Box II-1

Foreign direct investment and output growth For years, economists have attempted to explain why some economies grow faster than others. The findings indicate that factors such as educational level, research and development expenditure, openness to international trade, institutional quality, financial market development, and price stability are all important. In addition, output growth appears to be stronger in economies where foreign direct investment (FDI) is more extensive (see, for example, Li and Liu, 2005). The main reason for this link is that FDI stimulates output growth, both by increasing investment and its efficiency and by transmitting technology, expertise, new management methods, and improved organisation from the investing country to the recipient (see, for example, Balasubramanyam et al., 1996, and DeMello, 1999). As a result, output growth can gain momentum from new inputs into the sectors where investment takes place and from increased productivity generated by new technology or production methods adopted by domestic companies.

Balasubramanyam et al. (1996) posit that FDI affects GDP growth more strongly in countries where it stimulates exports than in countries where it is import-substituting. According to Borensztein et al. (1998), however, differences in the ability to embrace new technology could explain the variation in the effect of FDI on GDP growth. They conclude that the higher the educational level of the labour force (and thus the greater the human capital), the more FDI will stimulate GDP growth. The findings of Xu (2000) appear to support this: Xu has come to the conclusion that FDI contributes more effectively to increased productivity in developed countries than in developing ones. The current technology level is also an important factor: the impact of investment varies directly with the size of the gap between the technology level of the investing country and that of the recipient. Finally, the findings of Bengoa and Sanchez-Robles (2003) suggest that FDI fosters output growth in the recipient country if human capital is abundant, economic stability prevails, and trade is free.

In Iceland, inward FDI has been rather limited in comparison with other developed countries, both in the Nordic region and elsewhere (Chart 1).¹ Inward FDI in Iceland averaged about 1% of GDP

Figures from Iceland after 2003 should be interpreted with caution, in part because a portion of that which is registered as inward FDI in Iceland is probably investment by Icelandic individuals and businesses domiciled abroad.

during the period 1990-2003, as opposed to just under 2% in Norway, just under 3% in Finland, 4% in Denmark, and 5% in Sweden. The low percentage in Iceland is due in part to the fact that FDI tends to be attracted to large markets that are open to international commerce (see, for example, Li and Liu, 2005). The Icelandic market is extremely small in international comparison, and research has shown that the scope of international trade in Iceland is below the level expected based on the size of the country (see, for example, Gudmundsson *et al.*, 2000).

Inward FDI in Iceland has been restricted primarily to energyintensive industry. The vast majority of the production from this sector is exported, which should promote increased GDP growth. However, there is no reason to assume that FDI could not boost GDP growth still further. The level of education is high in Iceland, and it can be assumed that the labour force is willing and able to adopt new technology and expertise. Consequently, a shortage of human capital should not prevent FDI from stimulating further growth in Iceland. Iceland is also considered relatively technologically sophisticated, and while this should reduce the impact of FDI on output growth, the gap in technology level may vary from sector to sector; therefore, it can be assumed that foreign companies will focus on industries that have a relatively low level of technological sophistication and offer the possibility of producing more economically than domestic companies can. As a result, technological sophistication need not dilute the effect of FDI on GDP growth. Moreover, it is worth noting that if FDI is directed at the development of new industries, a high level of technology in existing sectors will be less important, while the highly educated labour force would be utilised to enhance GDP growth. In sum, Iceland appears to be in a strong position to take advantage of inward FDI to bolster GDP growth, irrespective of whether it is directed towards the development of new industries or the enhancement of existing investments.

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Chart I Inward foreign direct investment 1990-2008



1990 1992 1994 1996 1998 2000 2002 2004 2006 2008



Denmark

— Norway

- Sweden

Source: Reuters EcoWin.