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## Determinants of foreign direct investment in the mining sector in Asia: A comparison between China and India

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## ABSTRACT

The aim of this paper is to assess the conditions that influence foreign direct investment in the mineral industries of China and India. The paper first surveys literature on the determinants of foreign direct investment to identify key conditions, under which host countries attract mining FDI. It then builds an evaluative framework which allows for comparative analysis. The paper then comparatively evaluates the performance of foreign investment regimes that govern mineral industries in China and India. Its findings show that the overall conditions for foreign mining investment in China and India are not favourable and that substantial policy, regulatory and other changes in both countries need to be made if more investment is to flow.

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## Introduction

In the early 1990s, China and India opened up their non-fuel mineral industries to foreign investment. Since, both countries have made changes to their regulatory regimes, intending to improve the investment climate for foreign mining companies. In the case of India, this has led to a complete redrafting of the existing mining laws, making India comparable to any liberal mineral producing regime. Meanwhile, China undertook more piecemeal changes to its mining legislation, promoting foreign investment in its highly prospective western provinces (Table 1).

Yet, despite favourable regulatory reforms, both China and India have struggled to attract the desired levels of FDI into their non-fuel mineral industries. For example, in India, there is only a small presence of foreign mining firms and foreign mining

investment represents less than 1% of foreign direct capital stock in India (Athreye and Kapur, 2001). The country did not reach the US\$22.37 billion investment target for 2007–2009 (Business Monitor International, 2008; O'Callaghan and Vivoda, 2010). Most mining majors have also steered clear of China, where the lack of transparency and uncertainty plague the investment environment (Suxun and Chenjunnan, 2008). In 2007, the sector attracted 1% of total FDI across all sectors in China (NBS, 2008). Although China improved foreign investment conditions between 2004 and 2006, resulting in a surge of foreign investment into the sector, many of these investments have not been realised, with some being stalled or stopped altogether. This has led to a feeling of uncertainty by some foreign enterprises towards China as a destination for exploration, mining and metals investment (CIMG, 2009). Only 10–15% of metal mining production in China and India was produced by foreign mining companies in 2005 (UNCTAD, 2007).

Consequently, the aim of this paper is to assess the conditions that impact on the level of foreign direct investment in the mineral industries of China and India. The focus is on China and India because they have been the two fastest growing economies in the region and the largest FDI recipients among developing Asian states. The paper is organised as follows. "Introduction" surveys literature on the determinants of foreign direct investment to identify key conditions, under which host countries attract FDI in the mining sector. "Conditions that facilitate foreign

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**Table 1**  
Recent changes in mineral rules and regulations in China and India.

China	2008	Ministry of Commerce and MOLAR jointly promulgated the “Measures for the Administration of the Foreign-invested Mineral Exploration,” which consolidated existing rules governing the establishment and operation of foreign-invested exploration enterprises	
	2007	The <i>Foreign Investment Guidance Catalogue</i> was revised and the number of minerals classified as ‘encouraged’ reduced	
	2006	MOLAR announced its intention to amend the provisions of the <i>Mineral Resources Law</i> to create a more attractive investment environment for foreign investors	
	2006	MOLAR issued the “Notice of Further Regulating the Administration of the Grant of Mineral Rights,” to standardise procedures for the grant of exploration and mining rights	
	2005	State Council Directive “Notice Concerning the Comprehensive Rectification and Standardisation of the Regulation for Mineral Resource Development”	
	2004	Projects that do not require government financing and that fall into the ‘permitted’ and ‘encouraged’ categories will be approved automatically	
	2003	The State Council issues ‘China’s Policy on Mineral Resources’ that encourages foreign investment	
	2000	China issued the “Opinion on Further Encouraging Foreign Businesses to Make Investment in Exploring and Exploiting Mineral Resources Other Than Oil and Gas”	
	1996	<i>Mineral Resources Law</i> revised, the legal framework surrounding the mineral sector strengthened	
	1993	China allows foreign investment in prospecting and mining	
	India	2008	The Government gave its approval to the new National Mineral Policy 2008
		2008	Government allows 100% foreign-owned FDI in mining and mining-related industries
		2006	Investment policy liberalised
2000		New foreign investment guidelines issued presenting new opportunities for mining investors	
1997		FDI policy in the mining sector further liberalised to incorporate “automatic approval”	
1994		Legislative changes consequent to National Mineral Policy	
1993	National Mineral Policy revised: non-fuel and non-atomic minerals covered by the Act		

direct investment in mineral industries” comparatively evaluates the performance of foreign investment regimes that govern mineral industries in China and India based on the evaluative criteria set up in “Introduction”. This includes a discussion of key political, regulatory, fiscal, monetary, environmental, social and many other issues that impact on the levels of foreign investment in the mineral sectors of China and India. Finally, “Assessing the performance of China and India” summarises the main findings.

The existing literature on foreign mining investment in China and India has some limitations. Region-wide and/or other comparative studies are either dated (Naito et al., 1998, 1999, 2001; Naito and Remy, 2001) or focus on a single country (China—Andrews-Speed et al., 2003; Tse, 2003; Penney et al., 2007; Suxun and Chenjunnan, 2008; India—Jhingran, 1997; Chatterjee, 2002; Singh and Kalirajan, 2003; Sames, 2006; Jain, 2008). This paper builds on previous theoretical work on determinants of FDI in the mineral sector to develop an evaluative framework, which allows for comparative analysis. The paper also has broader relevance, as the same evaluative framework developed here can be applied to a region-wide study, or comparatively to evaluate the attractiveness of any number of foreign investment destinations in the mining sector.

## Conditions that facilitate foreign direct investment in mineral industries

By and large, although some determinants of FDI (for example, the quality of formal institutions or tax policies) are important in the location of manufacturing and services as well as resource industries (mining and petroleum), most are *industry specific* (Imbun, 2006). The mineral sector has a certain combination of characteristics that can hardly be found in any other industry. According to Andrews-Speed (1996) and Saidu (2007), these include:

- High capital intensity.
- Low labour intensity.
- Long lead time.
- High-risk.
- Non-renewable resource.
- Finite life.
- Volatile markets.
- Many failures.
- Late payback.

As a result of these unique characteristics, the determinants of FDI in the minerals sector are substantially different than those in other sectors.

Otto (2006) argues that not only are determinants of FDI industry specific, they are also *firm specific*. The criteria that any one company will apply, in deciding whether to invest in a particular mineral-rich nation, will be unique to that company and time. Some companies, particularly risk-taking juniors that aim to establish a foothold in the industry, will target countries with good prospectivity regardless of risk, but most mining companies will balance prospectivity against risk criteria, when making investment decisions.

Mining companies have many countries from which to select when deciding exploration and development budgets. In an ideal world, investment would flow to nations that have the most abundant and richest deposits. In reality, many other factors besides geological endowment influence investment decisions. Consequently, prior to investment, foreign mining companies require as much assurance as possible as to the security of the investment. This is particularly so given that mining investments involve large sunk costs that are irreversible. Due to the nature of the industry, mining companies are immobile for a period of time, and as such, their investments are typically of high-risk. The greatest risk is usually at the prospecting and exploration stage, and capital outlay increases over time as a project proceeds. It is in the commercial interests of any mining investor to undertake due diligence when considering any new major investment, and risk assessment should be part of any due diligence effort.

One of the most convenient ways to measure geological potential and country-specific risk is by survey. The three best-known annual surveys of exploration investment are those conducted by the Metals Economics Group (MEG), Behre Dolbear and the Fraser Institute. The MEG survey provides general information on the sources and destinations of investment by various commodities, but does not provide much information on the reasons behind the direction of investment flows. The Behre Dolbear ‘Ranking of Countries for Mining Investment,’ which has been compiled since 1999, ranks twenty five countries that are host to major exploration or mineral development efforts and/or mining operations on seven criteria. The rankings in this annual survey are based on qualitative opinions gathered from company professionals and research from various public and confidential sources (Behre Dolbear, 2010). While the survey undoubtedly has some value, it provides no detailed explanatory notes on why the countries have been assigned a particular score for

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