

27

Gross domestic expenditure on research and development (R&D)

As a percentage of GDP and by source of funds

Dépenses intérieures brutes de recherche et développement (R-D)

En pourcentage du PIB et répartition par source de financement

Country or area Pays ou zone	Year Année	Expenditure on R&D as a % of GDP Dépenses en R&D en % du PIB	Source of funds (%) / Source de financement (%)					
			Business entreprises Entreprises	Government Etat	Higher education Enseigne- ment supérieur	Private non- profit Institut. Privées sans but lucratif	Funds from abroad Fonds de l'étranger	Not specified/ Non précisé
Total, all countries or areas	2005	1.5	...	...	...	...	...	...
Total, tous pays ou zones	2010	1.6	...	...	...	...	...	...
	2015	1.7	...	...	...	...	...	...
	2017	1.7	...	...	...	...	...	...
Northern Africa	2005	0.3	...	...	...	...	...	...
Afrique septentrionale	2010	0.5	...	...	...	...	...	...
	2015	0.6	...	...	...	...	...	...
	2017	0.6	...	...	...	...	...	...
Sub-Saharan Africa	2005	0.4	...	...	...	...	...	...
Afrique subsaharienne	2010	0.4	...	...	...	...	...	...
	2015	0.4	...	...	...	...	...	...
	2017	0.4	...	...	...	...	...	...
Northern America	2005	2.5	...	...	...	...	...	...
Amérique septentrionale	2010	2.7	...	...	...	...	...	...
	2015	2.6	...	...	...	...	...	...
	2017	2.7	...	...	...	...	...	...
Latin America & the Caribbean	2005	0.6	...	...	...	...	...	...
Amérique latine et Caraïbes	2010	0.7	...	...	...	...	...	...
	2015	0.7	...	...	...	...	...	...
	2017	0.7	...	...	...	...	...	...
Central Asia	2005	0.2	...	...	...	...	...	...
Asie centrale	2010	0.2	...	...	...	...	...	...
	2015	0.2	...	...	...	...	...	...
	2017	0.2	...	...	...	...	...	...
Eastern Asia	2005	2.0	...	...	...	...	...	...
Asie orientale	2010	2.2	...	...	...	...	...	...
	2015	2.4	...	...	...	...	...	...
	2017	2.5	...	...	...	...	...	...
South-eastern Asia	2005	0.6	...	...	...	...	...	...
Asie du Sud-Est	2010	0.7	...	...	...	...	...	...
	2015	0.9	...	...	...	...	...	...
	2017	1.0	...	...	...	...	...	...
Southern Asia	2005	0.7	...	...	...	...	...	...
Asie méridionale	2010	0.7	...	...	...	...	...	...
	2015	0.6	...	...	...	...	...	...
	2017	0.6	...	...	...	...	...	...
Western Asia	2005	0.5	...	...	...	...	...	...
Asie occidentale	2010	0.5	...	...	...	...	...	...
	2015	0.6	...	...	...	...	...	...
	2017	0.6	...	...	...	...	...	...
Europe	2005	1.6	...	...	...	...	...	...
Europe	2010	1.7	...	...	...	...	...	...
	2015	1.8	...	...	...	...	...	...
	2017	1.9	...	...	...	...	...	...
Australia and New Zealand	2005	1.9	...	...	...	...	...	...
Australie et Nouvelle-Zélande	2010	2.2	...	...	...	...	...	...
	2015	1.8	...	...	...	...	...	...
	2017	1.8	...	...	...	...	...	...
Albania ¹								
Albanie ¹	2008	0.2	3.3	80.8	8.6	...	7.4	...
Algeria	2005 ¹	0.1	...	...	...	...	...	...
Algérie	2017	# 0.5	6.7	93.1	...	...	~0.0	~0.0
American Samoa ¹	2005	0.4	...	...	...	...	...	...
Samoa américaines ¹	2006	0.4	...	...	...	...	...	...
Angola ^{1,2,3}								
Angola ^{1,2,3}	2016	~0.0	...	100.0 ⁴	...	...	...	...

Country or area Pays ou zone	Year Année	Expenditure on R&D as a % of GDP Dépenses en R&D en % du PIB	Source of funds (%) / Source de financement (%)						
			Business entreprises Entreprises	Government Etat	Higher education Enseigne- ment supérieur	Private non- profit Institut. Privées sans but lucratif	Funds from abroad Fonds de l'étranger	Not specified/ Non précisé	
Argentina	2005	0.4	31.0	59.6	5.7	3.0	0.7	...	
Argentina	2008	0.5	26.5	67.6	4.4	1.0	0.6	...	
	2010	0.6	...	...	...	...	...	...
	2015	0.6	19.2	74.8	2.0	0.5	3.5	...	
	2017	0.5	16.5	72.6	1.8	0.6	8.5	...	
Armenia	2005 ¹	0.3	...	77.5	...	...	4.7	17.8
Armenia	2010 ¹	0.2	...	84.5	...	...	11.7	3.8
	2015 ^{2,3}	0.3	...	73.8	...	...	2.3	23.9
	2018 ^{2,3}	0.2	16.7	# 68.7	...	...	5.6	9.1
Australia	2004	1.9	54.6	40.3	0.4	1.9	2.9	...	
Australia	2008	2.4	61.9	34.6	0.1	1.8	1.6	...	
	*2010	2.4	...	...	...	...	...	...
	*2015	1.9	...	...	...	...	...	...
	*2017	1.9	...	...	...	...	...	...
Austria	2004	2.2	47.2	32.6	0.4	0.5	19.4	...	
Austria	*2005	2.4	45.6	35.9	...	0.4	18.0	...	
	2009	2.6	47.1	34.9	0.7	0.6	16.8	...	
	*2010	2.7	45.1	38.3 ⁵	...	0.5	16.1	...	
	2015	3.0	49.7	32.6	0.6	0.5	16.6	...	
	2017	3.1	54.7	27.6	0.8	0.3	16.6	...	
	*2018	3.2	54.4	29.4	...	0.6	15.6	...	
Azerbaijan	2005	0.2 ⁶	18.7	77.5	~0.0	1.3	2.4	...	
Azerbaijan	2010	0.2	# 9.6	# 88.2	0.3	1.9	~0.0	...	
	2014	0.2	30.5	67.6	0.8	0.9	0.2	...	
	2015	0.2	32.2	65.8	0.4	1.7	...	...
	2016	0.2	29.9	68.5	1.4	0.2	...	...
	2017	0.2	32.0	67.2	...	0.7	0.1	...	
	2018	0.2	30.8	68.7	...	0.5	...	...
Bahrain									
Bahrain	2014	0.1	21.8	41.5	...	2.0	12.4	1.1	
Belarus	2005	0.7 ⁶	21.2	71.9	0.7	...	6.3	...	
Belarus	2008	0.7 ⁶	36.5	57.6	0.3	0.1	5.5	...	
	2010	0.7 ⁶	27.1	58.7	...	0.6	13.6	...	
	2015	0.5 ⁶	41.3	46.0	...	...	12.7	...
	2018	0.6	45.0	41.8	...	...	13.2	...
Belgium	2005	1.8	59.7	24.7	2.6	0.6	12.4	...	
Belgium	2010	2.1	57.6	25.4	3.1	0.6	13.3	...	
	2015	2.5	58.6	22.5	2.0	0.4	16.5	...	
	2017	2.7	63.5	20.0	3.0	0.5	13.0	...	
	*2018	2.8	...	...	...	...	...	...
Bermuda ⁷	2010	0.2	...	...	...	...	...	...
Bermudes ⁷	2015	0.2	...	...	...	...	...	...
	2018	0.3	...	...	...	...	...	...
Bolivia (Plurin. State of)	2002	0.3	16.0	20.0	31.0	19.0	14.0	...	
Bolivia (État plurin. de)	#2009	0.2	5.2	51.2	26.5	2.1	1.9	13.2	
Bosnia and Herzegovina	2005 ¹	~0.0	...	...	...	...	...	...
Bosnie-Herzégovine	2009 ¹	~0.0	...	...	...	...	...	...
	2013	0.3	1.8	25.3	...	...	53.9	18.9
	2015	0.2	31.4	37.6	...	~0.0	16.9	...	
	2017	0.2	29.1	41.2	...	0.1	16.4	0.1	
	2018	0.2	28.9	40.9	...	~0.0	20.4	...	
Botswana	2005	0.5	...	...	...	...	...	...
Botswana	#2012	0.3	5.8	73.9	...	0.7	6.8	0.2	
	2013	0.5	17.7	59.7	...	...	21.7	...
Brazil	2005	1.0	50.4	47.7	1.9	...	...	...
Brazil	2010	1.2	47.0	51.1	1.8	...	...	...
	2015	1.3	45.5	52.2	2.2	...	...	...
	2017	1.3	47.5	49.7	2.8	...	...	...

Country or area Pays ou zone	Year Année	Expenditure on R&D as a % of GDP Dépenses en R&D en % du PIB	Source of funds (%) / Source de financement (%)					
			Business entreprises Entreprises	Government Etat	Higher education Enseigne- ment supérieur	Private non- profit Institut. Privées sans but lucratif	Funds from abroad Fonds de l'étranger	Not specified/ Non précisé
Brunei Darussalam Brunéi Darussalam	2003 #2004 2018 ⁸	~0.0 ~0.0 ¹ # 0.3	6.7 1.6 ...	86.8 91.0 # 97.0	...	...	6.6...	...
Bulgaria Bulgarie	2005 2010 2015 2017 2018	0.4 0.6 1.0 0.8 0.8	27.8 16.7 35.6 43.2 ...	63.9 43.2 20.3 24.3 ...	0.4 0.5 0.1 0.1 ...	0.3 0.1 0.1 0.2 ...	7.6 39.6 43.8 32.2...	...
Burkina Faso Burkina Faso	2005 2009 #2014 ³ 2017 ³	0.2 ¹ 0.2 0.2 0.7	... 11.9	100.0 9.1 98.4 93.6	...	...	...	...
Burundi Burundi	2008 ¹ 2010 ¹ 2012 ¹ 2018	0.2 0.1 0.1 # 0.2	... ... ... 8.8 ¹	59.9 # 64.8 ^{1,4}	...	...	39.9.........	...
Cabo Verde ^{1,8} Cabo Verde ^{1,8}	2011	0.1	...	100.0	...	...	...	...
Cambodia Cambodge	2002 ¹ #2015	~0.0 0.1	... 19.4	17.9 23.5	...	43.0 22.1	28.4 34.9	10.6 ...
Canada Canada	2005 2010 2015 *2018	2.0 1.8 1.7 1.6	49.3 47.2 44.0 41.1	* 31.8 * # 34.9 * 31.6 33.1	* 7.3 * 7.9 * 10.0 ⁹ 11.1 ⁹	2.8 3.5 4.0 ⁹ 4.5 ⁹	8.8 6.6 9.8 9.3	...
Chad ^{2,3} Tchad ^{2,3}	2016	0.3	...	100.0 ⁴	...	...	...	...
Chile Chili	2010 2015 *2017	0.3 0.4 0.4	25.4 32.8 31.4	40.4 42.6 47.0	12.7 11.1 15.4	1.7 0.6 1.7	19.8 12.9 4.5	...
China ¹⁰ Chine ¹⁰	2005 2010 2015 2018	1.3 1.7 2.1 2.2	67.0 71.7 74.7 76.6	26.3 24.0 21.3 20.2	...	...	0.9 1.3 0.7 0.4	...
China, Hong Kong SAR Chine, RAS de Hong Kong	2005 2010 2015 2018	0.8 0.7 0.8 0.9	53.0 ¹¹ 47.6 ¹¹ 47.4 ¹¹ 49.1 ¹¹	44.1 47.3 47.1 46.9	0.4 0.1 ~0.0 0.2	...	2.5 4.9 5.5 3.7	...
China, Macao SAR Chine, RAS de Macao	2005 2007 2008 2010 ¹ 2015 ¹ 2018 ¹	0.1 ¹ # 0.1 ¹ 0.1 ¹ 0.1 0.1 0.2	* 0.2 0.1 0.2	88.0 89.3 91.7 ... 87.2 66.7	...	0.4 2.8 1.4 ... 0.5 0.3	... 0.6	1.4 1.6 0.3 ... 6.1 29.0
Colombia Colombie	2005 2010 2015 2017 2018	0.2 0.2 0.3 0.2 0.2	... 23.1 44.7 49.1 ...	... 8.9 9.6 8.2 ...	... 39.9 28.6 22.8 ...	... 27.2 16.7 19.1 ...	... 1.0 0.4 0.5 ...	... ... ... 0.4 ...
Costa Rica Costa Rica	2004 2009 2010 2015 2017	0.4 0.5 0.5 0.4 0.4	... 28.7 ... 4.7 3.7 ³	... 53.0 ... 57.4 53.6 ³	... ... ... ... ...	... 2.8 ... 2.9 ~0.0 ³	... 1.7 ... 3.7 6.7 ³	... 13.7 ... 31.2 36.0 ¹²
Côte d'Ivoire ^{1,3} Côte d'Ivoire ^{1,3}	2016	0.1	...	...	...	...	...	...

Country or area Pays ou zone	Year Année	Expenditure on R&D as a % of GDP Dépenses en R&D en % du PIB	Source of funds (%) / Source de financement (%)					
			Business entreprises Entreprises	Government Etat	Higher education Enseigne- ment supérieur	Private non- profit Institut. Privées sans but lucratif	Funds from abroad Fonds de l'étranger	Not specified/ Non précisé
Croatia Croatie	2005	0.9	34.3	58.1	4.9	~0.0	2.6	...
	2010	0.7	38.8	49.2	2.0	0.2	9.9	...
	2015	0.8	46.6	36.4	2.0	0.5	14.5	...
	2017	0.9	42.6	43.1	3.5	0.1	10.8	...
	*2018	1.0	...	...	...	...	...	...
Cuba Cuba	2005	0.5	35.0	60.0	...	...	5.0	...
	2010	0.6	15.0	75.0	...	...	10.0	...
	2015	0.4	40.0	55.0	...	...	5.0	...
	2016	0.3	34.5	62.0	...	...	2.0	1.5
	2017	0.4	33.0	66.0	...	...	1.0	...
	2018	...	42.0	56.4	...	...	1.6	...
Cyprus Chypre	2005	0.4	16.8	67.0	4.2	1.2	10.9	...
	2010	0.4	12.7	68.3	3.5	0.5	15.0	...
	2013	0.5	15.8	59.5	5.4	0.6	18.8	0.1
	2015	0.5	20.0	50.6	5.8	0.6	23.0	...
	2017	0.6	32.8	38.5	5.4	0.9	22.5	...
	*2018	0.6	...	...	...	...	...	...
Czechia Tchéquie	2005	1.2	48.2	45.2	1.2	~0.0	5.4	...
	2010	1.3	40.8	44.4	0.9	~0.0	13.9	...
	2015	1.9	34.5	32.2	0.7	0.1	32.5	...
	*2018	1.9	33.0	34.1	1.0	0.1	31.8	...
Dem. Rep. of the Congo Rép. dém. du Congo	2005	# 0.1 ^{13,14}	...	100.0	...	...	...	...
	2009	0.1 ^{13,14}	...	100.0	...	...	...	...
	2015	# 0.4 ^{3,7}	~0.0 ³	# 34.5	...	0.2 ³	1.4 ³	...
Denmark Danemark	2005	2.4	59.5	27.6	...	2.8	10.1	...
	2010	2.9	* 61.1	* 28.2 ⁵	...	* 3.5	* 7.2	...
	2015	3.1	59.1	30.2 ⁵	...	4.4	6.3	...
	*2017	3.0	58.5	27.2 ⁵	...	5.4	8.9	...
	*2018	3.1	...	...	...	...	...	...
Ecuador Équateur	2003	0.1	...	...	...	...	...	...
	2010	0.4	1.0 ³	40.2 ³	9.6 ³	0.5 ³	5.3 ³	43.4 ¹²
	2014	0.4	0.1 ³	42.4 ³	12.6 ³	0.1 ³	2.5 ³	42.3 ¹²
Egypt Égypte	2005 ^{1,13}	0.2	...	...	...	...	...	...
	2010 ^{2,3}	0.4	...	...	...	...	...	...
	2014	0.6	8.1	91.7 ⁴	...	0.1	0.1	...
	2015	0.7	6.2	93.7 ⁴	...	0.1	...	...
	2018	0.7	3.9	95.4	...	~0.0	0.5	...
El Salvador El Salvador	2010	0.1	0.6	70.1	20.8	~0.0	8.3	0.1
	2013	0.1	0.7	42.7	37.0	2.8	16.4	0.3
	#2015	0.1	41.9	29.0	21.2	1.1	6.8	...
	2017	0.2	31.2	39.2	20.6	1.3	7.7	~0.0
Estonia Estonie	2005	0.9	38.5	43.5	0.8	0.2	17.1	...
	2010	1.6	43.6	44.1	0.6	0.2	11.4	...
	2015	1.5	41.0	46.4	0.2	0.2	12.2	...
	2017	1.3	43.6	40.2	1.0	0.3	15.0	...
	*2018	1.4	...	...	...	...	...	...
Eswatini Eswatini	2015	0.3	22.3	41.7	...	2.5	33.5	...
Ethiopia Éthiopie	2005	0.2 ¹	...	69.2	...	0.1	30.8	...
	2010	# 0.2	10.8	56.0	1.1	~0.0	30.0	2.2
	2013	0.6	0.7	79.1	1.8	0.2	2.1	16.0
	2017	# 0.3	1.5	73.4	3.1	1.5	19.1	1.4
Faroe Islands Îles Féroé	2003	0.9	20.4	...	...	0.3	18.7	60.6 ^{4,7,15}

Country or area Pays ou zone	Year Année	Expenditure on R&D as a % of GDP Dépenses en R&D en % du PIB	Source of funds (%) / Source de financement (%)						
			Business enterprises Entreprises	Government Etat	Higher education Enseigne- ment supérieur	Private non- profit Institut. Privées sans but lucratif	Funds from abroad Fonds de l'étranger	Not specified/ Non précisé	
Finland Finlande	2005	3.3	66.9	25.7	0.2	1.0	# 6.3	...	
	2010	3.7	66.1	25.7	0.2	1.1	6.9	...	
	2015	2.9	54.8	28.9	0.3	1.5	14.5	...	
	2017	2.8	58.0	29.0	0.5	1.7	10.8	...	
	2018	2.8	...	...	...	...	...	...
France France	2005	2.1	51.9	38.6	1.0	0.9	7.5	...	
	#2010	2.2	53.5	37.1	1.0	0.8	7.5	...	
	2015	2.3	54.0	34.8	2.6	0.9	7.6	...	
	*2017	2.2	56.1	32.4	2.7	1.0	7.8	...	
	*2018	2.2	...	...	...	...	...	...
Gabon Gabon	2009	0.6	29.3	58.1	9.5	...	3.1	~0.0	
Gambia Gambie	2009 ¹	~0.0	...	...	...	...	...	...
	2011 ⁷	0.1	...	38.5	...	45.6	15.9	...	
	#2018 ^{1,2}	0.1	...	...	...	...	...	...
Georgia Géorgie	2005	0.2	...	...	...	...	...	...
	2013 ^{1,8}	# 0.1 ¹⁶	...	46.7 ¹⁷	...	3.1 ¹⁷	14.7 ¹⁷	0.4 ¹⁷	
	2015 ^{1,2,3}	0.3	...	...	...	...	...	...
	2018 ¹	0.3 ^{2,3}	1.7 ^{8,17}	42.5 ^{8,17}	...	1.0 ^{2,3}	10.3 ^{2,3}	1.7 ^{2,3}	
Germany Allemagne	2005	2.4	67.5 ⁵	28.5 ⁵	...	0.3 ⁵	3.7 ⁵	...	
	2010	2.7	65.5 ⁵	30.4 ⁵	...	0.2 ⁵	3.9 ⁵	...	
	2015	2.9	65.6 ⁵	27.9 ⁵	...	0.4 ⁵	6.2 ⁵	...	
	2017	3.0	66.2 ⁵	27.7 ⁵	...	0.3 ⁵	5.8 ⁵	...	
	*2018	3.1	...	...	...	...	...	...
Ghana Ghana	2010	# 0.4	# 0.1	# 68.3	...	0.1	31.2	...	
Greece Grèce	2005	0.6	31.1	46.8	1.7	1.5	19.0	...	
	*2010	0.6	36.5	48.3	2.3	1.0	11.9	...	
	2015	1.0	31.4	53.1	2.5	0.4	12.7	...	
	*2018	1.2	42.6	40.6	1.9	0.6	14.2	...	
Greenland Groenland	2004	0.6	...	...	...	...	...	...
Guam Guam	2001	...	...	100.0	...	...	...	...
	2005	0.3	...	...	...	...	...	...
Guatemala ¹ Guatemala ¹	2005	~0.0	...	42.1	57.9	...	...	...
	2010	~0.0	...	18.3	30.9	...	50.8	...	
	2015	~0.0	...	27.8	28.2	...	44.0	~0.0	
	2017	~0.0	10.3	10.2	79.5	...	...	...
Honduras Honduras	2004	~0.0	...	...	...	...	...	...
	2015 ¹	# ~0.0	...	82.5	...	...	...	...
	2017	~0.0	10.4	44.9	...	13.8	3.5	...	
Hungary Hongrie	2005	0.9	39.4 ⁵	49.4 ⁵	...	0.3 ⁵	10.7 ⁵	...	
	2010	1.1	47.4	39.3	...	0.9	12.4	...	
	2015	1.4	49.7	34.6	...	0.7	15.0	...	
	2017	1.3	52.7	31.9	...	0.5	14.9	...	
	2018	1.6	...	...	...	...	...	...
Iceland Islande	2005	2.7	48.0	40.5	...	0.3	11.2	...	
	2009	2.6	47.8	40.2	...	0.6	11.4	...	
	2015	2.2	35.8	30.8	4.0	4.1	25.4	...	
	2018	2.0	40.2	36.0	3.3	1.9	18.6	...	
India Inde	2005	0.8	...	...	...	...	...	...
	2010	0.8	...	...	...	...	...	...
	2015	0.7	...	...	...	...	...	...
	2017	0.7	36.8 ¹⁸	63.2 ¹⁸	...	...	...	...
	2018	0.7	...	...	...	...	...	...

Country or area Pays ou zone	Year Année	Expenditure on R&D as a % of GDP Dépenses en R&D en % du PIB	Source of funds (%) / Source de financement (%)					
			Business enterprises Entreprises	Government Etat	Higher education Enseigne- ment supérieur	Private non- profit Institut. Privées sans but lucratif	Funds from abroad Fonds de l'étranger	Not specified/ Non précisé
Indonesia Indonésie	2001	~0.0	14.7 ^{1,11}	84.5	...	...	...	0.7
	#2009 ¹	0.1	...	...	...	...	...	...
	2013	0.1	...	...	...	...	...	...
	2018	0.2	8.0	87.7	...	0.2	0.1	1.0
Iran (Islamic Republic of) Iran (Rép. islamique d')	2005	0.6	12.2	76.2	11.6	...	...	...
	2008	0.6	30.9	61.6	7.4	...	...	...
	2010 ^{2,19}	0.3	...	...	...	...	...	...
	2015	0.4	...	...	...	...	...	...
	#2017	0.8	...	...	...	...	...	...
Iraq Iraq	2010	~0.0 ^{2,3,16}	...	100.0 ⁴	...	...	...	...
	2015	~0.0	1.1	96.4	...	0.3	0.1	...
	2016	~0.0	1.2	96.0	...	0.7	0.1	...
	2018	~0.0	1.8	97.3	...	0.3	...	...
Ireland Irlande	2005	1.2	57.4	32.0	1.7	0.2	8.6	...
	*2010	1.6	52.2	29.4	0.9	0.5	17.0	...
	*2015	1.2	48.7	26.1	1.0	0.6	23.6	...
	*2016	1.2	49.0	25.8	0.8	0.8	23.6	...
	*2018	1.1	...	...	...	...	...	...
Israel ⁵ Israël ⁵	2005	4.1	56.2	14.5	2.8	1.8	24.7	...
	2010	3.9	36.2	14.2	1.2	1.1	47.3	...
	2015	4.3	33.2	12.8	0.7	0.8	52.5	...
	2017	* 4.8	* 35.8	* 10.6	# 0.3	* 0.8	* 52.6	...
	*2018	5.0	...	...	...	...	...	...
Italy Italie	2005	1.0	39.7	50.7	0.1	1.6	8.0	...
	2010	1.2	44.7	41.6	0.9	3.1	9.8	...
	2015	1.3	50.0	38.0	1.0	2.7	8.3	...
	2017	1.4	53.7	32.3	0.8	1.5	11.7	...
	*2018	1.4	...	...	...	...	...	...
Jamaica Jamaïque	2002	0.1	...	...	...	...	...	...
Japan Japon	2005	3.2	76.1	* 16.8	* 6.1	0.7	0.3	...
	2010	3.1	75.9	* 17.2	* 5.7	0.8	0.4	...
	2015	3.3	78.0	* 15.4	* 5.4	0.7	0.5	...
	2018	# 3.3	# 79.1	* 14.6	* 5.1	# 0.7	# 0.6	...
Jordan Jordanie	2002	0.3	...	...	...	...	...	...
	2008	0.4	...	...	...	...	...	...
	#2016 ⁷	0.7	...	...	...	...	...	...
Kazakhstan Kazakhstan	2005	0.3	39.1	44.5	13.4	1.3	1.5	...
	2010	0.2	36.6	36.7	17.2	8.9	0.6	...
	2011	0.2	51.6	24.9	16.3	6.9	0.3	...
	2015	0.2	36.6	58.8	...	...	1.8	2.8
	2018	0.1	47.4	44.5	...	...	2.7	5.4
Kenya Kenya	#2010	0.8	4.3	26.0	...	3.5	47.1	...
Kuwait Koweït	2004 ¹³	0.1 ¹	6.0	93.2	...	...	0.8	...
	2005 ¹³	0.1 ¹	7.3	92.3	...	0.4	...	...
	2009 ¹³	0.1 ¹	2.3	96.5	...	...	1.2	...
	2010 ¹³	0.1 ¹	5.2	94.8	...	~0.0	...	...
	2014 ^{2,3}	0.4 ⁷	1.0	90.2	...	1.1	...	2.3
	#2015 ^{1,2,3}	0.1	...	...	...	...	...	...
	2018 ^{1,2,3}	0.1	...	...	...	...	...	...
Kyrgyzstan Kirghizistan	2003	0.2	53.7	45.1	0.1	...	1.1	...
	2005	0.2	36.4	63.6	...	...	~0.0	...
	2010	0.2	...	...	...	...	...	...
	2015 ²	0.1	8.7	89.2	0.2	...	1.0	0.8
	2017 ²	0.1	6.4	89.5	0.2	...	3.1	0.7
Lao People's Dem. Rep. Rép. dém. populaire lao	2002	~0.0	36.0	8.0 ¹	...	...	54.0 ¹	...

Country or area Pays ou zone	Year Année	Expenditure on R&D as a % of GDP Dépenses en R&D en % du PIB	Source of funds (%) / Source de financement (%)					
			Business entreprises Entreprises	Government Etat	Higher education Enseigne- ment supérieur	Private non- profit Institut. Privées sans but lucratif	Funds from abroad Fonds de l'étranger	Not specified/ Non précisé
Latvia Lettonie	2005	0.5	34.3	46.0	1.2	...	18.5	...
	2010	0.6	38.8	26.4	1.4	...	33.4	...
	2015	0.6	20.0	32.7	2.2	...	45.0	...
	2017	0.5	24.1	43.6	2.5	...	29.8	...
	2018	0.6	...	...	...	...	...	...
Lesotho Lesotho	2004 ¹	0.1	...	...	...	...	...	...
	2009 ¹	~0.0	3.4	15.0	...	...	...	78.9
	2011 ¹	~0.0 ⁸	...	...	...	...	3.4	51.9
	2015 ³	~0.0 ²	0.8	91.1 ²	...	0.3 ²	7.8 ²	...
Lithuania Lituanie	2005	0.7	20.8	62.7	5.7	0.2	10.5	...
	2010	0.8	32.4	46.0	1.5	0.2	19.9	...
	2015	1.0	28.5	35.3	1.5	0.3	34.3	...
	2017	0.9	35.4	36.4	3.7	0.1	24.4	...
	*2018	0.9	...	...	...	...	...	...
Luxembourg Luxembourg	2005	1.6	79.7	16.6	~0.0	0.1	3.6	...
	2010	1.5	43.5	35.1	0.6	0.1	20.6	...
	2015	1.3	47.1	47.7	1.6	0.2	3.4	...
	2017	1.3	49.6	43.1	1.4	0.3	5.7	...
	*2018	1.2	...	...	...	...	...	...
Madagascar Madagascar	2005	0.2 ¹	...	89.8 ⁴	...	...	10.2	...
	2009	0.1 ¹	...	89.4 ⁴	...	...	10.6	...
	2010	0.1 ¹	...	# 100.0 ⁴	...	...	...	...
	2011	0.1 ¹	...	100.0 ¹⁵	...	...	...	...
	#2014 ^{1,13}	~0.0	...	...	...	...	...	...
	2017 ^{1,13}	~0.0	...	...	...	...	...	...
Malaysia Malaisie	2004	0.6	71.2	21.5	6.9	...	0.4	...
	2010	1.0	59.6	36.4	3.5	...	0.4	0.1
	2015	1.3	# 49.6	# 35.8	7.0	...	1.7	# 6.0 ¹⁸
	2016	1.4	# 56.9	# 28.8	# 12.8	...	# 0.9	# 0.7
Mali Mali	2007 ¹	0.2 ¹⁹	10.1	40.9	...	...	49.0	...
	2010	0.6	...	# 91.2	...	...	8.8	...
	2015 ³	0.3	0.9	43.6	...	0.3	32.7	22.4
	2017 ¹	0.3 ³	0.8 ³	46.0	...	3.0 ³	50.2 ³	...
Malta Malte	2005	0.5	# 46.8	# 25.9	0.4	0.1	26.9	...
	2010	0.6	52.5	34.4	1.3	0.1	11.7	...
	2015	0.7	45.6	32.8	1.1	0.1	20.4	...
	2017	0.6	56.4	31.3	1.3	0.3	10.8	...
	*2018	0.6	...	...	...	...	...	...
Mauritania ^{1,8} Mauritanie ^{1,8}	2018	~0.0	...	92.8	...	7.2	...	...
Mauritius Maurice	2005 ^{7,16}	0.4	...	100.0	...	...	...	...
	2012	# 0.2 ⁷	0.3 ³	72.4 ³	...	0.1 ³	6.4 ³	...
	2018	0.3	4.1	79.4	...	...	1.0	11.0
Mexico Mexique	2005	0.4	41.5	49.2	7.3	0.9	1.1	...
	2010	0.5	33.0	64.0	2.0	0.5	0.5	...
	2015	0.4	17.4	79.7	1.7	0.5	0.6	...
	*2018	0.3	18.6	76.8	2.8	0.8	0.9	...
Monaco ¹ Monaco ¹	2005	~0.0	...	98.8	...	...	...	1.2
Mongolia Mongolie	2005	0.2 ¹	10.4	77.8	0.8	...	4.4	6.5
	2010 ¹	0.2	7.2	61.1	1.5	...	4.2	25.9
	2014 ¹	0.2	7.5	75.8	3.2	...	2.8	10.7
	2015 ¹	0.2	7.3	80.1	9.7	...	...	2.9
	2016 ¹	0.2	4.9	86.3	3.7	0.8	2.1	2.1
	2018 ¹	0.1	8.1	80.9	7.1	...	3.5	0.4

Country or area Pays ou zone	Year Année	Expenditure on R&D as a % of GDP Dépenses en R&D en % du PIB	Source of funds (%) / Source de financement (%)					
			Business entreprises Entreprises	Government Etat	Higher education Enseigne- ment supérieur	Private non- profit Institut. Privées sans but lucratif	Funds from abroad Fonds de l'étranger	Not specified/ Non précisé
Montenegro Monténégro	2005	0.9	...	...	...	...	...	...
	2007	1.1	...	...	...	...	...	...
	2015	0.4	29.9	57.8	...	~0.0	5.9	...
	2017	0.3	18.7	64.1	...	...	10.3	...
	2018	0.4	...	...	...	...	...	...
Morocco Maroc	2003	0.6	12.3	40.3	47.4	...	...	...
	2010	0.7	29.9	23.1	45.3	...	1.7	...
Mozambique Mozambique	2002 ^{7,14}	0.4	...	34.7	...	...	65.3	...
	2010	# 0.4 ³	...	18.8 ⁴	...	3.0	78.1	...
	2015	0.3	0.5 ¹	43.5	...	...	39.9	2.8
Myanmar Myanmar	2002 ¹	0.2	...	...	...	...	...	...
	2017 ^{2,3}	# ~0.0 ¹	...	77.4 ⁴	...	~0.0	22.5	...
Namibia Namibie	2010	0.1 ^{1,19}	19.8	78.6	...	...	1.5	...
	2014 ¹	0.3	11.1	63.2	...	3.9	15.8	...
Nepal ¹⁶ Népal ¹⁶	#2010	0.3	...	...	...	...	...	...
Netherlands Pays-Bas	2005	1.8	46.3	38.8	0.3	2.6	12.0	...
	2009	1.7	45.1	40.9	0.3	2.8	10.8	...
	2010	1.7	...	...	...	...	...	...
	2015	2.0	48.6	33.1	0.2	2.6	15.5	...
	2017	2.0	51.6	31.4	0.2	2.5	14.3	...
	* #2018	2.2	...	...	...	...	...	...
New Zealand Nouvelle-Zélande	2005	1.1	41.1	43.2	...	1.7	5.2	...
	2009	1.3	39.0	44.7	...	2.8	5.2	...
	2015	1.2	43.8	37.1	...	3.1	7.7	...
	2017	1.4	46.4	35.8	...	2.5	7.7	...
Nicaragua Nicaragua	2002	~0.0	...	...	...	...	...	...
	2015 ⁸	0.1	...	...	...	...	...	...
Nigeria Nigéria	2007	0.1	0.2	96.4	0.1	1.7	1.0	0.6
North Macedonia Macédoine du Nord	2002	0.2	* 7.8	76.3	7.3	~0.0	8.6	...
	2005	0.2	...	...	...	...	...	...
	2010	0.2	...	...	...	...	...	...
	2015	0.4	16.8	52.9	25.0	0.1	5.2	...
	2018	0.4	30.1	45.2	20.2	0.2	4.3	...
Norway Norvège	2005	1.5	46.8	43.6	0.7	0.9	8.1	...
	2009	1.7	43.6	46.8	0.4	1.0	8.2	...
	2010	1.6	...	...	...	...	...	...
	2015	1.9	44.2	44.9	0.4	1.2	9.2	...
	2017	2.1	42.8	46.7	0.4	1.2	8.8	...
	*2018	2.1	...	...	...	...	...	...
Oman Oman	2012	0.2	29.9	47.8	...	0.3	~0.0	...
	2013	0.2	24.5	48.6	...	0.1	...	2.3
	2015	0.2	21.4	55.7	...	0.2	...	...
	2018 ¹	0.2	31.8	43.3	...	4.3	1.5	...
Pakistan Pakistan	2005	0.4 ^{2,3}	...	87.0	11.9	...	0.3	0.8
	2009	0.4 ^{2,3}	...	84.0	12.1	1.7	0.9	1.3
	2015 ^{2,3}	0.2	...	67.0	25.5	0.3	2.7	4.6
	2017	0.2 ^{2,3}	...	61.8	35.1	0.3	1.3	1.4
Panama Panama	2003	0.3	0.6	25.5	1.8	1.0	71.0	0.1
	2005	0.2	0.4	38.5	1.4	0.7	58.9	...
	2010	0.1	3.4	53.9	6.0	14.0	22.7	~0.0
	2015	0.1	0.9	26.4	0.8	14.8	57.2	~0.0
	2016	0.1	0.5	48.0	6.0	6.7	38.8	...
	2017	0.1	1.5	55.7	...	8.0	34.7	0.1
Papua New Guinea ³ Papouasie-Nvl-Guinée ³	2016	~0.0 ¹	4.5	38.7	...	0.8	39.7	8.8

Country or area Pays ou zone	Year Année	Expenditure on R&D as a % of GDP Dépenses en R&D en % du PIB	Source of funds (%) / Source de financement (%)					
			Business entreprises Entreprises	Government Etat	Higher education Enseigne- ment supérieur	Private non- profit Institut. Privées sans but lucratif	Funds from abroad Fonds de l'étranger	Not specified/ Non précisé
Paraguay	2005	0.1	# 0.3	# 74.9	# 8.6	# 2.0	# 14.2	...
Paraguay	2008	~0.0	0.3	76.2	9.2	2.1	12.3	...
	2015 ³	0.1	0.3	73.1	2.1	4.2	10.3	10.1
	2017 ³	0.1	0.2	77.4	3.9	2.8	11.5	4.3
Peru	2004	0.2	...	...	...	...	...	...
Pérou	2015	0.1	...	...	...	...	...	...
	2018	0.1	...	...	...	...	...	...
Philippines	2005	0.1	62.6	25.6	6.0	0.7	4.8	0.3
Philippines	2009	0.1	57.5	26.7	7.8	0.4	4.2	3.4
	2015	0.2	38.0	49.4	9.9	0.4	1.8	0.4
Poland	2005	0.6	33.4	57.7	2.9	0.3	5.7	...
Pologne	2010	0.7	24.4	60.9	2.5	0.3	11.8	...
	2015	1.0	39.0	41.8	2.2	0.2	16.7	...
	2017	1.0	52.5	38.3	3.0	0.3	6.0	...
	*2018	1.2	...	...	...	...	...	...
Portugal	2005	0.8	36.3	55.2	1.0	2.8	4.7	...
Portugal	2010	1.5	43.9	45.1	3.2	4.6	3.2	...
	2015	1.2	42.7	44.3	4.4	1.3	7.4	...
	2017	1.3	46.5	41.0	3.9	1.2	7.3	...
	*2018	1.4	...	...	...	...	...	...
Puerto Rico	2009	0.5	...	...	...	...	...	...
Porto Rico	2015	0.4	69.4	23.1	...	0.3	...	0.6
Qatar	2015	0.5	7.1	42.6	...	27.8	1.9	~0.0
Qatar	2018	0.5	9.3	32.4	...	12.7	0.5	~0.0
Republic of Korea	2005 ⁵	2.6	75.0	23.0	0.9	0.4	0.7	...
République de Corée	2010	3.5	71.8	26.7	0.9	0.4	0.2	...
	2015	4.2	74.5	23.7	0.6	0.4	0.8	...
	2018	4.8	76.6	20.5	0.6	0.3	1.9	...
Republic of Moldova	2005	0.4	...	...	...	...	3.8	96.2 ¹⁸
République de Moldova	2010	0.4	...	...	...	...	7.4	92.6 ¹⁸
	2015	0.3	...	...	...	...	11.6	88.4 ¹⁸
	2016	0.3	...	...	...	...	4.2	95.8 ¹⁸
	2018	0.3	15.5	76.7	2.8	...	5.0	...
Romania	2005	0.4	37.2	53.5	4.0	~0.0	5.3	...
Roumanie	2010	0.5	32.3	54.4	2.2	~0.0	11.1	...
	2015	0.5	37.3	41.7	1.7	0.1	19.2	...
	2017	0.5	54.4	35.9	1.7	~0.0	7.9	...
	2018	0.5	...	...	...	...	...	...
Russian Federation	2005	1.1	30.0	61.9	0.4	~0.0	7.6	...
Fédération de Russie	2010	1.1	25.5	70.3	0.5	0.1	3.5	...
	2015	1.1	26.5	69.5	1.2	0.2	2.6	...
	2018	1.0	29.5	67.0	0.9	0.3	2.3	...
Rwanda	2016	0.7	0.6	64.5	...	0.7	33.7	...
Saint Vincent & Grenadines	2002	0.1	...	...	...	...	...	...
Saint-Vincent-Grenadines	2005 ¹	~0.0	...	...	...	...	...	...
Saudi Arabia ¹⁶	#2010 ⁷	0.9	...	...	...	...	...	...
Arabie saoudite ¹⁶	2013 ⁷	0.8	...	...	...	...	...	...
Senegal	2010	0.4	4.1	47.6	~0.0	3.2	40.5	4.5
Sénégal	2015 ³	0.6	2.1	85.4	0.1	4.5	7.9	...
Serbia	2005 ^{5,20}	0.4	...	...	...	...	...	...
Serbie	2010	0.7 ²⁰	8.6	59.4	...	~0.0	3.6	...
	2015	0.8 ²⁰	12.8	50.6	...	~0.0	12.6	...
	2018	0.9 ²⁰	10.0	43.1	...	~0.0	21.6	...
Seychelles	2005	0.3	...	...	...	...	...	...
Seychelles	2016	# 0.2	2.0 ³	56.1 ³	...	3.2 ³	33.9 ³	0.3 ³

Country or area Pays ou zone	Year Année	Expenditure on R&D as a % of GDP Dépenses en R&D en % du PIB	Source of funds (%) / Source de financement (%)					
			Business enterprises Entreprises	Government Etat	Higher education Enseigne- ment supérieur	Private non- profit Institut. Privées sans but lucratif	Funds from abroad Fonds de l'étranger	Not specified/ Non précisé
Singapore Singapour	2005	2.1	58.6	35.7	1.3	...	4.4	...
	2010	1.9	51.8	41.2	2.0	...	5.0	...
	2015	2.2	52.8	38.2	2.2	...	6.8	...
	2017	1.9	52.2	37.4	3.3	...	7.1	...
Slovakia Slovaquie	2005	0.5	36.6	* 57.0	0.3	~0.0	6.0	...
	2010	0.6	35.1	* 49.6	0.4	0.3	14.7	...
	2015	1.2	25.1	31.9	3.3	0.3	39.4	...
	2018	0.8	48.8	38.0	1.7	0.3	11.2	...
Slovenia Slovénie	2005	1.4	54.8	37.2	0.7	~0.0	7.3	...
	2010	2.1	58.4	35.3	0.3	0.1	6.0	...
	2015	2.2	69.2	19.9	0.3	~0.0	10.6	...
	2017	1.9	63.1	22.9	0.5	0.4	13.1	...
	*2018	1.9	...	...	...	...	...	...
South Africa Afrique du Sud	2005	0.9	43.9	38.2	3.0	1.4	13.6	...
	2010	0.7	40.1	44.5	0.1	3.2	12.1	...
	2015	0.8	38.9	44.6	0.1	3.3	13.0	...
	2017	0.8	41.5	46.7	0.2	1.5	10.2	...
Spain Espagne	2005	1.1	46.3	43.0	4.1	0.9	5.7	...
	2010	1.3	43.0	46.6	3.9	0.7	5.7	...
	2015	1.2	45.8	40.9	4.3	0.9	8.0	...
	2017	1.2	47.8	38.9	4.3	0.8	8.2	...
	2018	1.2	...	...	...	...	...	...
Sri Lanka Sri Lanka	#2000	0.1 ¹	* 7.7	51.7 ¹	18.5 ¹	...	4.5 ¹	17.5 ¹
	#2004	0.2	0.6	67.5 ⁴	...	...	22.6	9.3
	2010	0.1	# 40.9	55.9	0.2	...	2.7	0.3
	2015	0.1	34.4	59.6	...	2.3	1.5	2.1
State of Palestine ³ État de Palestine ³	2010	0.4	0.9	21.3	...	4.9	52.4	18.2
	2013	0.5	3.8	29.4	...	17.1	24.2	21.1
Sudan ⁷ Soudan ⁷	2005	0.3	...	...	...	...	...	...
Sweden Suède	#2005	3.4	63.9	24.4	0.7	2.9	8.1	...
	2009	3.4	59.5	27.0	0.6	2.6	10.3	...
	*2010	3.2	...	...	...	...	...	...
	*2013	3.3	61.0	28.3	1.0	3.1	6.7	...
	2015	3.3 ¹⁷	57.3	...	0.9	3.3	...	...
	2017	3.4 ¹⁷	60.8	25.0	0.7	3.3	10.1	...
	*2018	3.3	...	...	...	...	...	...
Switzerland Suisse	2004	2.7	69.7	22.7	1.5	0.8	5.2	...
	2008	2.7	68.2	22.8	2.3	0.7	6.0	...
	2015	3.4	63.5	24.4	1.5	0.5	10.2	...
	2017	3.4	67.0	25.9	1.4	0.5	5.2	...
Tajikistan Tadjikistan	2001	0.1	0.6	97.3	...	...	0.2	1.9
	2005	0.1	2.2 ¹⁷	91.5 ¹⁷	...	...	...	5.5 ¹⁷
	2006	0.1	0.2 ¹⁷	76.3 ¹⁷	...	...	0.6 ¹⁷	19.9 ¹⁷
	2010	0.1 ^{2,3}	1.9 ¹⁷	76.2 ¹⁷	...	...	...	19.7 ¹⁷
	2011	0.1 ^{2,3}	1.6 ¹⁷	82.1 ¹⁷	...	...	...	15.1 ¹⁷
	2013	0.1 ^{2,3}	...	92.5	...	...	0.2	7.1
	2015 ^{2,3}	0.1	...	100.0	...	...	...	...
	2018 ^{2,3}	0.1	...	100.0	...	...	...	...
Thailand Thaïlande	2005	0.2	48.7	31.5	14.9	0.7	1.8	2.4
	2009	0.2	41.4	37.9	17.8	0.3	1.0	1.6
	2015	0.6	66.2	20.5	5.5	0.1	1.5	6.0
	2017	1.0	80.8	12.2	5.7	0.5	0.7	0.1
Togo Togo	2010	0.2	...	88.3	...	...	11.7	...
	2012	0.2 ³	...	84.9	...	3.1	12.1	...
	2014 ³	0.3 ²	...	94.5	...	...	5.5	...

Country or area Pays ou zone	Year Année	Expenditure on R&D as a % of GDP Dépenses en R&D en % du PIB	Source of funds (%) / Source de financement (%)					
			Business enterprises Entreprises	Government Etat	Higher education Enseigne- ment supérieur	Private non- profit Institut. Privées sans but lucratif	Funds from abroad Fonds de l'étranger	Not specified/ Non précisé
Trinidad and Tobago Trinité-et-Tobago	2005	0.1	...	...	...	...	...	...
	2010	~0.0	...	...	...	...	...	...
	2015	0.1	...	...	...	...	...	...
	2017	0.1	8.2	75.0	...	...	16.8	...
Tunisia Tunisie	2005	0.7	14.4	79.2	...	...	6.4	...
	2010	0.7	17.1	78.1	...	...	4.8	...
	2015	0.6	18.9	77.1	...	...	3.9	...
	2018	0.6	...	...	...	...	...	...
Turkey Turquie	2005	0.6	43.3 ⁵	50.1 ⁵	...	5.8 ⁵	0.8	...
	2010	0.8	38.2	43.1	16.8	0.1	1.7	...
	2015	0.9	44.6	38.5	15.0	~0.0	1.9	...
	2017	1.0	49.4	33.6	13.3	0.1	3.5	...
Uganda Ouganda	2005	0.2	1.7	41.5	...	...	56.9	...
	2010	0.5	13.7	21.9	...	6.0	57.3	...
	2014	# 0.2	# 3.4	37.9	...	3.3	52.4	0.7
Ukraine Ukraine	2005	1.0	# 32.3	# 40.1	# 0.1	# 0.4	# 24.4	# 2.8
	2010	0.8	26.2	46.7	0.2	0.1	25.7	1.1
	2014	0.7 ²⁰	35.2	43.8	0.2	~0.0	19.8	1.1
	2015	0.6 ²⁰	40.3	39.4	0.2	...	18.2	2.0
	2018	0.5 ²⁰	30.5	46.3	0.3	0.1	21.7	1.1
United Arab Emirates Émirats arabes unis	2014	0.7	74.3 ²¹	25.7 ¹³	...	...	...	...
	2015	0.9	...	...	...	...	...	...
	#2018	1.3	...	...	...	...	...	...
United Kingdom Royaume-Uni	2005	1.6	42.1	32.7	1.2	4.7	19.3	...
	*2010	1.7	44.0	32.3	1.2	4.8	17.6	...
	2015	1.7	49.0	27.7	1.4	4.9	17.1	...
	2017	1.7	53.7	26.0	0.7	5.2	14.4	...
	*2018	1.7	...	...	...	...	...	...
United Rep. of Tanzania Rép.-Unie de Tanzanie	2010	0.4 ^{1,3}	0.1	57.5	0.3	0.1	42.0	...
	2013 ³	0.5	...	...	...	...	...	...
United States of America États-Unis d'Amérique	2005 ⁵	2.5	63.3	30.8	2.8	3.1	...	...
	2010	2.7 ⁵	56.9 ⁵	32.6 ⁵	3.0 ⁵	3.8 ⁵	3.7	...
	2015	2.7 ⁵	62.5 ⁵	25.3 ⁵	3.5 ⁵	3.7 ⁵	5.0	...
	2018	* 2.8 ⁵	* 62.4 ⁵	* 23.0 ⁵	* 3.6 ⁵	* 3.7 ⁵	* 7.3	...
United States Virgin Islands ¹ Îles Vierges américaines ¹	2002	0.1	...	70.8	...	1.2	...	...
	2005	~0.0	...	100.0	...	...	...	...
	2007	~0.0	...	100.0	...	...	...	...
Uruguay Uruguay	2000	0.2	39.3	20.3	35.7	...	4.8	~0.0
	2002	0.2	46.7	17.1	31.4	0.1	4.7	...
	2010	0.3	47.1	22.9	26.6	0.9	1.7	0.8
	2011	0.3	8.5	30.8	45.2	0.1	6.5	8.9
	2015	0.4	4.6	28.6	59.2	0.3	7.4	...
	2017	0.5	4.6	28.2	59.5	0.3	7.4	...
Uzbekistan Ouzbékistan	2005	0.2	52.7	43.1 ⁴	...	...	0.6	3.6
	2010	0.2	35.1	57.8 ⁴	...	...	2.4	4.7
	2015	0.2	38.9	57.0 ⁴	...	...	1.2	2.9
	2018	0.1	42.4	54.3 ⁴	...	...	0.3	3.0
Venezuela (Boliv. Rep. of) Venezuela (Rép. boliv. du)	2005	0.2	...	...	...	...	...	...
	2010	0.2	...	...	...	...	...	...
	2014	0.3	...	59.6	...	...	...	32.0
	2015	...	...	89.1	...	...	...	...
	#2016	...	...	91.1	...	...	...	...
Viet Nam Viet Nam	2002	0.2	18.1	74.1	...	...	6.3	0.8
	2015	0.4	58.1	33.0	...	...	2.9	5.0
	2017	0.5	64.1	26.9	...	...	4.5	3.1
Zambia Zambie	2005 ¹	~0.0	...	...	...	...	...	...
	#2008	0.3	3.2	94.8	...	0.3	1.6	...

Source:

United Nations Educational, Scientific and Cultural Organization (UNESCO), Montreal, the UNESCO Institute for Statistics (UIS) statistics database, last accessed June 2020.

- 1 Partial data.
- 2 Excluding private non-profit.
- 3 Excluding business enterprise.
- 4 Including higher education.
- 5 Do not correspond exactly to Frascati Manual recommendations.
- 6 Data have been converted from the former national currency using the appropriate conversion rate.
- 7 Overestimated or based on overestimated data.
- 8 Higher Education only.
- 9 Underestimated or based on underestimated data.
- 10 For statistical purposes, the data for China do not include those for the Hong Kong Special Administrative Region (Hong Kong SAR), Macao Special Administrative Region (Macao SAR) and Taiwan Province of China.
- 11 Including private non-profit.
- 12 Including business enterprise.
- 13 Government only.
- 14 S&T budget instead of R&D expenditure.
- 15 Including Government.
- 16 Based on R&D budget instead of R&D expenditure.
- 17 The sum of the breakdown does not add to the total.
- 18 Including other classes.
- 19 Excluding government.
- 20 Excluding data from some regions, provinces or states.
- 21 Business enterprise only.

Source:

Organisation des Nations Unies pour l'éducation, la science et la culture (UNESCO), Montréal, base de données statistiques de l'Institut de statistique (ISU) de l'UNESCO, dernier accès juin 2020.

- 1 Données partielles.
- 2 Non compris les organisations privées à but non lucratif.
- 3 Ne comprend pas les entreprises commerciales.
- 4 Y compris l'enseignement supérieur.
- 5 Ne correspond pas exactement aux recommandations du Manuel de Frascati.
- 6 Les données ont été converties à partir de l'ancienne monnaie nationale et du taux de conversion approprié.
- 7 Surestimé ou fondé sur des données surestimées.
- 8 Enseignement supérieur seulement.
- 9 Sous-estimé ou basé sur des données sous-estimées.
- 10 Pour la présentation des statistiques, les données pour la Chine ne comprennent pas la région administrative spéciale de Hong Kong (RAS de Hong Kong), la région administrative spéciale de Macao (RAS de Macao) et la province chinoise de Taïwan.
- 11 Y compris les fonds privés à but non lucratif.
- 12 Y compris les fonds d'entreprises.
- 13 Etat seulement.
- 14 Budget pour la science et technologie au lieu des dépenses de recherche et développement.
- 15 Y compris l'état.
- 16 Basé sur le budget de la recherche-développement au lieu des dépenses.
- 17 La somme de toutes les valeurs diffère du total.
- 18 Comprend d'autres catégories.
- 19 Non compris l'état.
- 20 Non compris les données de certaines régions, provinces ou états.
- 21 Les entreprises commerciales seulement.