





FÉDÉRATION DES SCIENCES HUMAINES

Social Sciences and Humanities:

Economic Impacts and Readiness of Graduates



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Today's Presentation. Two Studies, Two Perspectives

- Top-down (macro-economic)
 - Economic Role and Influence of the Social Sciences and Humanities: A Conjecture

- Bottom-up (micro-economic)
 - Business Perceptions and Use of Research and Talent in the Social Sciences and Humanities





Stating the Obvious ...

- SSH have inherent socio-cultural value regardless of (economic) impact
- Scholarship is a sufficient condition for public support
- Economic influence/impact is not the sole (or even the most important) metric for measuring impact/value
- But: Questions about relevance and impact are not going away





Part 1

Economic Impacts of SSH the Macroeconomic Angle





Hypothesis: Knowledge Shapes Business, Economies

- Codified Knowledge (Know-What)
 - Documented knowledge
- Tacit Knowledge (Know-How)
 - Intuitive, hard to define knowledge, largely experience based
- Embedded/Embodied Knowledge
 - Knowledge locked in processes, products, culture, routines, artifacts, or structures





DESTRICTION WORLD OF SSH

Social Sciences (18)	Humanities (11)
Anthropology	Classics, Classical & Dead Languages
Archaeology	History
Archival Science	Fine Art
Communications & Media Studies	Folklore
Criminology	Law
Demography	Linguistics
Economics	Literature, Modern Languages
Education	Mediaeval Studies
Geography	Philosophy
Industrial Relations	Religious Studies
Interdisciplinary Studies	Other
Library and Information Science	
Management, Business, Administrative Studies	
Political Science	
Psychology	
Social Work	
Sociology	
Urban and Regional Studies, Environmental Studies	Ideas can



FEDERATION FOR THE HUMANITIES AND SOCIAL SCIENCES

Economic Influence of Academic SSH:

hought Experiment

Social Sciences (18)	Influence	Humanities (11)	Influence
Anthropology	1	Classics, Classical & Dead Languages	ı
Archaeology	1	History	ı
Archival Science	М	Fine Art	М
Communications & Media Studies	S	Folklore	ı
Criminology	М	Law	S
Demography	S	Linguistics	М
Economics	S	Literature, Modern Languages	М
Education	S	Mediaeval Studies	ı
Geography	S	Philosophy	ı
Industrial Relations	S	Religious Studies	ı
Interdisciplinary Studies	М	Other	ı
Library and Information Science	М		
Management, Business, Administrative Studies	S	Strona 9	
Political Science	М	Strong 9	
Psychology	М	Moderate 11	
Social Work	М	- Woderate 11	
Sociology	М	Indiract	
Urban and Regional Studies, Environ. Studies	S	Indirect 9	
S = Stro	ong, M = Mode	rate, I = Indirect	Les
S = Stro	ong, M = Mode	rate, I = Indirect	S Les

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FEDERALE CONDING Influence of Applied SSH SOCIAL SCIENCES PHUMAINES

		<u> </u>	
Agriculture	D	Productivity	D
Arts & Culture	D	Science & Technology	D
Biotechnology	D	Transportation	D
Communications	D	Children & Youth	I
Economic, Regional, Industrial Development	D	Children	Į.
Economic & Regional Development	D	Education	Į.
Employment & Labour	D	Elderly	I
Energy & Natural Resources	D	Family	I
Environment & sustainability	D	Gender Issues	I
Financial & Monetary Systems	D	Global/Climate Change	ı
Fisheries	D	Health	I
Forestry, Silviculture	D	Indigenous Peoples	ı
Globalization	D	Literacy	ı
Housing	D	Mental Health	I
Immigration	D	Multiculturalism & Ethnic Studies	ı
Information Technologies	D	Politics & Government	I
Innovation, Industrial, Technological Development	D	Post-Secondary Education, Research	ı
International Relations, Development, Trade	D	Poverty	1
Law & Justice	D	Social development and welfare	ı
Leisure, Recreation, Tourism	D	Violence	ı
Management	D	Women	ı
Northern Development	D	Youth	1
Population Studies	D		Ideas

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All industries	\$ million 1,193,905	% 100.0%
Business sector industries	1,005,146	84.2%
Business sector, goods	373,048	31.2%
Business sector, services	632,638	53.0%
Non-business sector industries	188,687	15.8%
Non-business sector, goods	2,437	0.2%
Non-business sector, services	186,248	15.6%
Total industries	1,194,351	100.0%
Goods-producing industries	375,489	31.5%
Service-producing industries	818,862	68.6%
Specific Industries	1,194,782	100.0%
Goods		
Agriculture, forestry, fishing and hunting	27,847	2.3%
Mining and oil and gas extraction	57,174	4.8%
Utilities	30,128	2.5%
Construction	74,087	6.2%
Manufacturing	I 86,63 I	15.6%
Services		
Wholesale trade	68,383	5.7%
Retail trade	69,015	5.8%
Transportation and warehousing	55,501	4.6%
Information and cultural industries	43,147	3.6%
Finance, insurance, real estate, rental, leasing, management of companies/enterprises	230,362	19.3%
Professional, scientific and technical services	55,3//	4.6%
Administrative and support, waste management and remediation services	30,524	2.6%
Educational services	56,221	4.7%
Health care and social assistance	74,780	6.3%
Arts, entertainment and recreation	11,410	1.0%
Accommodation and food services	27,365	2.3%
Public administration	66,758	5.6%
Other services (except public administration)	30,072	2.5%





FEDERATION FOR THE PÉDÉRATION POR THE PÉDÉRATION PER SCIENCES Economy (Employment)

Table 6.	Employ	ment by	industry	, 2007 ((000)
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	No.	%
Goods-producing sector	3,993	23.7 9
Agriculture	337	2.09
Forestry, fishing, mining, oil and gas	339	2.09
Utilities	I 38	0.89
Construction	1,134	6.79
Manufacturing	2,045	12.19
Services-producing sector	12,874	76.39
Trade	2,682	15.99
	823	4.99
Transportation and warehousing		
Finance, insurance, real estate and leasing	1,060	6.39
Professional, scientific and technical services	1,137	6.79
Business, building and other support services	702	4.29
Educational services	1,183	7.09
Health care and social assistance	1,8 4 6	10.99
Information, culture and recreation	782	4.69
Accommodation and food services	1,069	6.39
Other services	724	4.39
Public administration	865	5.19

Source: Statistics Canada, Catalogue no. 71F0004XCB



100.09

16,866



ALL INDUSTRIES



Knowledge Influence

rubic of Economic influence of Soft and	Notional Leve	l of Influence
Specific Industries	STEM	SSH
Goods		
1. Agriculture, forestry, fishing and hunting	Н	L
2. Mining and oil and gas extraction	Н	L
3. Utilities	Н	L
4. Construction	Н	L
5. Manufacturing	Н	М
Services		
6. Wholesale trade	L	L
7. Retail trade	L	M
8. Transportation and warehousing	M	L
9. Information and cultural industries	M	Н
10. Finance, insurance, real estate, rental, leasing, etc.	M	Н
11. Professional, scientific and technical services	M	Н
12. Administrative and support, waste management, remediation	Н	Н
13. Educational services	L	Н
14. Health care and social assistance	Н	M
15. Arts, entertainment and recreation	L	Н
16. Accommodation and food services	L	L
17. Public administration	M	Н
18. Other services (except public administration)	M	M

<u>SSH</u> <u>Influence</u> H = 7

M = 4

L = 7





FÉDÉRATION
DES SCIENCES
HUMAINES

Economic Influence of Applied SSH

Table 7. Gross Influence of SSH and STEM Knowledge Inputs (\$ million)

	Primary Inputs		Financial Outputs (GDP)		
Industry	STEM	SSH	STEM	SSH	
Agriculture, forestry, fishing and hunting	✓		27,847		
Mining and oil and gas extraction	\checkmark		57,174		
Utilities	✓		30,128		
Construction	✓		74,087		
Manufacturing	✓		186,631		
Wholesale trade		✓		68,383	
Retail trade		✓		69,015	
Transportation and warehousing	✓		55,501		
Information and cultural industries		✓		43,147	
Finance, insurance, real estate, rental, leasing, etc.		✓		230,362	
Professional, scientific and technical services		✓		55,377	
Administrative and support, waste management, etc.		✓		30,524	
Educational services		✓		56,221	
Health care and social assistance		✓		74,780	
Arts, entertainment and recreation		✓		11,410	
Accommodation and food services		✓		27,365	
Other services (except public administration)		✓		30,072	
Public administration		✓		66,758	
TOTAL			431,368	696,656	





FEDERATION FOR THE HUMANITHES AND DES SCIENCES Influence - Refined

Table 10. Estimated Calculation of Economic Influence of SSH and STEM \$ Value of Influence					ce
	GDP	on GDP			
Specific Industries	(\$M)	S	TEM		SSH
Goods	(,)				
Agriculture, forestry, fishing and hunting	27,847	Н	13,924	L	2,785
Mining and oil and gas extraction	57, I 7 4	Н	28,587	L	5,717
Utilities	30,128	Н	15,064	L	3,013
Construction	74,087	Н	37,044	L	7,409
Manufacturing	186,631	Н	93,316	М	55,989
Sub-Total	375,867		187,934		74,913
Services					
Wholesale trade	68,383	L	6,838	L	6,838
Retail trade	69,015	L	6,902	M	20,705
Transportation and warehousing	55,501	М	16,650	L	5,550
Information and cultural industries	43,147	M	4,315	Н	21,574
Finance, insurance, real estate, rental, leasing, etc.	230,362	Μ	69,109	Н	115,181
Professional, scientific and technical services	55,377	М	16,613	Н	27,689
Administrative and support, waste management, etc.	30,524	Н	15,262	Н	15,262
Educational services	56,221	L	5,622	Н	28,111
Health care and social assistance	74,780	Н	37,390	M	22,434
Arts, entertainment and recreation	11,410	L	1,141	Н	5,705
Accommodation and food services	27,365	L	2,737	L	2,737
Public administration	66,758	M	20,027	Н	33,379
Other services (except public administration)	30,072	M	9,022	M	9,022
Sub-Total	818,915		211,627		314,185

I,194,782 399,561 3<mark>89,097</mark> H=50% influence; M=30% influence; L=10% influence





TOTAL



SSH in the "Real World" Thomson-Reuters

Business

 Provides integrated information solutions to business and professional customers in the fields of law, tax, accounting, financial services, scientific research and healthcare.

Annual Revenues

\$13 billion+ (2008, combined)

Typical Jobs

 Accounting and Finance, Administration, Business Development, Customer Service/Support, Financial Market Research, General Manager, Human Resources, Legal, Marketing and Communications, Procurement and Contract Administration, Product/Technical Training, Professional/Consulting Services, Publishing/Editorial, Research, Sales





SSH in the "Real World" Torstar Corporation

Business

A broadly based media group and a publisher of the Toronto Star.
 Its businesses include CityMedia Group, publishers of daily and community newspapers in Southwestern Ontario, Metroland Printing, Publishing and Distributing, and Harlequin Enterprises

Annual Revenues

\$1.5 billion (2007)

Typical Jobs

Writer, Editor, Marketing, Advertising Sales, Publisher,
 Producer/director, Copy Checker, Lawyer, Accountant, Strategic
 Planner, Programmer/Analyst, Production Operator







SSH in the "Real World" Cirque du Soleil

Business

 Cirque du Soleil is a major Quebec-based organization providing high-quality artistic entertainment. The company has almost 4,000 employees from over 40 different countries, including 1,000 artists. Also, Cirque creates original and innovative content for television and DVD

Annual Revenues

\$600 million +

Typical Jobs

 Artist, Set Designers, Costume Designer, Marketer, Talent Coordinator, Musician, Composer, Writer, Publicist







SSH in the "Real World" Stratford Festival

Business

A repertory theatre festival, permanently located in Stratford,
 Ontario, Canada. It produces works of theatre in the classical and contemporary repertoire, with special emphasis on the works of William Shakespeare. The festival provides direct employment for 1,773 individuals.

Annual Revenues

\$53.9 million

Typical Jobs

Audience Development Representative, Business Systems Analyst,
 Director, Producer, Writer, Dialogue Coach, Choreographer,
 Dancer, Lighting Designer, Publicist, Actor, Costume Designer.







Conclusions

- Large direct and indirect influence of SSH on the economy
- Chief sources of knowledge inputs, methods of some of Canada's best-known companies
 - e.g. Thomson Corporation, Torstar Corporation, Manulife Financial, Stratford Festival, Industry Canada, etc.
- SSH contributes ideas, methods, people, etc. that impact "hard (STEM) industries"





Conclusions

- More research needed on economic role and influence of SSH
 - Case studies
 - Occupational analysis
 - Detailed industry sub-sector analysis of knowledge inputs
 - Firm-level industry studies of expenditures on tacit, embodied, codified knowledge





Part 2

Economic Impacts of SSH The Microeconomic Angle





Business SSH Issues

 How business perceives the contribution of SSHoriented graduates and skills; and,

 The degree to which it values the "embodied knowledge" that SSH graduates bring to it





Whom We Spoke With

Interviewees by Type				
Type Number				
Association	12			
Company	10			
Non-Profit	1			
Total	23			





Business Sectors

Interviewees by Sector			
Type Numb			
Academic (College)	1		
Cultural Industries	1		
Financial Services	1		
General Business	5		
Management and Professional Services	2		
Media	1		
Other (Technology + Financial Services)	1		
Printing, Software	1		
Resources	4		
Technology	5		
Utility	1		
Total	23 Ide		



Key Study Findings

- Most respondents have degrees in a social science or humanities (SSH):
 - English Literature, Economics, Education, Geography,
 Journalism, Political Science, Psychology, Accounting,
 Business Administration, Labour studies, History

- Small number trained in a STEM field
 - STEM degrees often supplemented with additional training in SSH (e.g. business administration, commerce)





Macroeconomic Challenges

- The economy and trade: Selling Canadian products in world markets
- Recession-related issues and demand from the US economy
- Battling the effects of a high Canadian dollar on the tourism, manufacturing, software and film sectors
- Immediate and long-term impact of regulatory frameworks



Macroeconomic Challenges 2

- Globalization and trade, open borders
- Demographic changes in the economy and workforce
- Competitiveness, regulatory and fiscal policy challenges
- Aboriginal economic opportunities
- "Energy literacy": Public's psychological, sociological perception of dirty oil
- Global warming and fossil fuel utilization







- Productivity enhancement through investment in technology, <u>systems</u>, <u>processes</u> and <u>people</u>
- Potentially large world markets; potential to create over 30,000 jobs
- The rise of Asia (as a market, source of talent, investment)





- Globalization
- Ensuring wide distribution of energy benefits
- Developing export markets in China, India
- Exploiting new and emerging markets





- Exploiting Canada's 150 years of hydrocarbon resources
- Capturing our share of an industry that typically grows at twice the rate of the economy
- Generating revenue & minimizing costs





Microeconomic Challenges

- Dealing with new business models, especially outsourcing
- Attracting investment
- Cost optimization
- Flat sales
- Declining consumption of core products





Microeconomic Challenges 2

- Revenue growth, through increased memberships, report sales, etc.
- Our "social license to operate"
- Operating in a regulated-return environment
- Developing new products and services for new media/digital economy





- Collaboration with third parties
- Translating consumer preferences into enhanced business practices
- Cross-disciplinary approaches (to exploiting business opportunities)
- Turning ubiquitous data into value-added information products





- Providing outsourcing solutions for customers
- Driving technology solutions into smaller businesses
- Organizing, mobilizing our local membership network
- Developing renewable sources of energy





- Developing new products from our resources
- Exploiting upstream and downstream markets for our products
- Exploiting business opportunities in the service sector (e.g. personal/home care, professional services such as optometry, hospitality, travel)





- Working in collaboration with universities, companies and research institutes
- Cloud computing
- Mobile communications, convergence, Internet commerce
- Social media





- Exploiting the digital economy
- Understanding the impact of self-publishing
- Working with diverse cultures and teams
- Developing improved leadership skills





Focus on Labour Force Challenges

- Managing our workforce under high work loads
- Developing new products and services
- Talent: competing (with the public sector) for applied social sciences and humanities talent









- Obtaining accurate labour market information
- Workforce demographics/aging/ workforce renewal
- Workforce attrition, demographics
- Intercultural relations





- Skills shortages, workforce retention, and career promotion
- Labour cyclicality requirements; competition with other sectors for talent
- Access to financing for entrepreneurs
- Entrepreneurship skills training





 Availability of talent; especially technical talent (due to declining IT enrolments)

 Recruitment; attracting talent – 80% of our jobs are entry-level front line customer service positions





- Human resources: critical shortage of people with advanced skills
- Immigration policy issues (as they affect labour availability)
- Enhanced recruitment/utilization of women in the industry
- Workforce diversity





Industry Use of SSH Tools & Resources

- We rely on research "to some degree"
- Academic research is missing in our sector
- We're not short of ideas; the issue is implementation
- We tend to rely on the trade literature rather than the academic literature
- We utilize multi-stakeholder networks





- We have internal subject experts
- All of the above; we're very open-minded; we don't have a monopoly on good ideas
- We hired university researchers to do a study of non-compliance (concerning an unwanted odour problem), but this was part of a court-ordered settlement.





- We put universities and colleges at the bottom end (of the solutions spectrum)
- We use all sources
- We rely to a large extent on our industry research network
- We generally hire consultants rather than university or college faculty; university research not seen as applied



 We look all over; we're getting better at leveraging external talent

 We might look to the academic sector for nonimmediate solutions





Our company (a foreign multinational) spends \$1
billion a year on training and development; we
have our own management development
institute and we're talking about hiring a Chief
Learning Officer





SSH Graduates – Employers Want Knowledge Related to...

- Environmental science
- Customer service
- Consensus-building
- Diversity
- Interdisciplinary skills
- Digital technology skills content and capabilities





- Economists, criminologists, security experts
- Generalists the "spongy brain"
- Content college or university grads with writing skills
- Creative design, design, software design





- Salespeople
- Lobbyists; generalists with synthesis and media relations skills
- Trade, finance, people who can develop into executives in 7-8 years
- Legislative; economics, political science, MBAs, econometrics





- Manufacturing-related: distribution, logistics, marketing, sales, health and safety
- Project managements skills, not content experts
- Labour market analysis





- Mostly looking for generalists (service sector respondent)
- Market research
- Legal, patenting
- Technology, senior management







Relevance to Business: Social Sciences

Social Science Disciplines	Relevance		
	High	Medium	Low
Anthropology		5	15
Archaeology		4	15
Archival Science	4	11	5
Communications and Media Studies	16	3	2
Criminology	1	3	16
Demography	9	6	5
Economics	16	5	1
Education	9	7	3
Geography	5	5	11
Industrial Relations	12	7	2
Interdisciplinary Studies	6	6	5
Library and Information Science	5	8	9
Management, Business, Administrative Studies	14	4	2
Political Science	8	7	5
Psychology	1	12	8
Social Work	2	6	13
Sociology		11	9 9
Urban and Regional Studies, Environmental Studies	10	7 🥦	n 2



Relevance to Business: Humanities

Table 2. Relevance of SSHRC Di Humanities Disciplines	Relevance		
	High	Medium	Lov
Classics, Classical and Deal Languages	1	1	19
History	1	3	17
Fine Arts	4	3	14
Folklore		4	17
Law	11	8	2
Linguistics		4	17
Literature, Modern Languages	2	6	13
Mediaeval Studies		2	19
Philosophy	1	2	18
Religious Studies		2	19







Service Sector – Sources of Knowledge

Source of Information	%	
1. Within Firm	80+	
2. From Suppliers	70	
3. Clients	70	
4. Competitors	60+	
5. Conferences & Journals	60+	
6. Fairs & Exhibitions	60+	
7. Customers	60	
8. Universities	25	
9. Government	20+	
Source: OECD. Promoting Innovation in Services. Paris. 14 October 2005		

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- Large number of business challenges related to labour/workforce issues:
 - Demography, Economics, Education, Industrial Relations,
 Political Science, Psychology, Social Work and Urban and
 Regional Studies
- Senior management positions (alternately described as general management) require the ability to fuse knowledge from a broad range of disciplines, nontechnical and technical







- SSH key to macro-economic challenges:
 - Globalization and trade, Open borders Demographic change,
 Competitiveness, Regulatory and fiscal policy challenges
- Respondents were generally <u>unable to link their</u> needs to academic SSH research
 - Few had any substantial appreciation of the breadth or depth of academic SSH research
 - Little personal familiarity with SSH research ... even if they were themselves graduates of SSH programs





- Social sciences and humanities research conducted in universities and colleges is <u>not on business</u> <u>leaders' radar screen</u>
- Four SSH disciplines stood out:
 - Communications and Media Studies
 - Economics
 - Industrial Relations
 - Management, Business, Admin. Studies





- Make yourselves known to the companies; we need messages for the business community about how SSHRC can be helpful
- Have an active industrial outreach program
- Mimic the NSERC programs; establish a joint research program with academics





- Conceptually, it's possible [to utilize SSH research];
 especially in areas related to HR, recruitment, skills
 development, dispute resolution, community
 economic development
- Outreach to business; promote mutual contract, networks, collaborative projects
- Engage with the employer community; identify skill sets and talent and demonstrate the relevance of SSH knowledge





- Fund research to address pre-competitive industry challenges
- There's a war for talent out there; need a better
 focus on preparing students to work with industry;
 "you've graduated from Political Science ... what
 now?"
- More dialogue that would produce skilled and educated people





- The best thing that SSHRC has going for it is the people who get the research money; we need more engagement with researchers
- (Knowing) Where do I start?
- Facilitate interactions; develop a "marketplace of ideas"





- Issue, the gap between "basic" and "applied"
 SSH research
- There is clearly an awareness barrier between academic SSH research and the applied research needs of firms





Academic SSH and Applied SSH Parallel Universes:

"Business people understand the relevance of politics, but not so much of political science; business ethics, but not philosophy; human factors engineering, but not psychology; digital content, but not literature, folklore or fine arts; market segmentation, but not sociology or anthropology; plain English in contracts, but not linguistics; content management, but not archival science; security, but not criminology; land claims, but not archaeology"





Opportunities for the SSH Community

- Bridge the gap between academic and applied SSH
- Convert <u>potential</u> benefits into <u>actual</u> benefits
 - Activate the potential of SSH by adopting and adapting commercialization approaches used by NSE, Health research communities
- Foster closer working relations between the business sector and the academic SSH sector
 - Work with SSHRC and others to develop a business engagement strategy







Opportunities for the SSH Community

- Begin a dialogue with the "parallel universe" of business SSH:
 - Human Resources
 - Digital Media
 - Natural Resources, Agriculture
 - Marketing, Sales
 - Economics
 - Etc., etc.





Opportunities for the SSH Community

- Make CFHSS a voice for the economic role and influence of SSH
 - Tell the story of SSH as the life-blood of many industries, companies, government departments, and the non-profit sector
- Commission/encourage additional research, position papers on SSH role, influence
- Launch a discussion stream at Congress 2016 ... and invite business to participate!







References

- Economic Role and Influence of the Social Sciences and Humanities: A Conjecture
 - http://www.sshrc-crsh.gc.ca/aboutau sujet/publications/impacts e.pdf
- Business Perceptions and Use of Research and Talent in the Social Sciences and Humanities
 - Contact us for details





Thank you!

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