Issues Paper on ISIC 85 - Education 38th Voorburg Group Meeting

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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		NACI	NACE, Rev. 2 – Europe		NAICS, 2022 – Mexico & US		
<i>85</i>	Education	85	Education	61	Educational services		
851	Pre-primary and primary education	85.1	Pre-primary education		Elementary and secondary schools		
		85.2	Primary education	6111			
852	Secondary education	85.3	Secondary education				
853	Higher education	85.4	Higher education	6112	Junior colleges		
				6113	Colleges, universities, and professional schools		
				6114	Business schools and computer and management training		
				6115	Technical and trade schools		
854	Other education	85.5	Other education	6116	Other schools and instruction		
855	Educational support activities	85.6	Educational support activities	6117	Educational support services		

Used classifications – product level

CPC, Rev. 2.1 – International		CPA,	CPA, Rev. 2.1 – Europe		NAPCS, 2022 – Mexico & US		
92	Education services	85	Education services	341	Educational services		
921	Pre-primary education services	85.1	Pre-primary education services		Basic education and skills programs		
922	Primary education services	85.2	Primary education services	34101 0101			
923	Secondary education services	85.3	Secondary education services	. 0101			
924	Post-secondary non-tertiary education services	05.4		34101 0102	Trade, career, technical and professional development training programs		
925	Tertiary education services	85.4	Higher education services	34101 0103	Higher career, technical, academic and advanced research qualification programs		
929	Other education and training services and educational support services	85.5	Other education services	34101 0104	Exam preparation and tutoring services		
				34101 0105	Student services		
		85.6	Educational support-services	34101 0201	Educational support and consulting services		



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

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^{*} only export prices = used for ISIC85

^{**} 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 38th VBG Meeting)

	Sweden	Sweden			Mexico		
School Type	Enterprises (n)	Employees (n) (FTE)	Revenue (Net turnover) MEURO	Enterprises (n)	Employees (n)	Revenue (Income) MEURO	
Pre-primary education	9 5891	13 159 ¹	1 113.32 ²	10 877	92 238	601.12 ²	
Primary education	4 8291	109 070 ¹	1 545.932	2 939	47 571	449.172	
General Secondary Education				793	16 119	178.962	
Upper secondary education	1 3071	35 035 ¹	1 225.742				
Terminal Technical Middle Education				330	2 851	23.352	
Higher Middle Education				2 304	42 797	515.06 ²	
Schools that combine multiple education levels				6 983	249 021	3 065.742	
Universities and other post- secondary education			259.11 ²				
Higher Technical Education				313	4 702	58.23 ²	
Higher Education				4 104	252 108	5 192.292	
Business, Computer and Management Training Schools				1 017	8 447	106.022	
Trade Schools				2 978	13 225	106.352	
Cultural, sports and recreational education			206.602				
Driving schools			207.442				
Education for the labour market			420.342				
Educational support and other education services			456.222				
Management consultancy activities			105.272				
Arts, entertainment, personal services			107.882				
Other activities			148.21 ²	20 219	80 394	648.69 ²	

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.

Data drawn from statistia.de (see references), since no respective data was provided in Sweden's turnover and output paper.

²To ensure compatibility between all money-values given in papers, values were conversed 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

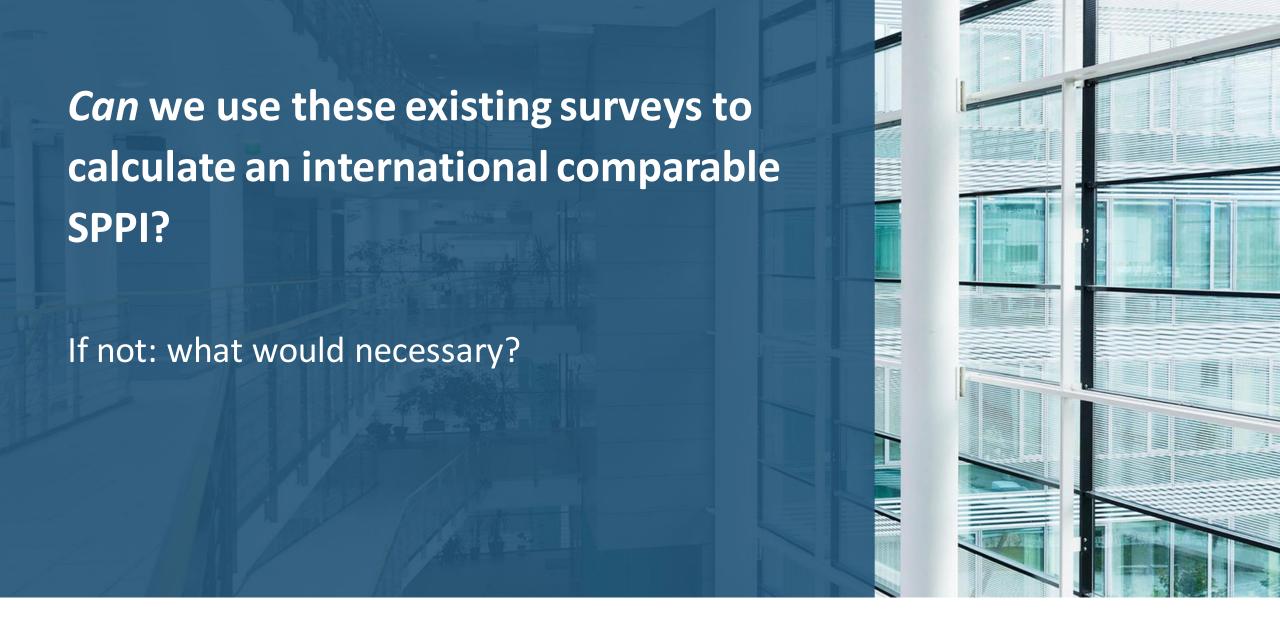
- Majority of education = provided by public institutions
- Ministry of Education
 - Provides curriculum
 - Responsible for quality assurance
- All funding available = from
 - Taxes
 - Grants (=exception)

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 OECDcountries
- Education System = regulated by each states government
- Age limits & curricula can vary between states



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 39th VBG-Meeting
- existing XPI = currently not published for ISIC 85*

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

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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 \rightarrow possible, international efforts to use new data sources (see *Future Topics*, presentation on March 5th 2024) will help to provide data useable for this endeavour
- Possibly contributions for 39th VBG-Meeting might provide new insights



