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Mergers and Acquisitions: Implications for public enterprises in developing countries

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Abstract

For more than a century, regulatory intervention in corporate mergers and acquisitions has been of much interest to corporate strategists. The high level of merger and acquisition activity across the world over the three decades of a century has revitalised the field of Industrial Organisation (IO). This has accelerated in the public sector of developing countries like India. For policy formulation, the antitrust authorities are increasingly relying on research in this field to comprehend the factors that affect how firms and markets are organised and behave. However, there hasn't been any analysis to determine whether the authorised mergers are anti-competitive. IO is a high-tech, high-brow field of research because to the employment of increasingly complicated models, but its theoretical suitability, empirical validity, and policy usefulness have not yet been determined. This paper examines the research models and procedures utilised in current IO research and comes to the conclusion that a more rigorous analytical framework is required to give IO studies credibility. In case of Public Sector Enterprises, collusive behaviour is not a problem, but there is a need to look at other areas of concern.

KEYWORDS: Mergers, acquisitions, industrial organisation

Introduction

High level of merger and acquisition (M&A) activity over the past quarter of century has revitalised the field of Industrial Organisation (IO) which is concerned with determinants of firm and market organisation and behaviour. In developing countries, M&A is affecting public enterprises as well (Sangisetti, 2022). Time has come that the regulators in developing countries

and researchers in the field of public enterprises understand the theory and practice of IO that relates to M&A

In the seventies, the field of IO was preoccupied with analysis across industries. Its advancement was slowed by a lack of fresh theoretical understanding and an inability to locate data to address current pressing issues, and it was becoming clear that the field was not heading in the right direction. (Fuchs, 1972). Pre-1980 literature had been so nontheoretical, or even antitheoretical, that few economic theorists were attracted to it. In the eighties its research agenda moved toward analysing individual industries and boundaries of the firm. "Market structure" became an old-fashioned term in IO and the general Structure-Conduct-Performance (SCP) paradigm that made links between structure and performance was forgotten. Questions about the global organisation of production in the economy were ceded to other branches of economics like trade and macroeconomics. Application of game theory and better data accessibility and utilisation elevated IO.. Oliver Williamson (1996) announced IO as "the queen of microeconomics" and insisted that M&A "will continue to be its main beneficiary." (p. 306).

IO has donned the mantle of a high-tech discipline. Moreover, its users, - the law makers and antitrust authorities across the globe seem to be content by the work they are doing. For example, the report of the US Antitrust Modernization Commission declares that relevant U.S. antitrust laws are 'sound' and that U.S. antitrust enforcement has attained an appropriate focus on (1) fostering innovation; (2) promoting competition and consumer welfare; and (3) aggressively punishing criminal cartel activity. As far as between-industry differences are concerned, the US Antitrust Modernization Commission reported in 2007 that it does not believe that new or different rules are needed to address so-called "new economy" and insisted that the antitrust laws remain relevant in today's environment and tomorrow's as well. Further the Commission submitted that differential treatment to different industries is unnecessary. The economists are less sanguine and many feel that the current state of IO research there is inadequate attention to applied work on measurement based data that continues by framing the empirical exercise in terms of a coherent economic model. Significant public resources are devoted to the review of the potential anticompetitive effects of mergers before they are approved. Yet there has been little evaluation of whether or not the mergers that have been permitted are anticompetitive. Without this information analysis of government policies is hardly possible (Ashenfelter & Hosken, 2010). Crandall and Winston (2003), for example, argue that antitrust policy has not been favourable to

the consumers, while in the same issue of *Journal of Economic Perspectives* Baker (2003) expresses opposite views. If IO is to guide antitrust policy and practice, it should concentrate on how prior business mergers affected consumer pricing. This is not being done. While in the field of labour economics, one can find hundreds of empirical studies on how wages are affected by unionisation, minimum wage laws etc., research on the aggregate effects of merger policy is limited (Angrist & Pischke, 2010).

The basic approach of the econometric industry studies has been called 'new empirical industrial organisation' (NEIO). The methodology of initial studies under this approach lacked sophistication (Bresahan, 1989). Behavioural interpretations were assigned to 'conjectural variations' These were then utilised as a measurement of market power (Corts, 1999). To circumvent assessment of several cross-elasticities in these studies, solid restrictions on demand function were applied. Endogeneity of prices and quantities and other identification problems were not considered at all. During the late 1990's better techniques were established under the brand of 'structural IO' (Ackerberg et al, 2007; Reiss & Wolak, 2007). Demand system is typically estimated by means of discreet choice models of product differentiation (Berry, 1994). Nested demand structures that impose restrictions on substitution effects between brands in different segments have been developed. Demand modelling has focussed on the trade-off between allowing flexible substitution patterns and the lack of disparity in representative data that allows such substitution patterns to be identified flexibly. Demand elasticities are identified using instrumental variables like prices in other markets. Thereafter, a model of market behaviour is formulated using the substitution matrix enabling simulation of conduct of the industry with merger and without. These models have removed low-brow low-tech stigma from IO but their credibility is in question.

Industrial Disorganisation

Mergers in the ready-to-eat cereal business is an important example as it could affect the price of a popular consumer food product. It is one of the most recession-resistant product because of its low cost. The products in case of cereal industry are closely related but not identical (Hausman, 1997). Moreover there is differing levels of similarity across cereal brands. One strategy could be to divide products into segments and estimate a model that restricts substitution patterns across segments but allows flexibility within segments. In the new models developed under NEIO and structural IO (Baker & Bresnahan, 1985), 'front-end' estimation of the structural

parameters computes demand functions and supply relations. Thereafter, these estimates can be used to simulate post-merger equilibrium in the 'back-end' analysis.

Models with nonlinear demand, multi-product producers, economies of scale and heterogeneous products can produce an even wider range of results. In these complicated but relevant models, whether or not mergers re profitable and/or socially desirable can vary a lot across parameter values (Berry & Pakes, 1993). Aviv Nevo (1997, 2000, 2001) tried to measure market power and implications of mergers in ready-to-eat cereal industry painstaking empirical work. Assumptions made are of some concern. The demand system formulated imposes restrictions on substitution patterns which are unconvincing. Instrumental variables are notoriously hard to discover and. Prices in other markets can be used as instrumental variables if the assumption of independence across markets holds, which appears arbitrary. It has been implied that the mergers affect prices through only one channel, i.e., the decrease in the number of competitors. This is implausible as the prices can be affected by other factors like cost reductions. Comparable difficulties plague structural models of airline mergers. Supply-side effects, such as variations in marginal costs or deviations from the assumed model of firm behaviour are hard to integrate in the model intended to estimate the result of the alteration in ownership and management on unilateral pricing incentives. Analysis consolidation in the airline industry of the 1980s by Craig Peters (2010) reveals that the structural analyses of these mergers do not yield accurate predictions of the ticket prices after the mergers. He recommends that the future research could use more flexible models of firm behaviour.

Utilizing the difference-in-difference (D-in-D) technique and imagining a scenario in which the merger had not taken place is an alternative. The assignment of participants to the treatment group and the comparison group cannot, of course, be random, but it can be supposed to be 'as if random'. Ashenfelter & Hosken (2010) used this methodology to examine mergers in cereal industry and state: "It is unclear why Nevo's predictions are so different from our estimates" (p. 450). Hastings (2004) used this method to assess the pricing implications of Thrifty by ARCO's acquisition of a gas retailer on a panel of station-specific prices including the station-level fixed effects and the city-time effects. Whereas Nevo's framework is an intricate set of equations wherein it is hard to find out what is driving the result, D-in-D results come from a simple equation showing the mean change resulting from the treatment. A simplified Hasting's equation to find the price p at time t at station i is:

$$p_{it} = \mu + \alpha_i + \delta\gamma\bullet t + \theta z_{it} + \varepsilon_{it} \quad (1)$$

where μ is constant and α_i is time-invariant station-specific deviation from μ. γ is city dummy. z_{it} is an indicator of competition with independent station. The coefficient θ indicates whether the presence of an independent competitor affects the local selling price.

This analysis seems to have a flaw in that it only considers the effects of a merger on Thrifty's rivals, not the former Thrifty stations. As the expected effect was five cents per gallon, it meant that the retail margins would increase by a whopping 50 percent. However, other researchers (Taylor et al., 2010) used the same dataset and presented the results of the following regression:

$$p_{it} = \mu + \alpha_i + \beta\, Convert_{it} + \Sigma_j\Sigma_k\delta^{jk}\gamma_i\tau_t + \varepsilon_{it} \quad (2)$$

where the dummy variable $Convert_{it}$ takes a value of one if station i is located within a mile of a Thrifty station during period t. Thus, a negative β suggests that the loss of an independent competitor is correlated with a rise in the average price at these competing stations. The city-time fixed effects are captured by the interaction of city dummies, γ_i and time dummies τ_t. The coefficient estimates of the variable of main interest, i.e., *Convert* are quite different. In short, the increase in the price was found to be just one fiftieth of that found by Hastings. This finding holds even in case of when various sub-samples and the authors are not convinced that ARCO's acquisition of Thrifty resulted in higher prices. While Hastings's research finds support for the underlying model of consumer preference, Taylor et al. doubt whether this model depicts consumer behaviour and disagree with the underlying model of consumer preferences. With time, D-in-D methodology is becoming more and more sophisticated; but it faces the charge that it is atheoretical and sensitive to assumptions.

Trusting antitrust

If we can trust neither the structurally derived estimates nor direct D-in-D estimates, what do we do? With time, structural models are probably going to get more complex. It's unclear whether they will be able to rely on fewer, more believable hypotheses. According to randomistas, several structural models should be tested, and the one that best fits the direct estimates should be used. In keeping with this, Hausman and Leonard (2002) used three structural models in their investigation of new toilet paper brands and found that the Nash-Bertrand model which is frequently employed

in studies of the competitive effects of mergers yield indirect estimates reasonably similar to the direct estimates and superior to the indirect estimates produced by the two alternative models they tried. This raises the issue of whether direct estimates represent the gold standard. DD estimates cannot be trusted, as demonstrated in the case study of ARCO's acquisition of Thrifty gas stations. Many renowned scholars have criticised the focus on experimental or quasi-experimental outcomes on theoretical grounds. For example Nobel Laureate James Heckman (2010) points out that economic choice theory has been abandoned in favour of statistics. The crucial distinctions between subjective and objective evaluations and ex ante and ex post outcomes, which are at the heart of structural econometrics, are lost. Finally, even if we are able to draw some credible conclusions from private sector mergers in the past, how relevant are these estimates to future mergers involving public enterprises?

Merger analysis bring forward unusual problems in case of merger of a public enterprise with a private one. Although considering stock prices and balance sheets is not difficult, understanding the cultural environment is challenging. For example, there are significant differences between human resource management practices and management of external environment. In case of public enterprises, the decisions also need to be politically acceptable and socially desirable. The decentring of the state as a result of globalisation, neo-liberalism and developments in legal theory and methodology has had a destabilising influence on M&A theory and practice and a lot of theoretical and empirical research is necessary.

Conclusion

M&A literature has not kept pace with theoretical advancements pertaining to the sources of value creation for firms (Feldman & Hernandez, 2022). Regarding the precise role that organisation should play, economic theory has not said much. On the other hand, business school non-economists typically believe that organisation matters and that firms are not, despite what economic theory may posit, undifferentiated profit maximising agencies that respond to specific market situations in ways that are independent of their organisation. The merger policy has been the most significant area of public action relating to market structure that IO economists have sought to inform. As a result of the influence of IO scholars as compared to that of lawyers and jurists (White, 2010), the United States' stance toward horizontal mergers has greatly advanced since the first Guidelines were published in 1968 (Shapiro, 2010). Other countries can learn from

this evolution. The primary structural indicator taken into consideration is no longer market shares. If there is no change in the nature or level of competition, unilateral effects—the performance impacts of changing the structure—are viewed as being more significant. The 2010 Guidelines provide a considerably more in-depth analytical approach that is based on theoretical developments and enforcement experience rather than empirical data. Coordinated effects - adverse changes in (expected) market performance that occur because changes in market structure make collusive behaviour more likely – have been put in the background as the tools available to analyse unilateral effects have become much more powerful (Schmalensee, 2012). Merger simulation models formulated by Budzinski and Ruhmer (2010) can be employed to integrate information from a variety of sources, and the newly introduced Upward Pricing Pressure (UPP) test is an improvement over the traditional market definition approach in case of differentiated products. But these new tools shed no light whatever on coordinated effects. Merger simulation models usually assume single-period Bertrand competition and the UPP test assumes that the demand curves facing the merging firms do not change as a consequence of their merger or their post-merger price changes (Jaffe, & Weyl, 2013). As a discipline, M&A has rebuilt itself many times in the past; to maintain its relevance, it needs to reinvent itself once more. A relevant and coherent rebuilding of the discipline relevant to the public sector enterprises will depend on its ability to take new developments into account. The models will need to incorporate political imperatives and social obligations..

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