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Information technology investment announcements and market value in transition economies: Evidence from Warsaw Stock Exchange

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ABSTRACT

This study examines stock market reactions to announcements of information technology investments in Poland, an emerging market and transition economy. Based on 66 announcements by companies traded at the Warsaw Stock Exchange in the period 2002–2009, our study confirms some previously published results from studies conducted primarily in highly developed markets, but also shows that specific characteristics of announcements play a more important role than has been commonly assumed. Our results indicate that investors in Poland react more positively if systems are acquired from global rather than local vendors. Announcements about completed projects are more positively received than announcements about planned or in-progress projects. Furthermore, announcements in Polish, targeted at existing shareholders, are more likely to be received positively than similar announcements released in English, targeting global investors.

1. Introduction

For most public companies in today's challenging business environment, the performance of their stocks is seen as an important proxy measure of their business success. If a company's stocks are seen as outperforming the competition, it is usually much easier for the particular company to obtain additional capital for expansion. In contrast, underperforming stocks may ruin the trust in a particular company and make it difficult to secure any needed financing.

Access to private capital is particularly important for companies in transition economies. Frequently, these companies developed out of previously state-owned enterprises, underwent privatization and substantial restructuring, and are on the way to claim their position in the global market. For many of these companies, the stock market is the major source of capital (Jermakowicz and Gornik-Tomaszewski, 1998).

In spite of the vital importance of capital markets for companies in transition economies, to our knowledge, there is not a single published study that examined the impact of information technology (IT) investment announcements on stock performance in transition economies, other than China. In many of these economies, IT has been used as an important strategic tool to support restructuring efforts from a centrally planned to a market-oriented economy (Roztocki and Weistroffer, 2008b; Samoilenko, 2008). For example in Poland, after 1989, the privatization and restructuring process of formerly state-owned companies was heavily accompanied by IT investments (Janson and Wrycza, 1999). Many of these system

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implementations proved to be more costly than typical in mature economies (Soja, 2008a) and their payoffs more uncertain. Overall, there is a scarcity of studies in the field of economics of IT that examine the relationship between IT investments and firm performance in transition economies (Roztocki and Weistroffer, 2009c). It may be reasonably expected that such studies on IT in transition economies may produce different results from what has been uncovered by similar studies conducted in highly developed economies.

Thus, the objective of this study is to expand our knowledge base in economics of IT by providing insight into the impact that IT investment announcements have on the financial markets in the little examined transition economies of Eastern and Central Europe. We do this using data from the Warsaw Stock Exchange (WSE) in Poland. The main research question driving this study is: ''What factors affect the market reaction to IT investment announcements in a transition economy?''

The remainder of this paper is structured as follows. After providing some contextual background, we introduce the Roztocki and Weistroffer (2009d) explanatory model, which serves as the underlying basis for establishing our research hypotheses. Then in the following section, we describe our research methodology, data collection method, and data analysis. Subsequently, we present and discuss our findings. We conclude our paper by discussing the contribution and limitations of our study, and point to opportunities for future research.

2. Research background

2.1. Information technology in transition economies

The term transition (or transitional) economies refers to countries that recently transitioned or are in the process of transitioning from centrally controlled to market driven economies, especially the countries of the former Eastern Bloc and countries that originated from the break-up of the Soviet Union (Roztocki and Weistroffer, 2008b,c).

During the cold war, partly because of the Coordinating Committee for Multilateral Export Controls (CoCom) embargo, the IT industry in the Eastern Bloc countries lagged eight to 12 years behind technology in the western countries (Marble, 2004). Political and economic reforms, together with the cessation of the CoCom embargo, led to turbulence in the IT industry, as many local, large companies with obsolete technology found themselves unable to compete in the global market (Harindranath, 2008). On the other hand, a large number of small IT firms emerged in these transition economies, as newly inspired entrepreneurs embraced the opportunities offered by the free market (Soja, 2008b).

Although the literature on IT in transition economies is highly fragmented and focused on a relatively small set of countries, it appears that the communist past still influences much of the current use of IT in many of these economies; presenting both unique obstacles and exceptional opportunities. For example, a study on electronic commerce in Serbia (Travica et al., 2007) reports that past, strong governmental control over the telecommunication industry highly affects its current diffusion. A different study on IT-supported organizational learning in Slovenia (Cecez-Kecmanovic et al., 2008; Janson et al., 2007) reports that the studied company highly benefited in its IT initiatives from a high level of worker participation, typical in communist and post-communist countries. Also, in contrast to typical IT managers in Western countries, IT managers in transition economies seem to focus more on technical than non-technical issues (Dexter et al., 1993). Overall, the results from many comparative studies seem to support substantial differences in IT management in transition economies as compared to developed countries, such as the USA (Dekleva and Zupančič, 1996).

Some cross-country studies investigating payoffs from information and communication technologies in transitional economies (Samoilenko, 2008; Samoilenko and Osei-Bryson, 2008) suggest not only differences in comparison to developed countries, but also large differences among the various transition economies themselves.

The transition from a central planning system to a free market economy in Poland began in 1989. At that time the Polish economy was dominated by large, state-owned enterprises with only a marginal private sector. IT in most companies was used primarily for reporting purposes and not for profitability calculation (Soja, 2008b). The ensuing privatization process was accompanied by heavy investments in IT systems more suitable for a market driven economy (Janson and Wrycza, 1999). At this time, IT started to be widely used for linking Polish suppliers with international companies, often competing over price, such as in the case of IKEA, a large furniture retailer (Baraldi and Waluszewski, 2005).

In spite of the fact that transformation in Poland started two decades ago, the published literature, though confirming many similarities in the use of IT with developed economies, also points to some substantial differences. For example, Soja and Paliwoda-Pekosz (2009) report problems with the IT infrastructure not common in Western countries, while finding fewer conflicts among team members than may be common in developed countries. In a separate study, Pastuszak (2008), reported a higher availability of human capital than is common in many developed countries, but also found inadequate infrastructure, the latter seemingly being one of the major factors inhibiting competitiveness. Furthermore, fast changing laws and regulations that highly affect implementation projects (Pawłowska, 2004) may also be a factor that makes IT management in Poland distinct from IT management in developed, mature economies.

2.2. Stock market reaction to IT investment announcements in transition economies

According to our knowledge, before this current study, there was not a single published event study that specifically investigated stock market reaction to IT investment announcements in countries of the former European Eastern Bloc. Event