
Polynomics Regulation Index 2012

Characteristics in Brief (see www.polynomics.ch/rdi for more information)

The «Polynomics Regulation Index 2012» measures regulatory density in the telecommunication sector. This short summary provides some background information on the index.

Why Measuring Regulatory Density in Telecommunications?

Studies have so far examined the influence interventions in the market have on a sector's ability to improve production processes and new products. Both, too little and too much competition – and the primary goal for regulation is to promote competition – can delay or even impede innovation.

The conclusion that investments or innovations are hampered in countries with high regulatory density is not valid by simply looking at regulatory density alone. Such an effect – or the opposite of it – can only be assessed econometrically, by estimating the relationship between investments or innovations in the telecommunication sector and regulatory density.

Cornerstones of the «Polynomics Regulation Index 2012»

In order to study the effect of regulation on industry behavior and market outcome, regulatory density must be measured. The «Polynomics Regulation Index 2012» aims to provide such a measure. It takes into account recent

OECD recommendations regarding construction and composition of indices. The «Polynomics Regulation Index 2012» is based on

- 29 questions regarding sector specific regulations. Each of these can basically be related to the fixed network, the mobile network and/or NGA networks. On this basis, the data consists of coded answers to a total of
- 41 regulatory indicators. These indicators are scored in terms of «regulatory density» by «0» for the lowest regulatory density (only competition law) and by «1» for the highest comprehensive sector-specific regulation density. Some indicators attain values between 0 and 1: For example regulated incremental costing is assumed to be more severe (therefore score «1») than price-cap regulation (score «0.5»). The indicators are evaluated and gathered for
- 32 countries (EU-27, Australia, Japan, Switzerland, Singapore, USA) for a period of
- 14 years (1997 until 2010), thus since liberalisation of telecommunications markets in many of these countries. Based on the regulatory indicators
- various sub-indices and indices can be constructed. One can, for example, take the average over all or over a subset of indica-

tors. One particular way to do this is to compute the average over the indicators for certain subsets of regulations (price, quantity, entry, and further regulations influencing entrepreneurial decision variables).

- See www.polynomics.ch/rdi for more information. Please request the data set by e-mail: rdi@polynomics.ch.

How can the Index Be Used in Empirical Economics?

The sub-indices and indicators used in the «Polynomics Regulation Index 2012» were all selected by the criterion, that they potentially influence investment and innovation activity by telecommunication companies, but they do not make any direct statements about the quality of regulation. The indicators measure the intensity of regulation but do not rate it.

Market results like innovation are influenced by regulation as well as by a number of other factors like GDP, inflation, etc. In a first step, regulation must be measured but not assessed. In further steps, market results and other influencing factors need to be measured. In a last step, the link between regulation and market outcome can be econometrically estimated.

Studies which use our indicators include:

- Bauer, J.M. and Shim, W. (2012). Regulation and Innovation in Telecommunications, Quello Center for Telecommunications Management and Law, Working Paper 01-12, East Lansing, Michigan.
- Grajek, M., and Röller, L.-H. (forthcoming). Regulation and Investment in Network Industries: Evidence from European Telecoms, Journal of Law and Economics.

Polynomics Company Profile

Polynomics has a strong team of experts in various fields of economics. Our thinking is firmly grounded in economic theory and our knowledge of modern econometric methods allows us to translate theory into practice.

Our core consulting competence is focussed on

- analysis of customer needs
- regulatory and decision oriented costing and pricing
- competition economic analysis
- efficiency measurement and benchmarking
- strategy consulting

We employ our expertise in economics and our international experience to

- write scientific and empirical reports for antitrust and regulatory proceedings,
- write reports on the design of regulatory systems, assess the consequences of proposed regulations, and evaluate the economic importance of individual industries.

The composition of our team of experts guarantees that we can consult our clients efficiently and comprehensively. This is particularly true for energy, telecommunication, transport, postal services, health and finance.



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