Redstone University Index 2025: **Focus Slovakia**

Slovakia's 18 Billion Euro Opportunity

AlpMomentum REDSTONE RWTH AACHEN UNIVERSITY sapie The Slovak Alliance for Innovation Economy

Picture: Allsides Tech

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Agenda

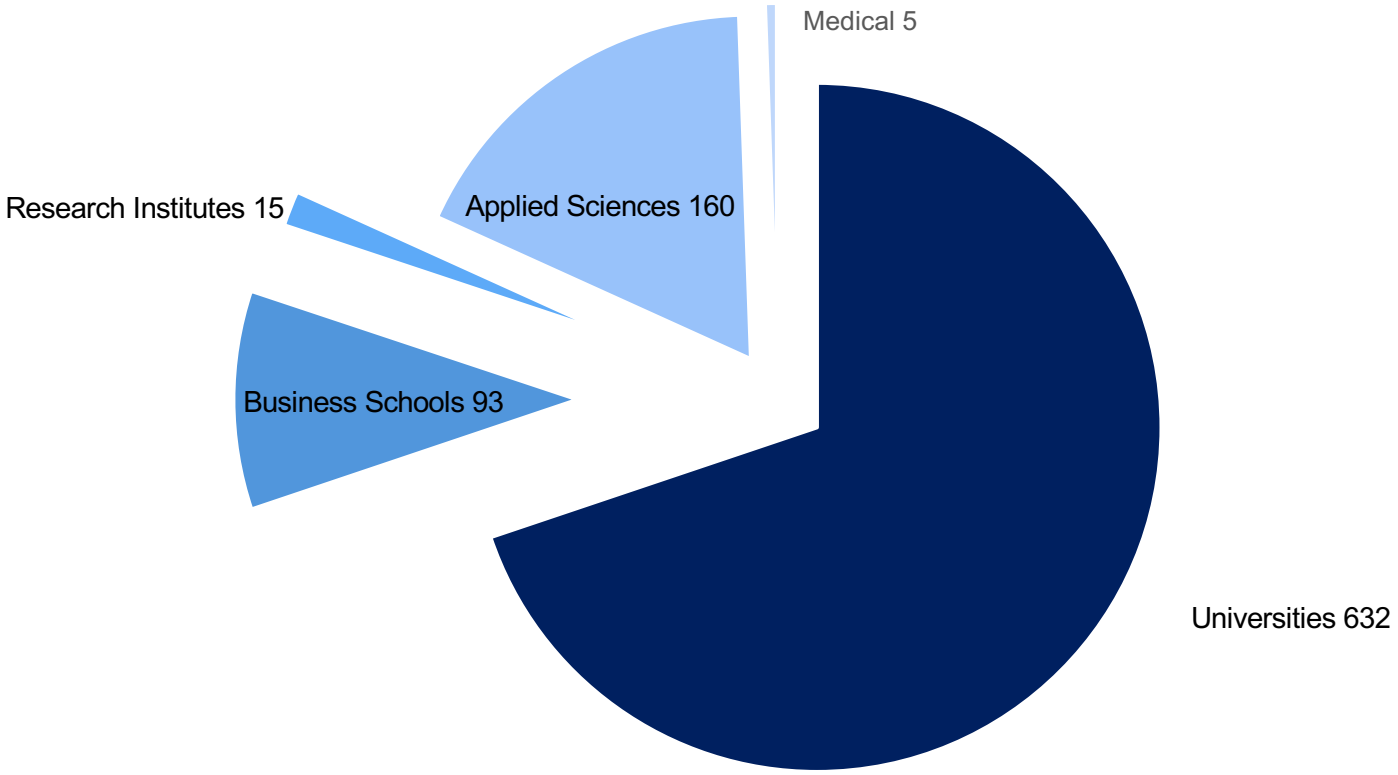
Redstone University Index 2025 :

Europe´s largest study on efficiency of universities to foster entrepreneurship.

Read the full study here

Scope of the Study

Distribution of Universities



Total # Universities : **905**

1. Out of roughly 5.000 recognized universities in Europe, we initially considered 2.500+ most entrepreneurially active universities.
2. Out of these 2.500+ universities, **890** were retained at the end.
3. Additionally, to broaden the perspective, we have included, **15** research institutes across Europe

Key Findings

Scope of the Study on Entrepreneurial European Universities:

- **905 universities in 35 countries** have a combined annual budget of almost **€250 billion.**
- Annually, they create 14.000+ startups through alumni founders and spinoffs.

Discrepancy in University Effectiveness:

- There is a significant disparity in the effectiveness of universities in creating economic and political value for society.
- With comparable resources, university startup creation varies widely, from 1 to 80 startups if provided the same € 100 million budget.

Potential Value Creation Over Next 10 Years:

There is potential to create over 327K+ additional startups over next 10 years resulting in:

- 13,1 million additional jobs.
- €5,5 trillion in additional GDP.
- €880 bilion in additional tax revenue.
- €7 trillion in additional equity value.

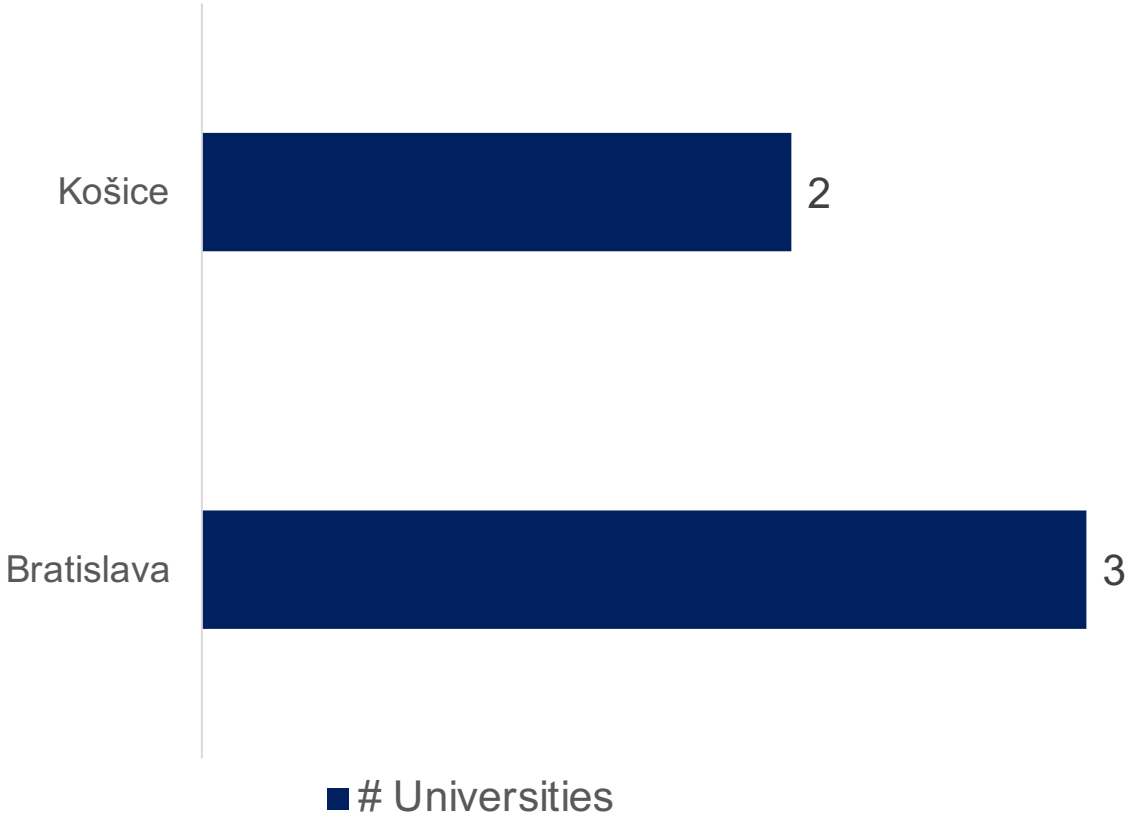
Achievable with negligible additional resources by increasing startup creation efficiency.

Country Overview

Slovakia

Scope of the Study: **Slovakia**

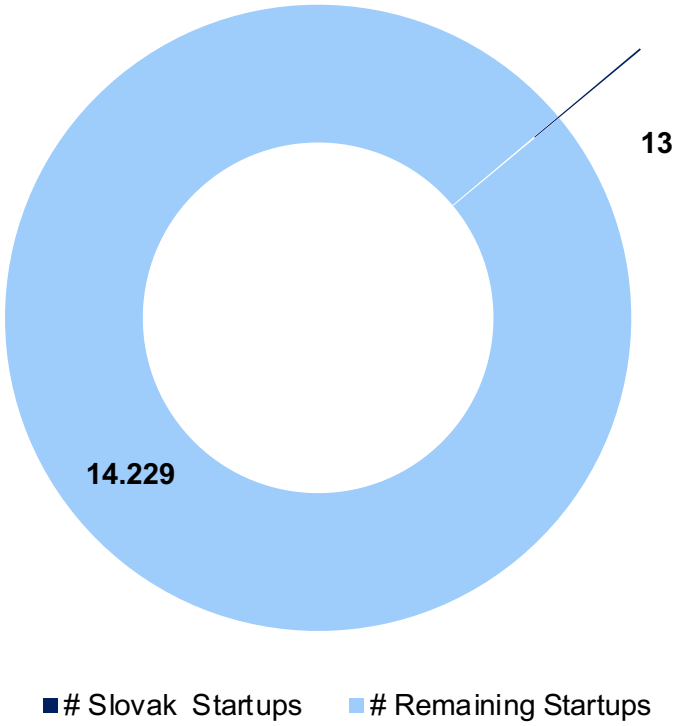
Slovakia : University Distribution by City

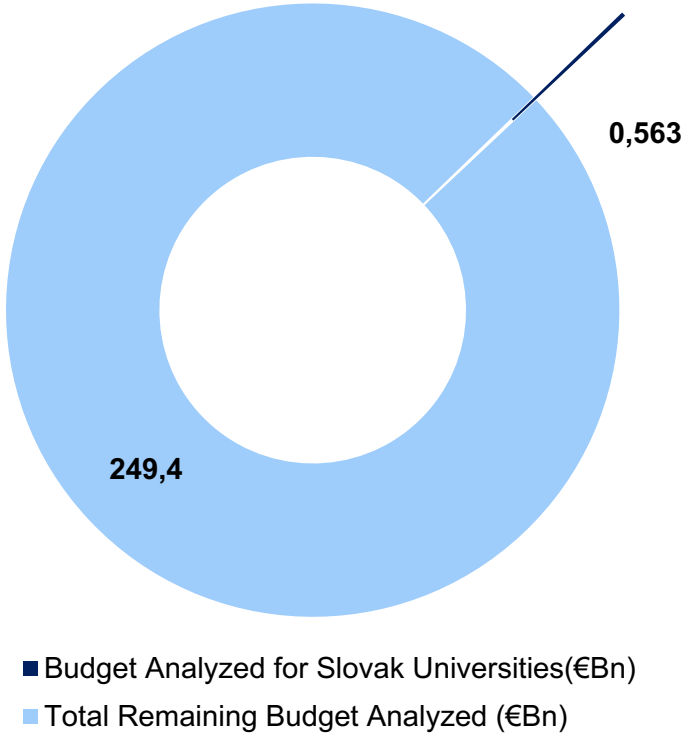


Out of 39 universities in Slovakia, 5 universities with highest entrepreneurial activity were analyzed in our study.
Here is a brief:

- Total number of universities : **5**
- Total number of cities represented: **2**
- Total university budget analyzed: **€563 Mn**
- Total number of startups analysed: **13**

Slovak Universities **Consume 0,02%** Of The Total European Budget To **Produce 0,09%** Of All The Startups





Startups Per €100 Mn University Budget

Our primary metric for this study was the number of startups per €100 Mn university budget, i.e., number of startups created by universities for every €100 Mn.

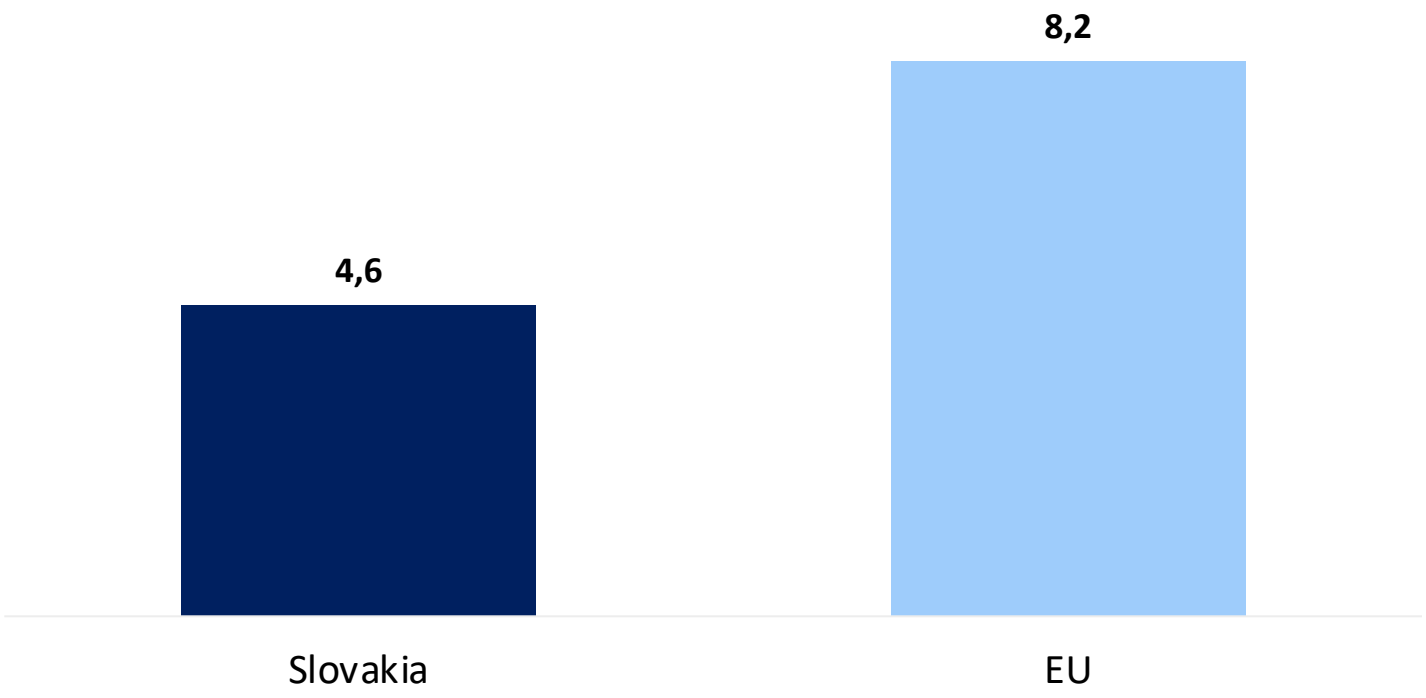
$$\text{\# Startups per €100 Mn university budget} = \frac{\text{\# Startups Created In 1 Year X 100}}{\text{Annual University Budget}}$$

Higher value means better performance.

Startup Efficiency

Slovakia vs Rest of Europe

Slovak Universities Lag Far Behind The EU Average In Terms Of Creating Startups



Here is how Slovakia compares to rest of Europe:

- 5 universities across 2 cities of Slovakia produce 4,6 startups per 100 Million Euros of university budget.
- This is much lower than the EU average of 8,2 startups for the same budget.

Rankings | **General Universities**

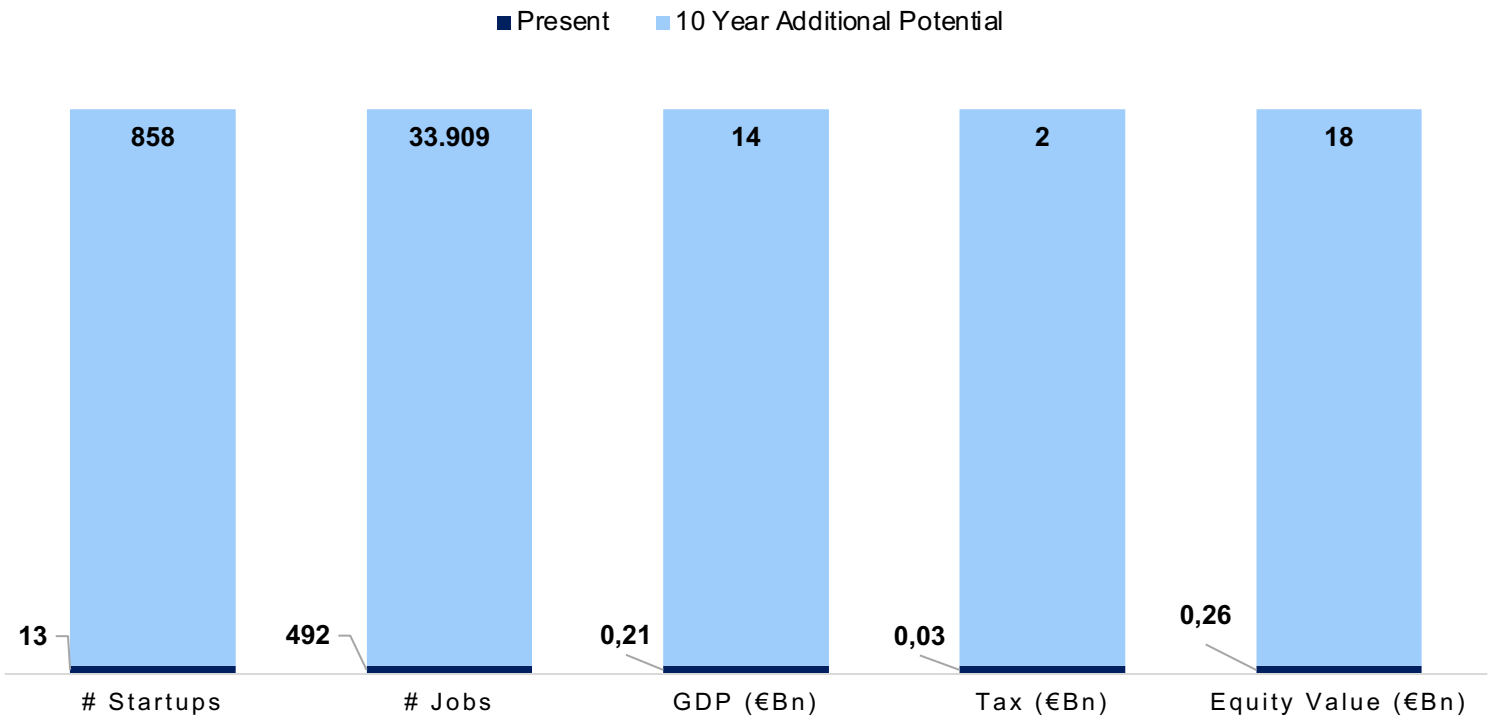
Rank	Universities	City	#Startups per 100 mn budget (€)	#Startups	Annual University Budget (mn €)
1	University of Economics in Bratislava	Bratislava	14,7	5	36
2	Slovak Technical University	Bratislava	4,5	4	90
3	Pavel Jozef Šafárik University	Košice	2,0	1	50
4	The Technical University in Kosice	Košice	1,0	2	202
5	Comenius University	Bratislava	0,5	1	185

Potential for **Change**

If the recommendations are implemented, universities could contribute substantially more to the future readiness of Slovakia.

Additional Potential **Slovakia**

Slovakia Has A Potential Of Generating **34.000** Additional Jobs + More Value



If all 5 universities operated at benchmark efficiency, then over the next 10 years, we could expect:

- **850+** additional startups
- **34.000+** new jobs
- **€2 Bn** in additional tax revenues
- **€14 Bn** in added GDP
- **€18 Bn** in increased equity value.

Further Information

Recommendations for Universities & Policy Makers

European taxpayers take the biggest burden in funding universities, thus obligating them to deliver societal value. To realize this value, our recommendations based on this study are the following:

Universities

- Entrepreneurship as third pillar (next to research & teaching)
- Embed entrepreneurship education
- Foster strong alumni networks
- Establish entrepreneurial foundations
- Promote interdisciplinary collaboration
- Support regional ecosystems

Policy Makers

- Entrepreneurship as third pillar (next to research & teaching)
- Encourage pension funds to invest into venture capital
- Unified and large European capital market
- Empowering high school students

About Us

AlpMomentum

Alpmomentum is a think tank born out of Redstone, evolving into an independent entity focused on shaping Europe's future through impactful policy solutions.

REDSTONE

Redstone is one of the most active European early-stage investors dedicated to support great minds that take humanity to the next level.

RWTH AACHEN UNIVERSITY

RWTH Aachen University is the second largest technical university in Slovakia, tackling real challenges that will shape the future.

Our Supporter In Slovakia:

sapie The Slovak Alliance for Innovation Economy

The Slovak Alliance for Innovation Economy(SAPIE) is a leading forum for debate on digital economy and innovation in Slovakia

CONTACT DETAILS

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AlpMomentum REDSTONE RWTH AACHEN UNIVERSITY

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Appendices

Agenda

AlpMomentum REDSTONE RWTH AACHEN UNIVERSITY

- **A** — Terminology
- **B** — Sources and Methodology
- **C** — Tax Ratios
- **D** — Cluster-wise University Rankings
- **E** — Geographical Rankings

TERMINOLOGY

Sl No.	Terms	Description
1	**University**	Refers to all universities, business schools, and research institutes on the list, collectively known as 'Higher Education Institutes' as per industry standards. ***Notes:*** 1. In cases where significant business schools are part of a larger university and receive their finances as part of the university budget, we have not included the business schools as separate entities. Eg: Cambridge Judge and University of Cambridge, Oxford Said and University of Oxford, SDA Bocconi and Bocconi University, Warwick Business School and University of Warwick, etc. 2. In cases where significant business schools act as a separate entity despite being affiliated to a university, both have been included as separate entities. Eg: LBS and University of London, Esade and Ramon Llull University, IESE and University of Navarra etc.
2	**Rank**	The ranking positions of the University (University) based on different criterias.
3	**Region**	The geographical region where the University is located.
4	**Country**	The country where the University is located.
5	**City**	The city where the University is located.
6	**# Startups - 2024**	The total number of startups associated with the University in the year 2024. Number of startups founded as spinoffs at the university as well as the number of startups founded by current and past alumni in the mentioned period. Every startup has been counted only once. If there are multiple founders from different universities, each university received equal weightage. For example, if a startup had three co-founders from three different university, for each university the startup was counted as 1/3. Startups related to legal or medical practices, public and private partnerships, NGOs, foundations etc. have not been considered in this year's rankings. Due to these reasons, for most universities, the number of startups may be anywhere between 20% - 50% of what they would count as their own startups. These adjustments were made for all universities in the list to keep the universities comparable. Refer to SOURCES for more information.
7	**#Startups per 100 Million Budget (€)**	Number of Startups that can be potentially created by the university with a 100 million euro budget at current efficiency.
8	**Budget (mn €) per year**	The budget allocated to the University per year, in million euros. **1. For Public & Private Universities:** The total budget allocated to the university. NOT the budget allocated to the startup ecosystem/technology transfer department of a university. Example: For Technical University Munich, the Total Budget including Hospital and University is 1.8 billion Euros. However, for the purpose of this research, we are taking the budget of 1.04 Billion Euros which is only the university budget, excluding the hospital budget. **2. For Business Schools**: Total gross revenue has been taken since most of them are private institutes and don't disclose their total budget unlike public universities such as TUM. **4. For Research Institutes:** As mentioned in annual reports.
9	**#Startups**	Additional Potential startups possible by increasing the efficiency to the benchmark value.
10	**#Jobs**	Additional potential jobs possible by increasing the efficiency to the benchmark value.
11	**Tax Potential (€)**	Additional potential tax for governments possible by increasing the efficiency to the benchmark value.
12	**GDP Potential (€)**	Additional potential contribution to GDP of countries and Europe possible by increasing the efficiency to the benchmark value.
13	**Equity Value Potential (€)**	Additional potential equity value possible by increasing the efficiency to the benchmark value.

SOURCES - BASE DATA

List of Higher Education Institutions	https://www.eqar.eu/
	https://www.whed.net
	https://eurydice.eacea.ec.europa.eu/national-education-systems/
Primary Exclusions	Institutions Purely Dedicated to Arts (Dance, Music, Fine Arts etc), religion or professional training (teacher training, nurse training etc.). Also, Pure military academies.

Enrollment Data

Primary Source:	University Websites & Brochures (Facts & Figures, About Us, Cifras etc.)

Secondary Sources

Sl No	Country	Sources
1	Andorra	https://www.uda.ad/en/
2	Austria	https://studyinaustria.at/en/study/institutions https://www.statistik.at/en/statistics/population-and-society/education
3	Belgium	https://www.studyinbelgium.be/en/french-speaking-universities-belgium https://www.studyinflanders.be/
4	Bulgaria	https://www.neaa.government.bg/en/accredited-higher-education-institutions/higher-institutions
5	Croatia	https://www.studyincroatia.hr/ https://dzs.gov.hr/en
6	Czech Republic	https://portal.studyin.cz/en/find-your-institution/ https://csu.gov.cz/
7	Denmark	https://studyindenmark.dk/study-options/danish-higher-education-institutions
8	Estonia	https://www.hm.ee/en/education-research-and-youth-affairs/general-education/higher-education
9	Finland	https://www.studyinfinland.fi/universities/
10	France	https://www.enseignementsup-recherche.gouv.fr/fr https://www.campusfrance.org/en/institutes-higher-education-France
11	Germany	https://www.hochschulkompass.de/en/study-in-germany.html
12	Greece	https://studyingreece.edu.gr/universities/
13	Hungary	https://studyinhungary.hu/study-in-hungary/menu/universities.html

SOURCES - BASE DATA		
14	Iceland	https://study.iceland.is/study-in-iceland/universities-in-iceland
15	Italy	https://www.universitaly.it/cerca-istituzioni
16	Latvia	https://studyinlatvia.lv/universities
17	Liechtenstein	https://www.uni.li/
18	Lithuania	https://studyin.lt/
19	Luxembourg	https://www.uni.lu/en/
18	Malta	https://www.um.edu.mt/media/um/docs/about/factsandfigures/annualreport2023.pdf https://timesofmalta.com/article/1-1m-budget-cut-mean-university-malta.976157
19	Netherlands	https://www.studyinnl.org/dutch-education
20	Norway	https://studyinnorway.no/higher-education-institutions-norway
21	Poland	https://study.gov.pl/higher-education-institutions
22	Portugal	https://www.study-research.pt/en/study/ https://www.dges.gov.pt/en
23	Romania	https://studyinromania.gov.ro/universities
24	Slovakia	https://www.studyinslovakia.sk/where-to-study/
25	Slovenia	https://studyinslovenia.si/study/universities-and-institutions/
26	Spain	https://www.universidades.gob.es/catalogo-de-datos/ https://www.educacionfpydeportes.gob.es/servicios-al-ciudadano/estadisticas/indicadores/cifras-educacion-espana/2022-2023.html
26	Sweden	https://studyinsweden.se/universities/
27	Switzerland	https://www.studyinswitzerland.plus/
28	United Kingdom (England, Scotland, Northern Ireland, Wales)	https://www.hesa.ac.uk/data-and-analysis/

Budget Data		
1	University Annual Reports/Facts & Figures/Cifras/At a Gance (Or from last year study)	Total University Budget (excluding medical wherever clearly stated)/Operating Revenue for Smaller Universities and Business Schools
2	For United Kingdom (convered to EUR at 1,2 EUR for 1 GBP)	Higher Education Student Data (HESA UK)
3	Estimated when budget data not available but student enrollment available (10% cases)	Based on EURYDICE & OECD data on Countrywise Government Spending Per Student and Tuition Fee Per EU and Non-EU Student
4	When neither budget nor reliable enrollment information available	Excluded

SOURCES - BASE DATA

Startup Data		
1	Based on number of founders per university (*Refer to table below)	Founders' Count on LinkedIn Collected For March 2024 to March 2025
2	Official numbers provided/indicated by universities	Either in Public Domain or through direct contact
3	Where startup number was zero but enrollment/budget data available	Assumed that no startups were found
4	When no data found as well as unreliable budget/enrollment numbers	Excluded

Founders	Startups Allocated	Reasoning
1	1	Solo founder, solo startup
2	2	Likely two separate ideas
3	2	Could be one trio or solo + duo
4	3	Avoid underestimation, not all may be on same team
5+	F ÷ 2.45	Uses industry average founder-to-startup ratio

***Table Based on:**	European Startup Monitor 2019
Job projection	https://sifted.eu/articles/data-startups-jobs-surge
Unicorn Projection	https://www.swisscore.org/unicorns-and-lower-valued-startups-in-europe/

Research Institutes	
Max Planck	https://www.mpg.de/21976643/2023
Fraunhofer	https://www.fraunhofer.de/s/ePaper/Annual-Report/2023/epaper/ausgabe.pdf

SOURCES - BASE DATA

DLR	https://www.dlr.de/en/dlr/about-us/dlr-in-numbers#6c5066ff-3a27-47e4-8095-89b92ecd65ea
CERN	https://cds.cern.ch/record/2922260/files/English.pdf
CEA	https://www.cea.fr/english/Pages/resources/corporate-publications.aspx https://www.cea.fr/english/Documents/booklet-start-up-Anglais-web.pdf https://list.cea.fr/en/page/transferring-technology-through-startups/
INRIA	https://inria.fr/sites/default/files/2024-06/Rapport-Annuel_2023.pdf
Institut Pasteur	https://www.pasteur.fr/en/home/press-area/resources-medias/2023-annual-report-institut-pasteur
VTT	https://www.vttresearch.com/en/about-us/vtts-impact-technology-and-innovation-creating-sustainable-growth
TNO	https://www.tno.nl/en/about-tno/organisation/annual-report/
SINTEF	https://www.sintef.no/globalassets/sintef-konsernstab/barekraftsrapport/sustainability-report/si2402-rapport2023-eng-lr-2.pdf
Max Delbrück Center for Molecular Medicine (MDC)	https://www.mdc-berlin.de/about/us/facts https://www.mdc-berlin.de/transfer/innovation/spin-offs
The Francis Crick Institute	https://www.crick.ac.uk/news-and-features/annual-reviews-and-reports https://www.crick.ac.uk/research/applying-our-research/entrepreneurship/spin-outs
IMEC	https://www.imec-int.com/en/spin-offs https://www.imec-int.com/en/articles/imec-2024-overview
Helmholtz Association	https://www.helmholtz.de/system/user_upload/Ueber_uns/Wer_wir_sind/Zahlen_und_Fakten/2023/23_Jahresbericht_Helmholtz_Zahlen_Fakten_EN_FR.pdf
CSIC Spain	https://www.csic.es/en/innovation-and-transfer https://www.csic.es/en/csic/corporate-information/csic-annual-reports
Leibniz Association	https://www.leibniz-gemeinschaft.de/en/about-us/organisation/leibniz-in-figures https://www.leibniz-gemeinschaft.de/en/transfer/transfer-and-innovation/start-ups-at-leibniz

ADDITIONAL POTENTIAL - METHODOLOGY AND SOURCES

Sl No.	Terms	Description
1	**# Startups**	1. Based on rankings 2. If universties fall behind on benchmark, their potential jump is calculated. 3. If universities perform equal to or better than benchmark, then a flat 10% scope of increase is added.
2	**#Jobs**	1. Number of jobs created by European Startups on Average = approx 17. 2. Number of jobs created by European Unicorns on Average = approx 1000. ***Sources:*** https://sifted.eu/articles/data-startups-jobs-surge http://www.startupmonitor.eu/ https://www.fintechnews.org/europes-biggest-report-on-uni-and-soonicorns/ https://siliconcanals.com/news/startups/253-european-soonicorns-20-benelux/
3	**ARPE (Average revenue per employee) used to calculate revenue:**	EUR 300.000 For Matured Startups EUR 50.000 For Early Stage Startups EUR 175.000 Average Value Calculated based on number of jobs created ***Sources:*** https://blog.serenacapital.com/european-saas-benchmark-2023-e9c33ca94b44 http://www.startupmonitor.eu/
4	**Tax**	1. Refer to Tax Ratios (percentage value) 2. Calculated based on revenue.
5	**GDP**	Multiplier of 2.4x is applied to the revenue values after taking an average of multipliers across industries. ***Sources:*** https://ec.europa.eu/growth/smes_en https://www.worldbank.org/en/research https://www.oecd.org/tax/tax-policy/revenue-statistics-highlights-brochure.pdf
6	**Equity Value**	Multiplier of 3.0x is applied to the revenue values after taking an average of multipliers across industries. ***Sources:*** https://ec.europa.eu/growth/smes_en https://www.worldbank.org/en/research https://www.oecd.org/tax/tax-policy/revenue-statistics-highlights-brochure.pdf

TAX RATIOS

Region	Country	Tax-To-GDP
EU	France	46,10%
	Germany	39,30%
	Spain	37,50%
	Netherlands	38,00%
	Sweden	41,30%
	Italy	42,90%
	Belgium	42,40%
	Poland	34,60%
	Austria	42,50%
	Finland	43,10%
	Ireland	20,90%
	Portugal	34,30%
	Denmark	46,80%
	Luxembourg	40,90%
	Greece	42,10%
	Romania	10,00%
	Estonia	33,10%
	Lithuania	31,60%
	Bulgaria	10,00%
	Czech Republic	35,30%
	Hungary	38,90%
	Slovakia	34,20%
	Serbia	41,70%

TAX RATIOS

Region	Country	Tax-To-GDP
	Latvia	32,30%
	Slovenia	43,20%
	Malta	21,60%
	Croatia	26,20%
Switzerland	Switzerland	27,20%
Non-EU EEA	Iceland	34,50%
	Andorra	10,00%
	Liechtenstein	22,40%
	Norway	44,10%
United Kingdom	England	35,30%
	Wales	35,30%
	Northern Ireland	35,30%
	Scotland	35,30%

Sources:

https://www.oecd.org/coronavirus/en/data-insights/tax-to-gdp-ratios

https://ec.europa.eu/eurostat/web/products-eurostat-news/-/edn-20231031-1

EXCHANGE RATES		
1	British Pound (GBP)	€ 1,20
2	Swiss Franc (CHF)	€ 1,06
3	Swedish Krona (SEK)	€ 0,09
4	Polish Zloty (PLN)	€ 0,30
5	Norwegian Krone (NOK)	€ 0,09
6	Danish Krone (DKK)	€ 0,13
7	Romanian Leu (RON)	€ 0,20
8	Czech Koruna (CZK)	€ 0,04
9	Hungarian Forint (HUF)	€ 0,04
10	Bulgarian Lev (BGN)	€ 0,50
11	Icelandic Krona (ISK)	€ 0,01

Sources:

https://www.ecb.europa.eu/stats/policy_and_exchange_rates/euro_reference_exchange_rates/html/index.en.html

https://data.bis.org/

2025 Rankings : UNIVERSITIES (Budget < €100 Mn)

Rank	University	Geography			Base Data					Additional Potential - 10 Years					
		Region	Country	City	# Startups per 100 Million €	# Startups	#Students (Full-Time)	Budget per year (m €)	% Change in Efficiency From Last Year	#Startups	#Unicorns	#Jobs Created	GDP Potential (€)	Tax Potential (€)	Equity Value Potential (€)
31	University of Economics in Bratislava	EU/EEA	Slovakia	Bratislava	14,7	5	7.250	36	991,79	89	2	3.618	1.519.627.129	204.516.484	1.899.533.911
121	Slovak Technical University	EU/EEA	Slovakia	Bratislava	4,5	4	10.668	90	**New**	57	1	2.242	941.460.933	39.227.539	1.176.826.167
165	Pavel Jozef Šafárik University	EU/EEA	Slovakia	Košice	2,0	1	5.700	50	**New**	14	0	579	243.235.416	26.553.200	304.044.271

2025 Rankings : UNIVERSITIES (€100 Mn < Budget < €500 Mn)

Rank	University	Geography			Base Data					Additional Potential - 10 Years					
		Region	Country	City	# Startups per 100 Million €	# Startups	#Students (Full-Time)	Budget per year (m €)	% Change in Efficiency From Last Year	#Startups	#Unicorns	#Jobs Created	GDP Potential (€)	Tax Potential (€)	Equity Value Potential (€)
331	The Technical University in Kosice	EU/EEA	Slovakia	Košice	1,0	2	10000	202	**New**	336	8	13.184	5.537.385.479	789.077.431	6.921.731.849
357	Comenius University	EU/EEA	Slovakia	Bratislava	0,5	1	22000	185	**New**	316	7	12.393	5.205.179.482	741.738.076	6.506.474.352

2025 RANKINGS : REGIONS

Rank	Region	Base Data				Additional Potential - 10 Years				
		Number of Universities	Total #Startups - 2024	# Startups /€100 Millon	Total University Budget (mn €)	#Startups	#Jobs	GDP Potential (€)	Tax Potential (€)	Equity Value Potential (€)
1	**United Kingdom**	123	4.796	9,4	55.897	53.775	2.221.410	932.992.370.668	137.227.627.852	1.166.240.463.335
2	**European Union / European Economic Area**	759	9.133	8,2	180.048	255.892	10.215.803	4.287.417.307.189	716.055.031.224	5.304.271.633.987
3	**Switzerland**	27	517	6,3	16.367	26.121	1.034.489	434.485.500.155	49.241.690.018	543.106.875.193

2025 Rankings : SLOVAKIA

						Additional Potential - 10 Years				
Country	# Universities	# Startups /100 Millon Euros	Total Budget per year (m €)	Total # Startups	Total #Students	#Startups	#Jobs	GDP Potential (€)	Tax Potential (€)	Equity Value Potential (€)
Slovakia	5	4,6	563	13	55.618	858	33.909	14.241.577.537	2.029.424.799	17.801.971.921

2025 Rankings : CITIES IN SLOVAKIA

Base Data							Additional Potential - 10 Years				
Rank	City	# Universities	# Startups / 100 Million Euros	Total Budget per year (m €)	Total # Startups	Total #Students	#Startups	#Jobs	GDP Potential (€)	Tax Potential (€)	Equity Value Potential (€)
196	Bratislava	3	6,6	311	10	39.918	455	18.180	7.635.612.363	1.074.899.150	9.544.515.453
488	Košice	2	1,5	252	3	15.700	414	16.266	6.831.832.799	973.536.174	8.539.790.998