December 2007

Internationalization of Mobile Telecommunications Operators: Country Factors, Institutional Distance and Regional Effects

Nicolai Pogrebnyakov
Pennsylvania State University

Follow this and additional works at: http://aisel.aisnet.org/amcis2007

Recommended Citation
http://aisel.aisnet.org/amcis2007/402

This material is brought to you by the Americas Conference on Information Systems (AMCIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in AMCIS 2007 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.
Entry of foreign mobile network operators (MNOs) increases competition and results in lower prices, which in turn can lead to increased levels of adoption. This study aims to systematically evaluate increasing international involvement (i.e., internationalization) of MNOs across several levels of analysis and consistently assess the impact of the regional dimension on MNO internationalization. Additionally, it will test the importance of differences in institutional environments between countries (known as institutional distance) and their effects on MNO market entry. In achieving these objectives, the study will develop a theoretically-based framework that explains and predicts internationalization of MNOs. An econometric model will be built and tested based on the framework. Furthermore, the study will advance research on institutional distance by testing the importance of industry characteristics in institutional distance and constructing a mobile telecommunications-specific institutional distance index.

Keywords

Institutional distance, internationalization, international business, mobile telecommunications
Introduction

The “personal computing revolution” that started with the advent of IBM’s Personal Computer in 1981 brought the power and resources of computing and subsequently the internet to offices and homes around the world and boosted productivity. Today, mobile telephony is seen as a logical completion of this revolution. The increasing capabilities of mobile phones and their ability to perform many tasks that were previously done on personal computers is particularly promising for developing countries, where adoption of computers has so far lagged behind developed nations (The Economist 2006). It is not surprising then that telecommunications have turned into a central driving force behind the development of information societies and a global information economy, rather than being a mere complement to economic development (Melody 2001).

Motivation

Although the telecommunications industry has experienced a surge in growth over the past decade, adoption of mobile telecommunications technology in a country requires large-scale investments to build infrastructure in order to provide mobile service. Mobile network operators (MNOs), which provide mobile service, make these investments and build the infrastructure. Many MNOs are partially or wholly owned by large multinational operators, and the number of instances of foreign market entry by MNOs has substantially increased in the past decade (Gerpott and Jakopin 2005).

Because of that, a framework that explains increasing international involvement of MNOs, known as internationalization (Johanson and Vahlne 1977), would be beneficial to governments. It would make their efforts in attracting foreign direct investments (FDI) from MNOs into their country more focused. Such framework would also benefit MNOs, which would be able to relate their practices with the general trends in the industry. This is particularly salient because firms tend to stay within the boundaries of their regions when they internationalize (Rugman and Brain 2003).

The problem that this research addresses consists in the limited theory-driven understanding of drivers of MNO internationalization consistent across levels of analysis. I will address it by constructing a conceptual framework that explains and predicts investments of mobile network operators (MNOs) in foreign countries.

This research considers several factors that drive internationalization of MNOs across different levels of analysis: MNO characteristics, host country characteristics, differences between the home and host countries of the MNO and regional factors. It is informed by three primary bodies of research: 1) internationalization of firms, 2) institutional theory and 3) telecommunications policy studies.

Framework

The proposed framework is shown on Figure 1. The dependent variable is the fact of entry of an MNO from one (home) country to another (host) country. It is operationalized as the amount of investments the MNO brings into the country.

Independent variables are grouped into several clusters. Firm characteristics include previous investments of the MNO in other countries of the same regional bloc, for example, the European Union. Previous investments add to the experience of the firm with respect to its international operations, and I include this variable based on the premise that firms progressively enter countries based on experience obtained in the countries they have already entered (Johanson and Vahlne 1977).
Host country characteristics include quality of life and the amount of FDI in a country. Following the logic used by Cheng (2006), I assume that higher quality of life is associated with higher income levels, which create and stimulate the demand for mobile services. And investments that an MNO brings in a country are, in effect, part of overall FDI that a country attracts. The “amount of FDI” variable accounts for the strong reinforcing effect that FDI have themselves (Cheng and Kwan 2000).

The level of technology adoption at the country—industry level describes how advanced a country is in terms of infrastructure development and adoption of information and communication technologies. This variable describes market size for mobile telecommunications, which is an important determinant of FDI flows (Chakrabarti 2001).

![Proposed framework of internationalization of MNO ( +/- signs show the hypothesized relationship)](image)

Figure 1. Proposed framework of internationalization of MNO (+/- signs show the hypothesized relationship)

The concept of institutional distance has been recently developed (Kostova 1999) and operationalized (Xu 2001) to explain host country choice by multinational firms. However, this concept, which I will refer to as generic institutional distance, does not consider specific characteristics of the industry the firm is operating in. One of the goals of this study is to determine whether industry-specific institutional factors play an important role in internationalization of firms. To this extent, a measure that is specific to mobile telecommunications will be constructed, which will be called industry-specific institutional distance index.

Regional policy harmonization level is included to test the significance of regional-level telecommunications market and regulatory conditions, as most multinational companies are regional, not global, in their operations (Rugman and Brain 2003).

To summarize, the conceptual framework reflects recent findings and trends and proposes that MNO entry in a country is conditioned by several factors: firm learning (in the internationalization context); characteristics of the host country; institutional distance between the home and host country and the importance of the regional factor in internationalization. Additionally, research on internationalization of firms based on differences between countries (psychic distance, cultural distance and recently institutional distance), implicitly assumed that differences between countries can be
applied to studies of any industry without reservation. This study will test for importance of industry specifics and thus includes factors specific to mobile telecommunications.

**Methodology**

The model of internationalization of MNOs and the telecommunications institutional distance index will be constructed and tested using an econometric data model and interviews. Geographically, the study will consider four regional blocs, European Union, Mercosur and Andean Community in Latin America and Southern African Development Community, a total of 48 countries. The timeframe is 1995 to 2005 (11 years), and preliminary analysis has shown that 45 multinational MNOs (with presence in three or more countries of the world and at least one country of any of the regional bloc) will be included. The econometric model will be built upon the framework on Figure 1, and it will be the primary method of analysis. Approximately ten interviews to validate the econometric model specification and discuss the results of model estimation will be performed with managers at MNOs or consultants.

**Contributions**

This research will make both theoretical and practical contributions. It will contribute to research on internationalization patterns in mobile telecommunications, a sector that provides access to an increasing variety of information and communication technologies (ICTs) with an increasing impact. It is thus of growing importance to both providers and consumers of ICTs. It will advance theoretical understanding of internationalization by explicitly accounting for the regional orientation of internationalizing firms, which has been documented but is still largely unaccounted for in theoretical frameworks.

Additionally, the proposed research will help national governments to focus their efforts in developing a more sophisticated ICT infrastructure and attracting FDI from MNOs into their country. It will also inform decision-making on internationalization and possibly increase competitiveness of MNOs.

**References**