

Intellectual Property Registration Strategies in Domestic and Foreign Contexts

SUPPLEMENTARY MATERIAL - FILE 3

Summary of key differences between residents' and non-residents' IP filings, with respect to R&D effort

The key differences between residents' and non-residents' IP filings, with respect to R&D effort, are summarized in Table C1, as follows.

Table C1. Summary of key differences between residents' and non-residents' IP filings, with respect to R&D effort

Residents	Domestic R&D benefits local innovation directly, fostering localized knowledge creation and technology development. Studies in countries with strong innovation systems show a significant correlation between domestic R&D and resident patent filings (Kemp, 2005; Chen and Puttitanun, 2005; Athreye and Cantwell, 2007; Sanders and Shabalala, 2014; WIPO, 2003).
Non-residents	For non-residents, R&D efforts exert indirect influence, primarily through spillovers. Multinational enterprises may benefit from the host country's R&D environment but are more often motivated by strategic factors such as market access, IP laws, and economic potential (Bayraktar, 2013; Alves and Zambujal-Oliveira, 2012). Foreign direct investment (FDI) combined with domestic R&D can shift these dynamics: while FDI may encourage non-resident filings, it can also reduce the relative advantage of domestic R&D for resident filings (Dunning and Lundan, 2008; Griffith, Cavusgil, and Xu, 2008; Yang & Kuo, 2008).

Source: developed by the authors.

In conclusion, domestic R&D strongly drives resident IP applications, directly benefiting local innovation. For non-resident applications, domestic R&D's influence is indirect, mediated by factors such as IP protection, market size, and FDI. These results can be summarized in Table C2 as below.

Table C2. Summary of key differences between residents' and non-residents' IP filings, with respect to examined constructs

Consumption Capacity	A country's economic purchasing power can stimulate demand for innovative products, encouraging both domestic and foreign IP filings.
R&D Effort	Domestic R&D enhances innovative performance and export capacity, while foreign R&D can generate spillover effects that benefit local innovation. Domestic firms leverage local knowledge; foreign firms contribute global insights that complement local innovation.
Business Environment for Innovation	The quality of regulations, property rights, and overall business conditions influences R&D and economic capacity, which in turn support IP creation. Strong institutions can amplify the positive effects of FDI on domestic innovation by improving absorptive capacity and governance.

Source: developed by the authors.

References

Please refer to the original paper for the complete list of references.

The references cited exclusively in this supplementary material are as follows:

Yang, C., & Kuo, N., 2008. Trade-related influences, foreign intellectual property rights and outbound international patenting. *Research Policy*, 37, pp. 446-459.
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