Increasing Women in SETT:

The Business Case

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Canadian Centre for Women in Science, Engineering, Trades and Technology (WinSETT Centre)

The WinSETT Centre is an action-oriented non-profit organization that aspires to recruit, retain and advance women in science, engineering, trades and technology (SETT). The WinSETT Centre was established in 2009 by CCWESTT after regional consultations and three national forums with key stakeholders including women in SETT.

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Increasing Women in SETT: The Business Case

Summary of Literature Review and Sector Scan

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Husky Energy

Increasing Women in SETT: The Business Case

Summary of Literature Review and Sector Scan

> *If Canada is to excel in the global knowledge based economy, we have to call up all of our strengths to build and maintain a strong, entrepreneurial science culture that maximizes all of our human resources.*[1]
> Arthur J. Carty, Canada's Former National Science Advisor

Women's increased participation and advancement in the workforce bring significant economic benefits to organizations and to Canada. This compelling business case is articulated by industry and institutional leaders across all sectors and is supported by recent research findings. Enhancing the participation and leadership of women in science, engineering, trades and technology (SETT) fields will generate even greater positive impacts in our knowledge-based, technological and highly competitive global economy. The benefits of gender diversity are described in this review and are supported by direct economic indicators. They include:

- Solution to skills shortages
- Access of employers to a broader base of talent
- Increased innovation potential
- Enhanced market development
- Greater return on human resource investment
- Stronger financial performance
- Improved governance
- Increased national economic growth index

A Solution to Skills Shortages

A strong, technically skilled workforce is key to a successful 21st century economy. Strengthening women's representation in SETT occupations addresses critical national imperatives to meet current and future skilled labour needs and to build Canada's research and innovation capacity.

> *The pressures of economic, technological and scientific change, combined with an ageing workforce, and intensifying global competition for skilled people, will soon strain our skills development system to the limit.*[2]
> Expert Panel on Skills, Advisory Council on Science and Technology.

While some sectors are already experiencing shortages, with the retirement of the 'baby boom' generation and other factors, labour force growth will decline significantly. Consider these snapshots of various sectors:

- Between 2015 and 2019, the cumulative hiring demand for information and communications technology workers will be 182,000, and the current supply of 'home-grown' talent will not be sufficient to meet the demand.[3]
- An Engineers Canada study forecasts more than 100,000 engineering job openings in Canada between now and 2025 as engineers retire and the economy continues to grow.[4]
- Across the 2016-2025 scenario, total market expansion requirements for trades occupations in the construction sector will be 11,400 jobs, and demand to replace retirements is estimated at 250,000 workers.[5]

- Even in a 'lower scenario' projection, Canada's petroleum sector is predicted to have a net hiring requirement of >46,000 workers for the period 2017-2020.[6]

Especially for the skilled trades, it is imperative to train, recruit and hire from the widest possible pool. Women, in 2013 at 2.6% of registered apprenticeship completions in the building construction, electrical, industrial and mechanical, metal fabrication, and motor vehicle and heavy equipment trades[7], and only 5.9% overall working in trades, transport, equipment operations and related occupations in 2011[8], represent the largest currently untapped human resource to meet these needs. Since females are 50.4% of Canada's population[9] (and 48% of the labour force[8]), women presumably constitute half of all the other groups identified as emerging potential sources of labour supply and designated as contributors to workplace diversity – Aboriginals (51% women[10]), visible minorities, new immigrants, and persons with disabilities.

> *Canada's construction industry competes with many other industries with similar demographic profiles and which face labour shortages in the future… The industry is looking to all sources of labour to meet its needs for a skilled, competent and adequate workforce in the future, including women.*
> Construction Sector Council.[11]

There are also talent shortfalls in computer science and some related engineering disciplines in North America. In all regions of Canada but British Columbia, total student enrolments in computer science in 2006-07 had declined by 36% from their peak values in 2002[12], with women's participation in 2011-12 being 24.4% of the undergraduate enrolment in mathematics, computer and information science[13], and in 2014, only11.6% in computer engineering.[14] The percentage of women enrolling in Canadian undergraduate engineering programs overall had dropped from a peak of ~20% in 2001 to 17.1% in 2008 but has climbed steadily back to 19.1% in 2014.[14]

It is clearly critical to attract more students and professionals, especially women, to these fields if we are to address shortfalls in the SETT workforce and strengthen our global economic competitiveness.

Access by Employers to a Broader Base of Talent

Women have entered universities and the workforce in steadily increasing numbers over the past several decades and now predominate as percentage of new entrants overall. Women's participation continues to grow in many SETT fields and remains significant in others.

- Women were 48% of the total workforce in 2011, and 21.9% of the paid workforce in science and engineering occupations.[8]
- Women were 57.2% of the total undergraduate students in Canadian universities in 2011-12.[13]
- Women received 57.5% of Bachelors and 54.2% of Masters degrees in the physical and life sciences, and 42.7% of PhD in 20011-12.[13]
- Women received 19.0%, 24.3% and 20.7% of the Bachelors, Masters and Doctoral degrees in engineering in 2014.[14]

It clearly makes good business sense for employers in governments, industry, educational institutions and other organizations to have access to this large, well educated and trained source of talent. Employers who wish to build strong

organizations will be competing for the best employees, women and men, and they are implementing innovative recruitment and retention practices to do so.

In turn, women and increasingly, men, expect more from their workplace – a supportive environment, professional development opportunities, strong benefit packages, flexibility in work arrangements, and good family policies including access to child-care. For example, a Catalyst study documented the strong business case for flexibility for both men and women in the law profession in Canada.[15]

The employer who supports women in the workplace will have a competitive advantage in attracting and retaining highly qualified employees from an increased pool of talent and will become an 'employer of choice'.[16] Underscoring that assertion, 89% of the companies who responded to a Catalyst Benchmarking Survey cited 'competitive advantage' as the primary aspect of their business case for diversity.[17]

Increased Innovation Capacity

The dramatic transformation to a knowledge economy over the past decade has created workplaces that are highly integrated with technology and require new ways of thinking, working and communicating.

> *Attracting the best and the brightest into science, technology and the trades – from all elements of society, including women, visible minorities, new Canadians, aboriginal people and the disabled – is rapidly becoming a key policy challenge for Canada. Not only do we need the numbers; we need the diversity of perspectives at all levels that a more inclusive S&T community can provide.*[1]
> Arthur J. Carty, Canada's Former National Science Advisor

While true diversity flows from *internal* characteristics such as those listed in the next sentence, *outer* differences, such as gender, are useful indicators or proxies for these characteristics.[18] For example, because of gendered socialization factors, women typically bring different life experiences, perspectives and values that add to their mix of knowledge and skills to inspire new approaches to work processes, ideas, solutions, products and services. The introduction of diversity into work settings can also reduce unilateral thinking ('groupthink'), challenge accepted views and create a dynamic synergy which expands possibilities for innovation.[19,20,21]

The well documented differences in communication and leadership styles between women and men are also part of that mix. In her comprehensive study of over 600 Canadian professionals, Orser found that women managers are perceived more likely to be consensus builders, nurturing of strong interpersonal relationships, and to consider social and human impacts of decisions.[16] The result of this management style was an increased ability to address issues in an informed and creative way and to engage buy-in. Orser also cites a 2000 study of US companies that found that *significant financial gains (a 7.8 per cent increase in market value) were associated with collegial, flexible work environments.*

In *Stepping Up: Skills and Opportunities in the Knowledge Economy,* the Advisory Council on Science and Technology's Expert Panel on Skills states that employers in five technology sectors reported that there is a persistent shortage of people who combine essential skills (communication and teamwork) with technical skills.[2]

Information technology employers in a recent report also stress that they require employees who have the whole 'package' including interpersonal skills.[22] Women bring great strength in these essential skills.

Statements about enhanced creativity and innovation are often articulated by industry and institutional leaders in their descriptions of the benefits of a diverse workforce.

> *Diversity initiatives have the potential to expand the petroleum industry's labour pool at a time when it is experiencing shortages in some trades…Such initiatives also provide Husky and its contractors access to a wider range of capabilities, improve worker retention, and contribute to healthy and productive working environments.*[23] Husky Energy Inc.

> *This initiative is premised on a strong diversity business case generated by the diversity-of-thought concept, which maintains that different types of thinking stem from different dimensions of diversity. The more demographically, functionally, and culturally diverse an organization is, the more innovative its employees will be.* Georgia-Pacific Corporation on its Catalyst Award-winning "Bridging Cultures, Leveraging Differences" initiative which increases the recruitment, development and advancement of women.[24]

These views are supported by research studies that conclude mixed groups are more effective than homogeneous ones, for example, in how decisions are made.[21],[25] Through the process of addressing and managing internal diversity, an organization keeps itself flexible, well-developed and able to respond to change.[19] This adaptability also feeds innovation.

Expanded Market Development

Whether you are a post-secondary institute serving students or a company selling technology, your clients are becoming increasingly diverse with women being a growing proportion of that base. Women have a significant impact on the economy as wage earners, consumers and business owners.

- Women were 61.2% of undergraduate degree recipients in Canada in 2011-12.[13]
- Women influence 80% of consumer purchase choices in Canada.[26]
- Women retain ownership in 47% of Canada's 1.6 million small and medium-sized enterprises and majority ownership in 16% of Canadian SMEs.[27]
- Self-employed women numbered more than one million in 2015.[28]

There is very strong evidence that an organization whose employees reflect the diversity of its client or customer base responds more effectively in understanding and serving their needs and in identifying new opportunities and markets.

David Thomas' 2004 landmark case study of IBM compellingly illustrates the business case for diversity through its expansion into new markets.[29] In 1995, under the direction of their new CEO, IBM established eight task forces each focused on a different diversity constituency in its workforce, one of them being women (another was white men). The goal was to *uncover and understand differences among the groups and find ways to appeal to a broader set of employees and customers.* Explained the CEO, "*We made diversity a market-based issue".*

One significant outcome was to focus on sales and service support to the fast growing segment of the US economy - women-owned businesses. The result was an impressive increase in revenue in this business division from $10 million in 1998 to over $300 million in 2001. *Workforce diversity was the bridge between the workplace and the marketplace.*

An integral part of the taskforce process was to identify ways to welcome and value the various constituencies in the workplace, maximize their productivity, and develop links with external diversity-based organizations. Thus, in addition to expanding business opportunities, the company was able to *focus on talent – attracting, retaining, developing, and promoting the best people.* The example of IBM's business strategy includes highly effective practices, policies and processes that can benefit other organizations.

Return on Investment in Human Resources

One of the greatest economic advantages of a diverse workforce does not show up in the sales revenue column. Rather, it lies in capitalizing on the major investments in human resources by minimizing loss of talent.

Companies, government departments, and other institutions invest significant resources in the recruitment, hiring, training and development of their employees. Australia's Commonwealth Scientific and Industrial Research Organization found that it *cost roughly four times as much to continually hunt for and train replacement staff than it did to provide optimal conditions for job satisfaction and motivation of existing personnel.*[30]

There is a very strong economic benefit therefore to *minimize the costs* of employee absenteeism and turnover, and prevent the loss of institutional knowledge and diminished client relationships.

Women, however, tend to leave organizations at higher rates than men particularly at mid-career levels.[31] The comprehensive "Athena Report" found that 41% of highly qualified scientists, engineers, and technologists on the lower rungs of corporate career ladders are female, but more than half (52%) drop out.[32] Another seven-year US study found that women in science and engineering occupations are twice as likely as men to leave these fields to pursue other careers, and in the UK, a 2005 study reported that 50,000 women are not using their science qualifications.[33,34] Creating workplaces that support, offer development opportunities for, provide returning on-ramps for, and retain women employees provides a return on the organization's investment in valuable human resources and saves on the high costs of this differential turnover.

The Conference Board of Canada report "Workplaces that Work" illustrates that workplace cultures that *encourage greater participation by women, share many of the same characteristics as those that maximize employee satisfaction and engagement*, and lessen the costs related to illness, injury and turnover.[27] In turn, women also show strong loyalty, commitment and motivation in such environments.[20]

While leading companies have advanced significantly beyond a strictly *compliance* approach[17], successful inclusive strategies do address situations where there are *direct legal* obligations or client / supplier requirements for diversity within the organization. Companies in the European Union, for example, whose nations all have strong gender equity legislation, typically have equity requirements for their workforce. Proactive

compliance by strengthening diversity eliminates costs of grievances and any potential legal actions.

In Canada, the Employment Equity Act of 1995 requires Public Service and Federal Contractors to identify and eliminate employment barriers and institute policies and practices to ensure appropriate representation of designated groups in their workforce.[35] It is worth noting, however, that the construction industry is exempt from the Act and has the lowest representation of women in its workforce. Provincial legislation can also address these issues. In Newfoundland and Labrador, for example, all large-scale natural resource projects are required to develop, implement and report on gender equity and diversity programs.[36] It is clear that where there are equity regulations in various forms, hiring of women and other equity-seeking groups does increase.[37]

Stronger Financial Performance

International research highlights the correlation between women in management and leadership roles and profitability. The most often cited recent study that links gender and the 'bottom line' is the 2004 Catalyst study of 353 Fortune 500 companies in the US which found

> *…companies with a higher representation of women in senior management positions financially outperform companies with proportionally fewer women at the top. These findings support the business case for diversity, which asserts companies that recruit, retain, and advance women will have a competitive advantage in the global marketplace.*[38]

Specifically, companies with the highest representation of women in their top management teams had a 35.1% higher return on equity and 34.0% higher total return to shareholders than those with the lowest representation.

More recently, a 2007 Catalyst study showed that

> *...on average, Fortune 500 companies with the highest percentages of women board directors outperformed those with the lowest. Compared to U.S. companies with the least gender diverse boards, these firms reported a 53 percent higher return on equity (ROE); a 42 percent greater return on sales (ROS), and 6 percent higher return on invested capital (ROIC).*[39]

And, the 2011 Catalyst study of Fortune 500 companies in the US for 2004-08 summarized that

- *Companies with the most women on boards of directors (WBD) outperformed those with the least on return on sales (ROS) by 16 percent and on return on invested capital (ROIC) by 26 percent.*
- *Companies with sustained high representation of WBD significantly outperformed those with sustained low representation by 84 percent on ROS and by 60 percent on ROIC.*[40]

In a 19-year study of Fortune 500 companies, Adler also showed the strong correlation of financial performance and women's presence at high levels in the organization.[41]

> *Three measures of profitability were used to demonstrate that the 25 Fortune 500 firms with the best record of promoting women to high positions are between 18 and 69 percent more profitable than the median Fortune 500 firms in their industries.*

In Canada, research reported by the Conference Board of Canada tracked corporations with at least two women on their board for six years. At the end of that period in 2001, these organizations were ranked more highly as industry leaders than those with all male boards, both in revenues (17th vs. 40th) and profits (10th vs. 17th).[19]

Comparable research in the UK and Sweden show similar results.[42,43] Vinnicombe and Singh demonstrated a high correlation between market capitalization and the presence of women directors in the 100 largest companies on the London Stock Exchange. In a study with a slightly different focus of over 14,000 companies, the Swedish Business Development Agency found a positive correlation between profitability and the degree of 'gender equality' in the organization. The latter was measured by the degree of representation of women and men in the organization as compared to the overall situation in different educational categories in society, and the balance in uptake of parental leave by both women and men. They concluded

> *…a company with a representatively balanced workforce is organized in such a way that a greater number of staff feel disposed to perform well, that the company takes account of the skills of each individual regardless of gender, and that opportunities for synergy effects are properly exploited.*

While correlation doesn't prove causality, Adler proposes that

> *"Firms exhibit higher profitability because their top executives have probably made smarter decisions…[one of them being] to include women in the executive suite, so that the best brains are available to continue making smart and profitable decisions."* Wannamaker in discussing Adler's findings elaborates *"Perhaps the more profitable companies are successful because they build inclusionary corporate cultures which give women the same opportunities as men and value their contributions as much as those of their male colleagues. It only makes sense that a company giving all employees a chance to contribute meaningfully to the bottom line will achieve better results than one failing to sufficiently tap such resources.*[44]

Studies by Orser and Gibson for the Conference Board of Canada further describe the links between women's leadership, employee satisfaction and corporate performance.

> *For those organizations that foster gender diversity at all levels of the organization, the rewards are great – bottom-line results, lower turnover and employment branding that is attractive to talented, successful women, the kind of employees that all Canadian organizations seek.*[17]

Better Management Performance and Corporate Governance

Studies in a number of countries have demonstrated the positive correlation between women in executive management teams and good corporate governance (which in turn contributes to better corporate performance).[42] Conference Board of Canada studies provide comprehensive and compelling evidence that Boards with more than two or three women have stronger practices in several key areas of governance.[19] These include:

- More regular reviews of non-financial performance
- Greater measurement and implementation of corporate strategies
- Greater attention to audit and risk oversight and control

- Increased presence of conflict of interest guidelines and codes of conduct
- More effective two-way communication with stakeholders
- Greater consideration of measures of innovation and of social and community responsibility

The study also noted the symbolic benefit of women's presence on boards in sending a signal to all stakeholders that their perspectives are important and their voices will be heard at the top.

The *2007 Catalyst Census of Women Board Directors of the FP500* similarly echoed that

> *…diversity of thought, perspective and experience on boards enhances the quality of dialogue around the board table, producing more opportunities for innovation and improving the overall quality of governance.*[45]

Also related to performance and corporate governance, two other studies demonstrated positive correlations between female representation on boards of directors of Fortune 500 companies and a company's appearance on the "100 Best Companies to Work For" list and on the "World's Most Ethical Companies" list.[46,47]

> *Success in the new economy depends on new styles of management – those same styles that create workplace cultures attractive to women. And, many of the behaviours in the new styles are traditionally associated with women.*[27]
> *The Conference Board of Canada*

Increased National Growth Index

The benefits of women's increased participation in the SETT workforce extend beyond the institutional level to national competitiveness in the global economy. A 2005 landmark study by the World Economic Forum measured the gender gap in 58 countries incorporating data on women's participation and opportunities in the economy, educational attainment, political empowerment and health.[48] Their report noted a correlation between this gender gap index with indices of growth competitiveness and gross domestic product, indicating a link between women's success and a nation's long-term growth opportunity. The authors concluded that "countries that do not capitalize on the full potential of one half of their societies are…compromising their competitive potential".

Another study by the Organization of Economic Co-Operation and Development also linked gender equality (as measured by birth rate and attitudes toward gender roles) with economic development, noting that attitudinal and institutional change will affect labour supply and its effective utilization and help determine long-term national economic growth.[49]

Next Steps

The Canadian Coalition of Women in Engineering, Science, Trades and Technology (CCWESTT) and the Canadian Centre for Women in Science, Engineering, Trades and Technology (WinSETT Centre) are leaders in taking action to increase gender diversity in organizations.

Established in 1987, CCWESTT, a coalition of member organizations from coast-to-coast-to-coast, has a strong history of national and regional projects and partnerships.

From 2003-08, CCWESTT led a significant national initiative - *Women in SETT (Science, Engineering, Trades and Technology)* - to engage organizations and influence policy to increase women's participation, retention, and leadership in science, engineering, trades and technology throughout Canada.

Regional Consultations held across Canada and National Forums and Roundtables held were attended by experienced representatives from industry, government, small and medium sized enterprises, universities, colleges, professional associations, the labour movement, and non-governmental community organizations. These invited stakeholders reviewed issues and effective practices, identified priorities, highlighted regional issues, and developed recommendations.

Participants in all meetings agreed on the benefits of increased diversity in the workplace, the important resource that women in SETT careers offer to strengthen Canada's innovation and research capacity, and on the need to increase the numbers of women in SETT as a way to address skills shortages in building Canada's 21st century economy.[50]

In 2006-08, the WinSETT Initiative developed and presented the compelling business case and other critical information to decision makers in government, business, sector councils, academia, and other organizations, and delivered pilot services, tools and data to employers to strengthen the recruitment and retention of women in SETT fields.[51]

In 2009, CCWESTT established the Canadian Centre for Women in Science, Engineering, Trades and Technology (WinSETT Centre) as a separate nationally incorporated non-profit organization. The Centre is a catalyst for the increased recruitment, retention, advancement and leadership of women in SETT fields. The Centre achieves its mission by developing and disseminating through collaboration and partnerships, the tools and expertise useful to industry, government, educational institutions, and women in SETT organizations. The Centre:

- Collects best practices for the recruitment, retention and promotion of women in SETT.
- Develops and delivers the Women in SETT Leadership Program to increase the desire of women to assume leadership in SETT fields and to provide them with tools to succeed.
- Delivers services and resources to employers to create respectful and inclusive workplaces.
- Runs selected career awareness activities particularly for Aboriginal and immigrant girls and women to increase the pool of these women in SETT.
- Gathers statistics and track trends.
- Monitors the success of its initiatives.
- Communicates and promotes programs, resources and successes.

References

1. Carty, A. J. (2004). Opening Remarks: Spotlight on Women in Science, Technology and Trades. Nov. 4, 2004. 11 pp.

2. Advisory Council on Science and Technology (2000). Stepping Up - Skills and Opportunities in the Knowledge Economy. 78 pp. http://acst-ccst.gc.ca

3. Information and Communications Technology Council (2015). Labour Market Outlook 2015-2019. 75 pp. http://www.digcompass.ca/wp-content/uploads/2015/07/Labour-Market-Outlook-2015-2019-FINAL.pdf

4. Engineers Canada (2015). Engineering Labour Market in Canada - Projections to 2025. 196 pp. https://www.engineerscanada.ca/sites/default/files/Labour-Market-2015-e.pdf

5. Buildforce Canada (2016). Construction and Maintenance Looking Forward 2016-2025: National Summary. 9 pp. https://www.constructionforecasts.ca/sites/forecast/files/highlights/2016/2016_National_Summary_Constr_Maint_Looking_Forward.pdf

6. PetroLMI/Enform (2016). Labour Market Outlook 2016 to 2020 for Canada's Oil and Gas Industry. 62 pp. http://www.careersinoilandgas.com/media/243771/canada-wide-labour-market-outlook-final.pdf

7. Statistics Canada (2015). Registered Apprenticeship Training Programs 2013. Tables 477-0053,4. http://www5.statcan.gc.ca/cansim/a26?id=4770054&

8. Statistics Canada. 2011 National Household Survey. Catalogue Number 99-012-X2011033

9. Statistics Canada (2015). Population by sex and age group. http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/demo10a-eng.htm

10. Statistics Canada. Canadian Census 2006: Aboriginal Population Profile http://www12.statcan.ca/census-recensement/2006/dp-pd/prof/92-594/details/Page.cfm?Lang=E&Geo1=PR&Code1=01&Geo2=PR&Code2=01&Data=Count&SearchText=Canada&SearchType=Begins&SearchPR=01&B1=All&Custom=

11. Construction Sector Council (2004). Future Labour Supplies for Canada's Construction Industry. 40 pp. http://www.csc-ca.org/pdf/LMI_Future_E.pdf

12. Slonim, J., Scully, S. & McAllister, M. (2008). Outlook on Enrolments in Computer Science in Canadian Universities. 56 pp. Information and Communications Technology Council. http://www.ictc-ctic.ca/uploadedFiles/Labour_Market_Intelligence/Outlook_on_enrolments.pdf

13. Canadian Association of University Teachers (2015). Almanac of Post-Secondary Education 2011-2012. 56 pp. http://www.caut.ca/resources/almanac (Data derived from Statistics Canada sources)

14. Engineers Canada (2016). Canadian Engineers for Tomorrow – Trends in Engineering Enrolment and Degrees Awarded 2010 to 2014. 63 pp. https://www.engineerscanada.ca/sites/default/files/EnrolmentReport2014-e-r2.pdf

15. Catalyst (2005). Beyond a Reasonable Doubt: Building the Business Case for Flexibility. 45 pp. http://www.catalystwomen.org/bookstore/files/full/Flex%20in%20Canadian%20Law%20full%20report.pdf

16. Orser, B. (2000). Creating High - Performance Organizations: Leveraging Women's Leadership. The Conference Board of Canada. 31 pp. http://www.conferenceboard.ca/

17. Catalyst (2002). Making Change: Creating a Business Case for Diversity. 18 pp. http://www.catalystwomen.org/

18. Brown, D. A. A., Brown, D.L. & Anastasopoulos, V. (2002). Women on Boards: Not Just the Right Thing ... But the "Bright" Thing. The Conference Board of Canada. 17 pp. http://www.conferenceboard.ca/

19. Society for Human Resource Management (2005). What is the "Business Case" for Diversity? 3 pp. http://www.shrm.org/diversity/businesscase.asp

20. Thomas, D. A. & Ely, R. (1996). Making differences matter: A new paradigm for managing diversity. Harvard Business Review Sept.-Oct Issue: 79-90.

21. Woolley, A., Malone, T. & Berinato, (2011). What Makes a Team Smarter? More Women. Harvard Business Review, 89 (6): 32-33 June 2011. http://hbr.org/2011/06/defend-your-research-what-makes-a-team-smarter-more-women/ar/1

22. Ticoll, D. (2005). Canada's Information Technology Labour Market 2005: Issues and Options. Software Human Resource Council. June 2005. 14 pp. http://www.shrc.ca/lmi/expert_panel/pdf/05_286_IssuesOptions_e.pdf

23. Husky Energy (2003). White Rose Project Diversity Plan. October 2003. 32 pp.

24. Catalyst (2005). 2005 Catalyst Award Winner: Bridging Cultures, Leveraging Differences Initiative of the Georgia-Pacific Corporation. http://www.catalystwomen.org/award/files/2005/kit/Georgia%20Pacific%20description.pdf

25. Ancona, D. G. & Caldwell, D.F. (1992). Demography and Design Predictors of New Product Team Productivity. Organization Science 3, 321-341.

26. McLean, D. (2003). Workplaces that Work - Creating a Workplace Culture that Attracts, Retains and Promotes Women. Centre of Excellence for Women's Advancement, report for Federal/Provincial/Territorial Ministers Responsible for the Status of Women. 20 pp. http://www.gov.on.ca/citizenship/owd/english/about/fpt-workplaces.pdf

27. Telfer School of Management (2011) Action Strategies to Support Canadian Women-owned Enterprises. Data from Industry Canada, Statistics Canada. http://sites.telfer.uottawa.ca/womensenterprise/

28. Statistics Canada (2016). Self-Employment, Historical Survey. http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/labor64-eng.htm

29. Thomas, D. A. (2004). Diversity as Strategy. Harvard Business Review. September 2004,10 pp.

30. Council of Science and Technology Advisors (2002). EDGE - Employees Driving Government Excellence: Renewing S&T Human Resources in the Federal Public Service. November 2002. 22 pp. http://www.csta-cest.ca

31. Hewlett, S. A. & Luce, C.B. (2005). Off-Ramps and On-Ramps: Keeping Talented Women on the Road to Success. Harvard Business Review March 2005, 11 pp.

32. Hewlett, S. A., Luce, C.B., Servon, L.J., Sherbin, L., Shiller, P., Sosnovich, E., and Sumberg. K. (2008). The Athena Factor: Reversing the Brain Drain in Science, Engineering and Technology. Harvard Business Review, 112 pp.

33. Holmgren, J. L. & Basch, L. (2005). Encouragement, Not Gender, Key to Success in Science. Carnegie Perspectives Feb. 2005, 3 pp. http://www.carnegiefoundation.org/perspectives/perspectives2005.Feb.htm.

34. BBC News (2005). Women Experts Urged Back to Labs. May 11, 2005. http://news.bbc.co.uk/go/pr/fr/-/2/hi/science/nature/4534177.stm

35. Government of Canada (1995). Canada Employment Equity Act. http://laws.justice.gc.ca/en/E-5.401/

36. Government of Newfoundland and Labrador (2007). Energy Plan - Focusing Our Energy. 93 pp. http://www.nr.gov.nl.ca/nr/energy/plan/pdf/energy_report.pdf

37. Women in Resource Development Committee (2005). At a Snail's Pace: The Presence of Women in Trades, Technology and Operations in Newfoundland and Labrador. April, 2005. 54 pp. http://www.wrdc.nf.ca/pdf/SnailsPaceReport.pdf

38. Catalyst (2004). The Bottom Line: Connecting Corporate Performance and Gender Diversity. 34 pp. http://www.catalystwomen.org/bookstore/files/full/financialperformancereport.pdf

39. Catalyst (2007). The Bottom Line: Corporate Performance and Women's Representation on Boards. 2 pp. http://www.catalyst.org/file/139/bottom%20line%202.pdf

40. Catalyst (2011). The Bottom Line: Corporate Performance and Women's Representation on Boards (2004–2008). 3 pp. http://www.catalyst.org/file/445/the_bottom_line_corporate_performance_and_women's_representation_on_boards_(2004-2008).pdf

41. Adler, R. D. (1999). Women in the Executive Suite Correlate to High Profits. For European Project on Equal Pay. 8 pp. http://www.women2top.net/download/home/adler_web.pdf#search='Roy%20Adler%20Women%20in%20Executive%20Suite'

42. Vinnicombe, S. & Singh, V. (2003). Summary of the 2003 Female FTSE Index. 7 pp. http://www.womenandequalityunit.gov.uk/publications/FTSE_report_2003_summary.doc

43. NUTEK (1999). Gender and Profit. NUTEK, the Swedish Business Development Agency. 9 pp. http://www.equalpay.nu/docs/en/genderandprofit.pdf

44. Wanamaker, T. (2003). Is There Really a Glass Ceiling Over Women's Heads? In: The Business Record, April 1, 2003. 4 pp. Adler quoted in article. http://www.thebusinessrecord.com/articles/2003/04/01/news_reports/on_women_in_business/tx03frontwoglasceiling.prt

45. Catalyst (2008). 2007 Catalyst Census of Women Board Directors of the FP500: Voices from the Boardroom. 48 pp.

46. Bernardi, R.A., Bosco, S.M., & Vassill, K.M. (2006). Does Female Representation on Boards of Directors Associate With Fortune's "100 Best Companies to Work For" List? Business & Society 45(2): 235-248.

47. Bernardi, R.A., Bosco, S.M., & Columb., V.L. (2009). Does Female Representation on Boards of Directors Associate with the 'Most Ethical Companies' List? Corporate Reputation Review 12(3): 270-280.

48. Lopez-Claros, A. & Zahidi, S. (2005). Women's Empowerment: Measuring the Global Gender Gap. World Economic Forum & Harvard Business Review. 23 pp. https://members.weforum.org/pdf/Global_Competitiveness_Reports/Reports/gender_gap.pdf

49. Mörtvik, R. & Spånt, R. (2005). Does Gender Equality Spur Growth? OECD Observer, October, 2005. 3 pp. http://www.oecdobserver.org/news/fullstory.php/aid/1664/Does_gender_equality_spur_growth_.html

50. Canadian Coalition of Women in Engineering, Science, Trades and Technology (2004). Women in SETT: Human Resources to Build Canada's Economy. Briefing Paper for "Spotlight on Canada', 4th National Roundtable on Women in Science, Technology & Trades. Ottawa, November 4, 2004. 10 pp. http://www.ccwestt.org/WinSETT/tabid/56/Default.aspx

51. Canadian Coalition of Women in Engineering, Science, Trades and Technology (2008). Women in SETT (Science, Engineering, Trades and Technology) - Providing Resources for Industry and Post-Secondary Institutions. CCWESTT National Conference, Guelph ON, May 31, 2008. 4 pp. http://www.ccwestt.org