

Intangible Assets in the Global Economy: Better Data for Better Policy

Cecilia Jona-Lasinio

World KLEMS Conference – Tokyo, 27-28, March 2025



Goals and policy relevance of the project

Develop quarterly cross-country estimates of intangible investments and productivity

Expand the coverage of intangible investment to middle- and lower-income countries

Up-to-date macroeconomic data are essential for assessing the short-term effects of economic shocks and formulating policy measures to mitigate their long-term consequences

In emerging and developing economies, innovation is broadly acknowledged as a critical catalyst for economic growth, with innovation policies playing a vital role in their strategic and planning designs.

Empower as many countries as possible to generate data independently, through technical capacity-building efforts worldwide.

Extending the timing and the geographical coverage of intangibles estimates is a notable advancement in innovation and productivity analysis

Project organization

Steering committee



Technical advisory board

- ✓ Bishawanath Goldar (Institute for Economic Growth, India)
- ✓ Tsutomu Miyagawa (Gakushuin University and Research Institute of Economy, Trade and Industry – RIETI, Japan)
- ✓ Mary O’Mahony (King’s College, UK)
- ✓ Bart van Ark (University of Manchester, UK)
- ✓ Rodrigo Ventura (Instituto Nacional da Propriedade Industrial – INPI, Brazil)

Global INTAN-Invest: Database and Highlights

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GLOBAL INTAN-INVEST

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Global INTAN-Invest

Global INTAN-Invest is a new database expanding [INTAN-Invest](#) and building on [EUKLEMS & INTANProd](#) by developing cross-country quarterly and annual measures of intangible assets for high-income and emerging economies.

Intangible Assets in the Global Economy: Better Data for Better Policy

In partnership with the World Intellectual Property Organization (WIPO), Luiss Business School established **Global INTAN-Invest** in 2024, making notable advancements in innovation and productivity analysis. Global INTAN-Invest stands out as the first database providing timely measures of investment in intangible assets, coherent with the National Accounts framework proposed by Corrado, Hulten, and Sichel (2005, 2009). A distinguishing feature of Global INTAN-Invest is that it expands the geographical coverage of intangible investment to emerging economies, starting with India.

The results of the project will be released annually via the [World Intangible Investment Highlights](#), featuring key trends in intangible investment, as well as via the Global INTAN-Invest Database.

In addition, the project also includes technical capacity-building efforts aimed at empowering countries worldwide to generate this data independently.

Detailed information about the project can be found here:

[WIPO website](#) and [WIPO-Luiss Partnership](#)

<https://global-intaninvest.luiss.it/>



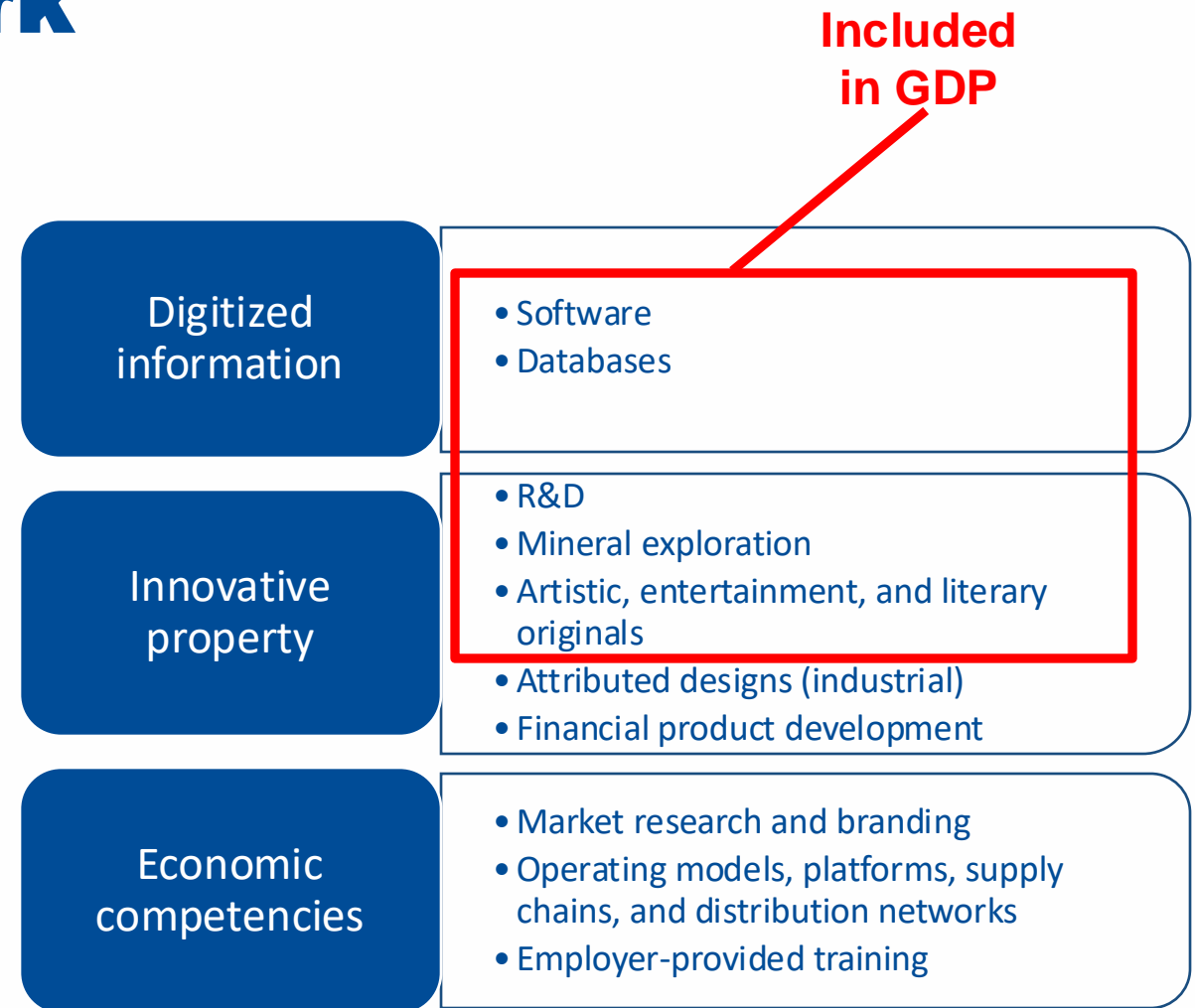
World Intangible Investment Highlights Better Data for Better Policy

Geneva, 25 June 2024

<https://www.wipo.int/publications/en/details.jsp?id=4744>

The intangibles framework

- ✓ The approach of Corrado, Hulten, and Sichel (2005, 2009) expands the range of spending by firms that should be viewed as an investment.
- ✓ It applies a fundamental economic criterion that defines investment: outlays expected to yield a return in a future period.
- ✓ But many of the components of intangibles relevant for analyzing modern companies are not included in GDP.
- ✓ Existing efforts include:
 - ✓ INTAN-Invest
 - ✓ EUKLEMS & INTANProd
 - ✓ Focused on annual industry-level estimates
 - ✓ EU, US, UK and Japan



Source: Adaptation of Corrado, Hulten, and Sichel (2005, 2009)

Global INTAN-INVEST: main characteristics

PILLARS

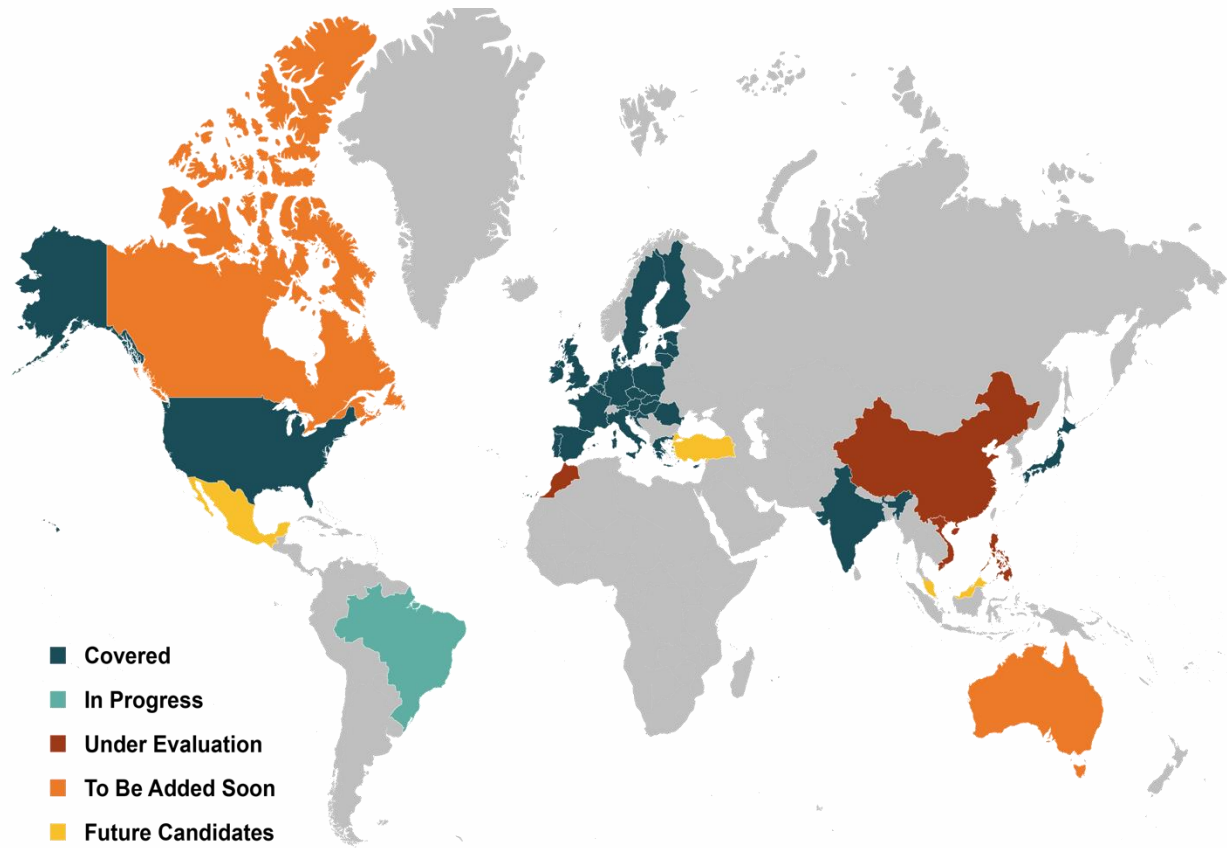
- ✓ Official statistics as the main data sources
- ✓ Consistency with official national accounts
- ✓ Bottom-up approach – total investment the sum of investment by asset
- ✓ Quality checks
- ✓ Detailed and exhaustive documentation describing estimation methods

FEATURES

- ✓ Comparability across countries and over time
- ✓ Data internally coherent
- ✓ Any difference with official national accounts can be explained and quantified
- ✓ Updatable and replicable
- ✓ Not a standalone product – it can be integrated and used together with all the other variables in the domain of national accounts and with other macroeconomic statistics

<https://global-intaninvest.luiss.it/>

Global INTAN Invest: Coverage and Future Developments



Note: *Indian data are up to 2020

✓ The first release, in June 2024, covers annual and quarterly estimates of intangible investment for the total economy, spanning from 1995 to 2023.

✓ **Annual estimates** currently cover 31 countries, including 27 EU economies, India*, Japan, the UK & the US.

✓ The 2025 data release will include Brazil and update of India to 2022.

✓ Chinese data are under evaluation as well as, the Philippines, Republic of Korea and Singapore.

✓ Canada and Australia to be included soon

✓ **Quarterly estimates** refer to 27 EU economies, the UK and the US

✓ The 2025 quarterly data release will include Japan

Estimation strategy for annual data

14 marzo 2025



Estimation Strategy for Annual Data

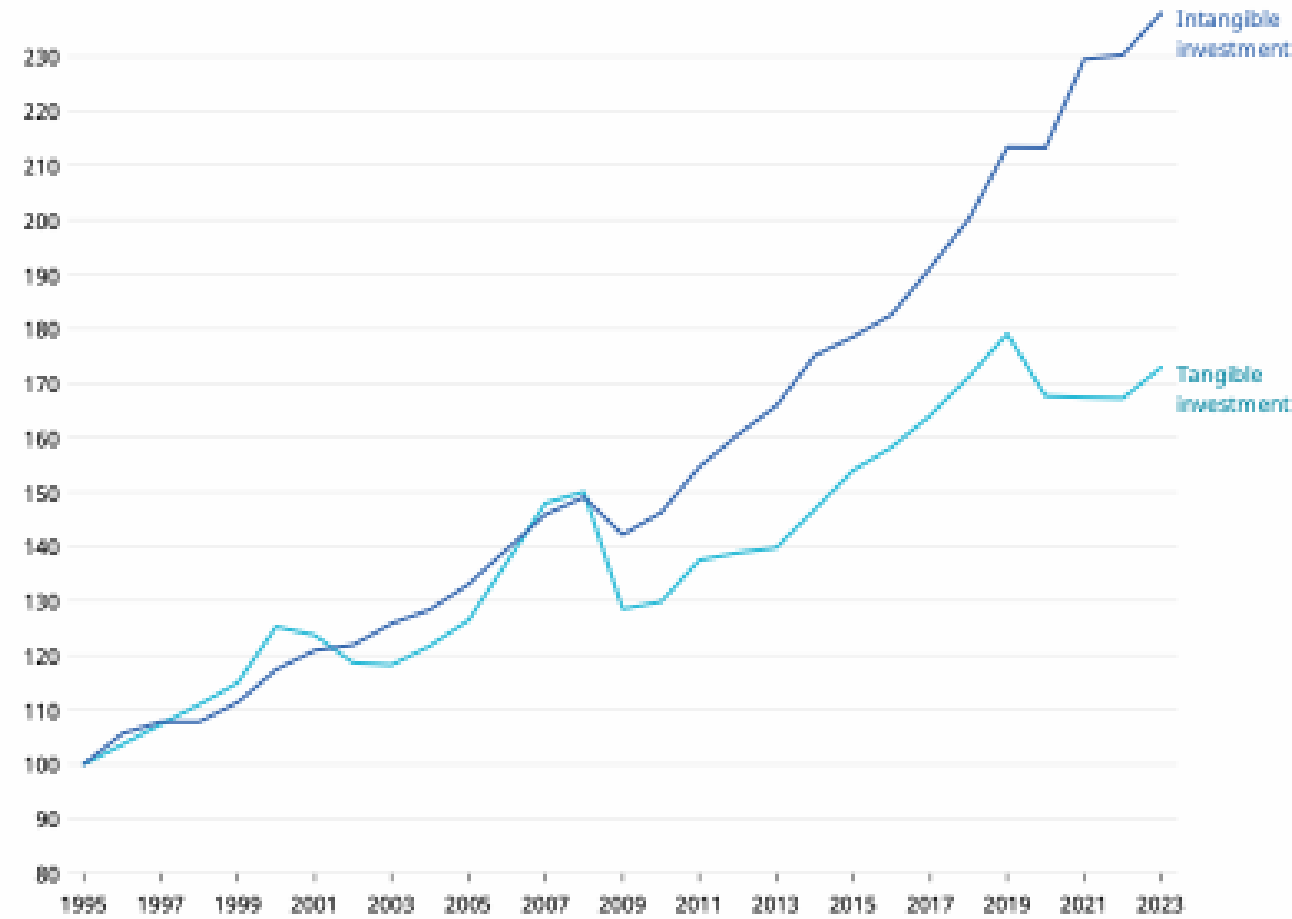
- **Official national accounts** for Software, R&D and OIPP
- **Expenditure** approach for non-NA intangibles
- **Use tables** for the purchased components
 - Intermediate consumption in products like management consultancy services, advertising and market research services, and design.
- **LFS**, SES for EU countries, RAIS for Brazil, for the own-account component
 - Employment and wages for the relevant occupation
 - Ideally four digits ISCO, minimum three digits

Issues Specific for Emerging Economies

- **Missing data** in national accounts
- Country-specific and **highly aggregated** classifications
- Large time-series fluctuations
- Own-account and the **informal sector**
 - Do informal firms hire occupations associated with intangible production?
 - If so, do intangibles-related workers actually produce intangible assets?
 - India LFS
 - Small firms hire relatively less intangible-related professionals than larger ones
 - About 20 percent of intangible-related occupations work in firms with less than 10 employees

Intangible Investment is Substituting Tangible Investment

Figure 1 Total intangible and tangible investment, 1995–2023, indexed (1995=100)

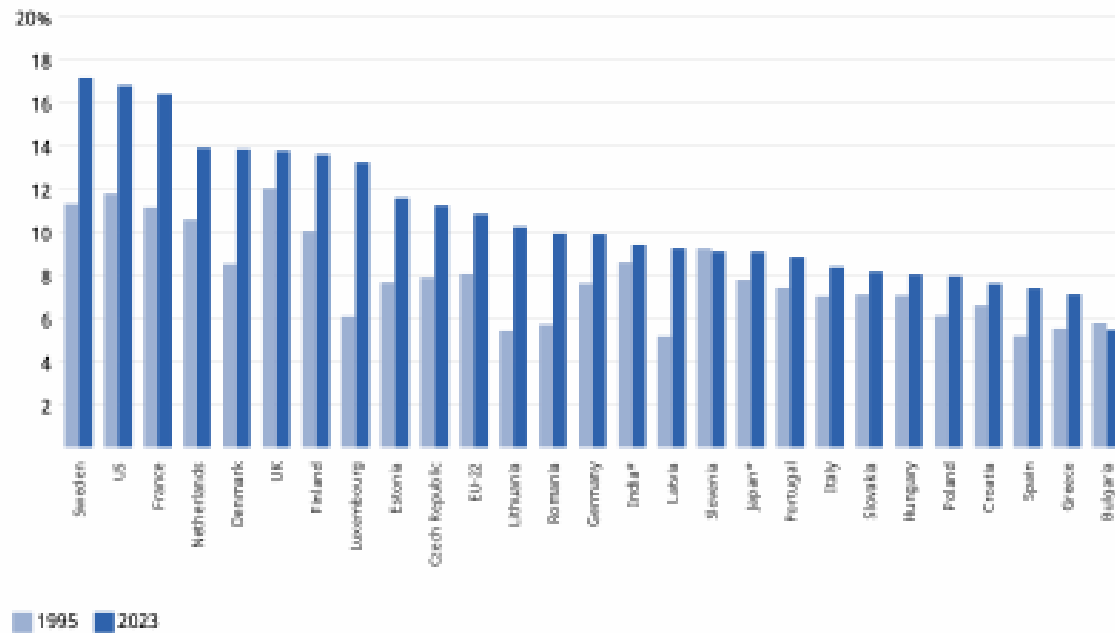


Note: Intangible and tangible investment have been aggregated over the sample countries: EU-22, India, Japan, the United Kingdom and the United States. Estimates are in terms of chain-linked volumes (reference year 2015). See note 2 for definition of EU-22.

Source: WIPO-LBS Global INTAN-Invest Database, June 2024.

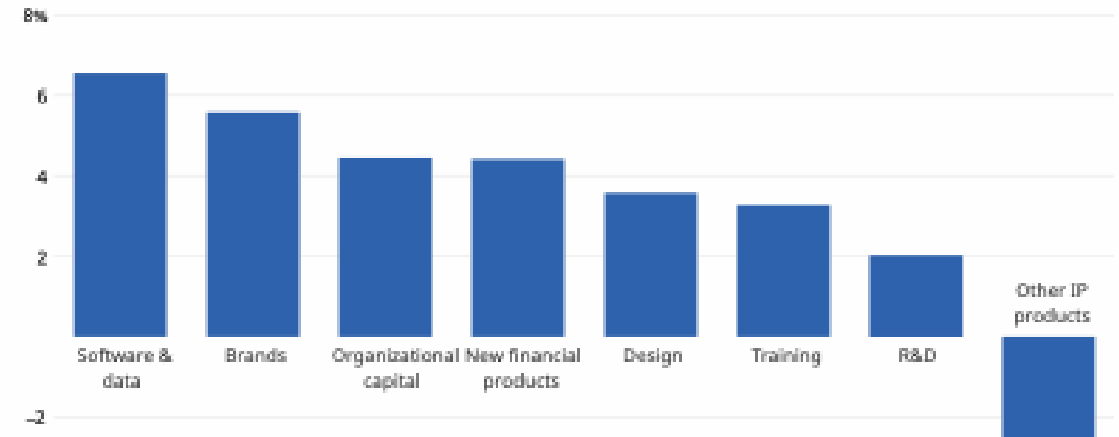
Intangible Investment Share of GDP Increased in Most of the Countries Mainly Driven by Software and Brands

Intangible investment as a share of GDP (%), 1995 versus 2023



Notes: * For India, shares are for the years 2011 and 2020, respectively, owing to the unavailability of data before 2011 and beyond 2020. Data for India exclude the informal sector. For Japan, shares are for the years 1995 and 2021, respectively, owing to the unavailability of data beyond 2021. See note 2 for definition of EU-22.
Source: WIPO-LBS Global INTAN-Invest Database, June 2024.

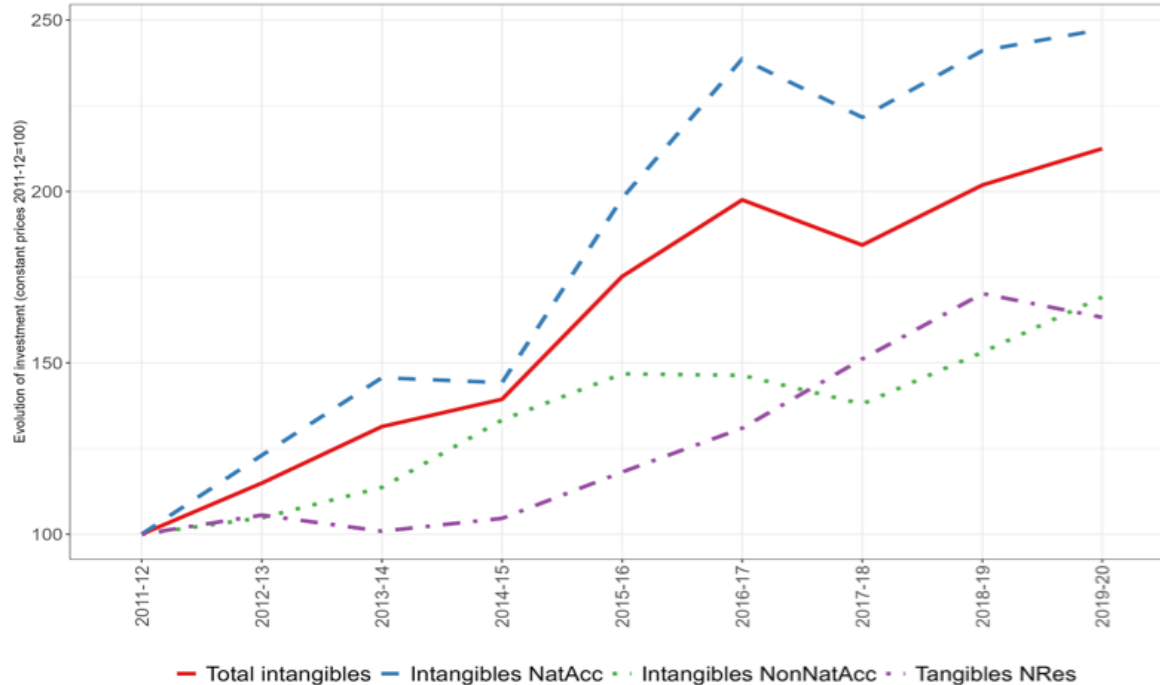
Compound annual growth rate (%), 2011–2021



Notes: Intangible investment by asset type has been aggregated over the sample countries for 2021: EU-22, Japan, the UK and the US. See note 2 for definition of EU-22. 2021 is the most recent year for which data is available across all intangible asset types.
Source: WIPO-LBS Global INTAN-Invest Database, June 2024.

Intangible vs Tangible Investment Trends in India

Constant prices, 2011=100



- ✓ Intangibles are outpacing the tangibles mainly driven by national accounts components (Software)

Intangible and Tangible Shares of GDP

(2019)



Notes: Figures for India exclude the informal sector. Note that India data sources refer to the fiscal year from July to June; therefore, 2011 stands for July 2011 to June 2012, and so on. See note 2 for definition of EU-22.

Source: WIPO-LBS Global INTAN-Invest Database, June 2024.

- ✓ Intangible investment in 2019 made up over 10 percent of India's GDP,
- ✓ ...which is comparable to the EU-22 average (about 10 percent) and higher than in Japan (about 9 percent).

Underscores India's significant progress in the global arena of intangible assets and intellectual property. First time intangible data available for India.

THE TIMES OF INDIA

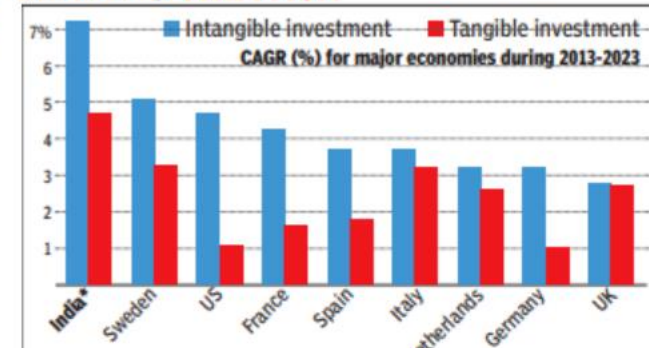
India sees fastest growth in intangible investment

TNN | Aug 10, 2024, 05.42 AM IST



NEW DELHI: India has witnessed the fastest growth in intangible investments over a nine-year period (2011-2020), surpassing major economies like the US, France, Germany & the UK, indicating high level of value creation by companies. In terms of absolute levels of intangible investments for 2020 (latest year for which data is available), India ranks 14th among a sample of 26 advanced economies, trailing Denmark and ahead of Finland and Portugal, the World Intangible Investment Report said.

LEADING THE PACK



Estimation strategy for quarterly data

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Global INTAN-Invest quarterly data allows to

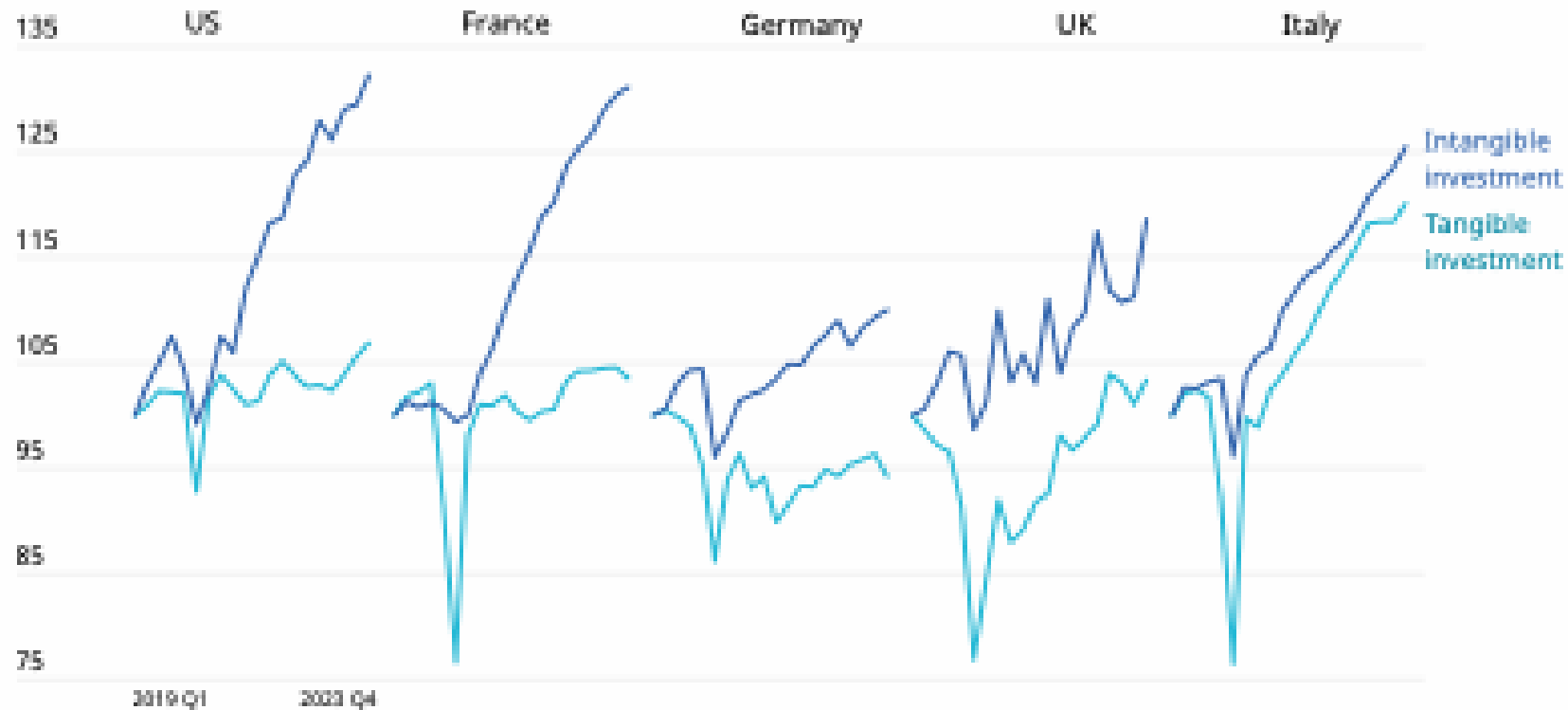
- Monitor **current developments** of intangible investment
- Conduct **business cycle analysis** with the full set of intangibles
(National Accounts and Non-NA)
- Increase **timeliness of annual** estimates of intangible investments
and capital stocks for productivity analysis

Quarterly Indicators for Benchmarking

- Purchased brand, design and organizational capital
 - Quarterly service **turnover index** (US Census data)
- Own account brand, design, organizational capital and new financial products
 - Volume indicator: **time-use adjusted quarterly employment** from CPS (LFS for EU) for relevant occupations (not available for most recent years)
 - Price Indicator: **Investment deflator** (PPI Industry Data from BLS)
- Training (to be implemented)
 - Volume indicator: Information on **participation in training from quarterly LFS for EU**
 - Price Indicator: Investment deflator or training costs

Intangible Investment More Resilient than Tangible in Times of Crisis

Figure 4 Quarterly investment, selected economies, 2019–2023, indexed (2019 Q1=100)



Note: Estimates are in terms of chain-linked volumes (reference year 2015).

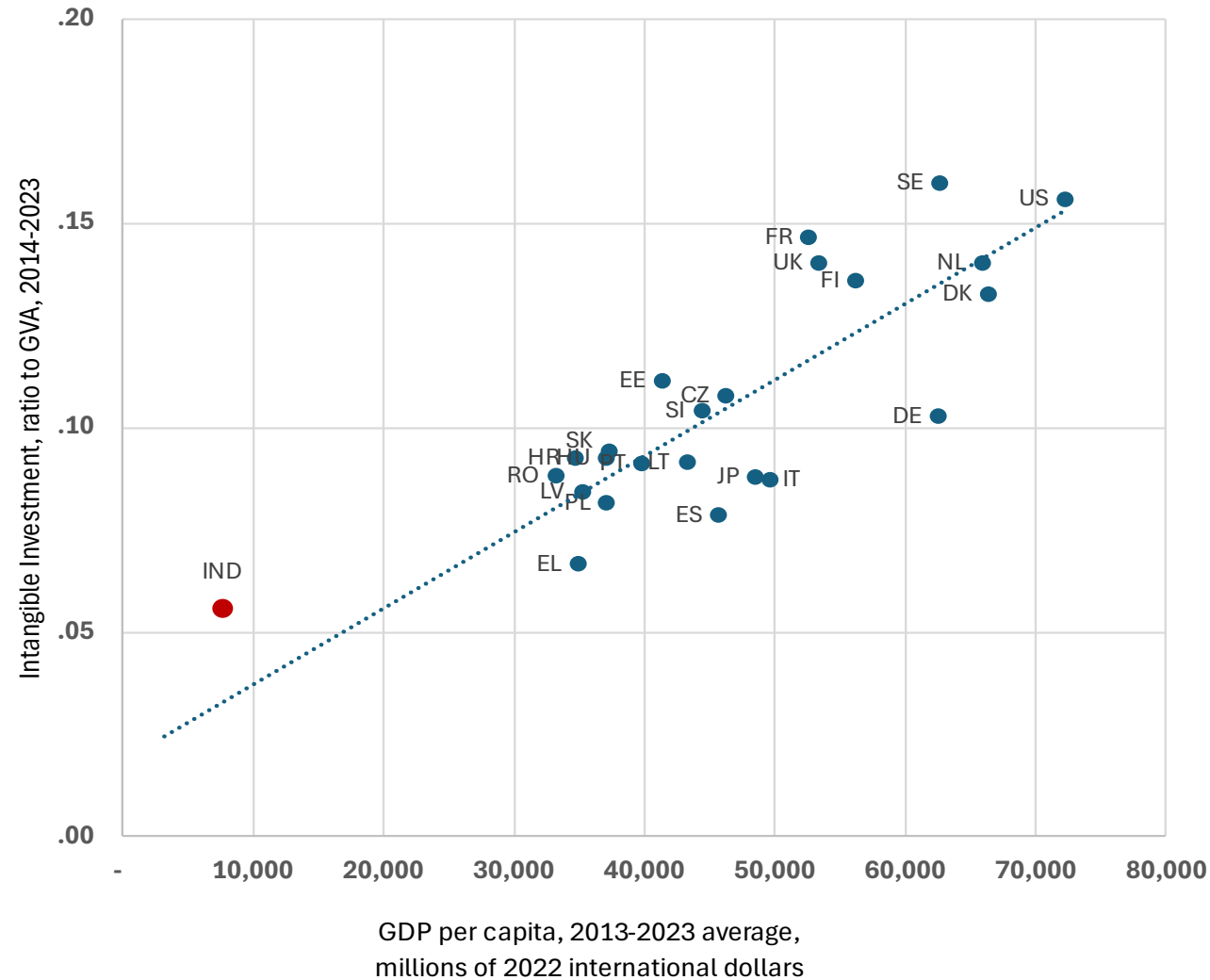
Source: WIPO-LBS Global INTAN-Invest Database, June 2024.

Why intangibles matter?

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Intangible Investment Intensity and GDP per Capita



Note. Intangible investment and GVA cover all NACE activities. Data for India are through 2021.
Sources. Intangible investment and GVA, EU KLEMS & INTANProd (2023) and Global INTANInvest (2024).
Real GDP per capita in 2022 international dollars, Total Economy Database (The Conference Board, 2023).

Concluding remarks

- ✓ Despite the importance of intangible investment in driving innovation, productivity and economic growth, our understanding of its size, composition and impact remains limited owing to measurement challenges.
 - ✓ Many intangible asset types, such as brands or design, are not recognized as an investment under national accounting frameworks, with the result that about 60 percent of investment in intangible assets goes unmeasured
- ✓ Patterns of growth depend upon where you look, and the inclusion of intangibles can significantly affect how growth and innovation is perceived.
 - ✓ To understand modern firms and the performance of dynamic, innovative economies, intangible capital needs to be included in the analysis
 - ✓ The CHS framework for measuring intangible assets and including them in productivity analysis has been adopted and widely used in many studies.

Thank you

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