
Prefilling U-Multirank data for Sweden

U-Multirank is a multidimensional and inclusive ranking. To increase the coverage and therefore, the representativeness of the data, we use publicly available data sources to prefill the values for institutions. Publicly available sources will also be used to cross-reference the information retrieved from other sources. This document provides an overview of the sources found and reviewed, their use for crossreferencing and their use to prefill values for Swedish institutions included in U-Multirank and mapping choices made.

While we try to consult national experts to validate the data as much as possible, we recognise that available data and definitions can change over time and better sources emerge. Thus, we welcome your feedback in case you think that the approach used is not representative of your institution or country, or you are aware of alternative or better sources.

The key sources used for Sweden are:

- UKÄ: data on students, academics, internationalization, revenues
- ETER: data on students, academics, internationalization, revenues and expenditures
- World Bank: exchange rate and PPP for revenue and expense data

The map below provides an overview of how well represented Swedish institutions are in U-Multirank as a share of total higher education institutions in U-Multirank. The percentage score for each institution shows how complete the provided data is.

[Map

Map]

Would you like to become a national expert on U-Multirank data for Sweden?

We are looking for a couple of country experts to consult us on data mapping twice a year. Furthermore, once a year we organize a meeting to discuss potential future indicators relevant for national and regional context. If you are interested, please send an e-mail to info@umultirank.org with a title "UMR national expert Sweden". Experts should be familiar with national and international data sources listed below.

NATIONAL OR REGIONAL SOURCES

Measurement level: Institutional level. Data aggregated at a higher level is not suitable for U-Multirank.

UKÄ (eng: the Swedish Higher Education Authority) is a Swedish government agency focusing on three main areas of higher education: quality assurance, legal supervision and monitoring. As part of its monitoring activities, the agency is also responsible for the official higher education statistics and decides which data and how should be collected¹.

Data obtained:

- Student data (e.g. number of students per program, graduates by field of specialisation, student mobility)
- Data on academic staff (e.g. academic staff employed(FTE/HC), doctoral students and post-docs employed, foreign staff employed)
- Revenue data (e.g. amount per category, revenue sources, including external revenue sources)

SCB (eng: the Swedish Central Statistics Bureau) is the coordinating body and responsible unit for official statistics in Sweden. SCB develops, produces and disseminates the statistics². The database covers a wide range of topics from the economy and labour market to agriculture and financial markets. It includes a section on education and research, where data for higher education is provided by UKÄ³.

Data obtained:

- No data was obtained from SCB. We examined the database for data on employment and unemployment levels, research output, graduate and spin-off companies. The information on employment level was not available on institutional level; the other data elements were not found.

Nordic Statistics is a collection of comparative Nordic statistics. Funded by the Nordic Council of Ministers, it has existed since the mid-1960s. It consists of two primary communication platforms: the basic database, Nordic Statistics database, and the Nordic iLibrary containing indicators based on a selection of the variables from the Nordic Statistics database⁴.

Data obtained:

- No data was obtained from Nordic statistics. We examined the database for data on employment and unemployment levels, graduate and spin-off companies. The information was not available.

¹ UKÄ. (2018). What we do? Retrieved from UKA: <https://english.uka.se/about-us/what-we-do.html>

² SCB. (2019). About us. Retrieved from SCB: <https://www.scb.se/en/About-us/>

³ SCB. (2019). Education and Research. Retrieved from SCB: <https://www.scb.se/en/finding-statistics/statistics-by-subject-area/education-and-research/>

⁴ Nordic Statistics. (2019). About the Nordic Statistics database. Retrieved from Nordic Statistics Database: <https://www.nordicstatistics.org/about/>

EUROPEAN SOURCES

Measurement level: Institutional level. Data aggregated at a higher level is not suitable for U-Multirank.

ETER (the European Tertiary Education Register) is a database collecting information on Higher Education Institutions (HEIs) in Europe. It contains data on educational activities, staff, finances and research activities as well as basic characteristics and geographical position. The main specificity of ETER is providing data at the level of individual higher education institutions, complementary to educational statistics at the country and regional level provided by EUROSTAT⁵.

Data obtained*:

- Student data (e.g. number of students per program and gender, graduates by field of specialisation, student mobility)
- Data on academic staff (e.g. academic staff employed(FTE/HC; gender; foreign staff), doctoral students)
- Revenue data (e.g. amount per category, core, third-party funding)
- Expenditure data (e.g. personnel expenditures, non-personnel, capital expenditures)

*Note: Data is used to validate corresponding fields in the national database, except the expenditure data, which was not available in the national database.

Eurostat is the statistical office of the European Union. It is tasked to provide the European Union with statistics at European level that enable comparisons between countries and regions⁶. Among other statistics, Eurostat provides data on tertiary education in Europe on participation rates, graduates, student-academic staff ratios, gender balance among students, etc. Data are available on the country level only⁷.

Data obtained:

- No data were obtained from Eurostat. Eurostat data is not available on an institutional level.

TTO Circle (the European Technology Transfer Office(TTO) Circle) is a network established with the aim to bring together the major public research organisations to share best practices, knowledge and expertise, perform joint activities and develop a common approach towards international standards for the professionalisation of technology transfer⁸.

Data obtained:

- No data was obtained from TTO Circle. We examined the site for data on graduate and spin-off companies. The information was not available.

⁵ ETER. (2019). About ETER. Retrieved from ETER Project: <https://www.eter-project.com/#/info/about>

⁶ Eurostat. (2019). About Eurostat. Retrieved from European Commission: <https://ec.europa.eu/eurostat/about/overview>

⁷ Eurostat. (2019). Tertiary Education Statistics. Retrieved from EC: https://ec.europa.eu/eurostat/statistics-explained/index.php/Tertiary_education_statistics#Finance

⁸ TTO Circle. (2019, 07 04). European TTO circle. Retrieved from European Commission: <https://ec.europa.eu/jrc/communities/en/community/tto-circle-community>

INTERNATIONAL SOURCES

Measurement level: Institutional level except exchange rate and PPP, which is required on a country level.

(the) **World Bank** provides financial and technical assistance to developing countries. At the World Bank, the Development Data Group coordinates statistical and data work and maintains a number of macro, financial and sector databases. The World Bank's data bank contains a large array of publicly available data⁹, including exchange rate and PPP data.

Data obtained:

- Data on exchange rates and PPP rates to convert and compare revenue and expense data.

UIS (the UNESCO Institute for Statistics) is the official source of internationally-comparable data on education, science, culture and communication. As the official statistical agency of UNESCO, the UIS produces a wide range of indicators in UNESCO's fields of action by working with national statistical offices, line ministries and other statistical organisations. The UIS Director serves as the Organization's chief statistician¹⁰.

Data obtained:

- No data was obtained from UIS as it does not provide data on an institutional level.

OECD (the Organisation for Economic Co-operation and Development) is an international organisation that works to "build better policies for better lives"¹¹. It provides an interactive platform with data graphics on various topics, including higher education on a country and regional level¹².

Data obtained:

- No data was obtained from the OECD as it does not provide data on an institutional level.

ASTP is a non-profit organisation committed to knowledge transfer among universities and industry. It focuses on further improving the quality of impact that public research has on the economy and society¹³. It collects and publishes data on knowledge transfer (e.g. R&D intensity, personnel employed, start-up and spin-off companies) obtained from knowledge transfer offices (KTOs) on an annual basis.

Data obtained:

- No data was collected from ASTP as it is not publicly available. The data on graduates and spin-offs appear to be in the right form, although it might be available per KTO rather than on an institutional level.

AUTM is a non-profit organisation that aims to educate, promote and inspire professionals to support the development of academic research. One of its offered services is a Statistics Access

⁹ World Bank. (2019). The World Bank Data. Retrieved from About us: <https://data.worldbank.org/about>

¹⁰ UIS. (2019). About us. Retrieved from UIS: <http://uis.unesco.org/en/about-us>

¹¹ OECD. (2019). Who we are. Retrieved from OECD: <http://www.oecd.org/about/>

¹² OECD. (2019). Education. Retrieved from OECD Data: <https://data.oecd.org/education.htm>

¹³ ASTP. (2017). Organisation. Retrieved from ASTP: <https://www.astp4kt.eu/organisation/>

for Technology Transfer(STATT) database, which contains data on licensing activity and income, start-ups, funding, staff size, legal fees, patent applications filed, royalties earned and more. Only members can access the database¹⁴.

Data obtained:

- No data was collected from AUTM as it is not publicly available. The data on graduates and spin-offs appear to be in the right form, but the unit of measurement is not available.

¹⁴ AUTM. (2019). STATT: Statistics Access for Technology Transfer Database. Retrieved from AUTM: <https://autm.net/surveys-and-tools/databases/statt/>

U-Multirank Question	Data element	Mapped element
Q5: Students	Students enrolled	SCB→ Registered students per HEI [Registered students the academic years 1977 / 78–2019/ 20 by university / college and gender] UKA→ Registered students per study form[Alla Registrerade studenter per studieform] → Sorted by institution
	Female students enrolled	SCB→ Registered students per HEI [Registered students the academic years 1977 / 78–2019 / 20 by university / college and gender] UKA→ Registered students per study form[Alla Registrerade studenter per studieform] → Sorted by institution and gender
Q6: International students	Foreign degree seeking students	UKA→ Number of foreign degree students (Antal inresande studenter)
	Incoming students in international exchange programmes	UKA→ Incoming exchange students (Inresande utbytesstudenter per program)
	Students sent out in international exchange programs	UKA→ Outgoing exchange students (Antal utresande utbytesstudenter)
Q7: New entrants	New entrants enrolled in 1st year bachelor programmes	UKA--> Number of HEIs beginners per Study Form (Högskolenybörjare per studieform) → Sorted by studyform, bachelor
	New entrants enrolled in 1st year master programmes	UKA--> Number of HEIs beginners per Study Form (Högskolenybörjare per studieform) → Sorted by studyform, graduate
Q9: Graduates	Short degree	New MAPPING from SCB database: http://www.statistikdatabasen.scb.se/pxweb/sv/ssd/
	Bachelor	UKA→ Number of graduates sorted by graduate category (Antal examina) → Sorted by graduate category
	Master	UKA→ Number of graduates sorted by graduate category (Antal examina) → Sorted by graduate category
Q10: Graduates by field	Education	UKA(Number of graduates sorted by main focus (Antal generella examina, Huvudinriktning) → Sorted by main focus, Education and teacher training (Pedagogik och lärarutbildning)
	Humanities and arts	UKA(Number of graduates sorted by main focus (Antal generella examina, Huvudinriktning) → Sorted by main focus, Humanities & Arts (Humaniora och konst)

U-Multirank Question	Data element	Mapped element
	Social sciences	UKA(Number of graduates sorted by main focus(Antal generella examina,Huvudinriktning) →Sorted by main focus, Social sciences, law, commerce and business(Samhällsvetenskap, juridik, handel, administration)
	Business and law	UKA(Number of graduates sorted by main focus(Antal generella examina,Huvudinriktning) →Sorted by main focus, Social sciences, law, commerce and business(Samhällsvetenskap, juridik, handel, administration)
	Natural science, mathematics and statistics	UKA(Number of graduates sorted by main focus(Antal generella examina,Huvudinriktning) →Sorted by main focus, Science, mathematics and data (Naturvetenskap, matematik och data)
	Information and communication technologies	UKA(Number of graduates sorted by main focus(Antal generella examina,Huvudinriktning) →Sorted by main focus, Technology and Manufacturing (Teknik och tillverkning)
	Engineering, manufacturing and construction	UKA(Number of graduates sorted by main focus(Antal generella examina,Huvudinriktning) →Sorted by main focus, Technology and Manufacturing (Teknik och tillverkning)
	Agriculture forestry, fisheries and veterinary	UKA(Number of graduates sorted by main focus(Antal generella examina,Huvudinriktning) →Sorted by main focus, Agriculture, forestry and animal health care(Lant- och skogsbruk samt djursjukvård)
	Health and social welfare	UKA(Number of graduates sorted by main focus(Antal generella examina,Huvudinriktning) →Sorted by main focus, Healthcare and social services(Hälso- och sjukvård samt social omsorg)
	Services	UKA(Number of graduates sorted by main focus(Antal generella examina,Huvudinriktning) →Sorted by main focus, Services (Tjänster)
Q14: Academic staff	Academic staff in FTEs	Updated staff here: https://www.scb.se/hitta-statistik/statistik-efter-amne/utbildning-och-forskning/hogskolevasende/personal-vid-universitet-och-hogskolor/ UKA→Staff (FTEs) [Personal (helårspersoner)] by institution, employment category Adjunkter+Annan forskande och undervisande personal+Doktorander+Lektorer+ Meriteringsanställning+Professorer Lecturers+Other research and teaching staff+

U-Multirank Question	Data element	Mapped element
		Doctoral students+Lecturers+Postdoctoral or deputy lecturer+Professor
	Academic staff head-count	<p>UKA→Staff (HC) [Personal (individer)] by institution, employment category and gender</p> <p>Note: Adjunkter+Annan forskande och undervisande personal+Doktorander+Lektorer+Meriteringsanställning+Professorer</p> <p>Lecturers+Other research and teaching staff+ Doctoral students+Lecturers+Postdoctoral or deputy lecturer+Professor</p>
	female academic staff	<p>UKA→Staff (HC) [Personal (individer)] by institution, employment category and gender</p> <p>Note: Adjunkter+Annan forskande och undervisande personal+Doktorander+Lektorer+Meriteringsanställning+Professorer</p> <p>Lecturers+Other research and teaching staff+ Doctoral students+Lecturers+Postdoctoral or deputy lecturer+Professor</p>
	Doctoral candidates counted as academic staff in FTEs	<p>UKA→Staff (FTEs) [Personal (helårspersoner)] by institution, employment category</p> <p>Note: Doktorander Doctoral students</p>
	Doctoral candidates counted as academic staff in headcount	<p>UKA→Staff (HC) [Personal (individer)] by institution, employment category and gender</p> <p>Note: Doktorander Doctoral students</p>
	Doctoral candidates with foreign nationality	<p>UKA→ Foreign PhD students by topic [Antal utländska doktorander]</p> <p>Selection on institutions only</p>
	Female doctoral candidates	<p>UKA→Staff (HC) [Personal (individer)] by institution, employment category and gender</p> <p>Note: Doktorander Doctoral students Kon(Gender)-Kvinnor(female)</p>
Q15: Post-docs	Post docs (head-count)	Updated staff here:

U-Multirank Question	Data element	Mapped element
		https://www.scb.se/hitta-statistik/statistik-efter-amne/utbildning-och-forskning/hogskolevasende/personal-vid-universitet-och-hogskolor/ UKA→Staff (HC) [Personal (individer)] by institution, employment category and gender Note: Employment category= Meriteringsanställning (Postdoctoral or deputy lecturer), not possible to distinguish
Q16: Currency and Unit	Currency	SEK (Swedish krona)
Q17: Revenues	Unit	1
	Total revenues	UKA→ Total revenue-overview by institutions, support group and activity.
	Core budget	UKA→ Total revenue-overview by institutions, support group and activity.
	Fees from courses organised within the framework of continuing professional development (CPD)	UKA→ Total revenue-overview by institutions, support group and activity.
	External revenues from research	UKA→ Total revenue-overview by institutions, support group and activity.
	external revenues from privately funded research contracts	UKA→ Total revenue-overview by institutions, support group and activity.
	Other revenues	UKA→ Total revenue-overview by institutions, support group and activity.
Q18: Revenues by source	Tuition fees from international sources as % of total tuition fee revenues	
	External research revenues: % from international sources	UKA→ Total revenue-overview by institutions, support group and activity.
	External research revenues: % from national sources	UKA→ Total revenue-overview by institutions, support group and activity.
	External research revenues: % from regional sources	UKA→ Total revenue-overview by institutions, support group and activity.