

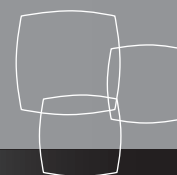


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SMALL BUSINESS QUARTERLY

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PERFORMANCE

Trends

- Preliminary results from an Industry Canada study show that profitability (return on assets) is a better predictor of high performance (high profits and high growth) than growth in the number of employees, revenues or assets.
- From 1987 to 2011, the number of self-employed individuals increased by 57 percent, while the number of employees increased by 38 percent. Over this period, self-employment in the natural and applied sciences occupational group had the highest growth rate (240 percent).
- Year-over-year employment increased by 1.3 percent in the third quarter of 2011. Mining and oil and gas extraction reported the largest growth (7.3 percent) and health care and social assistance created the most jobs (36 000).
- From 2000 to 2010, sales risk of small and medium-sized enterprises (SMEs),¹ measured as the volatility of sales revenues over time, was highest in the construction industry and lowest in the wholesale trade industry.
- Export-oriented immigrant-owned SMEs not only outperformed immigrant-owned firms that did not export, but also outperformed their exporting non-immigrant counterparts in terms of per-employee growth in revenue, profits, employment and total salary expenses.
- Business insolvencies declined by 10 percent in the first three quarters of 2011 compared with the same period in 2010.

¹ Small businesses are defined as having fewer than 100 employees, medium-sized businesses having 100 to 499 employees and large businesses having 500 or more employees.

CANADIAN HIGH-GROWTH FIRMS:

Does Profit Come before Growth?

High-growth firms tend to create disproportionately more jobs and wealth than other firms. As a result, they have attracted much attention in both government and academic circles. Though there are numerous studies on the positive economic impact of high-growth firms, information on the transition into a state of high growth is limited. Recent international research has focused on the relationship between growth and profitability of firms and has found that growth alone is not necessarily a sign of sustainable development.

Preliminary results from an Industry Canada study, *Canadian High-Growth Firms: Does Profit Come before Growth?*, shed light on the relationship between growth and profitability by following Canadian businesses from 2001 to 2007. The study is based on data from the Canada Revenue Agency that encompasses about 157 000 private sector firms with more than 10 employees.

In the context of this study, growth is defined in terms of the number of employees, revenues and assets. High growth is defined according to the Organisation for Economic Co-operation and Development, namely firms that experience average annualized growth rates greater than 20 percent per year over a three-year period. Profitability is measured by the return on assets of the business in comparison with the industry median. Both growth rates (in terms of the number of employees, revenues and assets) and profitability levels are calculated for two periods: the initial period, from 2001 to 2004, and the final period, from 2004 to 2007.

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For each period, firms are categorized into four performance groups:

- **Poor:** Low growth and low profits
- **Growth:** High growth and low profits
- **Profit:** High profits and low growth
- **Star:** High profits and high growth

By categorizing firms in both periods, the study analyzes 16 possible paths for businesses between the initial and final periods.

One of the main findings of this study is that firms that achieve *Profit* performance in the initial period are more likely to achieve *Star* performance in the final period than firms that first demonstrate *Growth* performance. In other words, profitability is a better predictor of high growth. These results hold regardless of whether growth is defined in terms of the number of employees, revenues or assets.

Table 1 shows the percentage of firms that achieved *Star* performance in the 2004–2007 period, depending on their initial category. When growth is defined in terms of assets or revenues, there were four times more *Stars* initially in the *Profit* category than in the *Growth* category. This tendency to move from *Profit* to *Star* was most evident when growth was defined in terms of the number of employees. Using this definition of growth, there were 13 times more *Profit* firms that became *Stars* than *Growth* firms.

Table 1: Percentage of Firms in Each Category that Became Stars in the Final Period, 2004–2007, by Definition of Growth

Definition of Growth Initial Category	Star		
	Assets	Number of Employees	Revenues
Growth	10.8	3.7	10.1
Profit	43.4	48.3	40.3

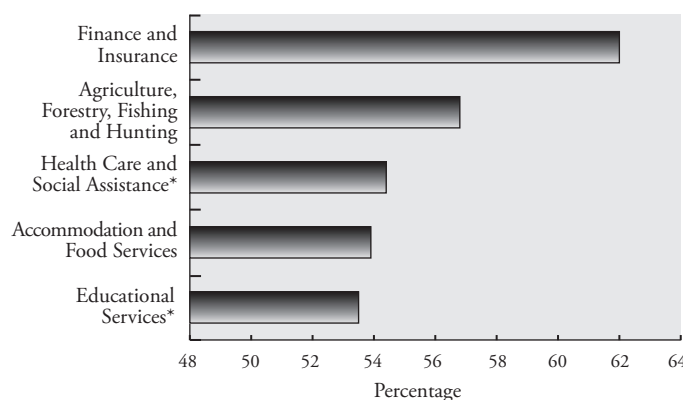
Source: Canada Revenue Agency (CRA), Industry Canada calculations.

Using the growth definition in terms of the number of employees, Figure 1 shows the top five industries in which firms that first achieve *Profit* performance transition to *Star* performance.

These transitions occur in a diversity of industries and are not necessarily in innovation-intensive industries. For example, in the finance and insurance industry, 62 percent of *Stars* were previously *Profit* firms, while about 57 percent of firms in agriculture, forestry, fishing and hunting and 54 percent of firms in health care and social assistance (private sector) were previously *Profit* firms.

This article presents some preliminary findings on the relationship between growth and profitability. The full report, including analysis of the results by definition of growth and by firm size, will be available later in 2012.

Figure 1: Percentage of Stars that were Previously Profit Firms, by Selected Industries



Source: Canada Revenue Agency (CRA), Industry Canada calculations.
* Health care and social assistance, and educational services include the private sector only.

SELF-Employment

According to Statistics Canada's *Labour Force Survey*, self-employment has grown substantially over the last few decades. From 1987 to 2011, the number of self-employed individuals increased by 57 percent, while the number of employees increased by 38 percent (Table 2). Moreover, the self-employment rate (proportion of the labour force that is self-employed) increased from 13.8 percent in 1987 to 15.4 percent in 2011.

In 2011, occupations with the largest share of self-employed individuals were management, representing close to 500 000 individuals (18.7 percent of the self-employed); trades, transport and equipment operators, accounting for 441 800 individuals (16.5 percent of the self-employed); and sales and services, with 427 500 individuals (16.0 percent of the self-employed). In total, these three occupational groups represented over half (51.2 percent) of all self-employed individuals in 2011.

In terms of composition, growth in self-employment from 1987 to 2011 appears to be driven by a substantial increase in the number of self-employed individuals in the natural

and applied sciences occupational group. In 1987, 46 500 self-employed individuals were in this group. By 2011, this number increased more than threefold to 157 900, representing an increase of 240 percent. Other substantial increases in self-employment over this period occurred in art, culture, recreation and sport (150 percent); health (144 percent); processing, manufacturing and utilities (141 percent); and business, finance and administration (132 percent).

The only occupational group that experienced a decrease in the number of self-employed individuals was primary industry. From 1987 to 2011, total self-employment in this group decreased from 357 500 to 245 700, a drop of 31 percent. This is likely a reflection of the shift in the Canadian economy away from goods-producing industries towards service industries. Self-employment in primary industry decreased from 56.8 percent in 1987 to 46.4 percent in 2011; nevertheless, primary industry still had the highest self-employment rate of all occupational groups in 2011.

Table 2: Self-Employed Workers and Employees by Occupational Group, 1987–2011

Occupational Group	Employees				Self-Employed				
	1987	2011	Change	2011 Share of Total Employees	1987	2011	Change	2011 Share of Total Self-Employed	2011 Self-Employment Rate
	(Thousands)		(%)	(%)	(Thousands)		(%)	(%)	(%)
Business, finance and administrative	2 258.4	2 815.7	25	19.2	131.8	306.2	132	11.5	9.8
Health	553.7	1 010.9	83	6.9	62.4	152.1	144	5.7	13.1
Management	720.4	977.1	36	6.7	336.9	499.9	48	18.7	33.8
Natural and applied sciences	566.8	1 114.1	97	7.6	46.5	157.9	240	5.9	12.4
Art, culture, recreation and sport	208.9	369.4	77	2.5	82.6	206.2	150	7.7	35.8
Social science, education and government	666.3	1 396.9	110	9.5	96.4	195.6	103	7.3	12.3
Primary industry	271.9	284.2	5	1.9	357.5	245.7	-31	9.2	46.4
Sales and services	2 605.9	3 743.4	44	25.6	278.8	427.5	53	16.0	10.2
Trades, transport and equipment operators	1 850.0	2 145.4	16	14.7	290.7	441.8	52	16.5	17.1
Processing, manufacturing and utilities	931.7	778.6	-16	5.3	15.5	37.3	141	1.4	4.6
Total, all occupational groups	10 634.0	14 635.7	38	100	1 699.1	2 670.2	57	100	15.4

Source: Statistics Canada, *Labour Force Survey*, December 2011.

Note: Numbers may not add up due to rounding.

JOB *Creation*

According to the latest *Survey of Employment, Payrolls and Hours* from Statistics Canada, year-over-year employment increased by 1.3 percent, or almost 194 000 workers, in the third quarter of 2011 (Table 3). Large businesses (500 or more employees) contributed most to job gains, growing by more than

94 000 workers and representing 48.5 percent of total employment growth during this period. In comparison, employment in small and medium-sized firms grew by 28 000 and almost 72 000 workers, respectively, representing 14.5 percent and 37.0 percent of total employment growth.

Table 3: Year-Over-Year Net Change¹ in Payroll Employment² by Industry, 3rd Quarter 2011

Quarter	Change		Contribution to Total Net Change (Number of Employees)					
			Small (0–99 employees)		Medium-Sized (100–499 employees)		Large (500+ employees)	
	%	Jobs	%	Jobs	%	Jobs	%	Jobs
Q3 2010	0.9	131 642	37.4	49 239	27.7	36 527	34.8	45 876
Q4 2010	1.1	161 850	13.1	21 241	30.6	49 487	56.3	91 124
Q1 2011	1.3	188 940	15.6	29 551	32.3	61 058	52.0	98 332
Q2 2011	1.3	186 007	0.3	587	35.5	65 957	64.2	119 465
Q3 2011	1.3	193 964	14.5	28 186	37.0	71 723	48.5	94 055
Industry			Change (Jobs)					
Forestry	0.3	128	0.1	41	13.2	851	-14.1	-765
Mining and Oil and Gas Extraction	7.3	14 148	-5.8	-2 768	-7.6	-2 529	17.3	19 445
Utilities	4.6	5 503	-1.8	-121	-4.5	-276	5.5	5 898
Construction	3.3	29 003	1.8	12 001	12.3	15 136	1.7	1 867
Manufacturing	1.1	16 302	-0.9	-4 632	3.0	11 406	1.7	9 528
Wholesale Trade	2.1	15 749	-0.4	-1 430	6.1	8 976	4.1	8 204
Retail Trade	-0.4	-6 748	-0.1	-531	1.5	3 036	-1.1	-9 252
Transportation and Warehousing	2.1	13 922	1.5	3 194	-1.4	-1 185	3.3	11 913
Information and Cultural Industries	-0.4	-1 452	-4.9	-3 531	-7.2	-3 090	2.4	5 168
Finance and Insurance	0.4	3 022	-0.4	-524	0.6	495	0.6	3 052
Real Estate and Rental and Leasing	0.9	2 266	2.5	3 883	-7.8	-2 947	2.6	1 330
Professional, Scientific and Technical Services	3.2	24 169	0.8	3 775	2.9	3 414	9.0	16 980
Management of Companies and Enterprises	-3.0	-3 204	-1.3	-606	-3.4	-626	-4.6	-1 972
Administrative and Support, Waste Management and Remediation Services	1.4	10 307	1.1	3 437	8.7	12 363	-1.8	-5 493
Educational Services	-1.2	-11 058	0.1	64	-1.2	-1 075	-1.3	-10 047
Health Care and Social Assistance	2.2	36 071	1.1	5 707	2.2	5 650	2.8	24 711
Arts, Entertainment and Recreation	1.0	2 729	-1.8	-2 411	10.0	4 914	0.2	226
Accommodation and Food Services	2.0	22 096	0.7	4 828	6.3	11 591	3.2	5 677
Other Services (excluding Public Administration)	2.2	11 256	1.5	5 966	6.2	4 349	1.6	940
Public Administration	0.9	9 756	2.2	1 838	1.1	1 273	0.8	6 645
Canada Total	1.3	193 965	0.5	28 180	3.3	71 726	1.5	94 055

Source: Statistics Canada, *Survey of Employment, Payrolls and Hours*, unadjusted for seasonal variations, December 2011.

¹ Year-over-year net change in payroll employment is calculated as the variation between the level of employment in a given quarter and the level in the same quarter a year before.

² *Survey of Employment, Payrolls and Hours* data exclude self-employed workers who are not on a payroll and employees in the following industries: agriculture, fishing and trapping, private household services, religious organizations and military personnel of defence services. The data breaking down employment by size of firm also exclude unclassified industries.

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The industry reporting the largest year-over-year employment growth was mining and oil and gas extraction, increasing by 7.3 percent and amounting to slightly more than 14 000 additional jobs. Utilities, construction, and professional, scientific and technical services also witnessed noticeable gains, growing by 4.6 percent, 3.3 percent and 3.2 percent respectively. In terms of number of job gains, health care and social assistance topped the list, creating 36 000 jobs from the third quarter of 2010 to the third quarter of 2011.

Nevertheless, growth in these industries was slightly offset by losses in others. In particular, year-over-year employment in management of companies and enterprises, educational services, retail trade, and information and cultural industries decreased by 3.0 percent, 1.2 percent, 0.4 percent and 0.4 percent respectively. Educational services lost the most jobs over this period, decreasing by 11 000 jobs.

SME Sales Risk

Forecasting business revenues can be difficult because many of the factors that influence revenues are uncertain. Revenues are affected by economic conditions, strategies of competitors, government regulations and demographic changes. They are also heavily influenced by industry dynamics. In a highly cyclical industry, such as construction, sales will typically display more volatility over the business cycle compared with businesses in more stable industries.

Sales risk is the risk associated with business revenues. It is typically measured as the volatility of sales revenues over time, usually 5 to 10 years, and can be measured by the standard deviation of historical revenues. As the standard deviation is sensitive to the level of sales, it is not directly comparable across industries. However, it can be normalized by dividing the standard deviation of revenues by average revenues over the period. The resulting measure is the coefficient of variation (CV) in sales.¹ Table 4 presents the CV for SMEs across industries covering the 2000–2010 period. These findings help confirm intuition regarding the risk-to-sales trade-offs across industries.

Among small businesses, the largest growth rates occurred in real estate and rental and leasing (2.5 percent), followed by public administration (2.2 percent). Small businesses in construction created the most jobs, boasting a year-over-year increase of 12 000 workers. On the other hand, significant job losses occurred among small businesses in manufacturing (-4632) and information and cultural industries (-3531).

Among medium-sized firms, significant job gains occurred in construction (15 136) and administrative and support, waste management and remediation services (12 363). Employment among large businesses increased most in health care and social assistance (24 711), followed by mining and oil and gas extraction (19 445).

Table 4: Small and Medium-Sized Enterprise Sales Risk by Industry, 2000–2010

Industry	Average Revenues (\$ millions)	Standard Deviation (\$ millions)	Coefficient of Variation
Agriculture	46.4	6.5	0.14
Construction	120.0	21.1	0.18
Manufacturing	110.0	5.2	0.05
Wholesale Trade	120.5	3.4	0.03
Retail Trade	155.8	9.6	0.06
Professional, Scientific and Technical Services	60.1	8.9	0.15
Accommodation and Food Services	41.8	4.2	0.10
All industries*	883.7	85.0	0.10

Source: Statistics Canada, financial and taxation statistics for enterprises; and author's calculations, 2000–2010.

*The total for all industries includes industries not presented in the table.

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As seen from Table 4, sales risk was highest in the construction industry (0.18) and lowest in the wholesale trade industry (0.03), with both generating about \$120 million in revenue per year. Sales risk was second and third highest in the professional, scientific and technical services industry (0.15) and the agriculture industry (0.14). The accommodation and food services industry—a highly cyclical industry—appeared to have low sales risk when measured by its standard deviation alone (4.2). When properly measured against its CV, however, the sales risk was much higher (0.10).

Sales risk is an important concept of business risk. Higher sales risk typically translates into greater volatility in earnings and cash flows and an increased likelihood of financial distress. Monitoring sales risk is particularly important because it helps policy-makers to understand within which industries businesses are most sensitive to economic activity and to anticipate within which industries businesses will be in the greatest need of financial support.

¹ Reilly, Frank K., and Brown, Keith C., *Financial Statement Analysis*, CFA Curriculum, CFA Institute, 2007.

IMMIGRANT ENTREPRENEURS *and the Importance of Exporting*

For young SMEs owned by recent immigrants to Canada, a major factor determining success or disappointment appears to be the decision to export goods and services, according to preliminary results from a study conducted by the University of Ottawa and Industry Canada.¹ Using data from Statistics Canada's *Survey on Financing of Small and Medium Enterprises* linked with tax file data,² the joint study found not only that immigrant-owned young firms were more likely to export than young firms owned by non-immigrants, but also that export-oriented immigrant-owned SMEs significantly outperformed immigrant-owned firms that did not export (in terms of per-employee growth in revenue, profits, employment and total salary expenses over a four-year period).

In fact, exporting immigrant-owned SMEs outperformed even their exporting non-immigrant counterparts. This particular result suggests that immigrant entrepreneurs have the resources, such as unique managerial acumen and access to international networks, to give them a competitive advantage over non-immigrant SME owners that export or aspire to export.

In contrast, immigrant-owned SMEs that were *not* export oriented mostly underperformed firms owned by non-immigrants, regardless of whether the latter exported or not. Such findings imply that immigrant-owned SMEs that do not (or cannot) engage in international trade may be facing unique challenges to perform and ultimately survive in the marketplace.

The study helps explain why previous research on the performance of immigrant-owned enterprises has been so mixed. While many successful enterprises have been anecdotally linked to immigrant entrepreneurs, other studies have suggested that such entrepreneurs tend to be confined to low-value, low-profit sectors of the economy. By taking into account important business characteristics, such as exporting activities, researchers can better identify the opportunities and challenges facing the highly diverse group of immigrant entrepreneurs.

¹ The study's authors were François Neville, Barbara Orser and Allan Riding of the University of Ottawa, and Owen Jung of Industry Canada.

² All tax file data are anonymous and cannot be traced back to a particular firm.

BUSINESS *Insolvencies*

The number of business insolvencies is one of the indicators used to gauge the strength of the Canadian economy. Recovery from the recent financial crisis and the recession that ensued led to a decrease in business insolvencies, contributing to a trend that began in 1996 (with 2000 and 2001 being the exceptions). The latest data indicate that business insolvencies declined by 10 percent in the first three quarters of 2011 compared with the same period in 2010.

This downward trend in the number of business insolvencies occurred across most major industries, with professional, scientific and technical services (-19 percent); real estate and rental and leasing (-20 percent); and transportation and warehousing (-22 percent) leading the way. Bucking the trend are finance and insurance (11 percent increase), and health care and social assistance (32 percent increase), albeit from a smaller base.¹

Industries that historically have accounted for the bulk of business insolvencies are construction, retail trade, accommodation and food services, manufacturing, and transportation and warehousing.

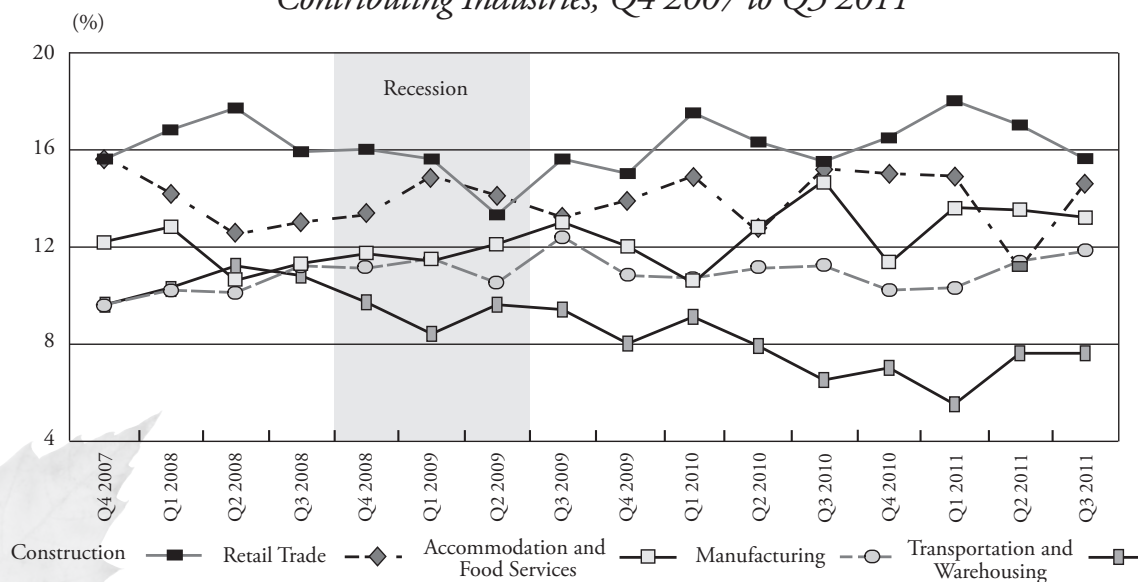
These five industries represented two thirds of all business insolvencies in the third quarter of 2011, while representing only one third of the overall number of businesses.² Industries where insolvencies are less frequent include educational services; arts, entertainment and recreation; and information and cultural industries.

Figure 2 displays the quarterly share of business insolvencies by the top five major contributing industries since October 2007. The recession (Q4 2008 to Q2 2009) did not trigger a surge in business insolvencies in these industries. The relative shares of these five industries remained remarkably stable over the last four years with the notable exception of transportation and warehousing, which decreased significantly over time. Shares of business insolvencies for the other industries followed a similar pattern, decreasing slightly over time.

¹ The comparison covers the first three quarters of 2010 and 2011.

² Source: Statistics Canada, *Business Register*, June 2011.

Figure 2: Quarterly Share of Business Insolvencies by the Top Five Contributing Industries, Q4 2007 to Q3 2011



Source: Office of the Superintendent of Bankruptcy Canada (www.osb.ic.gc.ca).

RECENT *Developments*

OECD REPORT: *Financing High-Growth Firms: The Role of Angel Investors*

Released in December 2011, this report covers seed and early-stage financing for high-growth companies in Organisation for Economic Co-operation and Development (OECD) and non-OECD countries with a primary focus on angel investment, including definitions, data and processes.

It reviews developments around the world and identifies some key success factors, challenges and recent trends.

The report discusses policy measures for promoting angel investment, with examples from countries that have been active in this area.

The full report is available for purchase at www.oecd.org/sti/angelinvestors.

Small Business Quarterly Small Business Branch

The *Small Business Quarterly* is being discontinued and this Volume 14, No.1, May 2012 will be the last issue published. Thank you for your interest in this publication.

If you have questions or comments about the content, please email: smers-rspme@ic.gc.ca. To find other Small Business Branch reports and publications, visit the Small Business Research and Statistics website at www.ic.gc.ca/sbresearch.

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CREDIT CONDITIONS

faced by SMEs that invest in R&D

Using data from Statistics Canada's *Survey on Financing of Small and Medium Enterprises*, this report compares the financing activities of research and development (R&D) performing SMEs with non-R&D performing SMEs to reveal differences in financing demands. In the analysis, R&D performers are separated into two groups, "intensive" and "low-medium," to show the diversity in financing needs among R&D performing SMEs. The report also outlines general firm and majority-owner characteristics by R&D intensity.

The full report will be available in the fall of 2012 at www.ic.gc.ca/sbresearch/sbreports.

UPCOMING *Event*

CANADIAN COUNCIL FOR SMALL BUSINESS AND ENTREPRENEURSHIP (CCSBE)

Annual Conference, September 27–29, 2012

The Canadian Council for Small Business and Entrepreneurship (CCSBE) is an organization whose goal is to promote and advance the development of small business and entrepreneurship through research, education and training, networking, and dissemination of scholarly and policy-oriented information.

The CCSBE Annual Conference will be held in Halifax, Nova Scotia, from September 27 to 29. The theme is "Bridging the Gap between Research and Practice."

For more information on this event, visit www.ccsbe.org.