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## SEMINAR ANNOUNCEMENT

### *The Influence of Institutional Structure on Regulatory Choices and the Impact of these Choices on the Telecommunications Marketplace*

#### SPEAKER ABSTRACT



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#### VENUE

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The telecommunications regulatory authorities are separate independent bodies equipped with people with the knowledge of the technology and the economics of the sector and endowed with certain statutory power to oversee the market. In different countries these sector specific organizations are different in terms of structure, scope and level of independence. Nonetheless, these independent regulatory authorities (IRA) take various decisions that are often proved to be vital to change the course of the specific sector. This research aims to understand what influences the regulatory decisions and how the decisions impact the course of the sector.

Mobile telephony and Internet revolutionized the telecommunication marketplace since early 1990s. Better technology made transfer of real time voice and video transfer via Internet affordable and ubiquitous. The need for spectrum increased as the use of mobile data increased. Traditional regulatory regimes recognize ‘voice’ and ‘data’ to be distinct services. With Voice over Internet Protocol (VoIP), this regulatory notion is gradually becoming obsolete. Now wired, wireless and Internet based telecom services are competing in the voice telephony market. With competition, customers are migrating to newer, cheaper and better quality services. The barrier to this free movement is the absence of number portability- customer’s ability to keep the phone number when she migrates from the existing service provider to a better alternative.

The regulators are now facing new challenges – legalization of VoIP, introduction of mobile number portability, decisions to award electromagnetic spectrum via auction, legalization of reusing specific spectrum band and mandating neutrality of technology for specific technology generations. Broadly, these regulatory choices can be divided into three categories- decision to introduce new technology (legalization of Voice over IP), decision to enhance competition (introduction of mobile number portability) and decision to manage scarce resources efficiently (spectrum related decisions).

This thesis is a novel addition to the anthology of telecommunication regulation, technology policy, institutional economics and political science. Theoretical works that explain the dynamics of the regulatory institutions and their decisions are in abundance. However, quantitative

scrutiny is scarce. We try to fill the gap through empirical research. We ascertain how over all politico-regulatory environment impact certain regulatory decisions, and how these decisions impact diffusion of a certain technology generation, price of telephony and the country's economic growth.

The dataset is of time-series-cross-sectional form consisting of 145 countries of the world. It contains information regarding political conditions (such as system of the governments, parliament, regulatory design (such as composition of the institution, independence, functions), socio-economic condition (such as income level), and communication-market specific data (such as various regulatory decisions, sector performance indicators). With the help of the dataset, this thesis ascertains firstly the impact of the institutional environment on the regulatory choices and secondly the impact of these choices on the marketplace.

Our estimations find that in the telecommunications sector, it is not the over all political condition but the construct of the regulatory structure-independence and scope that enables the regulators to take decisions in favor of technologies and interventions that may be paradigm shifting and disruptive. We find that the decisions related to spectrum management, have positive impact on diffusion. However, the 'one size fit all solution' does not work well as in terms of consumer price and GDP growth, influence of these interventions affect the countries of different economic level and geo-political locations differently. We also find evidence that, whilst the institutions impact various regulatory decisions which in turn impact the diffusion of technologies, the variables of the institutions do not have direct influence on the diffusion process.

#### **SPEAKER**

Moinul Zaber, PhD, received his doctorate in Telecommunications policy at the Engineering and Public policy department of Carnegie Mellon University, United States. His dissertation was on the the impact of regulatory structures and the methods of spectrum management policies on the diffusion of telecommunications technology. He has an MSc in Engineering and Public policy and BSc and MSc in Computer Science and Engineering. He is currently a Research Fellow at both LIRNEasia in Sri Lanka and Instituto Superior Técnico, University of Lisbon, Portugal.