



HIGHLIGHTS

- An aging population will place greater pressure on firms to attract and retain high-potential women to fill skill shortages
- But, the Canadian workplace may be experiencing a topping out of female participation among the core working age group (25-44) – the feeder pool into higher level positions
- The unexplained portion of the gender gap appears to largely capture a ‘motherhood gap’
- Skills atrophy plays a smaller role in the motherhood gap than first thought
- The length of absence is generally found to be less damaging than the frequency of absences
- Women incur far less financial penalty the more experience they build before exiting, irrespective of the length of time they ultimately remain out of the workforce
- Returning to the same employer also reduces the wage penalty
- Firms should self-explore whether the non-linear career path of mothers is penalized as a negative signal of labour force attachment or ambition

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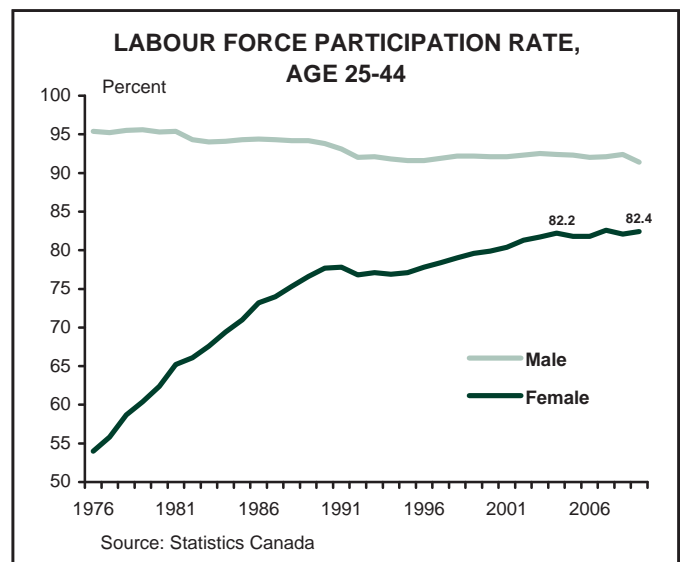
CAREER INTERRUPTED

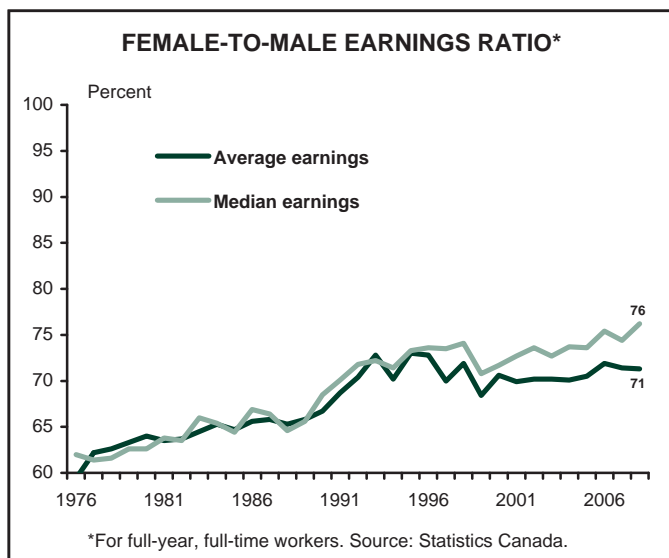
The Economic Impact of Motherhood

Three years ago we wrote a paper entitled *Markets are a Woman’s Best Friend*, which noted that market forces related to an aging population and increasingly knowledge-based economy in Canada will place greater pressure on firms to attract and retain employees.¹ Given that women are exceeding men in university enrollment and clustering in service-oriented sectors, they are prime candidates for filling the skill shortages that will emerge. In turn, this should help place women on more equal footing with men in reducing the ‘explained’ portion of the gender wage gap that relates to education, experience, age, occupation, and other observable factors. So while the total observed gender wage gap is roughly on the order of 20%, about half of that is attributable to these standard factors that drive wages. What is less clear is whether these forces will help reduce the other half, or ‘unexplained’ gender wage gap, which estimates place at 5-15%.²

The emerging war on talent does present some unique challenges to employers. A rapid rise in Canadian female participation rates in the job market first came about through educational advancement, experience, and occupational shifts – all key determinants of earnings. Legislation on equal pay and equal opportunity also helped push things along. However, advances in the female participation rate for the core working age group (25-44) have stalled in the past five years, and it appears so too has further narrowing of the gender gap. As labour force growth grinds to a near halt in the years to come, advancement on either of these fronts is not guaranteed by simple expansions of existing corporate and government policies that were initially meant to break down the obvious gender barriers. In other words, the low hanging fruit has already been picked.

This is where nuances within the statistics can bear some relevance, and understanding them can provide firms with a competitive hiring edge. First, the ‘unexplained’ portion of the gender gap is largely reflecting a ‘motherhood gap’, as women without children tend to have their wages closely aligned with their male counterparts for a given level of experience and education. Second, within the motherhood gap, wage penalties appear to be steeper the more often a woman enters and exits the job market (i.e. in relation to having children), relative to the





length of time they are absent or the skills atrophy during this period of adjustment. Firms typically use the frequency of entry and exit in the labour force as a signal of attachment or commitment, and many women fall into this trap due to the greater likelihood of having a non-linear career path related to childcare. Lastly, the responsiveness of women to classic job incentives like wages and taxes has greatly diminished over the years. A firm can enhance their odds of attracting and retaining high-potential female employees if they are presented with greater on-the-job responsibility.

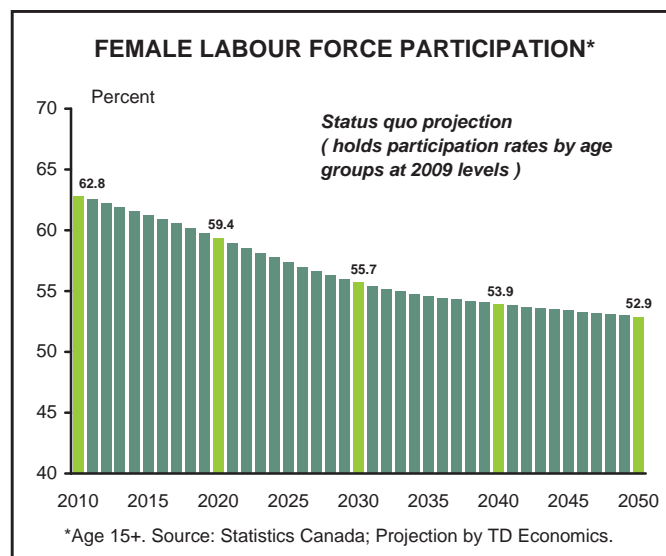
Life stages dictate labour force attachment

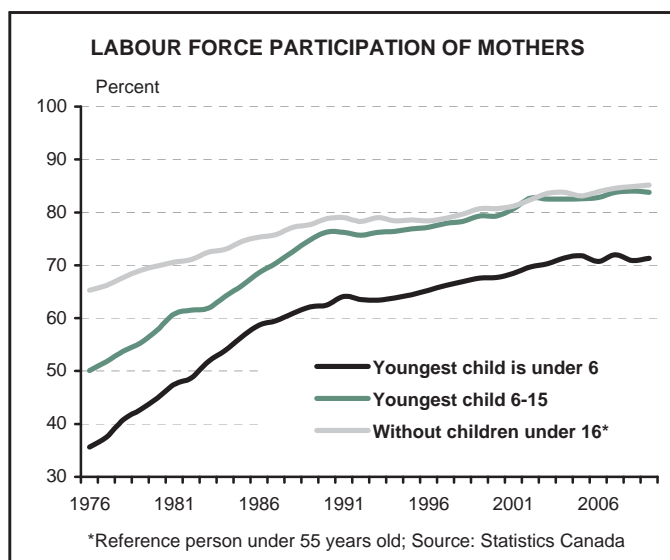
Before we can discuss the dimensions of the motherhood wage gap, we must first understand why it makes good business and economic sense to attract and retain women, particularly mothers, in the job market. It is well understood by now that a looming labour force crunch under an aging population will leave Canadian firms with a more shallow pool from which to draw talented workers in the coming decades. This will have knock-on effects to the broader economy, resulting in a lower rate of trend growth in economic activity and incomes, unless there is some powerful offset from productivity growth – which seems unlikely, given Canada’s exceptionally weak track record. Thus, with the demographic factor at play, we estimate that the labour force participation rate over the next 20 years could fall by roughly 7 percentage points. This does not seem like much on the surface, but it equates to a near stagnant labour pool. These projections assume that the participation rates among various age groups remain unchanged. However, as the single largest population segment that is under-represented in the labour force, women yield the highest potential to make an immediate difference in national labour force

participation. From the current female working-age population of 11.5 million, increasing participation by a single percentage point would translate into an additional 115,000 women in the workforce. Bringing the female participation rate up to the male equivalent – closing a 7 percentage point gap – would boost the labour force by 805,000 people.

Digging a little deeper, the strongest upward movement in participation rates over the past two decades has been among women aged 45 years or more. It is this age group whose participation shows the greatest potential to converge to that of their male counterparts. Successive cohorts of older women have shown progressively stronger labour force attachment due to their decision to have fewer children or postpone that decision to a later age in life. This, in turn, has facilitated achieving higher levels of education and the associated financial and professional rewards in the marketplace that come with it. However, even if participation rates in this age cohort were to fully converge with the equivalent male rate, this would only offset about half of the projected decline in aggregate participation. More relevant and disconcerting is the core working age group – 25 to 44 year olds – for which participation has flat-lined in the past 5-7 years, raising the prospect that this ratio has effectively ‘topped out’. The ages 25 to 44 are crucial in career building, marked by the period when skills, knowledge and professional contacts are acquired. This pool of women will subsequently feed into and support higher participation rates of older workers, who in turn have amassed the experience to take on high-impact positions within firms, such as senior executives, partners, corporate board members, and so on.

However, it is no easy task to bump up female participation rates, especially considering that a number of countries, such as the U.S., U.K., most of Western Europe and





Scandinavia, appear to be experiencing the same ‘topping out’ phenomenon. There is good reason for this considering that the core working group is confronted with the push and pull of being in their prime years for the development of work skills and experience, but also in the prime years when family (i.e. children) responsibilities are greatest. The participation rate for Canadian mothers with children under 6 years old is only 71%, which is 12.5 percentage points below the participation rate of mothers with school-aged (6-15) children. Notably, since the late 1990s, the latter has converged to that of women of working age with no children under the age of 16. This highlights the importance of recognizing the interrupted or non-linear career path of mothers with young children, and the opportunity available to corporations to pull back high-potential women into their workplace.

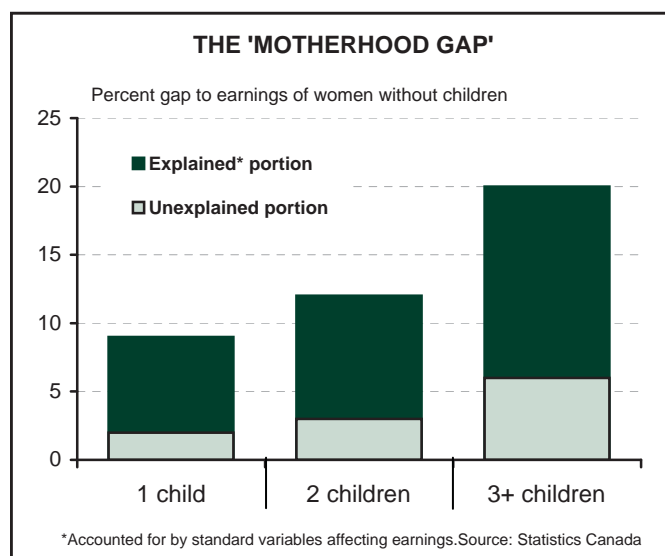
Some of the flattening in the participation rate for those aged 25 to 44 may not be entirely voluntary. Survey evidence suggests that a number of women are absent from the labour market because they cannot afford childcare. Extended, multiple-year leaves can cause women to disconnect from the labour market, making re-entry extremely difficult. One-third of Canadian women aged 25 to 44 who were absent from the labour force in 2005 cited family responsibilities as a key contributing factor in their absence. This finding, coupled with an OECD study that noted that female participation remains dissuaded by the lack of flexibility of working arrangements, does suggest there could be scope for corporate and government initiatives to raise the participation rates of this crucial age cohort, by allowing work-life challenges to be bridged.³

Getting to the heart of the gender wage gap

In a perfect world, some policy could be put in place to bridge the work-life challenges across all firms, and every mother who wanted to work could do so. But that’s just never going to happen. There is too much variance in preferences and needs between employees and employers, such that perfect matches between the two are unrealistic. However, improvements can always be made to the status quo, and this is an obvious place to investigate what barriers may exist in promoting greater participation among women – especially those in their prime childbearing and skill-accumulation years.

We start with the notion that women, specifically mothers, tend to have non-linear career paths. This means that they will exit and re-enter the job market with greater frequency than non-mothers and their male counterparts. This non-linear path comes at a financial cost. Studies on wage differences by gender have found that roughly half of an observed 20 percent gender gap cannot be explained by the usual factors that drive wages, such as: experience, hours worked, occupation, industry, age and the like. However, we believe that much of this ‘unexplained’ portion of the gap isn’t just a ‘gender’ gap between men and women. Rather, it is likely largely attributed to a ‘motherhood gap’, which is a gap specifically wedged within the female group between mothers and non-mothers.

Research shows that women that have never been married and/or are not mothers tend to have less conflicts in their career development, such that their wage gap with men is relatively small. The same holds for men and women at younger ages (18-24), when they are new entrants to the job



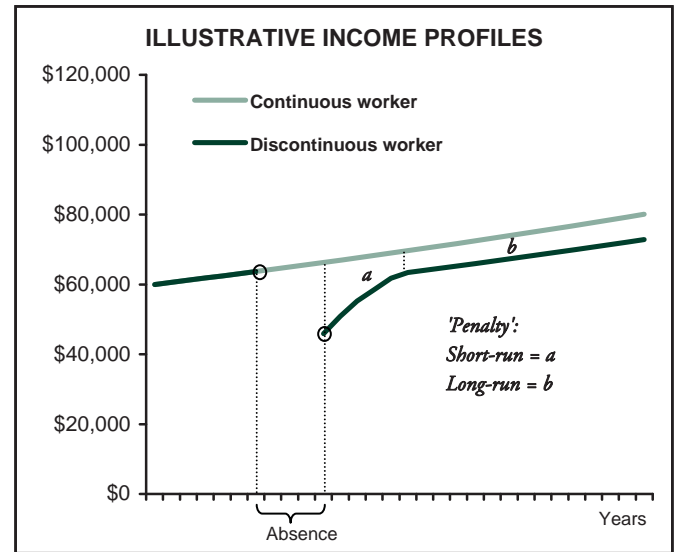
market with similar skills, experience and education. The observed wage gap starts to widen noticeably as women enter the 25-34 age bracket, and then further in the 35-44 age bracket. This lends itself to the conclusion that the gender gap is actually more representative of a motherhood wage gap. And, in fact, research does indicate that the more children a woman has, the wider the ‘unexplained’ gap becomes with each additional child. Remember, the ‘unexplained’ part of the gap is not related to less experience due to time off for maternity leaves, or differences in age, education, occupational choice or other such evident factors.

Peeling the motherhood gap – Discontinuity Matters

While mothers with childcare responsibilities are most prone to extended absences from the labour force, absences do occur across the broader population for any number of reasons, including: layoffs, ill health, care of elderly parents etc. Regardless of the cause for the absence, when a person returns to the workplace, that period of non-participation has been estimated to result in an unexplained wage loss of 3-9% per year of absence relative to the person with continuous employment.^{4, 5} This effect typically persists for 3 to 5 years. Beyond that period, the wage penalty starts to dissipate, with a lingering penalty amounting to 2% per year of absence. Specific to our interest, absences related to childcare were found to generate a persistent 3% wage penalty per year of absence. While this may appear to be pocket change, it is not. As an example, let’s take a woman today with \$60,000 in after-tax income, who works continuously for another six years – upon which her real (inflation-adjusted) earnings are assumed to have grown by 1% per year to nearly \$64,000. Then suppose she takes a single three-year stint out of the labour force before returning and working another continuous 20 years. According to the estimates presented above, and assuming a 55% income replacement ratio in the first year of a child-related absence, this woman would incur a cumulative earnings penalty of over \$325,000 in today’s dollars.

There are a number of studies that attempted to get to the heart of this unexplained portion of the wage gap for women, and mothers in particular. Much of the research explores the wage impact that might be related to factors within the absence spells: like frequency, duration, and interlude since last spell. These go beyond simply accounting for observed factors like education, occupation, experience and age.

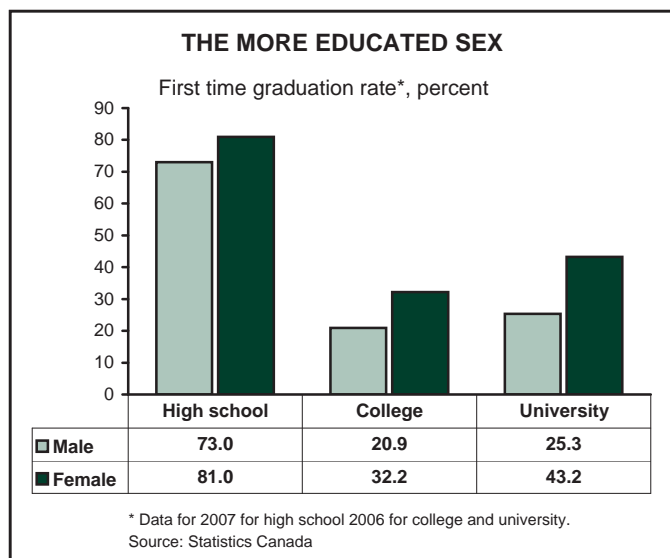
One key study conducted by the Federal Reserve Bank of Atlanta found that the wage gap is about three times larger for those women with three or more spells of absence



relative to those with an average spell length of six years or longer.⁶ Clearly the message was that a high frequency of spells generates a noticeably larger penalty than long duration. This leads us to believe that skills atrophy plays a smaller role in the motherhood gap than first thought, and that employers perceive intermittent behaviour as a signal of labour force attachment. In relation to both of these, however, there is an interesting finding from other research that during average leaves of nearly 2 years, women incur a much smaller wage penalty when returning to the same employer than those who seek employment elsewhere. This is in large part because they are able to at least partially preserve their employer-specific skills and restore a previously valuable match between employer and employee.

Peeling another layer off the onion reveals yet another dimension to the wage penalty. The timing of having and caring for children can also greatly minimize the wage gap. The early post-graduation work years are an intense phase of experience accumulation and wage growth. The bulk of one’s skills are acquired early in life, which generally coincides with the timing of decisions pertaining to marital and parental status. After controlling for the usual factors that drive wages, a Statistics Canada report found that women who delayed childbirth earned a 6% premium compared to those who had children earlier in life.⁷

Putting it all together, the unobserved or unexplained portion of the motherhood wage gap is far more multi-dimensional than at first blush, and we didn’t even cover an exhaustive list of possibilities. The length of absence is generally found to be less damaging than having many absences, even if they are relatively short. And, even within these absences, it matters whether a person returns



to the same employer and at what age these exits and entries occur. From an employer perspective, a frequent ‘stop and go’ profile serves as a strong signal of weak labour force attachment. From an employee standpoint, it can prevent the building up of a ‘critical mass’ of experience for the individual in general, and with a specific employer in particular. When compared to the less irregular career profiles of men and non-mothers, this can be easily seen to result in a much flatter income-age profile for mothers.

Many women have already picked up on these nuances, and are heeding the call of higher education and establishing a distinguishable footprint in the labour market before exiting, if or when they chose to do so. As the next section emphasizes, employers can also play a crucial role in their quest to attract and retain valuable employees, by incorporating and developing a flexible, longer-term view of careers.

It’s not always about the money

The responsiveness of married women to classic job incentives like wages has greatly diminished over the years. To be clear, work effort among women is still responsive to higher wages, but that sensitivity looks to have reduced over the decades. A study conducted in the U.S. by the National Bureau of Economic Research found that every 1% increase in wages elicited a 0.8-0.9% increase in labor supply of married women in 1980.⁸ In 1990, that relationship had eroded to 0.6% and by 2000 it was a mere 0.4%. The reduced sensitivity was observed across all educational levels. However, this is not a unique phenomenon, as men have an even lower wage-labour sensitivity ratio of less than 0.1%.

So, although market wages and tax policy incentives are

having less influence today than in the past in strengthening labour force attachment among women (and in this case, married women), it is still a larger influence than for men. This may be because male participation rates and hours worked are already higher than those of women, leaving less room to rise in response to wage incentives. In addition, in spite of a persistent motherhood or gender gap, the ‘explained’ portion has certainly narrowed over the decades, with female wages converging more closely to those of men. At this stage, finding work-life balance through wage incentives may be maxing out because the traditional division of labour in the household puts more pressure on women to substitute between market work, home responsibilities and leisure, while men are viewed as substituting primarily between market work and leisure. This topic was covered in our aforementioned TD Economics report in 2007, so we won’t delve into the details again here. However, the basic message is that the satisfaction derived from incrementally higher earnings bears less and less work-incentive over time when there is not a corresponding offset in home responsibilities, in which mothers in particular disproportionately take part – this is the economic notion of opportunity cost.

Indeed, this is why an ‘extreme-type’ job environment doesn’t work well for many women. A book entitled *Off-Ramps and On-Ramps* explores this notion through a survey of 1,564 men and women, aged 25-60 years who made up the top 6% of earners in the United States.⁹ An extreme job was characterized as one requiring 60 or more hours of work a week, and having at least 5 of the following characteristics:

1. unpredictable workflow
2. fast-paced under tight deadlines
3. inordinate scope of responsibility that amounts to more than one job
4. work-related events outside regular work hours
5. availability to clients 24/7
6. profit/loss responsibility
7. mentoring/recruiting responsibility
8. large amount of travel
9. large number of direct reports
10. physical presence at workplace at least 10 hours a day

The survey found that 21% of high-echelon workers have extreme jobs in the U.S., and within a separate survey of global companies, that ratio rose to 45%. Because of the strong spillover to private lives from extreme jobs, when the

strain proved too much, men were more likely to threaten to leave these jobs (yet often stayed), but women were more likely to actually quit. A large share of the negative responses from women was related to competing childcare responsibilities, and having the freedom to leave a job with a second source of income on the home front. This isn't to say that women shy away from responsibility or work demands, but they are more likely to react negatively to the opportunity cost of 'face time' in the office, if, on the margin, it involves less productive work.

To this point, the global survey detailed in the book found that only 18% of women held jobs with 60+ hours/week compared to 36% of men. The lowest female representation was in jobs that were 60+ hours/week and had low responsibility (10%), while the greatest representation of women was in jobs that carried high responsibility (23%). In contrast, men were somewhat more evenly distributed across job requirements, showing more tolerance for jobs with longer hours and less responsibility. While this survey is not overly scientific in its approach by any means, it does support the notion that it's not the responsibility that was a deterrent in extreme jobs for women, but rather the hours worked or rigidity of the work environment. With this in mind, part of the solution to enticing high-potential women into the workplace is centered on providing jobs that offer a sense of greater responsibility, in order for these women to want to make the trade-off with household responsibilities.

But, the full solution is not that simple. This may be a more effective strategy in attracting women to the workplace after extended leaves for childcare, under the presumption that those responsibilities have dissipated to a large degree. But for those mothers still juggling the two responsibilities simultaneously, the timing and level of responsibility is more difficult to ascertain in developing a career path. Another survey from the same source, consisting of 2,443 American women with an honors university or graduate degree, found that 16% declined promotions, while 38% deliberately chose a position with fewer responsibilities and lower compensation, in order to fulfill responsibilities at home.¹⁰ From the perspective of a corporation, these actions may be misconstrued as a signal of a lack of work commitment or ambition, when it's really a matter of timing, where increased home life responsibilities and/or the presence of young children make for a temporary career interruption or slower progression.

So whether from the point of view of attracting or retaining talented mothers in the workplace, the competitive edge will come from an ability to "re-engineer" jobs towards fur-

Average daily time* spent on primary child care by married persons aged 25 to 54 with children under 19 at home

	Men		Women	
	1986	2005	1986	2005
	Hours*			
All	0.6	1.0	1.4	2.0
1+ child under 5	1.0	1.6	2.6	3.4
All children 5-18	0.3	0.6	0.7	1.2
	Participation rate (%)			
All	38	52	67	72
1+ child under 5	57	73	92	94
All children 5-18	25	40	52	60

*Population-wide. Source: Statistics Canada, General Social Survey

ther work-life flexibility. This is particularly true for extreme jobs – which tend to be in more senior positions – as survey respondents indicated that the bigger dynamic behind these jobs was corporate culture, rather than economic pressures.

Conclusion

In light of the social and economic pressures from an aging Canadian labour force, women remain underrepresented relative to their male counterparts and form a highly educated and skilled labour pool from which firms can draw. This group should be given high priority among human resource strategists, especially considering that a mass of experienced baby boomer men in senior management are set to retire shortly. Avoiding a vacuum in key positions presents both a tremendous challenge and opportunity.

However, there are two worrisome trends in the data. First, the Canadian workplace may be experiencing a toping out of female participation among the core working age group (25-44), who are the feeder pool into higher level decision-making and management positions. Second, the gender wage gap is largely tied to motherhood, and women in this group appear to be incurring larger wage penalties unrelated to their skills, education, and experience. Evidence strongly suggests that labour force intermittency is the main, yet multidimensional, culprit. As men continue to gradually take up more family responsibilities (see table above) and as eldercare needs swell, they too may incur 'unexplained' wage penalties described herein.

From the vantage point of employees and employers, there are some broad lessons to be learned. From the em-



ployee perspective, women incur far less financial penalty the more experience they are able to build before temporarily exiting, irrespective of the length of time they ultimately remain out of the workforce. In addition, returning to the same employer lends itself to a lower wage penalty, as social networks and other firm-specific skills remain better preserved.

From the employer perspective, re-engineering jobs to provide flexible work options is a necessary step and one in which many companies are already incorporating into their cultural DNA. A winning formula for attraction and retention should also include the recognition that women

prefer positions of greater responsibilities, even when those positions bring with them longer hours. However, corporations should also self-explore whether a mother's non-linear career path is being penalized as a negative signal of labour force attachment or ambition. In the face of a looming skilled-labour force crunch and its equivalent 'war for talent' at the enterprise level, it may be at this margin of innovation where more mothers become empowered to participate in the workforce and improve their outcomes. In the process, they would help kick-start the stalled convergence to male labour market outcomes that their own mothers helped ignite.

Endnotes

- 1 Caranci, B. and D. Drummond, "Markets are a Woman's Best Friend", TD Economics, 2007, available at: http://www.td.com/economics/special/bc0907_woman.pdf
- 2 While estimates before 2001 are not available on the unexplained portion of the wage gap, it is highly unlikely to have receded in any meaningful way given that the earnings ratio has flatlined over the last decade (see chart page 2). Canadian estimates of the gap are provided in Drolet, M. "The Persistent Gap: New Evidence on the Canadian Gender Wage Gap", Statistics Canada Research Paper, Catalogue no. 11F0019MPE – No. 157, January 2001.
- 3 "Female Labour Force Participation: Past Trends and Main Determinants in OECD Countries", OECD Economics Department, May 2004.
- 4 Studies differ with regard to what types and length of absences they consider, but typically exclude relatively short leaves related to maternity and seasonal work, with most studies looking at withdrawals that last one year or longer.
- 5 Mincer, J. and H. Ofek. "Interrupted work careers: depreciation and restoration of human capital", *The Journal of Human Resources*, 1982, 17, 3-24.
- 6 Hotchkiss, J. L. and M. Pitts. "Female Labour Force Intermittency and Current Earnings: A Switching Regression Model with Unknown Sample Selection", Federal Reserve Bank of Atlanta, Working Paper 2003-33, December 2003.
- 7 Zhang, X. "Earnings of women with and without children", Statistics Canada, Perspectives on Labour and Income, Catalogue no. 75-001-X, March 2009, 5-13.
- 8 Blau, F. and L. Kahn. "Changes in the Labour Supply of Married Women: 1980-2000", National Bureau of Economic Research, Working Paper 11320, March 2005.
- 9 Hewlett, S. A. "Off-Ramps and On-Ramps: Keeping Talented Women on the Road to Success", Harvard Business School Press, 2007.
- 10 Ibid.

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