

CHAPTER I

# GLOBAL INVESTMENT TRENDS AND PROSPECTS



# A. INVESTMENT TRENDS

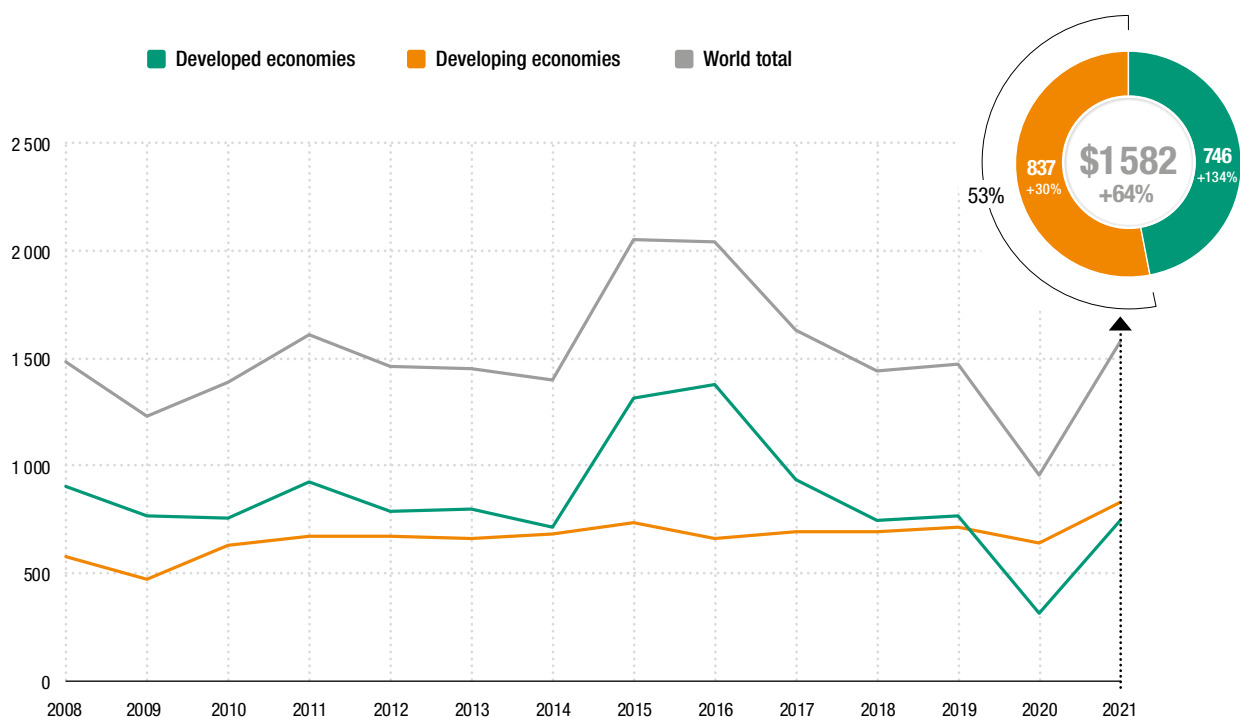
## 1. Global trends

Global foreign direct investment (FDI) flows in 2021 were \$1.58 trillion, up 64 per cent from the level during the first year of the COVID-19 pandemic of less than \$1 trillion (figure I.1). FDI flows appeared to have significant momentum mainly because of booming merger and acquisition (M&A) markets and rapid growth in international project finance as a result of loose financing conditions and major infrastructure stimulus packages.

However, the global environment for international business and cross-border investment changed dramatically in 2022 with the onset of the war in Ukraine, which occurred while the world was still reeling from the impact of the pandemic. The war is having effects well beyond its immediate vicinity, causing a triple food, fuel and finance crisis, with rising prices for energy and basic commodities driving inflation and worsening debt spirals (box I.1). Investor uncertainty and risk aversity could put significant downward pressure on global FDI in 2022.

The war, with its direct implications for investment in and from the Russian Federation and Ukraine, and its ripple effects through sanctions, supply shortages in energy and basic commodities, and broader macroeconomic impact, is not the only factor cooling FDI prospects for 2022. The flare-up of COVID-19 in China, which is resulting in renewed lockdowns in some areas that play a major role in global value chains (GVCs), could further depress new greenfield investment in GVC-intensive industries.

**Figure I.1. FDI inflows, global and by economic grouping, 2008–2021** (Billions of dollars and per cent)



Source: UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>).

**Box I.1.**
**The impact of the war in Ukraine on global FDI flows**

The war in Ukraine will have far-reaching consequences for international investment in economic development and the Sustainable Development Goals (SDGs) in all countries. It comes as a fragile world economy was just beginning an uneven recovery from the effects of the pandemic. Global FDI in 2022 and beyond will be affected by the security and humanitarian crises, by macroeconomic shocks set off by the conflict, by energy and food price hikes, and by increased investor uncertainty.

The direct effects of the war on investment flows to and from the Russian Federation and Ukraine include the halting of existing investment projects and the cancellation of announced projects, an exodus of MNEs from the Russian Federation, widespread loss of asset values and sanctions virtually precluding outflows.

The value at risk is significant. MNEs from developed economies that support the sanctions account for more than two thirds of FDI stock in the Russian Federation (with a significant part of the rest accounted for by offshore financial centres (OFCs)). In contrast, to date, MNEs from China and India account for a negligible share of FDI stock in the Russian Federation (less than 1 per cent), although their share in ongoing projects is larger. Box table I.1.1 shows the top 10 non-financial MNEs ranked by assets held in the Russian Federation. Energy sector MNEs hold the largest share. In Ukraine, similarly, a number of MNEs hold significant assets, mostly in steel, information and communication technology (ICT), pharmaceuticals and agricultural commodities. Arcelor Mittal (Luxembourg) is the largest investor, with assets of \$6.5 billion.

**Box table I.1.1. Top 10 non-financial MNEs by assets held in the Russian Federation, 2021**  
(Billions of dollars)

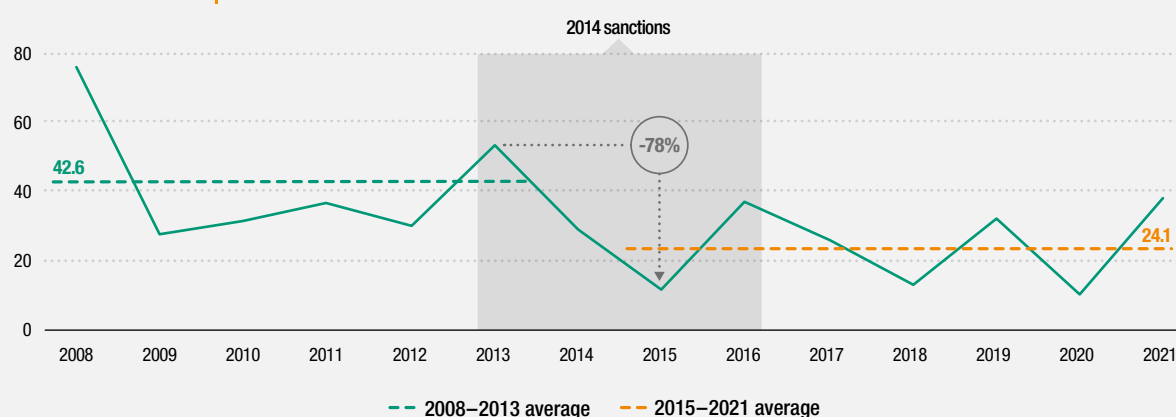
Company	Home country	Industry	Estimated assets <sup>a</sup>
Fortum	Finland	Utilities	32.6
Renault	France	Automotives	15.9
BP	United Kingdom	Oil and gas	14.4
TotalEnergies	France	Oil and gas	13.7
Exxon Mobil	United States	Oil and gas	7.5
Shell	United Kingdom	Oil and gas	5.7
PepsiCo	United States	Food and Beverages	5.6
Carlsberg	Denmark	Food and Beverages	3.7
Japan Tobacco	Japan	Tobacco	3.9
Siemens	Germany	Machinery	2.6

Source: UNCTAD, based on data from Refinitiv SA.

<sup>a</sup> Because companies rarely report country-by-country segment figures, assets are estimated in many cases using subsidiary data.

The wider effects on global investment flows are mostly indirect and difficult to anticipate. Apart from its importance as a natural resource exporter, the Russian Federation plays a relatively minor role in international investment and global value chains (GVCs). Moreover, both its inward and outward investments had already declined significantly after the international sanctions imposed in 2014. Inward FDI fell by more than three quarters immediately following those sanctions and remained 43 per cent lower than the pre-sanctions average in the subsequent years (box figure I.1.1). It can be expected that only a few economies – mainly in Eastern Europe and Central Asia – will be significantly affected now as a result of Russian links with their FDI profile.

**Box figure I.1.1. FDI inflows to the Russian Federation, 2008–2021**  
(Billions of dollars)



Source: UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>).

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**Box I.1.**

**The impact of the war in Ukraine on global FDI flows** (Concluded)

The indirect effects on investment flows to developing countries will mostly depend on the extent of their exposure to the triple “food, fuel and finance” crises caused by the conflict and their consequent economic and political instability – key determinants of international private investment.

An early indication of investment prospects for individual sectors and industries can be found in the profit expectations of MNEs. Since the start of the war, the majority of the top 5,000 MNEs have revised earnings forecasts for 2022. Due to high commodity prices, extractive industries (mining, oil and gas) have revised their forecasts upward. Industries that require commodities as production inputs (such as manufacturing and construction) or that depend on fuel (such as airlines) have revised their earnings forecasts downwards. Geographically, companies in Eastern Europe and North Africa appear to face relatively more downward pressure on earnings.

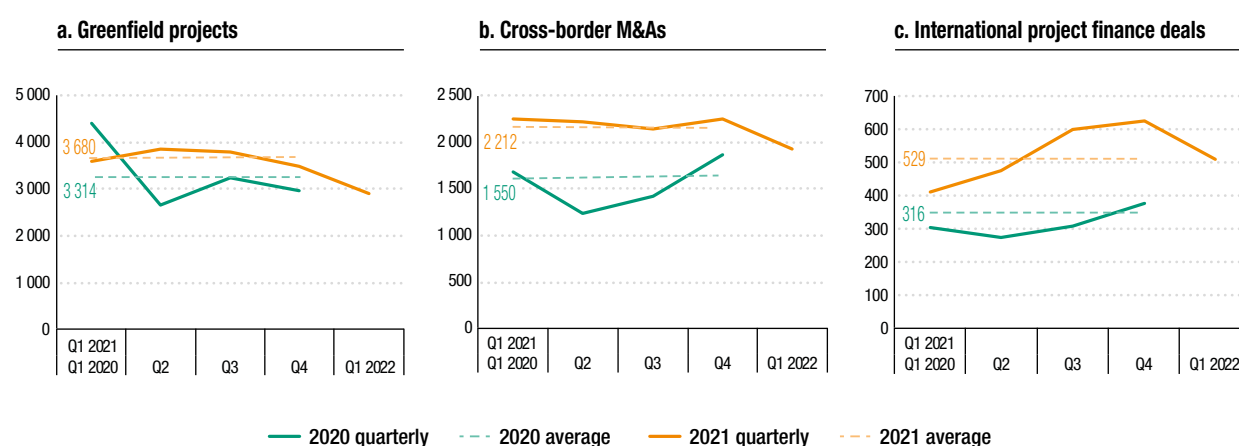
Source: UNCTAD.

Furthermore, the expected interest rate rises in the United States, Europe and other major economies that are seeing significant rises in inflation could slow down M&A markets later in the year and dampen the growth of international project finance. Negative financial market sentiment and signs of a looming recession could accelerate an FDI downturn.

There are also factors that point towards making FDI relatively resilient to drastic decline at times of global economic downturn. The part of FDI that is most closely correlated with financial markets has not yet lost its strength. Cross-border M&As and international project finance in infrastructure sectors may provide a floor to global FDI in 2022. Greenfield investment in industry, which saw only a partial recovery in 2021 and remains weak in many sectors, is likely to suffer more.

Early indicators reveal a worrisome FDI outlook: FDI project activity in the first months of 2022 shows investors’ uncertainty and risk aversity. According to preliminary data, the number of greenfield project announcements in the first quarter of 2022 was 21 per cent below the quarterly average in 2021. Cross-border M&A activity was 13 per cent below the 2021 average and international project finance deals were down 4 per cent (figure I.2). However, in terms of value, cross-border M&As were up 59 per cent from last year. The value of announced international project finance deals was 37 per cent below the record levels of 2021 but remains at a very high level compared with the pre-pandemic period.

**Figure I.2. Announced greenfield projects, cross-border M&As and international project finance deals, Q1 2020–Q1 2022** (Number and per cent)



Source: UNCTAD, cross-border M&A database (<https://unctad.org/fdistatistics>) for M&As, information from the Financial Times Ltd, fDi Markets ([www.fdimarkets.com](http://www.fdimarkets.com)) for announced greenfield FDI projects and Refinitiv SA for international project finance deals.

Overall, UNCTAD foresees that the growth momentum of 2021 cannot be sustained and that global FDI flows in 2022 will likely move on a downward trajectory, at best remaining flat. This projection takes into account the various downward pressures and potential stabilizing factors and considers the composition of the 2021 value of \$1.6 trillion, which for some recipient regions (especially Europe) does not represent historically high levels and could therefore cushion the decline. However, even if flows should remain relatively stable in value terms, new project activity is likely to suffer more from investor uncertainty.

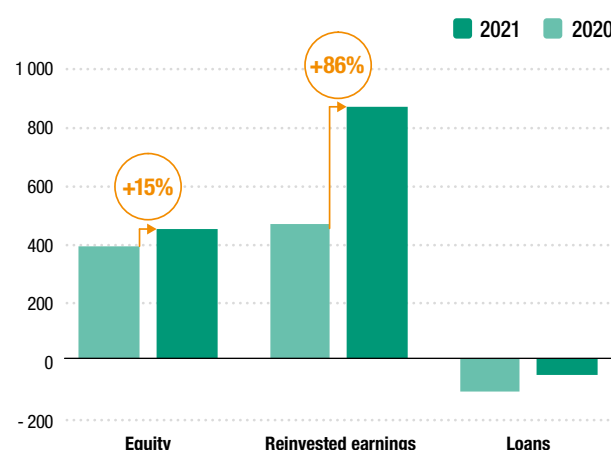
Looking at the global FDI trend over the course of the pandemic to date, a clear contrast emerges with other economic variables (table I.1). In 2020, FDI was much more severely affected than global trade and GDP, which had already started their recovery in the second half of the year. In 2021, FDI accelerated faster than other variables.

The large swings in FDI observed between the first and second year of the pandemic, especially in developed countries, were mainly caused by the substantial financial flow component of FDI and by transactions that are closely linked to the performance of financial markets. The booming M&A market and retained earnings of MNEs explain much of the rapid rebound of growth in 2021. The corollary is visible in much weaker growth of greenfield investments in industry and in the low share of new equity in FDI flows.

The reinvested earnings component of FDI – profits retained in foreign affiliates by multinational enterprises (MNEs) – accounted for the bulk of FDI growth in 2021. In the United States, reinvested earnings reached \$200 billion – the highest level ever recorded. Other developed countries, including Switzerland, the Netherlands, Canada, Australia and Belgium, in that order, also saw large jumps in their reinvested earnings. Global equity investment grew more moderately, reflecting the more limited growth of new project investments and the shift towards international project finance, which often includes a much smaller equity component and greater reliance on debt financing. Intracompany loans remained negative in many countries (figure I.3).

The importance of retained earnings in 2021 FDI flows reflects the record rise in profit levels of MNEs, especially in developed economies, with

**Figure I.3. Global FDI inflows, by components, 2020 and 2021** (Billions of dollars and per cent)



Source: UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>).

Variable	2015	2016	2017	2018	2019	2020	2021	2022 <sup>a</sup>
GDP	3.4	3.3	3.7	3.6	2.9	-3.1	6.1	3.6
Trade	3.0	2.3	5.6	4.0	0.9	-7.9	10.1	5.0
GFCF	-4.7	0.9	4.1	5.0	0.5	-2.9	8.0	3.2
FDI	47	-1	-20	-11	2	-35	64	-
<i>Memorandum</i>								
FDI value (Trillions of dollars)	2.1	2.0	1.6	1.4	1.5	1.0	1.6	1.6

Source: UNCTAD, FDI/MNE database for FDI; IMF (2022b) for GDP, GFCF and trade.

Note: GFCF = gross fixed capital formation.

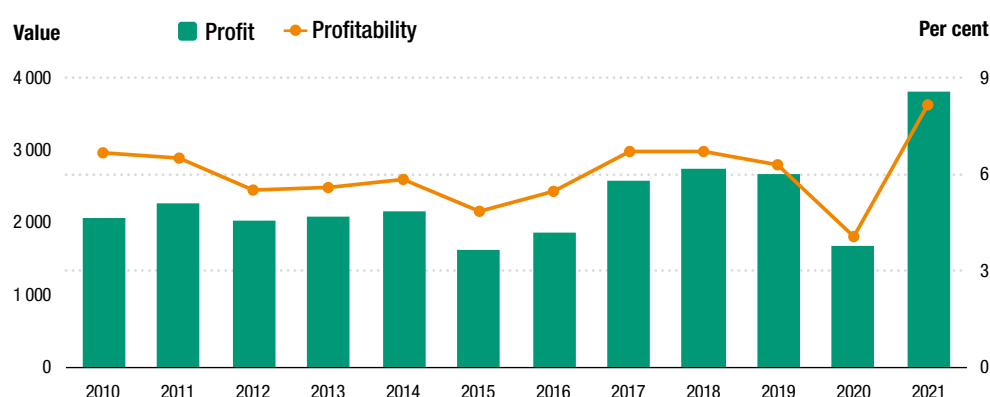
<sup>a</sup> Forecasted.

the release of pent-up demand, low financing costs and significant government support. The profitability of the largest MNEs doubled to 8.2 per cent (figure I.4).

As a result of these growth factors, developed economies saw the biggest rise by far, with FDI reaching \$746 billion in 2021 – more than double the exceptionally low level in 2020. In Europe, FDI rose in most countries, although half of the increase was caused by large fluctuations in major conduit economies. Inflows in the United States more than doubled, with much of the increase accounted for by a surge in cross-border M&As. Although much of the growth in FDI in developed countries was driven by financial flows and M&As, there were indications of investment strength in actual new projects. Investor confidence was high in infrastructure sectors, supported by favourable long-term financing conditions and recovery stimulus packages. International project finance deals in developed economies were up 70 per cent in number and 149 per cent in value (table I.2).

FDI flows to developing economies increased by 30 per cent, to \$837 billion, with 19 per cent growth in developing Asia (to a record \$619 billion), a partial recovery in Latin America and the Caribbean (to \$134 billion) and an uptick in Africa (to \$83 billion). International project finance deals rose by 64 per cent in number (142 per cent in value). Investor confidence in industry remained weak, although the low points seen in GVC-intensive industries in 2020 were not repeated and several industries registered a partial recovery. Greenfield project announcements in developing countries were flat in value terms, although activity (project numbers) increased by 16 per cent.

**Figure I.4. Profitability and profit levels of MNEs, 2010–2021** (Billions of dollars and per cent)



Source: UNCTAD, based on data from Refinitiv SA.

**Table I.2.**

**Announced FDI greenfield projects, cross-border M&As and international project finance deals, by economic grouping, 2020–2021**

Group of economies	Type of FDI	Value (Billions of dollars)		Growth rate (%)	Number		Growth rate (%)
		2020	2021		2020	2021	
Developed economies	Cross-border M&As	389	615	58	5 333	7 838	47
	Greenfield projects	316	401	27	8 993	9 790	9
	International project finance	264	656	149	742	1 262	70
Developing economies	Cross-border M&As	86	113	31	868	1 008	16
	Greenfield projects	259	259	-	4 255	4 920	16
	International project finance	220	532	142	520	853	64

Source: UNCTAD, cross-border M&A database (<https://unctad.org/fdistatistics>) for M&As, information from the Financial Times Ltd, fDi Markets ([www.fDimarkets.com](http://www.fDimarkets.com)) for announced greenfield FDI projects and Refinitiv SA for international project finance deals.

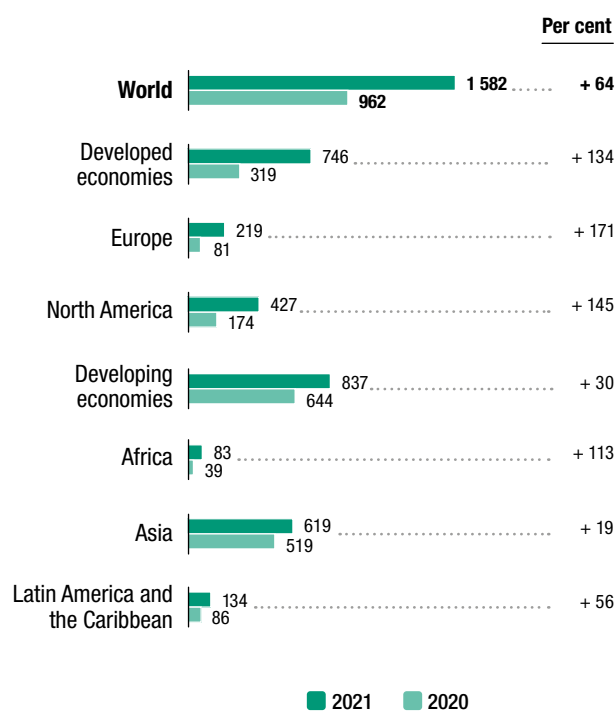
## 2. Trends by geography

### a. FDI inflows

FDI flows recovered strongly in 2021 in all regions (figure I.5; box I.2). The increase in FDI flows to developed economies (+134 per cent) – from the exceptionally low values in 2020 – accounted for most of the global growth. The jump in developed economies showed the effect of stimulus packages, resulting in record earnings for MNEs, and reflects the more volatile nature of FDI flows in developed markets because of the larger financial component. However, FDI flows to developing regions also increased significantly. FDI inflows to developing Asia increased by 19 per cent to reach a new high of \$619 billion, driven mostly by East and South-East Asia (table I.3). Flows to Latin America and the Caribbean increased by 56 per cent, recovering part of the ground lost in 2020. Flows to Africa more than doubled, but most of the increase was due to a single corporate transaction, without which they would have increased moderately.

The share of global flows accounted for by developed countries returned to pre-pandemic levels, at about half of the total, from just one third in 2020. Structurally weak economies continued to attract only a small share of global FDI, at 2.5 per cent of the total.

**Figure I.5. FDI inflows by region, 2020–2021**  
(Billions of dollars and per cent)



Source: UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>).

#### Box I.2. Changes in geographical classifications in *WIR22*

Several changes in the definition – for statistical purposes – of regions and economic groups have been introduced in this year’s *World Investment Report*, following the reclassification of some countries by the United Nations Statistical Division (UNSD).

Transition economies have been discontinued as an economic group. The economies in it have been distributed across other groups and regions. Europe now includes five countries of the western Balkans, namely Albania, Bosnia and Herzegovina, Montenegro, North Macedonia and Serbia, and four countries from the Commonwealth of Independent States (CIS) namely Belarus, the Republic of Moldova, the Russian Federation and Ukraine. These nine countries are now included among developed countries under “other Europe”. Armenia, Azerbaijan and Georgia are included in West Asia and Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan are included in Central Asia. They are all part of developing Asia. In addition, at its 1215th plenary meeting, the Trade and Development Board approved the application of the Republic of Korea, endorse by Group B, and with the agreement of the Asia-Pacific Group, to be moved from the States in list A to the list B States annexed to General Assembly resolution 1995 (XIX). Therefore, the Republic of Korea is now included in the group of developed countries throughout the WIR. Thus, in various data presentations, it no longer features under developing Asia, but under other developed countries.

All references to developed economies, developing economies, Europe and developing Asia in *WIR22* refer to the new classification; growth rates have been calculated on the basis of adjusted series, unless stated otherwise

Source: UNCTAD.

**Table I.3. FDI flows, by region, 2019–2021** (Billions of dollars and per cent)

Region	FDI inflows			FDI outflows		
	2019	2020	2021	2019	2020	2021
<b>World</b>	<b>1 481</b>	<b>963</b>	<b>1582</b>	<b>1 124</b>	<b>780</b>	<b>1 708</b>
Developed economies	764	319	746	737	408	1 269
Europe	405	81	219	343	-21	552
EU	402	210	138	368	66	398
Other Europe	3	-129	81	-26	-87	154
North America	275	174	427	108	281	493
Other developed countries	84	64	100	286	147	225
Developing economies	716	645	837	387	372	438
Africa	46	39	83	5	-1	3
Asia	512	519	619	336	378	394
Central Asia	8	6	7	-3	-2	2
East Asia	232	285	329	203	268	244
South Asia	59	71	52	13	11	16
South-East Asia	175	122	175	80	62	76
West Asia	37	35	55	43	39	56
Latin America and the Caribbean	159	86	134	47	-5	42
Oceania	0.1	-0.1	0.1	-0.8	-0.8	-0.2
<b>Structurally weak, vulnerable and small economies<sup>a</sup></b>	<b>41</b>	<b>34</b>	<b>39</b>	<b>-0.2</b>	<b>0.4</b>	<b>2.4</b>
LDCs	23	23	26	-1.0	1.5	-0.1
LLDCs	22	14	18	0.8	-1.3	1.7
SIDS	4	3	3	0.8	1.0	0.5
<i>Memorandum: percentage share in world FDI flows</i>						
Developed economies	51.6	33.1	47.1	65.6	52.3	74.3
Europe	27.3	8.4	13.8	30.5	-2.6	32.3
EU	27.1	21.7	8.7	32.8	8.5	23.3
Other Europe	0.2	-13.4	5.2	-2.3	-11.1	9.0
North America	18.6	18.1	27.0	9.6	36.1	28.9
Other developed countries	5.7	6.6	6.3	25.5	18.9	13.2
Developing economies	48.4	66.9	52.9	34.4	47.7	25.7
Africa	3.1	4.1	5.2	0.4	-0.1	0.2
Asia	34.6	53.9	39.1	29.9	48.5	23.1
Central Asia	0.6	0.7	0.4	-0.2	-0.3	0.1
East Asia	15.7	29.6	20.8	18.0	34.3	14.3
South Asia	4.0	7.4	3.3	1.2	1.4	0.9
South-East Asia	11.8	12.7	11.1	7.1	8.0	4.4
West Asia	2.5	3.6	3.5	3.8	5.0	3.3
Latin America and the Caribbean	10.7	8.9	8.5	4.2	-0.6	2.5
Oceania	0.0	-0.0	0.0	-0.1	-0.1	-0.0
<b>Structurally weak, vulnerable and small economies<sup>a</sup></b>	<b>2.8</b>	<b>3.5</b>	<b>2.5</b>	<b>-0.0</b>	<b>0.1</b>	<b>0.14</b>
LDCs	1.5	2.4	1.6	-0.1	0.2	-0.01
LLDCs	1.5	1.5	1.2	0.1	-0.2	0.1
SIDS	0.3	0.3	0.2	0.07	0.12	0.0

Source: UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>).

Note: LDCs = least developed countries, LLDCs = landlocked developing countries, SIDS = small island developing States.

<sup>a</sup> Without double counting countries that are part of multiple groups.

### (i) Developed economies

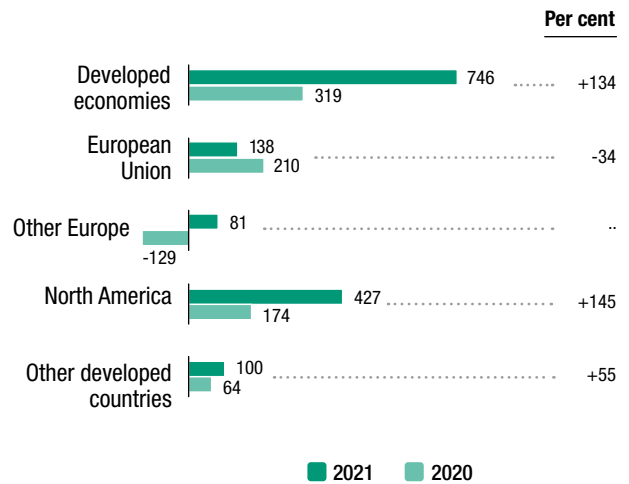
In 2021, most developed countries – 34 out of 48 – saw an increase in FDI. The overall rise was characterized by strong fluctuations in conduit FDI, financial flows resulting from corporate restructurings, and M&As. Among subregions, flows rose in North America, other Europe and other developed countries while they fell in the EU (figure I.6).

In North America, flows to the United States more than doubled to \$367 billion, the third highest level ever recorded, after those of 2015 and 2016. The United States remained the largest recipient of FDI (figure I.7). The increase in corporate profits had a direct impact on reinvested earnings, which rose to a record \$200 billion. In addition, equity investments were up by 54 per cent, reflecting a steep increase in cross-border M&As. New greenfield project announcements also increased, by 28 per cent to \$86 billion.



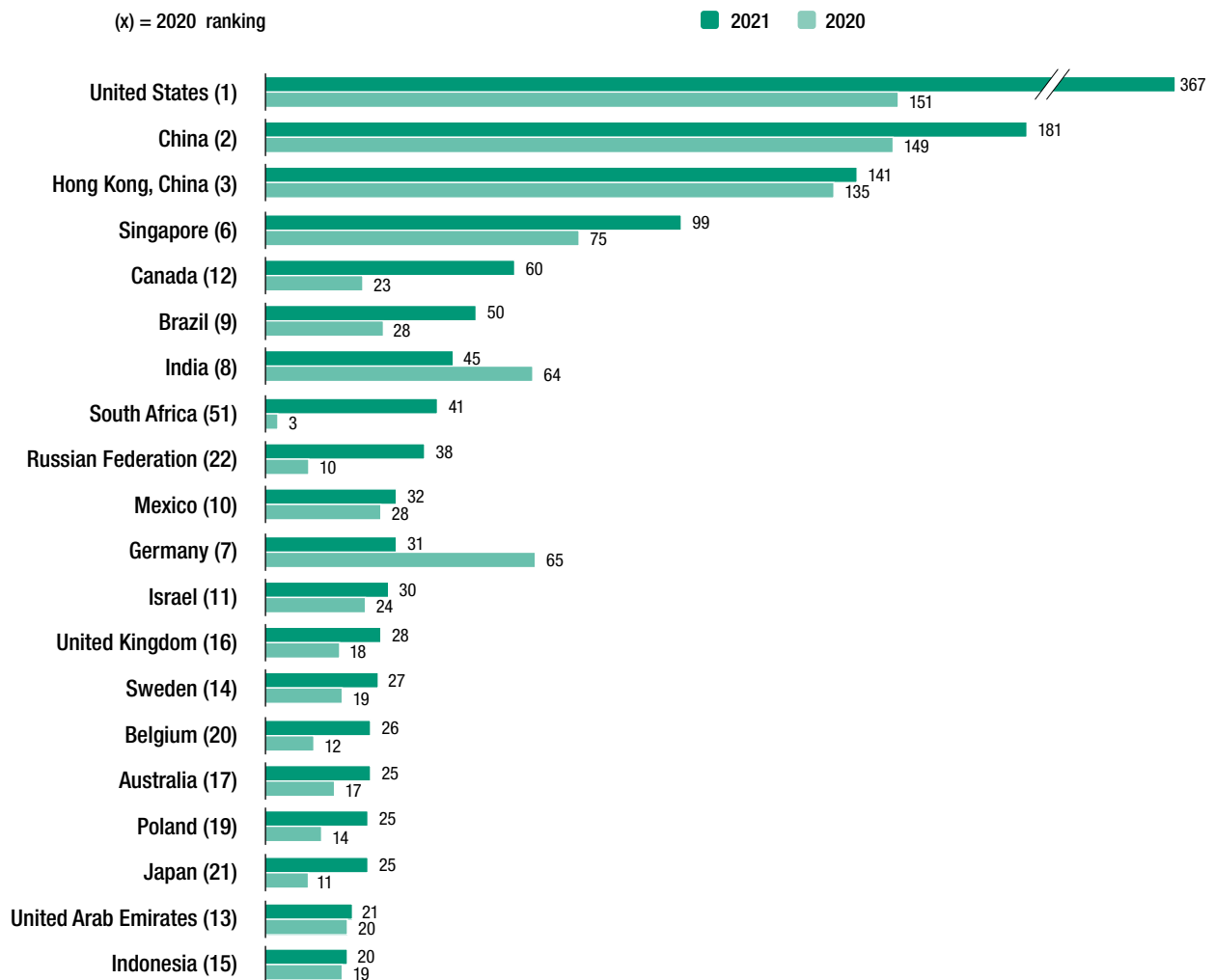
Cross-border M&A sales of United States assets to foreign investors in the services sector reached \$200 billion. They were spread across many services industries, including information and communication (\$43 billion), trade (\$40 billion), transport and storage (\$37 billion), finance and insurance (\$30 billion) and professional services (\$21 billion). Among the 18 cross-border M&As sales of more than \$10 billion in 2021, nine took place in the United States. They included the acquisition of Alexion by AstraZeneca (United Kingdom) for \$39 billion, the purchase of GE Capital Aviation Services by AerCap Holdings (Ireland) for \$31 billion, the purchase of Kansas City Southern by Canadian Pacific Railway (Canada) for \$31 billion and the acquisition of Speedway by Seven & I Holdings (Japan) for \$21 billion. The boom in cross-border M&A deals explained much of the increase in FDI in the United States.

**Figure I.6. FDI inflows in developed economies, 2020–2021** (Billions of dollars)



Source: UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>).

**Figure I.7. FDI inflows, top 20 host economies, 2020 and 2021** (Billions of dollars)



Source: UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>).

FDI in Canada increased by 157 per cent to \$60 billion, 30 per cent above the 10-year average before the pandemic. Reinvested earnings reached a record \$29 billion, from only \$3 billion in 2020. Equity flows rose also, by 50 per cent to \$25 billion, driven by a doubling of cross-border M&A sales to \$29 billion. Sales – predominantly to MNEs from the United States – increased in extractive industries (\$7 billion) and services (\$14.5 billion), mainly in information and communication (\$7 billion) and finance and insurance (\$4 billion).

FDI flows to the European Union (EU) reached \$138 billion – the lowest level since 1997 – mostly due to continued large swings in conduit flows, including negative values in the Netherlands (-\$81 billion in 2021 from -\$105 billion in 2020) and an enormous drop of flows to Luxembourg (from \$102 billion in 2020 to -\$9 billion in 2021). Equity flows in EU countries fell sharply from \$220 to -\$4.2 billion. Cross-border M&A sales dropped also by 26 per cent to \$139 billion. While intra-EU sales doubled, mainly because of acquisitions by French and German MNEs, sales to MNEs from outside the EU declined. The fall was due in part to several sizeable divestments of foreign affiliates to domestic firms, which led to negative values in net cross-border M&As. For example, the sale in France of Aviva France (United Kingdom) to Aema Groupe (France) for \$3.9 billion.

The fall in EU inflows occurred despite record reinvested earnings of foreign affiliates in the group, at \$252 billion. The decline was not limited to conduit locations: FDI flows also decreased in large EU host countries. Flows to Germany fell by 52 per cent, to \$31 billion, from \$65 billion in 2020.

The overall positive growth in Europe was driven by FDI flows registered in Switzerland which, after three consecutive years of negative flows, turned positive to \$1 billion. In addition to intrafirm financial flows, M&A activity drove part of the increase. Among the larger deals were the acquisition of Sunrise by Liberty Global (United Kingdom) for \$5.4 billion. FDI flows to the United Kingdom also rose, by 51 per cent to \$28 billion, still one of the lowest levels ever recorded. Equity investment there more than doubled, together with cross-border M&A values. Large deals in the United Kingdom included the merger of Fiat Chrysler Automobiles with Peugeot (France) for \$22 billion and the purchase of GW Pharmaceuticals by Jazz Pharmaceuticals (United States) for \$6.8 billion. Two large divestments included the sale by PPL (United States) of its Bristol-based electric power distributor to National Grid for \$20 billion and the sale by Telefonica (Spain) of its O2 Holdings to Virgin Media for \$13 billion. Most other developed economies also saw FDI inflows rise in 2021. In Israel, FDI continued its upward trend, to \$30 billion – a record. Cross-border M&A sales there reached \$22 billion, more than half of which was in information and communication. For example, Thoma Bravo (United States) merged with Ironsource, for \$10 billion. Flows to Australia rose by 50 per cent to \$25 billion, driven in part by M&A sales in food and beverages; Coca-Cola European Partners (United Kingdom) acquired a 69 per cent in Coca-Cola Amatil for \$5.2 billion. Despite some large divestments, FDI flows to Japan more than doubled, to \$25 billion, and flows to the Republic of Korea doubled to \$17 billion.

Although developed economies are more prone to large fluctuations in FDI caused by financial flows and M&A transactions – clearly the case in the 2021 rebound from the 2020 lows – there were upswings in new productive project announcements as well. The value of new greenfield projects announced in developed economies rose by 27 per cent to \$401 billion. Projects in the primary sector remained minimal (at \$7 billion), while the value of projects in the services sector rose slightly, by 9 per cent, to \$215 billion. Manufacturing industries experienced a return to pre-pandemic values, at \$179 billion. Greenfield projects announced in electronics and electrical equipment, strongly affected during the first year of the pandemic by supply chain concerns, more than doubled to \$73 billion. The value of announced projects in information and communication kept rising in 2021 to \$68 billion.

The two largest deals announced were in semiconductors: Intel (United States) intends to build a semiconductor plant in Germany for \$19 billion, and Samsung (Republic of Korea) plans to build a semiconductor factory in the United States for \$17 billion.

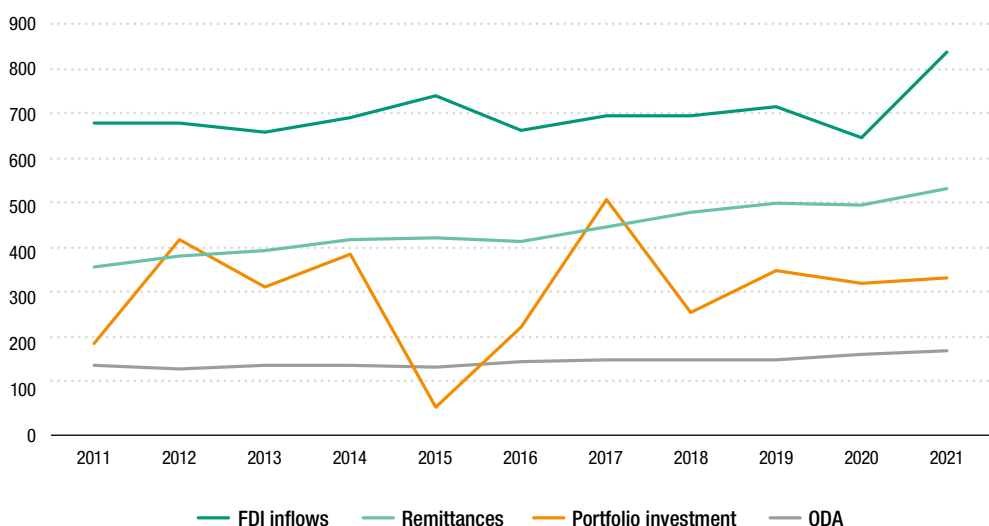
In 2021, the number of announced international project finance deals continued its upward trend, reaching 1,262 projects – a record. The total value of deals more than doubled, to \$656 billion. Renewable energy remained the most important industry with two thirds of the deals (805), a 52 per cent increase from 2020. Deals in residential and commercial real estate quintupled to 78 from 16. Many international project finance deals target sustainability or climate change objectives; in 2021 projects included, for example, the construction of a zero-carbon retail and residential precinct in Australia for \$1 billion.

For 2022, FDI trends in developed economies are highly uncertain, as the war in Ukraine could have far-reaching consequences for investment – especially in Europe where, apart from the direct impact on investment in the Russian Federation and Ukraine, the main channel through which the war and the sanctions will affect investment is the rise in energy prices and energy insecurity. Supply chain disruptions will also hurt some industries – including automotive – as the war and sanctions hinder production of key inputs. Nonetheless, cross-border M&As – the most important type of FDI in developed economies – rose by 39 per cent, to \$285 billion, in the first four months of 2022, compared with the \$205 billion four months average in 2021. One third of M&A sales (\$87 billion) took place in the extractive industries, reflecting the higher commodity prices.

### (ii) Developing economies

FDI flows to developing economies in 2021 increased by 30 per cent to \$837 billion, the highest level ever recorded. The increase was mainly the result of strong growth performance in Asia, a partial recovery in Latin America and the Caribbean, and an upswing in Africa. The share of developing countries in global flows remained just above 50 per cent. FDI flows continue to be an important source of external finance for developing economies, together with other cross-border capital flows, which also saw a rise in 2021 (figure I.8).

**Figure I.8. Developing economies: sources of external finance, 2011–2021**  
(Billions of dollars)



Source: UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>) (for FDI inflows), OECD (for ODA flows) and World Bank (for remittances).

In 2022, FDI flows to developing economies are expected to be strongly affected by the war in Ukraine and its wider ramifications, and by macroeconomic factors including rising interest rates. The main drivers of a possible contraction of FDI are the impact of higher energy prices on domestic demand; high food prices, which can lead to political instability; and tighter financial conditions. Fiscal space in many countries will be significantly reduced, especially in oil- and food-importing developing economies. Rising investor uncertainty and downgrades of country risk ratings will be important factors for FDI. Higher commodity prices may provide some offsetting investment increases for resource-based economies in Africa and in Latin America. As in developed economies, cross-border M&A sales in developing economies also rose – by 13 per cent, to \$42 billion in the first months of 2022, 40 per cent of which targeted extractive industries.

### Africa

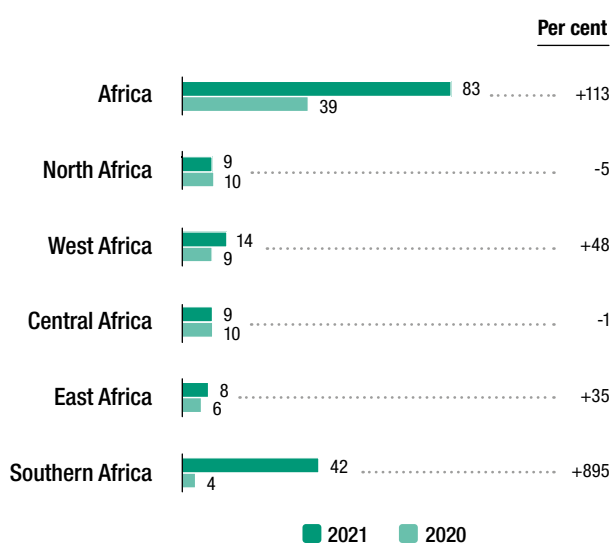
FDI flows to Africa reached \$83 billion – a record level – from \$39 billion in 2020, accounting for 5.2 per cent of global FDI. Most recipients saw a moderate rise in FDI after the fall in 2020 caused by the pandemic. The total for the continent was inflated by a single intrafirm financial transaction in South Africa in the second half of 2021. Excluding that transaction, the increase in Africa is moderate, more in line with other developing regions. Southern Africa, East Africa and West Africa saw their flows rise; Central Africa remained flat and North Africa declined (figure I.9).

Flows to North Africa fell by 5 per cent to \$9.3 billion. Egypt saw its FDI drop by 12 per cent as large investments in exploration and production agreements in extractive industries were not repeated. Despite the decline, the country was the second largest host of FDI on the continent. Pledges from Gulf States to invest some \$22 billion in various sectors may boost FDI going forward. Announced greenfield projects in Egypt more than tripled, to \$5.6 billion; for example, Reportage Properties (United Arab Emirates) announced a real estate project for \$1.5 billion. Flows to Morocco rose by 52 per cent to \$2.2 billion. A large international project finance deal was announced there: the \$20 billion construction of a 3,800 km transmission line to the United Kingdom with 3.6 GW of capacity, sponsored by Xlinks (United Kingdom).

FDI in West Africa increased by 48 per cent to \$14 billion. Nigeria saw its flows double to \$4.8 billion, mainly because of the resurgence in oil investment and expansion in gas. International project finance deals in the country jumped to \$7 billion, with some large projects in residential and commercial real estate. These included, for example, the \$2.9 billion Escravos Seaport project, involving construction of an industrial complex with a refinery, international airport, industrial estate and free trade zone. FDI flows to Ghana rose by 39 per cent to \$2.6 billion, again mainly owing to projects in extractive industries; for example, the construction of an \$850 million gold mining facility by Newmont Corp (United States) and the construction of a cement factory by Ciment d’Afrique (CIMAF) (Morocco) for \$436 million.

FDI to East Africa grew by 35 per cent to \$8.2 billion. Flows to Ethiopia reached \$4.3 billion. Chinese investments tripled in 2021 (Ethiopia is a central hub for China’s Belt and Road Initiative).

**Figure I.9. FDI inflows in Africa, by subregion 2020–2021** (Billions of dollars)



Source: UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>).

Four (out of five) international project finance announcements in the country were in renewables; for example, the Masdar solar project involves construction of a 500 MW solar power plant for \$135 million, with Abu Dhabi Future Energy as a sponsor. Uganda saw its FDI rise by 31 per cent to \$1.1 billion. FDI to the United Republic of Tanzania rose by 35 per cent to \$922 million, and new greenfield project announcements tripled in value. The two largest projects announced in 2021 were the development of nickel project from Kabanga Nickel (United Kingdom) for \$318 million, and an investment in food and beverages by Associated British Foods (United Kingdom) for \$238 million.

Flows to Central Africa remained flat at \$9.4 billion. FDI to the Democratic Republic of the Congo rose by 14 per cent to \$1.9 billion, with investment remaining buoyant because of flows in offshore oil fields and mining. Other projects include a facility for treatment of municipal organic waste by Biocrude Technologies (Canada) for \$136 million. Flows to Congo fell by 8 per cent to \$3.7 billion, but two international project finance deals were announced; the largest involves the construction of an oil facility for \$166 million, sponsored by China National Chemical and Beijing Fortune Dingheng Investment (China).

FDI to Southern Africa jumped to \$42 billion due to a large corporate reconfiguration in South Africa – a share exchange between Naspers and Prosus in the third quarter of 2021. New project announcements included a \$4.6 billion clean energy project finance deal sponsored by Hive Energy (United Kingdom) and a \$1 billion greenfield project by Vantage Data Centers (United States), with its first African campus.

Despite the overall positive FDI trend on the continent, total greenfield announcements remained depressed, at \$39 billion, showing only a modest recovery from the low of \$32 billion in 2020 (down from \$77 billion in 2019).

In contrast, international project finance deals targeting Africa showed a rise of 26 per cent in number (to 116) and a resurgence in value to \$121 billion (after \$36 billion in 2020). The rise was supported by strong investment by multilateral finance and capital market investors targeting power (\$56 billion) and renewables (\$26 billion). The largest project was the announcement in Mauritania of a power-to-x hydrogen project for \$40 billion by CWP Renewables (Australia).

European investors remain by far the largest holders of foreign assets in Africa, led by the United Kingdom (\$65 billion) and France (\$60 billion).

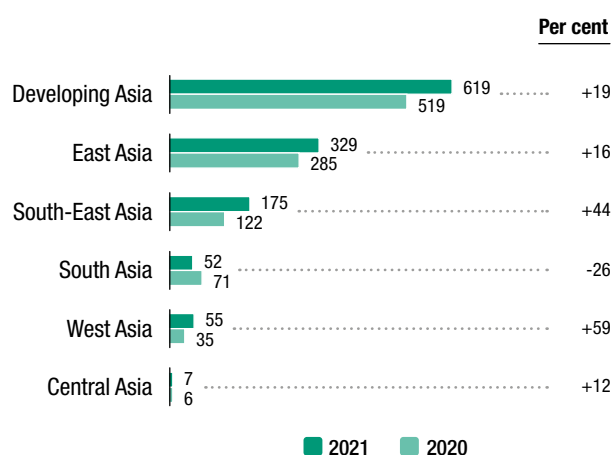
## Developing Asia

Despite successive waves of COVID-19, FDI in developing Asia rose for the third consecutive year to an all-time high of \$619 billion, underscoring the resilience of the region. It is the largest recipient region of FDI in the world, accounting for 40 per cent of global inflows.

The 2021 upward trend was widely shared in the region, with South Asia the only exception (figure I.10). However, inflows remain highly concentrated. Six economies (China, Hong Kong (China), Singapore, India, the United Arab Emirates and Indonesia, in that order) accounted for more than 80 per cent of FDI to the region.

FDI in East Asia increased 16 per cent to \$329 billion in 2021. FDI growth in China picked up pace, growing by 21 per cent to \$181 billion, after

**Figure I.10.** FDI inflows in developing Asia by subregion, 2020–2021 (Billions of dollars)



Source: UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>).

only a 6 per cent increase in 2020. China's robust FDI growth was powered by strong investment in services and high-tech sectors, where the outlook also remains robust; for example, TSMC (Taiwan Province of China) plans to invest \$2.8 billion in China to ramp up the production of semiconductors used in automobiles. The number of foreign-invested enterprises in China registered in 2021 reached 48,000, up 24 per cent year on year. International project finance deals reached 25 – a record number, with the most projects announced in renewables and industrial real estate. One of the largest projects was the construction of a data centre in Shanghai for \$1 billion, sponsored by Princeton Digital Group (Singapore). Flows to Hong Kong, China, reached \$141 billion – 4 per cent higher than 2020, mostly accounted for by reinvested earnings (\$108 billion). FDI trends in China in 2022 will be affected by renewed lockdowns in parts of the country, with significant implications for industrial production and global supply chains.

South-East Asia resumed its role as an engine of growth for FDI in developing Asia and globally, with inflows up 44 per cent to \$175 billion and increases across most countries. The rise was underpinned by strong investment in manufacturing, the digital economy and infrastructure. Singapore, the largest recipient, saw inflows up 31 per cent to \$99 billion, driven by a jump in cross-border M&As. The largest deal was the merger of Altimeter Growth Corp (United States) with Grab, a Singapore-based software publisher, for \$34 billion. Announced greenfield projects also rose to \$13 billion with a \$4 billion project of GlobalFoundries (United Arab Emirates) to build a chipmaking plant in Singapore. Malaysia also attracted chipmakers; its largest greenfield project announcements were all in semiconductors – Risen Solar Technology (China) for \$10 billion, Intel (United States) for \$7 billion and AT&S (Austria) for \$2.1 billion.

FDI in West Asia increased by 59 per cent to \$55 billion in 2021 from \$35 billion in 2020, mainly driven by a significant rise in cross-border M&As. While the United Arab Emirates remained the largest recipient with stable flows at \$20 billion, inflows more than tripled in Saudi Arabia and rose by 60 per cent in Turkey. In the United Arab Emirates, DHL Global Forwarding (Germany) and Total (France) announced the building of a solar energy project in Dubai for \$633 million. FDI inflows to Saudi Arabia rose to \$19 billion from \$5.3 billion in 2020 thanks to two large deals. In Turkey, after two consecutive years of decline, inflows reached \$13 billion, with a rise in new equity investments. Deals included the refinancing of project debt across several oil and gas assets in Turkey by Socar (Azerbaijan), for \$1.3 billion.

FDI in South Asia fell by 26 per cent, to \$52 billion, as the large M&As registered in 2020 were not repeated. Flows to India declined to \$45 billion. However, a flurry of new international project finance deals were announced in the country: 108 projects, compared with 20 projects on average for the last 10 years. The largest number of projects (23) was in renewables. Large projects include the construction in India of a steel and cement plant for \$13.5 billion by Arcelormittal Nippon Steel (Japan) and the construction of a new car manufacturing facility by Suzuki Motor (Japan) for \$2.4 billion.

Flows to Central Asia rose by 12 per cent to \$7 billion. Flows to Kazakhstan – the largest host in the subregion – fell by 14 per cent to \$3.2 billion, with declines in extractive industries and transportation. Flows rose by 18 per cent to \$2 billion in Uzbekistan and by 24 per cent to \$1.5 billion in Turkmenistan.

Across developing Asia, investment in sectors relevant for the SDGs rose significantly. International project finance values in these sectors increased by 74 per cent to \$121 billion, primarily because of strong interest in renewable energy. Project values in this industry rose 123 per cent, to \$77 billion, from \$34 billion in 2020.



## Latin America and the Caribbean

In 2021, FDI in Latin America and the Caribbean rose by 56 per cent to \$134 billion, sustained by strong inflows in traditional target industries such as automotive manufacturing, financial and insurance services, and electricity provision, and pushed up by record high investments in information and communication services across the region. Most economies saw inflows rebound, with only a few experiencing further declines caused by the pandemic-induced economic crisis, in some cases combined with political instability. Flows rose in all three subregions in Latin America and the Caribbean (excluding financial centres) (figure I.11).

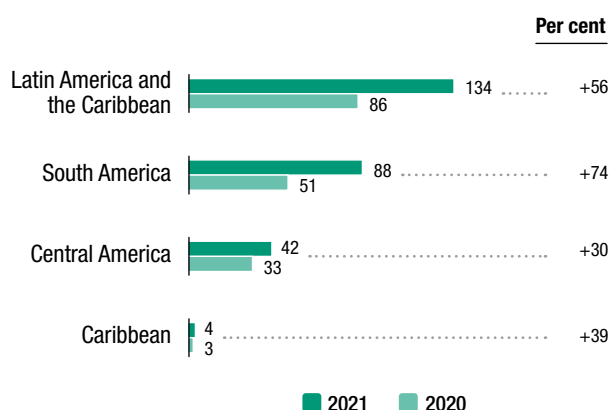
In South America, FDI grew by 74 per cent to \$88 billion, sustained by higher demand for commodities and green minerals. All major recipients, which include Brazil, Chile and Colombia, saw their FDI flows rise, driven by the resumption of flows into mining and hydrocarbons. In Brazil investments in agribusiness, automotive and electronics manufacturing, information technology and financial services led to an increase of total FDI by 78 per cent, to \$50 billion. The value of announced greenfield projects and number of international project finance deals in the country rose by 35 per cent and 32 per cent, respectively. One of the largest greenfield projects was the kick-off by Bravo Motor (United States) of a \$4.4 billion project to produce electric vehicles as well as batteries and components in Brazil. Among international project finance deals, the largest was the construction of a 2 GW offshore wind farm for \$5.9 billion, sponsored by Ocean Winds (Spain). Flows to Chile rose by 32 per cent to \$13 billion, sustained by several large acquisitions and renewed interest in mining projects. The number of international project finance deals there rose 80 per cent to 88 projects. One of the largest is the construction of a \$3 billion ammonia plant with onshore wind farm, electrolysers, and port facility. Flows to Colombia grew by 26 per cent to \$9 billion, led by inflows in the manufacturing sector and in transport, logistics and communication services. Flows to Argentina and Peru recovered to pre-pandemic levels. In Argentina, inflows grew to \$6.5 billion, largely in mining projects.

In Central America, FDI reached \$42 billion. Flows to Mexico, the second largest recipient in the subregion, increased by only 13 per cent to \$32 billion, with new equity investments in the mining and extractive industries as well as in automotive. Greenfield investment announcements, an indicator of future investment plans, were up 43 per cent from 2020, with the biggest jump in information and communication; for example, Huawei (China) announced that it will open a cloud data centre in Mexico for \$4.5 billion. Flows to Costa Rica returned to pre-pandemic levels, almost doubling to \$3.2 billion with new investments in special economic zones. In Guatemala flows reached a record level of \$3.5 billion.

In the Caribbean, FDI increased by 39 per cent to \$3.8 billion, mainly driven by growth in inflows to the Dominican Republic, to \$3.1 billion. Flows increased in mining, financial services and special economic zones.

Overall, in Latin America and the Caribbean, cross-border M&A activity increased, with a higher number of deals, although the total value of net sales was virtually unchanged from 2020 at \$8 billion. The services sector recorded the highest increase of net sales, especially in the financial and energy supply industries. Announced greenfield

**Figure I.11.** FDI inflows in Latin America and the Caribbean, by subregion, (Billions of dollars)



Source: UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>).

investment increased by 16 per cent, with most commitments going to the automotive, information and communication, and extractive industries. The value of announced international project finance deals doubled, exceeding pre-pandemic levels, pushed by large projects in transportation infrastructure (especially in Brazil), mining (across the region) and renewable energy.

### Structurally weak, vulnerable and small economies

FDI flows to 82 structurally weak, vulnerable and small economies rose by 15 per cent to \$39 billion (figure I.12). Inflows to the least developed countries (LDCs), landlocked developing countries (LLDCs) and small island developing States (SIDS) combined<sup>1</sup> accounted for only 2.5 per cent of the world total in 2021, down from 3.5 per cent in 2020. The impact of the pandemic continued to intensify the fragility of the structurally weak economies. Investment in various sectors relevant for achieving the SDGs, especially in food, agriculture, health and education, continued to fall in 2021.

FDI in LDCs increased by 13 per cent to \$26 billion, despite the acceleration of funds repatriation by oil companies, which resulted in negative inflows to Angola of -\$4.1 billion (from -\$1.9 billion in 2020). Flows remained concentrated, with the top five recipients (Mozambique, Ethiopia, Cambodia, Bangladesh and Senegal, in that order) accounting for 69 per cent of total FDI in the group.

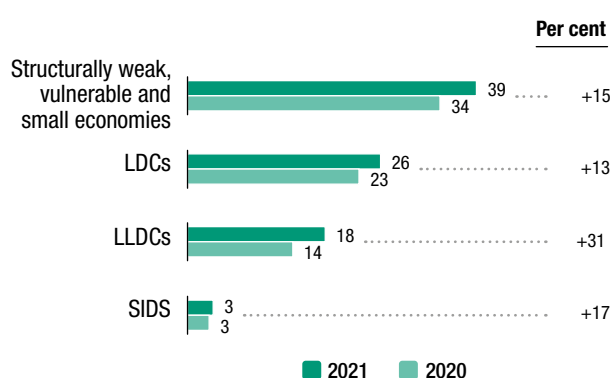
FDI inflows to the 33 African LDCs increased by 17 per cent to \$16 billion, accounting for almost two thirds of all LDC inflows. Inflows exceeded \$1 billion in five African LDCs. In Mozambique, inflows grew by 68 per cent to \$5.1 billion, and the country saw a jump in greenfield projects; for example, Globeleq Generation (United Kingdom) plans to build power plants for \$2 billion. Flows to Ethiopia rose by 79 per cent to \$4.3 billion as FDI from China tripled in 2021. FDI in Senegal rose by 21 per cent to \$2.2 billion, and the country registered a 27 per cent rise in announced greenfield projects. Flows to Zambia remained negative at -\$457 million, due to a \$1.5 billion copper mine divestment by Glencore (Switzerland) to State-owned ZCCM Investments Holdings.

In the nine Asian LDCs, FDI inflows rose by 6 per cent to \$9.8 billion, or one third of the LDC total. In Cambodia, the largest LDC recipient, FDI was down by 4 per cent, at \$3.5 billion. While greenfield projects fell to only \$124 million (from \$1.6 billion in 2020), there were eight international project finance deals (compared with only two in 2020).

For example, a 50-hectare car tire manufacturing facility is under construction for \$350 million, sponsored by Sailun Group (China). In Bangladesh, inflows rose by 13 per cent to \$2.9 billion – around the pre-pandemic level. The number of international project finance deals tripled to 14, reaching \$4.7 billion. The largest project was the construction of a container terminal in Ananda Bazar for \$2 billion.

The number and value of greenfield project announcements in LDCs continued their downward trend in 2021. The number of projects fell to the lowest level since 2008. Their value fell to the lowest ever recorded, \$12 billion. This is a major concern as these investment types are crucial for building productive capacity and thus for prospects of sustainable recovery. By value, the largest projects were announced in energy and gas supply and in information and communication.

**Figure I.12.** FDI inflows in structurally weak, vulnerable and small economies, 2020–2021  
(Billions of dollars)



Source: UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>).



International project finance deals targeting LDCs decreased by 6 per cent in number (to 73) but rose by 69 per cent in value. Renewable energy projects accounted for the largest number (34), while power was the largest in terms of value (\$41 billion).

Investment in SDG sectors in LDCs remains weak. The number of foreign investment projects (both greenfield and international project finance deals) fell in important SDG sectors, including renewables, power, food and agriculture, and health. They rose in transport, WASH (water, sanitation and hygiene) and education.

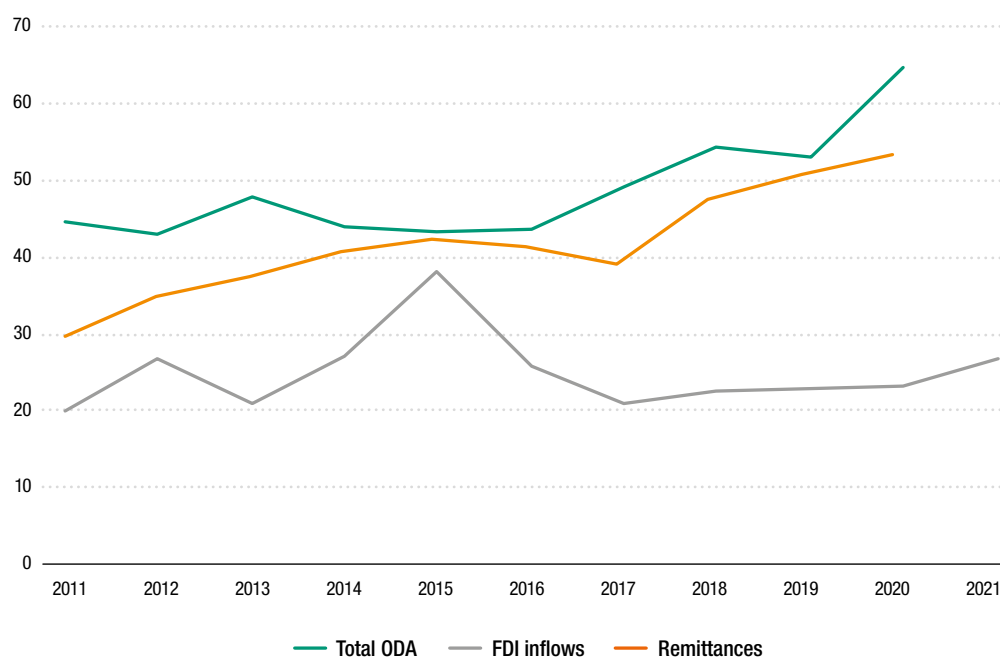
MNEs from developing countries play an increasingly important role in LDCs. China continues to be the largest source of FDI, with its FDI stock in the group reaching \$46 billion – a 38 per cent rise from 2016.

Since 2011, FDI flows to LDCs as a group have increased only marginally. The pandemic has further undermined the attainment of the goals of the Istanbul Programme of Action for LDCs, as well as the SDGs. FDI remains an important external source of finance for LDCs, but the growth of FDI lags other sources; ODA and remittances are by far the largest external financial flows to LDCs (figure I.13).

Although international project finance is an increasingly important source of investment in most countries and in a diverse set of industries, including SDG-relevant sectors, in LDCs extractive industries continue to be the main target of project finance. This points to the continued dependence of LDCs on resource-driven FDI.

A few LDCs have seen some sectoral diversification. Looking at the types of investment that are most important for the development of productive capacities in LDCs, only investment in energy generation and distribution grew significantly during the decade, while investment in other infrastructure sectors and projects important for private sector development and structural change barely increased. During the pandemic, investment in several priority sectors for developing productive capacity almost completely dried up, making the next programme of action for LDCs – recently adopted – particularly challenging (table I.4).

**Figure I.13. | LDCs: FDI inflows, ODA and remittances, 2011–2021** (Billions of dollars)



Source: UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>) (for FDI inflows), OECD (for ODA flows) and World Bank (for remittances).

Table I.4.

**LDCs: announced investment in productive capacity, 2011–2012 and 2019–2021**

(Millions of dollars and per cent)

Productive capacity-relevant sector	Greenfield projects						International project finance deals					
	2011	2012	2019	2020	2021	2020–2021 growth rate (%)	2011	2012	2019	2020	2021	2020–2021 growth rate (%)
<b>Total</b>												
Value	28 741	24 765	33 779	17 314	11 368	-34	96 765	115 265	67 376	32 401	60 474	87
Number of projects	492	556	421	207	160	-23	24	27	83	60	63	5
<i>Energy</i>												
Value	4 398	4 265	3 483	7 047	3 260	-54	93 370	54 821	59 267	18 208	55 855	207
Number of projects	3	9	17	24	7	-71	14	19	67	49	47	-4
<i>Human capital</i>												
Value	177	438	201	43	244	467	387	100	130	351	216	-38
Number of projects	10	8	10	5	7	40	2	1	1	2	3	50
<i>ICT</i>												
Value	1 120	771	337	2 248	1 898	-16			320		410	..
Number of projects	27	41	19	31	31	0			2		2	..
<i>Natural capital</i>												
Value	12 159	6 374	11 214	3 059	1 568	-49			181			..
Number of projects	44	22	19	10	7	-30			1			..
<i>Private sector development</i>												
Value	2 322	3 128	1 377	838	524	-37						..
Number of projects	147	178	108	45	31	-31						..
<i>Structural change</i>												
Value	8 488	9 110	14 754	4 078	3 364	-18	1 844	1 112	314	992	858	-14
Number of projects	256	287	232	92	72	-22	5	2	3	5	5	0
<i>Transportation</i>												
Value	77	678	2 413		509	..	1 164	59 231	7 164	12 849	3 135	-76
Number of projects	5	11	16		5	..	3	5	9	4	6	50

Source: UNCTAD, information from the Financial Times Ltd, fDi Markets (www.fDimarkets.com) for announced greenfield FDI projects and Refinitiv SA for international project finance deals. For the methodology on investment in productive capacities, see *WIR21*, chapter IV, and UNCTAD's Productive Capacities Index.

FDI inflows to the 32 LLDCs rose by 31 per cent to \$18 billion. Flows to these countries in Africa, Latin America and the Caribbean, and Europe rose. Only flows to LLDCs in Central Asia fell. Flows remained concentrated in a few economies, with the top five recipients (Ethiopia, Kazakhstan, Mongolia, Turkmenistan and Uzbekistan, in that order) accounting for more than 71 per cent of total FDI to the group.

In Africa, flows to the group increased by 53 per cent to \$7.8 billion, accounting for 42 per cent of total FDI in LLDCs. Ethiopia became the largest LLDC recipient. Flows to Mali rose by 23 per cent to \$660 million; Ciment d'Afrique (CIMAF) (Morocco) intends to construct a factory for \$436 million. Uganda saw its FDI rise by 31 per cent, to \$1.1 billion.

In the two Latin American LLDCs, FDI inflows turned positive in 2021, to \$716 million, after large divestments in 2020 in the Plurinational State of Bolivia. In Paraguay, flows remained flat, rising by 1 per cent to \$594 million. The country's lockdown, nationwide for two months and in selected areas afterwards, proved effective and the economy reopened relatively quickly.

Inflows to the LLDCs in developing Asia contracted by 6 per cent to \$9.1 billion. After the increase in 2020, flows to Kazakhstan fell by 14 per cent to \$3.2 billion. Investment in extractive industries and in transportation and storage declined, but they rose in manufacturing and in finance and insurance. Top investors in the country included MNEs

from the United States (\$1.6 billion, up 11 per cent), the Russian Federation (\$865 million, doubling from 2020) and China (\$491 million from -\$851 million in 2020). Flows to Mongolia rose by 24 per cent, to \$2.1 billion. There were three international project finance deals; for example, the South Gobi green hydrogen pilot plant project for \$262 million. Flows rose in Turkmenistan, Uzbekistan and the Lao People's Democratic Republic. In Azerbaijan, flows turned negative to -\$1.7 billion because of the repatriation of funds by oil companies.

Looking at the LLDCs group as a whole, the value of greenfield project announcements decreased to \$9.9 billion in 2021, although the number of projects rose by 26 per cent, to 173. The decrease in value was particularly pronounced in manufacturing and services. There was a jump in value in extractive industries, mainly because Zimplats (South Africa) plans to expand investment in the production of platinum in Zimbabwe by \$1.2 billion.

The number of international project finance deals in LLDCs was 46 per cent higher than in 2020, at 76 projects. The majority (41) targeted renewables, but projects were also announced in other sectors, including mining, power generation and infrastructure. Examples include the construction of a gas-fired power plant in Kazakhstan for \$1.2 billion, sponsored by Siemens Energy (Germany), the expansion of Almaty International Airport in Kazakhstan for \$780 million, sponsored by TAV Havalimanlari Holding (Turkey) and the construction of a wind farm and 69 wind turbines in North Macedonia for \$610 million, sponsored by WPD (Germany).

FDI to LLDCs originates mostly from a few key investor countries. With \$20 billion, China was by far the largest investor in LLDCs (with \$6 billion in Kazakhstan alone), followed by Thailand, the Netherlands and Canada.

FDI inflows to the SIDS in 2021 rose by 17 per cent to \$3.3 billion, continuing to hover around 0.2 per cent of global FDI. Reflecting differences in levels of development and factor endowments, a handful of SIDS continued to attract the bulk of inflows. The top five recipients (Maldives, Fiji, the Bahamas, Trinidad and Tobago, and Mauritius, in that order) accounted for 56 per cent of FDI flows to the group. The 2021 increase represented only a partial recovery, as pre-pandemic levels were about 25 per cent higher than current levels. This reflects the multiple problems that several of these countries face resulting from the pandemic, including stagnant international tourism.

Inflows to the 10 Caribbean SIDS rose by 4 per cent to \$1.7 billion, after dropping 27 per cent in 2020. In the Bahamas, inflows decreased by 60 per cent to \$360 million. However, there was a rise in announced greenfield projects and international project finance deals. CGrowth Capital (United States) sponsored the construction of a refinery in the Bahamas for \$262 million. Flows to Trinidad and Tobago turned positive (to \$342 million from -\$103 in 2020); Digicel (Jamaica) plans to invest \$137 million in telecommunication.

FDI rose in the two Asian SIDS. In Maldives, FDI inflows rose by 27 per cent, to \$443 million, still about half of the 2019 level. In Timor-Leste, a large project was announced in 2021—the construction of a carbon capture and storage scheme in the Timor Sea for \$1.6 billion sponsored by a group of investors from Italy, Australia, the Republic of Korea and Japan.

In the five African SIDS, FDI rose by 25 per cent to \$592 million. Mauritius saw its FDI flows rise by 13 per cent to \$253 million. Decathlon (France) opened its fourth global warehouse in that country – an investment with a value of \$17 million. In Seychelles, FDI flows rose by 28 per cent (to \$157 million), more than recovering the loss during the pandemic. Cross-border M&As rose in information and technology as ICOA (United States) acquired iBG, a provider of custom computer programming services, for \$185 million.

In the 11 SIDS in Oceania, inflows also recovered to pre-pandemic levels, with a 64 per cent rise to \$517 million. In Fiji, the largest host country by far, FDI was up by 67 per cent to \$401 million, as Sevens Pacific (Singapore) acquired a 44 per cent stake in the state-owned Energy Fiji for \$210 million.

## b. FDI outflows

In 2021, MNEs from *developed economies* more than doubled their investment abroad to \$1.3 trillion, from \$408 billion. Their share in global outward FDI rose to three quarters of global outflows. The strong volatility of conduit countries continued in 2021.

Aggregate outward investment by European MNEs rebounded from the anomalously low level in 2020 of -\$21 billion to \$552 billion.

Outflows from the Netherlands reversed direction, jumping back to \$29 billion from -\$191 billion in 2020, with the difference accounting for two thirds of the rise in investment by EU MNEs. A sharp increase in outflows from Germany to \$152 billion (from \$61 billion in 2020) made it the second largest investor home country in the world (figure I.14). Among the components, reinvested earnings of German MNEs abroad jumped to \$66 billion – the highest level ever recorded. Large acquisitions by German MNEs included the purchase of Varian Medical Systems (United States) by Siemens Healthineers for \$16 billion and the purchase of the petrochemicals business of BP (United Kingdom) in the United States by INEOS Styrolution Group for \$5 billion. Outflows from Ireland increased also, to \$62 billion from -\$45 billion in 2020, mainly owing to several large acquisitions, such as the purchase of GE Capital Aviation Services (United States) by AerCap Holdings for \$31 billion.

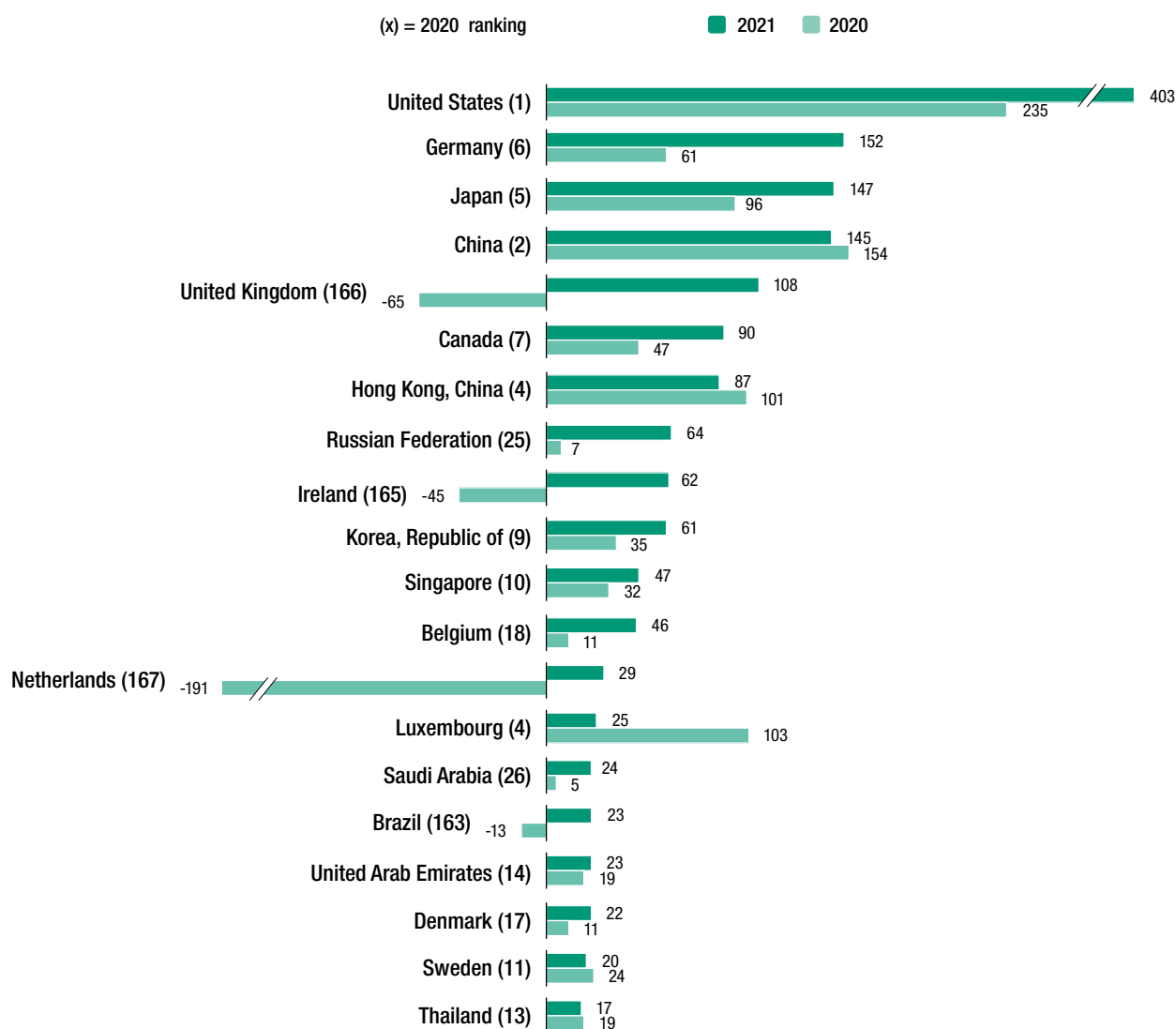
Outward investments by MNEs from other European countries turned positive to \$154 billion from -\$87 billion in 2020. MNEs from the United Kingdom increased their investment abroad to \$108 billion from -\$65 billion in 2020, mainly in the form of reinvested earnings. Outward FDI flows from the Russian Federation increased to \$64 billion from \$7 billion, mostly directed to Cyprus.

Outflows from North America reached a record \$493 billion. MNEs from the United States increased their investment abroad by 72 per cent, to \$403 billion. Flows to the EU and the United Kingdom doubled to \$154 billion and \$79 billion, respectively. Outflows from the United States to Mexico almost tripled (to \$11 billion), and to Singapore they increased significantly (\$25 billion). By industry, the biggest rises were in wholesale trade (to \$38 billion from -\$1 billion) and finance (to \$39 billion from -\$30 billion).

Outward FDI from other developed countries rose by 52 per cent to \$225 billion, mainly because of increases from Japanese and Korean MNEs. Outflows from Japan rose by 53 per cent to \$147 billion, making it the third largest investor country. Cross-border M&As from Japan rose to \$60 billion from \$18 billion, mainly in information and communication and in chemicals. For example, Renesas Electronics (Japan) acquired Dialog Semiconductor (United Kingdom) for \$6 billion. Outflows from Korean MNEs doubled to \$61 billion, with announced greenfield projects overseas jumping from \$9.4 billion to \$33 billion.

The value of investment activity abroad by MNEs from *developing economies* rose by 18 per cent, to \$438 billion. Developing Asia remained a major source of investment even during the pandemic. Outward FDI from the region rose 4 per cent to \$394 billion, contributing to almost a quarter of global outflows in 2021. The rise included robust outflows from Saudi Arabia (with a five-fold increase to \$24 billion), Singapore (up 49 per cent to \$47 billion) and the United Arab Emirates (up 19 per cent to \$23 billion). Investment from China and Hong Kong (China), the region's two largest investors, fell by 6 per cent to \$145 billion and

**Figure I.14. FDI outflows, top 20 home economies, 2020 and 2021**  
(Billions of dollars)



Source: UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>).

13 per cent to \$87 billion, respectively. Outward FDI from South Asia, mainly from India, rose by 43 per cent to \$16 billion. In South-East Asia, only outflows from Singapore and Malaysia increased.

Although overall outward investment from developing Asia increased, companies headquartered in the region made fewer acquisitions in 2021. Cross-border M&A purchases fell by 35 per cent to \$45 billion. Acquisitions by MNEs headquartered in East Asia (mainly China) plummeted, from \$44 billion in 2020 to just \$6.3 billion. South-East Asia, however, saw cross-border M&A purchases rise by 19 per cent to \$29 billion and West Asia saw a rise from -\$1.3 billion to \$7.7 billion.

Outward FDI from Latin America and the Caribbean jumped back to 2019 levels at \$42 billion. The increase is mostly explained by the investment behaviour of Brazilian MNEs, as \$13 billion of negative outflows turned to a positive \$23 billion. Chilean MNEs also increased their foreign investments to \$12 billion.

### 3. Trends by type and sector

In 2021, cross-border M&As, greenfield project announcements and international project finance deals all increased, both in value and in number (figure I.15). Strong financial markets and loose financing conditions led to robust growth in international project finance numbers, up by 68 per cent, and a boom in M&A activity, with a corresponding increase in cross-border M&As of 43 per cent. The recovery of greenfield project announcements after the steep drop in 2020 was more moderate, with project numbers up 11 per cent.

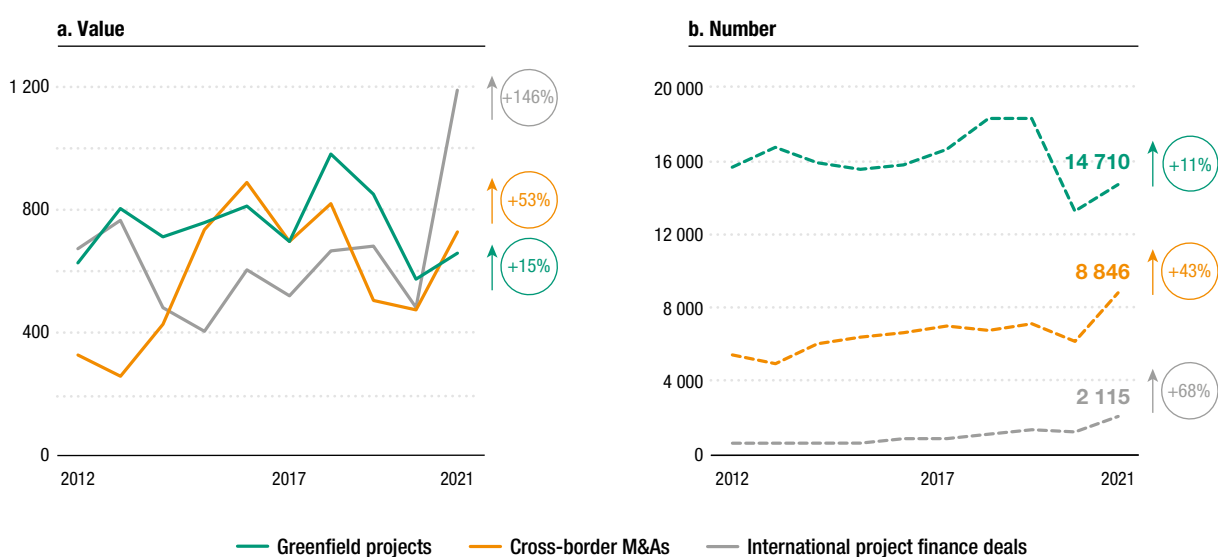
#### a. Greenfield investment trends

The value of announced greenfield investment projects rose by 15 per cent to \$659 billion (table I.5). It remained flat in developing countries at \$259 billion – stagnant at the lowest level ever recorded as MNEs' appetite for investing overseas in real productive assets remained weak. This is a major concern, as these investments in industry are crucial for economic growth and development prospects.

Greenfield projects targeting the primary sector – mainly in extractive industries – remained small. At \$13 billion, the aggregate value of announced greenfield projects represented less than 2 per cent of the total, compared with 24 per cent in 2003, 13 per cent in 2009 and 7 per cent in 2016. The long-term decline in primary sector projects is the result of continued low international investment in agriculture, and – in extractives – a shift from greenfield projects by individual investors to international project finance investments that allow risk sharing among multiple investors.

The number of projects in manufacturing rose by 8 per cent. The increase represents only a hesitant initial recovery after the 2020 drop in investment activity by more than a third, and it leaves manufacturing project numbers about a quarter below the average of the last 10 years.

**Figure I.15. Value and number of cross-border M&As and announced greenfield projects, 2012–2021** (Billions of dollars, number and per cent)



Source: UNCTAD, cross-border M&A database (<https://unctad.org/fdistatistics>) for M&As, information from the Financial Times Ltd, fDi Markets ([www.fDimarkets.com](http://www.fDimarkets.com)) for announced greenfield FDI projects and Refinitiv SA for international project finance deals.

**Table I.5. Announced greenfield projects, by sector and selected industries, 2020–2021**

Sector/industry	Value (Billions of dollars)		Growth rate (%)	Number		Growth rate (%)
	2020	2021		2020	2021	
<b>Total</b>	<b>575</b>	<b>659</b>	<b>15</b>	<b>13 248</b>	<b>14 710</b>	<b>11</b>
<b>Primary</b>	11	13	15	100	98	-2
<b>Manufacturing</b>	240	297	23	5 258	5 688	8
<b>Services</b>	323	350	8	7 890	8 924	13
<i>Top 10 industries in value terms</i>						
Electronics and electrical equipment	47	120	156	882	1 028	17
Information and communication	85	104	23	2 962	3 743	26
Electricity and gas supply	103	90	-13	546	484	-11
Construction	33	49	49	320	329	3
Automotives	33	34	3	571	692	21
Transportation and storage	27	33	25	639	737	15
Chemicals	40	28	-30	452	445	-2
Trade	23	24	4	580	638	10
Food, beverages and tobacco	18	19	9	432	431	0
Pharmaceuticals	15	19	26	360	378	5

Source: UNCTAD, based on information from the Financial Times Ltd, fDi Markets (www.fDimarkets.com).

Among the stronger performers in 2021 were a few typical GVC-intensive industries such as electronics and automotive, which were hit hard during the first year of the pandemic. Announced greenfield values in electronics and electrical equipment more than doubled to \$120 billion. Booming demand for microchips prompted producers to start several mega investment projects. The two largest deals announced in 2021 were in semiconductors: Intel (United States) intends to build a semiconductor plant in Germany for \$19 billion and Samsung (Republic of Korea) plans to build a \$17 billion semiconductor factory in the United States. Several other large projects were announced in electronic components; for example, Risen Energy (China) will invest \$10 billion in a new production facility in Malaysia to manufacture high-efficiency photovoltaic modules.

The moderate recovery in the number of greenfield project announcements was mostly driven by services, which now account for 61 per cent of total projects – the highest on record. The fast-growing global demand for digital infrastructure and services led to a significant rise in greenfield FDI project activity in the ICT industry, with values up by 23 per cent to \$104 billion and numbers up by 26 per cent to a record 3,743 projects. Amazon (United States) stood out as the most active foreign investor in 2021, with \$20 billion worth of investments.

## b. International project finance trends

International project finance activity in 2021 was frenetic. The number of projects reached 2,115, a 68 per cent increase over 2020 and almost three times the average of the last 10 years. The value of international project finance deals was above \$1 trillion for the first time ever.

The rise of projects led by domestic sponsors was even higher (90 per cent) than internationally sponsored deals (as reported in table I.6), reaching 3,924 projects. While conducive long-term financing conditions favoured both types, recovery stimulus packages benefitted domestic markets more than international ones.



**Table I.6. Announced international project finance deals, selected industries, 2020–2021**

Industry	Value (Billions of dollars)		Growth rate (%)	Number		Growth rate (%)
	2020	2021		2020	2021	
<b>Total</b>	<b>484</b>	<b>1 188</b>	<b>146</b>	<b>1 262</b>	<b>2 115</b>	<b>68</b>
<i>Top 10 industries by number</i>						
Renewable energy	198	502	154	802	1 193	49
Industrial real estate	52	135	160	52	152	192
Residential/commercial real estate	13	30	137	45	143	218
Mining	21	39	88	65	109	68
Power	30	116	293	55	109	98
Oil and gas	60	139	131	71	102	44
Telecommunication	42	61	45	52	92	77
Transport infrastructure	41	49	20	52	90	73
Petrochemicals	19	90	370	25	59	136
Water and sewerage	3	9	176	21	18	-14

Source: UNCTAD, based on data from Refinitiv SA.

Investment in renewable energy has been the main engine of growth in international project finance for several years running. It now makes up more than half the annual number of projects. In 2021, activity growth in the sector was exceptionally high (up 49 per cent). Values increased even more because of some megaprojects. Six projects were worth more than \$10 billion, including the largest, the \$74 billion construction in Australia of a 50 GW green energy hub over 15,000 square km that could convert wind and solar power into green fuels, sponsored by Intercontinental Energy Corp (United States), CWP Europe SARL (Luxembourg) and Mirning Green Energy (Australia).

International project finance announcements in industrial real estate have also grown continuously for several years, with no let-up during the pandemic. In 2021, deal numbers tripled to 152 projects with a value of \$135 billion. Large projects include the construction of a steel and cement manufacturing plant in India for \$14 billion and the construction of a 960 -hectare pharmaceutical park in Viet Nam for \$10 billion. The number of deals targeting residential and commercial real estate also tripled, to 143. The biggest increase took place in developed countries, where the number of such projects rose from 16 to 78.

Investment in the oil and gas industry in 2021 rose by 131 per cent in value and 44 per cent in number. The most significant rise across developing regions was reported in Asia, where the value of announced investment rose to \$62 billion from \$19 billion. The largest project involved the construction of a 1,700-km oil pipeline in Iraq for \$18 billion.

Telecommunication investment continued its rise, reaching \$61 billion and 92 projects following the pandemic-induced acceleration of the digital economy. While most projects targeted Europe (46), the number of projects in developing Asia more than doubled, from 7 to 18. The largest projects include the acquisition by Telxius Telecommunication Towers (United States) of telecommunication towers in Argentina, Brazil, Chile, Germany, Peru and Spain, from Telefonica (Spain) for \$9.4 billion and the construction by Dito Telecommunity (China) of 10,000 towers in the Philippines for \$5.4 billion.

In petrochemicals, the value of projects also rose strongly to a record \$90 billion, driven mainly by a few very large projects; for example, in Oman, the \$30 billion construction of a plant to produce over 1.8 million tonnes per year of green hydrogen.



## c. Cross-border M&As

Cross-border M&A sales reached \$728 billion in 2021 – up 53 per cent compared with 2020 (table I.7). In the services sector, cross-border M&As doubled to \$461 billion – one of the highest levels ever recorded. Deals targeting manufacturing firms rose slightly, by 5 per cent, to \$239 billion. In the primary sector, M&A values remained at a low level (\$28 billion), continuing the decade long downward trend, reflecting reduced investment in the upstream activities of the oil and gas industry.

Information and communication and pharmaceuticals remained in the top ranking as the pandemic pushed up activity in the digital and health sectors. Sales of assets in digital industries rose by 69 per cent to \$136 billion – a record level. In deal numbers information and communication has been the most active sector since 2000; in 2021 it was also the largest in value terms. An important deal was the \$34 billion merger of Altimeter Growth (United States) with Grab (Singapore), a leading Asian “superapp” for food delivery, mobility and digital payments.

After the fall in value in 2020, the value of M&A sales in pharmaceuticals rose by 31 per cent, to \$73 billion, and the number of deals by 6 per cent, reaching 223 deals – the highest number ever recorded. The largest deal of the year was recorded in the pharmaceutical industry: the acquisition of Alexion (United States) by AstraZeneca (United Kingdom) for \$39 billion.

In developed countries, where cross-border M&As are a significant part of total FDI, the value of deals rose by 58 per cent to \$615 billion, mostly from tripling in North America, while in Europe the value remained flat at \$258 billion.

In other sectors, M&A sales in transportation and storage rose more than seven-fold to a record \$53 billion, mainly because of a single large deal in which Canadian Pacific Railway acquired Kansas City Southern (United States) for \$31 billion. Some large divestments were recorded in the electric and electrical equipment sector. For example, PPL (United States) sold its Bristol-based electric power distributor to National Grid (United Kingdom) for \$20 billion.

**Table I.7. Net cross-border M&As, by sector and selected industries, 2020–2021**

Sector/industry	Value (Billions of dollars)		Growth rate (%)	Number		Growth rate (%)
	2020	2021		2020	2021	
<b>Total</b>	<b>475</b>	<b>728</b>	<b>53</b>	<b>6 201</b>	<b>8 846</b>	<b>43</b>
<b>Primary</b>	25	28	11	658	639	-3
<b>Manufacturing</b>	228	239	5	1 136	1 674	47
<b>Services</b>	221	461	108	4 407	6 533	48
<i>Top 10 industries in value terms</i>						
Information and communication	80	136	69	1 248	2 114	69
Pharmaceuticals	56	73	31	211	223	6
Finance and insurance	28	72	157	562	733	30
Trade	18	63	255	495	663	34
Transportation and storage	7	53	651	224	324	45
Automotives	17	42	144	41	81	98
Professional services	11	41	268	447	689	54
Electronics and electrical equipment	40	38	-4	165	311	88
Real estate	22	35	57	327	420	28
Administrative and support services	6	28	413	206	303	47

Source: UNCTAD, cross-border M&A database (<https://unctad.org/fdistatistics>).

# B. SDG AND CLIMATE CHANGE INVESTMENT TRENDS

## 1. SDG investment trends

Cross-border investment in SDG sectors in developing economies was growing before the COVID-19 pandemic, although not at a sufficient rate to fill the SDG investment gap. International SDG investment was significantly hit in the first year of the pandemic, with double-digit declines across all sectors except renewable energy (WIR21). In 2021, with the overall investment recovery, SDG investment increased substantially, by 70 per cent, compared with 2020. The combined value of greenfield investment and international project finance in SDG sectors, which had dropped to \$218 billion in the first year of the pandemic (from \$312 billion in 2019) rebounded to \$371 billion in 2021, thus surpassing the pre-pandemic level. However, most of the recovery growth was due to international project finance activity in the renewable energy sector, where project values reached more than three times the pre-pandemic level.

While the 2021 recovery in value terms is positive, investment activity in most SDG-related sectors in developing economies, as measured by project numbers, remained below pre-pandemic levels (table I.8). Apart from renewables, only investment activity in education fully recovered to prior levels. Other sectors, including food and agriculture, health, physical infrastructure and WASH, partially recovered.

Greenfield investment in SDG sectors – mostly by individual firms – has started its recovery from the fall of 2020 but remains well below pre-pandemic levels (table I.9). In contrast, international project finance – large projects, often with the involvement of multiple investors, including financial institutions – is now well above pre-pandemic levels (table I.10).

Table I.8.

**International private investment in the SDGs: 2021 project numbers compared to pre-pandemic levels (Per cent)**

### Infrastructure

Transport infrastructure, power generation and distribution (except renewables), telecommunication



-11

### Renewable energy

Installations for renewable energy generation, all sources



+2

### WASH

Provision of water and sanitation to industry and households



-9

### Food and agriculture

Investment in agriculture, research, rural development



-35

### Health

Investment in health infrastructure, e.g. new hospitals



-25

### Education

Infrastructural investment, e.g. new schools



+17

Source: UNCTAD.

Table I.9.

## Announced greenfield projects in SDG sectors in developing economies

(Millions of dollars and per cent)

SDG-relevant sector	Developing economies				Of which, LDCs			
	2019	2020	2021	2020–2021 growth rate (%)	2019	2020	2021	2020–2021 growth rate (%)
<b>Total</b>								
Value	133 874	92 551	101 345	10	12 824	10 824	6 332	-41
Number of projects	1 686	1 147	1 277	11	114	85	69	-19
<i>Power<sup>a</sup></i>								
Value	18 484	10 841	4 169	-62	1 483	3 452	2 000	-42
Number of projects	45	22	20	-9	4	4	1	-75
<i>Renewable energy</i>								
Value	40 880	28 977	35 831	24	2 030	3 601	1 329	-63
Number of projects	241	190	144	-24	15	21	9	-57
<i>Transport services</i>								
Value	25 921	10 522	13 327	27	3 627	1 071	449	-58
Number of projects	321	182	269	48	36	17	22	29
<i>Telecommunication<sup>b</sup></i>								
Value	18 285	25 756	26 125	1	255	2 112	1 717	-19
Number of projects	303	241	281	17	6	22	20	-9
<i>Water, sanitation and hygiene (WASH)</i>								
Value	1 819	633	4 119	551	61	-	136	..
Number of projects	17	7	19	171	1	-	1	..
<i>Food and agriculture</i>								
Value	21 700	11 347	11 847	4	4 812	477	421	-12
Number of projects	428	291	271	-7	30	12	7	-42
<i>Health</i>								
Value	5 556	3 618	4 805	33	419	77	172	123
Number of projects	256	151	188	25	14	5	3	-40
<i>Education</i>								
Value	1 228	858	1 121	31	137	33	109	229
Number of projects	75	63	85	35	8	4	6	50

Source: UNCTAD, based on information from Financial Times Ltd, fDi Markets (www.fdimarkets.com).

<sup>a</sup> Excluding renewable energy.

<sup>b</sup> Including information services activities.

The stronger growth performance of international project finance can be explained by loose financing conditions, infrastructure stimulus and significant interest of financial market investors in participating in large-scale projects. It is likely that international project finance will increasingly play the leading role in SDG investment, including by leveraging public investment through private finance participation.

The diverging trends between greenfield and international project finance investment are evident across several sectors. Greenfield investment in the power sector continued to decline in 2021 and remained at less than half the level of 2019. In contrast, international project finance activity recovered almost to its pre-pandemic level, and its value increased by 68 per cent, due to large deals such as the 1.5 GW Basra gas-fired power project in Iraq, estimated at about \$10 billion.

Similarly, the number of greenfield investment projects in renewable energy remained continued to decline, although the value of such projects increased by 24 per cent, driven by a few large projects such as the Base-one project in Ceará, Brazil, valued at \$5.4 billion. International project finance activity in renewables is booming, increasing both in numbers of projects and in values, confirming the shift in sources of investment. It is responsible for the bulk of overall growth in SDG investment.

Table I.10.

## International project finance deals in SDG sectors in developing economies

(Millions of dollars and per cent)

SDG-relevant sector	Developing economies				Of which, LDCs			
	2019	2020	2021	2020–2021 growth rate (%)	2019	2020	2021	2020–2021 growth rate (%)
<b>Total</b>								
<b>Value</b>	<b>178 021</b>	<b>125 738</b>	<b>270 356</b>	<b>115</b>	<b>24 032</b>	<b>29 833</b>	<b>51 249</b>	<b>72</b>
<b>Number of projects</b>	<b>408</b>	<b>360</b>	<b>543</b>	<b>51</b>	<b>72</b>	<b>48</b>	<b>49</b>	<b>2</b>
<i>Power<sup>a</sup></i>								
Value	29 452	21 758	36 490	68	8 267	3 910	970	-75
Number of projects	46	32	39	22	13	6	3	-50
<i>Renewable energy</i>								
Value	53 231	69 149	183 171	165	7 970	12 695	46 519	266
Number of projects	283	275	393	43	46	35	35	0
<i>Transport infrastructure</i>								
Value	36 092	22 605	22 995	2	7 164	12 849	3 135	-76
Number of projects	46	21	50	138	9	4	6	50
<i>Telecommunication</i>								
Value	55 127	9 826	16 875	72	320	-	410	..
Number of projects	10	13	31	138	2	-	2	..
<i>Water, sanitation and hygiene (WASH)</i>								
Value	3 398	1 339	536	-60	130	380	138	-64
Number of projects	15	14	10	-29	1	3	2	-33
<i>Food and agriculture</i>								
Value	562	1 034	8 155	688	181	-	-	..
Number of projects	4	3	10	233	1	-	-	..
<i>Health</i>								
Value	120	9	2 035	22 514	-	-	-	..
Number of projects	2	1	5	400	-	-	-	..
<i>Education</i>								
Value	40	18	100	473	-	-	78	..
Number of projects	2	1	5	400	-	-	1	..

Source: UNCTAD, based on data from Refinitiv SA.

<sup>a</sup> Excluding renewable energy.

The momentum in international project finance, specifically in renewables, shows that this form of investment is particularly suitable for the risk profile of such projects in developing economies. The large size of some individual projects makes risk-sharing arrangements more attractive. International project finance deals also make it easier for domestic capital or governments to participate in or initiate the project. In the non-renewable power sector, a similar trend can be observed. The appetite of international investors for fossil-fuel-based facilities is waning, and projects are increasingly initiated by domestic or State-owned enterprises, explaining the stagnant greenfield numbers and continued growth in international project finance, through which international investors can participate in domestic projects.

Project finance activity in transport infrastructure more than doubled in numbers, returning to the pre-pandemic level, although the increase in value was marginal. Most of the international project finance investments target critical infrastructure in roads, bridges and ports. For example, Nigeria introduced five projects for expanding, repairing and maintaining 884 km of toll road. In Kenya, four bridge projects will bring connectivity with remote areas. Of the 600 international projects in transport infrastructure and services (considering both greenfield and project finance) announced in 2021, 319 are in developing economies and more than half in Asia (232 projects).

LDCs account for a small share, with only 28 projects. The Berbera Port and Economic Zone project is ground-breaking for the Horn of Africa, as it is poised to provide a trade gateway for the countries surrounding it. Such projects in LDCs have the potential to address long-term challenges in access to markets and supply chain bottlenecks.

In the telecommunication sector, which contributes to SDG 9 on universal access to industry, innovation and infrastructure, large-scale private investment clearly outweighs public sector investment. The most relevant projects from an SDG perspective are those in low-income countries, including LDCs, where a large share of the population is still excluded from access to basic infrastructure and connectivity. For example, in the Democratic Republic of Congo, a fibre network estimated at \$200 million will help to improve Internet access and connectivity for more than 30 million people across Central Africa. SDG-relevant greenfield activity in telecommunication picked up in 2021, also growing in value (1 per cent from a negative post-pandemic trend). International project finance activity in the sector more than doubled, with the value of deals also picking up (72 per cent). In LDCs, greenfield investment decreased in 2021 in comparison with 2020, and the level of project finance activity remains low.

Greenfield investments in WASH rallied in 2021. The value of announced investment increased six-fold, and the number of projects more than doubled. Yet project finance deals and activity in the sector continued to decline compared with pre-pandemic levels.

Investment in the food and agriculture sector also reversed the persistent negative trend and the pandemic shock. International project finance deals saw a recovery, both in value and in project activity in developing economies, although investment activity remains small, with only 10 projects in 2021. The large increase in value was driven by a \$7 billion phosphates project in Algeria, sponsored by China – now particularly important in light of shortages in phosphorus-based fertilizers caused by the war in Ukraine. In LDCs, greenfield investments lagged, and no project finance activity was registered in 2021.

Greenfield investment in the health sector partially recovered in 2021. Investments included hospitals and several COVID-19-related projects such as vaccine production. The sharp rise in project finance values was due to a single \$1.6 billion project involving the construction of a large hospital and subsidiary facilities in China. Out of 188 new greenfield projects in the health sector, only 3 were in LDCs. However, the total value of such investment in LDCs increased, driven by BioNTech (Germany), which will construct a vaccine production facility in Rwanda at a total estimated cost of \$79 million.

International investment in the education sector has fully recovered from the pandemic-related decline. A number of education projects were announced in developing countries, including a significant expansion of rural secondary schools in Malawi (table I.11).

In LDCs, the SDG investment trend is less favourable than in other developing economies, and the detrimental impact of the pandemic persists. The share of total SDG investment in developing countries (both greenfield and international project finance values) that went to LDCs decreased from 19 per cent in 2020 to 15 per cent in 2021. Their share in the number of projects declined from 9 to 6 per cent.

Physical infrastructure and broader infrastructure industries (including utilities and power) are capital-intensive projects that are highly dependent on the long-term risk outlook. This can explain in part the stagnant trend in LDCs. In addition, the boost in infrastructure project finance in developed economies and high-income developing countries because of pandemic-related recovery packages risks drawing private project sponsors away from LDC markets (*WIR21*). The unfavourable trends in SDG-related investment in LDCs add to their structural handicaps and aggravate persistent challenges, including weak infrastructure, underdeveloped human capital and a narrow productive capacity base.

Table I.11.

## Examples of SDG-relevant investment projects in developing economies announced in 2021, by sector

SDG-relevant sector	Country	Project name	Total cost estimate (Millions of dollars)	Description
Renewable energy and power	Mauritania	30 GW Mauritania Power-to-X Hydrogen Project	40,000	PPP project in the Sahara sponsored by Australian developer CWP Global and the Government, generating wind and solar energy to power electrolyzers to produce hydrogen
	Malaysia	20.76 MW Kulim Large-Scale Solar Photovoltaic Project	20,725	Build-own-operate project by Energy ES, an incorporated joint venture company of Savelite Engineering, Moderntent Development and Frasers Construction
	Viet Nam	3900 MW Hai Phong Offshore Wind Power Plant Project	11,900	A build-own-operate project funded by a joint venture between T&T Group and Orsted
Telecommunication	Nigeria	MTN Nigeria Network Infrastructure Project	1,460	A build-own-operate project, sponsored by MTN Nigeria Communications, to connect some 3,000 rural communities to the network
	Democratic Republic of Congo	Liquid Technologies and Facebook Fibre Network Project	202	Construction of a fibre network to help connect East and West Africa, enabling improved Internet access for more than 30 million people across Central Africa
	Sri Lanka	Axiata and Mavenir TIP Evenstar 4G Radio Project	154	Deployment and integration of Open vRAN in Sri Lanka, Malaysia and Indonesia to provide seamless service continuity, better mobile broadband experience and next-generation voice services
Transportation	Egypt	Bombardier Transportation Monorail Project	2,321	Construction of two monorails to connect the New Administrative City with East Cairo and 6th October City with Giza
	El Salvador	Tren Pacifico Rail PPP Project	450	A 555-km mass transit system under a PPP scheme, sponsored by Comisión Ejecutiva Portuaria Autónoma and the Central American Bank for Economic Integration
	Bangladesh	Bangladesh Dual-Gauge Railway Line Project	282	A build-own-operate project comprising construction of an 80-km mass transit system, with Bangladesh Railway and Rites Ltd as sponsors
Water, sanitation and hygiene (WASH)	Saudi Arabia	Solar-powered water desalination plant in Saudi Arabia	827	Construction of the largest solar-powered water desalination project, under a PPP scheme sponsored by Engie and Saudi Water Partnership, awarded as a build-own-operate contract, with commercial operation expected in 2024
	Egypt	Wastewater treatment plant (El-Hammam)	739	Construction of an agricultural waste management plant with a capacity of 6 million cubic metres, in a joint venture with Hassan Allam, Arab Contractors and Orascom Construction
	Mozambique	Pemba Water Supply Center and Pipeline Network Project	134	A build-own-operate project including construction of a 172-km water pipeline; sponsored by Water Supply & Sanitation Service Improvement Project

/...

Table I.11.

**Examples of SDG-relevant investment projects in developing economies announced in 2021, by sector** (Concluded)

SDG-relevant sector	Country	Project name	Total cost estimate (Millions of dollars)	Description
Health	Kazakhstan	RenEl Multidisciplinary Hospital PPP Project	303	Construction of several multidisciplinary hospitals in the cities of Kokshetau, Aktobe, Atyrau, Aktau, Taraz, Pavlodar, and Karaganda, sponsored by RenEl and provided for the State Programme for the Development of Health Care for 2020-2025
	Sri Lanka	Hambantota COVID-19 Vaccine Plant Project	154	Construction of a hospital in Hambantota in a deal allowing the facility to source up to 9 million COVID-19 vaccine doses
	Malaysia	Chukai Private Specialist Hospital Project	24	Construction of 100 beds on 2.2 hectares of land owned by the Kemaman Municipal Council in Kg. Jaya, Mukim Chukai, Kemaman that will give residents in the southern part of Terengganu access to high-quality health care and specialist treatment
Food and agriculture	Taiwan Province of China	Linkou District Wind-Powered Smart Farm Project	82	Construction of a demolition wind-powered smart farm, sponsored by Alternaturals Inc under a build-own-operate scheme
	South Africa	Pinetown Plant Upgrading Project	34	Construction of a flour mill by Tetra Pak Nordic Holding in a build-own-operate project that aims to have the world's most sustainable packaging made from renewable materials
	Maldives	Sustainable Economic Empowerment and Development (SEED) Project	2	Support for households affected by COVID-19 by assisting 2,000 MSMEs and 250 smallholder farmers through the Business Center Corporation's outreach initiatives, implemented in a build-own-operate mode, by the Government of Japan and the United Nations Development Programme, with enhanced private sector participation
Education	Malawi	Malawi Rural Secondary Education Expansion for Development (SEED) Project	78	Building of 38 schools in a partnership between the governments of the United States and of Malawi, funded through Basic Education and PEPFAR funds
	Malaysia	Sankyu Technical Academy	29	Building of the company's first human resources training centre outside of Japan, in the Medini Central Business District, under a build-own-operate scheme
	Peru	Colegio San Felipe, Escuela Nuestra Senora de La Visitacion, Jose de la Torre Ugarte, Jorge Basadre Grohman School Project	7	Building of 75 schools by a consortium of eight companies from the United Kingdom and Finland (Gleeds, Arup Group, 4Global, AFRY Group Finland, Lahdelma & Mahlamki Architects, Isku, Polar Partners and Mace)

Source: UNCTAD, based on data from Refinitiv SA.

The dependence of many developing economies, and particularly LDCs, on grain imports from the Russian Federation and Ukraine and their consequent vulnerability to the food crisis underscore the need to accelerate efforts to foster international private investment in food security and to diversify food supply chains. Despite the calls for increased investment as part of the effort to achieve SDG 2 on food security, investment in agriculture remains small, at less than 1 per cent of total FDI flows globally.



## 2. Climate change and investment

UNCTAD first reported on the investment gap in climate change mitigation and adaptation in *WIR14*, which analysed investment needs and investment levels across all SDG areas. Subsequently, the *SDG Investment Trends Monitor* and the *WIR* series have continued to report on trends in these two areas. In consideration of the growing urgency and renewed emphasis placed on the mobilization of financial resources for investment in combating climate change for COP27, this section on climate change and investment breaks down the aggregate figures on mitigation and adaptation provided in the SDG investment section. It also adds insights on other relevant sectors to provide a more granular view of investment trends related to climate change. The analysis focuses on cross-border private investment and reports mostly greenfield investment and international project finance trends. The data collection approach follows the same methodology used for the assessment of SDG investment trends (box I.3).

### Box I.3. Measuring international private climate change investment

UNCTAD's data on climate change investment focus on direct investments in greenhouse gas (GHG) emission reductions and climate resilience activities. It includes greenfield investments (new projects and expansions by individual overseas investors) and project finance (large-scale projects, mostly in infrastructure industries, involving multiple investors and a significant debt component). Both greenfield investments and international project finance data are on an announcement basis.<sup>a</sup>

As in the case of UNCTAD's *SDG Investment Trends Monitor* and in line with the scope of the *World Investment Report*, the focus is on international investment, i.e. cross-border investment flows. For international project finance this implies that the project's sponsor is an international investor (although co-investors may include domestic financiers).<sup>b</sup>

International project finance investment flows are retrieved from Refinitiv SA and greenfield investments are sourced from fDi Markets. The sectoral breakdown distinguishes the following categories:

#### Climate change mitigation

*Renewable energy.* This includes investments in power generation projects from the following sources: biomass, geothermal, hydroelectric, solar, tidal or wave (marine) and wind. While energy from residual waste (excluding biomass) is only partially renewable due to the presence of fossil-based carbon in the waste, such projects are also included in this category. As hydrogen is a secondary source of energy, only projects producing hydrogen from the renewable energy sources listed above qualify as climate mitigation investments. Whenever the primary source of energy is not specified in the project, the project is not included in the renewable energy category.

*Energy efficiency and emission reduction.* Projects included in this category vary depending on the data available across data sets. Greenfield investment data distinguish electric vehicles and clean technologies, which include investments in the production of new materials used in developing renewable energy projects and other products that contribute to reducing greenhouse gases emissions. fDi Markets allows for the identification of such projects across standard industrial classifications through its project tags. International project finance further includes energy transmission lines, carbon capture and battery storage projects.

*Low-carbon mobility.* This category captures transport projects that contribute to a decrease in GHG emissions. They consist mostly of projects in public transport (trains, buses, municipal transport).

#### Climate change adaptation

*Water management.* This category includes investments in projects building resilience to climate related changes in the water cycle. Both fDi Markets and Refinitiv SA provide a sufficiently granular industrial breakdown to identify such projects.

*Other adaptation projects.* Several industry-wide projects fall into this category including investments that improve the climate resilience of existing infrastructure, as well as investments in climate-resilient agriculture and coastal protection. These projects are selected through manual screening of the database.


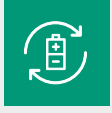



Source: UNCTAD.

<sup>a</sup> The value of such a project indicates the capital expenditure planned by the investor at the time of the announcement. Data can differ substantially from the official FDI data as companies can raise capital locally and phase their investments over time, and a project may be cancelled or may not start in the year when it is announced.

<sup>b</sup> UNCTAD's sectoral breakdown of international investment flows is based on the methodology in the *Global Landscape of Climate Finance* (Climate Policy Initiative, 2021) but adapted to the granularity and quality of data available for international project finance and greenfield investments.



**Table I.12. Climate change investment categories**

Sectors	Investment area
<b>Climate change mitigation</b>	
Renewable energy	 <ul style="list-style-type: none"> <li>• Power generation from: biomass, geothermal, hydroelectric, hydrogen, solar, tidal or wave, waste (excluding biomass), wind.</li> </ul>
Energy efficiency/ emission reduction	 <ul style="list-style-type: none"> <li>• Energy provision efficiency transmission lines, battery storage, carbon capture.</li> <li>• Other investments in energy efficient technology or products: electric vehicles, clean technologies.</li> </ul>
Low-emission transport	 <ul style="list-style-type: none"> <li>• Mass transit systems: rail, public transport systems.</li> </ul>
<b>Climate change adaptation</b>	
Water management	 <ul style="list-style-type: none"> <li>• Investments on climate related changes in the water cycle: water pipelines, water supply, district cooling (i.e. deep ocean or lake water cooling systems), desalination, water storage, disposal and treatment.</li> </ul>
Other adaptation	 <ul style="list-style-type: none"> <li>• Investments to improve the climate resilience of existing infrastructure, and coastal protection.</li> <li>• Climate resilient agriculture, such as flood / drought resistant crops.</li> </ul>

Source: UNCTAD.

Climate change investments are broadly defined as *mitigation* investments in cleaner and/or more energy-efficient technologies supporting the reduction of greenhouse gas emissions, and *adaptation* investments, which are those in critical infrastructure, technologies and activities to improve resilience and help adapt to the consequences of climate change. Table I.12 shows the categorization adopted for the purpose of reporting international investment trends in this section. Combating climate change will require many other types of investment, including in research and development, energy-efficient buildings and means of production, green minerals and materials needed to produce batteries or clean energy technologies, as well as other, often yet unknown adaptation investments. The scope here is limited to the key areas in which international direct investors are active to date and for which it is possible to monitor discrete investment projects.

For international private investment, mitigation is far more important than adaptation. The attractiveness of the various categories of climate-relevant investment for the private sector depends on the existence of a clear revenue model and on project- and country-level risks (*WIR21*). Adaptation projects are often public goods, characterized by steep upfront costs, long investment timelines, lack of a clearly identifiable revenue stream or unattractive risk-return profiles. These categories necessarily rely on public investment (table I.13).

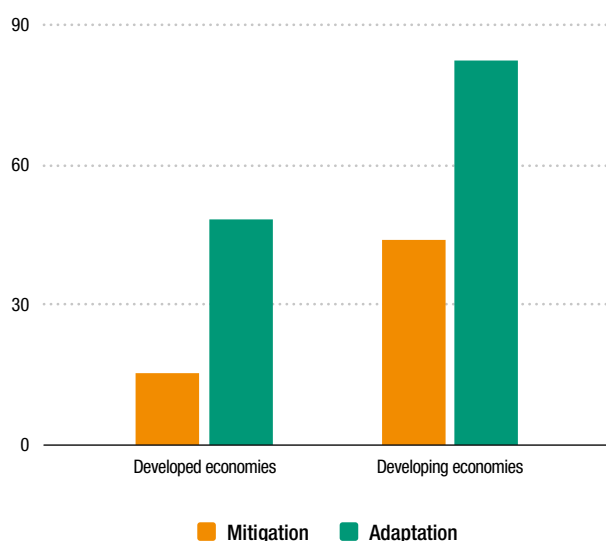
Looking at total climate change mitigation finance in 2019, 54 per cent was funded by private sources in 2019–2020.<sup>2</sup> For project finance, the share is even higher, with 85 per cent of mitigation investments (including domestic projects) in developed economies and 56 per cent in developing economies not requiring any public sector involvement (figure I.16).<sup>3</sup> In contrast, just over half of adaptation projects in developed economies and only 18 per cent in developing ones have no government involvement. For very large projects in mitigation, and in particular in developing economies, the involvement of multilateral development banks is often required to lower investment risk.<sup>4</sup>

**Table I.13. Adaptation and mitigation: the scope for private investment**

Scope for private investment	Example projects
i. Projects that are pure public goods	Floodwalls, protection systems for dams, drainage systems, reforestation, mangrove protection, disaster prevention, early warning systems
ii. Projects that allow for PPP models or concessionary schemes (identifiable revenue stream)	Climate resilient infrastructure, green infrastructure, water management, public transportation
iii. Projects that can be privately financed but that may require incentives or subsidies to cover the additional cost of making them climate friendly or climate-change resilient	Agricultural investment in resistant crops, weather monitoring systems, clean technologies, carbon-neutral buildings, carbon capture
iv. Projects that can be purely privately financed	Renewable energy generation, electric vehicles, green minerals extraction

Source: UNCTAD.

**Figure I.16. Share of government participation in mitigation and adaptation project finance investments, 2011–2021**  
(Per cent)



Source: UNCTAD, based on data from Refinitiv SA.

Note: The data include both domestic and international projects.

Categories that have higher shares of projects with public sector participation show a correspondingly lower share of internationally sponsored projects. In developing economies where the political and economic environment for investors is less predictable, government involvement – especially through equity participation – can reduce the perceived risk of the project. However, beyond a certain threshold, higher government equity shares can also discourage foreign investors, as they may fear public interference and governance issues (WIR21; Barclay and Vaaler, 2021).

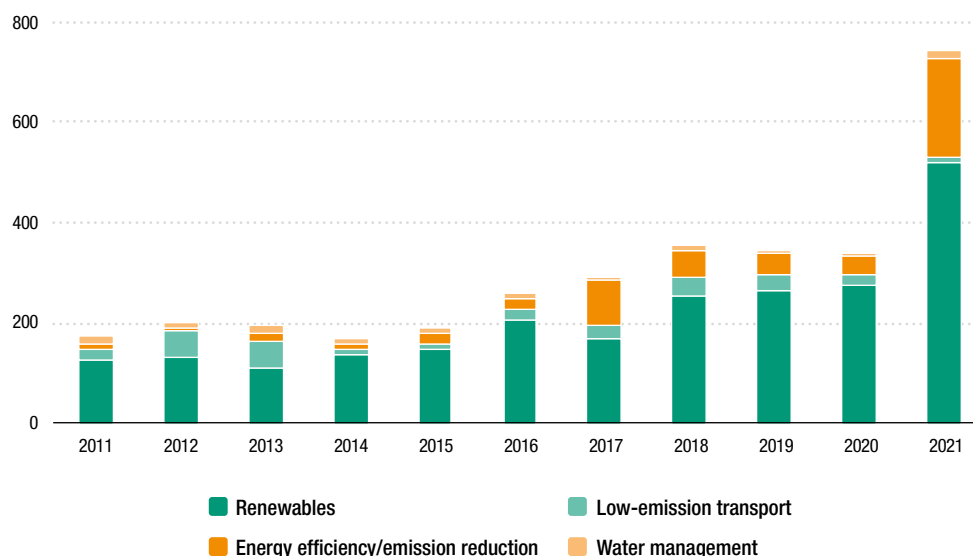
In both developed and developing economies, fewer than a quarter of adaptation projects have a foreign sponsor, and nearly all of those are water management projects. Beyond water management, only a single adaptation project in resilient infrastructure had a foreign sponsor over the last decade: a \$38 million project in the Marshall Islands to develop energy-efficient, disaster- and climate-resilient digital infrastructure across all 24 inhabited atolls and islands, announced in 2019.

## Trends

Mitigation projects account for more than 95 per cent of international climate investments, with the remainder in adaptation. The vast majority is in renewables and, to a lesser extent, in energy efficiency projects (figure I.17). In developing regions, the share of adaptation projects is higher (12 per cent, compared with 1 per cent in developed economies) owing to the greater prevalence of international water management projects.

Climate investment showed an upward trend after the adoption of the SDGs in 2015, a trend that was interrupted by the pandemic but recovered strongly in 2021, with total project values at twice the pre-pandemic level of 2019. Mitigation investments funded through international project finance more than doubled in value. Adaptation project values increased almost three-fold, although project numbers remained low (table I.14).

**Figure I.17. International mitigation and adaptation investment projects, 2011–2021** (Billions of dollars)



Source: UNCTAD, based on information from Financial Times Ltd, fDi Markets (www.fdimarkets.com) for greenfield projects and Refinitiv SA for international project finance deals.

**Table I.14. Announced greenfield and international project finance deals in climate change sectors, 2019–2021** (Millions of dollars and per cent)

Climate Change relevant sector	Announced greenfield projects				International project finance deals			
	2019	2020	2021	2020–2021 growth rate (%)	2019	2020	2021	2020–2021 growth rate (%)
<b>Total mitigation</b>								
<b>Value</b>	125 149	115 439	159 787	38	212 888	217 556	552 203	154
<b>Number of projects</b>	804	739	1 090	47	761	814	1 226	51
<i>Renewable energy</i>								
Value	92 479	92 016	85 175	-7	170 835	185 225	418 306	126
Number of projects	520	524	467	-11	712	764	1 070	40
<i>Energy efficiency or emission reduction</i>								
Value	31 651	23 173	74 456	221	9 061	13 003	124 011	854
Number of projects	258	205	611	198	33	39	136	249
<i>Low-emission transport</i>								
Value	1 019	250	156	-37	32 991	19 328	9 886	-49
Number of projects	26	10	12	20	16	11	20	82
<b>Total adaptation</b>								
<b>Value</b>	2 316	716	4 412	516	4 383	3 358	9 305	177
<b>Number of projects</b>	35	15	30	100	21	21	19	-10
<i>Water management</i>								
Value	2 316	716	4 412	516	4 383	3 358	9 268	176
Number of projects	35	15	30	100	21	21	18	-14
<i>Other adaptation</i>								
Value	-	-	-	..	-	-	38	..
Number of projects	-	-	-	..	-	-	1	..

Source: UNCTAD, based on information from Financial Times Ltd, fDi Markets (www.fdimarkets.com) for greenfield projects and Refinitiv SA for international project finance deals.

Renewables and energy efficiency projects accounted for most of the growth in 2021. New projects included, for example, the Xlinks subsea transmission cables project in Morocco, which involves the construction of a 3,800 km transmission line with 3.6 GW of capacity (estimated at \$20 billion) to enable solar energy from the Sahara and wind power off the Atlantic to be sent to the United Kingdom. Another example is the carbon capture and storage project at the Bayu-Undan offshore gas field in Timor-Leste waters, estimated to cost \$1.6 billion. Other examples appear in table I.15.

Renewable energy project finance and greenfield investments represented 70 per cent of all international climate change investments in 2021, with projects in developed economies accounting for the lion's share (61 per cent). Europe alone accounted for almost half of renewables projects, followed by Latin America and the Caribbean, North America and developing Asia – each of which attracted about 200 projects in 2021 (figure I.18). The number of international projects in renewables in Africa doubled between 2011 and 2021, from 36 to 71, including several megaprojects such as the power-to-x project for the construction of a 30 GW hydrogen plant in Mauritania (estimated at \$40 billion).

Within renewables, solar and wind accounted for more than three quarters of investments. They reached a peak share of 86 per cent in the years 2018 to 2020 (figure I.19). Historically, hydroelectric energy has always been important in renewables investment, with yearly investments of \$15–20 billion. Other sources are slowly gaining importance, including biomass, with about \$10 billion of investment in recent years; hydrogen, which boomed in 2021; and, especially in developed economies, waste-to-energy projects. After remaining stagnant in 2019 and 2020, international investments in renewables almost doubled in 2021, due to a 42 per cent increase in investments in solar and wind energy generation and a boom in green hydrogen energy.

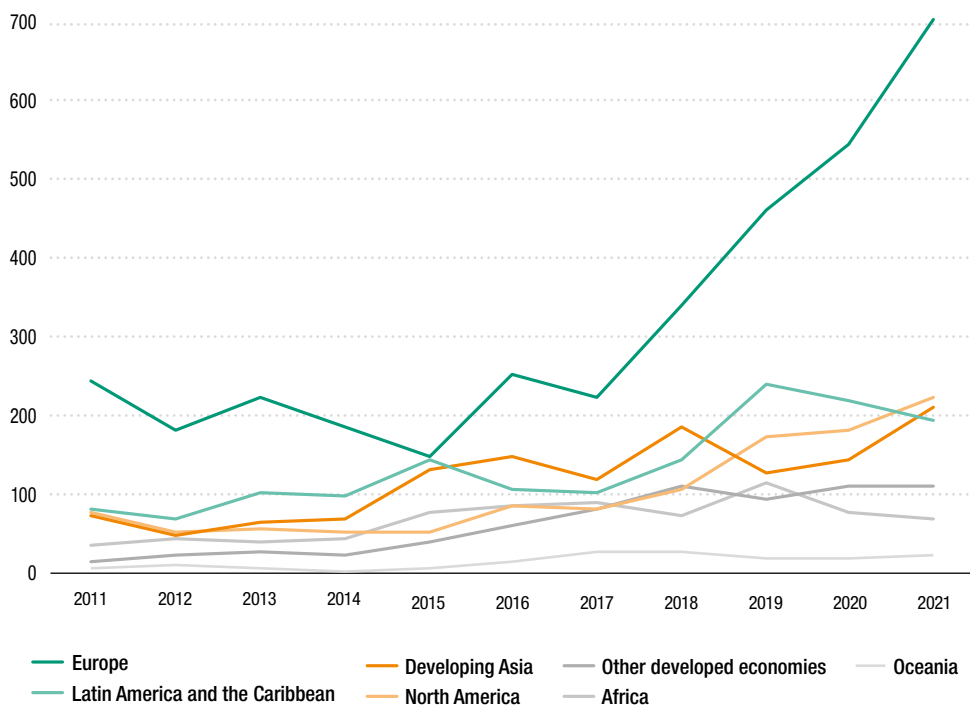
**Table I.15. Examples of international project finance deals in renewable energy, developing economies, 2021**

Renewable energy <sup>a</sup>	Country	Project name	Value (Millions of dollars)
Biomass	Philippines	Prime Infrastructure Waste-to-Fuel Biorefinery Project	424
Geothermal	Nicaragua	San Jacinto-Tizate Geothermal Power Project	280
Green hydrogen	Brazil	Pecem Industrial Complex Green Hydrogen Project	2,000
Hydroelectric	Burundi	10.2 MW Mpanda Hydropower PPP Project	43
Residual waste (excluding biomass)	Kazakhstan	Kazakhstan Waste Incineration Power Plant Project	110
Solar	South Africa	Kenhardt Solar and Battery Project	1,000
Wind	Sri Lanka	200 MW Mannar Wind Power Project	93

Source: UNCTAD, based on data from Refinitiv SA.

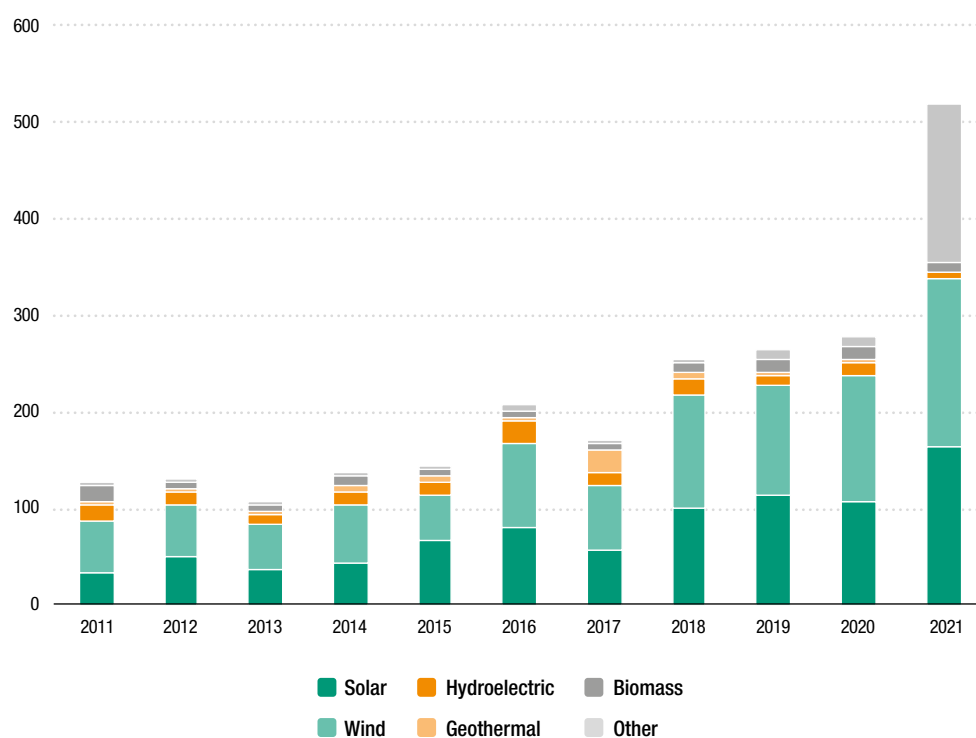
<sup>a</sup> No tidal or wave (marine) projects have been reported in developing economies since 2015.

**Figure I.18. International investments in renewables, by region, 2011–2021**  
(Number of projects)



Source: UNCTAD, based on information from Financial Times Ltd, fDi Markets ([www.fdimarkets.com](http://www.fdimarkets.com)) for greenfield projects and Refinitiv SA for international project finance deals.

**Figure I.19. Investment projects in renewables, by type, 2011–2021** (Billions of dollars)



Source: UNCTAD, based on information from Financial Times Ltd, fDi Markets ([www.fdimarkets.com](http://www.fdimarkets.com)) for greenfield projects and Refinitiv SA for international project finance deals.

The energy price shock caused by the war in Ukraine could have implications for international investment in the energy transition. On the one hand, a significant increase in oil and gas prices, as seen immediately after the start of the war (although mitigated since by policy action), could shift investment back into extractive industries and fossil-fuel-based energy generation, temporarily reversing the trend towards renewables documented over the past 10 years. In 2011–2013, when oil prices were last above \$100 per barrel, the total value of investment projects in fossil fuels was almost a third higher on average than in the second half of the last decade. On the other hand, expectations are that the fuel crisis will also boost investment in renewable energy, especially in Europe. However, investment in renewables is already growing at high speed, and it is unclear if further stimulus could generate enough capacity in the short term to replace supplies by the Russian Federation.

# C. INTERNATIONAL PRODUCTION

## 1. Key indicators of international production

International production gained further strength in 2021, with all indicators of FDI rising, albeit at different growth rates (table I.16). FDI stock reached a record \$45 trillion, equivalent to almost half of global GDP. Therefore, the rate of return remained unchanged, at 4.9 per cent, despite the jump in corporate profits.

**Table I.16. Indicators of FDI and international production, 2021 and selected years**  
(Billions of dollars)

Item	Value at current prices					
	1990	2005–2007 (pre-crisis average)	2018	2019	2020	2021
FDI inflows	205	1 425	1 448	1 481	963	1 582
FDI outflows	244	1 464	941	1 124	780	1 708
FDI inward stock	2 196	14 605	32 843	36 530	41 728	45 449
FDI outward stock	2 255	15 315	31 393	34 496	39 546	41 798
Income on inward FDI <sup>a</sup>	82	1 129	2 199	2 264	1 997	2 193
<i>Rate of return on inward FDI<sup>b</sup></i>	5.2	9.2	6.5	6.0	4.9	4.9
Income on outward FDI <sup>a</sup>	128	1 243	2 128	2 259	2 041	2 131
<i>Rate of return on outward FDI<sup>b</sup></i>	8.4	10.5	6.5	6.6	5.4	5.3
Cross-border M&As	98	729	816	507	475	728
Announced greenfield FDI projects	..	..	982	846	575	659
Sales of foreign affiliates	4 801	19 781	32 884	32 889	..	..
Value added of foreign affiliates	1 074	4 668	7 148	6 512	..	..
Total assets of foreign affiliates	4 649	47 124	96 130	92 235	..	..
Employment by foreign affiliates (thousands)	20 449	49 840	84 066	83 597	..	..
<i>Memorandum:</i>						
GDP <sup>c</sup>	23 475	52 481	86 085	87 536	85 239	96 293
Gross fixed capital formation <sup>c</sup>	5 838	12 477	21 908	22 488	22 028	24 902
Royalties and licence fee receipts	31	189	417	457	469	471

Source: UNCTAD.

Note: Not included in this table are the value of worldwide sales by foreign affiliates associated with their parent firms through non-equity relationships and of the sales of the parent firms themselves. Worldwide sales, value added, total assets and employment of foreign affiliates are estimated by extrapolating the worldwide data of foreign affiliates of MNEs from Australia, Austria, Belgium, Canada, Czechia, Finland, France, Germany, Greece, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Portugal, Slovenia, Sweden, Switzerland and the United States for sales; those from Czechia, France, Israel, Japan, Portugal, Slovenia, Sweden and the United States for value added (product); those from Austria, Germany, Japan and the United States for assets; those from Czechia, Japan, Portugal, Slovenia, Sweden and the United States for exports; and those from Australia, Austria, Belgium, Canada, Czechia, Finland, France, Germany, Italy, Japan, Latvia, Lithuania, Luxembourg, Macao (China), Portugal, Slovenia, Sweden, Switzerland and the United States for employment, on the basis of three-year average shares of those countries in worldwide outward FDI stock.

<sup>a</sup> Based on data from 168 countries for income on inward FDI and 144 countries for income on outward FDI in 2021, in both cases representing more than 90 per cent of global inward and outward stocks.

<sup>b</sup> Calculated only for countries with both FDI income and stock data. The stock is measured in book value.

<sup>c</sup> Data from IMF (2022b).

## 2. Internationalization trends of the largest MNEs

The recovery after the first year of the pandemic enhanced the degree of internationalization of the top 100 MNEs but this was mostly limited to their sales (table I.17). Rescue and stimulus packages boosted revenues of companies in construction materials, mining, hydrocarbons, commodity trading and utilities (especially those with a greener energy portfolio). High demand for health-care products lifted revenues of pharmaceutical MNEs, almost doubling them for major vaccine providers. In some cases these higher sales, combined with low interest rates and high share prices, translated into foreign acquisitions and expansion of business lines abroad.

The largest deal was the acquisition by the pharmaceutical firm AstraZeneca (United Kingdom) of Alexion Pharmaceuticals (United States) for \$40 billion. Perhaps an even bigger operation was a complex asset swap deal (the value of which was not fully disclosed) that started in 2018 and was completed in 2020; it brought RWE (Germany) into the upper half of the 2021 ranking by more than doubling its foreign assets.<sup>5</sup> The deal involved the acquisition of the international business of E.ON (Germany) with the objective to transform the vertically integrated utilities company and refocus it on renewables.

Automotive MNEs also enjoyed an increase in revenues, capturing some of the pent-up demand of 2020; however, they did not increase their foreign investment, having to concentrate on overcoming supply chain constraints. Similarly, light industry MNEs, despite the stabilization of consumer demand, mostly abstained from expanding their overseas operations.

Table I.17.

### Internationalization statistics of the 100 largest non-financial MNEs, worldwide and from developing economies (Billions of dollars, thousands of employees and per cent)

Variable	100 largest MNEs, global					100 largest MNEs, developing economies		
	2019 <sup>a</sup>	2020 <sup>b</sup>	Change, 2020–2019 (%)	2021 <sup>b</sup>	Change, 2021–2020 (%)	2019 <sup>a</sup>	2020	Change (%)
<b>Assets</b> (Billions of dollars)								
Foreign	9 322	9 591	2,9	10 092	5,2	2 479	2 642	6,6
Domestic	7 698	8 251	7,2	8 664	5,0	5 061	5 857	15,7
Total	17 021	17 842	4,8	18 756	5,1	7 540	8 499	12,7
Foreign as share of total (%)	55	54		54		33	31	
<b>Sales</b> (Billions of dollars)								
Foreign	5 982	5 196	-13,1	6 409	23,3	1 963	1 812	-7,7
Domestic	4 375	3 950	-9,7	4 720	19,5	3 155	3 041	-3,6
Total	10 357	9 146	-11,7	11 128	21,7	5 118	4 854	-5,2
Foreign as share of total (%)	58	57		58		38	37	
<b>Employment</b> (Thousands)								
Foreign	9 591	9 140	-4,7	9 157	0,2	4 359	4 150	-4,8
Domestic	10 396	10 192	-2,0	11 000	7,9	8 981	8 971	-0,1
Total	19 987	19 332	-3,3	20 157	4,3	13 341	13 121	-1,6
Foreign as share of total (%)	48	47		45		33	32	
Unweighted average TNI	61	62		62		50	48	
Median TNI	63	62		61		49	47	

Source: UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>).

Note: Data refer to fiscal year results reported between 1 April of the base year and 31 March of the following year. Complete 2021 data for the 100 largest MNEs from developing economies are not yet available.

<sup>a</sup> Revised results.

<sup>b</sup> Preliminary results.



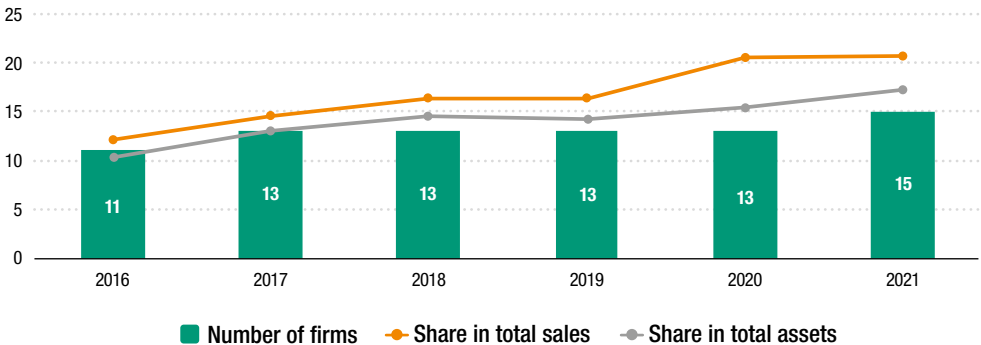
The aggregate transnationality index (TNI) of the top 100 MNEs was weighed down by corporate restructuring operations and reconfigurations carried out by several firms in the ranking. For example, the spin-off of its truck unit by Daimler (Germany) led to a 17 per cent decrease in its foreign assets. Daimler had restructured into a holding company containing a car division, a truck unit and a financial services arm in 2019, but weak synergy between the two manufacturing businesses and a diverging geographical focus led to the spin-off. General Electric (United States) continued its decade-long restructuring, selling its Capital Aviation Services to AerCap (Ireland) for \$30 billion and announcing it will further split into three companies focused on health care, energy and aviation.

The top developing-country MNEs resumed overseas investment activity in 2021, especially in the services industries. Among the largest deals were the continued expansion of State Grid (China) in the Chilean energy provision market with the acquisition of Cia General de Electricidad for \$3.1 billion; the South African digital MNE Naspers' acquisition of Stack Exchange (United States), a provider of knowledge-sharing and management platforms, for an estimated \$1.8 billion; and the purchase by logistics company DP World (United Arab Emirates) of Syncreon NewCo (United States), a provider of long-distance freight trucking services, for \$1.2 billion.

The second year of the pandemic continued to buoy tech MNEs but not equally across different segments of the industry. Competition in the software and IT services industry depressed revenues and led IBM (United States) to spin off the IT services business Kyndryl. In contrast, consolidation and support through national industrial policies gave a big push to semiconductor companies; e.g. Micron Technology (United States) joined the top 100 ranking. Together with the return to the ranking of Oracle (United States), this brings the total number of tech and digital MNEs to 15.<sup>6</sup> In comparison with five years ago, the list also includes two Chinese hardware producers, Legend and Huawei, while the semiconductor producer Broadcom (United States) and the hardware company Nokia (Finland) have dropped off the list.

Tech MNEs have an international footprint that differs fundamentally from that of other MNEs because, with their many digital services, they can often reach foreign markets without making large investments in overseas assets (WIR17). Figure I.20 depicts the recent evolution of tech MNEs' share of assets and sales in the top 100 ranking. Tech MNEs have gained increasing weight in the ranking in terms of number of companies and also in terms of their share in total assets and sales. Sales have been growing at an annual rate of 19 per cent since 2016, compared with about 4 per cent for the rest of the MNEs in the ranking. The pandemic has further accelerated this trend, so that tech MNEs' revenues now account for more than 20 per cent of the ranking's total sales.

**Figure I.20.** Evolution of tech MNEs in UNCTAD's ranking of the top 100 MNEs, 2016 – 2021 (Number and per cent)



Source: UNCTAD FDI/MNE database (<https://unctad.org/fdistatistics>).

### 3. Internationalization trends of digital MNEs

To assess the potential impact of digitalization on international production, *WIR17* analyzed and provided a ranking of the top 100 digital MNEs. An update of this ranking provides evidence of their growing importance in the economy (box I.4).

The inherent dynamism of digital companies, coupled with the pandemic-induced acceleration in the adoption of digital solutions, is reflected in a significant number of new companies (39) in the ranking of the top 100 digital MNEs. The segments that saw the highest relative number of new entrants were Internet platforms (9 out of 15) and e-commerce (9 out of 21), with the initial public offerings of relevant digital companies that were private during the compilation of the first top digital ranking, such as Airbnb (United States), Didi Global (China), Uber (United States) and WeWork (United States). In both segments new entrants represent almost half of the companies in the group. In absolute terms the digital solution category had the highest number of new entrants (14). With respect to the companies that fell out of the ranking, almost a third (14) were acquired by others. This is the case of LinkedIn (acquired by Microsoft), Priceline (by Booking Holdings (United States)), Viacom (by National Amusement (United States)) and Sky (by Comcast (United States)), among others. Another third of the companies that fell out of the ranking (14) were simply outranked by other companies.

Despite the high number of new companies, the ranking is still dominated by companies from developed economies, mostly from the United States (59) followed by other developed economies (32). Nonetheless, MNEs from South-East Asia and Latin America are gaining global relevance, e.g. Mercado Libre (Argentina), and Joyy and SEA (both Singapore).

Especially for e-commerce MNEs, local knowledge is proving an important factor, as shown by the large share (two thirds) of non-United States MNEs. Geographical diversity also increased in the internet platforms segment with the entry of companies from China, Singapore and Europe. In particular, the Chinese search engine Baidu has expanded its foreign operations since 2016, including by entering a partnership with the social network company Snap (United States). Despite their economic importance, preeminent Chinese digital companies (such as Meituan and JD.com) are not represented in the ranking owing to their focus on the large domestic market.

The overall FDI lightness – the ratio of the foreign share of sales to the corresponding share of assets – of the new ranking is higher than that of the 2017 ranking. This is partly because the new entrants were on average 30 per cent lighter than the companies that continued in the ranking. Digital solution entrants were two times lighter than the companies that carried over from the previous ranking.

Overall, for digital MNEs, the ratio between the share of sales generated by foreign affiliates and the corresponding share of foreign assets (the FDI lightness index) is very high compared with that of UNCTAD's top 100 MNE ranking, with the exception of the tech group in that broader ranking (table I.18).<sup>7</sup> Between 2016 and 2021, the sales of traditional MNEs in UNCTAD's top 100, excluding technology MNEs, increased at a much slower pace than those of top digital companies, further accentuating the difference between digital and traditional MNEs.

Foreign asset lightness varies between segments of the digital economy, which highlights the different underlying business models within this group of MNEs. Internet platforms and digital solutions have the lightest ratios. Their business model is easily scalable internationally; it does not necessarily require physical capital investment in each of the markets where they generate sales. In contrast, e-commerce and digital content MNEs are more similar to traditional MNEs. Global e-commerce firms rely on their own large-scale

distribution centres across the world, while many digital content MNEs are traditional firms that have transformed or expanded into digital markets (“gone digital” rather than “born digital”). They often still engage in the physical production of their content and maintain a relatively higher share of foreign assets. This is also confirmed by their engagement in equity acquisitions and greenfield investments.

#### Box I.4. UNCTAD’s top 100 digital MNEs

The *World Investment Report 2017* introduced the first ranking of the top 100 digital MNEs and investigated the effect of digitalization on global investment patterns. Recently, a Special Issue of the *Global Investment Trends Monitor* (UNCTAD, 2022) and a related UNCTAD Insights research note in *Transnational Corporations* (Trentini et al., 2022) presented an updated of the ranking and of the investment footprint of digital MNEs.

The update is timely because (i) a five-year timespan is sufficient to look at evolutionary trends; (ii) the five years include the COVID-19 pandemic period, which has provided a huge boost to digital activities; and (iii) recent international policy developments – including Pillar I of the G20/OECD Base Erosion and Profit Shifting (BEPS) project and the Digital Services Act of the European Union – make it interesting to assess which firms and activities will be most affected.

The updated ranking closely follows the methodology established in *WIR17* (and explained in Casella and Formenti, 2018). The compilation of data for the new ranking started from the original ranking, updating the underlying statistics – operating revenues, sales and assets. Additional companies were selected using the same criteria as in *WIR17*: (i) listed companies with total revenues above \$1 billion, reporting information on foreign business (i.e. foreign sales and foreign assets, or at least one of the two), and (ii) relevant core industry or activity. Companies were selected by screening a sample of large public companies in tech or consumer-facing<sup>a</sup> industries on the basis of activity codes, business description and financial reporting to determine their core activity.

As in *WIR17*, digital MNEs are classified into four main types:

- (i) *Internet platforms*: born digital, and operated and delivered through the Internet, such as search engines, social networks and other platforms and shared-economy companies (e.g. ride-hailing companies Uber (United States) and Didi Global (China), and shared accommodation platform Airbnb (United States)).
- (ii) *Digital solutions*: other Internet-based players and digital enablers. This category is expanded to include providers of software as a service (SaaS) and fintech, in addition to e-payment solutions. Fintech has a broader range of services: brokers, banking and finance.
- (iii) *e-Commerce*: online platforms that enable commercial transactions. This category includes e-retailers and the new delivery group (mostly food delivery and mobile apps) which gained significant relevance during the pandemic.
- (iv) *Digital content*: producers and distributors of goods and services in digital-format media, including games as well as data and analytics.

The digital MNEs were matched to investment project data, in particular data on M&As and greenfield investments from Refinitiv and fDi Markets, to provide an assessment of digital FDI. These data provide information on the geography and industry of investments.

Source: UNCTAD.

<sup>a</sup> In the initial sample, consumer-facing companies were included and screened if they have a significant digital offering (for goods companies) or product (mostly services companies that could digitalize).

Table I.18. Sales growth rates and FDI lightness: comparison between traditional top 100 MNEs, tech MNEs and top digital MNEs

	Total sales increase (%)	FDI lightness		
	2016–2021	2016	2021	Change (%)
Traditional MNEs	36	1.00	1.01	2
Tech MNEs (from top 100)	73	1.50	1.45	-3
<b>Top digital MNEs</b>	<b>159</b>	<b>1.37</b>	<b>1.58</b>	<b>15</b>
Internet platforms	212	2.25	2.32	3
Digital solutions	110	1.85	2.21	20
E-commerce	225	1.03	1.21	17
Digital content	68	1.32	1.12	-15

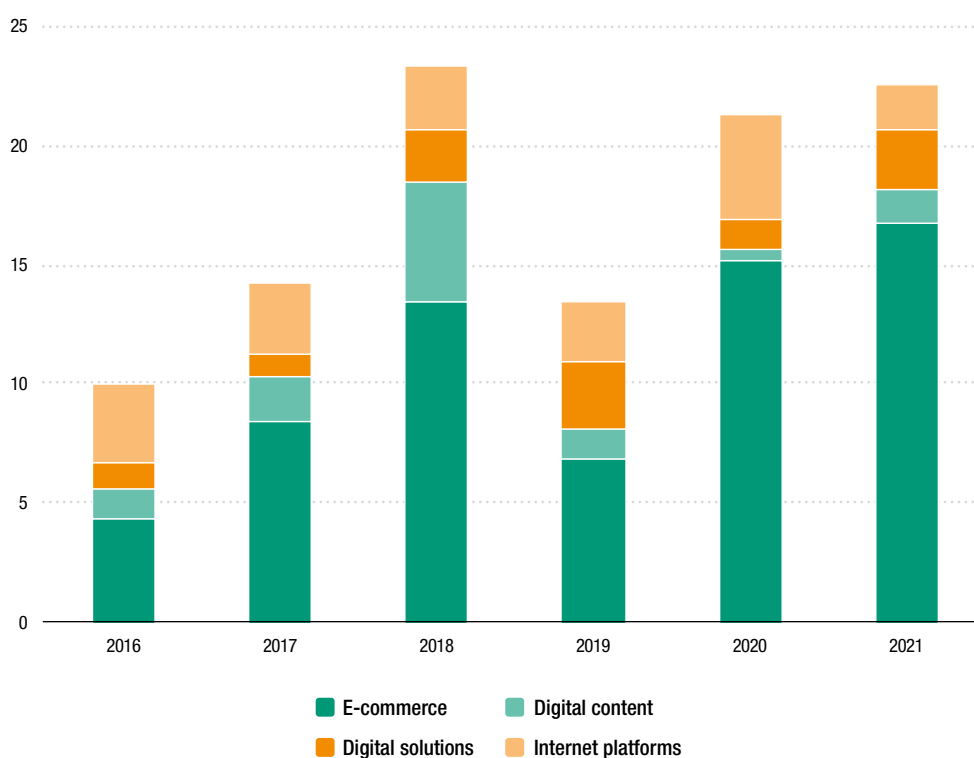
Source: UNCTAD FDI/MNE database (<https://unctad.org/fdistatistics>).

The overall lightness of the top 100 digital MNEs increased by 15 per cent since 2016. Digital solutions MNEs increased their asset lightness the most, pushed by fast-growing foreign sales during the pandemic. Similarly, e-commerce companies benefitted from the heightened demand for delivery services during lockdown periods. Digital content MNEs became asset heavier.

Internet platforms increased their already high lightness index only marginally. One explanation for this relative slowdown lies in the vertical integration being pursued by major platforms and their expansion across business segments. For example, Alphabet (United States) decreased its asset lightness ratio from 2.2 to 2 over the period, as it increased physical asset investments overseas to support international growth.

The different international asset footprints are also evident in diverging investment patterns since 2016. Traditional top manufacturing MNEs engage almost exclusively in greenfield investment, with a share of about 90 per cent of greenfield investment projects over their total number of foreign investment projects. In contrast, digital MNEs typically engage less in greenfield investment; most of their investment abroad relates to acquisitions of competitors or valuable start-ups and sales support activities. E-commerce companies are the exception, because they need to set up their networks of warehouses and distribution facilities, accounting for more than two thirds of all projects. The soaring e-commerce activity induced by the pandemic translated into an increase in greenfield investments (mostly in logistics and sales-related projects) of 120 per cent in 2020 and a further 10 per cent in 2021 (figure I.21). Much of that increase was accounted for by e-commerce giant Amazon. Before the pandemic, the increase was due largely to coworking space provider WeWork (United States), which invested heavily to expand its real estate portfolio.

**Figure I.21.** Greenfield investment projects of top 100 digital MNEs, by segment, 2016–2021 (Billions of dollars)



Source: UNCTAD, based on Financial Times Ltd, fDi Markets ([www.fdimarkets.com](http://www.fdimarkets.com)).

In addition to logistical and sales support points (accounting for 42 per cent of the projects), digital MNEs also set up professional services offices (24 per cent of their greenfield investment projects), research and development (R&D) centres (14 per cent) and ICT and internet infrastructure (10 per cent). The relative importance of R&D and ICT investments for digital MNEs is significantly higher than for traditional MNEs, for which investments in R&D centres account on average for only 6-7 per cent and those in ICT and Internet infrastructure about 2-3 per cent of the total number of greenfield projects. The share of investment in these two activities varies across segments, with digital content companies devoting more than a third (35 per cent) of their projects to R&D centres, while digital solutions providers devote a slightly lower share (31 per cent) to internet infrastructure. Also, almost half of all R&D and two thirds of ICT and Internet infrastructure investments are made by the largest 10 digital MNEs in terms of assets: Amazon, Alphabet (both United States), Alibaba Group and Tencent (both China), Walt Disney, Meta Platform (both United States), Rakuten (Japan), and Salesforce, FIS and Fiserv (all United States).

More than 60 per cent of greenfield investments are in developed economies (table I.19.), especially in Europe (45 per cent). The geographical focus differs by segment. R&D projects concentrate in developed countries, with Canada, the United Kingdom and Spain among the top recipients; of R&D investment in developing economies, India captures almost half of all projects. Professional services seem to be the most geographically spread out, with almost half of such projects flowing to developing countries, especially in Asia and in Latin America.

Foreign acquisitions also show different profiles for the various categories. E-commerce MNEs and Internet platforms are less active in this case (figure I.22). Digital content and digital solutions providers accelerated their acquisitions in 2021, increasing their deals by 48 and 70 per cent respectively, pushed by heightened demand for their services in the second year of the pandemic.

**Table I.19.**

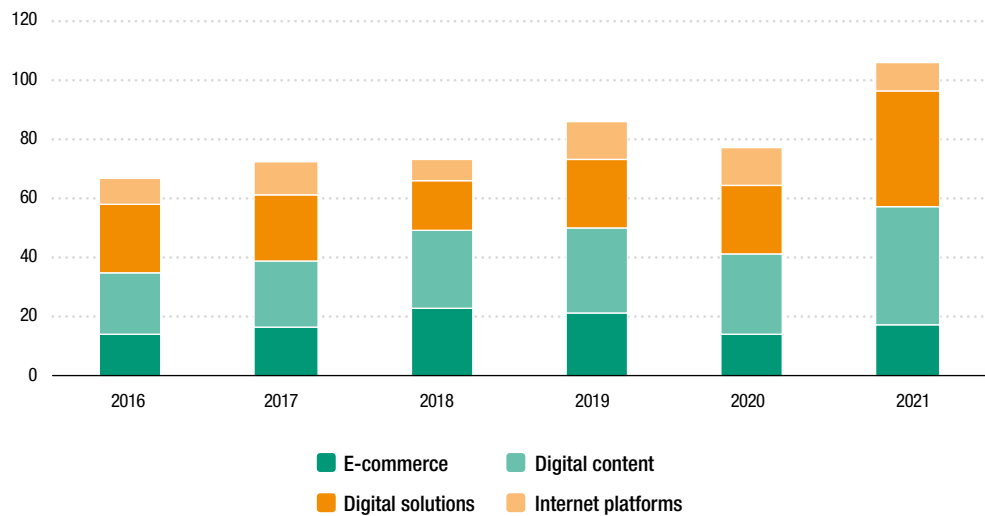
**Top 100 digital MNEs' greenfield investment projects: geographical distribution by activity** (Number and per cent)

	Logistics and sales	Professional services	R&D	ICT and Internet	Other <sup>a</sup>	Total
<i>Total number of projects</i>	905	520	294	219	227	2165
<b>Developed economies</b>	<b>69</b>	<b>53</b>	<b>68</b>	<b>60</b>	<b>55</b>	<b>63</b>
Europe	56	30	43	42	43	45
North America	9	5	18	4	5	8
Other developed economies	5	18	7	15	7	9
<b>Developing economies</b>	<b>31</b>	<b>47</b>	<b>32</b>	<b>40</b>	<b>45</b>	<b>37</b>
Africa	2	1	2	3	4	2
Asia	19	29	24	26	25	23
China	2	15	2	1	2	5
India	8	2	13	5	2	6
Latin America and the Caribbean	10	17	7	11	16	12
Brazil	4	5	2	5	2	4
Mexico	3	5	1	..	1	2

Source: UNCTAD, based on information from Financial Times Ltd, fDi Markets ([www.fdimarkets.com](http://www.fdimarkets.com)).

<sup>a</sup> Other includes, in order of importance, headquarters, customer care services, technical support, manufacturing, construction, maintenance and electricity.

**Figure I.22.** International equity acquisitions of top 100 digital MNEs by segment, 2016–2021 (Number)



Source: UNCTAD, based on data from Refinitiv SA.

Note: The figure reports numbers of deals instead of volumes because of the high quantity of deals for which values were not disclosed. Equity acquisitions include minority stakes.

The most common acquisition targets are software, IT consulting and online services (platform) companies, which account for 48 per cent of deals by digital MNEs. Other industries in which digital MNEs regularly acquire firms are professional services, publishing and broadcasting (for digital content MNEs), financial services (for digital solutions providers), retail and business-to-business services (for e-commerce companies), and travel services and audiovisual services (for Internet platforms).

Thus, the international expansion of digital MNEs through acquisitions occurs both horizontally (within the same industry) and vertically (in different industries). Some digital MNEs can expand their business across segments, bundling multiple services into their applications; e-commerce and e-payments are typically combined in the same app, to which – in an effort to leverage synergies and network effects – new digital companies often add much more (e.g. ride-hailing, social networking, streaming). Confirming this logic, Internet platforms typically invest in vertical deals; they buy companies in the same industry in only 13 per cent of cases. In contrast, digital solutions MNEs engage mostly in horizontal deals, expanding in foreign markets by acquiring overseas direct competitors to quickly gain local knowledge and customer relationships. E-commerce and digital content MNEs lie between these two extremes, with a share of horizontal deals of about 23 per cent.

For the many firms new to this year's top 100 ranking of digital MNEs, their investment profile differs from that of well-established MNEs. Large digital MNEs are already globally dominant players, and their investment decisions are mostly motivated by the need to protect business and to secure the next innovation, rather than to reach foreign customers. The top 10 MNEs by assets in the ranking account for a fifth of the deals (and almost half of the greenfield projects) mostly in innovative start-ups in other developed economies or segments of their supply chain (ICT and infrastructure). More than 80 per cent of the foreign equity acquisitions of digital MNEs are in other developed economies, with European firms the target of almost half (48 per cent) of all deals. Among developing economies, digital MNEs targeted firms in India firms in a sizeable share of deals (7 per cent), because of its thriving tech start-up scene.

Digital MNEs from the United States accounted for 53 per cent of all deals, targeting in more than half of the cases (53 per cent) companies from European countries – in particular, the United Kingdom (23 per cent). In developing economies, United States MNEs targeted India in 8 per cent of deals, mostly buying minority stakes to gain access to the market and to local innovative solutions. For example, eBay (United States) jointly with Microsoft (United States) and Tencent (China), acquired an undisclosed minority stake in online retailer Flipkart (India), for \$1.4 billion in 2017. Similarly, Paypal (United States) acquired undisclosed minority stakes in a range of Indian companies across several industries, including software providers, online brokerage systems, professional services and electronic payments (Moshpit Technologies, Speckle Internet Solutions, Scalend Technologies, Freecharge Payment Technologies).

European digital companies (of which there are 22 in the ranking) accounted for a quarter of foreign equity acquisition deals, of which more than half were in other European countries (54 per cent), in search of opportunities to consolidate operations with competitors. Another quarter were in the United States. One example of the first type of deals is the 2020 merger of two delivery companies, Takeaway (The Netherlands) and Just Eat (United Kingdom), a deal valued at \$8 billion. Music streaming company Spotify (Luxembourg) was one of the most active buyers in the United States, where its acquisitions included the Internet software and services companies Podz and Betty Labs (for undisclosed value) in 2021.

The four Chinese companies in the ranking accounted for 11 per cent of the deals and invested a relatively higher share in developing-economy MNEs (34 per cent) than their developed counterparts did. They invested especially in Asia, with shares divided equally between India and South-East Asia. Across developed economies, 41 per cent of their acquisitions were in Europe and 12 per cent in the United States. Most of the deals involved an undisclosed minority participation, often as part of a group of international investors. The only majority acquisition was the purchase by Alibaba (China) of e-commerce company Lazada (Singapore) – which has been occurring in several tranches with one still pending – for a total of \$4 billion.

Digital MNEs' engagement in international project finance deals is limited. Only the very top digital MNEs have now started investing overseas, especially in ICT infrastructure. For example, Alphabet (United States) is among the sponsors of one of the largest project finance deals in the telecommunication sector in Africa; a \$47 billion project announced in 2019 to construct a subsea internet cable running from Portugal to South Africa, resulting in improved high-speed and affordable Internet access for West Africans. Amazon (United States) in addition to establishing data centres in different regions, has recently been sponsoring renewable energy projects.

## 4. Internationalization trends of SMEs

Small and medium-sized enterprises (SMEs) – defined as firms with revenues below \$15 million and fewer than 300 employees – are the backbone of most economies and contribute significantly to growth and development (box I.5). Only the most productive and dynamic SMEs engage in international business activity through trade and investment. Few invest in physical assets abroad.

Predictably therefore, FDI by SMEs is small. Moreover, SME investment activity has shown a downward trend since 2015 (figure I.23). The number of FDI projects by SMEs fell from 880 in 2015 to 195 in 2021, and the share of SMEs in total greenfield investment projects declined from 5.7 to 1.3 per cent. The decline in 2020 can be explained by the economic fallout from the COVID-19 pandemic, which hit small businesses disproportionately;



Box I.5.

**Foreign direct investment by multinational SMEs**

A new UNCTAD research project examines the internationalization process of SMEs, with a focus on FDI by SMEs from and to developing economies. A novel aspect of the research is the analysis of the role of SMEs in South–South and intraregional FDI. The objective is to evaluate the importance of SME international expansion, particularly through FDI, for the economies of both home and host countries.

UNCTAD first published a study on FDI by SMEs in 1998 (UNCTAD, 1998), focusing on developing economies in Asia. In the intervening quarter-century, the growing importance of global value chains, the continued rise of emerging-market players and the new industrial revolution have changed the landscape. In addition, the more difficult international policy environment for international investment in recent years and the economic fallout from the pandemic have both had disproportionately negative effects on SMEs. This makes it imperative to take a fresh look at FDI by SMEs.

UNCTAD’s research project will bring together empirical evidence on FDI by SMEs covering all developing regions and cutting across industries. It will include firm-level evidence and case studies on Argentina, Brazil, Colombia, Ghana, Peru, Thailand, Turkey and Viet Nam. This project will also contribute to realization of the BAPA+40 outcome of “More than 40 entities participating in the UN mechanism for the implementation of this resolution will welcome data on South-South investment by SMEs”.<sup>a</sup>

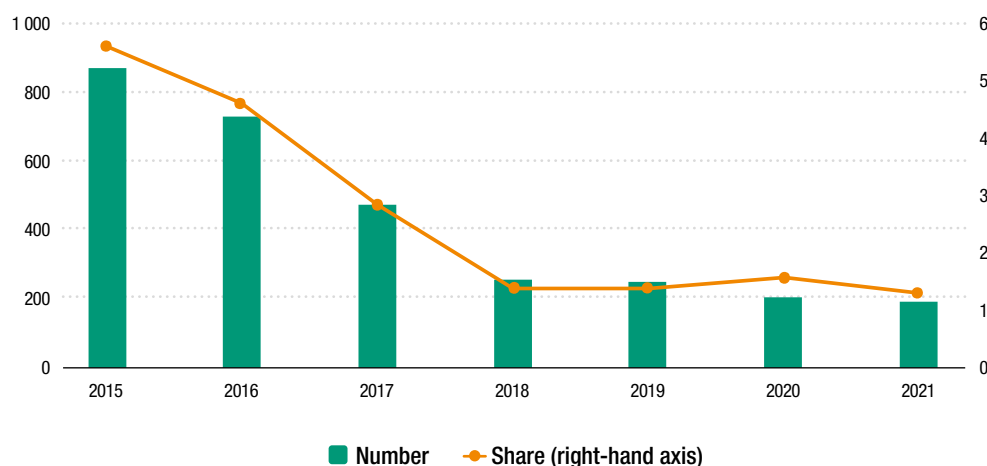
A fundamental driver for the project is the perception that in many economies policy tools and institutions for promoting international investment are mostly geared towards attracting large-scale industrial projects by major MNEs, and that investment promotion agencies, special economic zones and other home- and host-economy institutions have often not paid sufficient attention to the needs of SME investors. The project will aim to provide clear policy recommendations to strengthen the investment environment and investment facilitation for multinational SMEs.

Source: UNCTAD.

<sup>a</sup> Official Records of the General Assembly, Seventy-third Session, Resolution 73/291 24(m).

however, the decline before the pandemic indicates that longer-term factors hinder SME internationalization. These factors include unequal access to finance, the growing digital gap between SMEs and larger companies, continued concentration in international business and, from a policy perspective, a lack of investment promotion and facilitation measures targeted to SMEs. The deteriorating international policy environment for trade and investment, especially the trade tensions after 2017, are also likely to have discouraged SMEs more than large MNEs. Looking ahead, the potential role of SMEs in South–South and intraregional FDI could provide some impetus to reverse the downward trend, as regional economic cooperation among developing economies takes hold.

**Figure I.23. | Greenfield projects by SMEs, 2015–2021 (Number and per cent)**



Source: UNCTAD, based on information from the Financial Times Ltd, fDi Markets (www.fDimarkets.com).



Foreign investment by SMEs from developing economies represented only 6 per cent of all SME greenfield investment projects in 2021. This contrasts with the 39 per cent share of developing economies in total outward investment. SME outward investors are predominantly from upper-middle-income developing economies; for example, SMEs from China, India and Turkey are relatively active. Home-country economic conditions are clearly a key factor in the internationalization of SMEs.

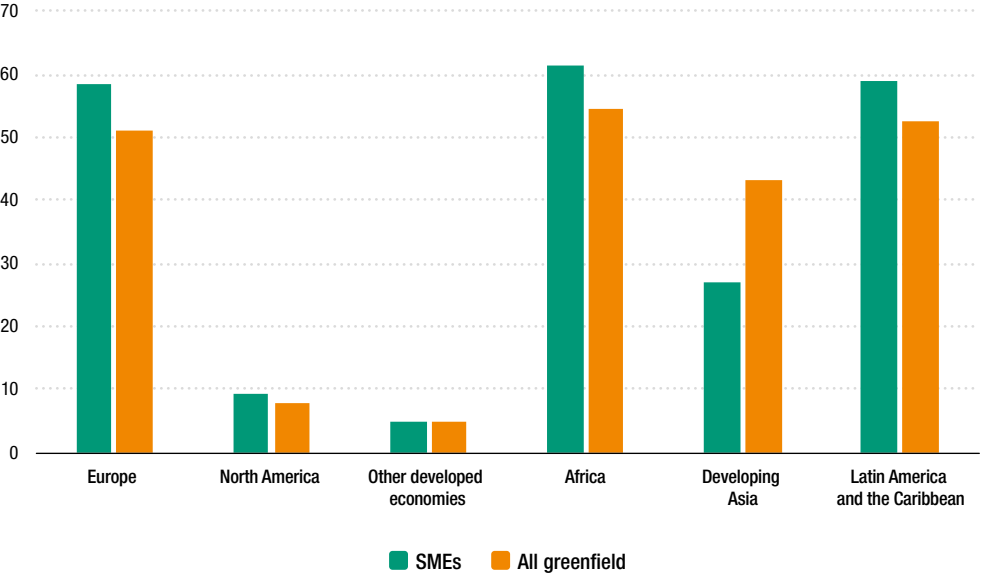
SMEs invest relatively more within their own regions than MNEs do (figure I.24). This holds for both developed and developing economies, and for almost all regions except for developing Asia, where the data are skewed by the large numbers of Chinese SMEs, which are highly active in Africa, and by Turkish SMEs, which invest almost exclusively in Europe.

A more nuanced picture emerges when looking at bilateral investment links, confirming that SMEs are more likely to invest within their region than large MNEs. The average distance to the host economy of greenfield investments by MNEs is about 4,000 km, whereas for SMEs it is about 3,500 km. Moreover, SMEs have a higher average share of greenfield investment in neighbouring countries (19 per cent) than do all firms (14 per cent).

In addition to their tendency to invest regionally, SMEs are more likely to invest in economies at a similar level of development as their home economy. SMEs from developed economies tend to invest in developed economies – irrespective of the region – whereas SMEs from developing economies target investment projects in other developing economies.

Overseas investment by SMEs tends to concentrate in industries that do not require high set-up (or fixed) costs, such as services and some specialized and light manufacturing. SMEs in information and communication services and those in professional services activities together account for more than half of all foreign investment projects (figure I.25). Within information and communication services, more than three quarters of projects are in software and information technology services, highlighting the importance of the digital economy for the development of a dynamic SME sector.

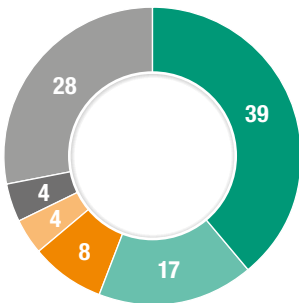
**Figure I.24. Shares of regional greenfield projects, SMEs and total, by region**  
(Per cent)



Source: UNCTAD, based on information from the Financial Times Ltd, fDi Markets ([www.fDimarkets.com](http://www.fDimarkets.com)).

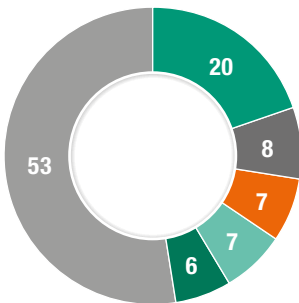
**Figure I.25. | Top sectors of greenfield projects, SMEs and total, 2015–2021 (Per cent)**

**a. SMEs**



- Information and communication
- Professional services
- Machinery and equipment
- Financial services
- Textiles
- Other

**b. All greenfield**



- Information and communication
- Textiles
- Manufacture of electronics
- Professional services
- Motor vehicles and other transport equipment
- Other

Source: UNCTAD based on information from the Financial Times Ltd, fDi Markets ([www.fDimarkets.com](http://www.fDimarkets.com)).

# NOTES

- <sup>1</sup> For the list of LDC, LLDCs and SIDS, please see footnotes e,f,g of annex table I. The category of LDCs overlaps partly with that of LLDCs and SIDS. There are 17 economies that are both LDCs and LLDCs, and 6 that are both LDCs and SIDS.
- <sup>2</sup> See also the report on the Global Landscape of Climate Finance 2021 by Climate Policy Initiative (CPI, 2021).
- <sup>3</sup> Government involvement includes any form of support through grants, guarantees, loans, equity participations, subsidies, tax breaks, and ancillary infrastructure improvements.
- <sup>4</sup> According to the *Joint Report on Multilateral Development Banks' Climate Finance*, the multilateral development banks collectively committed \$66 billion in 2020 – \$50 billion, or 76 per cent, for mitigation and \$16 billion, or 24 per cent, for adaptation. Of the total, 58 per cent was committed to low- and middle-income economies (AfDB et al., 2020).
- <sup>5</sup> Although the deal was completed in 2020, it affected financial accounts only in fiscal year 2021, with RWE's total assets increasing by 113 and its foreign ones by 130 per cent.
- <sup>6</sup> In 2017, Hitachi (Japan) was categorized as tech company because its core industry was historically defined as manufacturing of computers; however, in consideration of the expansion of its business in many new areas including electric grids, automotive and railways it is now categorized as conglomerate. In addition, the preliminary ranking for *WIR17* included Oracle (United States), which ultimately joined the ranking only in the following year, replacing Broadcom (United States).
- <sup>7</sup> Three MNEs are in both the broader UNCTAD ranking of the top 100 MNEs and the UNCTAD ranking of the top 100 digital MNEs: Alphabet and Amazon (both United States) and Tencent (China).

