

Industrial organization: understanding the mechanisms of market structures



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Patrick Legros, Professor of Economics at Université libre de Bruxelles, explores how Industrial Organization can help understand the positive and normative consequences of different market structures

In the Industrial Organization (IO) field, we understand the positive and normative consequences of different market structures. For instance, fewer firms yield higher prices. But we have a poorer understanding of the reasons for the emergence of these market structures, which require answers to two basic questions:

1. When and why do mergers or divestitures happen?; and
2. It is now well-documented that degrees of integration vary within and across industries, even when controlling for exogenous differences. How can we explain the heterogeneity in performance among seemingly identical firms?

The literature tends to explain merger waves by industry shocks that imply a financial need to reallocate assets or a behavioral approach linking booms to “over-optimism” that allows managers to have discretion and engage in mergers that are not necessarily wealth-enhancing. But traditional Industrial Organization does not provide a unified mechanism to answer both questions easily.¹

We have shown recently that if we can extend the traditional approach by considering firms from an organizational perspective (where all decisions cannot be contracted upon and where the identity of the decider matters for production efficiency), the two questions are linked.² Indeed, from an Organizational Industrial Organization (OIO) perspective, integration decisions tradeoff coordination benefits versus private costs to the managers.

This tradeoff provides a simple answer to the two previous questions and opens the door for another view of the relationship between price levels and degree of integration.

- Mergers happen because the product market conditions are “right”. For instance, if there is a higher demand for the industry product, there are more monetary benefits from coordinating activity (to integrate), even if this will entail higher private costs (e.g., loss of decision-making power); and
- There is heterogeneity in organizational forms and performance among seemingly identical firms because agents make decisions to integrate with control and decision rights, trade off the benefits from higher productivity (therefore more monetary benefits) and the private costs they incur in each organizational form. In a stable market outcome, less productive firms are associated with higher private benefits for the decision-makers, explaining why heterogeneity is consistent with stability when firms are identical otherwise.

The OIO approach and reverse causality

To put these answers in perspective, let us take stock of what we already know about integration. Two basic effects of integration have been identified: efficiency and market power enhancement.

Efficiency can arise because integration solves agency problems (lack of commitment on prices, distributors free riding on each other for brand advertising). Market power enhancement can be due to foreclosure (increased rivals' costs, refusal to supply) or increased ability to engage in collusive agreements to raise prices.

In both cases, we expect prices to rise at the wholesale or retail level and for market shares to be reallocated to the integrated firms. Hence, current Industrial Organization theory suggests that [integration may lead to higher or lower prices and market shares](#) depending on whether the dominant effect is foreclosure or efficiency.

Therefore, causality is perceived as flowing from integration decisions to price levels. But there may be a reverse relationship between integration and prices. If integration is privately costly to the parties, the price has to be high enough for firms to decide to integrate.

Integration is a consequence rather than a cause of high prices. Since integrated firms are more productive than non-integrated firms, they also have larger market shares. This reverse causality obtained from our OIO approach is important when considering when to regulate a market, e.g., whether to force firms to divest assets, but also to understand how market structures evolve.

Market power enhancement: Regulation and divestitures

For instance, when regulators observe a pattern of increasing prices and market shares to the integrated firms in a time series, they may conclude that the efficiency motive for integration is not at play and that the price increase is due to market power enhancement.

The regulators may then advocate divorcement policies with the expectation that by removing the instrument for market enhancement — integration — the price levels will decrease after divorcement.³

This happened in the US retail gasoline and British beer markets. Regulators imposed divorcement policies following long periods of increasing integration and rising prices. A surprising continuation of rising prices instead of the expected fall ensued. What is more, firms' profitability also fell despite the price increases.

These patterns are difficult to reconcile with the view that concentration causes price increases. But the pattern is consistent with the reverse causality between prices and integration. Indeed, if integration arises because demand is high, prices are high, and the higher prices are, the more integration should be expected, together with larger market share differences between integrated and non-integrated firms.

In this world, integration generates more output than non-integration, and divorcement policies will decrease output and, therefore, higher prices.

Market power and the quiet life

In ongoing work, we inquire about the emergence of oligopolistic structures and consider situations where firms are powerful when they have many production units.⁴ The decider in a powerful firm has market power and will want to increase the price by restricting output, concerning what a decider in a "fringe" firm without market power will do. Therefore, production units in powerful firms enjoy a quieter life (they will work less and have lower private costs) than in a fringe firm.

Production units can join powerful or fringe firms, anticipating that all firms face the same product price. Still, the revenue per production unit in powerful firms is inferior to that of fringe firms. An oligopoly emerges and is stable only if the monetary benefit of joining a fringe firm is compensated by the quieter life in powerful firms.

We show that fringe firms can co-exist with powerful firms and that concentration increases with the market size, suggesting a demand-side driver of recent trends that profit margins and market concentration increase in many industries.⁵ Moreover, stable oligopolies may lead to a market price that is inferior to the price in a perfectly competitive structure.

References

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