DATA AS AN ESSENTIAL FACILITY IN INSURANCE AND REINSURANCE MARKETS

Aditi Choula, Indian Institute of Management, Rohtak

ABSTRACT

This article challenges the notion that the market for insurance and reinsurance is capital intensive and that competitive superiority hinges on balance sheet superiority. The assertions offered in this article that data has now become the critical infrastructure input that determines competition in the modern market for insurance and reinsurance. Historical claims data, catastrophe loss data, and long-term loss development files have become essential for proper risk pricing, underwriting authenticity, and allocation of capacity. The absence of access to these sources of information means that companies can not only expect to pay higher prices for resources but also lack the means to compete and keep up with the market.

A transition from capital dominance to data dominance is best observed in the reinsurance sector, where a few large global reinsurers and analytical companies and a few data cooperatives in the industry compile loss data across locations and scales and over time. Here, the players essentially act as data gatekeepers because the loss data compiled cannot easily be duplicated by a new competitor. The compilation of the insurance data is also strongly path dependent, where its claims and disaster experiences over a period of several decades are vital because only then do they gain significant experience and are also subjected to a non-repeatable disaster experience.

In spite of these forces at work, the area of competition law took a long time to incorporate the concept of data as market power in the insurance industry. Most conceptual frameworks that exist presently relate to price, quantity, or capacity constraints, where data is regarded as a lower-order input rather than market infrastructure. This paper submits that it is difficult for that conceptual framework to be sustainable. Data in the insurance/reinsurance business may amount to an essential facility that may exclude competition.

The article has three major contributions. First, it generalizes the essential facilities doctrine, which has classically been connected with physical infrastructure, by locating the insurance data within the underlying logic of the essential facilities doctrine. Second, the article harnesses the post-digital antitrust approach and provides a reconceptualization of data by defining

data as infrastructural data instead of being merely informational data. Third, the article provides a comparative approach for access obligations and intervention on the basis of balancing competition, innovation, and stability.

In highlighting the challenges posed to existing antitrust rules by data-driven dominance within one of the economy's most significant sectors through its focus on insurance and reinsurance data as essential market infrastructure, this paper argues that a necessary evolution of competition policy can and must ensue.

Introduction: Data, Power, and Market Foreclosure in Insurance

The insurance and re-insurance market has also been austerely described as a capital-intensive market. However, while certainly true, capital has ceased to become the critical factor for a successful market participant. On the contrary, claims data, catastrophic data, and long-term loss data have become critical inputs and are actually the nucleus around which risk pricing, underwriting, and risk capacity revolve.[1] This observation has become self-evident because the current reality of the insurance market has brought data and risk pricing together. Entities without access to the data inputs have become structurally excluded options or have entered a cost disadvantage zone.[2]

This paradigm shift, therefore, from capital dominance to data dominance, is most evident in the reinsurance industry. Reinsurance involves the pooling of risk at the highest level, where the reinsurer is exposed to catastrophic loss correlation, along with aggregating data on the risk environment globally.[3] The world is a global village, making the availability of catastropherelated data both rare and highly depressed in the hands of a handful of major reinsurers and data analysis firms.[4] The data gatekeepers, therefore, are the gatekeepers to the information infrastructure for the insurance industry.

Notwithstanding this, competition law remains late to respond to data-driven exclusion, specifically within the insurance industry. The current legal framework rather discusses prices, output, and capacity, where data is only a secondary input and not a component of infrastructure.[5] It shall be shown in this thesis that this stance can no longer be tenable. Data

[1] Tom Baker & Kyle D. Logue, Insurance as Regulation, 101 Mich. L. Rev. 1 (2002).
[2] Reinsurance Ass'n of Am., The Role of Reinsurance in the Global Insurance Market (2018).
[3] Swiss Re Inst., Sigma No. 2/2020: World Insurance—Riding Out the 2020 Pandemic Storm (2020).
[4] Dennis W. Carlton & Jeffrey M. Perloff, *Modern Industrial Organization* 315–18 (4th ed. 2005).
[5] Herbert Hovenkamp, *The Antitrust Enterprise* 221–25 (2005).

related to insurance and reinsurance can constitute control over essential facilities, including those that can potentially exclude and drive competition.[6]

In this regard, the original contribution of this article lies in three aspects. First, there is an extension of the analogy of essential facilities to data in the field of insurance.[7] Second, the article seeks to apply the concept of post-digital antitrust to the insurance and reinsuring market, considering data from an infrastructural angle rather than from an informative one.[8] Finally, there is a progression towards a comparative and prospective approach to access and regulation in relation to the aspect of data in the realm of insurance.

Insurance and Reinsurance as Data-Dependent Ecosystems

The first thing to understand is that insurance is a probabilistic activity. The very process of risk-based pricing is based on experience statistics related to frequency and severity of losses.[9] Without access to this information and a corresponding flow of experience data related to events that took place in the past, insurers have neither a chance to sufficiently estimate potential costs nor can new products be considered.[10] While a certain modelling is feasible, the precision of underwriting is a non-linear function of the depth and scope of information.[11]

Reinsurance further accentuates this interdependence. Reinsurers are risk bearers, but they are also information aggregators. They take in the loss information of their insureds in various regions and improve their probabilistic models over long timescales.[12] This further introduces an information asymmetry between the primary insurer and the reinsurer, especially in smaller primary insurance companies that do not have equal information at their disposal.[13]

Data accumulation in the insurance industry experiences a high degree of path dependence. It takes many years, or even decades, to establish a claims record credible to a degree where decisions can be their outcomes safely to be left to data alone. Catastrophe data are particularly

[6] Phillip E. Areeda, Essential Facilities: An Epithet in Need of Limiting Principles, 58 Antitrust L.J. 841 (1989).
[7] United States v. Terminal R.R. Ass'n, 224 U.S. 383 (1912).
[8] Lina M. Khan, Amazon's Antitrust Paradox, 126 Yale L.J. 710 (2017).
[9] George L. Priest, The Current Insurance Crisis and Modern Tort Law, 96 Yale L.J. 1521 (1987).
[10] Kenneth J. Arrow, Uncertainty and the Welfare Economics of Medical Care, 53 Am. Econ. Rev. 941 (1963).
[11] W. Kip Viscusi, Regulation of Risk, 98 J. Econ. Lit. 231 (2010).
[12] Reinsurance Ass'n of Am., The Role of Reinsurance in the Global Insurance Market (2018).
[13] Peter Molk, Reinsurance and the Limits of Liability Insurance, 92 Wash. L. Rev. 1371 (2017).

non-replicable. Natural disasters are non-repeatable events, and their data cannot be replicated just by simulation alone.[14]

Such factors create barriers to entry that differ from and are, apart from scale, capital barriers. Even if better-financed, rival firms may be unable to compete effectively if they do not have access to high-quality data about events from the past and catastrophes.[15] Data, therefore, is a bottleneck input that affects industry structure and competition results largely beyond the usual scrutiny of competition analysis.[16]

The Essential Facilities Doctrine and Insurance and Reinsurance Data as an Essential Facility

The origin of the essential facilities doctrine has its roots in cases concerned with physical infrastructure like rail transport and transport networks.[17] Among its most fundamental premises is: "Where a dominant enterprise has control of an essential facility, refusal to supply access to that facility may be an abuse of dominance."[18]

However, the courts have shown growing reservations regarding the doctrine. The fear of judicial encroachment, obstruction of contractual liberties, and discouragement of investment incentives has resulted in the scaling back of the doctrine, especially in the United States.[19] Although in jurisdictions that are receptive to compulsory access, for instance the European Union, the doctrine is considered the exception.[20]

Nevertheless, the rationale of the doctrine has thus expanded in concept from hard infrastructure. This applies not only to intellectual property but also to network effects and information assets in general. Data has a rather ambiguous role in all the aforementioned expanded concepts. Data is non-rival and potentially replicable, but not from a practical perspective. If the essential facilities doctrine is used as a guiding principle instead of a checklist then then data shall clearly fall within its scope.

[14] Richard J. Zeckhauser, Insurance and Catastrophes, 45 J. Risk & Uncertainty 201 (2012).
[15] Franklin Allen & Douglas Gale, Financial Contagion, 1 Rev. Econ. Stud. 1 (2000).
[16] Jonathan B. Baker, Beyond Schumpeter vs. Arrow, 74 Antitrust L.J. 575 (2007).
[17] MCI Commc'ns Corp. v. AT&T Co., 708 F.2d 1081 (7th Cir. 1983).
[18] Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398 (2004).
[19] Case C-418/01, *IMS Health GmbH & Co. OHG v. NDC Health GmbH & Co. KG*, 2004 E.C.R. I-5039.
[20] Lina M. Khan & Sandeep Vaheesan, Market Power and Inequality, 133 Harv. L. Rev. 221 (2020).

The appropriate question here is not one of similarity between data and a railway line, but of whether control over the data in question (and thus its utilization) enables the exercise of gatekeeper power that competition law must focus on.

The data related to insurance and reinsurance has several characteristics that correspond closely with the factors that have been traditionally linked with essential facilities. Insurance data is, first of all, essential for competition. The accurate pricing of insurance lines requires that one has access to data related to past claim experience and catastrophe losses, and data related to long-term losses as well. Without these, one cannot accurately estimate losses and thus cannot allocate capital efficiently or provide competitive prices.[21] The importance of data to insurance underwriting thus carves out insurance from other markets, which may only be based on current prices and observed demand conditions. In insurance, risk is the product, and data provide the mechanism by which this risk is made legible and commoditized.[22]

Secondly, the information available in the insurance and reinsurance sectors is non-replicable even if it is considered reproducible. Developing a good data set is done after participating in this industry for a lengthy period. We can even consider a period that would last for several decades. The problem with catastrophe data sets is that they cannot be replicated at any cost. The reason for this is that natural catastrophes are rare events that occur in a non-repeatable stochastic manner. They possess information that can neither be modelled nor replicated. New companies cannot expedite the process of time nor can they develop catastrophe experience.

Third, the control of high-quality insurance data is increasingly centralized. This is because big global reinsurers and catastrophe modelling companies control access to high-quality longitudinal data.[23] This is because it is not only the case that big companies are big, but these companies are also information intermediaries. This is because re-insurers are in a favourable position that allows them to aggregate loss data from different customers. This allows them to improve their models that smaller companies are not able to develop. This advantage cumulates over time.

Refusal to deal in this instance is generally implicit. Where this is found to be the case, exclusion will instead be found by assessing licencing restrictions, excessive pricing, bundling

[21] Kenneth S. Abraham, *Insurance Law and Regulation* 3–7 (6th ed. 2015).
[22] Frank H. Knight, *Risk, Uncertainty, and Profit* 197–232 (1921).
[23] Tom Baker & Kyle D. Logue, *Insurance Law and Policy: Cases and Materials* 29–33 (5th ed. 2014).

data access and reinsurance capacity, and discriminatory data access.[24] The data in question may be available; however, this is not always necessarily the case. In fact, de facto exclusion may be tantamount to a refusal to deal.[25]

In the context of essential facilities, all of the above matters are important. Where there was a dominant firm with a necessary input that was impossible, non-replicable, and could be used to foreclose competition if withdrawn, there was historically a narrow duty to deal.[26] However, in terms of insurance data, all of the issues that have been identified in the context of the duty to deal are present in this area.[27]

Data Concentration, Market Power, and Soft Foreclosure

Data concentration in the insurance industry does not immediately generate price outcomes. Instead, the outcomes generated by data concentration in the insurance industry entail structural aspects. This is due to the fact that the major data owners influence the information framework within which underwriting or risk evaluation may take place.

"Soft foreclosure," therefore, falls squarely outside the traditional antitrust safe harbors, being based on short-term collusion. Yet soft foreclosure weakens market contestability and thwarts innovation and entry as well as solidifying the power of incumbents.[28] "The focus on observable price collusion through antitrust policies overlooks the far more subtle dynamics of market power based on control over data."

Data-driven markets create challenges for the traditional methods developed in response to competition concerns. Defining a market becomes more problematic, the notion of dominance becomes a fluid concept, whereas all ideas on harm emerge only through the long term. A different approach, which has a more visible presence within the newly formed frameworks on antitrust in the post-digital age, focuses on ecosystem power, gate keeping, and infrastructural control.[29]

[24] OECD, *Big Data: Bringing Competition Policy to the Digital Era* 33–36 (2016).
[25] Herbert Hovenkamp, *The Antitrust Enterprise: Principle and Execution* 252–55 (2005).
[26] Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 407–08 (2004), Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 605–11 (1985).
[27] Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 605–11 (1985).
[28] Jonathan B. Baker, Beyond Schumpeter vs. Arrow, 74 Antitrust L.J. 575 (2007).
[29] Kenneth S. Abraham, *Insurance Law and Regulation* 3–7 (6th ed. 2015).

In this respect, the information pertinent to the insurance sector and reinsurance is a means not only of inputs but also a form of coordination mechanism which is embedded within the processes of risk pooling and product design and capital flow.[30] This has strong systemic implications especially when one takes note of the role of the insurance sector in economic resilience.[31]

Thus, the focus on consumer welfare needs to be dynamic by necessity. The aspects of access, robustness, and contestability also need equal prominence alongside the price component, albeit within the short-term perspective. Ultimately, consumers end up being disadvantaged by a market that locks out entrants, such as new insurers, due to data constraints, even when the cost is not adversely affected.

Conclusion

A growing number of insurance and reinsurance data are becoming essential facilities. Ownership of such data can facilitate exclusionary conduct, entrench, and warp the market's process of evolution. Yet, the existing legal structure is ill-equipped to deal with such circumstances.

This article has argued for a reconceptualization of data as market infrastructure and for the cautious extension of access obligations in insurance markets. It is this elevation of informational control to an underlying driver of power that competition law must come to recognize in its evolution, not by abandoning restraint but by adapting its analytical focus.

Failure to do so risks allowing informational bottlenecks to quietly undermine market contestability, innovation, and resilience in one of the economy's most systemically important sectors.

[30] Erwann Michel-Kerjan & Paul Raschky, The Demand for Catastrophe Insurance, in *The Oxford Handbook of the Economics of Risk and Uncertainty* 570, 576–80 (Mark J. Machina & W. Kip Viscusi eds., 2014).
[31] Neil Doherty & Georges Dionne, Insurance with Undiversifiable Risk: Contract Structure and Organizational Form of Insurance Firms, 79 *J. Risk & Ins.* 101, 104–07 (2012).