

12. Investment

Investment, or to be more precise, gross fixed capital formation is an essential variable in economic analyses, such as analyses of demand and productivity.

Definition

Gross fixed capital formation (GFCF) is defined in the national accounts as acquisition less disposals of produced fixed assets, i.e. assets intended for use in the production of other goods and services for a period of more than a year.

Acquisition includes both purchases of assets (new or second-hand) and the construction of assets by producers for their own use.

The term *produced assets* signifies that only those assets produced as a result of a production process recognised in the national accounts are included. The national accounts also record transactions in non-produced assets such as land, oil and mineral reserves for example; which are recorded as non-produced assets in the balance sheet accounts and not as GFCF.

Acquisition prices of capital goods include transport and installation charges, as well as all specific taxes associated with purchase.

GFCF can be broken down into particular asset groups. Table 12.2 contains 6 groups: Dwellings (excluding land); Other buildings and structures (roads, bridges, airfields, dams, etc.); Transport equipment (ships, railway, aircraft, etc.); Other machinery and equipment (office machinery and hardware, etc.); Cultivated assets (managed forests, livestock raised for milk production etc) and intellectual property type fixed assets (mineral exploration, software and databases, and literary and artistic originals, etc.).

An additional important grouping of Information and Communication Technology (ICT) products is shown in Figure 12.2. ICT has three components: information technology equipment (computers and related hardware), communications equipment and software. It's important to note that ICT embodied in non ICT assets is not included in this concept.

GFCF can also be broken down into institutional sectors. For government this typically means investment in transport infrastructure and public buildings such as schools and hospitals.

For households, GFCF generally equates to dwellings, although investments made by unincorporated enterprises in other products do occur.

Comparability

When the System of National Accounts was revised in 1993, the scope of GFCF was widened to include mineral exploration, computer software and enter-

tainment, literary and artistic originals. Comparability of these items has improved in recent years but the scope with which the various items are covered is smaller in some countries, particularly in the case of own-account production of software.

In making comparisons of GFCF by institutional sector, attention should be given to the mechanisms commonly used to "acquire" assets. For example a unit may prefer to rent an asset, which will not count as GFCF of the lessee. If however the agreement between the lessee and the lessor resembles a finance lease, the SNA treats the lessee as having acquired the asset. On a larger scale many governments are increasingly turning to private finance initiatives to create public infrastructure. Determining who the owner of these schemes is in an SNA sense is non-trivial and may cause problems for temporal and international comparability.

The scope of assets has been widened in the 2008 SNA to include Research and Experimental Development and military weapons systems (see Annex for further information) but the figures contained here do not reflect these additions.

Note on Table 12.2: "Dwellings" includes "Other buildings and structure" for Norway. Cultivated assets are not capitalised for Canada and USA. "Cultivated assets" is included in "Other machinery and equipment" for United Kingdom.

Source

- OECD (2009), *National Accounts of OECD Countries 2009, Volume I, Main Aggregates*, OECD Publishing, http://dx.doi.org/10.1787/na_vol_1-2009-en-fr.

Online databases

- OECD (2009), "Aggregate national accounts: gross domestic product", *OECD National Accounts Statistics (database)*, <http://dx.doi.org/10.1787/data-00001-en>.
- OECD (2009), "Detailed national accounts: simplified non-financial accounts", *OECD National Accounts Statistics (database)*, <http://dx.doi.org/10.1787/data-00010-en>.


Further reading

- OECD (2010), *Handbook on Deriving Capital Measures of Intellectual Property Products*, OECD, Paris.
- Lequiller F., N. Ahmad, S. Varjonen, W. Cave and K.-H. Ahn (2003), *Report of the OECD Task Force on Software Measurement in the National Accounts*, OECD Publishing, <http://dx.doi.org/10.1787/334811030426>.
- Ahmad N. (2003), *Measuring Investment in Software*, OECD Publishing, <http://dx.doi.org/10.1787/335303788330>.

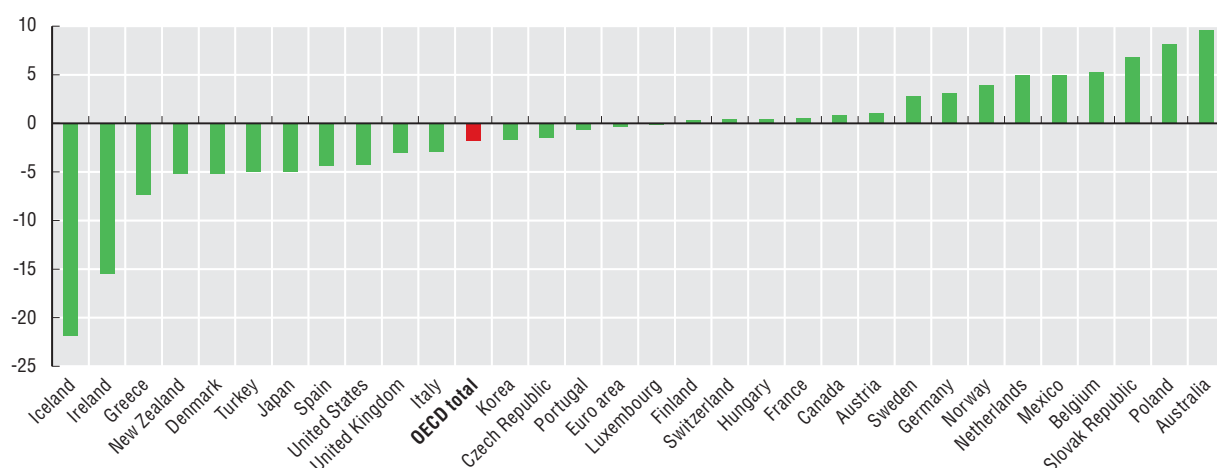
Table 12.1. **Gross fixed capital formation, volume**

Annual growth rates in percentage

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Australia	2.3	7.7	9.7	4.5	8.3	-9.5	9.7	14.4	8.3	6.2	8.9	5.5	9.7	9.6 e
Austria	0.1	4.7	-0.0	3.6	1.0	5.5	-1.7	-4.4	4.7	0.7	1.2	2.4	3.8	1.0
Belgium	3.4	1.5	7.1	3.6	4.2	4.5	0.2	-2.2	-0.7	7.1	6.9	4.7	6.2	5.2
Canada	-2.1	4.4	15.2	2.4	7.3	4.7	4.0	1.6	6.2	7.8	9.2	7.1	3.9	0.9 e
Czech Republic	19.8	9.9	-5.7	-0.9	-3.3	5.1	6.6	5.1	0.4	3.9	1.8	6.0	10.8	-1.5
Denmark	11.9	5.8	10.3	8.2	-0.1	7.6	-1.4	0.1	-0.2	3.9	4.7	13.6	3.1	-5.1
Finland	13.3	6.4	13.7	11.1	2.7	6.0	4.3	-3.0	4.0	3.5	3.4	4.8	8.7	0.3
France	1.8	0.7	0.4	7.1	8.3	7.2	2.4	-1.7	2.2	3.6	4.4	4.2	6.6	0.6
Germany	-0.2	-0.5	1.0	4.0	4.8	3.0	-3.7	-6.1	-0.3	-0.3	0.9	7.8	5.0	3.1
Greece	4.1 e	8.4 e	6.8 e	10.6 e	11.0 e	8.0 e	4.8	9.5	11.8	1.4	-4.5	9.8	4.6	-7.4
Hungary	-4.3	3.8	6.5	11.5	6.0	7.2	4.7	10.5	2.1	7.9	5.7	-3.6	1.6	0.4
Iceland	-1.7	25.0	9.3	34.4	-4.1	11.8	-4.3	-14.0	11.1	28.1	35.7	21.7	-12.8	-21.8
Ireland	15.8	16.4	16.5	14.1	13.4	6.3	0.2	3.0	6.4	9.6	14.6	3.9	2.4	-15.5
Italy	6.9	2.3	1.6	4.2	3.9	6.3	2.7	3.7	-1.2	2.3	0.8	2.9	2.0	-3.0
Japan	0.9	4.6	-0.3	-7.2	-0.8	1.2	-0.9	-4.9	-0.5	1.5	3.1	0.5	1.1	-5.0 e
Korea	13.1 e	8.4 e	-2.3 e	-22.9 e	8.3 e	12.2 e	0.3	7.1	4.4	2.1	1.9	3.4	4.2	-1.7
Luxembourg	-1.5	4.9	10.4	6.1	22.0	-4.7	8.8	5.5	6.3	2.7	2.5	4.7	12.6	-0.1
Mexico	-29.0 e	16.4 e	21.0 e	10.3 e	7.7 e	11.4 e	-5.6 e	-0.6 e	0.4 e	8.0	7.5	9.8	7.2	4.9 e
Netherlands	5.9	8.5	8.5	6.8	8.7	0.6	0.2	-4.6	-1.6	-1.6	3.7	7.5	4.8	4.9
New Zealand	11.1	5.1	0.2	-2.4	10.6	0.4	6.8	7.8	12.9	7.6	5.2	-2.3	4.7 e	-5.2 e
Norway	3.9	10.2	15.8	13.7	-5.4	-3.5	-1.1	-1.1	0.2	10.2	13.3	11.7	8.4	3.9
Poland	16.6	19.7	21.8	14.0	6.6	2.8	-9.7	-6.3	-0.1	6.4	6.5	14.9	17.6	8.2
Portugal	6.6	5.6	14.3	11.7	6.2	3.5	1.0	-3.5	-7.4	0.2	-0.9	-0.7	3.1	-0.7
Slovak Republic	0.6	30.1	14.0	9.4	-15.7	-9.6	12.9	0.2	-2.7	4.8	17.6	9.3	8.7	6.8
Spain	7.8	2.6	5.0	11.3	10.4	6.6	4.8	3.4	5.9	5.1	7.0	7.2	4.6	-4.4
Sweden	10.0	4.7	-0.1	8.1	8.5	6.3	-0.5	-1.8	1.4	5.7	8.9	9.1	7.5	2.7
Switzerland	4.8	-1.7	2.1	6.4	1.5	4.2	-3.5	-0.5	-1.2	4.5	3.8	4.7	5.2	0.4
Turkey	9.1 e	14.1 e	14.8 e	-3.9	-16.2	17.5	-30.0	14.7	14.2	28.4	17.4	13.3	3.1	-5.0
United Kingdom	2.9	5.4	6.8	13.7	3.0	2.7	2.6	3.7	1.1	4.9	2.3	6.0	6.8	-3.1
United States	6.3	8.5	8.8	9.9	9.1	6.9	-1.1	-3.0	2.9	6.2	5.3	2.3	-1.4	-4.2
Euro area	..	1.8	2.8	6.0	6.1	4.8	0.6	-1.4	1.3	2.3	3.2	5.5	4.9	-0.3
OECD-Total	..	6.0 e	5.6 e	3.8 e	5.4 e	5.2 e	-0.7 e	-1.0 e	2.2 e	4.7	4.8	4.3	2.7	-1.8 e

StatLink  <http://dx.doi.org/10.1787/740772513757>Figure 12.1. **Gross fixed capital formation, volume**

Annual growth rates in percentage, 2008

StatLink  <http://dx.doi.org/10.1787/738857646153>

12. Investment

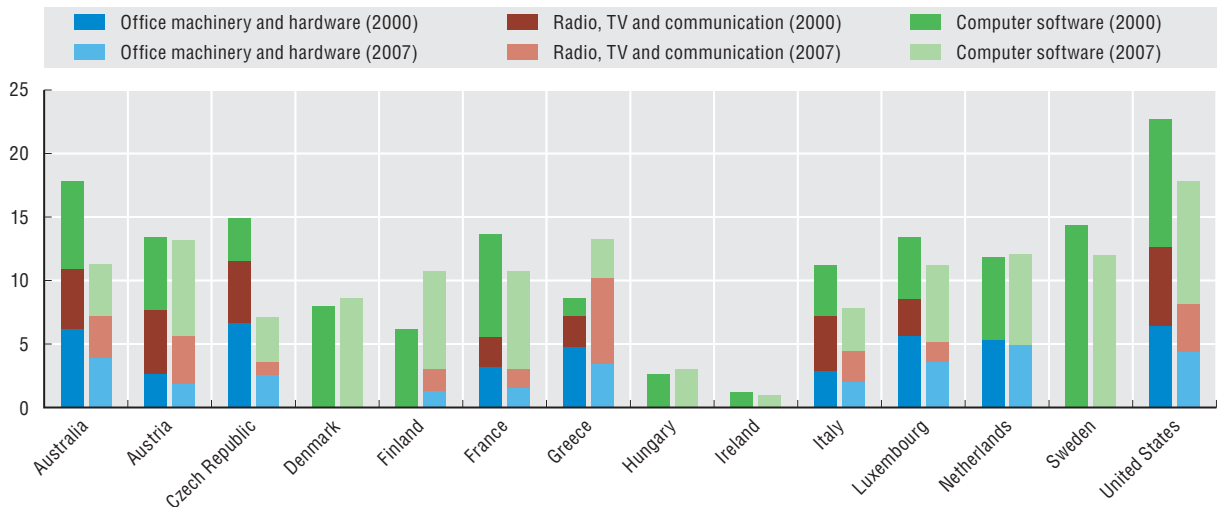
Table 12.2. **Gross fixed capital formation by asset**
Percentage of total GFCF

	Dwellings		Other buildings and structures		Transport equipment		Other machinery and equipment		Cultivated assets		Intangible fixed assets	
	1997	2007	1997	2007	1997	2007	1997	2007	1997	2007	1997	2007
Australia	23.2	21.7	29.2	35.7	11.2	9.7	23.7	20.2	0.9	0.8	6.6	6.0
Austria	27.2	21.9	29.5	31.6	9.7	12.0	29.3	26.3	0.2	0.3	4.2	7.9
Belgium	..	..	..	..	..	..	..	..	..	..	..	..
Canada	25.0	31.4	32.0	33.6	10.4	7.8	26.2	19.9	..	..	6.5	7.2
Czech Republic	11.0	15.2	42.1	35.1	7.4	15.4	36.3	29.2	0.8	0.5	2.4	4.6
Denmark	21.9	31.3	28.0	22.6	11.2	9.6	31.0	27.1	-0.0	0.0	8.0	9.3
Finland	24.3	28.3	30.2	36.5	7.9	6.4	30.9	20.0	0.3	0.2	6.5	8.7
France	30.7	32.1	28.3	30.9	7.1	7.9	25.6	20.4	0.5	0.3	7.7	8.5
Germany	35.3	29.1	26.0	21.7	8.5	13.5	25.6	29.6	-0.0	-0.0	4.6	6.1
Greece	38.4	35.6	29.7	18.3	10.1	15.0	20.5	26.5	0.2	0.2	3.5	4.5
Hungary	20.9	19.0	34.6	35.6	0.7	9.5	40.0	31.3	1.8	0.7	2.0	3.9
Iceland	..	..	..	..	..	..	..	..	..	..	..	..
Ireland	33.3	47.1	29.0	30.4	13.8	11.4	20.2	9.6	0.5	-0.1	3.3	1.6
Italy	22.9	24.0	25.7	27.3	9.5	9.8	37.4	34.7	0.1	0.1	4.3	4.1
Japan	18.1	14.8	39.1	37.4	6.8	8.4	31.8	33.2	0.1	0.1	6.2	8.8
Korea	17.3	16.9	44.7	44.6	8.1	7.1	26.1	25.2	..	..	3.6	6.2
Luxembourg	13.6	9.5	35.8	47.7	19.9	16.7	23.1	15.9	0.1	0.1	7.6	10.2
Mexico	..	27.0	..	38.4	..	10.1	..	24.5	..	0.0	..	..
Netherlands	26.5	32.1	24.3	25.9	9.0	8.4	30.6	23.9	1.1	0.4	8.5	9.3
New Zealand	27.8	28.6	26.1	29.4	10.4	10.3	29.5	24.7	..	..	6.3	7.1
Norway	62.2	68.7	..	..	12.4	8.9	19.3	15.6	..	..	3.1	3.4
Poland	10.8	14.1	42.6	42.4	9.3	10.6	33.9	29.0	0.5	0.2	2.8	3.8
Portugal	54.0	..	..	..	10.8	..	23.2	..	1.1	..	11.1	..
Slovak Republic	5.3	9.0	40.5	42.4	7.8	10.3	36.3	28.4	7.2	3.2	2.8	6.8
Spain	21.6	30.1	31.1	27.8	8.5	7.9	22.7	16.9	0.4	0.1	15.7	17.1
Sweden	9.1	17.6	28.9	24.7	7.5	9.2	41.4	32.4	0.6	0.3	12.5	15.7
Switzerland	20.5	21.1	18.3	14.6	7.2	6.5	49.1	49.9	0.2	0.2	4.7	7.8
Turkey	..	45.8	..	..	..	..	..	54.2	..	..	..	..
United Kingdom	17.3	22.5	29.9	37.1	9.1	6.2	37.2	27.8	..	..	6.5	6.5
United States	22.8	23.7	25.7	30.7	9.7	7.5	33.8	27.8	..	..	8.1	10.3
Euro area	..	..	..	..	..	..	..	..	..	..	..	..
OECD-Total	..	..	..	..	..	..	..	..	..	..	..	..

StatLink  <http://dx.doi.org/10.1787/740803805630>

Figure 12.2. **Investment in information and communication technologies (ICT)**

Percentage of total gross fixed capital formation




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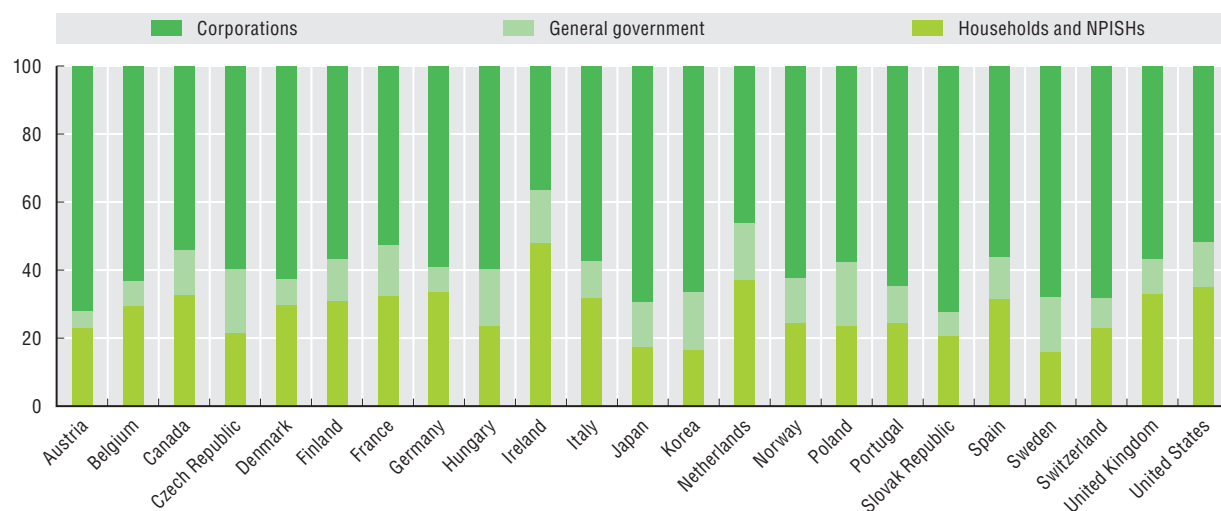
Table 12.3. **Gross fixed capital formation by institutional sector**

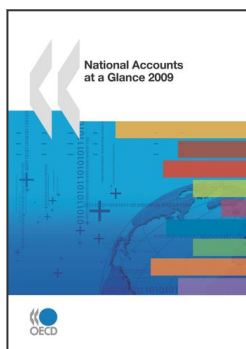
Percentage of total GFCF

	Corporations				General government				Households and non-profit institutions serving households			
	1995	1999	2003	2007	1995	1999	2003	2007	1995	1999	2003	2007
Australia	53.3	49.4	47.4	..	10.3	9.8	8.8	..	36.4	40.8	43.9	..
Austria	63.3	69.3	72.5	72.3	12.8	7.4	5.3	4.7	23.9	23.4	22.2	23.0
Belgium	56.4	61.2	63.0	63.3	9.6	9.4	8.8	7.4	34.0	29.4	28.2	29.3
Canada	55.0	60.8	54.1	54.3	15.0	11.8	12.6	13.2	30.1	27.4	33.3	32.6
Czech Republic	69.2	69.6	65.2	59.8	16.7	12.0	17.0	18.7	14.1	18.3	17.8	21.5
Denmark	68.1	64.4	66.9	62.5	9.6	8.4	8.2	7.9	22.3	27.2	24.8	29.6
Finland	59.3	55.8	54.2	57.0	16.2	14.5	16.0	12.4	24.6	29.6	29.8	30.7
France	50.7	53.7	53.0	52.5	17.6	15.6	16.3	15.2	31.7	30.7	30.7	32.2
Germany	50.6	54.3	56.5	59.1	10.0	8.8	8.7	7.5	39.4	37.0	34.7	33.3
Greece	..	..	34.1	..	..	..	14.9	..	..	..	51.0	..
Hungary	61.7	67.9	56.4	59.8	0.9	12.5	15.7	16.8	37.4	19.6	27.9	23.4
Iceland	..	..	..	..	..	..	..	..	..	..	..	..
Ireland	..	..	36.6	36.6	..	..	16.6	15.5	..	..	46.9	47.9
Italy	55.8	56.9	57.5	57.3	10.8	12.1	12.1	11.0	33.4	31.0	30.4	31.7
Japan	..	56.2	61.1	69.4	..	23.1	18.8	13.3	..	20.7	20.2	17.2
Korea	..	..	61.6	66.6	..	..	19.5	17.0	..	..	18.9	16.4
Luxembourg	..	..	..	..	..	..	..	..	..	..	..	..
Mexico	..	..	..	..	..	..	..	..	..	..	..	..
Netherlands	54.7	55.1	47.4	46.3	15.2	13.2	18.2	16.7	30.1	31.7	34.4	37.0
New Zealand	..	..	..	..	..	..	..	..	..	..	..	..
Norway	62.0	63.8	57.3	62.5	16.0	15.5	17.2	13.2	22.0	20.7	25.5	24.3
Poland	58.4	68.0	54.4	57.6	18.5	14.3	18.3	19.0	23.1	17.7	27.4	23.4
Portugal	52.2	56.5	59.7	65.0	16.8	15.1	13.6	10.6	31.0	28.4	26.7	24.5
Slovak Republic	76.9	71.3	67.3	72.4	9.5	9.9	10.4	7.2	13.6	18.8	22.3	20.4
Spain	..	..	55.4	56.2	..	..	13.2	12.4	..	..	31.4	31.5
Sweden	66.4	71.6	68.6	67.9	24.5	18.1	18.1	16.3	9.1	10.3	13.4	15.8
Switzerland	59.6	63.9	63.7	68.4	13.2	11.7	12.0	8.8	27.2	24.4	24.4	22.8
Turkey	..	..	..	..	..	..	..	..	..	..	..	..
United Kingdom	64.6	68.6	59.4	56.8	12.0	7.8	11.0	10.3	23.4	23.6	29.6	33.0
United States	53.2	53.9	46.8	51.9	13.2	12.4	13.7	13.0	33.6	33.8	39.5	35.1
Euro area	..	..	..	..	..	..	..	..	..	..	..	..
OECD-Total	..	..	..	..	..	..	..	..	..	..	..	..

StatLink  <http://dx.doi.org/10.1787/740841702817>Figure 12.3. **Gross fixed capital formation by sector**

Percentage of total gross fixed capital formation, 2007

StatLink  <http://dx.doi.org/10.1787/740037250208>



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