



**UNIVERSITY
OF TURKU**

TERRA - Maantieteellinen aikakauskirja

Terra on Suomen johtava maantieteen tieteellinen lehti, jota kustantaa Suomen Maantieteellinen Seura. *Terra* palvelee ensisijaisesti maantieteellisten aiheiden tutkijoita ja jatko-opiskelijoita. *Terra* on arvioitu Julkaisufoorumin tasolle 2 (<https://www.julkaisufoorumi.fi>). Se on indeksoitu Elsevierin ylläpitämässä Scopus-viittaustietokannassa. *Terra* ilmestyy neljä kertaa vuodessa painettuna lehtenä ja elektronisena Open Access -julkaisuna. *Terrassa* julkaistaan suomen- ja ruotsinkielisiä alkuperäistutkimuksia esitteleviä artikkeleita, tutkimukseen perustuvia katsauksia sekä tieteellisiä esseetyyppisiä artikkeleita ja katsauksia, joiden julkaisemisesta päätetään nimettömän asiantuntija-arvioinnin jälkeen (kaksoissokko). Lisäksi julkaistaan opetusideoita ja -aineistoja, keskustelupuheenvuoroja, uutisia ja kirja-arvosteluja.

Elektronisen Open Access -julkaisun koko sisältö on avoimesti luettavissa välittömästi julkaisemisen jälkeen (ilman embargoa ja rekisteröitymistä). Vanhat numerot pyritään saamaan tarjolle vuodesta 1980 alkaen näille sivuille (Arkistot). *Terra* ei peri kirjoittajamaksuja. Kirjoittaja kuitenkin vastaa värikuvista aiheutuvista ylimääräisistä kuluista.

Keskustelua – Diskussion

Foreign direct investments and technological advancement in the Global South: Perspectives on the emergence of Medellín as an investment hub

Väitöstilaisuuden Lectio Praecursoria, Talousmaantiede, Turun kauppakorkeakoulu, Turun yliopisto, 27.9.2024.

Despite ongoing global shifts and conflicts, we live in an increasingly interdependent world. Multinational companies are central to this, expanding across borders to link markets, spread technologies, influence policies, and build international relationships, all of which contribute to shaping local development.

Consider the everyday technologies we use: smartphones, software, and digital platforms. These products are rarely made where they are consumed.

Instead, companies like Microsoft, Apple, Google, Nokia, and countless others more and less well-known, develop them in different locations globally, forging new interdependencies between regions (Figure 1).

While these processes can drive societal progress and wealth in some areas, they can also deepen global inequalities and contribute to uneven growth. When we think of global corporations expanding into the



Figure 1. Foreign direct investments (FDI) from the Global North to the Global South 2003–2014.

Kuva 1. Suorat ulkomaiset investoinnit (FDI) globaalista Pohjoisesta globaaliin Etelään vuosina 2003–2014.

Global South, we often hear about the negative consequences – of sweatshops in Bangladesh, manufacturing plants in Mexico, Brazil, or Cambodia, and call centres in India. These examples highlight how companies can exert significant control over local economies and reinforce power imbalances.

However, these familiar examples represent only a fraction of the broader network of foreign direct investments in the Global South. Flows of foreign direct investment – when companies invest or expand businesses or infrastructure abroad – extend far beyond a few multinational giants. Thousands

of companies of varying sizes and origins actively shape local economies (Figure 2). To fully understand foreign direct investments' role in local development, we must look beyond the major players and explore how diverse companies contribute to the interconnected world.

This broader perspective also calls for exploring a wider variety of locations. While well-known technology hubs like Silicon Valley in the US or Bangalore in India are often seen as models for attracting multinationals and fostering innovation, they cannot be the only referents for the rest of



Figure 2. Foreign direct investments (FDI) within the Global South 2003–2014.

Kuva 2. Suorat ulkomaiset investoinnit (FDI) globaalin Etelän sisällä vuosina 2003–2014.

the world. As foreign direct investments become more knowledge-intensive and widespread, lesser-known cities are also beginning to draw multinationals. However, how and why new hubs emerge – and what are their contributions to technological advancement for both the cities and the companies involved – remain less understood.

In the research I am defending here today, I shift the focus from advanced economies and established hubs to the Global South, specifically exploring how foreign direct investments target emerging economies, and in a case study, I zoom into a city that has recently begun attracting multinational companies, particularly in the information and communication technologies sector. This approach allows me to explore how investment hubs emerge.

To answer this question, my thesis combines quantitative analyses of global foreign direct investment data with qualitative on-the-ground research. While the global analyses reveal broad trends in investment flows to the Global South and the factors attracting them, the qualitative research – based on interviews, local observations, and public reports – provides insights into the unique traits of a city beginning to attract multinationals and the local impact of their activities. The study integrates global, local, and firm-level perspectives.

I will next elaborate on the individual studies in my thesis and their findings. In the first part of the thesis, I reassess the role of emerging economies in global investments.

Mainstream studies, often from the perspective of advanced economies, tend to reinforce the dominance of a few major players – whether companies, cities or countries, highlighting outliers like India and China rather than providing an overview of broader trends involving Southern countries at large.

My analysis, however, differentiates investment flows from advanced, emerging, and less developed economies, revealing the distinct priorities of multinationals from each group. It also uncovers subtle developmental trends that could eventually reshape global interdependencies. While the development stage of a multinational’s home country influences the specific resources they seek abroad, technological readiness remains a critical factor for attracting investments across all flows to emerging economies.

The findings show that while multinationals from advanced countries continue to dominate investments, their focus is on cost-saving, efficiency-enhancing strategies. In contrast, firms from emerging and less developed economies are growing faster, driven by dynamic innovation goals and technological catch-up. For instance, multinationals from emerging economies enhance their innovation capabilities in other emerging markets by sharing expertise, benefiting from cost advantages, and acting as gateways to each other’s regions. This trend is evident in sectors like biotech and automotive, where companies such as India’s Tata Motors and Brazil’s Embraer have set up operations and development centres in other emerging economies. Another illustrative example that is important in today’s world is Brazil’s Natura, which is expanding into Colombia to tap into local knowledge of sustainable beauty practices.

By examining these diverse flows of foreign investments, the study challenges the belief that investments from the Global North are the primary drivers of technological progress, indicating instead that those from other emerging economies may be more effective. Additionally, investment flows between less developed and emerging economies, often overlooked in studies, provide valuable

opportunities for a broader range of countries to catch up and grow.

These insights are key to understanding how emerging cities must adapt to meet the varied demands of global investors and succeed as investment hubs.

Therefore, next, I wanted to understand the local capacity needed to host foreign direct investments and their impact. Initially, I planned to study three

investment hubs, but due to time constraints, information accessibility, complexity, and funding, I chose to focus on one, Medellín, Colombia, my hometown (Figure 3). This allowed me to explore the complexities of a specific operating environment more deeply.

Medellín might not be familiar to some of you. Far in the memories of some of us present here today, the former industrial capital became, during the



Figure 3. Panoramic view of Medellín, Colombia (modified to grayscale), originally taken by jduquetr. Licensed under Creative Commons Attribution 2.0 Generic license. Original image available at: <https://www.flickr.com/photos/72494726@N00/280693114>.

Kuva 3. Panoraamanäkymä Medellínistä, Kolumbiasta (muokattu harmaasävyiseksi), alkuperäinen kuvaaja jduquetr. Lisensoitu Creative Commons Attribution 2.0 Generic -lisenssillä. Alkuperäinen kuva saatavilla osoitteessa: <https://www.flickr.com/photos/72494726@N00/280693114>.

1980s and '90s as the base of the Medellín drug cartel, a 'murder city'. However, in more recent years, it has gained international recognition as one of "the world's most innovative cities", mainly for its social innovations – a topic I will address later. My goal was to understand what had changed to make the city attractive to multinational companies.

I began my research by visiting the local investment promotion agency, where I was told, "*Aquí no venía ni mi Dios*" (not even God used to come here). In a deeply religious society, this expression highlighted just how dire the situation once was and how significant the city's transformation.

I traced the arrival of multinational companies alongside Medellín's change, which turned out to be more extensive than I had expected. The city implemented a variety of city-wide initiatives – from grassroots education and entrepreneurship programs to large-scale social innovations, that is, landmark public infrastructure projects in informal neighbourhoods, such as cable cars, open air escalators, and library parks. These projects aimed

at connecting marginalised areas to urban infrastructure networks, boosting Medellín's global image and playing a key role in its internationalisation, attracting businesspeople, tourists, and foreign investors.

A more strategic aspect of this transformation, in the context of my research, was Medellín's science, technology, and innovation agenda, later to be complemented by the creation of an innovation district.

When examining the innovation district, I encountered two contrasting views. Those involved in its implementation described it as a thriving project, a view echoed by international policy papers that praised Medellín's innovation district as a leading example. However, others – including some tech companies – viewed it simply as a physical building. This prompted us to look deeper into the innovation district model.

Our research found that, although the development of the designated district area was slow and uncertain, the innovation district continued to

progress. A growing innovation culture, driven by policy efforts to boost innovation, led to the proliferation of smaller initiatives scattered across the city, with Ruta N – the district’s first and, so far, only but major building – serving as the visible hub that coordinated innovation and business activities.

Next, I shifted my focus from the innovation district to examining the foreign multinational companies operating in Ruta N. While Ruta N has attracted more foreign multinationals than corresponding initiatives in Latin America, most were small and medium-sized rather than the larger companies I had expected.

I set out to understand what attracted these companies to Medellín and how their presence benefited both the companies and the local economy. Public strategies in emerging cities – such as establishing innovation districts or facilities like Ruta N – offer up-to-date infrastructure and promise to facilitate tech companies’ operations. However, their effectiveness in attracting high-value multinational activities and driving technological growth and collaboration remains unclear in the literature.

Multinationals typically concentrate their knowledge-intensive activities in regions with strong innovation ecosystems where resources are abundant. Nevertheless, emerging investment hubs like Medellín may have unique advantages that enable them to compete. This is what I aim to uncover in my research.

I studied a variety of multinationals to explore their potential for interactive knowledge creation with local companies. I categorised them by their strategic motivations – whether seeking resources, markets, efficiency, or strategic assets – each requiring different local knowledge and impacting the local economy in varying ways.

Interestingly, I found that multinationals in Medellín followed all four motivations. This was surprising, as the traditional view suggests that companies move from resource-seeking to more strategic, high-tech activities over time. The diversity of motivations may be reflecting the rapid pace of globalisation and the growing appeal of cities like Medellín, where pro-innovation policies are strengthening the knowledge environment.

Although drawn by Medellín’s developmental progress and knowledge initiatives like Ruta N, these companies’ local engagement was limited. Most of their interactions occurred through Ruta N, and their operations supported activities in other countries, relying on Medellín as a strategic location with skilled, often university-educated labour. Local companies were largely unaware of multinationals’ whereabouts, except for the market-seeking ones.

The few market-seeking companies in my sample were more integrated into the local economy, benefiting from the growing tech community, changes in labour and environmental regulations, and demand for new business models, which created opportunities for their advanced technologies and services. Also, their operations required local expertise and international partnerships, showing the greatest potential for local knowledge-sharing and capacity-building.

Though the qualitative data in this study is limited and not generalisable, the findings emphasise the need for context-specific analysis when assessing multinationals’ strategies and their contribution to local knowledge creation. They also challenge the conventional view that multinationals only generate knowledge through high-tech activities in advanced economies, showing that even market-seeking activities can foster value creation and development in other contexts.

Together, the insights from the different studies help answer the broader question of how investment hubs emerge in the Global South. In Medellín’s case, this evolution can be understood through processes within four interconnected domains of urban transformation (Figure 4).

These domains form the basis of the conceptual model I propose in the thesis: First, starting from the bottom, addressing socioeconomic disparities; second, overcoming isolation from national and global exchanges; third, integrating into the global economy by adapting international policy and planning trends; and fourth, attracting multinational companies as part of a broader urban transformation.

While cities are unique, the general categories in the conceptual model reveal common themes across similar contexts. These shared themes can help identify context-specific strategies that are relevant to cities facing similar developmental challenges while also fostering mutual understanding and regional collaboration, leading to the development of regional approaches to global issues.

In conclusion, attracting the knowledge-intensive activities of multinationals requires coordinated local changes that drive technological advancement and position emerging cities as globally competitive hubs. However, as the volatile Medellín case demonstrates, balancing diverse efforts remains an ongoing challenge.

Technologically progressive and internationally connected societies are key to attracting multinational activities, with local technological progress creating demand for knowledge-intensive activities of multinationals and these investments strengthening local knowledge economies – a contemporary take on the idea of cumulative causation.

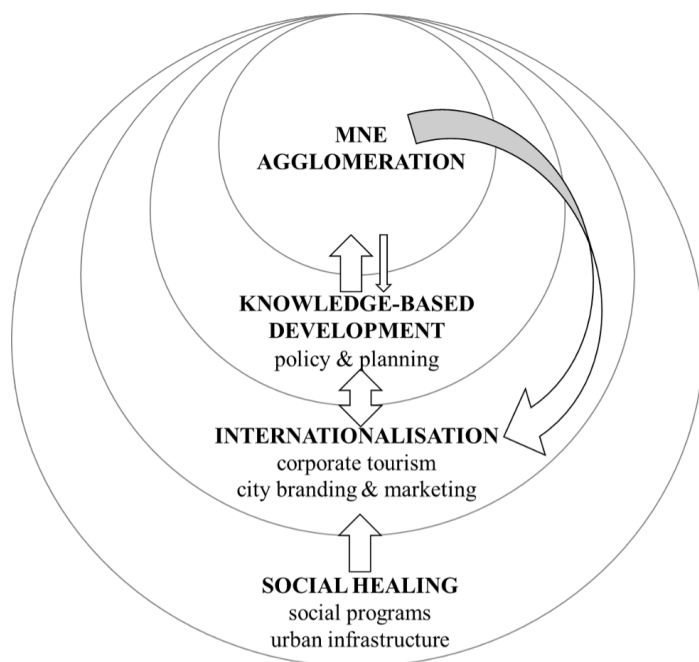


Figure 4. Complementary domains of urban transformation involved in Medellín's emergence as an FDI hub" (see original in Gómez 2024, 56).
 Kuva 4. Kaupungin transformaation täydentävät ulottuvuudet, jotka liittyvät Medellínin kehittämiseen suoran ulkomaisen investoinnin keskuksena (ks. alkuperäinen Gómez 2024, 56).

My research explores the unique traits of emerging economies as hosts for multinationals, the roles of these firms in local knowledge creation, and the strategic influence of policy and planning tools in shaping investment hubs. By examining the interplay between global trends and local conditions, it offers new perspectives and contextual details that enrich diverse literature streams. It reveals relationships between countries at different stages of development, showing that valuable connections can occur independently from advanced economies. It highlights how multinational strategies, shaped by specific local conditions, can drive diverse knowledge-creation processes.

Ultimately, it advocates for a more nuanced understanding of multinational-local relationships in the South and warns against equating places with predetermined development trajectories based on models from advanced economies. Instead, it calls

on economic geographers to remain open to alternative paths of development and to consider how alternative futures, aligning with global trends, take shape in specific places.

REFERENCES

- Gómez, L. (2024) *FDI and technological advancement in the Global South: Perspectives on the emergence of Medellín as an investment hub*. *Annales Universitatis Turkuensis, Ser. E. Oeconomica*. Tom. 120. Painosalama, Turku. <https://urn.fi/URN:ISBN:978-951-29-9829-6>

LUCÍA GÓMEZ
 Talousmaantiede,
 Turun kauppakorkeakoulu,
 Turun yliopisto