

# Issues Paper on ISIC 85 - Education

## 38th Voorburg Group Meeting

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[www.statistik.at](http://www.statistik.at)

Independent statistics for evidence-based decision making



# Are existing surveys feasible to measure an internationally comparable SPPI for education?

If so: how?

# What is education?

→ Knowledge transfer achieved by teaching

## What is taught?

- Field or profession
- Level of education

## How is it taught?

- Form of education
- Means of communication

## Who teaches?

- Institutions
- Public vs. private sector

# Used classifications – industry level

## ISIC, Rev. 4 – *International*

85	Education
851	Pre-primary and primary education
852	Secondary education
853	Higher education
854	Other education
855	Educational support activities

## NACE, Rev. 2 – *Europe*

85	Education
85.1	Pre-primary education
85.2	Primary education
85.3	Secondary education
85.4	Higher education
85.5	Other education
85.6	Educational support activities

## NAICS, 2022 – *Mexico & US*

61	Educational services
6111	Elementary and secondary schools
6112	Junior colleges
6113	Colleges, universities, and professional schools
6114	Business schools and computer and management training
6115	Technical and trade schools
6116	Other schools and instruction
6117	Educational support services

# Used classifications – product level

## CPC, Rev. 2.1 – *International*

92	Education services
921	Pre-primary education services
922	Primary education services
923	Secondary education services
924	Post-secondary non-tertiary education services
925	Tertiary education services
929	Other education and training services and educational support services

## CPA, Rev. 2.1 – *Europe*

85	Education services
85.1	Pre-primary education services
85.2	Primary education services
85.3	Secondary education services
85.4	Higher education services
85.5	Other education services
85.6	Educational support-services

## NAPCS, 2022 – *Mexico & US*

341	Educational services
34101 0101	Basic education and skills programs
34101 0102	Trade, career, technical and professional development training programs
34101 0103	Higher career, technical, academic and advanced research qualification programs
34101 0104	Exam preparation and tutoring services
34101 0105	Student services
34101 0201	Educational support and consulting services



**So given these differences, are there similar points of interest in the conducted surveys?**

**If so: what are the comparable results?**

# Turnover measures

## Sweden

- Short-Term Statistics (STS)
  - Based on KAU\* level
  - Based on VAT-data
  - Production Value Index
  - Turnover per service sector

- Administrative data  
(i.e. number, sex and salaries of employees, operating expenses, etc.)

- targeted turnover-coverage per strata of 90%

black = monthly  
blue = quarterly

\* kind-of-activity

## Mexico

- Statistical Business Register of Mexico (RENEM)
  - Economic Census
  - National Economic Surveys

- Administrative data  
(i.e. number, sex and salaries of employees, operating expenses, etc.)

- mix between probabilistic and non-probabilistic methods

black = every 5 years  
blue = monthly & annually

## US

- International Price Program (IPP)
  - Import/Export Price Indexes (MXP)\*
  - Data provided by IPEDS\*\*-data system

- Administrative data  
(i.e. number & origin (in-state, out-of-state, foreign) of students, etc.)

- Sample provided by IPEDS\*\*-data system

black = monthly & annually

\* only export prices = used for ISIC 85

\*\* National Center for Education Statistics' Integrated Postsecondary Education Data (IPEDS) Data System

# Market conditions

## Sweden (2020)

- *Revenue\**: 5 801.27 MEUR
- *Value added*: 3 586,39 MEUR

- *Nr. of enterprises*: 30 095
- 2.6% of country's enterprises

- *Employees*: 75 508

- *Growth since 2010*:
  - *Revenue\**: 56%
  - *Value added*: 67%
  - *Nr. of ent.*: 51%
  - *Employees*: 41%

## Mexico (2018)

- *Revenue\*\**: 11 014.30 MEUR

- *Nr. of enterprises*: 53 524
- 1% of country's enterprises

- *Employees*: 817 536

- *Growth since 2013*:
  - *Revenue\*\**: 44%
  - *Nr. of ent.*: 14%

## US (2021)

- *GDP portion*: MEUR 29 599.73

MEUR = Million Euros (all money-values in papers were conversed from national currency to Euros)

\*measured in net turnover

\*\*measured in income



# Comparison of relevant indicators per school type

Excerpt from the issues paper (provided by Austria for the 38<sup>th</sup> VBG Meeting)

School Type	Sweden			Mexico		
	Enterprises (n)	Employees (n) (FTE)	Revenue (Net turnover) MEURO	Enterprises (n)	Employees (n)	Revenue (Income) MEURO
Pre-primary education	9 589 <sup>1</sup>	13 159 <sup>1</sup>	1 113.32 <sup>2</sup>	10 877	92 238	601.12 <sup>2</sup>
Primary education	4 829 <sup>1</sup>	109 070 <sup>1</sup>	1 545.93 <sup>2</sup>	2 939	47 571	449.17 <sup>2</sup>
General Secondary Education	---	---	---	793	16 119	178.96 <sup>2</sup>
Upper secondary education	1 307 <sup>1</sup>	35 035 <sup>1</sup>	1 225.74 <sup>2</sup>	---	---	---
Terminal Technical Middle Education	---	---	---	330	2 851	23.35 <sup>2</sup>
Higher Middle Education	---	---	---	2 304	42 797	515.06 <sup>2</sup>
Schools that combine multiple education levels	---	---	---	6 983	249 021	3 065.74 <sup>2</sup>
Universities and other post-secondary education	---	---	259.11 <sup>2</sup>	---	---	---
Higher Technical Education	---	---	---	313	4 702	58.23 <sup>2</sup>
Higher Education	---	---	---	4 104	252 108	5 192.29 <sup>2</sup>
Business, Computer and Management Training Schools	---	---	---	1 017	8 447	106.02 <sup>2</sup>
Trade Schools	---	---	---	2 978	13 225	106.35 <sup>2</sup>
Cultural, sports and recreational education	---	---	206.60 <sup>2</sup>	---	---	---
Driving schools	---	---	207.44 <sup>2</sup>	---	---	---
Education for the labour market	---	---	420.34 <sup>2</sup>	---	---	---
Educational support and other education services	---	---	456.22 <sup>2</sup>	---	---	---
Management consultancy activities	---	---	105.27 <sup>2</sup>	---	---	---
Arts, entertainment, personal services	---	---	107.88 <sup>2</sup>	---	---	---
Other activities	---	---	148.21 <sup>2</sup>	20 219	80 394	648.69 <sup>2</sup>

Table 6. Comparison of different indicators by product/school types in Sweden (2020) vs. Mexico (2018). For the conversion to Euros (of SEK and Mex. Pesos respectively), the exchange rate on September 11th 2023 was used.

<sup>1</sup> Data drawn from statista.de (see references), since no respective data was provided in Sweden's turnover and output paper.

<sup>2</sup> To ensure compatibility between all money-values given in papers, values were converted from national currency to Euros on 22.09.2023.

# Concentration within industry

## Sweden (2020)

- *Concentration of revenue*
  - Primary education = 27%
  - Pre-primary education = 19%
- *Micro-enterprises (9 or less employees)*
  - 96% of enterprises
  - 21% of workforce
  - 24% of revenue
- *Large enterprises (250 or more employees)*
  - 1% of enterprises
  - 30% of workforce
  - 32% of revenue

## Mexico (2018)

- *Concentration of revenue*
  - Post-secondary education = 50%
  - Primary & pre-primary education = 1%

# Public regulations

## Sweden

- Majority of education = provided by public institutions
- Ministry of Education
  - Provides curriculum
  - Responsible for quality assurance
- All funding available = from
  - Taxes
  - Grants (=exception)

## Mexico

- Majority of education = provided by public institutions
  - 90% of students in compulsory education
- Extensive reforms (since 2010)
  - Cater education offered to current work environment (i.e. foster STEM subjects)
  - Reach rural areas
  - Cater to needs of indigenous pupils

## US

- Public vs. private institutions
  - Percentage of pupils = comparable to Europe & Mexico
  - Expenditure per student = among highest in OECD-countries
- Education System = regulated by each states government
- Age limits & curricula can vary between states



*Can we use these existing surveys to  
calculate an international comparable  
SPPI?*

If not: what would necessary?

# Discussion contributions

## Experiences to learn from

- US: Post-secondary education & colleges SPPI → based on tuition fees, costs for housing & food
- Data source = secondary data → provided by National Center for Education Statistics' Integrated Postsecondary Education Data (IPEDS) Data System\*
  - Proposed *new* Index = experimental
    - Supposed to also cover additional services by education-providers
    - possibly contribution published for 39<sup>th</sup> VBG-Meeting
  - existing XPI = currently not published for ISIC 85\*

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for more info on this, please look into the paper at:

\*p. 10, s.2.3.3

\*\*p. 4, Introduction

\*\*\*p. 11, s.5.1.1 & 5.2.2

\*\*\*\*p. 11, s. 5

Other than that no indices published → even though several countries\*\* collect detailed data (prices & administrative data)

## Challenges

- General problems
  - How to reach public education-providers? → other sample-criteria necessary than revenue\*\*\*
  - How to grant comparability between indices of different countries? → education-systems differ vastly → set of universal core-services/-factors necessary
- Monitored services
  - For SPPI: primarily economically significant actions/prices are of interest → how to translate this to teaching services?
    - Most public institutions don't have prices for individual services → paid salaries are funded by taxes
    - Difficulty for all education-institutions: **which services** to monitor? – **how** to monitor them? → are salaries (i.e. grouped by experience/qualifications) a permissible factor, to monitor price-development for teaching services (i.e. teaching, tutoring, preparation time, etc.)?
  - Education services vs. publishing services: where to draw the line? → live-teaching (by education-institutions) held online (due to COVID, extra occupational post-secondary education, etc.) vs. pre-recorded online courses with student support on demand (on platforms like udemy, coursera, udacity, etc.)\*\*\*\*

## Concluding remarks

- It will be interesting to see, if an internationally comparable SPPI is possible eventually → possible, international efforts to use new data sources (see *Future Topics*, presentation on March 5<sup>th</sup> 2024) will help to provide data useable for this endeavour
- Possibly contributions for 39<sup>th</sup> VBG-Meeting might provide new insights

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