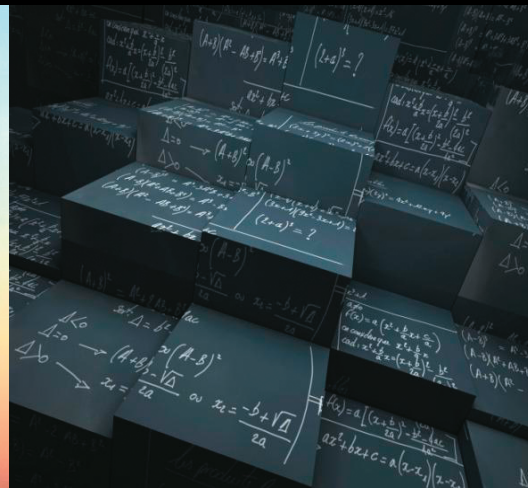
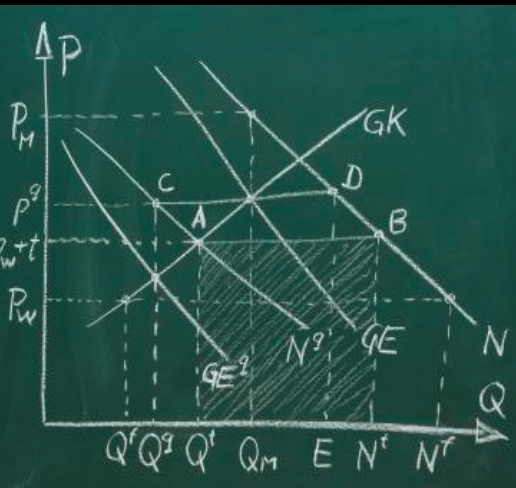


Telecommunications



Where Powerful Ideas Work

ADVANCED ANALYTICAL

CONSULTING GROUP

About Advanced Analytical Consulting Group (AACG)

Founded by former Senior Managers and national leadership of the Economics and Statistical Consulting Group of Deloitte's Financial Advisory Services in 2009, AACG provides economic, statistical, and computing consulting for business decisions and litigation. AACG assists business clients with strategic and operational consulting based on in-depth quantitative analysis of corporate data and the client's position in the market. AACG provides expert testimony, support for academic experts, and assistance in identifying the right expert from academic and business settings. From offices in Boston and Washington, D.C., AACG currently serves clients in Canada, Mexico, the UAE, the U.K. and the U.S.

Telecommunications

The speed at which the communications industry is evolving means rapid change in regulation and increasing complexity for businesses trying to optimize profits, satisfy regulatory requirements, and avoid or respond to litigation. In this environment, telecommunications companies can benefit from expert assistance in designing (and, if necessary, defending) their investment and pricing decisions. The economists at Advanced Analytical Consulting Group (AACG) have a deep understanding of the complexities of the industry and extensive experience in helping their clients face the business, regulatory, and legal challenges present in historically regulated, newly deregulated, and competitive environments. For example, implementation of the Federal Communication Commission's (FCC) plan for broadband expansion, competitive neutrality, and upgrading access for all Americans would affect how companies invest their resources and compete with one another when offering broadband services at prices consumers find attractive.

How We Can Help

With over 30 years of experience, Ph.D. economists at AACG have addressed a wide range of telecommunications issues from competition and antitrust issues in regulatory and litigation settings to optimal pricing decisions in business planning settings. Our experts have developed advanced analytic technology needed for complex statistical and econometric modeling of large data sets for uses such as determining how customers respond to product and price offerings and for assessing liability and damages. Our professionals are adept at communicating these analyses to audiences in corporate and legal settings and have served as testifying experts in numerous legal and regulatory matters. Our international telecommunications research and consulting have included competition issues in India, Canada, Japan, New Zealand, Peru, Australia, and Trinidad and Tobago.

Expert Testimony Our economists have testified as experts in legal and regulatory proceedings before the Federal Communications Commission, state regulators, and arbitration panels. These proceedings often have high stakes, typically involving multiple parties and multi-million dollar financial consequences. AACG economists have extensive experience in the methodologies used to evaluate the economic merits of competing positions. We have calculated damages (and critiqued opposing damage claims) for matters such as billing disputes, outstanding uncollectable balances, Lanham Act Claims, Alter Ego claims, billing and provisioning problems, heightened levels of customer churn, contract disputes, and consumer class actions. We ground our economic analyses in "real world" information, including the utilization of relevant market data, comparative company data, market trends, and knowledge of industry pricing (including tariff requirements) for traditional and emerging wireline and wireless services.

Capacity for Large-Scale Data Analysis Telecommunications engagements often require analysis of large amounts of data. For example, economic analysis of the competitiveness of increasingly complex product offerings (in business planning, regulatory, and/or litigation settings) may rely on corporate databases that include revenue and product cost information. The size and complexity of these datasets often calls for a team of economists and econometricians well-versed in applied economic analysis. AACG economists have supported some of the most data-intensive telecommunications cases, synthesizing concise, persuasive analysis, and arguments based on reliable, tested empirical research.

Advanced Analytic Technology Changing competition and an evolving regulatory landscape often demand companies to reassess the business impact associated with various pricing strategies and bundled offerings in order to optimize profit. AACG's *Pricing and Profitability Optimization* techniques draw on decades of research and experience to provide a customized tool for clients. By inputting a continuous stream of complex data into multiple, competing analytical and statistical models, AACG is able to provide portfolio revenue and profit scenarios to meet our clients' long-term and short-term business objectives.

Our Experience/Offering/Product

AACG's economists have deep experience in telecommunications, including the following:

- Evaluation of the competitiveness of traditional and emerging telecommunications markets
- Pricing/Rate design/Revenue enhancement
- Objective third-party expertise in performance/Quality measurement and operation support system readiness
- Technical expertise (e.g., economic and statistical analysis)
- Regulatory strategy development
- Expert testimony
- Depreciation analyses
- Public policy development
- Price cap/Incentive regulation/Deregulation analysis
- Cost of service studies
- Analysis of pole attachment/Infrastructure sharing arrangements
- Wholesale/Access pricing

Case Studies

Regulatory Support

Broadband Issues: Most recently, economists at AACG are active participants in regulatory and legal proceedings related to the FCC's National Broadband Plan. We have advised telecommunications clients and produced expert reports on topics such as (1) rates for the exchange of traffic between landline carriers that avoid uneconomic arbitrage opportunities and encourage efficient investment in telecommunications networks, (2) rates for the use of network infrastructure such as utility poles to facilitate the efficient provision of broadband services, and (3) development of an analytical framework for determining whether incumbents' high capacity services face enough competition to justify relaxed regulation or effective deregulation.

Retail Price Deregulation: An AACG economist submitted expert reports and appeared in a hearing before a state regulator to determine whether an incumbent local exchange carrier's retail rates should be deregulated. Our reports evaluated the state of telecommunications competition and concluded that competitive offerings (e.g., the rapidly growing inroads from non-traditional sources such as cable television providers, wireless, and voice over Internet protocol (VoIP)) were sufficiently strong to justify deregulation of retail rates. The state regulator issued a decision that deregulated the prices of all retail services.

Quality-of-Service Statistical Analysis Testimony: Economists at AACG provided expert testimony to the FCC and appeared before numerous commissions, detailing the appropriate statistical tests for use in measuring thousands of telecommunications performance metrics. The analysis was designed to ensure that scientific statistical methods were used in identifying when incumbent local exchange carriers (ILEC) were providing service to customers of competitive local exchange carriers (CLEC) equivalent to that provided by the ILEC to their own customers.

The statistical methods were then implemented for use in a monthly reporting process and provided to federal and state regulatory commissions and CLECs.

Quality-of-Service Performance Measurement, Advanced Statistical Analysis, and Reporting:

For a major US landline telecommunications provider, AACG economists developed and installed the reporting system used to check performance quality reports for CLECs and federal and state commissions.

Economists at AACG have reviewed or created the key performance indicators for more than two-thirds of the states and more than half of the customers in the US. Our economists have been involved in the parity of performance debates in the US since this regulatory issue arose. AACG economists have contributed to the development of the key performance indicators, the statistical methods used to monitor them, and the penalty plans associated with underperformance of each key performance indicator.

Litigation and Claim Support

Interconnection Rate (Access Charge) Disputes: Economists at AACG have participated in several legal and regulatory disputes over reasonable rate levels. In these cases, small rural local telephone companies had attracted unusually large volumes of long-distance traffic by partnering with other providers, such as those providing free (or low cost) conference calling services. Our analysis addressed economic principles for establishing reasonable rate levels, evaluated the reasonableness of existing rate levels, and estimated damages resulting from economically unreasonable access charges.

Pole Attachment Disputes: Economists at AACG provided expert testimony on behalf of a major local telecommunications carrier in connection with joint pole use agreements. The disputes related to high rental rates charged by the electric utility. Our work included economic evaluation of the rate proposals of the contending parties and economic support for the telecommunications carrier's rates. We also provided quantitative analysis in support of subsequent negotiations that resulted in a settlement reducing the telecommunications carrier's payments by several million dollars relative to what the electric utility claimed was owed under previous agreements.

International Wireless Carrier Interconnection Dispute: A national telecom regulator appointed an arbitration panel to resolve a dispute over the rates that two carriers could charge each other to terminate mobile traffic on their respective networks. An AACG professional submitted expert reports and appeared as a witness before the panel. Our reports analyzed the basis for each carrier's mobile termination charges. Our analysis also resulted in an economic principle that such reciprocal charges should generally be at comparable levels between parties and provided an estimate of a reasonable level for such charges. The arbitration panel determined that reciprocal charges were reasonable and established rate levels broadly consistent with our recommendations. The ruling supported by our work saved our client tens of millions of dollars per year relative to the amount sought by the contending operator.

Competitive Pricing Disputes: An incumbent local exchange carrier whose retail prices had been recently deregulated in certain areas lowered its prices to improve its competitive position. The competitors requested that the state regulator not allow these price reductions on the grounds that they were anticompetitive actions: predatory pricing, price squeeze, and cross-subsidization. Economists at AACG analyzed the state of competition and provided expert testimony concluding that rather than the incumbent's pricing responses being predatory, they were reasonable responses to improve its position in areas in which the complaining carriers had captured over half the market. The regulator ruled that our client's pricing was most likely the type of competitive response that it expected when it deregulated in the areas under dispute and that the response was beneficial to consumers.

Long Distance Reseller Disputes: Economists at AACG provided expert witness and consulting services for a major long distance carrier faced with various reseller contract disputes. The Long Distance Carrier faced numerous similarly disposed law suits filed by resale customers alleging

unfair and non-competitive business practices. Resellers alleged unfair pricing based on FCC regulations and rulings and contended that the Carrier provided inferior service to that being provided to retail customers. The sum of alleged damage claimed by the plaintiffs represented billions of dollars.

For these projects the teams sought to assess the facts via a thorough review of business records. Among the documents reviewed were provisioning records, billing documents, correspondence and reseller financial records. Analysis showed that the plaintiff's claims of misconduct were grossly overstated. In some instances, economists at AACG demonstrated that careful review of the plaintiff's financial statements revealed no lost profits because the company had never earned profits throughout the period of its reseller contract.

The consulting team worked with outside counsel and the general counsel's office by providing key document analysis, financial insight, and trial support. Many disputes resulted in settlements and judge or jury decisions in favor of our defendant client. In some instances, our client was awarded damages for lost revenue for unpaid services totaling tens of millions of dollars.

Billing Disputes: Interexchange carriers (IXC) have contractual rights to perform audits of certain local exchange carrier (LEC) processes. These audits often result in substantial claims issued by the IXC against the LEC. Economists at AACG analyzed the statistical, theoretical and contractual merits of multiple claims, re-performed the procedures used by the IXC in developing the claim, and developed responses to the claim.

The benefits to our client included:

- Significant reductions in the overall claim amount
- Identification of issues related to the meaningfulness of the application of statistics in the IXC claims
- Determination of the appropriateness of the IXC's treatment of state and local tax issues

Business Support

Economists at AACG determined the business impact of various pricing strategies and bundled offerings for one of the nation's leading telecommunications companies. Our experts established the estimated own-price and cross-price elasticities, using internal and external data for select products across several geographies. AACG economists tested critical hypotheses related to model structure, cannibalization, and competitive pricing non-linearities. Our findings influenced the development and introduction of several products and service bundles and improved the effectiveness of product and service introductions as measured by take-up rate and profitability.

Economists at AACG have employed similar techniques to determine the demand, costs, and profitability of telecommunications products and services, including (1) designing and evaluating telecommunications network cost models; (2) developing models of the demand and revenue impacts from introducing alternative pricing plans for local and long-distance services; (3) estimating models of the market potential of wireless offerings with different service configurations; (4) developing models of (a) business customer choices of switching systems (PBX and Centrex), (b) demand for optional calling features, and (c) demand for bundles of telecommunications services; (5) developing the demand elasticities adopted by a state commission to rebalance residential retail prices; and (6) estimating models of consumer choice and competition in the Japanese long-distance market.

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