

# General Frameworks in International Business

Dr. Ernil Sabaj

Warwick Summer School  
International Business and Finance

21 July 2025

## Textbooks

- Chapter 2, 3, Simon Collinson, Rajneesh Narula, Alan M. Rugman and Amir Qamar, *International Business*, 8th Edition, Pearson Education, 2020

## Extra reading:

- Chapter 12, John D. Daniels, Lee H. Radebaugh and Daniel Sullivan, *International Business, Global Edition*, 17th Edition, Pearson Education, 2021

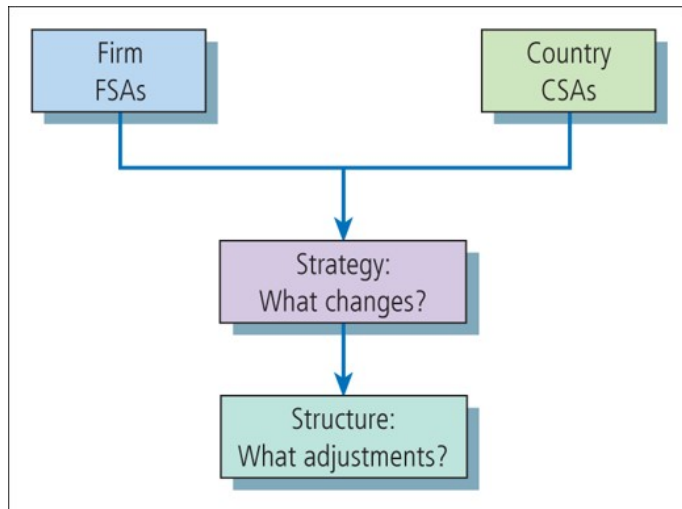
- General frameworks in international business
  - Firm-specific assets/ownership advantages and Location advantages/country-specific assets
  - The eclectic paradigm: putting it all together, Strategic management of MNEs Steps in the strategic management process, the FSA–CSA matrix.
  - Why firms become MNEs, Entry modes and The international activities of SMEs.
- Multinational enterprises, innovation and competitiveness
  - Trends in innovation at the firm and country level, The resource-based view (RBV) and the VRIO framework and Dynamic capabilities
  - Innovation and location advantages, International dimensions of innovation and The location of innovation activities in the MNE.

# Objectives: Understand

- **Understand** some key conceptual frameworks from the international business “toolbox,” including the eclectic paradigm and the CSA–FSA framework, which capture ownership advantages, location advantages, and internalization advantages.
- **Understand** why firms become multinational enterprises (MNEs)—what motivates them to expand abroad.
- **Understand** innovation and map out some innovation trends across firms and countries.
- **Understand** the internationalization process.
- **Understand** how dynamic capabilities underpin a capacity in firms to continuously innovate, alongside the R&D and technology development functions.
- **Understand** the term strategic planning and discuss the strategic orientations that affect this planning process.
- **Understand** how the resource-based view (RBV) and the VRIO framework connect innovation and competitive advantage.

# General frameworks in international business

# The basic components of international business



# A framework for global strategies: the FSA–CSA matrix

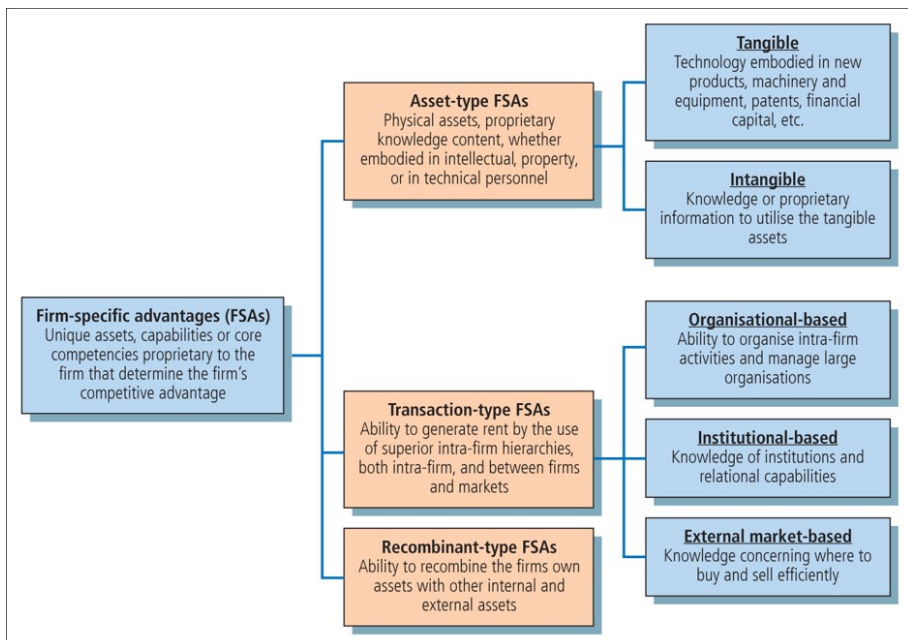
- Firms need to have assets that they are able to use in foreign locations to generate some kind of income.
- These assets are variously described as **ownership-specific (O) advantages**, **firm-specific advantages** or **firm-specific assets (FSAs)**.
- FSAs are important to understanding competitive advantage. The competitiveness of firms results from the ownership of proprietary assets that are efficiently combined with value creating activities, and that are difficult for competing firms to mimic.
- The CSAs represent the natural factor endowments of a nation; they are based on the key variables in its aggregate production function.

## Firm-specific assets/ownership advantages

- The understanding of ownership advantages in the international business field is based upon **Hymer's (1976) monopolistic advantage theory**.
- The theory was developed after neoclassical theories in economics proved ineffective in explaining how foreign firms were able to compete against domestic firms.
- Hymer argued that the MNE's **success lies in its access to a 'package (bundle) of resources' including technology and management skills** that offered the owner monopolistic advantages to outcompete indigenous firms.
- These monopolistic advantages were either **(a) not available to local firms, or (b) superior to the assets of local firms**.

- **Firm-specific assets (FSAs):** A unique capability proprietary to the organization.
  - It may be built upon product or process technology, marketing or distributional skills.
- There are three types of O advantages:
  - **Asset-type** (physical assets, proprietary knowledge content, whether embodied in intellectual, property, or in technical personnel).
  - **Transaction-type** (ability to generate rent by the use of superior intra-firm hierarchies, both intra-firm, and between firms and markets).
  - **Recombinant-type** (ability to recombine the firms own assets with other internal and external assets).

# Classes of FSAs or ownership (O) advantages



## Location advantages/country-specific assets

## **Country-specific assets (CSAs):** Country factors.

- Natural resource endowments (minerals, energy, and forests), the labor force and associated cultural factors, etc.

In principle, L advantages should be accessible to all. However, this may not be the case as:

- 1 full information about L advantages associated with a specific location may not be readily available;
- 2 even where information is available, there may be costs associated with accessing this knowledge;
- 3 L advantages may be made available (or denied) by the actions of governments that seek to encourage (or restrict) the activities of a particular group of actors by introducing barriers to their use of certain L advantages.

# Location advantages/country-specific assets

	TYPE OF L ADVANTAGES	SOURCES OF L ADVANTAGES	EXAMPLE OF L ADVANTAGES
Macro-region/country level L advantages	Exogenous L advantages	These derive from natural assets (independent of development stage)	<ul style="list-style-type: none"> <li>- Sociological/anthropological</li> <li>- Culture, norms, religion, political stability.</li> <li>- Land availability, rainfall, climate, extractive resources, basic population</li> <li>- Proximity and accessibility to other markets</li> <li>- Membership in a regional integration scheme</li> </ul>
	Fundamental L advantages	Basic infrastructure	<ul style="list-style-type: none"> <li>- Primary schools</li> <li>- Health care</li> <li>- Transport (roads, railways)</li> <li>- Utilities (electricity, water)</li> <li>- Telecoms</li> <li>- Ports</li> <li>- Efficient bureaucracy</li> <li>- Public transport</li> </ul>
		Legal infrastructure	<ul style="list-style-type: none"> <li>- Legal system</li> <li>- Security and police</li> <li>- Tariff system</li> <li>- Property rights</li> <li>- Tax and excise</li> </ul>
		Regulation and policy	<ul style="list-style-type: none"> <li>- Incentives</li> <li>- Subsidies</li> <li>- Tax holidays</li> <li>- Regulatory agencies</li> <li>- Industrial policy</li> <li>- Competition policy</li> <li>- Capacity to enforce regulation</li> </ul>
		Financial infrastructure	<ul style="list-style-type: none"> <li>- Banking, insurance, stock exchange</li> </ul>
Industry-level L advantages	Knowledge asset L-advantages	Knowledge infrastructure	<ul style="list-style-type: none"> <li>- Tertiary education, universities</li> <li>- Public research institutes</li> </ul>
	Structural L advantages	Market and demand structure	<ul style="list-style-type: none"> <li>- Income level and distribution</li> <li>- Size of potential market</li> <li>- Consumer sophistication</li> <li>- Wage rates</li> <li>- Skilled employee availability</li> <li>- Distribution channels</li> <li>- Competitors?</li> </ul>
Firm-associated L advantages	Collocation L advantages	L advantages that derive from the presence of other actors in the same location	<ul style="list-style-type: none"> <li>- Agglomeration economies</li> <li>- Networks of suppliers</li> <li>- Networks of customers</li> <li>- Presence of support industries</li> </ul>
		Industrial policy	<ul style="list-style-type: none"> <li>- Specific policies associated with given industry</li> </ul>
		L advantages that derive from location-bound O advantages of other actors	<ul style="list-style-type: none"> <li>- Presence of significant customer</li> <li>- Presence of significant supplier</li> </ul>

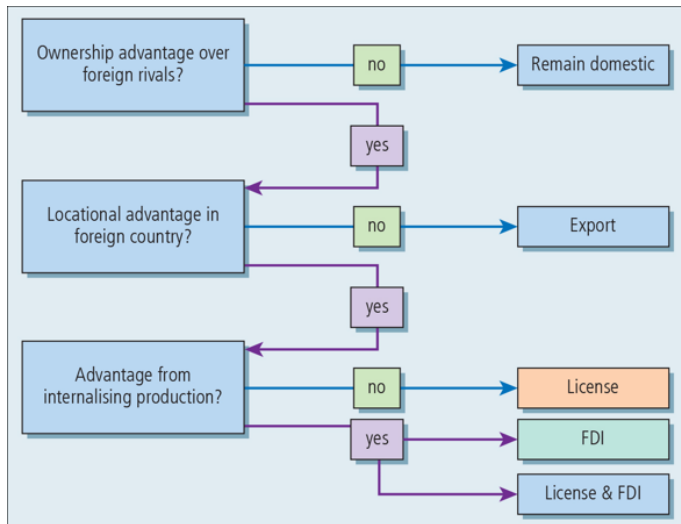
## The eclectic paradigm: putting it all together

# The eclectic paradigm: putting it all together

The eclectic paradigm (sometimes known as OLI) connects the three building blocks together.

- Ownership factors (O): FSAs
- Location factors (L): CSAs
- Internalization factors (I): FSAs
- O and I, in practice, are integrated features of FSA management within the MNE that cannot be decoupled in strategic decision making.

# The eclectic paradigm: putting it all together



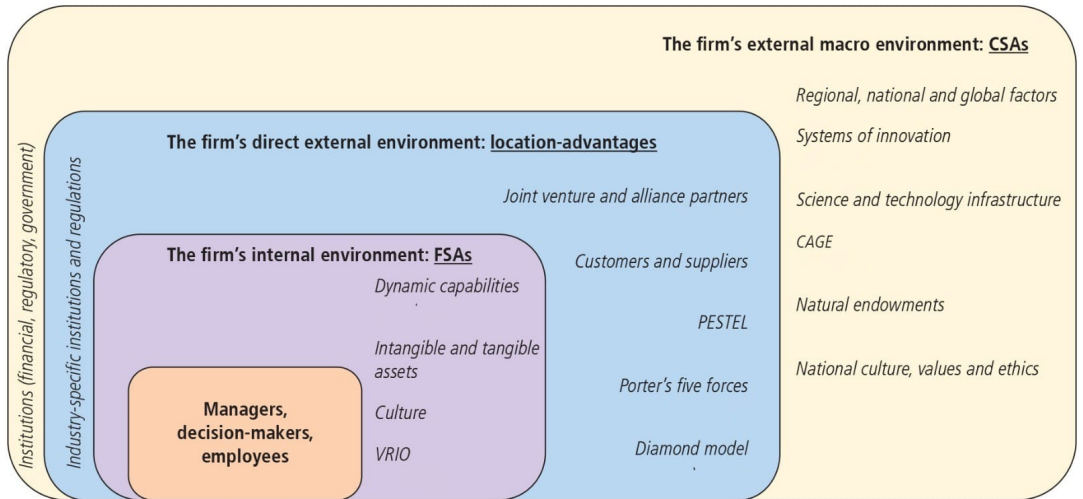
The OLI Framework: a decision model

# The eclectic paradigm vs FSA-CSA

- The eclectic paradigm is a more general framework and is useful in understanding a variety of different issues.
  - It is a toolbox in its own right, and helps us understand countries, modes of governance and government policies, and it is used by policy-makers.
  - It can be applied at a macro (country) level, as well as at an industry and firm level.
- The FSA–CSA framework finds its greatest application in understanding the strategy of firms.
  - Both frameworks share two crucial aspects – ownership advantages/firm-specific advantages, and location advantages/country-specific advantages.
  - The third 'leg' of the eclectic paradigm are internalisation advantages, a concept that is implicitly acknowledged by the FSA–CSA framework.

# Strategic management of MNEs and Steps in the strategic management process

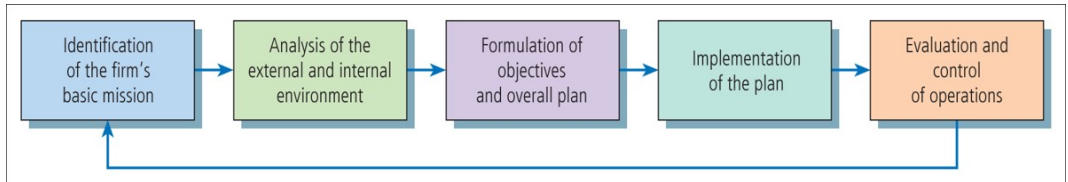
# Frameworks for internal and external analysis



# Strategic management of MNEs and Steps in the strategic management process

The strategic management process involves four major functions: **strategy formulation, strategy implementation, evaluation, and the control of operations.**

The strategic management process in action:



- The following questions must be answered to determine the firm's basic mission:
  - *What is the firm's business?*
  - *What is the reason for its existence?*

For example,

- Royal Dutch/Shell, BP, and ExxonMobil are in the energy business, not the oil business.
- AT&T and France Telecom are in the communications business, not the telephone business.

# Analysis of the external and internal environment

- The goal of external environmental analysis is to **identify opportunities and threats that will need to be addressed**.
- The purpose of an internal environmental analysis is to **evaluate the company's financial and personnel strengths and weaknesses**.

## Formulation of objectives and overall plan

- Internal and external analyses will help identify **long-term (2–5 years)** and **short-term (<2 years)** goals.

## The implementation process

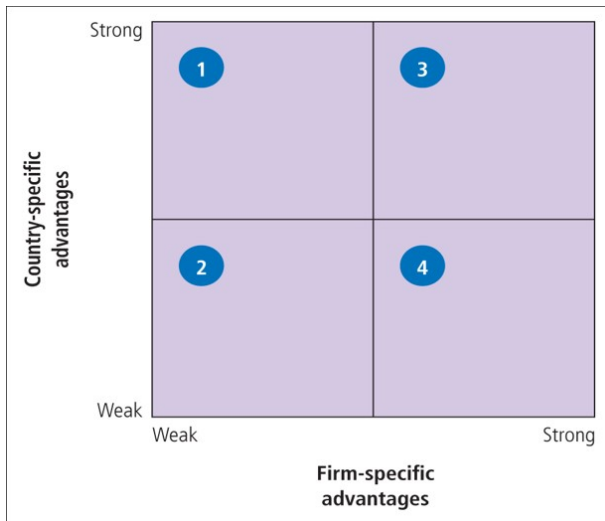
- Once goals have been established, the plan is then broken into major parts and each affiliate and department is assigned goals and responsibilities.

## Evaluation and control of operations

- Progress is periodically evaluated, and changes are made in the plan to accommodate changing circumstances and new information.

# The FSA–CSA matrix

# The FSA–CSA matrix



The quadrants in Figure imperfectly correspond to the three 'generic strategies' utilised in the strategy literature:

- cost leadership, differentiation and focus.
- These firms basically follow a differentiation strategy.
- In quadrant 4 the FSAs dominate, so in world markets the home-country CSAs are not essential in the long run.
- Thus, these firms are following low-cost and price competition strategies

# The competitive advantage matrix

- **Quadrant 1:** Resource-based and/or mature, globally oriented firms producing a commodity-type product ⇒ **cost leadership** (improving FSA can make them move to quadrant 3).
- **Quadrant 2:** Inefficient, floundering firms ⇒ no alternative but to exit or to restructure.
- **Quadrant 3:** Follow any of the generic strategies ⇒ both **cost leadership and differentiation**.
- **Quadrant 4:** Differentiated firms with strong FSAs in marketing and customization ⇒ **differentiation** (the CSA is not relevant).

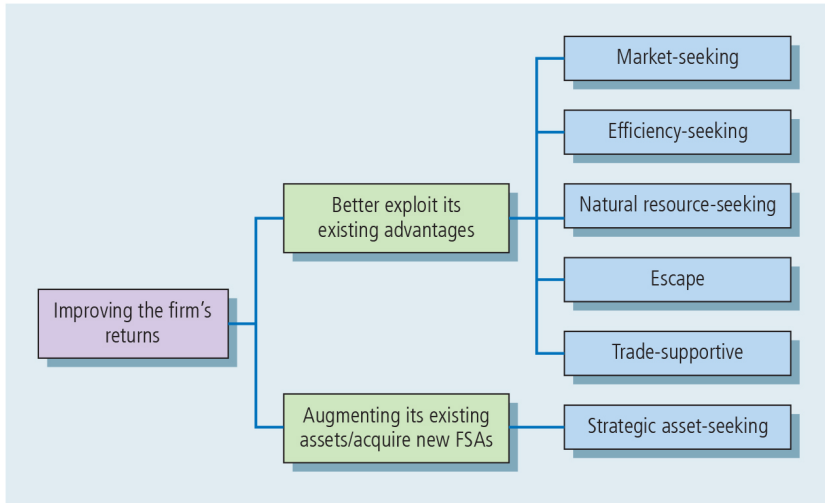
## Why firms become MNEs

# Internationalization motives: Why firms become MNEs

Types (adapted from Dunning, 1993)	Objectives/ Motives (inspired by and updated from Dunning, 1993)	The Cuervo-Cazurra et al. motives
Natural resource seeking	To acquire particular and specific resources of a higher quality at a lower real cost than could be obtained in their home country (e.g. Physical resources, un-skilled (or semi-skilled) labour, technological/managerial expertise, etc.)	"Buy better"
Market seeking	To supply goods or services to a particular country or region (from existing markets to new markets)	"Sell more"
Efficiency seeking	To rationalise the structure of established resource-based or market seeking investment in such a way that the investing firm can gain from the common governance of geographically dispersed activities (e.g. economies of scale and scope)	"Buy better" and "Sell more"
Strategic asset seeking	To promote long-term strategic objectives – especially that of sustaining or advancing global competitiveness (e.g. augmentation of global portfolio of physical assets and human competences, which they perceive will either sustain or strengthen their ownership-specific advantages or weaken those of competitors)	"Upgrade"
Escape investment	To escape restrictive legislation, institutional voids, or macro-organisational policies by home governments (e.g. round-tripping investment, escaping from high levels of taxation or austere environmental regulation, etc.)	"Escape"
Trade-supportive investment	To promote and facilitate the exports and imports of goods and services from the investing (or other) firm	"Buy better" and "Sell more"
Finance-supportive investment	To support and assist in the purchasing of foreign-produced goods and services from investing (or other) firm To establish domicile in specific location for regulatory and tax reasons	"Buy better" and "Sell more"
Management-supportive investment	To support the control and coordination function on behalf of MNE headquarters (e.g. regional office, branch offices)	"Upgrade"
Passive investment	To arbitrage by buying and selling firms or assets with some involvement of direct managerial inputs (e.g. private equity capital firm, asset stripping, etc.)	"Buy better" and "Sell more"

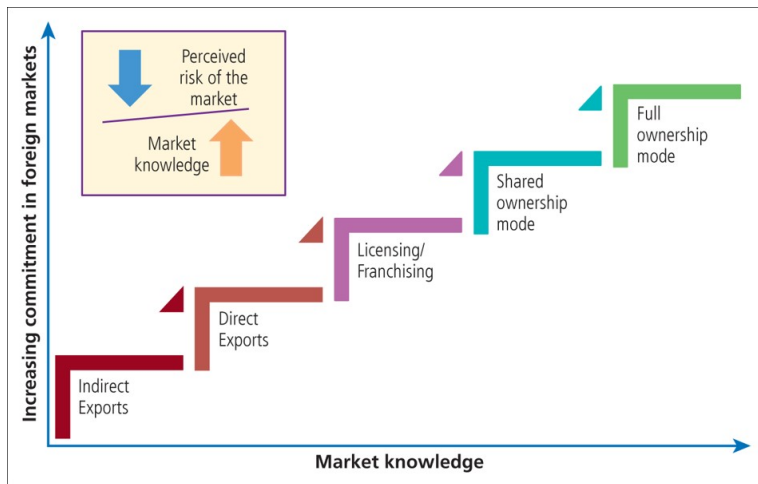
Source: A. Cuervo-Cazurra, and R. Narula, 'A set of motives to unite them all? Revisiting the principles and typology of internationalization motives', *Multinational Business Review*, vol. 23, no 1 (2015).

# The motives of internationalisation: a decision model



- Internationalization: **The process by which a company enters a foreign market.**
- Not all international business is done by MNEs. Indeed, setting up a wholly owned subsidiary is usually the last stage of doing business abroad.
- Why do businesses wait to set up wholly owned subsidiaries?
  - **Foreign markets are risky.**

# Entry into foreign markets: the internationalization process: The Uppsala model



Also Firms prefer to expand into countries that are “nearby” — but nearby means more than geographic distance. **The Uppsala model** helps us understand why firms internationalize gradually — they balance knowledge acquisition, risk reduction, and commitment. But real-world internationalization paths are shaped by many firm-specific, industry-specific, and host-country factors, so the process can vary widely.

# The internationalization process: The CAGE model (Distance matters)

	<i>Cultural Distance</i>	<i>Administrative Distance</i>	<i>Geographic Distance</i>	<i>Economic Distance</i>
<i>What creates distance?</i>	<ul style="list-style-type: none"> <li>• Language differences</li> <li>• Ethnicity differences and lack of social and local networks</li> <li>• Different religious backgrounds</li> <li>• Potential lack of trust</li> <li>• Differences in values, norms, and habits</li> </ul>	<ul style="list-style-type: none"> <li>• Potential lack of colonial ties</li> <li>• No existing regional trading block</li> <li>• No common currency</li> <li>• Political hostility and difficult past</li> </ul>	<ul style="list-style-type: none"> <li>• Physical distance (e.g. in miles/km)</li> <li>• No shared borders</li> <li>• Different time zones</li> <li>• Different climates</li> </ul>	<ul style="list-style-type: none"> <li>• Differences in monetary wealth</li> <li>• Differences in capital markets</li> <li>• Differences in GDP per capita and living costs</li> <li>• Differences in physical infrastructure</li> <li>• Differences in sourcing talent</li> </ul>
<i>What industries or products are affected by distance?</i>	<p><b>Cultural differences are especially important when:</b></p> <ul style="list-style-type: none"> <li>• products heavily rely on linguistics (e.g. TV, Netflix)</li> <li>• products are subject to consumers' cultural or national identity (e.g. food)</li> <li>• product characteristics vary in terms of size and packaging</li> <li>• products are defined by country-specific quality associations (e.g. wine)</li> </ul>	<p><b>Government involvement affects industries characterised by:</b></p> <ul style="list-style-type: none"> <li>• sellers of staple goods (e.g. electricity)</li> <li>• producers of pharmaceuticals</li> <li>• important (i.e. large) employers</li> <li>• national champions (e.g. airlines)</li> <li>• importance to national security (e.g. telecommunications, military)</li> <li>• high sunk costs (e.g. infrastructure)</li> </ul>	<p><b>Geography is highly important when:</b></p> <ul style="list-style-type: none"> <li>• products are sold in bulk at a low unit cost (e.g. cement)</li> <li>• products are fragile or perishable (e.g. glass or meat)</li> <li>• communication and interaction are highly relevant (e.g. professional services)</li> <li>• there is a need for local supervision and operational complexity is high</li> </ul>	<p><b>Economic differences matter the most when:</b></p> <ul style="list-style-type: none"> <li>• income levels impact levels of demand (e.g. cars)</li> <li>• economies of standardization or scale are limited (e.g. cement)</li> <li>• labour costs differ substantially (e.g. fashion)</li> <li>• distribution and business systems vary (e.g. insurance)</li> </ul>

Taken from Collinson book (adapted from Ghemawat (2001, 2017)).

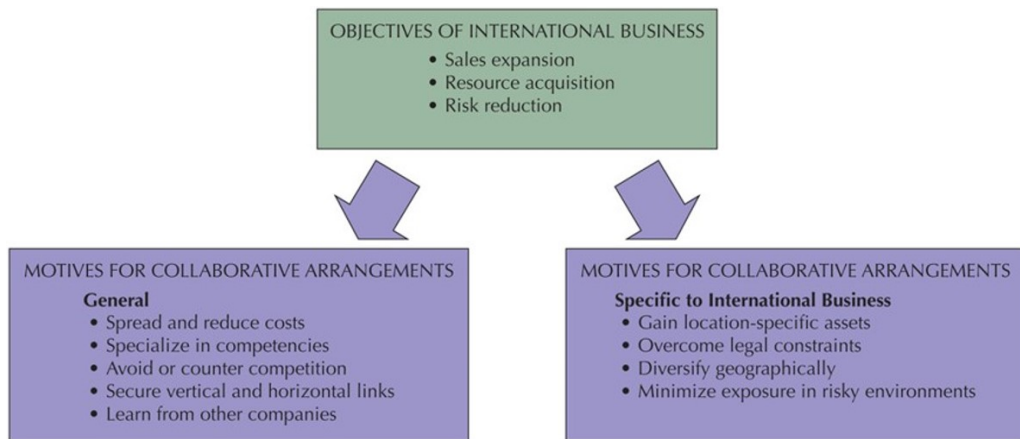
# Entry modes

## Advantages to locate production in another country

- When it's cheaper to produce abroad
- When transportation costs are too much
- When domestic capacity isn't enough
- When products and services need altering
- When trade restrictions hinder imports
- When country of origin becomes an issue

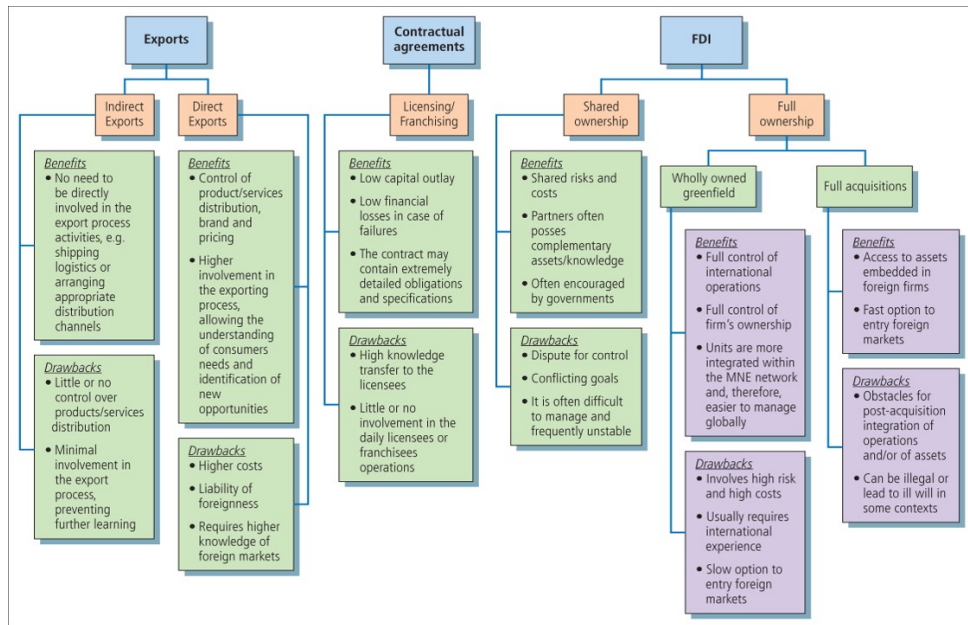
- When the firm decides to enter a new market, the first step is to decide whether it will opt for **non-equity or equity entry modes**.
- At the first stage, it **may want to avoid the risks of high commitment to unknown** (foreign) markets by arranging non-equity modes, such as exports, contractual agreements, licensing or franchising agreements.
- The firm may later move to equity modes (FDI), such as partial or full acquisition, which involve higher commitment to the foreign markets and often require higher knowledge or experience.

# Why Companies Collaborate



Daniels et al (2021): Collaborative Arrangements and International Objectives

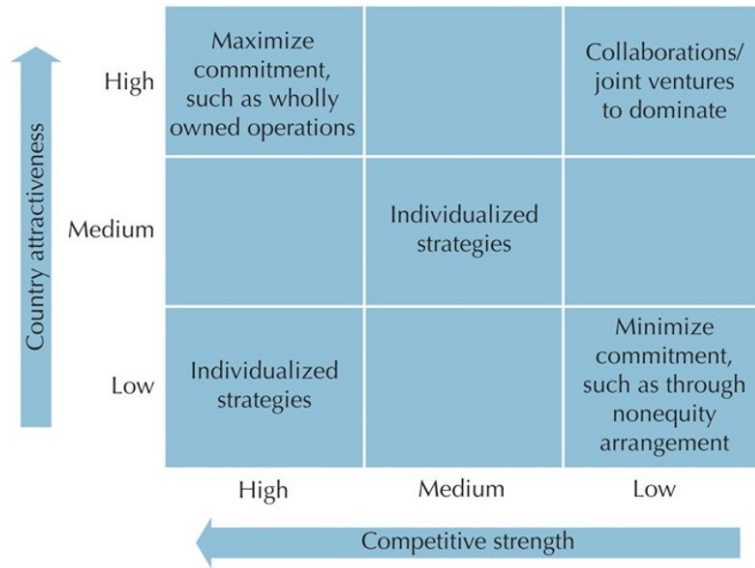
# Equity Entry Modes: benefits and drawbacks



# A typical internationalization process

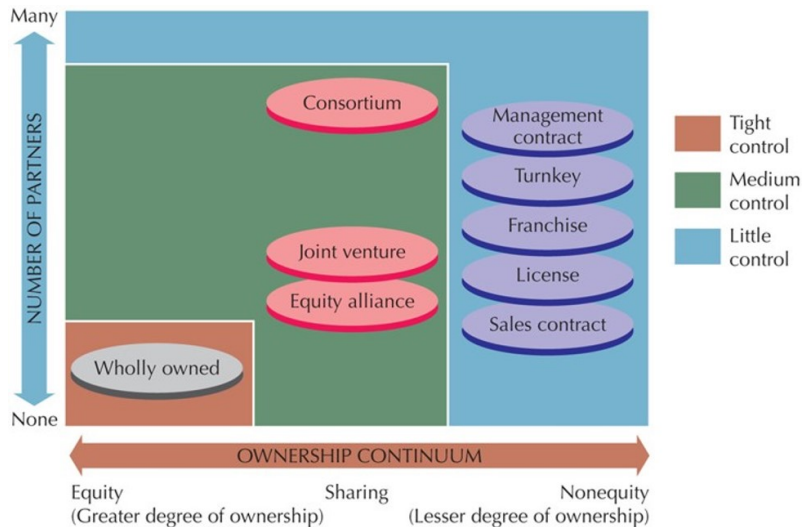
- Initially, the firm might license patents, trademarks or technology to a foreign company in exchange for a fee or royalty.
- The firm sees a potential for extra sales by exporting and uses a local agent or distributor to enter a foreign market.
- The firm **may use exporting** as a “vent” for its surplus production and might have no long-term commitment to the international market.
- As exports become more important, the MNE **will set up an office for its sales representative or a sales subsidiary**.
- The firm might set up local packaging and/or assembly operations.
- Finally, the firm will set up **a wholly owned subsidiary (FDI)**.

# Country Attractiveness/Company Strength Matrix



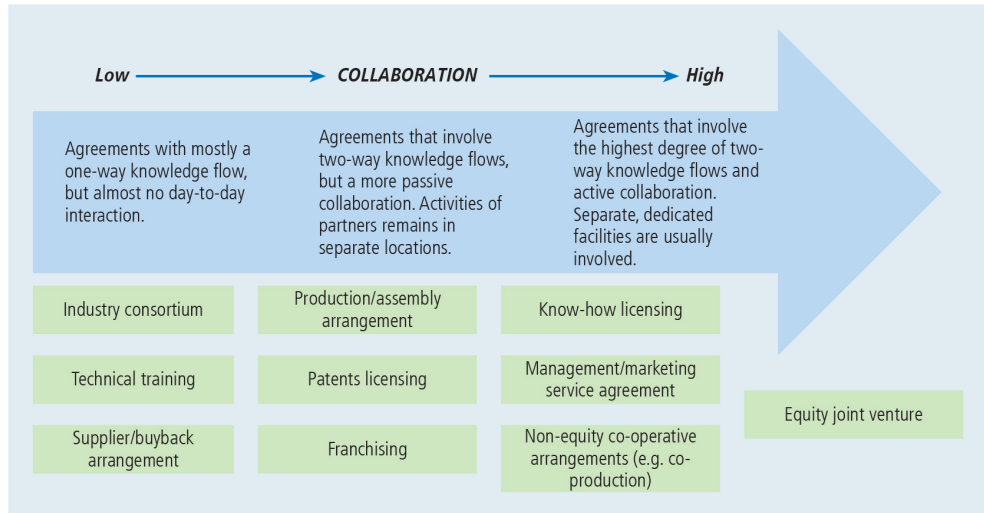
Daniels et al (2021)

# Types of Arrangements: Collaborative Strategy and Complexity of Control

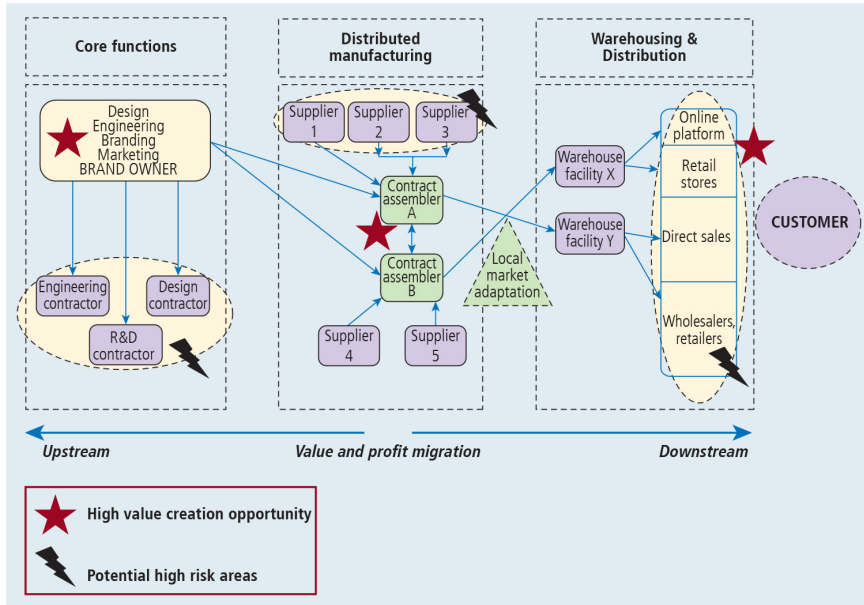


Daniels et al (2021)

# Organisational modes of cooperative agreements



# Global value chains: combining multiple entry modes



# 'Born global' firms

- An increasingly common term in the academic literature is the **'born global' firm**.
- Born global firms are also referred to as international new ventures (INVs) in the international entrepreneurship literature.
- **Born global firms** are immediately or very quickly reliant on a foreign presence to derive significant competitive advantage from the use of resources and the sale of outputs.
- **Leveraging particular firm-specific advantages (FSAs)**, such as new technologies, unique products or services, or a valuable capability derived from one or more locations, born global firms serve customers locally or globally.
- The very existence of born global firms **can be due to their position as international entrepreneurial 'brokers,' exploiting commercial opportunities that arise from bridging resource inputs and market niches in different global locations.**

## Home Country: Promoting Outgoing FDI

- Increase Long-Term Competitiveness
- **“Sunset” Industries:** Are those that use outdated and obsolete technologies or those that employ low-wage workers with few skills.



## Host Countries

### Promotion

- Financial incentives
  - Low or waived taxes
  - Low-interest loans
- Infrastructure improvements
  - Better seaports, roads, and telecom networks
- Insurance on assets abroad
- Loans and loan guarantees
- Special tax treaties
- Tax breaks on profits earned abroad
- Persuade other nations to accept FDI

### Restriction

- Ownership restrictions
  - Prohibit investment
- Performance demands
  - Local content requirements
  - Export targets
  - Technology transfer
- Higher taxes on foreign income
- Sanctions that prohibit investing in certain nations

# The international activities of SMEs

- **Small number of SMEs sell products and services outside their domestic market.**
- **Considering foreign direct investment (FDI)**, again SMEs are less prominent than large multinational firms as sources of FDI.
- **SMEs face limitations.**

# Types of international SMEs by trade and FDI up and down the value chain

Different types of international SMEs	(1) International <i>inputs</i> : Foreign sourcing of materials or expertise ...		(2) International <i>outputs</i> : Foreign sales of products or services ...	
Internalization; foreign ownership?  For example?	(1a) Yes. Input-oriented FDI  Foreign greenfield production facilities, procurement offices, R&D JVs	(1b) No. Sourcing via markets  <i>Imports</i> from foreign suppliers, outsourcing contractors or online service providers	(2a) Yes. Output-oriented FDI  Part or fully-owned foreign distribution, retail outlets, aftersales service providers	(2b) No. Selling via markets  <i>Exports</i> direct to foreign customers or via distributors, or online service delivery

# The international activities of SMEs (Continued): SMEs' Internationalization Strategies

## Direct entry modes to foreign markets

- Direct exports
- Licensing/franchising
- Strategic alliances/partnerships
- FDI (greenfield wholly owned subsidiaries, M&As, joint ventures)

## Indirect modes – staying in domestic markets

- Indirect exports (via domestic intermediaries)
- Supplier to foreign firms
- Acquiring licenses/franchise from foreign firms
- Partners of foreign firms

- 1 **What are Starbucks' firm-specific advantages?**
- 2 **Why is Starbucks focusing its international expansion on emerging countries, such as India?**
- 3 **Can you find any examples of Starbucks facing inter-regional liability of foreignness?**
- 4 **What are the advantages of Starbucks using licensing and joint ventures when expanding abroad?**

# Case Study: Starbucks – Key Answers

- **Firm-specific advantages (FSAs):** Starbucks' globally recognised brand is its core asset, complemented by its CSR reputation, expertise in identifying high-traffic locations, and economies of scale from global supply chains and supplier bargaining power.
- **Focus on emerging countries:** India and China offer large populations, growing middle classes, and increasing disposable income, making them ideal targets as mature markets saturate. These countries also present opportunities to shape and introduce 'affordable luxury' coffee culture.
- **Inter-regional liability of foreignness:** Example: Australia, where Starbucks underestimated cultural preferences for boutique cafés and stronger coffee. Aggressive expansion diluted the brand's exclusivity and highlighted a failure to adapt to local consumer expectations.
- **Advantages of licensing/joint ventures:** Licensing and joint ventures allow Starbucks to leverage local partners' market knowledge and networks (e.g., Tata in India), mitigate entry risks, secure prime retail locations, and adapt to regulatory environments while sharing investment and operational burdens.

## **Multinational enterprises, innovation and competitiveness**

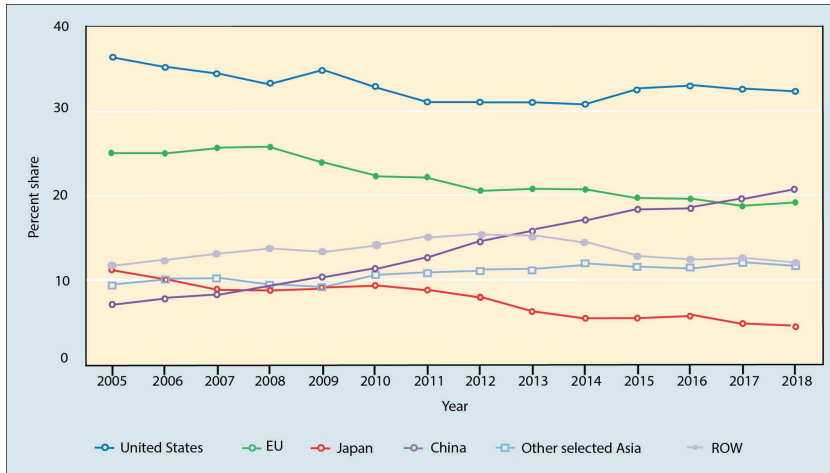
## Trends in innovation at the firm and country level

Innovation is what enables firms to maintain their competitiveness, survive and grow. It also goes hand-in-hand with internationalisation. Firm-specific advantages (FSAs), such as technology, brands or capabilities that can be used to compete effectively in other country markets, have to be adapted and developed to apply in different country contexts. Successful international expansion requires effective innovation.

# Trends in innovation at the firm and country level

- Developed countries still dominate the production of knowledge- and **technology-intensive (KTI) industries.**
- The KTI share of the world's developed economies grew from **29 percent to 32 percent between 1997 and 2012.**
- <https://www.wipo.int/edocs/pubdocs/en/wipo-pub-2000-2023-en-main-report-global-innovation-index-2023-16th-pdf> page 18-19

# Output of high-tech manufacturing industries for selected regions, countries or economies, 2005–18

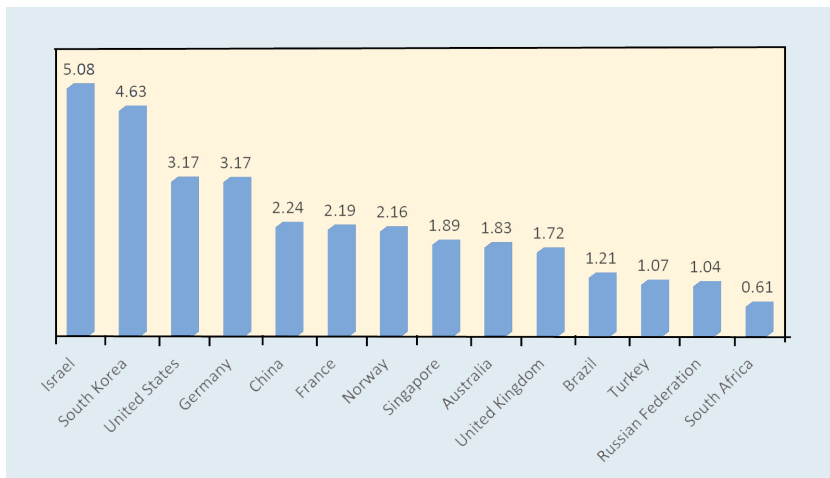


High-tech manufacturing industries include industries that rely heavily on research and development (RD) and technological innovation. Examples include: Aircraft, production Computers, electronics, and optical products, Pharmaceuticals, Scientific RD services, Software publishing. These industries are often classified as "knowledge- and technology-intensive" (KTI) because they require skilled labor, sophisticated RD capabilities, and advanced manufacturing processes.

## Trends in innovation at the firm and country level (Continued)

- In terms of R&D expenditures are also dominated by the Triad and **more recently China**.
- Notably, the top eight RD-performing countries (the United States, China, Japan, Germany, South Korea, France, India and the United Kingdom).
- In terms of R&D intensity, which is normally measured at a country level by considering gross expenditures on R&D (GERD) as a share of GDP.
- Israel is one of the world's leaders (Figure 3.2). In 2019, Israel spent USD20.7 billion, that is, 5.08 per cent of its GDP.
- Other countries that significantly spend in R&D are South Korea, the USA, Germany and China.
- The USA leads the overall R&D expenditure in absolute terms, spending USD667 billion in 2019. Meanwhile, China spent USD338 billion and South Korea spent USD69.7 billion.

## GERD (Gross Expenditure on Research and Development (GERD) ) as a percentage of GDP by selected countries, 2019



RD intensity is an input indicator for innovation capability. High RD intensity generally correlates with stronger innovation ecosystems, greater technological sophistication, and higher productivity growth. However, absolute RD expenditure also matters. For example, although China's RD intensity is lower than Israel's or Korea's, its total RD spending is much larger due to the scale of its economy. Source: Collinson et al (2024)'s creation based on data from the UNESCO Institute for Statistics (UIS). See <http://data.uis.unesco.org/?queryid=74>

# USPTO patents granted, by location of inventor, 2006–2020

Years	United States	Japan	EU	Other developed	Developing
2006	102267	39411	26742	23900	1422
2007	93690	35941	25030	23890	1491
2008	92001	36679	25378	26156	1611
2009	95038	38066	25785	27562	1722
2010	121178	46977	33406	35183	2423
2011	121257	48256	33384	36708	2635
2012	134194	52773	38605	40707	3273
2013	147666	54170	43165	44902	4339
2014	158713	56005	46933	48982	5135
2015	155982	54422	46883	51702	5651
2016	160540	51938	49122	51514	20471
2017	169208	51952	51992	53647	24605
2018	161809	49702	50553	51168	26761
2019	186118	55927	57531	56243	35284
2020	183147	53779	47309	65149	39477

United States consistently in the lead, followed by Japan and the European Union. Over the 2006–2020 period, the US has maintained a steady increase in patent grants, reaching a peak of around 186,000 in 2019 before slightly declining in 2020. In contrast, Japan's patent numbers were fairly stable but showed a slight decrease towards the end of the period. The EU and other developed countries have shown gradual increases but still trail behind the US and Japan. The developing world, though starting from very low levels, shows significant growth in patenting activity, increasing from around 1,400 patents in 2006 to nearly 40,000 in 2020.

## Selected list of major developing economies in US patenting, 2010–2020

Country	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Newly developed countries</b>											
South Korea	12,508	13,239	14,168	15,745	18,161	20,201	22,047	22,823	21,817	23,615	23,705
Taiwan	9,636	9,907	11,624	12,118	12,255	12,575	12,463	12,558	11,742	12,460	13,105
Singapore	633	696	841	857	1,010	1,048	1,040	1,037	1,064	1,199	1,112
<b>Developing countries</b>											
China	3,301	3,786	5,335	6,597	7,921	9,004	11,737	14,853	16,759	22,962	26,845
India	1,137	1,259	1,734	2,474	3,044	3,415	3,715	4,262	4,329	5,488	5,984
Brazil	219	254	256	286	362	381	384	418	425	464	539
Mexico	115	117	153	204	222	203	273	343	376	434	384
Turkey	45	52	55	83	103	136	147	204	188	261	224
South Africa	142	144	158	181	181	199	215	219	173	224	195

China stands out, with patent registrations rising more than eightfold from about 3,300 in 2010 to over 26,800 in 2020, particularly accelerating in the last five years of the period. South Korea and Taiwan, often considered “newly developed countries,” maintain patenting volumes comparable to advanced economies like Germany or the UK, though their growth has been less dramatic than China’s. India, Brazil, Mexico, Turkey, and South Africa also show growth, but their absolute patenting numbers remain relatively low. These data points illustrate how developing countries, especially China, are increasingly contributing to global innovation, as measured by USPTO patenting.

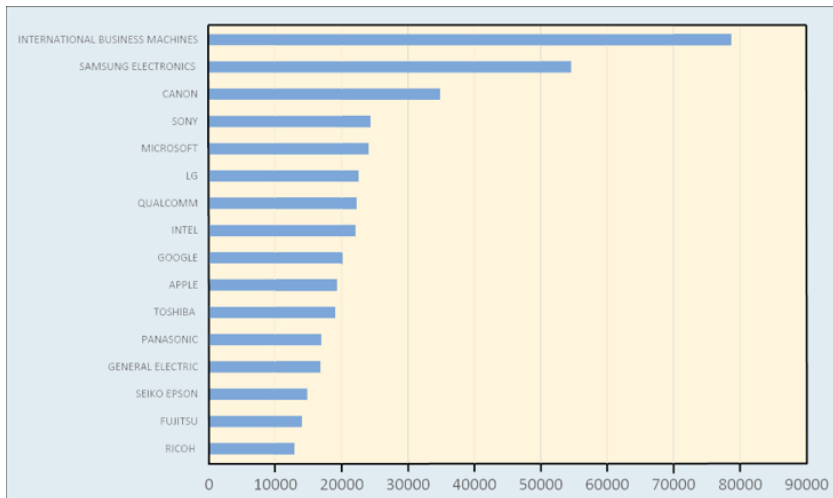
Collinson et al (2024)’s creation based on data from the UNESCO Institute for Statistics (UIS). See <http://data.uis.unesco.org>.

## R&D Personnel per million people for selected countries, 2020

South Korea	8,714
Sweden	7,930
Denmark	7,692
Finland	7,527
Norway	6,699
Netherlands	5,912
Austria	5,751
Belgium	5,750
Japan	5,455
Germany	5,393

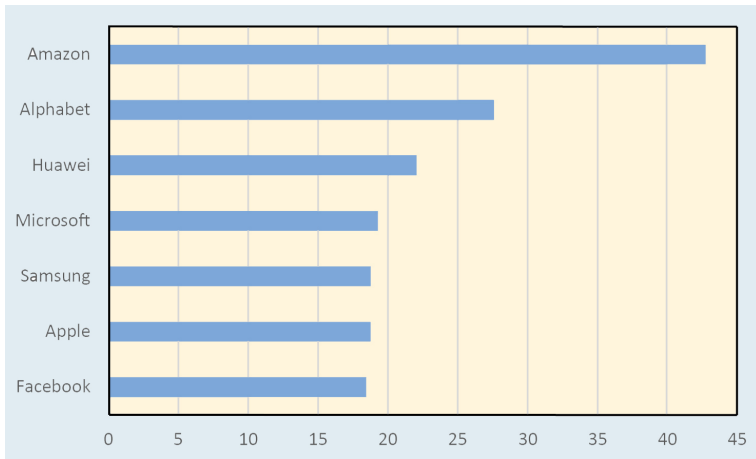
Finally, the third table provides an additional perspective on innovation capacity: RD personnel density, measured as the number of research and development personnel per million people in 2020: South Korea leads with 8,714 RD personnel per million, reflecting the country's deep commitment to innovation infrastructure. Collinson et al (2024)'s creation based on data from the UNESCO Institute for Statistics (UIS). See <http://data.uis.unesco.org>

# Top US patent recipients, 2010-2020



This chart shows that in 2020 alone, IBM led all firms in the number of patents granted by the US Patent and Trademark Office (USPTO), followed by Samsung, Canon, Microsoft, and Intel. IBM's leadership reflects its long-standing commitment to formal RD and patenting. The heavy presence of firms like Samsung, LG, and Canon highlights the innovation strength of South Korean and Japanese firms, many of whom consistently rank among the top patent holders globally. Source: Collinson et al (2024)'s creation using data from the USPTO (available until 2020)

# Top spenders on R&D in USD billions, 2017



This figure shows that Amazon and Alphabet (Google's parent company) were the world's top spenders on RD in 2017, with Amazon leading at nearly USD40 billion. Huawei's high ranking highlights China's strategic investment in technological innovation, while US firms like Microsoft, Apple, and Facebook also make significant contributions. Samsung is notable for being the only major South Korean firm on this list, reflecting its substantial commitment to RD as a core part of its global strategy. Source: Collinson et al (2024)'s based on data from Nasdaq (21 June 2021). Ranking of the companies with the highest spending on and worldwide in 2020 (in billion US dollars). For more information, see <https://www.nasdaq.com/articles/which-companies-spend-the-most-in-research-and-development-rd-2021-06-21>

- What do these figures tell us? What are the requirements for being an 'innovative' country?

# The resource-based view (RBV)

# The resource-based view (RBV)

- **RBV argues that the idiosyncratic, immobile strategic resources owned or controlled by a firm are its source of competitive advantage.**
  - **Resources** are what **a firm draws upon to create value**. They may be considered as the 'raw material' upon which capabilities are built.
  - **Capabilities** are the **firm's ability to create, modify, reconfigure and leverage resources**. Essentially, it is the bundling of the resources that builds capabilities.
  - **Resources are not necessarily firm-specific, while capabilities are firm-specific and are the basis of FSAs.**

# Firm-specific resources and capabilities

Resources	
Tangible resources	Financial assets: cash, stocks, loans Physical assets: land, buildings, equipment, natural resources Human capital: knowledge, skills, managerial know-how
Intangible resources	Intellectual property: R&D knowledge, patents, copyrights, trademarks Reputation: brand, corporate goodwill, formal and informal networks and relationships Customer/supplier portfolio: exclusive contracts Organisational culture: values, norms, tradition
Capabilities	
R&D and innovation capabilities	R&D skills in new product and service development Innovative organisational skills
Operational capabilities	Process efficiency: Six Sigma, just in time, lean manufacturing
Marketing capabilities	Market knowledge and responsiveness Product development Communication
Sales and distribution capabilities	Sales skills and knowledge Innovative sales channels Efficient distribution model
Corporate management capabilities	Strategy development and implementation structure Leadership Risk management
Dynamic capabilities	Organisational ability to respond and adjust to internal and external shifts

**Dynamic capability** refers to the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments.

Firms need three main types of dynamic capabilities in order to respond to changes or new challenges:

- **quick learning;**
- **the effective integration of new assets/processes;**
- **the ability to modify or transform existing assets/processes.**

## The VRIO framework

Innovation is what enables firms to maintain their competitiveness, survive and grow. It also goes hand-in-hand with internationalisation. Firm-specific advantages (FSAs), such as technology, brands or capabilities that can be used to compete effectively in other country markets, have to be adapted and developed to apply in different country contexts. Successful international expansion requires effective innovation.

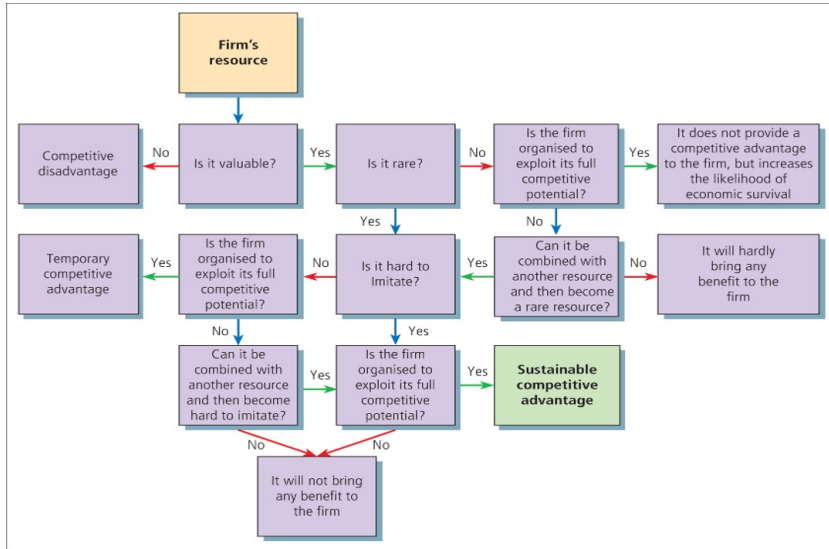
# The VRIO framework

The VRIO framework is a theoretical model based on the resource-based view (RBV) that helps to understand the sources of sustainable competitive advantages. A resource must pass all four VRIO conditions (Valuable, Rare, Inimitable, Organized) to provide a **Sustainable Competitive Advantage**.

- Do a firm's resources and capabilities add value by enabling it to exploit opportunities and/or neutralize threats? (**Valuable**)
- How many competing firms already possess these valuable resources and capabilities? (**Rare**)
- Do firms without a resource or capability face a cost disadvantage in obtaining it compared to firms that already possess it? (**Imperfectly Imitable**)
- Is a firm organized to exploit the full competitive potential of its resources and capabilities? (**Properly organized**)

VRIO framework as a step-by-step flowchart that helps firms evaluate whether a particular resource or capability can deliver a sustainable competitive advantage (SCA).

# The VRIO framework: a decision-making process



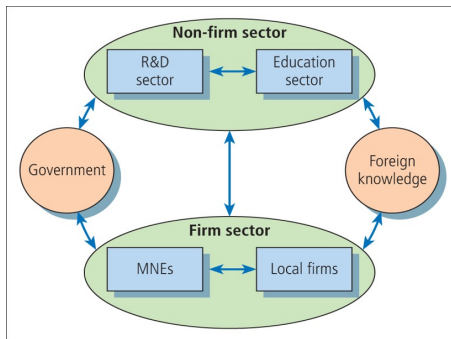
Sources: Adapted from J. Barney, "Firm resources and sustained competitive advantage," *Journal of Management*, vol. 17 (1991); J. B. Barney, "Looking inside for competitive advantage," *Academy of Management Executive*, vol. 9, no. 4 (1995).

## The location of innovation activities in the MNE

- MNEs are by definition located in many different locations, and this **FSA–CSA interaction needs to be appreciated and understood in each location.**

# The conventional model of an innovation system

Systems of innovation (SI) stress the “importance of ‘systemic’ interactions between the various components of inventions, research, technical change, learning and innovation.” **One of the key advantages of being an MNE is the ability to take advantage of different opportunities within its portfolio of locations.**

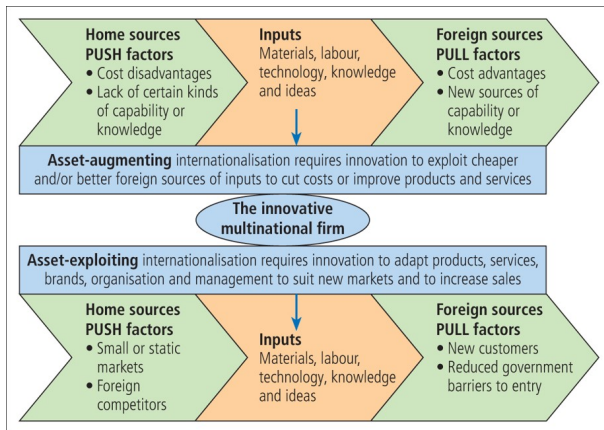


This model highlights that innovation is not an isolated process within firms — instead, it’s fundamentally systemic and depends on interactions among a variety of actors. Finally, it’s important to point out that the effectiveness of this whole system depends heavily on the quality of both formal institutions (like intellectual property laws and education policy) and informal institutions (like networks, trust, and norms).

# International dimensions of innovation

MNEs manage business operations across a range of country contexts, each of which represents a different set of opportunities for innovation.

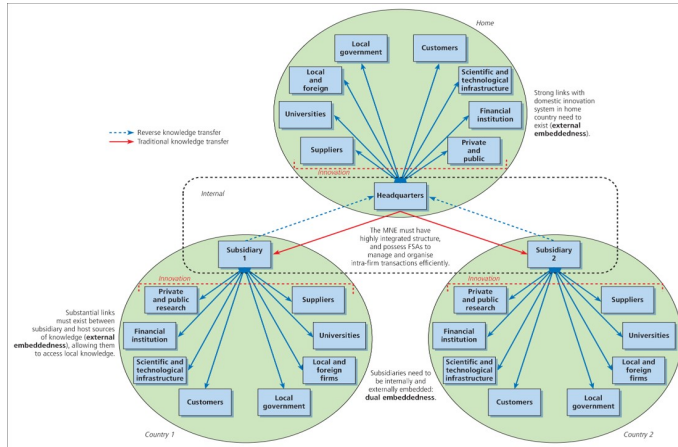
**Asset-augmenting** internationalisation. This is when firms innovate to take advantage of cheaper or better foreign sources of inputs, such as labour, technology or ideas, which helps them improve products or services and reduce costs. **Asset-exploiting** internationalisation is about adapting the firm's existing products, services, brands, or management practices to new markets.



**Home sources push factors** — these are reasons why firms are motivated to look abroad for innovation. For example, cost disadvantages at home or the lack of certain capabilities and knowledge can push firms to internationalise their innovation processes. **Foreign sources pull factors** — these attract firms to foreign locations because of cost advantages or access to new capabilities, technologies, or expertise that are unavailable or less developed at home

# International dimensions of innovation (Continued)

1. Successful MNEs achieve **dual embeddedness**: they are deeply integrated not only into their home country's innovation ecosystem but also into the innovation systems of their host countries. 2. **External embeddedness** at home even global firms rely heavily on the strength of their domestic innovation systems. The subsidiaries have their own relationships with local actors — research institutions, suppliers, universities, customers, government, and so on. This allows them to tap into local knowledge and capabilities, critical for innovation that is tailored to those markets.



The red arrows show traditional knowledge transfer — the flow of technologies, practices, and expertise from HQ to the subsidiaries. The blue dashed arrows represent reverse knowledge transfer — innovations developed in subsidiaries that are transferred back to HQ, enriching the entire corporation. MNE headquarters linked through its affiliates in other countries to the innovation systems of other countries.