## LEADERS IN INNOVATION

## THE GEOGRAPHY OF INNOVATION IS CHANGING



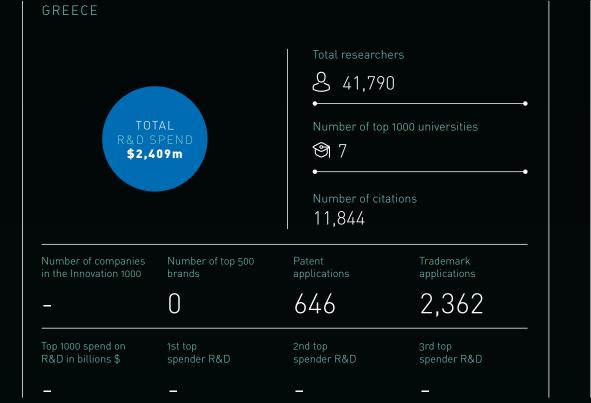
Trademark applications 839 24,414

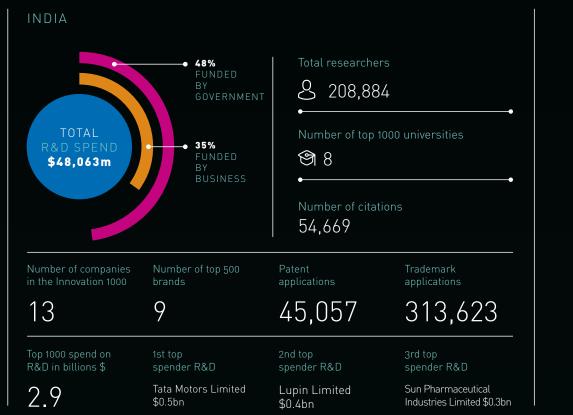


1,368 10,405 37

Top 1000 spend on 1st top	2nd top	3rd top	Top 1000 spend on	1st top	2nd top	3rd top	Top 1000 spend on	1st top	2nd top	3rd top	Top 1000 spend on	1st top	2nd top	3rd top	Top 1000 spend on	1st top	2nd top	3rd top
R&D in billions \$ spender R&	&D spender R&D	spender R&D	R&D in billions \$	spender R&D	spender R&D	spender R&D	R&D in billions \$	spender R&D	spender R&D	spender R&D	R&D in billions \$	spender R&D	spender R&D	spender R&D	R&D in billions \$	spender R&D	spender R&D	spender R&D
			3.4	Novo Nordisk A/S \$2.1bn	H. Lundbeck A/S \$0.4bn	Novozymes A/S \$0.3bn	5.4	Nokia Corporation \$4.7bn	KONE Oyj \$0.1bn	Stora Enso Oyj \$0.1bn	23.8	Sanofi \$5.5bn	Renault SA \$2.5bn	Peugeot S.A. \$2.0bn	54.1	Volkswagen \$12.1bn	Daimler AG \$6.9bn	Siemens \$5.5bn

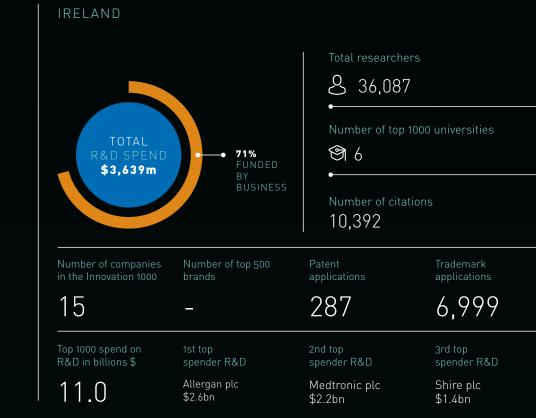
Patent

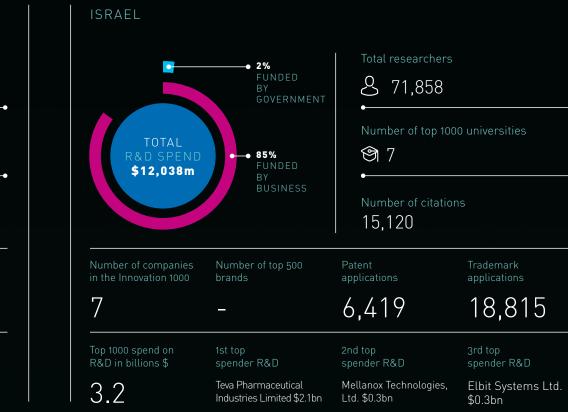




Patent

in the Innovation 1000 brands



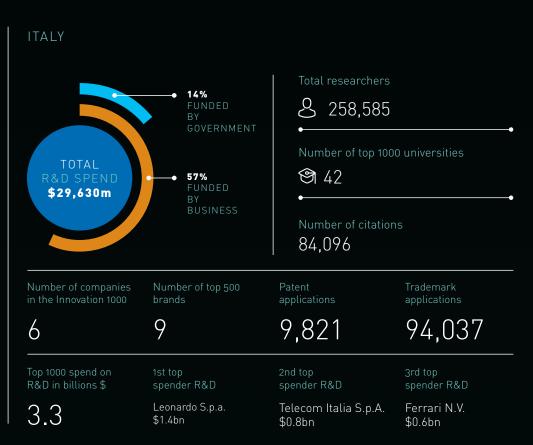


33

Trademark applications

16,218

274,201



Patent

67,899

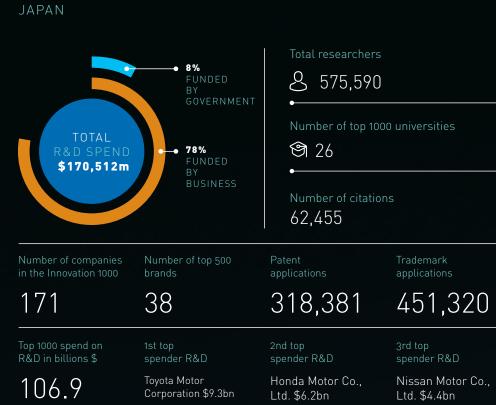
24

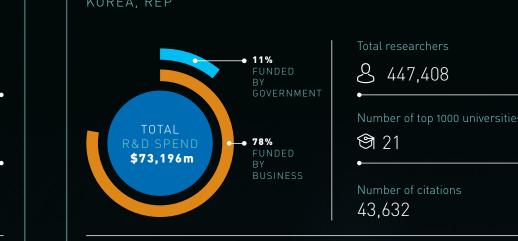
42

16

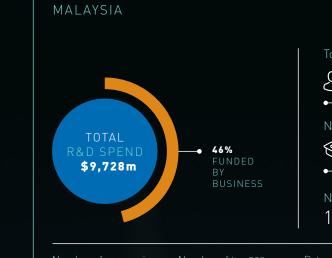
17

209,983



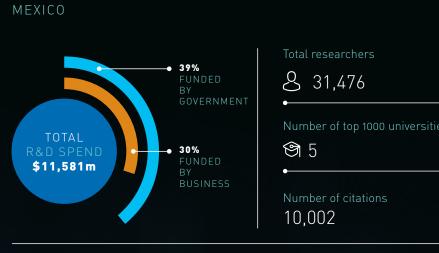


		1 10,002	
Number of companies	Number of top 500	Patent	Trademark
in the Innovation 1000	brands	applications	applications
36	38	208,830	231,978
Top 1000 spend on	1st top	2nd top	3rd top
R&D in billions \$	spender R&D	spender R&D	spender R&D
28.2	Samsung Electronics	LG Electronics Inc.	Hyundai Motor
	Co., Ltd. \$12.7bn	\$3.1bn	Company \$1.8bn

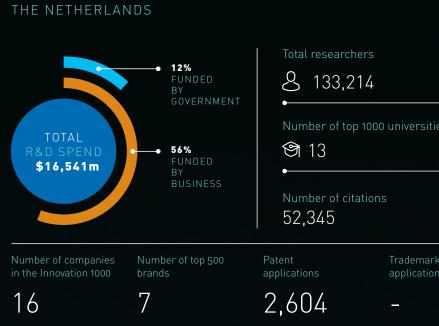


<b>46%</b> Funded By Business	S 64,157 Number of top S 5 Number of citat 11,293	1000 universities	-•
Number of top 500 brands	Patent applications	Trademark applications	

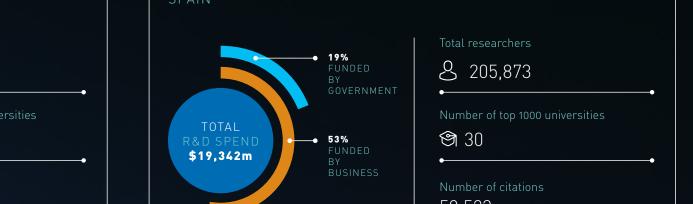
	1	7,236	39,107	
nd on ns \$	1st top spender R&D	2nd top spender R&D	3rd top spender R&D	
	-	-	-	



Number of companies	Number of top 500	Patent	Trademark
in the Innovation 1000	brands	applications	applications
_	2	17,413	141,726
Top 1000 spend on	1st top	2nd top	3rd top
R&D in billions \$	spender R&D	spender R&D	spender R&D



	/	2,004	-
00 spend on	1st top	2nd top	3rd top
n billions \$	spender R&D	spender R&D	spender R&D
	Exor N.V.	Airbus SE	Koninklijke Philips
	\$5.1bn	\$3.4bn	N.V. \$2.1bn









Total researchers	POLAND	RUSSIAN FEDERATIO	N 5	SINGAPORE	SPAIN
& 43,918		l researchers 77,952	-• 30% FUNDED BY GOVERNMENT Number of top 1000 universities	11%     Total researchers       FUNDED     8       BY     37,763	ties
TOTAL R&D SPEND \$5,786m TOTAL R&D SPEND SUBJECT SUB	→ TOTAL R&D SPEND \$9,187m BY BUSINESS	• \$39,830m	- 60% FUNDED BY BUSINESS	TOTAL R&D SPEND \$10,104m • • • • • • • • • • • • • • • • • • •	TOTAL R&D SPEND \$19,342m ↓ 53% FUNDED BY BUSINESS ↓ 53% FUNDED
Number of citations 16,134		nber of citations ,541	Number of citations 25,830	Number of citations 17,565	Number of citations       59,523
the Innovation 1000 brands applications appli	emark cationsNumber of companies in the Innovation 1000Number of top 500 brandsPatent applicati8,127-04,30	ons applications in the Innovation 1000 bran		Number of companies in the Innovation 1000Number of top 500 brandsPatent applicationsTradema applications1410,98045,5	ons in the Innovation 1000 brands applications applications
Dep 1000 spend on 1st top 2nd top 3rd to &D in billions \$ spender R&D spender R&D spender D.5 Statoil ASA Aker BP ASA \$0.3bn \$0.2bn -	op Top 1000 spend on 1st top 2nd top der R&D R&D in billions \$ spender R&D spender 	R&D spender R&D R&D in billions \$ spe	nder R&D spender R&D R&	Top 1000 spend on 1st top 2nd top 3rd top R&D in billions \$ spender R&D spender R&D spender 2.7 \$Proadcom Limited	R&DTop 1000 spend on R&D in billions \$1st top spender R&D2nd top spender R&D3rd top spender R&D2.6Telefónica, S.A. \$1.0bnAmadeus IT Group, S.A. \$0.6bnIberdrola, S.A. \$0.2bn
WEDEN	SWITZERLAND	UNITED KINGDOM	U	USA	SOURCES
Total researchers		37,511	Total researchers FUNDED BY GOVERNMENT Total researchers 419,898 • • • • •	11%     Total researchers       FUNDED     8       BY     GOVERNMENT	R&D Spend, funding sources and researchers: UNESCO Institute of Statistics 2016. From uis.unesco.org/apps/ visualisations/research-and-development- spending/
TOTAL R&D SPEND \$14,154m * 47% FUNDED BY Number of top 1000 universe * 1000 universe	TOTAL R&D SPEND \$14,745m BY	hber of top 1000 universities 11 \$44,164m	- 65% FUNDED BY	TOTAL R&D SPEND \$476,460m  ••• 72% FUNDED BY  Number of top 1000 universit ••• 72% FUNDED BY  ••• 72%	Patent and Trademark Applications: WIPO 2018. From brandfinance.com Statistics Database, September 2017. From www.wipo.int/ipstats/en/ Citeable documents: SCImago, (n.d.). SJF
BUSINESS Number of citations 33,053		nber of citations ,666	BUSINESS Number of citations 144,860	BUSINESS Number of citations 426,316	SCImago Journal & Country Rank [Porta Top 1000 Universities: Ranking Web of Universities - The "Webometrics Ranking of World Universities" is an initiative of the Cybermetrics Lab, a research group
the Innovation 1000 brands applications appli	Image: Application series cationsNumber of companies in the Innovation 1000Number of top 500 brandsPatent applicati0,73024162		ids applications applications in	Number of companies in the Innovation 1000Number of top 500 brandsPatent applicationsTradema applications357191605,571545	rk belonging to the Consejo Superior de
	der R&D R&D in billions \$ spender R&D spender Liv, Inc	R&D spender R&D R&D in billions \$ spe s AG Nestlé S.A	ider R&D spender R&D spender R&D R&	Top 1000 spend on R&D in billions \$1st top spender R&D2nd top spender R&D3rd top spender305.2Amazon.com, Inc. \$16.1bnAlphabet Inc. \$13.9bnIntel Co \$12.7br	R&D rporation

## Roke

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