than adjustments brought about by the price mechanism.

There are two variants of S-C-P paradigm. One attributes larger market shares of firms to their monopoly power and the other relates it to efficiency. Price is considered to be the main instrument or mechanism for generating efficiency. While price represents static efficiency growth any dynamics are associated with changes in market share. If the market share and ranks change then firms would be under pressure and this would lead to efficiency. Similarly, changing basic conditions create externalities and lead to dynamics. There are differences in the rate, the manner and the efficiency with which firms internalize these externalities. The two versions of S- C-P paradigm could be reconciled in the following manner. Market dynamics originates from two sources, namely, rivalry amongst firms for acquiring and retaining market, share on the one hand, and rivalry due to internalization of externalities created by change in basic conditions, on the other hand.

Rivalry could arise due to three forces. One, it could be due to new entrants which relates to structure (Deb, 2004) and more often than not to price competition. Two, it relates to conduct and is most often quoted in literature. Third, it arises out of externalities which are captured by basic conditions.

As a caveat, it has to be noted that this Smithian framework emphasizes two notions of competition. The former equilibrates demand and supply, while the later is driven by technology and structure. Our notion veers to the latter. However, there is a fundamental difference between the two notions. In the Smithian case, structure and technology lead to division of labour (which in turn lowers cost within the firm) and is enabled by a growth in the market. In our case, the logic is precisely the converse. Structure and technology change and so do basic conditions. This enables growth in markets and hence creates the competitive conditions through dynamics. Another difference is that in the Smithian case, the impact of technology and structure influence productivity and allocative efficiency, whereas the change in basic conditions leads to technical efficiency.

Most of the extant literature takes a partial view. It either restricts the notion of competition to structure, concentration, entry and monopoly power or to conduct and oligopoly, where the market form is pre supposed. Our approach not only develops the S-C-P framework for establishing the appropriate notion of competition. It also modifies the S-C-P framework suit banking and finally develops the empirics that are necessary to analyze and estimate competition in banking so as to pronounce an overall market form.

Initially having questioned the role of price and price cost margin that acts as an incentive in the competitive market form as well as a barrier to entry under monopoly, we wish to state in finality that it is possible to reconcile the two positions. If in the dynamic context, long run price stabilizes price cost margin could still emerge while basic conditions are dynamic and create declining costs. The role of competition and public policy is that it should be directed at allowing price cost margin to act as an incentive rather than a restriction to entry. This process would be successful if the approach to competition in general and banking in particular is promoted by the new concept of entry facilitators which we have identified.

There is a traditional notion that questions the desirability of competition in banking. We believe that their skepticism is misplaced. Entry is likely to jeopardize minimum scale only if we assume a context market size. With a dynamically growing market surcharged by dynamic basic conditions and positive public policy, the new entrants

would always find enough space in the banking market. At the margin however, if new banks that nevertheless start with a disadvantage edge on the existing banks, this is likely to lead to rivalry and competition, even if there is the fear of failure it has been proven in recent times that such banks choose to merge rather than exit. In fact the new rules that are incorporated in the changing basic conditions permit such merger.

Entry Facilitator

In the light of the above discussion, we are developing an analytical framework to understand competition. Such a framework includes the following elements. Firstly, it is believed that competition is an overall state that describes the nature of the market form (Figure 1). Hence, it encompasses all the aspects of an industry, namely basic conditions, structure, conduct and performance. Secondly, there is a phenomenon of entry facilitators as opposed to entry barriers. The basic approach to entry barrier does not look at basic conditions. Hence, the conclusion that returns to scale constitute a barrier to entry is only partial.

LEGEND

ACn = Long Run Average Cost of New Bank

Qmax = Maximum size

ACn = Average Cost of New Bank

Qo = Output of Old Bank

ACo = Average Cost of Old Bank

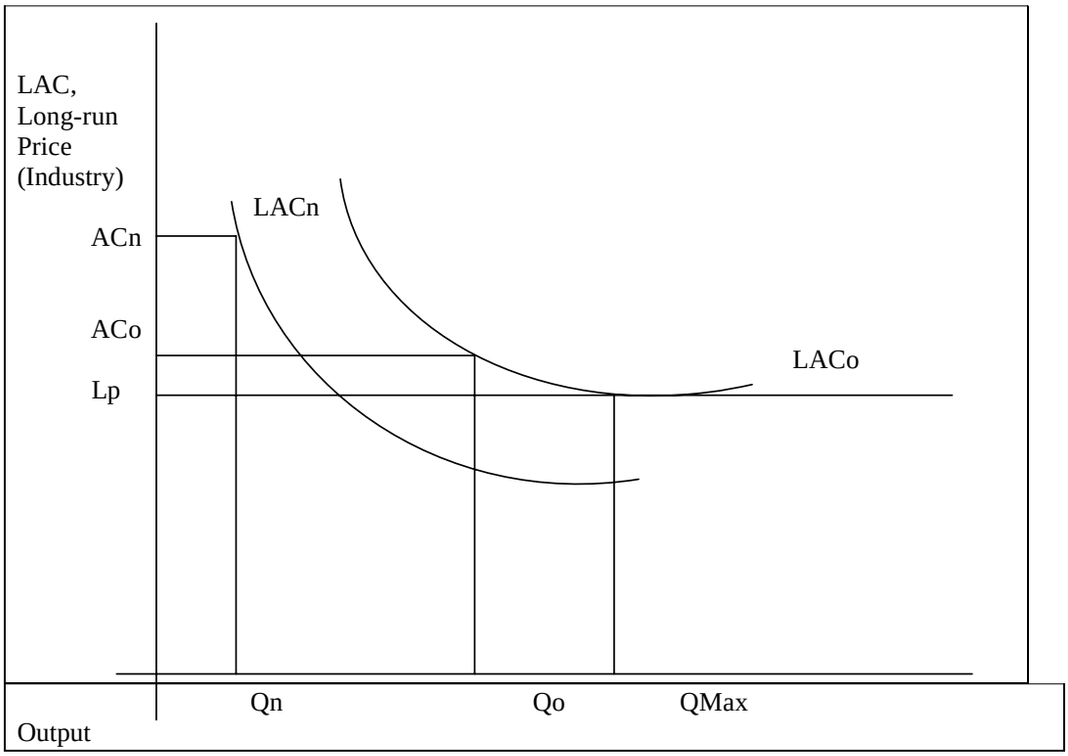
Lp = Long Run Price

LACo = Long Run Average Cost of New Bank

Qn = Output of new Bank

Assuming that long run costs are a product of both internal and external economies of scale, it still does not take into account basic conditions. Our understanding in this context is different from the traditional theory. Once basic conditions like technology are not treated as a parameter but are allowed to change, then it may be seen how it may act as an entry facilitator. It will lead to situation in which long run average cost of new firms will lie at a lower level than the old firms, which initially enjoyed a cost advantage over the new firms.

Figure 4: Entry and Market Dynamics



Harking back to classical economics, in the Wealth of Nations, competition apart from equating demands and supplies within the context of a given industrial structure and a given technology has also to adapt both structure and technology to the fresh opportunities created by expanding markets. What needs to be noted, however, is that such technology is embodied technology. An argument that eluded the classical economists was technological progress and technical efficiency. Figure 4 brings out the implications of technical efficiency as opposed to embodied technological progress.

Figure 4 is developed in order to explain the dynamics of the market after entry. The figure attempts to synthesize the approaches of S-C-P and strategic groups. While, it includes traditional elements of S-C-P paradigm including entry, economies of scale, product differentiation and price cost margin, it also incorporates basic conditions and strategic groups to analyze the process of market dynamics in the industry. In the traditional S-C-P paradigm, it is structure, which influences entry. However, it has been observed that in case of banking, change in basic condition directly influences conduct by bypassing structure.

In the figure, output and average cost are represented on the x and y-axes respectively. Let the discussion begin with the status of old banks on the eve of entry of new banks. They did not start with the provision of having to have an optimal scale in the beginning itself. In the absence of new banks, they got the benefit of serving a whole market and in the process, lowered cost through exploitation of economies of scale.

The entry barrier argument can well be granted in terms of internal economies arising in favour of old firms. These would arise out of indivisibilities and experience. However, internal economies are only likely to enhance the advantage the old banks may be experiencing, in addition to economies that they derive from external economies. External economies arises essentially an expansion of the industry.

In long run industry equilibrium, only efficient firms remained because they have achieved the optimal scale. In the regulated period, the old banks reached economies of scale when they were perhaps producing QMax level of output. Now the issue is how the new banks could enter and overtake the old banks, when the latter were enjoying the benefits of economies of scale.

To explain the scenario after entry with new banks with a better technology, two average cost curves are shown, one above the other. The upper curve represents average cost of the old banks and the lower one shows the cost situation of the new firms. This is because the new banks entered with a better technology, which resulted in lower cost of production. Clearly the new banks enjoyed a potential absolute cost advantage because the new banks at a lower cost can produce the same output. However, initially the new banks suffered from a relative cost advantage because of a lower volume of production in the initial period.

After entry of new banks, expansion of the industry benefited the old banks in the initial phase. It was natural for people to go to an established bank as opposed to a new bank, which was yet to establish its credibility. Substitution of an old bank with a new bank took place over time, when the new banks were perceived as provider of better services with the help of new technology. However, there was a caveat here. The amount of money needed to open an account with new banks is substantially higher than that of an old bank. Such difference in strategic behaviour limited the scope of substitution of old banks by the new banks. Thus, it is clear that, the new firms are not likely to have economies of scale during the period immediately after their entry. However, there was a latent demand for a variety of technology-based services emanating from affluent section of the population. In absence of supply of such services, such a section more readily joined the new banks. This caused an expansion of industry in favour of new banks arising out of new technology thus while, technology and new services enabled differential advantage in favour of new banks, and such advantages however would unfold only over a period of time.

It was imperative for the new banks to expand production in order to realize the benefits of economies of scale. Their strategy was to target the well off segment of the population through provision of technology based services. With this end in view, they engaged in product differentiation and developed brand names and ultimately went in for merger. In such a situation, the only alternative for the old firms was to go for new technology, which also had its own compulsions. Use of new technology is meaningful only when their economy of scale is exploited. With recession affecting their clients, second rung corporates located in their traditional area of operations, they had no choice but to look for expanded markets in metros.

It follows from the above discussion that market dynamics is shaped by three factors.

1. Entry of new banks consequent on deregulation, motivated by expectations of profits through use of new technology and strategic conduct.
2. The mechanism through which new banks could actually circumvent the advantages of old banks included new technology and strategic conduct.
3. Means adopted by the old banks to cope up with the new banks in the new scenario.

Conclusion

This paper lays out a fundamental approach that revises our understanding of the theoretical framework of competition. First, it critically examines classical and neo-classical approaches to competition. Second, through eight elements the new approach lays out our new understanding of the framework of competition as applied to banking. Role of basic conditions in S-C-P, dynamic S-C-P, modified S-C-P as adapted to banking, entry, concentration and competition, goals and strategic groups in banking, importance of banking theory, dynamics of banking markets; and the new concept of entry facilitator; these are all the eight new dimensions that adapt competition theory to banks.

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