

Telecommunications infrastructure and economic performance

16th-17th October 2008 – Paris, France

Regulatory governance and telecommunications performance An overview

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October 2008

What have we learnt?

Main findings

1. All empirical studies found that *competition* has a positive and significant impact on network expansion (Ros 2003, Boylaud and Nicoletti, Wallsten 2001, Fink et al, Gutiérrez, Gebreab, Li & Xu, Grzybowski , Maiorano & Stern).

Policy options: governments should keep being pro-active in opening markets, fixed and mobile, to more competition.

Main findings

1. Most studies found that *privatization* of former state owned operator had a positive and significant impact on network expansion (Ros 1999 & 2003, Fink et al, Gutiérrez, Gebreab 2002, Li & Xu, Estache et al, Gasmi and Recuero).
2. Competition interacted with privatization seems to affect positively network expansion (Li & Xu, Fink et al.).

Policy options: Governments where no privatization has taken place should learn that allowing private investment involvement in telecommunications brings better network deployment.

Main findings

The effect of regulation has been mixed

- Some studies found that regulation have also been effective in improving sector performance (Gutiérrez, Ros, Maiorano & Stern, Montoya & Trillas).
- However, others found the right sign but not statistical significance (Wallsten 2001, Gebreab, Estache et al., Gasmi & Recuero).

Policy views: One can say that regulation has brought government's commitment to the forefront of utilities industries.

Creation of IRA gives credibility and sustainability to governments desire to allow private investments.

Main findings

1. Some studies found that regulation combined with either privatization (Wallsten 2001) or competition has better effect on performance (than alone), (Fink et al, Gebreab).
2. Sequence of policy variables also matters. Wallsten found that introducing first regulation and then privatizing former SOO brings better performance.

Insights: Regulatory institutions have been important and efforts should be directed at improving their staff and at creating new ways of closing ties among them i.e., Regumatel in Latin America.

Author(s)	Sample and Period	Econometric Approach	Methodology	TELECOM REFORM					
				Priv.	Liberal/Comp.	Reg.	Reg*Priv	Reg*Comp	Priv.*Comp.
Ros 1999	110 1986- 1995	Reduced form	PD-FE with IV	+		NI			
Boylaud and Nicoletti 2001	23 OECD 1991- 1997	Reduced form	PD-FE & RE	-	+	NI			
Wallsten 2001	30 1984- 1997	Reduced form	PD-FE	-	+	+	+	-	
Gebreab 2002 Mobile	41 1987- 2000	Reduced form	PD-FE	+	+	+			
Fink, Mattoo, and Rathindran 2003	86 1985- 1999	Reduced form	PD-FE	+	+	NI	+	+	
Esfahani and Ramírez 2003	75 67-95 3 SERIES	Structural		+	NI	NI			
Gutiérrez 2003	22 LA&C 1980- 1997	Reduced form	PD-FE & RE + AB	+	+	+		+	
Li and Xu 2004	177 1990- 2001	Reduced form	PD-FE & 2SLS	+	+	NI			+
Ros 2003	20 LA 1985- 1999	Reduced form	PD-FE with IV	+	+	+			
Wallsten 2003	197 1985- 1999	Reduced form	PD-FE	-*			+	& +	
Grzybowski 2005 Mobile	15 EU 1998- 2002	Reduced form & System of 2 equations	OLS, 2SLS	+	+	+			
Estache, Goicoechea and Manacorda 2006	204 1990- 2003	Reduced form	PD-FE Weighted	+	NI	+	+		
Maiorano and Stern 2007 Mobile	30 1990- 2004	Estructural System of equations	PD-FE + AB & PD-2SLS	+	+	+			
Montoya and Trillas 2007	23 LA&C 1980- 2004	Reduced form	PD-FE	NI	NI	+			
Gasmi and Recuero 2008	86 1985- 1999	Reduced form	CLOG-LOG & SYS-GMM	+		+			

Governance

- Can be seen from the Macro Polity or the overall institutional environment present in a given country or society, say, the Constitution and laws (general checks and balances)

and,

- Can be seen from the Micro Polity or the specific institutions that oversees the well-functioning of economic sectors, say, regulatory bodies.

Governance factors

1. Political scientists and economists have made use of variables that control for the macro polity of countries or, the overall governance.
2. Bergara, Henisz and Spiller (1998) used them initially trying to test whether and how the institutional endowment impacted a utility industry (electricity).
3. Other researcher in growth theory used them to see how institutions affects economic growth (Knack and Keefer 1995, Mauro 1995, Barro 1996, among others).

Governance factors

For telecommunications, several authors did the same.

1. Gutiérrez & Berg (2001) who used the Polity III data,
2. Henisz (2001) who constructed POLCON, an index of political constraints.
3. Esfahani and Ramírez who used ICRG and Polity III
4. Estache et al who used the ICRG, corruption and risk indices.
5. Maiorano & Stern who used POLCON.
6. Gasmi & Recuero who used (alternatively) the ICRG's risk index, Corruption from IRIS project, and the democracy Index from Polity IV.

Other Main factors

1. In general, better governance leads to better performance (Henisz, Gutierrez & Berg).
2. Esfahani and Ramírez found that contract enforcement was important in explaining growth rate in telecommunications.
3. Maiorano & Stern found no significant effect of governance on mobile network deployment, but
4. Gasmi & Recuero found that lower level of corruption leads to greater deployment of fixed lines, and their institutional index helps to explain the creation of a separate regulator.

**What is still lacking
in the research?**

Further points to study

A lot has been done. But more should be done in:

- i. Getting updated data on regulatory incentives, i.e., price incentives, interconnection rates, and the like.
- ii. Looking at quality factors on the provision of telecommunications services.
- iii. Being more conscious of the endogeneity problems of policy reform variables.
- iv. Doing more research at firm level.
- v. Taking into account other ICTs.

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Thank you

Merci !

Conclusions

1. Telecommunications reforms undertaken worldwide have brought undoubtedly better performance, allowing more population to access telephony.
2. Creation of regulatory bodies has been a key factor in consolidating private investment involvement in this process.
3. However, digital divide though it might be closing or unimportant in old technologies, seems to be reappearing in new and modern ICT.

Thank you

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