### Abstract
The topic of research in this thesis is Access Pricing in the Mobile Telecommunications sector. Before the 1980's telecommunication companies were highly regulated in most countries. Deregulation of local monopoly providers and the rapid expansion of the mobile telecommunication network have both contributed to the changes that make the telecommunication sector one of the fastest growing sectors in almost all countries.

Network economics is a fairly new topic of research. The first paper mentioning network externalities was written in 1974 by Jeffery Rohlfs. The telecommunication sector is the perfect example of network externalities because the nature of these services involves communicating with a large number of people.

The aim of this study is to analyse with economic models, first the operators before and after deregulation and the effects to consumer utility, firm profits and social welfare. Opening of competition between long-distance call providers started the development on a pricing model called access pricing. This model allowed compensation for local networks that terminated long-distance calls in their local networks. Access can be any service that one needs for providing an origination or termination that is out of the local network. The second aim of this study is to analyse with economic models, access pricing between operators and how it effect their pricing strategies, firm profit and consumer utilities. Is there need for a regulator or does the market mechanism produce a socially optimal output at the same time as operators maximise their profits? Shy's (2001) model of access pricing for long-distance call providers was applied to the mobile telecommunications sector. An extensive form game was used analyse the different access prices with different tariffs. A subgame perfect equilibrium was found by using backward induction.

It is shown that an operator would not benefit on trying to over charge its competitor for access and that, consumer utility and operator profits were maximised and a socially optimal network size was reached by market mechanisms and no regulation of access prices is therefore needed.