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## Intangible Assets

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The integration of the world economy has underlined the need for firms to exploit their intangible assets on a global scale. Firms' intangible assets include their stock of knowledge, which is related to ideas, research and development (R&D), patent and blueprints, scientific and technical workers, and management techniques. In addition, intangible assets consist of their stock of goodwill, which is associated with product quality reputation, trademarks, and brand names.

The empirical evidence shows that the growth in intangible assets has been a recent phenomenon. As emphasized by Griliches (1994), the source of economic growth and wealth lies no longer in the investment of physical, tangible assets but in the creation and use of intangible assets. The contribution of the latter is hard to measure due to lack of data and uniform definition concerning its measurement. There is, however, substantial anecdotal evidence that enterprises have increased their relative investment in intangible assets. The pace of intangible investment by U.S. private firms has risen sharply in recent decades. By the late 1990s, their investments in intangible assets were around 1 trillion dollars a year, which was about the same as expenditure on tangible assets (Nakamura 2001).

The traditional explanation of multinational enterprises (MNEs) rests on the existence of firm-specific intangible assets. These assets give MNEs offsetting advantages over foreign producers because they have the property of joint inputs. Relative to physical tangible assets, intangible assets are easier and cheaper to transfer to foreign subsidiaries. For instance, blueprints and patents are very costly to produce but once they are created, they can be supplied to any foreign subsidiaries without reducing their value or productivity. Investing in tangible assets typically involves fixed costs at the plant level, whereas investing in intangible assets involves fixed costs at the level of the firm.

The empirical evidence confirms that MNEs have a larger value of intangible assets relative to their market value (compared to other firms). Industries with a high proportion of multinational firms tend to be characterized by high levels of intangible assets (evidenced as substantial R&D and advertising expenditures relative to sales), new or sophisticated products, and high shares of skilled employment (Markusen 1995). Since the early 1990s, for instance, the stock of business services has risen ninefold, to reach 26 percent of total inward foreign direct investment (FDI) stock in services in 2002 (UNCTAD 2004).

Understanding the importance of intangible assets for FDI requires investigating their transferability to local firms and their impact on host economies.

**Transferability of Knowledge-Based Assets** Transferring knowledge-based assets to local firms is quite different from transferring other intermediate inputs. Knowledge is not necessarily easily transferred, especially across firms. The reason is that knowledge-based assets are usually deeply embedded in the institutional and organizational contexts of their origins. Moreover, knowledge-based assets have a tacit component that is not codified and therefore is imperfectly transferable to local firms. For instance, production processes requiring highly specialized workers are usually transferred to subsidiaries rather than to other firms since licensing would entail costly training of local employees (Teece 1986). The transmission of knowledge-based assets is subject to market failures such as the dilution of property rights. Product reengineering, for example, may allow the local firm to

discover the tacit knowledge embedded in the new product and to start a rival firm. In addition, the MNE might break the terms of the license and transfer the knowledge-based asset to a different local firm. The problem for the MNE is to design an optimal contract that preserves the value of its knowledge-based assets. This contract usually includes rent sharing with the local firm. If defection cannot be avoided, the MNE will prefer to internalize its assets in spite of higher setup costs.

The empirical evidence presented by Smith (2001) on U.S. firms' foreign operations shows that licensing is a more likely entry mode in markets characterized by stronger protection of intellectual property rights.

**Transferability of Goodwill Assets** The stock of knowledge is not the only intangible asset that is difficult to transfer to local firms. The transfer of goodwill assets such as reputation for quality can face severe problems if the local firm does not fully appropriate the returns from maintaining the MNE's brand reputation. Examples of industries where reputation is important include hotels and restaurants, consulting, and financial services. The reputation problem faced by MNEs is as follows. Consumers value quality and are willing to pay more if they believe that the firm is supplying high-quality products or services. The local firm may be tempted to compromise on products' quality to reduce costs. This strategy leads to higher short-term profit, but once consumers become disappointed with their purchases, the MNE may retaliate and purchase products from other suppliers.

The fact that foreign parties do not fully appropriate the returns from maintaining the MNE's reputation gives rise to FDI. The local firm does not internalize the costs to the global reputation of the MNE when it provides low-quality goods. This problem is why the MNE should design contracts that specify much more than prices. In practice, the usual method to achieve such a result is a franchise contract in which the local firm agrees on a complete business concept. The contract needs to ensure that the local firm provides a level of quality sufficient to maintain the reputation of the MNE. However, the franchising agreement will still not be sufficient to solve the reputation problem when efforts to maintain the quality of products and/or services are not fully verifiable. In this case, the MNE may prefer to set up its own subsidiary, which allows more effective incentive and control systems.

**Intangible Assets and Spillovers to Foreign Economies** Researchers have attempted to identify and empirically measure spillovers from MNEs' transfer of intangible assets to local firms. These spillovers may be positive or negative. On the one hand, MNEs may enable local firms to upgrade their technology, to the extent that they bring better business practices, technology, or management. On the other hand, MNEs may increase competition by attracting demand away from local firms. If economies of scale are important, the loss of demand will reduce the productivity of local firms by reducing the scale of their production. Positive or negative spillovers may be direct, from firm to firm, through imitation of technology, managerial and organizational innovations, or competition. They can also be indirect through the labor market when specialized skilled workers from the MNE are complementary to workers in the local firm or when they move to rival firms. In either case, the ability of local firms to assimilate or value new knowledge, the so-called absorptive capacity, is crucial for obtaining significant benefits from FDI.

There is weak evidence for spillovers from MNEs. Positive spillovers from multinational firms are supported by casual evidence from many countries, but their existence and magnitude are difficult to establish empirically (UNCTAD 2001). Several studies have emphasized the role of local firms' absorptive capacity in explaining the lack of spillovers from multinational

activities. This reasoning suggests that spillovers may not affect firms equally but may benefit only firms with high levels of absorptive capacity. The lack of strong empirical evidence for spillovers suggests also that multinational firms have succeeded in protecting their intangible assets.

In sum, intangible assets are vital to the incentives for MNEs to form and vital to the ability of MNEs to continue to prosper. Successful MNEs have valuable intangible assets, transfer the benefits of these intangibles to subsidiaries producing abroad, and protect their intangible assets by limiting the degree that the benefits spill over to rival firms.

#### FURTHER READING

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