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Corruption and valuation of multinational corporations

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Abstract

This paper examines the relationship between U.S. MNCs' valuation and corruption in countries where the MNCs' foreign subsidiaries are located. We uncover that country-level corruption has a multi-dimensional impact on MNCs' valuation. We find that the impact of intangibles is less pronounced for MNCs operating primarily in corrupt countries, consistent with the view that the lack of property rights protection and information asymmetry problems are more prevalent in corrupt environments. We also find that the expansion of a MNC network dominated by corrupt countries negatively affects MNCs' valuation, suggesting that investors may recognize it as an additional risk. However, more importantly, we find that geographic diversification in corrupt countries significantly increases firm value if the MNC has high levels of intangibles such as technological know-how and marketing expertise. Assuming that transactions costs in corrupt countries are higher, our findings are consistent with the notion that the advantages from internalizing the cross-border transfer of intangibles are greater in the presence of corruption. Our findings remain unchanged when we account for endogeneity at the country-and firm-level, when we use alternative corruption measures, and when we re-estimate models by omitting MNCs with operations in locations with big "negative" shocks during the sample period. Moreover, we show that firms with expertise in dealing with corruption enjoy greater benefits from internalization.

JEL classification: D73; F23; G30
Keywords: Corruption; Intangible assets; Multinational corporation

1. Introduction

The degree of corruption in a country can have a profound impact on the country's macroeconomic development as well as firm valuations within the country. According to *Transparency International* (*TI*), corruption – the abuse of public power for private benefit – is still a widely spread phenomenon, even though many national governments have

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often undertaken efforts to reduce it. Consequently, corruption has become a prominent issue of concern within international institutions and with firms active in foreign markets. In addition, academic researchers in the areas of international finance and economics have recently been investigating the causes and important economic consequences of corruption in world markets.[3]

In this paper we examine corruption from the perspective of U.S. multinational corporations (hereafter MNCs). In particular, we investigate how the involvement of U.S. MNCs in corrupt countries affects firm value. We develop hypotheses derived from the basic premises of the internalization theory of MNCs and test how involvement in corrupt foreign countries affects the value impact of multinationality, intangibles, and internalization.[4] For example, the lack of property rights protection and information asymmetry problems prevalent in corrupt environments (see, for example, Zhao (2006)) may decrease the value of applicable intangibles in a corrupt environment as compared to a "clean" environment. Furthermore, from a theoretical standpoint, corruption may have a negative impact on firm value if investors recognize it as an additional risk to which MNCs are exposed, and consequently adjust firm value lower.[5] Thus, holding other things equal, the expansion of a corrupt-countries-dominated MNC foreign operations network should be value decreasing. On the other hand, due to the higher transactions costs in corrupt countries, one can also hypothesize that MNCs with substantial involvement in corrupt countries can benefit from internalizing the transfer of intangibles across borders. That is, for the same firm with the same level of intangible assets, the firm gets more value in the form of transactions cost savings from internalizing markets for the transfer of the intangibles in a corrupt environment than in a clean environment.

Overall, the different facets of the relationship between corruption and MNC valuation remain largely unresolved. This paper aims at providing clear, unequivocal answers to these important questions. Our tests are performed on a sample of non-financial U.S. MNCs over the 1995–1998 and the 2002–2005 periods and utilize both OLS regressions and panel data regressions. Our multivariate tests provide evidence that supports the hypotheses developed based on the internalization theory. First, our results show that the general impact of intangibles on the value of MNCs is positive, but smaller for MNCs whose foreign operations networks include many corrupt countries than for MNCs that primarily operate in clean countries. Second, we find that the direct effect of multinationality (i.e. the size of the firm's foreign operations network) on market value is negative for the group of MNCs whose foreign operations are primarily in corrupt countries, while the effect is insignificant for MNCs operating in clean countries. However, the coefficient of the interaction term of intangibles with multinationality is significantly positive for MNCs operating primarily in corrupt environments, and negative and insignificant for MNCs operating in clean environments. This finding implies that, although intangibles have generally a lower impact on MNC valuation in corrupt countries, MNCs can reap greater benefits from internalizing intangibles within a corrupt countries-dominated foreign operations network because transactions costs are higher in corrupt countries.

Our methodology also accounts for the possibility of two different endogenous relations between corruption level and unobservable variables. First, country-level corruption is likely to be associated with poverty and the type of legal environment. To account for this statistical problem, we utilize measures of country-level corruption, which are orthogonal to poverty and legal environment measures. Second, firm-level corruption – measured by an index which represents the firm's level of exposure to corruption in its foreign operations – is highly correlated with other firm-specific characteristics. We account for this by using a two-stage least squares (2SLS) model that estimates the firm-level corruption index in the first-stage. Our evidence remains robust to the use of an alternative country-level measure

[3] For example, Beck, Demirguc-Kunt, and Maksimovic (2005), Ehrlich and Liu (1999), Bliss and Di Tella (1997), Mauro (1995), and Shleifer and Vishny (1993), among others.

[4] The internalization theory was developed by Buckley and Casson (1976), Casson (1979), Rugman (1981) and Hennart (1982), among others, and borrows its arguments from transactions costs economic theory as described in Williamson (1975). Morck and Yeung (1991, 1992) provide empirical evidence in support of the internalization theory.

[5] Under traditional CAPM assumptions, idiosyncratic risk should not be rewarded with higher returns, since it reflects, by definition, diversifiable or unsystematic risk. However, past theoretical studies have shown that, once some of the CAPM assumptions are relaxed, idiosyncratic volatility (hereafter, IV) can be a priced factor. For example, in the CAPM extension of Levy (1978), where investors hold under-diversified portfolios, the relationship between idiosyncratic risk and expected returns is predicted to be positive. Similarly, in the models of Merton (1987) and Xu and Malkiel (2003), where investors can only invest in a subset of all available stocks due to various exogenous reasons, like incomplete information or transaction costs, imperfect diversification leads to investors requiring to be compensated with higher expected returns for holding stocks with high levels of IV. Finally, in the prospect theory model of Barberis and Huang (2001) idiosyncratic risk also produces higher expected returns. Moreover, recent empirical studies have also shown that there is a statistically significant relationship between IV and stock returns (see, for example, Goyal and Santa-Clara (2003), Bali, Cakici, Yan and Zhang (2005), Ang, Hodrick, Xing and Zhang (2006 and 2007), and Spiegel and Wang (2005)).