



**ADVANCING CANADA'S
COMPETITIVE ADVANTAGE**

A national forum on management

**PROMOUVOIR L'AVANTAGE
COMPÉTITIF DU CANADA**

Un forum national sur le management

Better Research for Better Business

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The Context



SSHRC asked the Council of Canadian Academies to assemble an expert panel to answer the question:

“What are the overall, identifiable, strengths and weaknesses of the university-based research community in the areas of management, business and finance, according to appropriate indicators.”

How the issue arose



The federal budget of 2007 provided new resources for the granting councils including \$11 million for SSHRC, targeted to research in management, business and finance (MBF).

The government undertook to improve tracking and reporting on the impact of research expenditures.

Outcomes



The 9-member Expert Panel's Report, including recommendations on capacity building, to serve as input into the development of SSHRC's long-term strategy to support research, training and knowledge mobilization in MBF.

Several sub-questions



- 1. Number and distribution of MBF researchers in Canada.**
- 2. Level and type of collaborations.**
- 3. International standing of Canadian MBF research.**
- 4. Strengths and weaknesses.**
- 5. Balance between direct research funding and capacity building.**
- 6. Identifiable opportunities where targeted funding could make a difference.**

Defining MBF research



“Research within any area of management, business and finance directed at improving the competitiveness and performance of Canadian business.”

Methodology



- 1. Quantitative indicators:**
 - **Bibliometrics**
 - **International Rankings**
- 2. Qualitative indicators:**
 - **Opinion survey**
 - **Stakeholder interviews**

Findings: The Canadian MBF landscape



The Canadian MBF research landscape is composed primarily of researchers in business schools and faculties, although researchers who contribute to MBF fields are found in all university faculties and in a majority of departments:

Les chercheurs par discipline

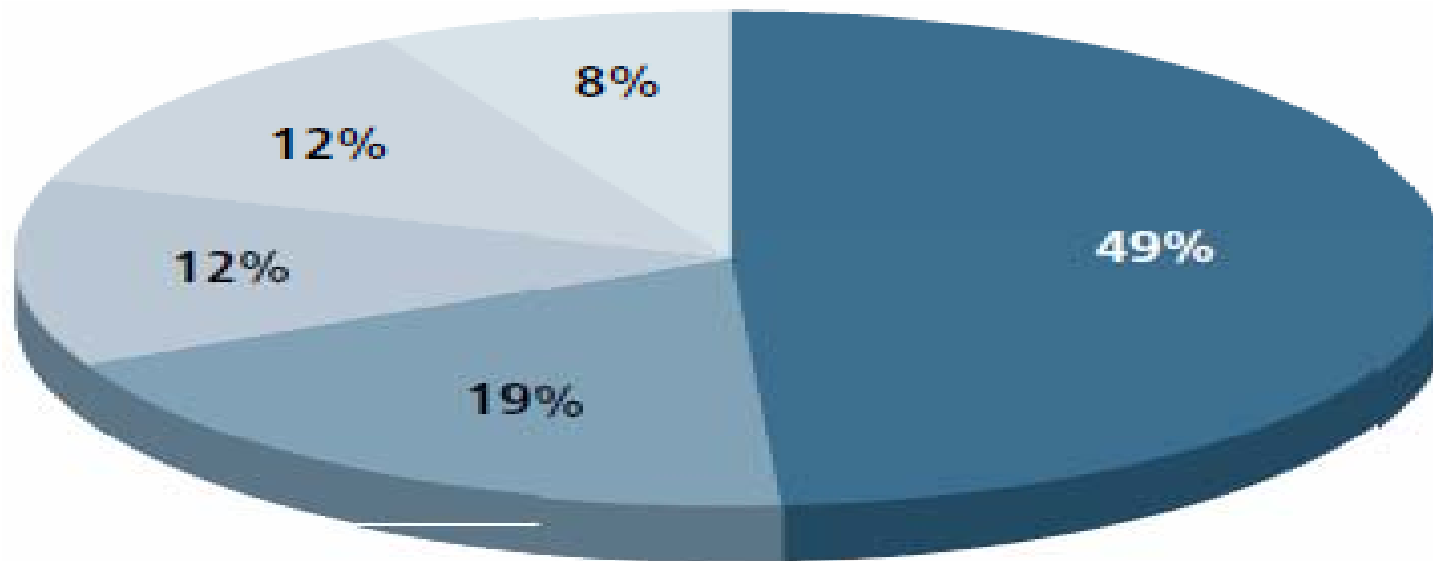


Faculty breakdown by specialty in Canadian business schools

Sub-field of Research	Number of Full-Time Faculty	% of Business School Faculty
Management	491	23
Finance	296	14
Accounting	295	14
Marketing	276	13
Operational Research	206	10
Knowledge and Technology Management	169	8
Economics	139	6
Organizational Studies and Human Resources	113	5
Business	75	3
Other	79	4
Total	2,139	100

All data are from a 2008 survey by the Canadian Federation of Business School Deans. The survey represented approximately 70 per cent of all business schools/faculties in Canada and just over 80 per cent of total faculty (non-reporting schools were generally smaller institutions with small faculty numbers). Categories reported here have been regrouped to align with the nomenclature presented in the bibliometric analyses. Reported faculty numbers represent the self-identified, primary field of research for all full-time faculty.

Les recherches par province



- Ontario 49%
- Québec 19%
- Alberta 12%
- British Columbia 12%
- Remaining Five Provinces 8%

The Canadian MBF landscape: the detail



- **58 business schools/programs**
- **2900 FT faculty**
- **93% research output from universities**
- **65% research output from faculty in business schools**

La collaboration entre les chercheurs



Overall collaborative trends in Canadian MBF research

Top 25 Institutions (by total number of papers)	Number of Collaborative Papers (% of Total)	Distribution of Collaborative Papers within each Institution (%)		
		International Co-author(s)	Domestic Co-author(s)	
			Within Management Depts.	Outside Management Depts.
University of Toronto	192 (24)	52	35	13
HEC/Université de Montréal	296 (37)	57	36	7
University of British Columbia	159 (29)	46	43	11
York University	137 (26)	63	29	8
University of Alberta	150 (29)	47	42	11
University of Western Ontario	116 (23)	59	34	7
University of Calgary	88 (18)	45	47	8
Concordia University	128 (30)	61	33	6
McMaster University	93 (22)	44	45	11
University of Waterloo	123 (33)	36	42	22
McGill University	109 (30)	48	48	4
Simon Fraser University	81 (25)	45	51	4
Université Laval	128 (42)	50	36	14
Queen's University	123 (46)	50	44	7
Université du Québec à Montréal	145 (58)	50	38	13
Wilfrid Laurier University	118 (51)	51	37	12
University of Ottawa	91 (42)	32	61	7
Carleton University	52 (27)	50	33	18
University of Manitoba	55 (32)	47	43	10
University of Guelph	51 (33)	24	57	19
University of Saskatchewan	35 (23)	17	83	0
University of Victoria	24 (16)	63	30	8
University of Windsor	33 (24)	36	48	16
University of New Brunswick	20 (15)	35	37	28
Dalhousie University	59 (45)	29	62	9
Total and Average Values	2,606	45	44	11

Collaborative trends in Canadian MBF research



- **40% published papers collaborative**
- **45% of the collaborative effort form international partnerships**
- **44% total collaborations among members of management departments/faculties**
- **90% collaborations between universities**

International profile of Canadian MBF research: Overview



“An evaluation of overall Canadian MBF research output, by various indicators, shows that Canada ranks above the world average, and tends to rank above average in most, but not all, MBF disciplines.”

Classement des pays



Ranking by citation of top 20 countries in economics and business
by Thomson Reuters

Thomson Reuters International Rankings by Total Citations				
Rank	Country	Papers	Citations	Citations Index
1	U.S.	66,600	516,584	7.76
2	U.K.	17,743	97,614	5.50
3	Canada	8,081	41,654	5.15
4	Netherlands	5,315	27,757	5.22
5	France	5,277	25,056	4.75
6	Germany	6,875	23,937	3.48
7	Australia	5,919	21,497	3.63
8	China	3,658	17,360	4.75
9	Spain	4,240	14,744	3.48
10	Italy	3,494	14,045	4.02
11	Sweden	2,487	13,707	5.51
12	Belgium	2,156	11,135	5.16
13	Israel	1,795	10,822	6.03
14	Switzerland	1,875	10,577	5.64
15	Scotland	1,858	9,005	4.85
16	Denmark	1,509	7,320	4.85
17	S. Korea	1,807	6,780	3.75
18	Japan	2,625	6,734	2.57
19	Singapore	1,260	5,981	4.75
20	Norway	1,428	5,931	4.15

Countries are ordered by the highest total citations for their papers published in Thomson Reuters-indexed journals of economics & business over the period, January 31, 1998 to October 31, 2008). The citation index is the average number of citations per paper. (Essential Science indicators, 2009)

International profile of Canadian MBF research: Thomson Reuters



- **3rd in number of papers published**
- **3rd in total number of citations**
- **8th in average number of citations by paper**

International profile of Canadian MBF research: Financial Times



Six schools placed in the top 50 2004-08:

- 1. University of Toronto**
- 2. University of British Columbia**
- 3. University of Alberta**
- 4. University of Western Ontario**
- 5. York University**
- 6. McGill University**

International profile of Canadian MBF research: Bibliometrics



- **8th on a per paper average of the number of citations**
- **4th when the impact factor of the journal is considered**

Impact selon les disciplines



Impact of Canadian MBF research by sub-field rankings

MBF Sub-field	# of Papers	ARC	ARIF	SI
Information Management	317	1.8	2.2	1.2
Computers	140	1.2	1.5	0.9
Organizational Studies & Human Resources	1,024	1.1	1.2	1.7
Management	1,881	1.1	1.2	1.4
Tourism	121	1.5	1.2	1.6
Marketing	612	0.9	1.2	1.3
Finance	855	0.9	1.1	1.2
Business	547	1.0	1.0	1.4
Healthcare Management	328	1.3	0.9	0.9
Operations Research	816	0.8	0.8	1.9
Accounting	215	0.8	0.8	1.2
Knowledge & Technology Management	357	0.9	0.7	1.1
Public Management	320	0.5	0.6	1.3

Listed are the 16 identified sub-fields with their average relative citation factors (ARC – an indicator of research impact based on the average number of citations of each paper counted in the year that the paper was published and for the next two years) and their average relative impact factor (ARIF – an indicator of the expected scientific impact of papers produced by a given entity based on the journals in which they were published calculated over five years). The specialization index (SI) is an indicator of the research intensity for a given entity (e.g., a country) in a specific area of research. Those values falling below world average are shaded.

Strengths and weaknesses



- **International impact in general management, information management, and organizational studies and HR**
- **Accounting a relative area of weakness**
- **MBF research in fields identified in the Science and Technology strategy above world average**
- **Growing # of publications 1996-2007**

Potential impact of investment?



“Neither the bibliometric results, nor the opinion-based approaches, provide evidence that an increased funding allocation in these disciplines - at least in the amount foreseen in Budget 2007- would result in positioning Canada as a global leader.”

Weakness in knowledge transfer



“The most significant identified weakness in Canadian MBF research is its lack of explicit relevance and usefulness as perceived by potential end-users of the work. There are few contacts between MBF researchers and business people in Canada, other than in Quebec.”

Barriers to knowledge transfer



- 1. Difficulties in communication – research too technical and jargon-laden**
- 2. Absence of incentives – research relevant to practice not valued re T and P**
- 3. Misaligned timeframes – publication process lengthy & ill-suited to addressing medium and short term problems**
- 4. Lack of accessibility – interaction limited**

Opportunities in Canadian MBF research



“Are there identifiable, outstanding opportunities where targeted support for MBF research can make a significant impact?”

Ways to make an impact



- 1. Directed application of support toward more relevant MBF research.**
- 2. Segregate targeted funds from base level MBF funding and focus their application.**
- 3. Develop and implement a novel funding program – BETToR – Business Excellence through Transfer of Research.**

The BETToR Program



Objective:

To encourage research within any area of MBF directed at improving the competitiveness and performance of Canadian business.

The BETToR Program



Approach:

- **No impact on level of allocations of strategy for disbursement of the remaining funds traditionally specified for MBF research.**
- **Funding to support large, multi-year projects.**

The BETToR Program



A two-step adjudication process:

- **Step 1 – peer review re quality of proposal, capacity of team, consistency with overall objective of program.**
- **Step 2 – evaluation by academics and practitioners with additional criteria eg relevance, knowledge transfer, collaboration and training opportunities.**

The BETToR Program



Advisory Group with broad representation for the research and business communities recommended:

- **to assist SSHRC in design of program**
- **To establish criteria for a 5-year evaluation of program.**

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Merci / Thank you