

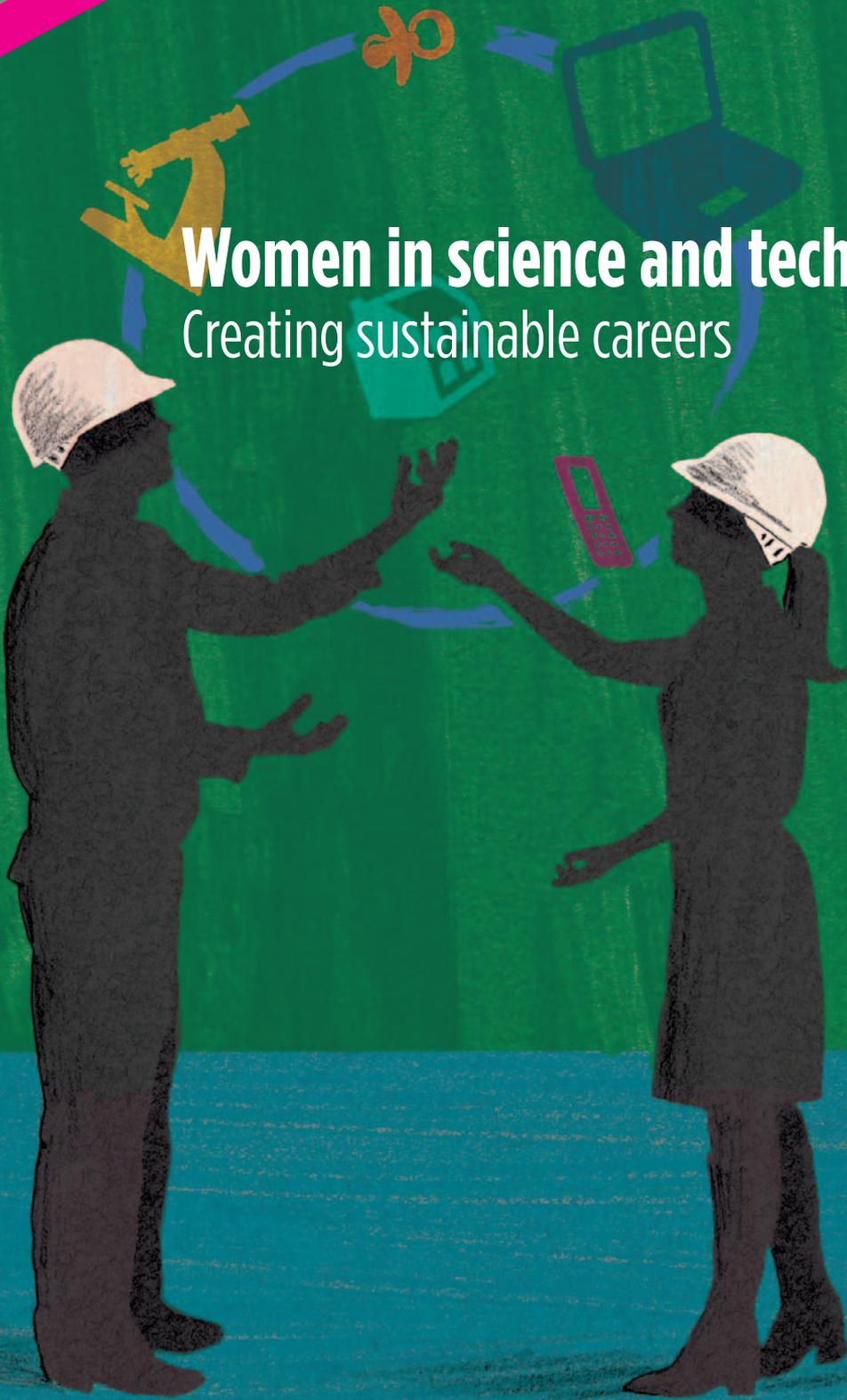


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REPORT

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Women in science and technology

Creating sustainable careers

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Foreword



A recession can be taken as an opportunity: a time to make changes in management practices. Managers must identify what has to be changed and then decide how to implement the changes.

This report provides an indication of possible changes: to attract and retain women – and men – in science and technology, an essential driver of our knowledge-based economy.

The Women in Science and Technology Group was created in 2003, and initially called the Women in Industrial Research Working Group. The change in the name indicates an enlargement of focus: academic institutions and research centres became part of the picture. And this extension corresponded to a real need: the leaky pipeline – the gradual loss of researchers over time – starts at the beginning of a scientific career, in the university lecture halls ...

As management experts underlined recently, recessions provoke two diametrically opposite reactions: to become very risk-averse, or to invest for a brighter future. Experience tells us that rolling back anything that looks like change will not help us to get out of a recession. These are times when companies – and other research institutions – must focus on essential investments for their future. They need to modernise their internal structures and corporate cultures. Modernising implies a new management style and it also includes having a gender-aware management.

To stop the leaky pipeline and to provide a favourable and well balanced working environment is one way to invest for a brighter future. Providing talented researchers, both women and men, with the right environment to develop their innovativeness and creativity, will be one of the motors driving the next stage of economic progress.


Janez Potočnik

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Introduction

Pierre Bismuth (1)

Eye Opener

I have now participated in several WIST rounds with leading companies and prestigious universities. Each session has increased my awareness as a Human Resources professional of gender issues in Science and Technology (S&T).

At the end of the last WIST session, we discussed our most serious concerns. Colloquially, we refer to them as the leaky pipe line (Figure 1) and the scissors (Figure 2). The so-called leaky pipe line describes the continuous exit of women from Science and Technology (S&T). The scissor image represents the different career tracks of men and women; a larger percentage of men than women reach the upper levels of academia and similarly for management. Unfortunately, they are accurate representations of gender diversity in S&T.

We all agreed at the end of the last WIST group that the status quo was unacceptable for S&T companies and universities. We know that women represent a competitive reservoir of talents, and that men and women share the same ambition to succeed in their professional and personal life. CEOs understand this, and therefore know that the status quo does not make business sense – it is a waste of efforts and motivation for all.

The obvious response is to improve – intelligently – the work life balance (“WLB”) for both men and women, in line with their needs and work requirements. During our work sessions, we had experts and company representatives collect data, develop concepts and methodologies, and propose conclusions. Together, we looked at the effectiveness of WLB policies in leading companies and universities.

The results are an eye opener.

Flexible time is one of the classic examples of a WLB policy. But what the Corporate Leadership Council extensive survey and the subsequent researches show, is that if S&T companies and universities do not manage the relationship between flexible time, workload and career, it is not going to work. If we

don't manage it, flexible time will become a negative factor for the career of those who use it – so far, mostly women. If we do not control workload, flexible time will not contribute to work life balance.

Our research also brings to light a more serious concern: the underlying culture in S&T companies and universities tends to marginalize those who use WLB policies. In other words, there is resistance to a healthy implementation of WLB policies. Ideally, these policies should address the needs of men and women at the time where personal life and work requirements conflict, typically when individuals start families. Too often it seems that we do not manage the transition into career breaks – or the transition back to work – with a sincere desire to protect the individual's career, or indeed the investment made by the company in that person's professional development. We are also concerned that WLB policies are not designed with the most promising, talented individuals in mind – the ones we want to keep. Instead, the high performers are encouraged to avoid these tracks. Again, business-wise, it does not make sense. WLB policies should be at the forefront of our efforts to retain our most talented employees.

Finally, we do have to keep working against the perception that S&T is a “man's world”. The research on the images promoted by companies on men and women at work in S&T shows how much – sometimes with good intentions – we feed the clichés and stereotypes. The tendency is to show men deciding and on top of operations and women part of the working environment.

It is about time that we, as Human Resources managers, observe and experiment more seriously before implementing changes. It is also time to stop linking WLB policies to women, as if men were born immune to personal problems, or were unable to participate in what Suzan Lewis calls the “family sphere”.

It is my sincere hope that all who read this report will be encouraged to treat work life balance policies as professionally as quality management or safety. It has become increasingly clear that the most competitive companies are the ones which can attract, motivate, and retain the best talents – globally. And the design and implementation of effective WLB policies will make the difference.

Figure 1

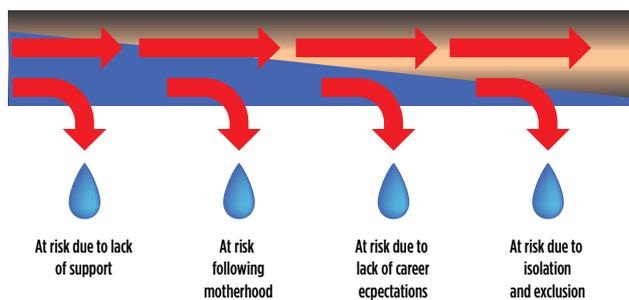
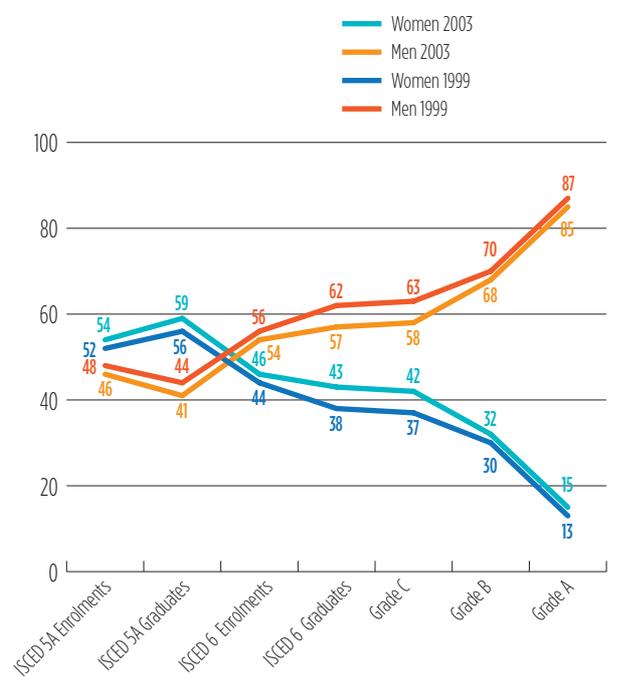


Figure 2 Proportions of men and women in a typical academic career, students and academic staff EU-25, 1999-2003



Source: Eurostat Education data; DG Research, WIS database seniority grades

Synthesis

Claartje Vinkenburg⁽¹⁾, Rapporteur

Introduction & objectives

Following a “Wake-Up call for European Industry” (EU DG Research, 2003), representatives from companies, experts from universities, and the EU DG Research joined forces in the working group Women in Science and Technology (WiST), in order to promote gender diversity in the field of science and technology. In 2006, the WiST working group presented its report entitled “Women in Science and Technology: a Business Perspective” (EU DG Research, 2006). Following the interest expressed by the participating companies, the European Commission decided to continue the WiST initiative for two more years. The WiST2 working group was thus established, giving more companies the opportunity to join the group, and at the same time expanding its scope to universities. Indeed, numerous studies including the report from the first WiST group showed that the “pipeline” for women in science and technology (S&T) starts to leak very early, in many cases before the professional career has even started. The collaboration with universities therefore is seen as crucial for increasing the potential of women in industrial research.

The objectives of the second WiST working group were:

- Reducing the leaky pipeline for women in science and technology;
- Building the business case for work-life balance.

To achieve these goals, the working group focused on the following issues:

- What can be done by universities and companies to reduce the leaky pipeline?
- Which policies and practices are effective in promoting gender diversity in science disciplines and in technical careers?
- Which policies and practices are effective in promoting work-life balance, especially for dual career couples?
- How do prevalent work-life practices relate to individual and organisational performance?
- How do work-life balance policies and practices affect the attraction and retention of talented employees?
- Is supporting employees’ work-life balance a smart business strategy?
- What are best practices for achieving work-life balance and addressing the leaky pipeline?

- What is the relationship between such best practices and workplace culture?

Finally, the working group aimed to develop recommendations for:

- Changing corporate culture to embed best practices for achieving work-life balance;
- Promoting and improving the implementation and utilization of best practices.

In order to achieve these objectives, seven international experts were invited to address one or more of the issues above, by inviting the participation of companies and universities from the WiST2 group for data collection. In this synthesis the outcomes of the experts’ research are discussed and integrated, thus shedding light on how to reduce the leaky pipeline and build the business case for work-life balance. Firstly, we give a brief description of the current situation. Secondly, we summarize the main findings from each of the experts’ research projects. Finally, we integrate these findings and look for overarching conclusions, in order to come up with practical implications, and to decide on next steps. For a brief overview of relevant recent scientific research on gender diversity, reducing the leaky pipeline, and building the business case for work-life balance in general as well as specifically for S&T companies and universities, refer to the final section of this report.

Current situation

In the report on “Women in Science and Technology: A Business Perspective” (EU DG Research, 2006), it was clearly established that despite the steadily growing number of women with a scientific or technical university degree in most European countries, women are still under represented in science and technology (S&T) professions, be it in companies or universities. Moreover, a disproportionate number of women are leaving S&T in each consecutive career stage, a phenomenon that has often been described as a “leaky pipeline”. While data are still being analyzed, the numbers soon to be reported in She Figures 2009 (forthcoming, EU DG Research) paint a picture

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that does not show a large change since the 2006 WiST report. In addition to the leaky pipeline, the glass ceiling metaphor used to explain the absence of women at higher organisational levels has been effectively replaced by that of the labyrinth (Eagly & Carli, 2007), in showing how women in organisational careers encounter many obstacles along the way, not simply one transparent barrier right before the top.

Since 2006, there has been a significant increase in the attention in the media and public opinion about the lack of gender diversity in higher positions in the private and public sectors as well as academia across Europe. The Norwegian quota legislation requiring 40% women on all boards became effective on January 1 2008 and has been widely discussed. Furthermore, two McKinsey reports entitled "Women Matter" (2007; 2008) have had a significant impact, adding to the growing body of evidence that gender diversity is positively related to organisational financial performance and innovation. Beyond financial gains, it is becoming increasingly evident that promoting the labour force participation and careers of women is essential for sustainable economic growth in the light of an ageing population. In fact, a comparative study across Europe show that increased labour force participation of women does not hurt fertility rates: in countries where women work most, they also have more children (Daly, 2007).

As women (still) have the larger part in care responsibilities (United Nations, 2008), even in dual career couples, for many working women the utilization of work-life policies and arrangements offered by their employer is a means to effectively combine work and care. While many employers increasingly offer such policies, we do not really know how such initiatives relate to business performance (Kelly et al., 2008), or how the utilization of such arrangements affects individual career and family outcomes (van Engen, Vinkenbug, & Dikkers, 2009). Unfortunately, only limited knowledge exists about the impact of offering such policies on employee attraction and retention (Towers Perrin, 2006).

Finally, the current global financial crisis is bound to have an impact on the discussion about gender diversity and work-life balance, and may even result in pushing these issues off the strategic agenda. However, in some organisations, responding to the crisis may in fact present an opportunity to implement sustainable solutions that take into account irreversible demographic developments beyond short term gains. This report aims to shed light on the current state of the art in gender diversity and work-life balance in S&T in Europe, by combining expert views, empirical evidence, and best practices, which we hope will support sustainable solutions for combining career and care.

Summaries of expert reports

In this section we provide a short summary of each of the experts' reports of the research they carried out within the WiST2 framework. Many of the organisations participating in

WiST2, slowly but surely, provided access to employee samples for data collection, as well as other sources including performance information and communication materials. For more details on the theoretical framework, please see the relevant section of this report. We believe the experts' reports represent an intriguing, multi-method, multidisciplinary, cross-culturally comparative collection of insights into the working lives of women (and men) in S&T. We anticipate that S&T companies will be able to use these findings to help identify and challenge the "leaky pipeline" within their own organisations and to commit to building a business case for work-life balance. In short – this report aims to support the achievement of sustainability in combining career and care.

The first expert report is from the Corporate Leadership Council, presented by **Warren Howlett**. Their survey study of a large scale, pan-European sample of S&T employees and HR representatives builds the so-called Employer Value Proposition (EVP). Work-life balance clearly is increasingly important for attracting and retaining employees. Interestingly, gender has a much smaller influence on the perceived importance of work-life balance practices than other factors such as geography or function. Further analyses show which work-life balance practices are specifically important to women in S&T compared to men and women in general, as well as differences between parents and non-parents. *Flexible work schedules together with an appropriate workload tend to play a key role in determining employees' attraction and commitment.* Next to clear guidelines and employee control, peer utilization is very important as it signals that the available work-life balance practices are not just "window dressing" but that utilization is in fact possible. The CLC findings highlight how employers can make sure that employees' awareness and consumption of their preferred work-life balance practices increases, in order to prevent turnover as well as becoming more attractive as an employer.

Laure Turner has investigated the business case of work-life balance, by matching CLC survey data on work-life balance practices to individual and project team performance data. The data suggest two underlying dimensions – the degree of work-life conflict, and the degree to which work-life balance is perceived as important. Groups of employees are found in each quadrant of the resulting 2 x 2 model, with high performers over-represented in the work-life balance conflict / not important group (which may mean that they have decided or were forced to focus on performance and income at the cost of balance), and high potentials mainly in the conflict/important and thus "frustrated" group. HR and line managers should try to *prevent "frustrated" high potentials from dropping out, and "unbalanced" high performers from burning out.* Furthermore, HR may need to screen the performance review system, as it may (implicitly) penalize those who use work-life practices to achieve balance.

Suzan Lewis has studied the integration of professional and personal life among employees (women and men) from research and development departments. A dual agenda lens sheds light

on the complexities involved in achieving gender equity as well as workplace efficiency. The interview data are clustered around themes such as flexibility and availability, assumptions about mothers and fathers compared to non-parents with respect to these themes, and consequences for daily interactions and careers following from these assumptions. By addressing these underlying, often “gendered” assumptions and their consequences, systemic change can be facilitated and experimental interventions can be designed to promote the further integration of work and home, as well enhance performance. Suzan Lewis provides suggestions based on her findings for implementing change and improving efficiency, such as **reducing the length of meetings and moving meetings to an earlier hour, from which everyone, not only parents, will benefit.**

Clem Herman has conducted interviews on women's experiences with career breaks (mainly for maternity leave) and their consequences for careers. The why, how, and especially the (short and long term) career effects of taking this break are discussed in detail with these women. There is still an unwritten assumption within many company cultures that taking maternity leave or a career break is a deviation from the traditional (male) model of continuous full time employment – this stereotype is deeply rooted even though it does not reflect the reality of S&T workforces any more. Following their career break or maternity leave, many women perceive that they need to sacrifice career potential and progression in order to reconcile working and family life. This is usually expressed as a personal choice rather than seen as an external or systemic problem. Managing maternity leave is generally well organised – however the experience of returning often depends on the type of work being done and timing of the break. Keeping in touch during the break is one strategy used to help ease the return process, but not universal. **Work life balance policies (including parental leave, flexible working and reduced working hours) can have the unintended consequence of reinforcing gender stereotyping within the workplace if it is only mothers/female carers who make use of these and not fathers or male carers.** However the availability of remote working seems to be popular and beneficial for working parents. Similarly a workplace nursery gives a symbolic message of support for parents of both genders within the company. Using this information described by Clem Herman, companies will be able to improve the retention and advancement of those women who plan to go on, are on, or have taken career breaks.

Sara Connolly & Stefan Fuchs addressed the question whether current career structures allow universities to attract and to retain their best talents. To answer the question of how prevalent working arrangements influence gender diversity and which of the measures that aim to address work-life imbalance are most successful in promoting greater gender diversity, they analyse unique data collected at a prestigious technical university in Europe. The focus is on what universities can do to stem any loss of talent through the leaky pipeline. Sara Connolly and Stefan Fuchs take a look at the employment choices of men and women in science, and analyse relevant academic practices in relation to work-life

balance. They take into account the specifics of science careers, and take into consideration the specific needs of couples and parents. This approach is quantitative, thus providing complementary evidence to the qualitative studies undertaken by Clem Herman and Suzan Lewis. Based on their findings, they suggest possible routes for universities in reducing the leaky pipeline for women in academia in general and S&T in particular, by offering **tenure tracks with the possibility to “stop the clock” during maternity or parental leave**, by enhancing flexibility and emphasizing alternatives to the “long hours culture”, and by making performance appraisal and promotion systems more transparent and standardized. Finally, Connolly and Fuchs address potential negative and positive consequences of the financial crisis for women's careers in academia.

We end the collection of experts' reports with the contribution from **Christine Wächter**, which is about how language and images, mainly found on the internet sites of companies as well as brochures and annual reports, (de)construct S&T as a male domain. **Many of these images essentially reflect and thus reproduce asymmetry, exclusion, numerical underrepresentation, and gender stereotypes**, by showing women as support staff and men as engineers in the field, and by relating work-family issues only to women. The words and pictures not only reflect but also influence our own ideas of what S&T looks like and who participates in what role. Clearly, those that are underrepresented or represented only in a submissive role will feel excluded and invisible, and will easily be discouraged to apply or tempted to leave. Improving the degree of symmetry, inclusiveness and counter-stereotypical nature of such images and representations may go a long way in trying to reduce the leaky pipeline. Christine Wächter gives clear recommendations to companies on good and not-so-good practices, as well as theoretical background for such recommendations. The way you look at your own company's representations of men and women at work will never be the same!

Conclusion

The experts' reports, taken together and individually, shed light on the original issues put forward by the WIST2 working group in trying to enhance gender diversity in science and technology, namely how to reduce the leaky pipeline and how to build a business case for work-life balance. There are, of course, no simple answers to these questions, and meeting the challenges inherent to gender and work-life balance issues is further complicated by the current global financial crisis. For those S&T companies that continue to take “diversity and inclusion” seriously, and that have resolved to keep these issues on the agenda despite the short-term need for cost cutting, there are a number of take home lessons that emerge from this report.

- Contemporary and future employees value work-life balance, and are expected to continue to do so in the future. Especially for dual career couples with young children, flexibility (in terms of timing and location of work) and an appropriate workload are in high demand.
- Offering work-life balance practices is not enough – the organisational culture (as evidenced in the communication about these practices, but especially in terms of the behavior of supervisors and peers) must be truly supportive of the utilization of these policies. If the message is negative (“you will have to work extremely long hours and put in face-time in order to get promoted”), or mixed (“of course you can work from home, as long as I can expect you to come in at short notice”), many will not utilize what is on offer, and those who do, are likely to fear the consequences.
- Central to organisational cultures in relation to gender diversity and WLB practices are our (often implicit, mostly incompatible) notions of the “ideal worker” and the “ideal mother”. These normative beliefs are heavily influenced by cross-culturally similar gender stereotypes and relate to the “separate spheres” of home (i.e. care, children) and work (i.e. career). While many of us consider such norms extremely resistant to change, the good news is these spheres increasingly overlap and are no longer defined by one gender. Research in fact shows that ideology will follow policy (Sjöberg, 2004): in countries that implemented family policies towards the support of a dual-earner family, normative beliefs progressively shift away from traditional roles.
- Companies can bolster the skills needed by employees (especially dual career couples) to combine work and care responsibilities effectively, which will help develop the home and work sphere at the same time. Such skill building will not only benefit from but also assist in further challenging the “normalized” underlying gendered assumptions about these spheres. One way to do so is to focus on work-life enrichment rather than conflict or interference (Greenhaus & Powell, 2009).

The WiST2 working group has been a unique opportunity to bridge the commonly experienced gap between HR research and practice (Cascio & Aguinis, 2008; Rynes, Colbert, & Brown, 2002). The companies who participated in WiST2 not only opened their doors for experts to collect data, but also showed, through their continuous commitment and sharing of experiences and best practices, that their gender diversity and WLB policies would be “evidence based” and built on clear research findings. Using an extensive dissemination strategy, what was developed here will be communicated throughout the EU, in S&T companies, at universities, and among HR and Diversity practitioners. In order to make sure that this communication between S&T companies, universities, experts, and the EU DG Research will continue beyond WiST2, we will look for innovative ways such as an on-line community or network of practitioners in order to provide a platform for and support communication between parties involved in WiST2. By these means, we can help create sustainability in combining career and care, which is of critical importance to HR and diversity practice in S&T companies.

So, what can be done?

- S&T companies need to keep on creating, promoting, and supporting custom-made WLB practices that fit the individual's needs and preferences, that match the strategic HR agenda of the organisation, and that are aligned with the national context in terms of legislation.
- Employers can project their vision of the “ideal” diverse and inclusive organisation by paying extra attention to the images and language on their website and in corporate brochures.
- Employers can protect their high performers and high potentials from burning out and/or eventually opting out by re-examining the nature of the performance appraisal process and making sure the utilization of WLB practices is not penalized unnecessarily or disproportionately.
- Employers can better manage transitions (“off- and on-ramps”) for those who take career breaks, and make sure that career trajectories take such career breaks or reduced hours into account. Well-managed, career breaks can bolster loyalty and performance; if not, they can be demoralizing, demobilizing, and demotivating.
- Efficiency can be rewarded and improved in many ways, by rescheduling and shortening meetings, and by focusing on output rather than long hours made for the sake of long hours, from which not only the WLB of parents will benefit.

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Driving Attraction and Commitment with a Work-Life Proposition

Special Focus on Science and Technology Employees

Corporate Leadership Council (1)

Introduction

Earlier research by the Corporate Leadership Council has established that work-life balance is prioritized by candidates and employees relative to other attributes of the organization. This study enables organizations to identify how to build a Work-Life Proposition that drives improved candidate attraction and employee commitment returns for the organization.

This research supports organizations in the following objectives:

- to quantify the business case for an effective Work-Life Proposition;
- to identify what types of work-life practices are most important for candidates and employees in science and technology;
- to determine how important it is for employees to be aware of and consume the work-life practices of the organization;
- to determine how to best improve science and technology employee awareness and consumption of work-life practices.

This study is organized into three parts. Part I provides organizations with a quantitative business case for building and effectively managing a Work-Life Proposition. It quantifies the relative importance of work-life balance for employees in Europe and in particular for science and technology employees. It identifies three key quantifiable benefits (improved attraction, higher discretionary effort, and increased retention) of effectively delivering a Work-Life Proposition. Finally, this section defines three key root causes of Work-Life Proposition delivery failure (inaccurate prioritization, low awareness, and low consumption) that organizations must overcome.

Part II of this study enables organizations to identify what types of work-life practices are most important for candidates. It defines the handful of work-life practices related to workload management, namely Flexible Work Schedule, Appropriate Workload, and Predictable Working Hours, that deliver the majority of attraction benefits for the organization. It then enables organizations to identify when and how to customize their work-life propositions for different talent segments. Finally, this section compares the work-life priorities of European science and technology employees with other employees in Europe, highlighting key differences in preferences.

Part III focuses on quantifying the importance of employee awareness and consumption of the Work-Life Proposition and identifying how to most effectively improve employee awareness and consumption. It quantifies the impact of increasing employee awareness and consumption of the Work-Life Proposition on employee commitment. It then identifies the key drivers of awareness and commitment and where the greatest opportunities are for improvement.

Methodology and Data

The Council's Employee Survey Instrument

The majority of data presented in this study was collected using an existing employee survey instrument, The Corporate Leadership Council's Employment Value Proposition Survey, which was first used in 2006. This survey was expanded to include new sections on the Work-Life Proposition and was conducted again during the spring of 2008, with more than 34,000 European respondents from 35 different organizations completing the survey.

Employment Value Proposition

The first part of the Council's survey examines 38 organizational attributes (e.g. Work-Life Balance, Location, Development Opportunities) that make up the Employment Value Proposition (EVP). The EVP is the set of attributes that candidates and employees perceive as the value they gain through employment in the organization. A detailed discussion and analysis of the EVP can be found in the Council's 2006 study, *Attracting and Retaining Critical Talent Segments*.

Work-Life Proposition

The second and larger part of the survey examines the Work-Life Proposition (WLP), which is the set of 32 work-life practices (e.g. Flexible Work Schedule, Remote Work Sites, Onsite Child-care) that candidates and employees perceive as the value they gain through employment in the organization.

(1) Warren Howlett, Research Director, Corporate Leadership Council
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HR Executive Survey

In addition to the main survey instrument, the Council conducted a short survey in 2008 of HR executives at the 35 participating organizations to analyze their organization's work-life investments and their perceptions of employee satisfaction levels with the work-life practices offered by their organizations. Nineteen HR executives from different organizations took part in the survey.

Developing the List of 32 Work-Life Practices

To develop an actionable list of work-life practices, Council staff reviewed a variety of sources to identify potential work-life offerings. These sources included company Web sites and recruiting literature, work-life action group resources and Web sites, business press articles, consultant literature, academic and business research, and interviews with more than 80 different organizations. A master list of more than 150 work-life offerings was compiled and evaluated for similarity, distinctiveness, universality, and overall ratability, leading to the consolidated list of 32 work-life practices grouped into six categories: Work Time, Work Location, Family, Development, Services, and Health. A full breakdown of the definitions of individual work-life practices can be found in the appendix.

Work-Life Categories and Definitions

Work-Life Category	Definition
Work Time	Enabling employees to manage the time spent working for the organization
Work Location	Managing the physical location of employee work
Family	Supporting the family and other dependent responsibilities of employees
Development	Offering opportunities for the personal development of employees (not including traditional training programs)
Services	Providing financial, retail, and other services for employees
Health	Supporting and maintaining the health of the workforce

Analytical Techniques

This research makes use of a number of analytical techniques, chiefly Q-Sort methodology and linear regression. The Q-Sort technique is a tool for measuring attitudes and preferences. It uses a forced-choice method, where respondents must rank a series of items in a pool. Typically a respondent is presented with a set of statements or options and is asked to rank-order them, either in groups or on an individual-item basis, an operation referred to as "Q sorting." Applying a Q-Sort methodology to the WLP, the Council asked survey respondents to rank

32 different work-life practices. These work-life rankings were then subject to analysis.

Linear regression is used to calculate the strength of the relationship between a dependent and independent variable(s) while controlling other factors, such as employee age, organizational tenure, industry, function, and education. Linear regression was used to test multiple hypotheses in the research. As an example, linear regression was used to analyze how the effectiveness of delivery of the WLP (the independent variable) impacts employee commitment (the dependent variable).

Part I: Building the Business Case for a Work-Life Proposition

In an environment of increasing cost pressure, work-life investments should be supported by a clear business case and a call for action. This section of the research supports organizations with answering the following questions related to building a business case for a WLP:

- How important is work-life balance for driving candidate attraction and employee commitment?
- What are the benefits of effective delivery of an organization's WLP and the costs of delivery failure?
- What are the root causes of WLP delivery failure that organizations must overcome?

The Importance of Work-Life Balance

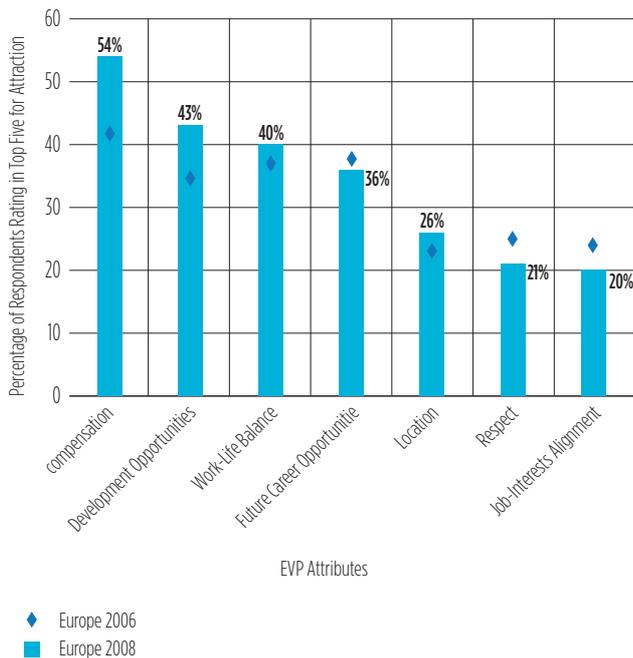
When the Council first ran its survey on the 38 organizational attributes that make up the Employment Value Proposition in 2006, Work-Life Balance emerged as the fourth most important driver of candidate attraction in Europe and also as an important driver of employee commitment.

The Council ran its survey on the Employment Value Proposition for a second time in Europe in the first half of 2008. As can be seen in Figure 1.0 on the next page, while the top drivers of attraction from 2006 are all important in 2008, only some attributes have increased in importance.

Work-Life Balance, which was ranked fourth of 38 attributes in 2006, is identified as the third most important driver of attraction for European employees in 2008. Indeed, as shown in Figure 1.0, the percentage of European respondents rating Work-Life Balance in the top five most important attributes for considering a potential employer increased from 31% in 2006 to 40% in 2008.

While a notable driver of employee commitment, Work-Life Balance is not as important for commitment as it is for attraction. However, it has increased slightly in significance for commitment in Europe since 2006. The maximum positive impact on commitment of improving the delivery of Work-Life Balance increased from 25% in 2006 to 30% in 2008.

Figure 1.0 Respondents Rating Attribute in Top Five for Attraction



Source: Employment Value Proposition and Work-Life Survey 2008; Corporate Leadership Council research.

The Importance of Work-Life Balance for Science and Technology Employees

Work-Life Balance is key for the attraction of science and technology candidates. In fact, science and technology employees assign slightly more importance to Work-Life Balance than other European employees. Fully 44% of all science and technology employees and 52% of women in science and technology rate Work-Life Balance in the top five organizational attributes most important for assessing a potential employer, compared to 40% for all European employees overall.

Work-Life Balance is also important across different science and technology talent segments in Europe. After Compensation, it is ranked second in importance for attraction of engineering, IT, and R&D employees. Contrary to some popular perceptions, high-potential employees in science and technology do care about work-life balance. High potentials in science and technology in fact place slightly more importance on Work-Life Balance (47%) than other science and technology employees (44%).

WLP in Context

While Work-Life Balance is a key organizational attribute for driving candidate attraction and employee commitment, organizations will always struggle to control the overall work-life balance of their employees. Work-Life Balance is the extent to which employees are able to balance their work and personal

interests. Although the organization usually has a high degree of control over employees' work, it typically has very little control over the personal interests of employees and the related demands that are placed upon them.

This research focuses on the elements of employees' work-life that the organization does control, namely the set of work-life practices that organizations offer to their employees. We call this set of work-life practices the organization's Work-Life Proposition.

WLP Defined

The set of work-life practices that the labor market and employees perceive as the value they gain through employment in the organization.

Three Benefits of an Effective WLP

In assessing the impact of an effective WLP, the Council has identified three key benefits related to candidate attraction, employee effort levels, and retention. Combined, these three benefits offer a compelling case for an effectively managed WLP.

Benefit #1: Improved Attraction

Organizations that effectively manage their WLP increase their attractiveness and therefore the breadth of their available candidate pool. Analyzing activity levels of respondents before they joined their current organization reveals that organizations that effectively manage their WLP are able to better access passive candidates and increase the size of their total talent pool by 4%.

Benefit #2: Higher Discretionary Effort

Effectively managing the WLP drives higher levels of employee effort levels at work. Examining the discretionary effort levels of employees with less than three months of tenure reveals that excellent WLP delivery can yield a workforce where 29% of new hires display the highest levels of discretionary effort. By contrast, organizations with poor WLP delivery typically have less than 2% of new hires displaying high levels of discretionary effort.

Benefit #3: Increased Retention

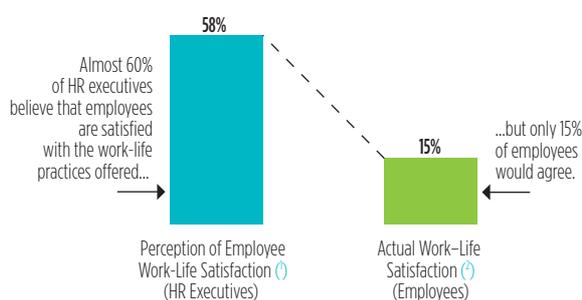
Effective management of the WLP drives increased levels of employee retention in new hires. Assessing employee intent to stay with the organization for employees with less than three months of tenure reveals that excellent WLP delivery can produce a workforce where 93% of new hires have the highest level of intent to stay. Meanwhile, organizations with poor delivery of the WLP typically have only 56% of new hires displaying the highest levels of intent to stay with the organization.

Cost of WLP Delivery Failure

The strength of the business case for an effective WLP is matched only by the consistency with which employees rate their employers as ineffective in delivering the right work-life practices. This dissatisfaction will come as a surprise to many HR executives.

Figure 1.1 **HR Executive Perception of Employee Work-Life Practices Satisfaction and Actual Employee Satisfaction with Work-Life Practices**

Percentage of European Respondents



- 1 Percentage of senior HR executives that "agree" or "strongly agree" that employees are satisfied with the work-life practices offered by the organization.
- 2 Percentage of employees that "agree" or "strongly agree" that they are satisfied with the work-life practices of the organization.

Source: Corporate Leadership Council research.

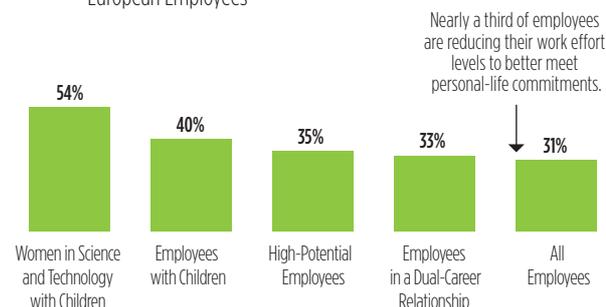
We find in Figure 1.1 that while almost 60% of HR executives perceive employees as satisfied with the work-life practices of the organization, only 15% of employees are actually satisfied with the work-life practices offered by organizations.

Employee dissatisfaction with the WLP has consequences. As demonstrated earlier, employees with low WLP satisfaction are less likely to put forth extra effort and more likely to leave. As shown in Figure 1.2, a little more than 30% of employees in Europe are reducing their effort levels at work to better meet commitments in their personal lives. For women in science and technology with young children, the proportion reducing their work effort to better meet personal-life commitments is even higher at 54%.

Root Causes of Poor WLP Delivery

While an effective WLP demonstrates compelling benefits, most organizations struggle to effectively design and deliver an effective WLP. Put simply, in spite of increased attention on work-life programs, organizations have struggled to maximize the returns from their work-life investments. Applying root-cause problem analysis, the Council built and tested a root-cause tree for the overall organizational problem of WLP investments failing to

Figure 1.2 **Percentage of Employees Reporting Reduced Levels of Effort at Work to Meet Personal-Life Commitments**
European Employees



generate acceptable returns for the organization. The Council has identified three key root-causes of the failure of organizations to maximize returns from work-life investments.

Root Cause # 1:

Few organizations invest in employees' preferred work-life practices. Attempting to better meet the work-life preferences of employees and candidates, organizations are continuously modifying the work-life practices they offer. We find that of the HR executives surveyed, almost half (47%) indicated that they had increased their organization's portfolio of work-life practices available in the past 12 months. However, few companies are prioritizing the work-life practices that matter most to employees.

Analyzing the percentage of informed employees who agree or strongly agree that the work-life practices they want are available at their organization, we find that only around a quarter of informed employees report that their organization offers work-life practices that align with their preferences. These findings lead to a clear question: Which work-life practices do employees and candidates prioritize?

Root Cause #2:

There is low employee awareness of the work-life practices offered by the organization. In spite of increased attention on work-life issues, this research finds that science and technology employees are relatively unaware of the organization's WLP. Across all the work-life categories, less than one-third of science and technology employees, on average, are aware of the work-life practices offered by organizations. This finding leads to a clear question: How can organizations most effectively increase employee awareness of the work-life practices that matter most?

Root Cause #3:

There is low consumption of work-life practices. Examining how frequently science and technology respondents use the work-life practices available at their organization, we find that more than half of the science and technology respondents in our survey indicated that they had never used a work-life practice offered by their organization. Subsequent conversations with participating organizations confirmed that they had also

identified low consumption levels within their organizations. This finding leads to a clear question: How can organizations most effectively optimize employee consumption of the work-life practices that matter most?

Summary of Part I

Work-Life Balance Is Increasingly Important – Work-Life Balance has significantly increased in importance for attraction and commitment since 2006. It is now the third most important organizational attribute for attraction.

Effective WLP Management Increases Attraction, Performance, and Retention – Effectively building and managing a WLP enables organizations to increase their total talent pool by 4%, improve new-hire discretionary effort levels by 27%, and improve intent to stay by 37%.

Many Employees Are Reducing Effort at Work to Better Meet Personal Commitments – Employees are much less satisfied with the work-life practices offered than HR executives perceive, and more than 30% of employees are reducing their effort levels at work to better meet personal commitments.

Three Root Causes of Poor Work-Life Returns – The Council has identified three root-causes of poor work-life returns for the organization:

- work-life investments are not targeted on the work-life practices that will deliver the highest returns for the organization;
- few employees are aware of the work-life practices offered by the organization and, in particular, the work-life practices that deliver the best returns for the organization;
- very few employees use the work-life practices offered by the organization.

Part II: Identifying Work-Life Drivers of Attraction

We have already identified the WLP as an important driver of attraction outcomes. This section of the research enables organizations to answer the following questions:

- Which work-life practices are most important and least important for driving attraction?
- When and how should organizations customize their WLP for different talent segments?
- How do the attraction preferences of science and technology candidates compare with other European candidates?

Attraction Preferences

Figure 2.0 on the following page presents the WLP preferences of candidates in Europe. Each bar represents the percentage of European respondents who identified a work-life practice within their top five most important for assessing a potential employer. This chart offers new evidence of what candidates most (and least) desire in a WLP.

The Top Drivers of Attraction—Flexible Work Schedule, Appropriate Workload, and Predictable Working Hours

When considering a potential employer, candidates across Europe heavily prioritize three dimensions of workload management – Flexible Work Schedule, Appropriate Workload, and Predictable Working Hours – with a notable emphasis on the first two elements of this set of dimensions. Indeed, candidates select Flexible Work Schedule and Appropriate Workload nearly twice as often as the next-highest-ranked work-life practice. This finding demonstrates that the most powerful WLPs will orientate around “workload management,” not simply “benefits offerings.” Put another way, candidates seek WLPs that *empower them to effectively manage work schedules* rather than simply offer them an array of benefits.

Attributes That Do Not Drive Attraction

Many tangible work-life practices, such as Fitness Services, are assigned a relatively low level of importance by candidates. This does not mean these practices cannot have a positive impact on attraction, but rather that they are relatively less important than other practices.

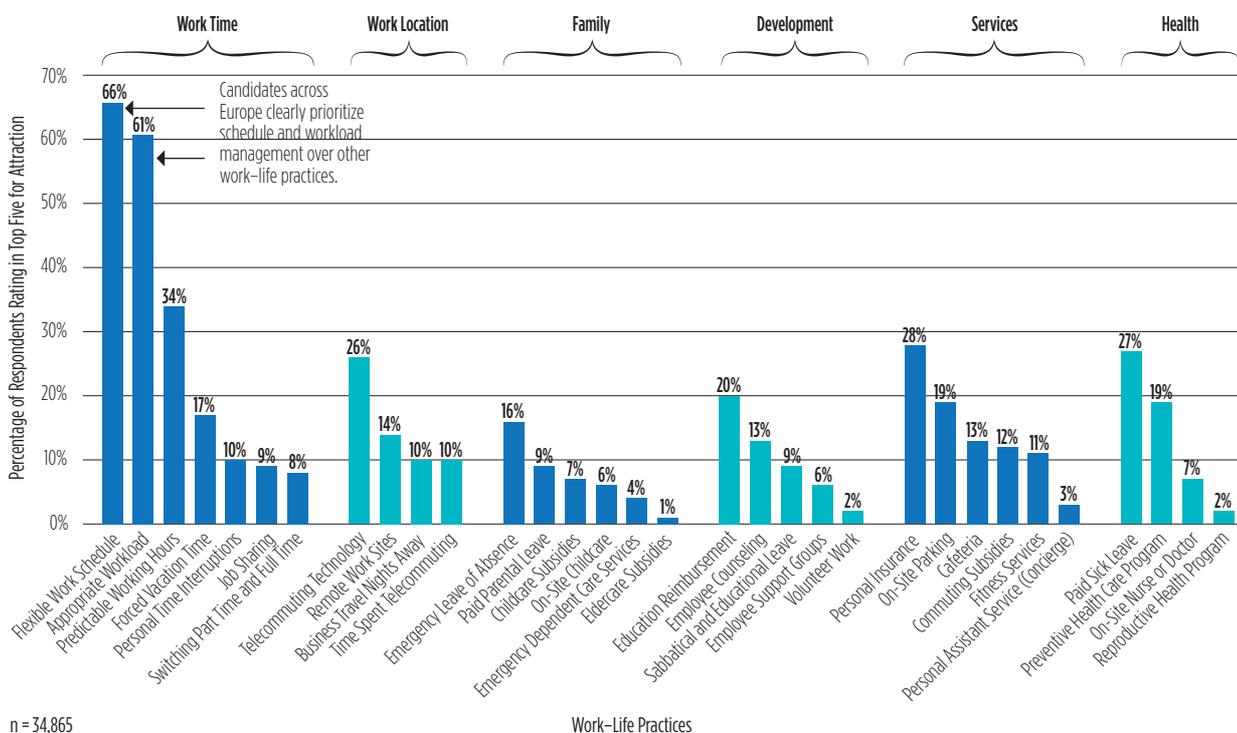
Using the Data to Develop a WLP Strategy

To build a work-life offering that is competitive in the labor market, organizations must prioritize WLP investments on workload management tactics. The importance of Flexible Work Schedule and Appropriate Workload also has ramifications for how the WLP is communicated to the labor market. Organizations typically communicate a comprehensive list of work-life practices to candidates; however, the importance of workload management suggests that the content of communications should emphasize the workload management tactics available to employees.

WLP Segmentation

A key challenge facing organizations is to build a WLP that is attractive across talent segments. To effectively manage a WLP across segments, organizations must identify which segments demonstrate unique preferences (and which do not). To this end, the Council examined the amount of variation in Work-Life preferences driven by a variety of demographic segments. This is achieved by applying a forward stepwise regression methodology on the dataset of 34,865 European respondents to identify how much of the variation in work-life preferences can be explained

Figure 2.0 Percentage of Respondents Rating Work-Life Practice in Top Five Most Important for Attraction Employees in Europe



Source: Work-Life Proposition Survey 2008; Corporate Leadership Council research.

by different demographic segments. In Figure 2.1 the Council identifies the impact of seven common talent segments within the total population: geography, function, age, parenthood, industry, level, and gender.

Geography Explains Most Variation in WLP Preferences

Geography accounts for the vast majority of variation in work-life preferences, accounting for 65% of the variation seen in the 34,865 respondents surveyed in Europe. Put simply, most of the differences in work-life preferences are a function of geography. Practically, this means that organizations considering the construction of customized WLPs should start with geography; other segments (e.g. function, level) will tend not to require much customization. Organizations working in multiple geographies must consider whether their target labor pools require a customized WLP.

Gender Accounts for Very Little Variation in WLP Preferences

Although conventional wisdom states that men and women have different work-life preferences, Council research finds that relatively few differences exist. That is not to say that there are no differences in preferences by gender; rather, gender differences are small and especially small when compared to geographic differences. Testing for the importance of gender interactions with each of the other demographic segments, the

Council also finds that the interaction of two demographics (one being gender) does not explain more variation in WLP preferences than the sum of the variation explained by the individual demographic segments.

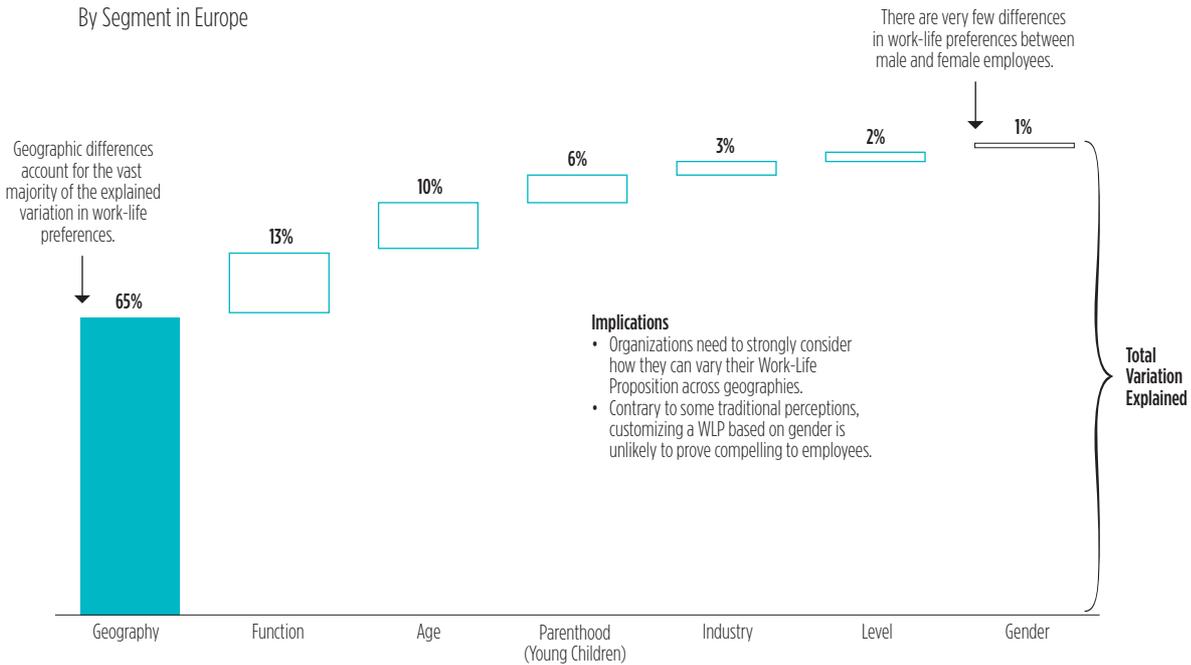
Highly Similar Work-Life Preferences Across Gender

Although gender accounts for very little variation in the work-life preferences of candidates, there are still some small differences, as demonstrated by Figure 2.2. The graphic displays the top 10 work-life preferences of women, comparing the strength of each preference across gender. The most significant differences occur for Personal Insurance, which is relatively more important for men, and Switching Part Time and Full Time, which is significantly more important for women.

The implications for organizations of the remarkably similar work-life preferences of men and women are significant. Contrary to some traditional beliefs, there is little evidence to support “wholesale customization” of work-life practices by gender. Any effort to customize WLPs by gender should be narrow, targeted, and conducted with caution.

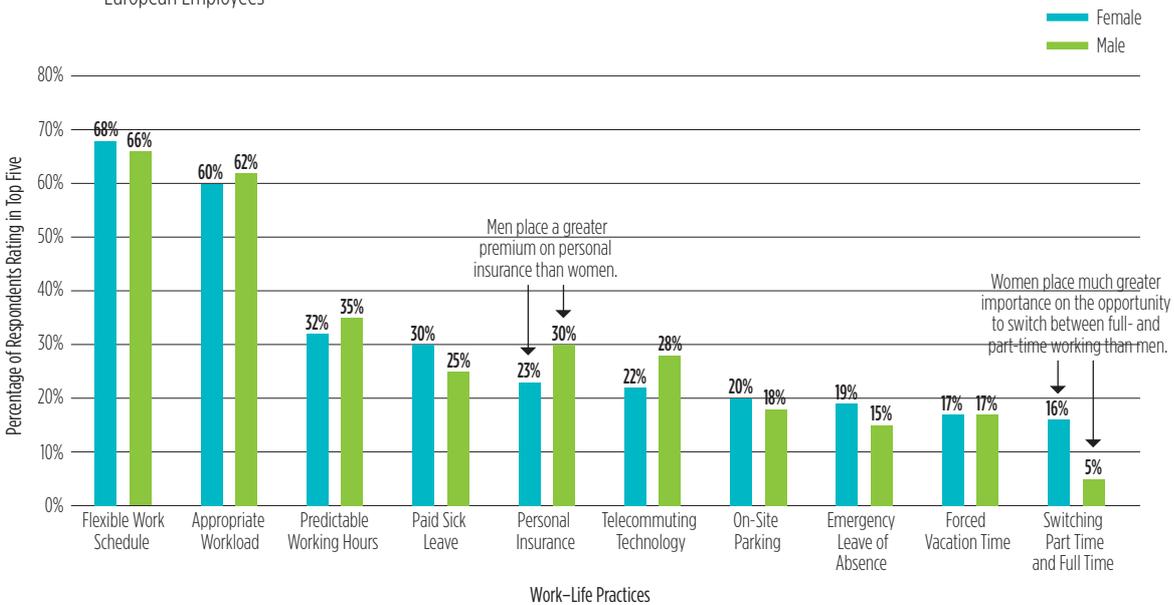
Differences by Parenthood

Figure 2.1 **Percentage of Variance in WLP Preferences Explained By Segment in Europe**



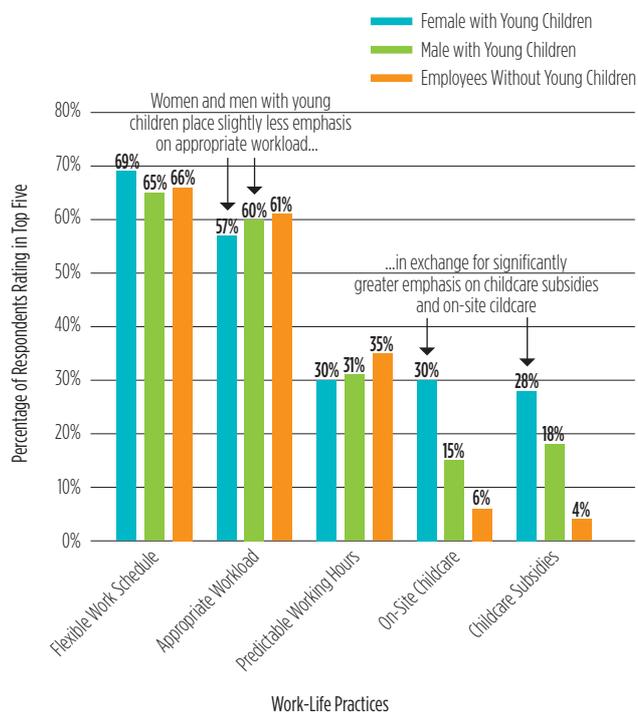
Source: Corporate Leadership Council research.

Figure 2.2 **Percentage of Respondents Rating Work-Life Practice in Top Five Most Important for Assessing Potential Employers European Employees**



Source: Corporate Leadership Council research.

Figure 2.3 Percentage of Respondents Rating Work-Life Practice in Top Five Most Important for Assessing Potential Employers European Employees with Young Children

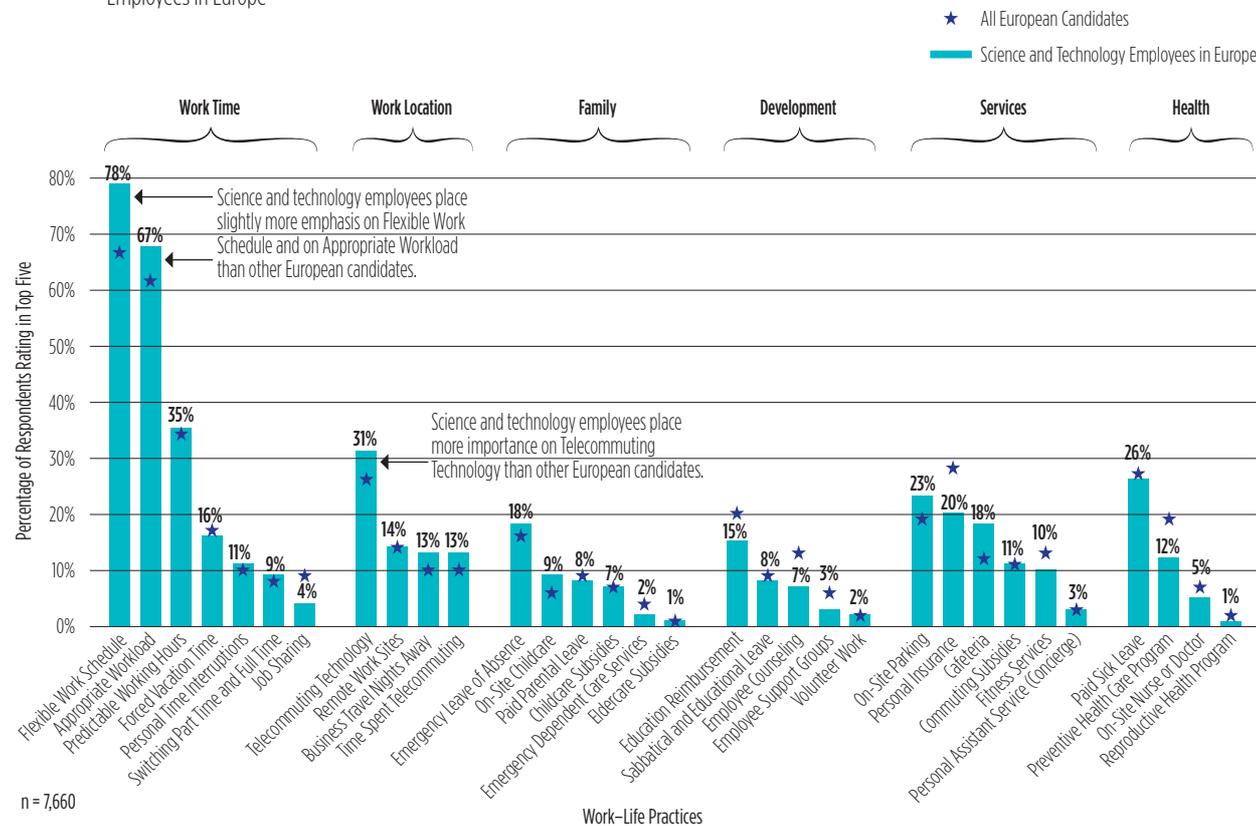


While gender explains relatively little of the variation in the work-life preferences of candidates, as shown earlier in Figure 2.1, Parenthood is relatively more important for explaining WLP preferences, accounting for 6% of the explained variation in WLP preferences.

Dominance of Workload Management and Childcare for Parents

In Figure 2.3 we find that as with nearly all other segments, parents with young children prioritize workload management tactics. That said, women and men with young children place slightly less emphasis on Appropriate Workload and Predictable Working Hours than individuals without young children. In turn, employees with young children unsurprisingly place far more importance on Childcare Subsidies and On-Site Childcare than employees without young children. While men with young children place significant importance on these childcare practices, women with young children assign greater emphasis on them.

Figure 2.4 Percentage of Respondents Rating Work-Life Practice in Top Five Most Important for Assessing Potential Employers Employees in Europe



n = 7,660

Source: Work-Life Proposition Survey 2008; Corporate Leadership Council research.

Geography Accounts for Most Variation in Preferences Within Work-Life Categories

As well as being the key driver of variation in the overall WLP, geography was also the key driver of variation of preferences within five of the six work-life categories: Work Time, Work Location, Development, Services, and Health. In fact, the proportion of variation explained by each demographic segment was very similar to the proportion of variance explained for the overall WLP.

Parenthood is as Important as Geography for Explaining Family Preferences

In contrast to the other work-life categories, parenthood is a key driver of the variation in preferences for the Family category of work-life practices. In fact, we find across the seven talent segments examined, that parenthood, which accounts for 38% of the explained variation, is almost as important as geography, which explains 39% of the variation in Family work-life preferences. More detail on the impact of the seven talent segments can be found in Figure 4.0 in the appendix.

Science and Technology Respondents Demonstrate Similar Work-Life Preferences

The work-life preferences of science and technology candidates are very similar to those of other European candidates as demonstrated in Figure 2.4. Figure 2.4 shows the percentage of European science and technology respondents who identified a work-life practice within their top five most important for assessing a potential employer. Science and technology candidates do place slightly more emphasis on Flexible Work Schedule and Appropriate Workload than other European candidates.

The attraction preferences of women in science and technology are shown in Figure 4.1 in the appendix. In addition to the premium that women in science and technology place on Flexible Work Schedule and Appropriate Workload relative to other European candidates, they also place a premium on the opportunity to switch between part-time and full-time work. Given the similarity of work-life preferences between science and technology candidates and other employee groups, there is no strong imperative for the organization to create a separate WLP for science and technology candidates.

Summary of Part II

Workload Management Key for Attraction – Across the 32 work-life practices that make up the Work-Life Proposition, just a handful of workload management tactics – Flexible Work Schedule, Appropriate Workload, and Predictable Working Hours – deliver the vast majority of attraction returns for the organization.

Geography Explains Most Differences in WLP Preferences

– Geography accounts for the majority of variation in the work-life preferences of candidates. Geographic differences matter much more than variation by function, age, parenthood, industry, level, or gender.

Very Similar WLP Preferences for Men and Women – The work-life preferences of men and women are remarkably similar.

Similar WLP Preferences for Men and Women with Children

– Men and women with children have similar work-life priorities, although women do place greater emphasis on Childcare Subsidies and On-Site Childcare than men.

Science and Technology Employees Have Similar Preferences to Other Employees

– Science and technology employees share similar work-life priorities with other employees. That said, science and technology employees place slightly more emphasis on a Flexible Work Schedule and Appropriate Workload. In addition, women in science and technology also place a premium on the opportunity to switch between part-time and full-time employment.

Part III: Driving Commitment Through Awareness and Consumption of the Work-Life Proposition

The previous section revealed the work-life practices that candidates and employees prioritize. In this section, the Council analyzes *how important it is that employees are aware of the WLP and consume the work-life practices offered*. This section enables organizations to answer the following questions:

- How does awareness and consumption of the WLP impact commitment?
- What are the key drivers of awareness and consumption?
- How effectively are the drivers of awareness and consumption delivered, and where are the opportunities for improvement?

Awareness and Consumption Drive WLP Delivery

As depicted in the far left of Figure 3.0 below, the Council measured employee awareness and consumption levels of the individual work-life practices offered by the organization. These awareness and consumption levels were then examined using multivariate linear regression against the level of WLP delivery effectiveness. Examining these relationships enabled the Council to determine if and how much raising levels of awareness and consumption of different work-life practices would impact employee perceptions of WLP delivery effectiveness.

Work-Life Proposition Delivery Effectiveness Impacts Employee Commitment

In the final stage of the analysis, the Council analyzed the relationship between WLP delivery effectiveness and employee commitment.

In summary, this analysis enabled the Council to answer two core questions: Does awareness and consumption of the WLP impact employee perceptions of WLP delivery effectiveness? Does WLP delivery effectiveness have an impact on employee commitment?

Impact of WLP Awareness

Analyzing the relationship between employee awareness of the WLP and employee perceptions of WLP delivery effectiveness, this research finds that increasing employees' overall awareness of the WLP has a maximum impact on WLP delivery effectiveness of 35%. In other words, increasing employee awareness of the WLP from "very unaware" to "very aware" holds the potential to increase employee perceptions of WLP delivery effectiveness by up to 35%. The more employees become aware of the organization's WLP, the more satisfied they become with the delivery of the WLP.

Impact of WLP Consumption

Examining the relationship between employee consumption of the WLP and employee perceptions of WLP delivery effectiveness, this study finds that increasing employees' overall consumption of the WLP has a maximum impact on WLP delivery effectiveness of 29%. In other words, enhancing consumption of the WLP from "I never use this" to "I always use this" holds the potential to increase employee perceptions of WLP delivery effectiveness.

Figure 3.0 Council Work-Life Proposition Delivery Effectiveness Model



Source: Corporate Leadership Council research.

Driving Higher Levels of Commitment

This research finds that improving employee perceptions of WLP delivery effectiveness impacts employee commitment. The maximum impact that changing employee perceptions of WLP delivery effectiveness can have on employee commitment is 29%. In other words, improving employee perceptions of WLP delivery effectiveness holds the potential to increase employee commitment. Importantly, this data demonstrates that employee perceptions of WLP delivery effectiveness matter.

WLP Awareness and Consumption Drivers for Science and Technology Employees

To identify how organizations can best drive awareness, the Council used linear regression to test 17 potential drivers of awareness across four categories: Communication, Promotion, Ease of Implementation, and Visibility of Utilization. To identify how organizations can best drive consumption, the Council used linear regression to test 25 drivers of consumption across six categories. (Note: The eight additional drivers of consumption are categorized into two groups: Accessibility and Alignment. The two new categories test the extent to which employees have access to the work-life practices they want to consume, and the extent to which the design of the WLP is aligned with the job, performance evaluation, careers, workload management, and development opportunities).

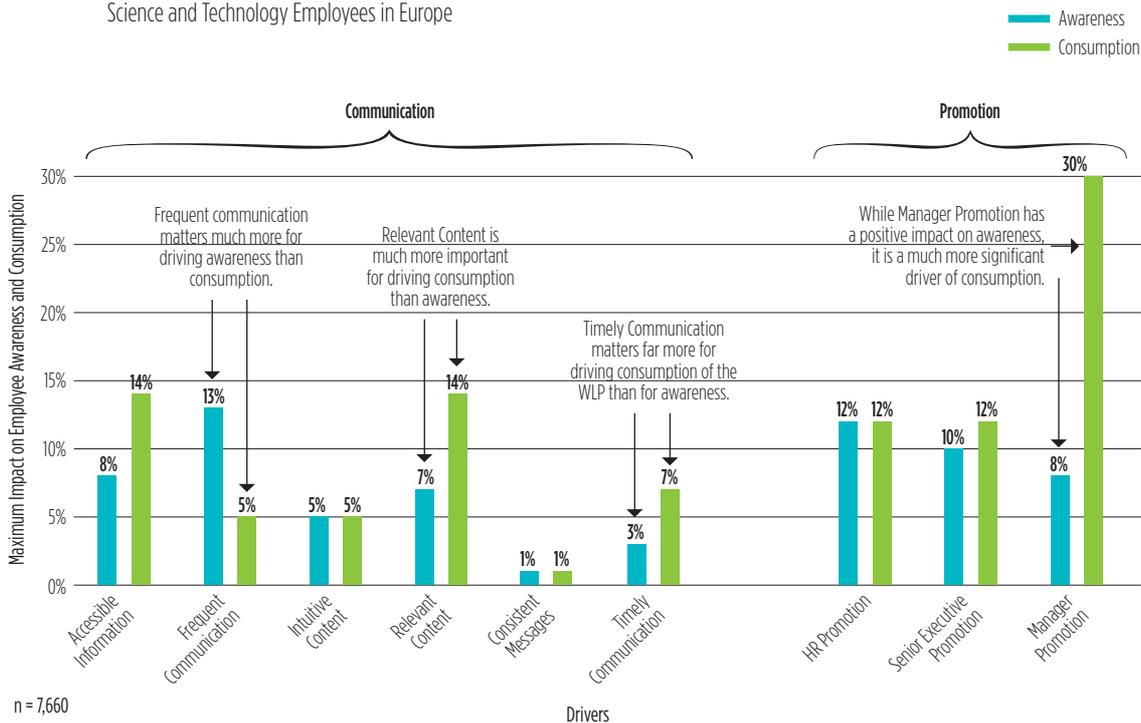
Driver Categories and Definitions

Driver Category	Definition
Accessibility	Enabling employee access to the WLP
Alignment	Aligning the WLP with the working environment
Communication	Communicating the WLP to employees
Ease of Implementation	Managing the implementation of the WLP
Promotion	Driving WLP promotion in the organization
Visibility of Utilization	Supporting the visibility of WLP utilization

Communication Drivers of Awareness and Consumption for Science and Technology Employees

Most organizations invest in communications about the work-life practices they offer to candidates and employees. However, communications activities have different levels of impact on awareness and consumption as shown in Figure 3.1. For example, Relevant Content and Timely Communication are much more important for driving consumption than they are for driving awareness. To maximize the impact of communications on WLP consumption, HR must ensure that the content of communications is relevant and timely to support employee work-life decisions.

Figure 3.1 Impact on Work-Life Proposition Awareness and Consumption
Science and Technology Employees in Europe



Source: Corporate Leadership Council research.

Promotion Drivers of Awareness and Consumption for Science and Technology Employees

Figure 3.1 shows that while HR Promotion has a significant impact on awareness and consumption, Senior Executive Promotion and Manager Promotion have a greater impact on consumption than awareness. In particular, the difference between the impact of Manager Promotion on awareness (8%) and consumption (30%) is especially noteworthy. Organizations can use the three promotion levers to raise WLP awareness and consumption, but must prioritize attention on Manager Promotion to maximize WLP consumption.

Ease of Implementation for Science and Technology Employees

In Figure 3.2 we find that Employee Control of Practices and Implementation Guidelines are far more important for driving consumption than awareness. HR must enable employee control of the work-life practices offered by the organization and provide clear guidelines for managers and employees on how to implement work-life practices.

Visibility of Utilization for Science and Technology Employees

Employee awareness of the work-life practices of the organization increases when colleagues are already using those work-life practices. We find in Figure 3.2 that Peer Utilization is a key driver of awareness but also has a very significant impact on employees' consumption of the WLP. Notably, Peer Utilization

has much greater impact than either Manager Utilization or Senior Executive Utilization; this finding demonstrates that employees are far more likely to follow the work-life consumption patterns of peers than those of superiors.

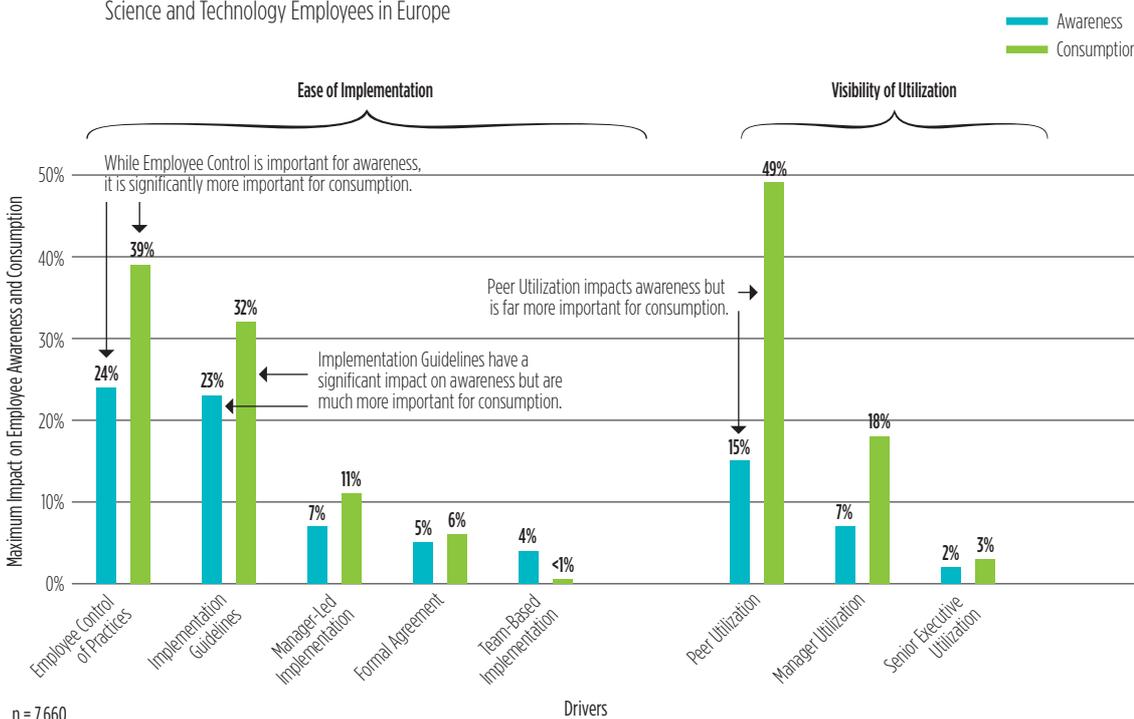
Awareness and Consumption Implications for Science and Technology Employees

In summary: the most powerful drivers of science and technology employee awareness are also the most significant drivers of consumption. Indeed, the impact of these key drivers tends to be much greater on consumption. In one sense, this is good news: investments in awareness building will almost always translate into higher consumption levels. This "double effect" on awareness and consumption, in turn, has a positive impact on employee commitment. That said, organizations attempting to increase only awareness should proceed with caution when leveraging any of the key drivers, since any resulting increase in awareness will probably be accompanied by an even greater increase in consumption. While consumption will increase commitment, it will also increase the cost of many work-life practices. Where cost of consumption is a concern, organizations may wish to limit their awareness-building efforts.

Accessibility of the WLP for Science and Technology Employees

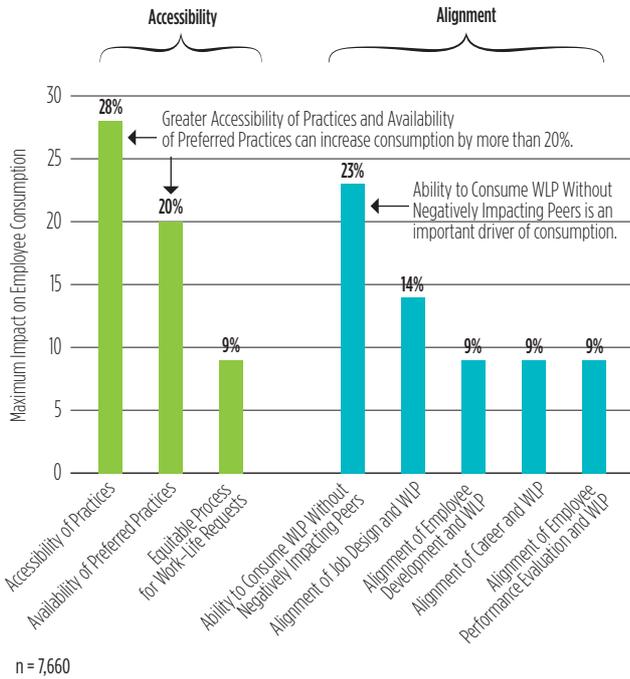
The Accessibility drivers examined were not relevant for awareness of the WLP, but as shown in Figure 3.3, are important for increasing consumption. In particular, increasing employee

Figure 3.2 Impact on Work-Life Proposition Awareness and Consumption Science and Technology Employees in Europe



Source: Corporate Leadership Council research.

Figure 3.3 **Impact on Work-Life Proposition Consumption**
Science and Technology Employees in Europe



Corporate Leadership Council research.

access to work-life practices (Accessibility of Practices) and ensuring that the organization offers the work-life practices employees prefer (Availability of Preferred Practices) have a notable impact on consumption.

Alignment of the WLP for Science and Technology Employees

The Council identified a handful of drivers related to the alignment of work-life practices that, while not being relevant for WLP awareness, have a significant impact on consumption. Figure 3.3 demonstrates that the most important Alignment driver is the extent to which consumption of work-life practices impacts an individual's peers. HR must enable managers and employees to effectively manage how an individual employee's consumption of a work-life practice impacts the workload of colleagues and their ability to use work-life practices.

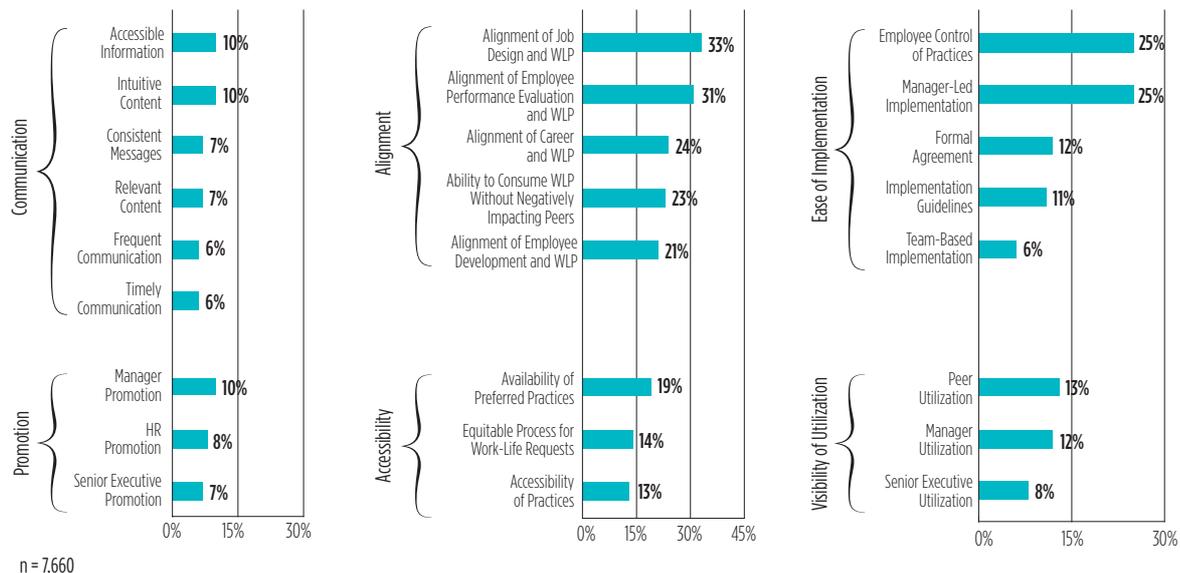
Very Low Effectiveness for Communication and Promotion

Figure 3.4 shows that science and technology employees believe that organizations have a strikingly low level of effectiveness at communicating and promoting the WLP. Indeed, less than 11% of science and technology employees rate their organizations as effective at communication and promotion. The tactics within these categories represent significant opportunities for improvement.

Accessibility and Alignment Delivery

Science and technology employees rate their organizations as slightly more effective at designing work-life practices for Alignment and Accessibility. While the scores here are still quite low, they are universally better than the scores provided for Communication and Promotion. This contrast suggests that organizations are better at designing work-life practices than they are at marketing them. Prior to undertaking major redesign efforts, most organizations should first aim to better communicate and promote their current work-life practices.

Figure 3.4 **Percentage of Respondents Rating the Organization as Effective**
Science and Technology Employees in Europe



Source: Corporate Leadership Council research.

Ease of Implementation and Visibility of Utilization Delivery

Across all the Ease of Implementation and Visibility of Utilization drivers, organizations have a low level of effectiveness, as perceived by science and technology employees. Within these two categories, organizations are most effective at enabling Employee Control of Practices and supporting Manager-Led Implementation. Organizations are least effective at enabling Team-Based Implementation.

Prioritizing Awareness-Building Tactics

As organizations seek to improve their effectiveness at driving awareness of work-life practices, they should focus on enhancing tactics that are poorly deployed, but hold substantial potential for increasing awareness. Combining an analysis of the level of organizational effectiveness for each driver and the maximum impact on employee awareness, we find that organizations have a relatively low level of effectiveness for most drivers of awareness, but the majority of these are not very significant drivers of awareness. Of more concern is the low level of organizational effectiveness for Implementation Guidelines and Peer Utilization, which both have a significant impact on employee awareness of the WLP. This finding suggests that most organizations should prioritize improvement efforts on Implementation Guidelines and Peer Utilization: drivers that have the greatest impact on employee awareness but notably low levels of effectiveness.

Prioritizing Consumption-Driving Tactics

As organizations seek to improve their effectiveness at driving consumption, they should focus on enhancing tactics that are poorly deployed but hold substantial potential for improving consumption. Combining an analysis of the level of organizational effectiveness for each driver and the maximum impact on employee consumption, we find that there are a number of drivers that have a strong impact on employee consumption, but have a relatively low level of effectiveness. Of note are Peer Utilization, Implementation Guidelines, and Manager Promotion, which all have a high impact on consumption but are poorly deployed by nearly all organizations. Organizations must prioritize investments on these high-impact, poorly deployed drivers.

Summary of Part III

Awareness and Consumption Drive WLP Delivery Effectiveness – Increasing employee awareness and consumption of the WLP enhances employee perceptions of work-life practices delivery by the organization, which impacts the level of employee commitment to the organization.

Awareness Is Slightly More Important Than Consumption – Employees don't necessarily have to use work-life practices for them to generate positive returns for the organization. Awareness of the work-life practices of the organization is a driver of WLP delivery effectiveness. In fact, awareness of the WLP is slightly more important than consumption for driving perceptions of WLP delivery effectiveness.

Peer Utilization, Implementation Guidelines, and Employee Control Are Key for Driving WLP Awareness and Consumption – Peer Utilization, Implementation Guidelines, and Employee Control of Practices are the most important drivers of awareness but have an even more significant impact on consumption. Just increasing Peer Utilization of work-life practices can increase employee consumption of the WLP by up to 49%.

Accessibility and Alignment is Important for Driving Consumption – Accessibility and Alignment of work-life practices have a strong impact on WLP consumption by employees.

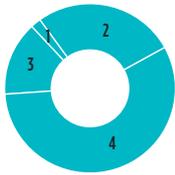
Peer Utilization and Implementation Guidelines: High Impact but Poorly Delivered – Across all the drivers of awareness and consumption, Peer Utilization and Implementation Guidelines have a relatively high impact on awareness and consumption but a low level of organizational effectiveness. Organizations must prioritize additional effort on these two drivers to increase employee awareness and consumption of work-life practices.

Appendix: Demographics

European Dataset

European Dataset

Organizational Level, Function, and Geography of Survey Participants



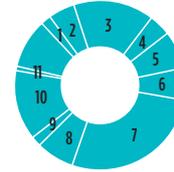
Level

- 1 Executive 2%
- 2 Junior 27%
- 3 Senior 14%
- 4 Mid 57%



Function

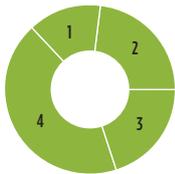
- 1 Operations 6%
- 2 Administrative 5%
- 3 IT/Systems 8%
- 4 Customer Service/Call Center 4%
- 5 Finance/Accounting 7%
- 6 Sales 7%
- 7 Engineering/Design 5%
- 8 HR/Education/Training 4%
- 9 Technical 9%
- 10 Retail 3%
- 11 Corporate 2%
- 12 R&D 9%
- 13 Quality Control/Assurance 4%
- 14 Marketing/Market Research 4%
- 15 Manufacturing/Supply Chain Logistics 7%
- 16 Other 16%



Geography

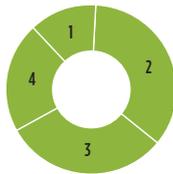
- 1 Ireland 2%
- 2 Switzerland 5%
- 3 United Kingdom 15%
- 4 Sweden 2%
- 5 Belgium 4%
- 6 Netherlands 7%
- 7 Portugal 2%
- 8 Italy 6%
- 9 France 27%
- 10 Germany 7%
- 11 Poland 2%
- 12 Spain 13%
- 13 Finland 1%
- 14 Other 7%

Company Size, Age, and Gender of Survey Participants



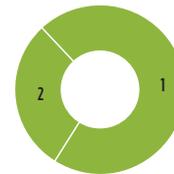
Company Size

- 1 Less Than \$3 Billion 14%
- 2 \$3 Billion - 10 Billion 23%
- 3 \$10 Billion - 20 Billion 20%
- 4 \$20 Billion or More 43%



Age

- 1 18-29 13%
- 2 30-39 35%
- 3 40-49 31%
- 4 50-65 21%



Gender

- 1 Male 71%
- 2 Female 29%

Appendix: Participants

With Special Thanks



Appendix: Definitions of Work-Life Practices

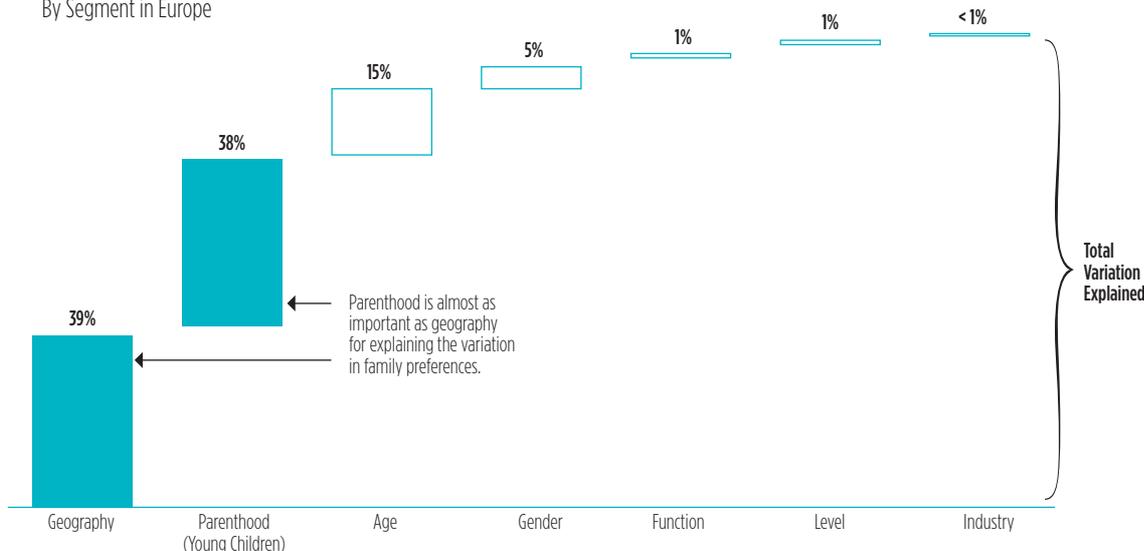
Work-Life Practice Name	Definition
Appropriate Workload	The extent to which employees are able to complete their work during a standard working week
Business Travel Nights Away	The number of nights away from home required by the job
Cafeteria	The quality of the organization's on-site cafeteria food services available to employees
Childcare Subsidies	The level of reimbursement received by employees for childcare costs
Commuting Subsidies	The level of subsidies received by employees toward the cost of travel to the workplace
Education Reimbursement	The level of reimbursement received by employees for their education costs and for their children's education costs
Eldercare Subsidies	The level of reimbursement received by employees for eldercare costs
Emergency Dependent Care Services	Whether or not employees have access to short-term emergency care services for dependents
Emergency Leave of Absence	Whether or not employees can take leave of absence for personal emergencies
Employee Counseling	Employee access to counseling service to resolve personal and work-related problems
Employee Support Groups	Whether or not employees have access to employee support groups (e.g., caregiver) to exchange experiences, advice, and practical insights
Fitness Services	The quality of the organization's fitness services available to employees
Flexible Work Schedule	The extent to which employees can select the days and number of hours they work
Forced Vacation Time	The minimum amount of holiday or vacation time that employees are required to use
Job Sharing	Whether or not part-time employees can share the work and responsibilities of one full-time position
On-Site Childcare	Whether the organization provides on-site childcare services
On-Site Nurse or Doctor	Whether or not employees have access to a nurse or doctor in the workplace
On-Site Parking	The extent to which employees have access to on-site car or vehicle parking facilities
Paid Parental Leave	The amount of paid parental leave provided by the organization
Paid Sick Leave	The amount of paid sick leave provided by the organization
Personal Assistant Service (Concierge)	Whether employees have access to dedicated assistance for personal administrative tasks and errands
Personal Insurance	The comprehensiveness of personal insurance (e.g., legal, travel, home) cover for employees
Personal Time Interruptions	The frequency of work-related interruptions during non-work time
Predictable Working Hours	The extent to which employees have visibility into their working hours
Preventive Health Care Program	Whether employees have access to preventative health screening and examination
Remote Work Sites	Access to alternative work sites to support telecommuters
Reproductive Health Program	Whether employees have access to dedicated reproductive health information, consulting, and services
Sabbatical and Educational Leave	The amount of time employees can take off for sabbatical leave
Switching Part Time and Full Time	The extent to which employees can move between full-time and part-time work
Telecommuting Technology	Extent to which the organization enables employees to connect remotely with the workplace
Time Spent Telecommuting	Time spent working in a location other than the workplace
Volunteer Work	Whether employees can undertake volunteer work during regular work hours

Appendix: Definitions of Awareness and Consumption Drivers

Driver Name	Definition
Accessibility of Practices*	The level of employee access to work-life practices
Accessible Information	The level of employee access to information about work-life practices
Alignment of Career and WLP*	The extent to which career opportunities are compatible with the WLP
Alignment of Employee Development and WLP*	The extent to which development opportunities are compatible with the WLP
Alignment of Employee Performance Evaluation and WLP*	The extent to which performance evaluation is aligned with the WLP
Alignment of Job Design and WLP*	The compatibility of the job design with consumption of work-life practices
Availability of Preferred Practices*	The extent to which the organization offers the practices employees want to use
Consistent Messages	Whether or not information about work-life practices is communicated consistently
Employee Control of Practices	The level of employee control over the work-life practices offered
Equitable Process for Work-Life Requests*	Whether or not the process for considering work-life requests is fair and equitable
Formal Agreement	Whether or not employees have a formal agreement in place for using work-life practices
Frequent Communication	The frequency of communications about work-life practices
HR Promotion	Whether or not HR promotes employee use of work-life practices
Ability to Consume WLP Without Negatively Impacting Peers*	The ability of employees to consume the WLP without negatively impacting peers
Implementation Guidelines	Whether or not the organization provides clear guidelines for work-life practices implementation
Intuitive Content	The extent to which the content of work-life communications is easy to understand
Manager-Led Implementation	Whether or not work-life practices implementation is driven by the manager
Manager Promotion	Whether or not managers promote employee use of work-life practices
Manager Utilization	The extent to which managers use work-life practices
Peer Utilization	The extent to which peers use work-life practices
Relevant Content	The relevance of the content in work-life communications
Senior Executive Promotion	Whether or not senior executives promote employee use of work-life practices
Senior Executive Utilization	The extent to which senior executives use work-life practices
Team-Based Implementation	Whether or not work-life practices implementation is driven by a team-based discussion
Timely Communication	Whether information about work-life practices is communicated at the right time to inform employee decisions

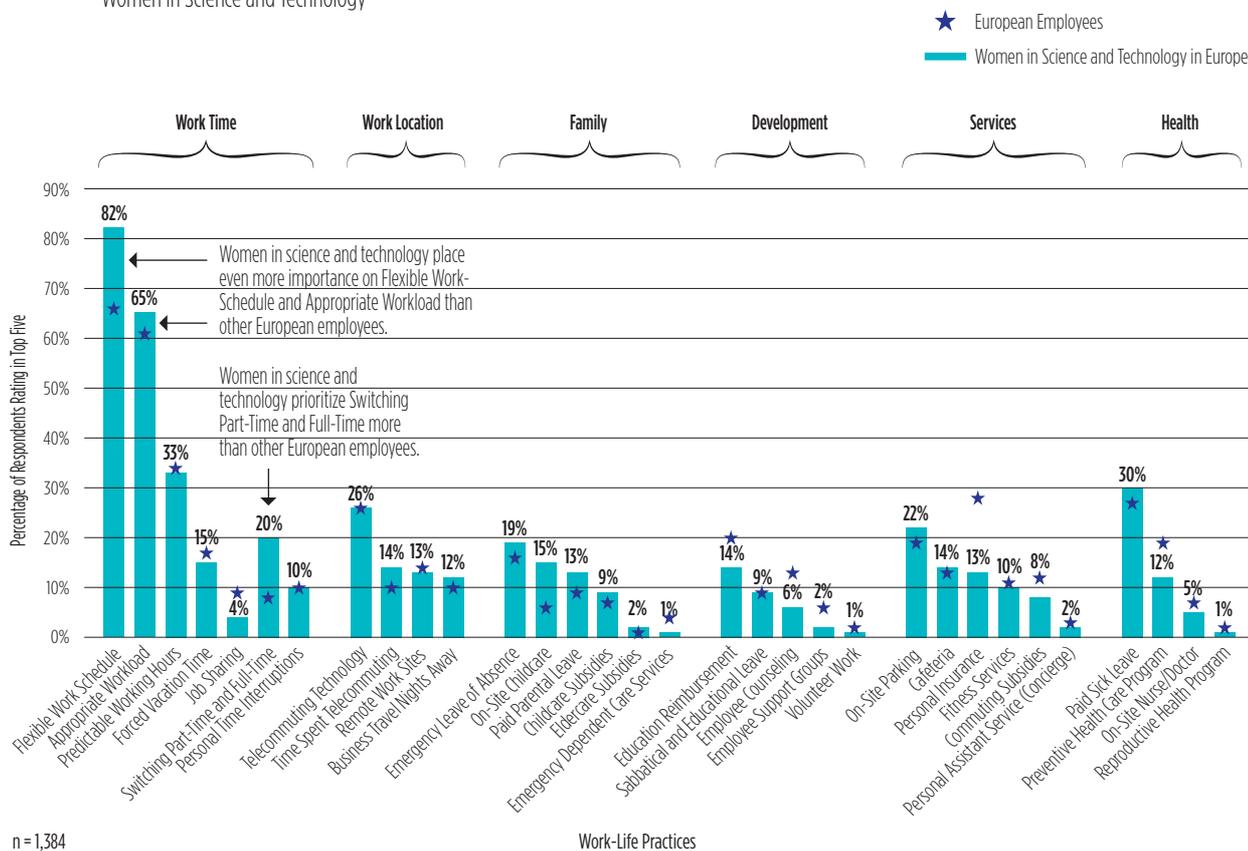
* Driver is relevant for WLP consumption but not for WLP awareness.

Figure 4.0 Percentage of Variance in Family Preferences Explained By Segment in Europe



Source: Corporate Leadership Council research.

Figure 4.1 Percentage of Respondents Rating Work-Life Attribute in Top Five Most Important for Assessing Potential Employers Women in Science and Technology



n = 1,384

Work-Life Practices

Work-life balance and performance

Laure Turner ⁽¹⁾

Introduction

Companies are devoting increasing resources to the implementation of work-life balance practices, in order to attract and retain their employees, especially in management positions. The Corporate Leadership Council (CLC) study presented earlier in this report shows the importance of the work-life proposition of companies to secure their pool of talents ⁽²⁾. However, the direct link between companies' performance and the level of work-life balance achieved in the organization has seldom been studied, to our knowledge. Bloom and Van Reenen (2006) pioneered this line of research, collecting extensive data on management and work-life balance practices in about 700 medium-sized firms in the USA, France, Germany and the UK. Their paper shows in particular that the positive correlation of firm productivity with the availability of work-life balance practices in an organization is not robust: it arises only because availability of work-life balance practices is strongly related to good management.

The originality of our research is to work on a disaggregated scale assessing the relationship between employees work-life balance and employees' performance. Using employees' performance data (evaluations) and the CLC Employees Survey on work-life balance drivers of commitment, this research builds both performance and work-life balance indicators, studies how they are related, and in particular when are high performance and high work-life balance combined.

Work-life balance (WLB) is assessed through the perceived importance of, satisfaction with, and utilization of work-life balance practices, as well as through the degree of conflict between work and family life. Results take into account both the accessibility of the work-life balance practices in the organization and the attitude of top management and peers with regards to the consumption of work-life balance practices. The country of residence, gender, age, family situation, educational and job levels are accounted for as well. Because ratings of individual performance may be affected or even biased by the employee's consumption of work-like balance practices, a second analysis looking at project performance is included. It sheds light on the relation between projects' performance and the work-life balance of the individuals working on the projects.

Data and methodology

This study draws on three sets of data: data on employees' answers to the CLC Survey, data on individual performance, and data on industrial project performance and work-life balance in teams.

The first dataset contains the individuals' answers to the CLC Survey about how they perceive and consume work-life balance practices. The answers analyzed relate to a set of questions about the perceived importance of WLB, the utilization of WLB practices, conflict, the attitude of top management toward WLB consumption, the accessibility of WLB practices, and the neutrality of it in regard to performance evaluation criteria (see Annex, Table A.1).

This employees' dataset was merged with a second dataset on individual performance ratings. Individual performance ratings are highly confidential and sensitive data. The advantage of using those data is to connect WLB directly to performance at the same individual level. One company agreed to provide employees' ratings, which represent 2 758 employees, disseminated worldwide. The performance indicator averages the performance rating of the employees over the last three years (see Annex, Table A.2). The dataset also contains information on which employees are selected as "high potentials" by the company. We focus on those employees in the following. They represent 10% of the sample.

In order to clarify the relationship between WLB and performance, we categorized the employees into groups, and then studied the performance of those groups. Multiple Correspondence Analysis was used to analyze the relationships of several WLB variables (perception of importance, conflict, satisfaction with, ...), and identify the main dimensions according to which the sample was partitioned. This method allowed the

1 ENSAE (École Nationale de la Statistique et de l'Administration Économique), Paris, France, laure.turner@ensae.fr
This work benefited from the Corporate Leadership Council Survey. This publication does not reflect the position of ENSAE but only the author's view. We also thank the HR departments of the two companies that participated in this study.

2 The Council surveyed more than 50 000 employees from 35 different organizations across 20 industries.

constitution of four groups in which employees were the most “similar” across the dimensions identified, and the most “different” from the employees of the other groups.

To study WLB in relation to project performance, we collected project evaluations and related the projects’ performance to the level of work-life balance reached in the teams working on the projects. The advantage of analyzing data at the project level is to provide a correction in the case where the employees’ rating would be impacted by the employees’ consumption of work-life balance. One company, different from the one previously mentioned, participated in this study at the project level. The project performance measure in this company was the projects’ rating given by the client. If this measure was not available, performance was measured by the delay of delivery, the cost of the project, as well as by the average per team of the employees’ bonuses. These measures were available from 2004 to 2006 (see Annex, Table A.2). The company had the request that, for time saving reasons, the study reached about 200 employees and consumed as little as possible of the employees’ time (something like 10 minutes). On this basis, we selected all the high and low performance projects in 2006, which represented 22 projects and 278 persons (3). A short questionnaire was sent to those 278 employees, with questions similar to the ones in the CLC Survey for the sake of comparability, and concerning the perception of the WLB importance, the utilization of WLB practices, and the degree of conflict. There were 121 respondents (47% of the surveyed employees). Finally the dataset contains the employees’ answers to this questionnaire and the performance of the projects on which they worked (i.e. 145 observations). This

dataset allowed exploring by category of project (high performance/low performance) the WLB of the employees who have worked on it(4). The team synergies contributing to project performance are not accounted for in this descriptive work.

The next section presents the results, first for the link between WLB and individual performance, and second for the relation between WLB and project performance.

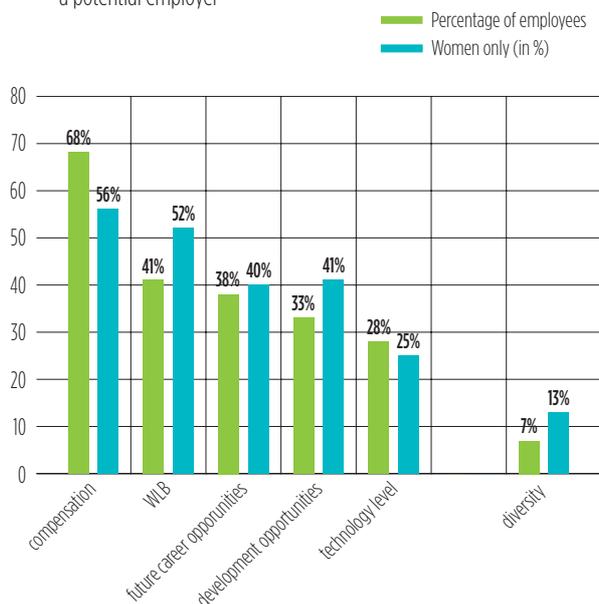
Results

Work-life balance and individual performance

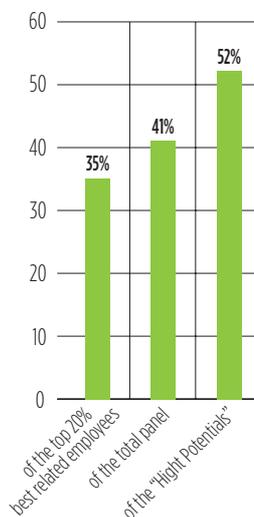
The employees studied show similar interest and consumption of work-life balance practices behavior as in the full sample of 50 000 employees analyzed in the CLC study. The first section emphasizes the main descriptive statistics concerning their WLB profiles, the second section relates the WLB profiles to individual performance, and the third section is a discussion of the results.

- 3 About 2/3 of the projects have a high performance, and 1/3 a low performance.
- 4 Of course, it would have been better if we could have surveyed the employees as extensively as done by the CLC Survey. Due to the size constraint on the questionnaire, only few questions could be asked, selected on the basis of the results of the study at the individual level.

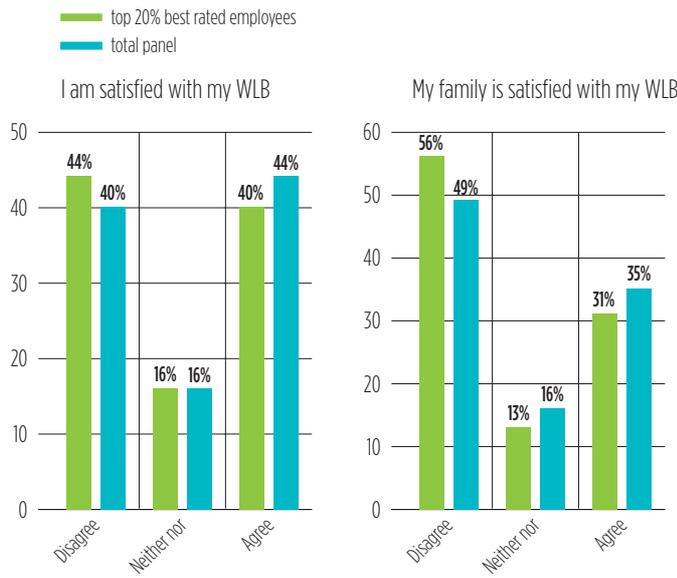
Graph 1 **Work-life balance as a driver of attraction**
the 5/38 most important characteristics when considering a potential employer



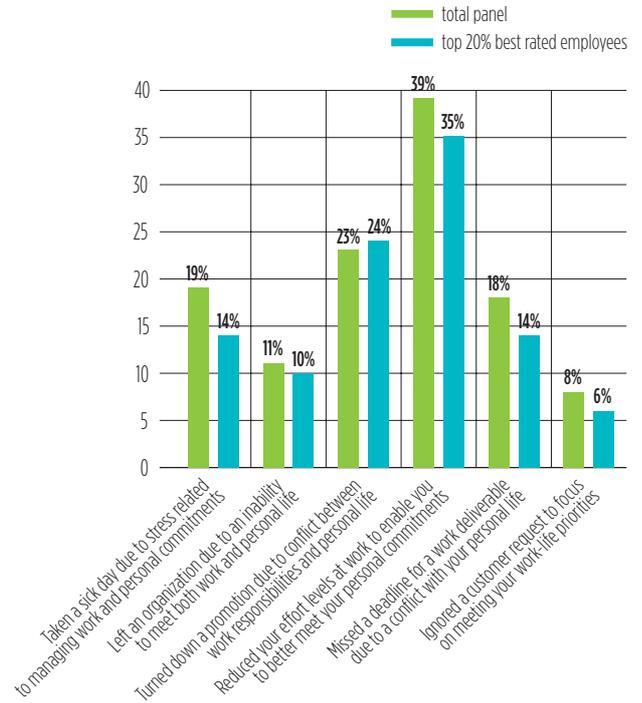
Graph 2 **Perceived importance of Work-life balance and Performance**
Consider WLB as one of the 5/38 most important characteristic when considering a potential employer



Graph 3 Satisfaction with work-life balance and Performance



Graph 4 Conflict between personal and work-life, and Performance Trade-offs work/personal life



Work-life Balance profiles

First, about 40% of the employees perceive WLB as important, in the sense that they consider that WLB is a major driver of attraction when looking for a potential employer. WLB is ranked second after the compensation criteria. Interestingly, men value WLB as women do, even though slightly less. They also value compensation slightly more than women do (Graph 1). However, the top 20% best rated employees do not perceive WLB as important as the rest of the sample. But, the “high potentials”, 40% of which are amongst the best rated employees and the others closely behind, show a strong preference for WLB compared to the total panel (Graph 2).

Secondly, the level of conflict between personal development at work and private commitments is quite high. The answers to a set of questions related to conflict were analyzed (see Annex, Table A.1). Up to 40% of the sample for instance already had to reduce effort levels at work to better meet their personal commitments. And only 30% of the employees agree that their personal development at work rarely conflicts with their work-life priorities. Also, the greater the conflict, especially from the family point of view, the lower is personal satisfaction with WLB.

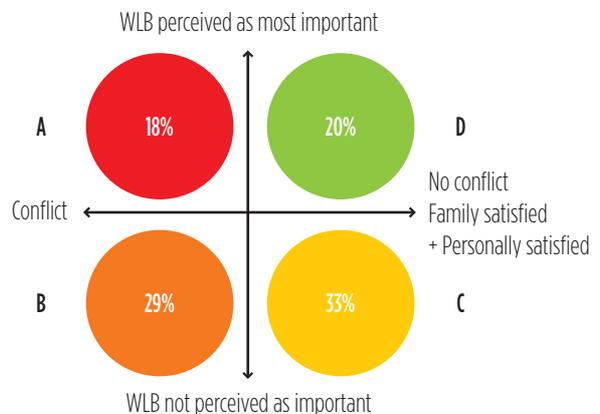
The difference in answers between the total panel and the best-rated employees is not clear-cut, even though the best performers seem to experience more conflict (Graph 3) (5). However, they are also less likely to reduce work commitment in order to meet personal commitments (Graph 4).

Multiple Correspondence Analysis was used to analyze the relationships of the several WLB variables, and identify the main

dimensions according to which the sample can be partitioned. The results are presented on Graph 5. The results show that employees cluster according to two main dimensions: the degree of work-life conflict and the degree to which work-life balance is perceived as important. The level of conflict appears to be principally defined by a negative answer to two questions (6): “your

5 The young generation of the “high potentials” expresses the same kind of pattern as the best-rated employees.

Graph 5 Graph 5 : Four WLB group profiles



personal development at work rarely conflicts with your work-life priorities”, “the work-life practices that you utilize rarely conflict with the design of your job”. We therefore find four groups:

- A. A group of employees (18%) who perceive WLB as important and who experience a high level of conflict.
- B. A group of employees (29%) who do not perceive WLB as important and who experience a high level of conflict.
- C. A group of employees (33%) who do not perceive WLB as important, who do not experience conflict and are satisfied with their WLB.
- D. A group of employees (20%) who perceive WLB as important, who do not experience conflict and are satisfied with their WLB.

Groups A to D can be sorted in an ascending way on a WLB scale, group A having the lowest level of WLB and group D the highest. The next section relates this classification to the individual performance.

The Work-life balance - Performance relation

Turning to the individual performance of the members of the four groups of WLB described above sheds light on the link between WLB and performance.

In Graph 6, performance is plotted against WLB. From this graph it is clear that the top 20% of best-rated employees is over-represented compared to the others in the group who experience conflict but do not perceive WLB as important. As WLB increases, the concentration of high performers decreases. Also, best performers tend to be in group B and C not feeling that WLB is important whether or not they do have conflict.

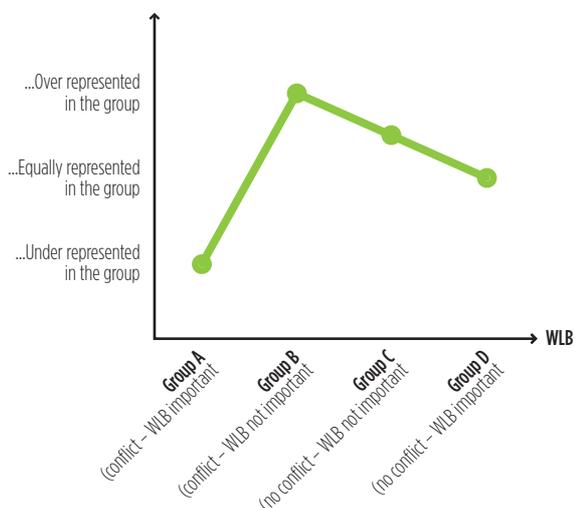
Noticeably, high performers are under-represented in group A which experiences both conflict and perceives WLB as important, a group most challenged from the WLB point of view. However, in this group A, there are relatively more “high potentials” than in the other groups, which makes this group of employees an important one to take into consideration (Graph 7).

Discussion

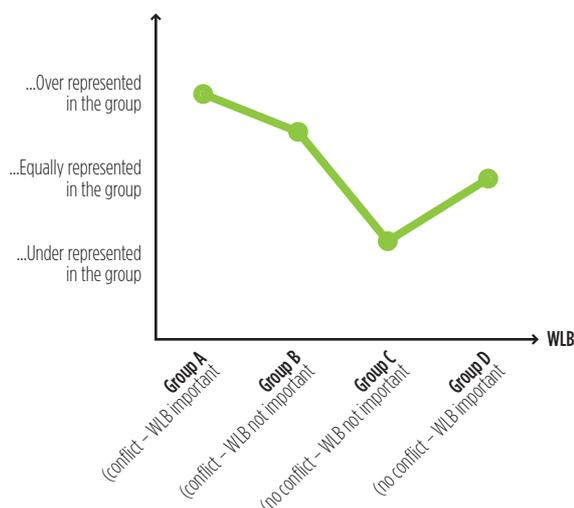
The group B of high performers – low WLB shows the following characteristics (Table 1): the employees mainly belong to age category 35-39 and 50-54 years; there are about as many women in this group as on average in the sample; the employees are less likely to have children than do those in the other groups (66% have at least one child, against 77% for group A where the WLB is the worst), and less are married (76% against about 80% in the other groups); as in the other groups, about 50% have a working partner. In most contrast with the other groups, up to 46% of them declare that their partner’s work is less or much less important than theirs (7). The employees in this group also have not much control over their workload or over their business travel schedule. About 60% of them share the idea that to get ahead in the organization they have to work overtime on a regular basis, and that showing commitment is prioritizing work over personal life. On three points – importance of partner’s work, perception of the need for career advancement to work overtime on a regular basis and perception that commitment is prioritizing work over personal life – this group distinguishes itself the most from group D who has the highest WLB. Group D is also younger (30-34 mainly), and contains more women (19% as compared to 13% in the sample).

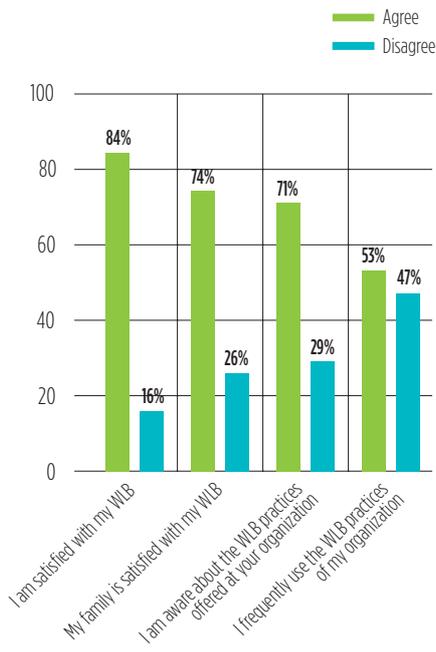
6 Answers are in the form agree/disagree on a 7 level scale.
 7 Distinguishing by gender makes no significant difference.

Graph 6 Position of the performers with regards to WLB and conflicts



Graph 7 Subset of performers with potential. Position with regards to WLB and conflicts



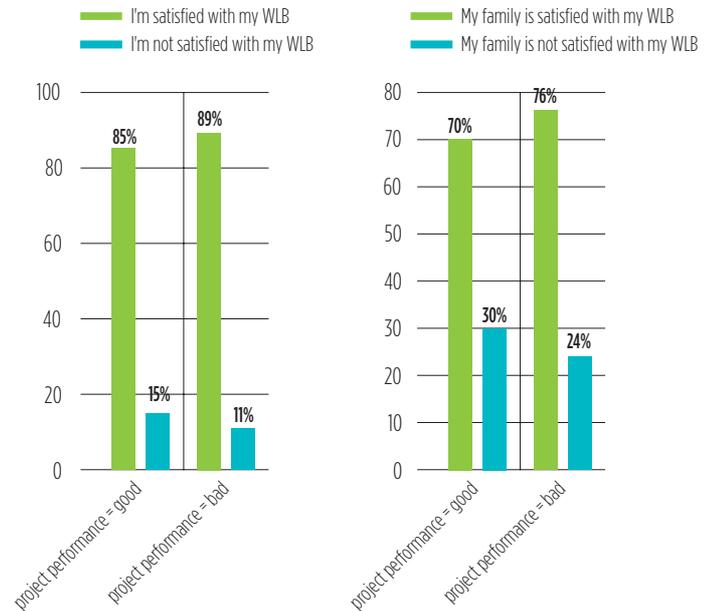
Graph 8 **Work-life balance in the second company studied**

Group A shows a similar pattern than group B, except that in some ways the employees of group A seem to bear more “constraints”. Predominantly aged 35-39, they are the ones who are more likely to have children in the sample (77% do), and they have the poorest control over both their work schedule and their workload as compared to the other groups.

Interestingly, group C, which is the one who compares best in terms of performance to group B, is characterized on the contrary by the highest level of control, be it over their work schedule, over their job design, over their workload, over their business travel schedule, or over the WLB practices that they use. This group is more senior (50-54 predominantly), and contains less women (9%). In terms of references – about the need for career advancement to work overtime on a regular basis and to prioritize work over personal life – they show proximity to group D.

In conclusion, a way to interpret those results is that the high performers, having low WLB (group B), are at risk in the sense that the frontier is tiny with group A where personal constraints are more stringent, the control over work schedule and workload more loose, and the conflict higher: group A has a lower performance. However, the results also suggest that the provision of tailored WLB practices might allow group B to get closer to group C on the WLB scale, keeping a comparable performance: group C has a good control over its job attributes and over the WLB practices used.

The next part turns to the project performance, and looks at how it relates to the WLB in teams.

Graph 9 **Satisfaction with work-life balance and Project Performance**
(145 observations)

Work-life balance and collective performance

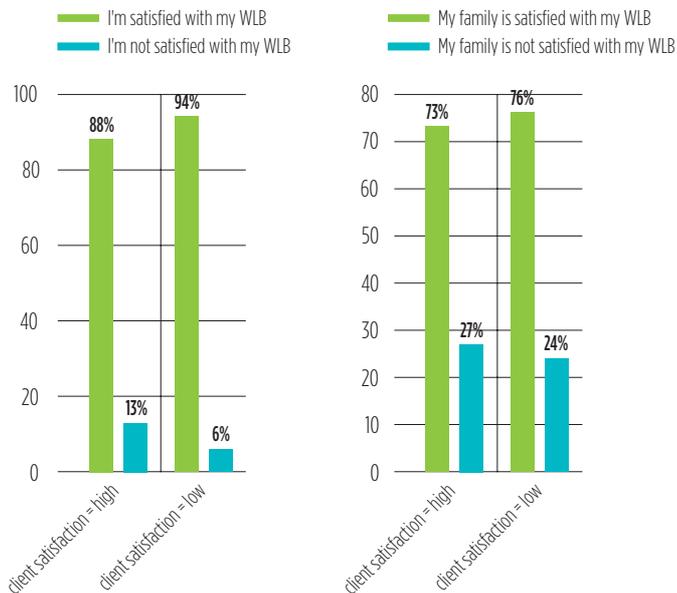
The employees surveyed in relation to the projects show a different pattern as regard to WLB, specific to the company in which they work. The first section describes their WLB profiles and relates to project performance to the employees' WLB.

Work-life balance in teams and project performance

The company surveyed appears to have a very high level of WLB amongst its employees, as compared to the general sample described in the CLC study. As a matter of fact, 84% of the employees surveyed are satisfied with their WLB, which is more than twice the figure obtained for the first company described previously. Moreover, 71% of the employees are aware of the WLB practices available in the company, and 53% of them use these practices frequently (Graph 8). The perception of the importance of WLB is much higher too in this sample, since about 60% of the surveyed employees consider it as one of the five main drivers of attraction to a potential employer (against about 40% in the general sample). This specific pattern should be kept in mind when looking at project performance in relation to the WLB of the respondents having worked on the projects.

The employees working on high and on low performance projects equally perceive WLB as important. And employees are evenly satisfied with their WLB whatever the project performance, the ones on low performance projects slightly more. However, the family of the employees having worked on high rated projects is less satisfied of the WLB of their relative than the family of the employees having worked on low performance

Graph 10 Satisfaction with work-life balance and Client satisfaction (65 observations)



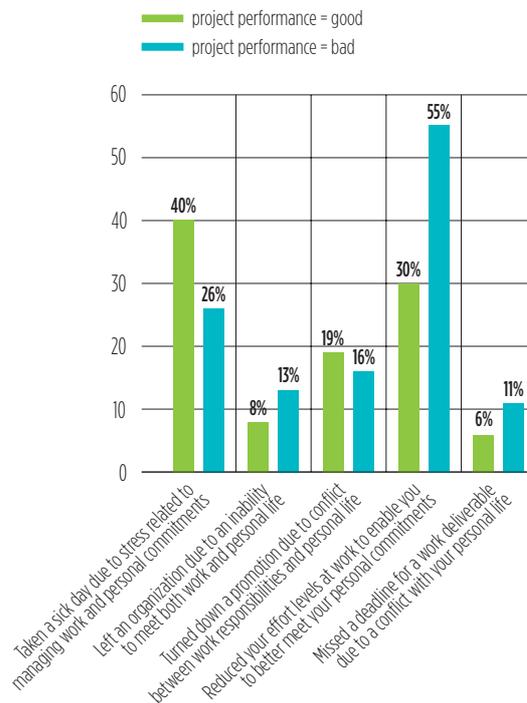
projects (Graph 9). Moreover, focusing only on the client level of satisfaction as the indicator of the performance of the projects, the lower the client satisfaction, the higher the personal and family satisfaction about WLB (Graph 10).

Interestingly, the “low performance” group is the one which utilizes less the WLB practices of the organization, whereas it was the contrary previously. Here, lower performance is not related to a higher level of WLB consumption. Moreover, looking more deeply at the conflict variables, we get a picture that contrasts and complements the one obtained previously. Graph 11 shows, by performance of the projects, the responses of the employees to some situations of conflict between their personal and work commitments. It appears that people on low performance projects solve the conflict much more by reducing their effort at work to meet personal commitments than the employees on high rated projects, whereas on the contrary, individuals on high rated projects are more likely to take a sick day due to stress related to managing both work and personal commitments than the employees on low projects. This picture is the same when focusing on the client satisfaction measure.

For the exercise of comparing the results on collective and individual performance, we group the individuals surveyed according to the quadrant used previously (defined by the conflict/perception dimensions). The classification into groups was constituted on a different sample in the previous part and therefore does not completely fit these data ⁽⁸⁾, nevertheless it is useful for comparison purposes. The relationship is similar to

8 In particular, there is no employee fitting the ‘no conflict – WLB not important’ group.

Graph 11 Conflict and project performance



the one obtained for the concentration of best-rated employees in relation to WLB. Good projects are less often observed for the worst level of WLB (group A), and more for an intermediate level of WLB (group B). It also shows that satisfactory collective performance is compatible with the high level of WLB (group B, knowing the specificity of the sample of having high WLB).

Discussion

The first result conveyed by the previous descriptive statistics is that the employees on high performance projects seem to rather work until they have to take a sick day leave related to stress than reduce their effort level at work to meet their personal commitments. It is the reverse for the employees having worked on low performance projects. Even though the employees surveyed are not “at risk” in the sense that they all report a high level of WLB, the result confirms the importance of the WLB practices to help the employees to meet their personal and work goals and to manage a good performance. In this case, the possibility of using emergency leave of absence is related to collective performance.

The second result is a confirmation at the project level that performance is not achieved for the lowest level of WLB, and more for an intermediate level of WLB.

Conclusion

The results suggest that performance is associated with an intermediary level of WLB. When work-life balance is perceived as important but cannot be reached in the organization, performance is lower. Interestingly, among the still high performers in this latter group, we predominantly find “high potentials”.

Our findings suggest that a driver to sustain the performance of high potentials and high performers is to give employees control over their work schedule, their workload, and over the work-life balance practices that they use. The results also suggest that project performance would benefit from such measures.

This paper presented an approach – relating employees' WLB to employees' performance – which can allow companies to monitor the effectiveness of WLB policies for their high performers and high potentials. In order to take the study and the

methodology further, performance data from more companies would be needed. Protocols can be established for data collection and for sharing data across firms at a level of aggregation ensuring statistical relevance and confidentiality.

Reference

Bloom N. and Van Reenen J., 2006, "Management practices, work-life balance, and productivity: a review of some recent evidence", Oxford Review of Economic Policy, Vol. 22, No. 4.

Table 1: Main characteristics of the WLB groups

	Group A conflict / WLB perceived as important	Group B conflict / WLB not perceived as important	Group C no conflict / WLB not perceived as important	Group D no conflict / WLB perceived as important
Average employed-level	mid-level management mid-level individual contributor	mid-level management mid-level individual contributor	mid-level management mid-level individual contributor	mid-level management mid-level individual contributor
Age most represented	35 - 39	35 - 39 and 50 - 54	50 - 54 (and slightly less 35 - 39, 40 - 44, 45 - 49)	30 - 34 and 35 - 39
% of women (average in the sample: 13%)	15 %	12 %	9 %	19 %
% of employees having at least one child (average in the sample: 71%)	77 %	66 %	70 %	74 %
% of employees having spouse work outside the home (average in the sample: 51 %)	55 %	48 %	49 %	55 %
% of married (average in the sample: 80 %)	80 %	76 %	82 %	82 %
% of employees saying partner's career is more important than theirs (average in the sample 7 %)	8 %	3 %	6 %	11 %
% of employees saying partner's career is equally important than theirs (average in the sample: 49 %)	52 %	48 %	55 %	45 %
% of employees saying partner's career is less/much less important than theirs (average in the sample: 39 %)	37 %	46 %	42 %	28 %
% of employees agreeing that to get ahead in the organization, employees are expected to work overtime on a regular basis	62 %	61 %	47 %	41 %
% of employees agreeing that showing commitment is prioritizing work over personal life	56 %	60 %	51 %	45 %
% of employees saying they have control over ... the design of their job	66 %	70 %	75 %	56 %
... their work schedule	58 %	63 %	81 %	76 %
... their workload	31 %	44 %	58 %	52 %
... their business travel schedule	39 %	31 %	55 %	53 %
... the WLB practices used	55 %	55 %	71 %	67 %
% of employees frequently using the work-life practices of their organization	36 %	35 %	39 %	48 %

Annex

Table A.1: Questions of the CLC Survey analyzed in this study

Category	Questions analyzed
Perceived importance of WLB	Choose "Work-life balance" at the question "What are the 5/38 most important characteristics when considering a potential employer". Choose WLB practices at the question "The 5/32 most important characteristics when considering a potential employer".
Utilization of WLB practices	"I frequently use the WLB practices of my organization" (agree/disagree type of answers), WLB Practices used
Conflict	"Are you satisfied with your WLB", "Is your family satisfied with your work-life balance", "Does your personal development at work rarely conflicts with your work-life priorities", "Do the work-life practices that you utilize rarely conflict with the design of your job", "Have you ever taken a sick day due to stress related to managing work and personal commitments", "Left an organization due to an inability to meet both work and personal life", "Turned down a promotion due to conflict between work responsibilities and personal life", "Reduced your effort levels at work to enable you to better meet your personal commitments", "Missed a deadline for a work deliverable due to a conflict with your personal life", "Ignored a customer request to focus on meeting your work-life priorities", "In this organization, employees are expected to put their job before their private life when necessary".
Control (agree/disagree type of answers)	"I have a high level of control over overtime hours worked", "I have a high level of control over my work schedule", "I have a high level of control over the work-life practices that I use".
Attitude of the management toward WLB consumption (agree/disagree type of answers)	"The organization provides a good level of WLB", "My manager frequently uses the work-life practices offered by my organization", "Senior executives at my organization promote participation in work-life practices offered by my organization", "My manager promote participation in work-life practices offered by my organization", "My HR department promote participation in work-life practices offered by my organization", "To get ahead in the organization, employees are expected to work overtime on a regular basis", "In this organization, employees are expected to put their job before their private life when necessary", "In order to be taken seriously in this organization, employees should work long days and be available at all time", "Effective actions in advancing your career in the organization" (work long hours, prioritize work over personal life, don't take leave of absence, don't take parental leave, etc.).
Accessibility	"The work-life practices I want to use are available at my organization", "The work-life practices of my organization are easily accessible to employees".
Neutrality	"The work-life practices that I use rarely conflict with the performance evaluation criteria for my job".

Table A.2: Definition of the individual and collective performance measures

Individual evaluation Company n°1 (2758 employees)	Performance measure
<ul style="list-style-type: none"> - Individual rating in the form of an appreciation A - B - C - D - High potentials detection 	<ul style="list-style-type: none"> - We identified the "best rated employees" as the employees having received only As and at most one B over the last 3 years. They represent 18% of the panel. - The "High Potentials" represent 10% of the panel. 40% of them belong to the "best rated employees" group.
Team/project evaluations Company n°2 (22 projects, 121 respondents)	Performance measure
<ul style="list-style-type: none"> - Satisfaction of the client (note from 1 to 4) - Real costs of the projects < anticipated costs - No delay in delivery of priority deliverables - Research bonuses averaged per project over all the team members (not only the respondents): rank 1 (low bonus, 25% of the sample) to 4 (high bonus, 25% of the sample) 	<p>High performance</p> <ul style="list-style-type: none"> - if Client satisfaction = 4 - or if the 3 other evaluations are indicating performance (meet the anticipated costs, no delay, bonus level = 4) <p>Low performance</p> <ul style="list-style-type: none"> - if client satisfaction = 1 - or if the 3 other evaluations are indicating low performance (do not meet the anticipated costs, delay, bonus level = 1)

Flexible working policies, gender and culture change

Suzan Lewis ⁽¹⁾ ⁽²⁾

Introduction

Flexible working arrangements and other “work-life balance” policies are often regarded as a means for enhancing retention of women in SET and minimising the leaky pipeline. However, policies alone are not sufficient to bring about real changes (Lewis, 1997; Rapoport, Bailyn, Fletcher and Pruitt, 2002). It is increasingly recognised that the most difficult barriers to break down in SET workplaces relate to organisational culture, including stereotypes and unwritten rules that can make it difficult for women to “fit in” and prosper (Miller, 2004).

This paper draws on theory of gendered organisations and sense of entitlement theory (see theoretical overview section) and uses a “dual agenda” lens to examine everyday working practices, their underlying assumptions and intended and unintended consequences for gender equity and workplace effectiveness. The focus is on Research and Development departments, where there are a relatively high proportion of women scientists, in two SET organisations.

The overall objectives of the project reported here are:

1. to explore assumptions and unwritten rules embedded in workplace cultures and everyday working practices within SET organisations;
2. to understand how these assumptions and unwritten rules operate and with what consequences;
3. to identify elements of promising practices to meet the dual agenda of gender equity and workplace effectiveness as a basis for future learning and development.

Methodology and research process

The study adopted a research strategy based on the initial phases of Collaborative Interactive Action Research (CIAR) (Rapoport et al, 2002). CIAR is a process of mutual enquiry that yields new ways of thinking about issues within organisations. This involves a number of stages: establishing case study organisations; establishing collaboration within the companies and a work unit to participate in the research; data gathering and analysis; reflection on the analysis. The final phase of collaboration, beyond the scope of this project, would be to

develop innovative solutions and the development, piloting and evaluation of interventions to bring about change.

The criteria for selection of organisations were: an awareness of issues faced by the women and also men in SET, especially in relation to “work-life balance”; and the existence of a number of policies and practices designed to support and promote the careers of women in SET. It was important that the cases were “leading edge” companies in order to highlight emerging processes of moving beyond policies to identify deeper level changes needed to meet the dual agenda of gender equity and workplace effectiveness, as well as current barriers in terms of unwritten rules, values and structures. Beyond these criteria the two cases were self selected. Both were SET companies, located in France. Overall 35 interviews were carried out of whom 24 were with women and 11 with men. In one organisation 17 members of one Research and Development team participated, while in the other 13 participants were in R and D, 3 in marketing, and 2 in HR.

Data gathering involved interviews focusing on working practices (how the work gets done), how people are valued, notions of success, working relationships and what it is like to work there for women and for men. Interview participants were encouraged to explore the assumptions or unwritten rules that underpinned working practices as well as possible consequences.

Interviews were conducted in English where possible, but with a translator present to assist when needed. Some were conducted in French because the interviewee were less comfortable talking in English. All interviews were taped, transcribed verbatim and where necessary translated into English. The data were analysed using a gender and dual agenda lens to develop a thematic grid. The analysis focused on identifying dominant working practices, the assumptions underpinning them and their impact on women’s (and men’s) careers and workplace effectiveness. Examples of positive practices that meet the dual agenda of gender equity and workplace effectiveness were also identified.

1 I acknowledge the valuable assistance of Dr Anne Humbert with the interviews and analysis.

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The French Context

The French context is important for these case studies. The French welfare state is based on the 'working mother model' and there exists a whole range of measures to support working parents (Fagnani and Math, 2008). France leads the European Union in the provision of childcare and benefits aimed at reducing child care costs for families (Gornick and Meyers, 2003, Fagnani and Math, 2008). Thus childcare was not an issue for the interview participants. There are also highly developed parental leave policies. In this context France has the highest fertility rates within the European Union. Many of those interviewed had three children. Nevertheless, despite gender-neutral discourse and some effort to encourage fathers to be more involved in family life, women continue to bear the main responsibilities for work in the home (Fagnani and Math, 2008). Moreover most children attend school only four days a week; many schools close on Wednesdays, so mothers often work a four day week.

The legally prescribed 35 hour work week in France provides some opportunities for flexible working arrangements, although companies now have the right to renegotiate working hours. Generally employees who work more than 35 hours can usually take extra time off, although not all do so. Managers in particular in both the companies, regarded this as largely irrelevant.

"The 35-hours law ? It's not for managers. We don't count our hours of working. We can leave early from work if we have a problem, but we have to work more if we need to in a day".
 Women scientist

Findings

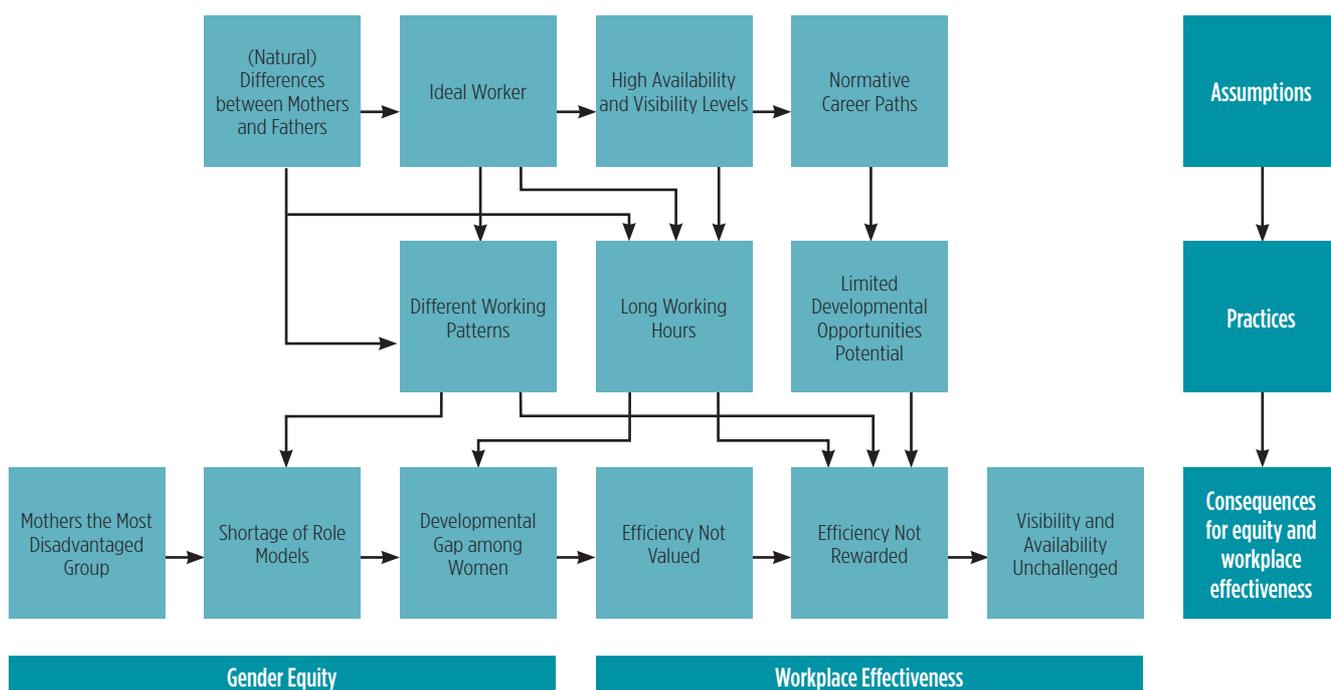
We represent the findings in Figure 1. This outlines a model of the process whereby everyday working practices are underpinned by gendered assumptions and have negative consequences for gender equity and workplace effectiveness.

Workplace practices

Figure 1 depicts three related areas of workplace practices which emerged as pivotal to an understanding of women's (and men's) experiences in the two workplaces. They relate to: flexible working arrangements which result in some different working patterns of women and men; long working hours, especially in management; and unclear and often limited career opportunities, especially for women. Each of these is described below, followed by an analysis of the assumptions and unwritten rules which underpin them and the consequences of these practices for both gender equity and workplace effectiveness.

A major characteristic of both cases was the high level of reported flexibility. In one of the companies there was a strong commitment to valuing diversity and to enabling women with family commitments to combine work and family in productive ways. The atmosphere, in R and D in particular, could be described as very women friendly. The atmosphere was also described as woman friendly or mother friendly in the R and D Department in the other company although it was reported that other departments were much more male dominated and

Figure 1.



less “family friendly”. The work of scientists in R and D lends itself better than other departments to flexible working.

Many of the women scientists whom we interviewed in both companies, and a few of the men, worked a 4 day week, largely because of the school closures on Wednesdays, a common practice in France. The reduction in time was not usually associated with a reduction in workload. Rather, work was condensed into fewer days and resulted in some intensification or invisibility of work, for example work performed at home. However, the structures were rather different in the two contexts. In one of the companies women we interviewed reported that their salary was cut by one fifth. Many said they actually worked longer than the four days, took work home, and even came in on their day off if it was deemed to be necessary. However, there was no sense of entitlement among these women to continue to be paid a full salary for doing a full workload in a shorter time (what might be conceptualised elsewhere as a compressed work week).

The costs of working a reduced hour's week were somewhat less in the other company where a collective agreement allowed for a 32 hour week, that is just 3 hours less than full time, but this could be spread over 4 days. Extra payment was also provided to bring pension contributions up to 35 hours. The additional pay arrangement applied for a specified period of years, although it was still possible to work a 32 hour week after this, but without the extra pension contributions. Again workload was not necessarily reduced.

Where the financial cost of working four days was less men as well as women worked reduced hours, although more women than men used it for childcare (usually taking a Wednesday off) and more men than women used it for other reasons – usually taking a Friday, for a three day weekend.

In the department we have about 45 % women and 55 % men. And I think that 80 % of the population is at work 4 days a week...But some men have other activities like they teach in schools or sometimes we have people also doing politics... It's not always for the children. Woman manager

It's practical for mothers to have their Wednesdays off to take care of their children.

Interviewer: And what about fathers?

Ah France is still a chauvinist country!

Man, engineer working 32 hours, but not because of childcare

Nevertheless the normalisation of this way of working made it easier for younger men, who wanted to be involved in childcare to do so, thus may potentially enhance gender equity in the long term.

I think especially very young men, 30 years old for example who had babies in the last two or three years...ask us in the interview if they can keep their Wednesday...I think that there is a change in the men. Woman manager

Although there was a general discourse of gender neutral flexibility and family friendliness in both companies, this co-existed with a second working practice, namely, expectations of long working hours in some jobs, especially at more senior levels. This was associated with heavy workloads, and/or for showing commitment.

I don't think you have to stay until late in the evening to do everything you have to do. It's rather in the culture, to leave from work late in order to be seen! Woman scientist

I'm paid for 32 hours...I work a lot more...But as a manager... you don't have schedules. Woman manager

One practice that exacerbated expectations of long hours and conflicted with the discourse of family friendliness was that of holding long meetings, often running on for a longer time than some of the interviewees felt was necessary, or held in the evenings and therefore difficult for those with childcare commitments.

I think (meetings are) long! Some very precise points could be discussed in half an hour...I think we discuss many things apart from the main topic. Woman scientist

In the team where working four days was more common they adapted by not scheduling meetings on Wednesdays and Fridays, but more senior managers, particularly those without childcare responsibilities were less aware of the need to change.

The bosses don't hesitate to put meetings at 5 or 6 in the afternoon, it doesn't matter, and you have to be there!... I think it could be different if our directors had to save time. Woman manager

Similarly other related practices are often inefficient, but not challenged.

And a lot of people spend a lot of time waiting for their bosses because they are in meetings and therefore unavailable. And you can't take any decisions without first asking your boss. Man scientist

The conflicting practices of flexibility and family friendliness for mothers on the one hand and expectations of long working hours for more developmental jobs on the other hand, feed into the third set of everyday practices concerning promotion and development. Criteria for being given interesting, developmental work and for advancement are often informal and not always perceived to be clear or explicit (except for lower status technician jobs). Thus there were often unclear and and/or limited opportunities especially for the women scientists.

Hence women remain disadvantaged although both companies are making good strides in reducing this. Some women were able to progress in their careers, up to a point, in both organisations, including being promoted to management while working a 4 day week. Both also had the same problems.

In one company the number of women in management was growing considerably but, as in most organisations remained proportionately lower than the number of women staff. In the other, in the specific R and D team interviewed, there were more women than men in management and this was beginning to make a difference to culture and practice. However, there were three promotional routes in this company, (project, management and expertise) and while the number of women advancing by the first two routes was growing, many fewer women advanced via the expertise group. This may be related to the requirement to publish which also involves networking with academics in universities, and is likely to be particularly time intensive. An understanding of, and challenging the working practices discussed above and the underlying assumptions discussed in the next section may help to progress women's advancement in SET. The next section considers the underlying assumptions and the consequences of these practices.

Assumptions, working practices and consequences for the dual agenda of gender equity and workplace effectiveness

Analysis of the data revealed a number of gendered assumptions – that is assumptions based on the ideology of separate spheres (see theoretical overview section). These assumptions underpinned the taken-for-granted working practices discussed above, which, in turn, impacted on both gender equity and workplace effectiveness as illustrated in Figure 1.

At the most basic, the differential take up of the 4 day week by women and men is underpinned by assumptions about motherhood and assumptions about ideal workers. The ideal worker assumptions lead to an overvaluing of availability and visibility which underpins expectations of long working hours especially for those in developmental jobs and an undervaluing of those (mostly women) who work less, or condense their work into less time. Finally these parts of the process feed into further assumptions about normative and valued career paths. In each of these steps there are negative consequences for gender equity and workplace effectiveness, which accumulate to disadvantage women.

Different patterns of working among women and men: assumptions and consequences.

Underpinning the take up of the 4 day week by women only among those interviewed in one company and by men and women, but for different reasons in the other, lie taken-for-granted assumptions about mothers, fathers, ideal workers and choices.

It is assumed that mothers are the main carers, are often less inclined to prioritise work and that their incomes are less important than those of fathers. At the same time it is widely assumed that ideal committed workers work full time and often long hours and always prioritise their jobs. Thus mothers, by

definition are not expected to be ideal workers and men are discouraged from reducing working time for childcare. The view is that women can be ideal employees, especially if they do not have children, but as in many other organisations, the women, especially those with children, feel they first have to prove themselves.

In my position, I proved myself so I'm OK now, but it was hard. It was harder for me as a woman. Woman scientist, manager

Women with children are seen as being less able to commit themselves, while men with children, no. I think it's beginning to change though. Woman engineer

In the company where both men and women use the 32 hour provision and the income penalty is lower, there is still a view among some managers that this arrangement is most valuable for mothers, and indeed even for women who may become mothers in the future. One woman without children was surprised to be told by management that it was a good idea to work 32 hours as she may have children one day and would find the arrangement useful.

A further assumption is that women with children freely choose to work less and by implication, to be “non ideal” workers by not conforming to the male model of work. It is assumed to some extent in both companies, that mothers have to choose between sacrificing time for family and sacrificing pay. Earnings are viewed as less important to mothers, whose partners, it is assumed, will be the main providers. The idea that mothers could both have time for family and accomplish a full week's workload in less time with full time pay is rarely considered. This is not viewed as in any way discriminatory, but as giving women choices to opt out of “ideal” careers to be what is widely perceived as good mothers.

However, to have the capacity to make real choices women and men) must have the capability to make alternative choices (Lewis and Guillian, 2005). They choose from what is available. Those interviewed do not have the capability to, for example, choose to compress their work into four days for full pay, to work four days with a reduced workload for reduced pay or to work five shorter days. The choices women and men make are constrained by both the workplace context and the wider ideological context in which women are viewed as more responsible for family than men. However, the assumptions that people make free choices obscures these contexts and justifies the gendered processes whereby women earn less and may be marginalised. Some men also talked about the 32 hour week as a choice, but here it was a lifestyle choice, not constrained by the need to conform to the ideal of a being a good parent.

One impact of the ideal worker norm is that mothers themselves often assume that they are lucky to be able to “deviate” from the male norm. Thus despite the loss of pay associated with condensing work into four days they regard this very favourably.

In my opinion we have this luxury, this chance – (the company) gives us this freedom [to work four fifths], which is good.

Woman scientist

All the women using a 4 day week articulated their decision as a “choice”. Nevertheless they were aware that they were “buying” this flexibility (see Lewis, Brannen and Nilsen, in press). In effect, these women were working more efficiently, but nevertheless took a pay cut because they were not usually available on the fifth day, as discussed by the women scientist quoted below.

...I work at home on Monday or Tuesday, when the children are asleep, I finish my work at home because I have to leave in the evening. In fact I think it's good to have this flexibility...I can leave early in the evening and finish what I didn't do at home. Interviewer: But you pay for that, in terms of salary?

Yes.

Woman scientist

Most of those working a four day week also recognised that they worked more efficiently and intensively.

In my opinion and I have discussed that with a lot of friends, I'm much more organised since I work four days. It's straight to the point : when I arrive I know exactly what to do and I have the feeling that I don't waste my time.

Woman scientist

Yes, I'm not available on Fridays. But I have my phone. And my computer. And if needed I can do something, send a document, answer a call, or something. But most of the time my Friday is off, it's time for me. The counterpart is that during other days, I work and I never rest!

Woman manager

This year we have a very tight schedule and we manage to do it in 32 hours, everybody. So if we had 35 hours maybe our schedule wouldn't be that tight. Maybe. But we do it anyway.

Woman engineer

In many ways therefore this is a win-win solution, benefiting the company and providing “choices” for the mothers. The women interviewed reported that they felt this was a sacrifice worth making, although they were aware that they were paying a price,. It seems that many of the managers also recognised that this may be a good deal for the organisation.

I asked for my Wednesdays, because it's easy in France, I asked my boss...and she said “I'm glad you asked because you're going to be paid 20% less but will do the same job!”

Woman scientist

These assumptions and associated practices impact on both gender equity and workplace effectiveness. In both cases the four day week schemes contributed to high levels of retention of women. Many participants said that they would not look for jobs elsewhere because they feared that they would find another job with so much flexibility. In some cases however this may hold women back in their careers, especially if they are not

provided with developmental opportunities in their jobs. The phenomenon has been described previously as “golden handcuffs”, whereby women are tied to their company by virtue of highly supportive policies, but pay a price for this, particularly in developmental terms. Some women feel trapped and thus the talents of some of these women scientists are not optimally developed.

For me and for many of my female friends, we won't that easily look for a job in another company because we have this flexibility, we have this comfort...Sometimes I think I should go somewhere else but I don't know what I will find in other companies, if there will be this flexibility.

Woman scientist

Moreover women have limited role models in senior posts and men have no role models of senior men adapting work for family. There are some examples of women in relatively senior positions in both case studies, which send out very positive messages. Nevertheless the interviewees felt there was a need for much more visibility of women at higher levels of management and particularly of men involved in family.

We need more women also at higher levels. If you have in a board of directors only one or two women...We need both women and men in the organisation. Everybody thinks it would be the right thing to do but in practice it's more difficult.

Woman scientist

But even...if men said that they also have a life outside work, that could also be a good thing...I know that some men value the fact that they have a life after work. Men don't talk about it easily. But if they did, they would be role models too. I'm sure that men also like to have children and a family. If they shared it more...but it's harder for men to be able to say that.

Woman engineer

Finally, although mothers who compress their work into 4 days a week are more organised, flexible and motivated, much of their work becomes invisible. This may also be career limiting, reinforcing gendered division of labour in the family and workplace.

Long working hours especially in managerial jobs: assumptions and consequences

Underpinning the practice of long working hours in developmental jobs are assumptions about availability and visibility that stem from ideal worker assumptions. Although not explicitly or even consciously articulated, the unwritten rules are that valued employers should be available and visible at all times, which creates difficulties for women with young children (and for fathers who want to be involved in childcare). This availability is often conceptualised in terms of “investing” time.

It mostly depends on the time you...invest in your job.

Woman scientist

I took two weeks less (maternity leave) because I was not very comfortable...three months represents nothing in research, we just had to organise differently. But I think I would have been affected by my boss's opinion if I was not visible.

Woman scientist

As visibility is valued for its own sake, the 4 day week tends to be viewed as an accommodation. Hence the greater efficiency of those who condense their work into work 4 days is obscured. Moreover some availability is valued more than other forms. In both companies women reported that being available at work in the evening is valued more than being available early in the morning. This is highly gendered as many women use flexibility to come into work earlier and leave early to collect children from school.

There is also an implicit assumption in both companies that flexibility is mainly for workers at lower levels and a taken for granted view that there are no alternative ways of organising work at management level. This implicitly views flexibility as undermining effectiveness, although it is clear that flexibility can increase efficiency and availability, including at management level.

...In my function, you sometimes have a question from a director or a customer that you have to answer, in two days and you have to. Also, I always work at home at night, when the children are in bed, I take my computer and I read my messages. I read my e-mail. So I think it's possible for me to keep that job because I can find some time to work outside the office and I can also sometimes be outside the office for my family and as I manage to do everything, there is no problem.

Woman manager, officially working 32 hours

The consequences of assumptions about the need to be constantly available and visible are that many women with children limit their aspirations, at least in the short term. Some women, including those working a 4 day week, are advancing into management in both companies but others find the time and availability demands involved daunting. This has implications for gender equity and talent management.

If I were ready to get more involved and work longer, I could (advance)...But if you also want to take care of your personal life it's more difficult.

What if you're a father?

Then you should have a good wife!

Woman scientist

I think women are afraid to ask for responsibilities, because they know it will be difficult for them..., to be completely available from 8am to 8pm, everyday..., especially when you have children. When you don't have children it's not that difficult.

Woman manager

Another consequence of assumptions about ideal workers and availability is that time inefficient practices such as long, inefficient and inconveniently timed meetings are not challenged. For example long meetings which eat into working time and evening meetings which mothers of young children find difficult to attend not only undermine gender equity but are also often inefficient. Questioning the ideal of constant availability may lead to a restructuring of meetings and a rethinking of other ineffective practices, to address the dual agenda. However as long as it is assumed that all good employees can spend time attending these, there is little incentive to change in ways that could benefit everyone. Work intensifies, for example, because of burdensome administrative tasks or the proliferation of email. If it is assumed that employees do not need time for family there will be less sense of urgency to look at different ways of doing things.

Availability may be needed in some jobs, where cover is needed, although this can often be achieved in other ways. However assumptions about the value of availability and visibility spreads to a range of jobs where it is not actually necessary, as found in many other studies (e.g. Lewis, 1997; 2001). Visibility, availability (and possibly inefficiency) are thus often rewarded more than effective workload management and efficiency.

Subsequently, rewards and promotions may be made for the wrong reasons and this impacts on career development for women and men, as discussed below.

Unclear promotion criteria and limited opportunities for women: assumptions and consequences

Promotion and career development practices that disadvantage women are also influenced by assumptions about mothers, fathers and ideal workers, and the overvaluing of availability and visibility. They result in a number of further assumptions in these organisations that advantage men more than women.

The main assumption, stemming from the ideal worker norm, is that there is only one, ideal career development trajectory—following the traditional male model. However, not all women, nor indeed, all the men interviewed wanted advancement in the traditional sense. Many were happy with the level they had attained. Nevertheless, all wanted interesting and developmental work and to be valued for doing a good job.

However, stemming from the assumptions about mothers, it is often assumed that as women want flexibility and time to be with children they do not also want or need development or advancement. Hence developmental opportunities can be limited for those working in non normative ways. For example, some women said that they had been provided with opportunities for specialisation while working a shorter week, but while it was assumed that this was always a good thing, some felt this limited their developmental opportunities.

Management consider that you're a specialist in your area and that it would be difficult for you to work in a different field. This is what they call added value. If you change your job you have to start learning new things. In my opinion it's not impossible, it just requires the people and the company to accept that you sometimes need to learn.

Woman scientist

In both cases there were perceived to be some problems relating to promotions. In one interviewees perceived limited opportunities for sideways developmental opportunities. In the other, an assumption that engineers must be mobile created difficulties for some women. This requirement relates to the notion of the ideal worker who does not need to accommodate their career for family reasons. It is based on the need to get a variety of experience but several of those interviewed discussed alternative ways that this could be achieved.

Promotions criteria that are not always clear, especially for higher level positions can be related to assumptions about availability and visibility. It appears to be assumed that the right people will be visible and put themselves forward for consideration – or will be noticed and encouraged to apply by their managers. Again this may disadvantage women. For example, more of the men than the women interviewed understood the “rules of the game” based on visibility.

To get promoted, I think you have to meet other people and to talk with them, about opportunities. I met about 30 people, just to see what the different job opportunities were and talk about them to Human Resources.

Male scientist as advised by his male boss

Many of the women with whom we spoke were reluctant to make themselves visible or push to be noticed, even if they knew that these were the rules of the game and therefore are disadvantaged by these informal rules.

Last year my group (achieved something special), so they congratulated us, told us we did a good job but nothing more! I didn't get a bonus, nothing. I was surprised; I had worked a lot... I've never asked (for a bonus for myself). I think that if I work well I don't need to ask, it's normal to get something.

Woman scientist

For me, no (I wouldn't ask for a bonus). But my husband would. I think it's different; it's easier if you're a man.

Woman scientist

Of course we cannot assume this gender difference is organisation wide. Some women and some men react differently, but it might nevertheless benefit some women if the rules of the game were explicit to all, and justified.

The focus on availability and visibility, and subsequent lack of recognition of the greater efficiency of those who managed their workloads in a shorter time and for less pay could also reduce promotional opportunities.

In both companies a 4 day week is perceived to be incompatible with higher levels of management.

I'm at the first level of management in the R&D division; it's still possible to be on 32 hours. At higher levels it's not, it's too difficult.

Woman manager

As visibility and networking are thought to be crucial for promotion this suggests a further implicit assumption that visible networking skills are more important at senior levels than other communication skills and less visible support skills.

Again the consequences of these assumptions undermine both gender equity and workplace effectiveness. However they are rarely challenged because of the taken for granted nature of assumptions and unwritten rules. Consequently those with the potential to make good senior managers but do not market themselves well may be overlooked, undermining talent management. Moreover if networking skills are more visible than other interpersonal skills and more likely to be rewarded by promotion – this may have broader implications for the communication skills of management.

In one of the companies the management are aware of the talent management implications of assumptions about an ideal career and have adapted by changing the procedures concerning the identification of staff who are labelled “high potentials”. Traditionally it was assumed that those with high potential would be apparent by the age of 30, but now the age range has been extended to around 40, to enable the company to pick up on women/mothers who have not followed the traditional “male” career pattern. However the assumption is that only women take care of children and this has not yet been applied to men actively involved in childcare. Assumptions about the roles of mothers and fathers remain strong.

In sum, gendered assumptions, albeit played out in somewhat different ways in the two organisations, undermined gender equity and effective talent management, but also perpetuated ineffective everyday working practices. There are nevertheless signs that some of these issues are beginning to be addressed and of emergent promising practices to meet the dual agenda of gender equity and workplace effectiveness, in both organisations.

Promising practices to meet the dual agenda

Normalising a condensed work week

The 32 hour collective agreement is effective in countering the ideal of constant availability in the workplace because it is so widely used and normalised. It is potentially good for gender equity, especially as it makes it possible for men as well as women to work and care and good for workplace performance as it enhances efficiency. However, there is still some loss of income associated with reduction in availability but not in workload, and it is still used differently by men and women. Moreover, senior managers are still expected to work longer hours.

Identification of “high potentials”

The practice of extending the time frame for women to be identified as high potentials addresses the dual agenda. The next step towards real gender equity would be to also provide this extended trajectory to fathers involved in childcare.

Focusing on work output rather than time input

Interviewees in both cases agree that quality and quantity of work are the most important criterion for good workers although at present the emphasis on output or input depends largely on individual line managers. Some also recognise that a focus on output can enhance effectiveness.

The new generation doesn't want to work a lot, and that is shocking, but it means they want to work more efficiently. We waste a lot of time in meetings that lead nowhere, we talk and talk and waste our time, just because bosses have time, they leave very late and they don't care if you have to leave early. But we could be more efficient in meetings and make them shorter. Man scientist

I like the company, because they respect your private life. The best example in my team: there is a woman who has two children and she has to leave at 7pm and that's not bothering anyone. Because it's integrated and I would say it's a way to make us all work more efficiently. Everybody knows she has to leave at 7 so we're just adapting to this rule, and it's also useful for my personal life because I don't want to leave work at 10pm, ...I'd like to have even more mothers. In my team, I noticed it changed the way I worked. Having more situations like that could be a good thing. Man, marketing

I think our department is quite different from the others, because it is the first time in the life of [the company] R&D that two women are at the head of the department...and a lot of men take some time for the family and for personal activities. And it's not a problem for us. We prefer to look at the results of the job and not at the time spent at the workplace. What is important is the result. Woman manager

Reorganising meetings

Often meetings are not organised on days when staff are not working. This does not always apply at more senior levels but managers who are aware of family constraints find no difficulty in organising meetings accordingly.

[My manager] avoids setting meetings up on Fridays for me. And I avoid meetings for my group on Wednesdays, because I know the constraints. Woman manager

Time wasting activities that could be cut- small changes

Recognition of the importance of productivity and effectiveness rather than just availability helps to think about small changes that could meet the dual agenda, or about dilemmas which need to be addressed.

Sometimes we repeat two or three times the same things because we don't take the time to wait for a meeting with everybody and to say it just one time... Woman manager

People come into my office sometimes at 6 o'clock in the evening because they don't have any children, and they come because all the meetings of the day are finished, and begin to explain ... what they've done in the day, in fact it's not necessary, I don't need this information ... it's difficult because for me it is also important to always have my door open to let people come into my office and discuss with me... We have to find a compromise between being open to the people and keep some barriers in order to be efficient. It's a little change, but we can work on that. Woman manager

Discussion and Conclusions

Despite changes in families and the labour force there remains a prevailing assumption that work and family are separate gendered spheres. Though not necessarily consciously recognised and articulated, this is reflected in workplace practices and cultures, which are based on the assumption that ideal workers can be constantly available and visible at the workplace. The ideology of motherhood on the other hand leads to an expectation that mothers of young children will not be able to be constantly available, which inherently conflicts with the ideal worker model. Even in these two organisations that are highly supportive of women scientists, and in R and D which lends itself to flexibility more than some other areas of SET, unwritten rules about availability and visibility obscure the commitment and greater efficiency of those who condense their work into four days and take a pay cut. Moreover, the high visibility of senior staff working long hours sends a message that these jobs cannot easily be combined with having time for children and consequently many mothers reduce their aspirations. This perpetuates gender inequities and can lead to the under development of human resources. The assumptions about the

ideal worker with no restrictions on their time also undermines workplace effectiveness as the need to examine inefficient, time wasting practices is not recognised. There are emerging examples in both cases of promising practices, formal and informal, that challenge assumptions currently undermining the dual agenda of gender equity and workplace effectiveness. Building on these initiatives could contribute towards wider change.

Recommendations

- Flexible working arrangements such as a four day week are good for retention, but if the aim is to go beyond retention to promoting the careers of women scientists the value of flexible working arrangements as a productivity and efficiency tool needs to be recognised.
- Flexible working arrangements that enable employees to work a four day week without losing substantial pay are more likely to be taken up both by men and women, and become normalised. This can contribute to a change in culture that enables fathers and mothers to balance work and family and sustain productivity.
- Recognise that those who can manage their work in a shorter time are more efficient, rather than only valuing those who are more visible for longer (but often less efficient).
- Recognise that scientists who wish to work flexibly or reduced hours still need opportunities to learn and develop and to advance or make horizontal moves.
- Value employees' non work time and question the ideal of the constantly visible worker.
- Schedule essential meetings during the standard working day, avoiding a day when some staff are not at work, and then organise these meetings efficiently to get through the work in hand without taking up unnecessary time.
- Ensure that promotion criteria are clear. If visibility, availability or mobility are criteria, be clear that this is justifiable and consider innovative alternatives.
- Challenge subtle messages that more senior scientists need to work long hours and highlight as role models senior women and men working efficiently and having clear work and family boundaries.
- Recognise that high potential may emerge at different ages as scientists, both women and men follow diverse life course and career trajectories.
- Recognise, publicise and reward working practices that meet the dual agenda of gender equity and workplace effectiveness.

It is questionable how far the kinds of changes envisaged here can be driven by HR alone. They involve going beyond policies to challenge gendered assumptions and changing working cultures and practice. For this to occur it is essential to engage with management at all levels, as well as collaboration and problem solving within in work teams. This sort of change involves long term thinking, innovations and experimentation (See Rapoport et al, 2002; Lewis and Cooper, 2005). Is this feasible in the current economic context? A knee jerk reaction may be no. But given the need to enhance efficiency, and develop all human resources for talent management and competitive edge in the long term, it is arguably more important than ever for forward looking organisations.

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"It's not the break that's the problem": women SET professionals and career breaks in European companies

Clem Herman (1)

Introduction

This report is focused on what companies can do to support women returning to work after a career break and to continue to progress their careers. Clearly company specific work life balance policies have a significant role to play but it is important to recognise the wide range of other factors within a broader cultural context. The decisions that women make at the time of maternity including whether or not to work part time on returning to work, can often determine what options they might have at a later stage in their careers. Yet these crucial decisions are not made in isolation but are strongly influenced by gendered cultural assumptions both inside and outside of the workplace. As well as company policies these include national legal frameworks, availability of care networks, work status, as well as personal preferences (Tomlinson 2006).

Welfare policies and legal entitlements are distinctive to each country - as such they are both informed by, as well as actively responsible for shaping, socio-cultural norms. Work status, including relationships with managers and colleagues can have a significant effect on the implementation of company policies. There is a wide variation in the availability of 'care networks', which may include a partner, extended family members as well as paid childcare provision or indeed facilities provided by the

company itself. Beliefs about gender roles (gender scripts) and sense of entitlement also influence career motivation and ambition (see Fig 1).

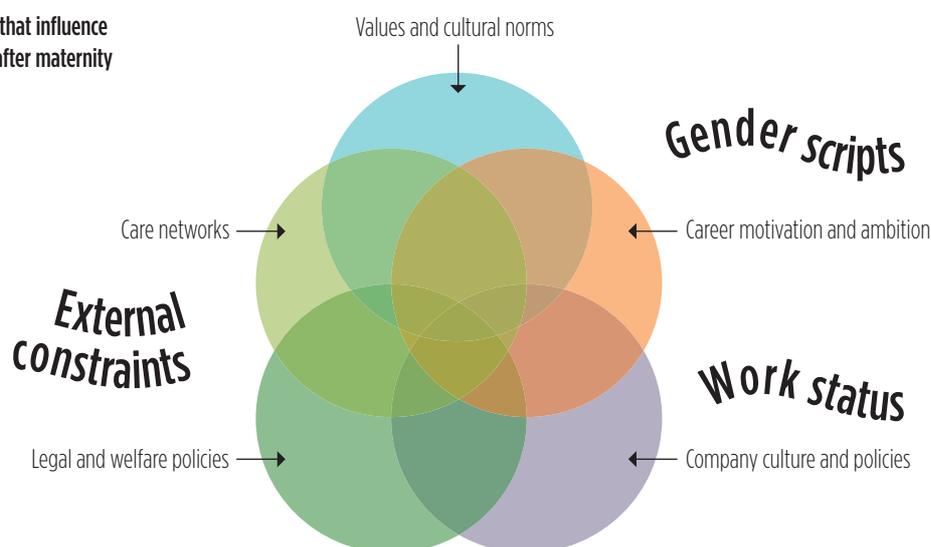
Research questions

- What is the real and long term impact of career breaks for professional women in SET?
- What are the unwritten rules and assumptions inhibiting women's progression within SET companies following a career break?
- What measures can be taken to support women to achieve the work life balance they want?

Methodology

This research into the impact of career breaks on progression of women in SET is based on 28 qualitative interviews with women professional engineers, scientists and technologists. These participants were identified by companies participating in the project who were asked to suggest women for interview – so the sample

Figure 1 **Intersecting factors that influence career progression after maternity**



(1) The Open University UK

does not include women who took leave and did not return. All but 3 of them have taken career breaks for maternity – the exceptions were one who had an extended period of sick leave, another who took time out for personal study unrelated to her work and a third who took leave to care for elderly parents. The majority returned directly to the same or similar jobs in the same companies after their (relatively short) period of leave. The sample spanned 6 EU countries (Italy, Germany, France, Netherlands, UK and Estonia) and included two individuals based outside Europe, (Russia and Canada). The average age was 39 – the youngest was 33 and the oldest 55.

Using a biographical narrative approach the study has explored the impact of social and cultural factors as well as workplace cultures in formulating the career trajectories of women professionals in these fields. Interviews were conducted using semi structured interview schedule – participants were asked to talk about their careers or working lives within the context of other aspects of their personal and domestic lives forming a narrative or chronological account. Such an approach offers the potential to contextualise experiences of women whose work-life stories are interwoven with social and political meanings. Comparing the experiences of women who have lived their lives and developed their careers in a range of countries offers a lens through which to understand the complex interplay of personal and public discourses which determine the impact of career breaks on progression and development. Interview transcripts were analysed with Atlas-ti using a grounded theory approach. This means that ideas and themes emerged during analysis of the data rather than using preset categories.

Results

SET industries – working in a male environment

The majority of the women were educated to post graduate level in scientific or technical subject areas – they had experienced being in a minority during Higher Education (usually there were less than 20% female students in their subject area, sometimes they were the only one). This experience of being in a minority continued into employment as they entered work in some of the most male dominated global industries including energy and IT companies. For most of the younger women this was something they just coped with and had presented no particular problems – they loved their jobs and enjoyed the technical challenges, travel, and range of opportunities presented by their careers. Several of the older women however spoke about their early experiences of isolation and intimidation often working as the only woman in a totally male environment

“I was the first female of a technical background, at least a graduate with a technical background. ... It was quite tough, and lonely. I think people were just struggling with how to cope and like I was supposed to work shifts for a month and there were no women’s facilities and the guys were all struggling with how they should do it. They had to find a way to work. It wasn’t easy,

like when I had to go to management meeting and I was sitting there with forty-five guys, you feel very exposed”.

43 year old Process Engineering Manager

Career breaks

Most of the previous research about career breaks focuses on women who have taken substantial number of years out of paid work and have lost ties with their previous employers. Thus the difficulties identified among women returning to employment after a career break include finding suitable and affordable child-care, and often overcoming loss of confidence and self esteem. (Shaw 1999, IOP 2004, Tomlinson 2005, Panteli, 2006). For women SET professionals there are particular issues over and above these generic problems, many of which were identified by the Maximising Returns report commissioned by the UK government (People, Science & Policy 2002). These include the loss of professional networks, location and mobility issues (usually lack of mobility options), out of date skills and knowledge and the absence of part time or flexible work in their particular sector.

Women in this study differ from previous studies of returners in two respects. Firstly they had taken short breaks. The average length of break was 6 months (the longest was just 2 years and shortest 3 months) so the issues relating to loss of skills and confidence were not as acute as those experienced by those on longer career breaks. Secondly all of them had returned to the same employer after their break, therefore they were not seeking new employment with all of the associated difficulties that this entails. However even after a short break, there were significant issues that emerged for many of the women, often associated not just with the break but also with subsequent part time working on their return.

Length of career break

The length of the career breaks was generally short with most taking just the statutory entitlement, or in some cases a slightly extended period that was offered by their company. Some also took additional holiday or other ‘saved’ leave days to extend their period of time before returning.

However there was an acknowledgement that a short break meant an increase in stress and pressure at the time of return. During early months women were often exhausted because of lack of sleep, breast feeding, and general adjustment to being a parent, so it made a big difference if their colleagues and managers were sympathetic and accommodating at this stage. Thus a maternity leave period of 4 months could in reality have a longer impact, with up to 3 or more months to adjust back in to full scale working.

Reasons cited for returning included strong career motivation, financial necessity, and wanting to do something for themselves other than being a mother. However there was also a tangible

fear of missing out on work and promotion opportunities that prompted some to return earlier than they would have wished.

Impact on career progression

Interviewees were specifically asked if they felt their period of absence had impacted on their own career progression. Several women talked about how promotion had been missed or delayed as a result of their career break – for example:

"I could have had a promotion but when you're 7 months pregnant it's very difficult – even though you have a good CV you have to say you must wait 6 months before you get a job. So I missed the opportunity when I was pregnant and I had to wait for 3 years. It's difficult to say, no-one will tell me it's because you were pregnant".. 39 year old Research Manager

However this was not universal - several of the women also mentioned positive impacts of taking breaks, specifically providing the opportunity for change that continuous employment would not have offered, for example:

"The maternity leave was important and helped me to understand that I needed to change the job. It always seemed like something was going to happen – perhaps a new project or something but the period of leave helped me realise that nothing was actually going to happen!" 42 year old Geophysicist

Maternity cover

In many of the companies work is organised on a project basis so the timing of the break was quite important. For those that were able to do so, stopping at the end of a project and then starting a new one when they came back meant that they minimised the impact of being away and did not have to delegate work to other colleagues in their absence.

"Well my first career break was, I think, in a way quite an ideal one because it was just in between jobs. So I stopped a job and I managed to arrange, before I left, the next job. So I took a break for four and a half months or so. It wasn't an extremely long period. I don't think it had a big impact as it was just between two jobs". 33 year old Chemical Engineer

However for those who did have other staff take over their work there were also benefits. Having someone cover maternity leave was actually a way of acknowledging status and importance of their role and it also meant the work continued in their absence.

"I had someone actually replace me and so I think that's...well if you don't get replaced then in all likelihood when you get back in that difficult period you inherit a train wreck because all the stuff that should have been happening in these few months hasn't happened and there's almost no way to bring it back to success". 45 year old Senior Manager

Keeping in Touch

Contact during maternity or career breaks can make an enormous difference to the process of returning.

"People sort of forget about you, it's not the right way to say it but it's how it tends to happen a little bit. What we've been doing with people who go off on maternity leave for instance and take an extended leave like that, we try to find someone to stay connected with them who just talks to them every few months or whatever they want just to make sure that we know when they're ready to come back, that there's something going on". 47 year old Senior Manager

Many of the women did keep in touch during leave and this ranged from casual social visits to the workplace to meet with colleagues and introduce them to the baby, through occasional phone calls with their line manager or boss and checking emails, to much more intense involvement in the day to day work in the case of a small number of generally more senior women.

"I stayed at home five months and in those months I more or less continued to be in contact with the office because it was not field work and I had to manage people so it was easy to keep contact by phone and email and after I delivered I used to drop into the office so I never really lost the progress of the things I left.. Everything continued as normal and when I went back I already knew where things were and coming back was nothing because I was always sharing decisions and people were helping me". 38 year old Project Manager

Returning to work

The main issues facing women coming back after extended career breaks which were identified earlier (the loss of professional networks, location and mobility issues, out of date skills and knowledge and the absence of part time or flexible work in their particular sector) are not generally a problem after short periods of leave. However there are a number of themes that regularly appeared in the interview accounts.

- Importance of support networks
- Assumptions made by colleagues/ managers that women would not be able to cope with challenging work and therefore not giving them opportunities
- Not getting your old job back
- Coping with sleepless nights and breast-feeding
- Adjusting back to a professional identity from being primarily focused on caring for a young baby
- Conflicts and power struggles with colleagues

Most importantly the availability of support was of immense significance, and several women were adamant that they could not have returned successfully without this. One respondent described how lack of support had been disastrous for one of her colleagues.

“...It's really ... related to your environment, your own situation at home. ...It is the circumstances, your husband, it's the company, it's so many sections that would influence and make it very personal. That's why some women really struggle to make success by themselves. I know one of the very ambitious women working here worked part-time but her husband was not willing to do anything at home, cleaning or whatever. No time to pick up the kids from the kindergarten in the afternoon. She almost went mad after six or eight months. She stopped, she couldn't handle it. It was too much. And of course if you have no support from home, that counts for men as well if they're around, if you have no support it is impossible to develop a career”.
42 year old Senior Manager

Supportive networks are clearly important for management of work and family responsibilities. The attitudes and behaviour of line managers and colleagues was also crucial to whether a returner was able to step back smoothly into her career:

“when my baby was four months old I started working again and it was not so easy because I was a senior reservoir engineer and in that period some of my colleagues who were also senior reservoir engineers became leaders. So I lost one year of my job and career and then I tried to recover this ... but at the beginning it was not so easy because my boss at this period... said “She has a baby who is 4 months and if it gets sick she will not be able to work so we should not give her a job with responsibility.”
46 year old Reservoir Engineer

While most returned to their previous posts this was not always the case:

“I left for a few months which was my legal entitlement, and when I came back I had nothing to do. Of course when I left somebody took my job so when I came back the project was stopped while I was off, and it took one or two months before they could get me another job...I had a few things to do but also it was very tense, you had groups, between those groups there were some tensions – [...]. So I decided to change [employer]. I stayed less than a year”.
39 year old Research Manager

And while the loss of confidence expressed by long term career break women in previous studies was not usually as acute, there were still difficulties in adjusting back to the work role, especially for those with management responsibility. And the transition from full time motherhood to professional employee includes physical as well as psychological adjustment:

“It's only natural that after nine months there's going to be a period of readjustment. Obviously I had some leave cover arranged and of course after a period of nine months everybody would go to that person for advice. So it was quite difficult for me to take control again. Psychologically it was quite difficult to operate at a professional level with not a huge amount of sleep or at least a lot less sleep than I was used to doing. Yeah, it was challenging on many levels. Coming back to work full-time, trying to make

myself presentable after a period of nine months not wearing very appealing clothes... trying to get myself switched on”.
33 year old Environmental Safety Advisor

Another issue faced by some women was ‘office politics’ – colleagues who had taken advantage of their absence to try and gain career advantage in a highly competitive industry sector.

“When I came back from this maternity leave somebody else did my job. And certainly in the beginning, and I was working three days, all the interesting projects and all the interesting work he kept for himself and all the interesting meetings were planned when I was not there. So it was really obvious that this person ... wanted to develop his own career a little bit faster and, I would say, over the back of some people”.
42 year old Senior Manager

The importance of a coherent institutional response was stressed by one woman – she herself had quite a positive experience but talked about other colleagues who had found returning to work a tough experience.

“I do speak to others who found it very, very hard when they came back and they'd lost their confidence and there should be a sort of recognition that your first few months back you're bedding back into the organisation. I don't know how you can manage that in a sensitive manner if you've given that person's work away to somebody else but there needs to be recognition that they've been in quite a big change and you actually get more from people when they come back by talking to them about what they need to better do in their job rather than just saying OK this is what we need you to deliver. There's a dialogue that needs to happen and I think that dialogue is missing”.
32 year old Quality Assurance Engineer

The same woman later spoke of how important the support she got from her managers and colleagues was, which contributed to a sense of being valued by the company.

“I realised that they were quite pleased with me and if they had wanted to get rid of me they probably wouldn't have given me all this support... It also means that you feel valuable to the company if they want to make all these investments. It also means you feel just like an employee, you don't feel like an exotic species or whatever”.

Working life after a career break

One of the strategies that a large number of women adopted in order to achieve work life balance following maternity leave was to working fewer hours. The impact of working part time or reduced availability after maternity leave was so closely connected to the career break itself, that the consequences are not easily distinguishable. Among those who returned to full time hours after maternity, their availability was often reduced and they were no longer able to stay late in the office

or spontaneously travel abroad to meetings. Many of the women went to great lengths to ensure that they could meet their work commitments, but there were often assumptions made about their reduced availability made by well meaning managers. They became regarded in the same way as 'part-time' workers, with reduced status and diminished career potential.

Part time working

One interviewee felt that colleagues treated her differently as a mother and regarded her as less productive (i.e. a part timer) even though she was in fact working on a full time contract:

"A lot of women with babies are not working full time so I was considered as not working full time – I **WAS** working full time but I was a mother so I couldn't get the job I wanted. They considered that I wasn't working full time".

39 year old Research Manager

Visibility was perceived to be compromised by part time working. Certain types of work (project leadership for example) are assumed to require a full time position and the work offered to part timers is usually less demanding and less visible.

Part time working was often regarded negatively by management – one manager advised a returner to save up her annual leave and use this to work reduced hours, so that officially she was still working full time. For others there was the recognition that double standards applied. While the company was happy to offer part time working this was considered problematic and not normalised within the organisation:

"The official line is that being part time shouldn't be a problem but in fact the cultural practice is that it is a problem – the reality is not like this!"

35 year old Mechanical Engineer

Cultural differences in attitudes to part time working vary considerably between countries. In the Netherlands and Germany for example it is very uncommon for mothers to work full time and there is strong social pressure to reduce hours after returning from maternity leave.

In France, school closure on Wednesdays is cited by most of the women as their reason for part time working (see Lewis's report). However this presents many of the women in this study with internal conflicts between their roles as mothers and workers. By contrast, in Eastern Europe there is very little tradition of part time working – despite the drastic reduction in public childcare provision, the legacy of communist gender policies has left a culture of full-time working for women without the 'guilt' that many Western European women feel about delegating their childcare to others. Similarly in Italy it is quite rare to work part time and most women return to full time jobs.

Part time working hours are regarded differently for men and women – men are more likely to work part time in some

countries rather than others but even in these countries it is more likely that women work shorter part time hours than their partners. For example in the Netherlands it is acceptable and even perhaps admirable for men to work 80% or 90% – however to go down to 3 days (60%) is considered to be going against perceived gender roles i.e. it is gender incongruent behaviour.

Whether they were on full or part time contracts, there was an expectation for many of the respondents that they would work over and above their contracted hours, especially among more senior women:

"Well, I admit when I was working part-time, on my day off I was working a number of hours anyway, and working in the evenings. I was always a hard worker, I still am. I work long days, I would say at least ten hours a day".

42 year old Senior Manager

However those working part time also demonstrated greater efficiency in their working hours:

"And what I saw was that people admired me a lot because they couldn't understand how I could cope with the work and the kids. And I think that it also had like a positive effect on my career progression because people were quite surprised with what I was still able to do in three days a week. And also I became more effective, more selective, not attending meetings where my presence was not really necessary. So I think it helped me to get promotions".

43 year old Process Engineering Manager

Flexible working

The availability of working flexible hours varied between companies and also within companies, so that even if the company had a policy for flexible work it was not automatic and could end up being at the discretion of the line manager.

"The company has a policy HR wise that it encourages flexible working practices but in reality most managers in the company are men who are over the age of 45 who've got wives who have been stay at home mums and for whatever reason they often struggle with flexible working, ... it all depends on who your manager is and the way you approach it – if you wait to be offered flexible working it simply won't happen".

32 year old Quality Assurance Engineer

The availability of remote working from home also differed between companies and countries. Where it was available this was greatly appreciated especially as a strategy for coping when a child was ill. For example:

"My husband travels quite a lot as well so what I'd do is work about three hours during the day and then work from 6 till 10 at night when [my son] had gone to bed and that's how I made up my hours. Nowadays he's not ill nearly as much – he's only missed one day at nursery since Xmas this year – he's

just like a normal little boy now – but if he's ill I can still work flexibly".
32 year old Quality Assurance Engineer

Gender roles in the domestic sphere

Despite their high level qualifications and potential for career success, gender role expectations within the domestic sphere are still an important influence on career decision making for most of the women interviewed. There are indications that traditional gender roles have become more blurred in many of the partnerships in this study, although this varied considerably between countries.

Sharing some of the childcare with a partner was very common, but most women still took main responsibility for childcare, so even if both partners worked part time, the women tended to work less hours than their partners. Even where both partners worked full time, women tended to take the main responsibility for childcare with partners taking a 'supporting' role:

"He helps me a lot. In the morning he practically feeds her, dresses her up and does everything. I wake up early and come to the office at 8. I leave everything ready for her – milk, yoghurt and things for the nursery. And bags for all the dresses and everything ready on the bed. He has to help her and then he usually goes to work after. He works in the centre of [town] – he has the same timing as me but he needs 50 minutes to arrive home and he arrives at half past 8 or 9 in the evening. I have to prepare the soup or the meal for [my daughter] and him. It is a long day and we usually go to bed at half past 9, dead!"
38 year old Project Manager

There were one or two exceptions of couples who had reversed roles completely with the male partner taking extended leave and primary responsibility for childcare, but these women saw themselves as unusual and were considered to be exceptional role models and pioneers by their colleagues.

"When our daughter was born I stayed at home the first 7 months and [my partner] I took over and stayed at home for 14 months and after that he went back to 30 hours a week [...] It's still unusual - there are some men who do this but they don't make much noise about it".
35 year old Mechanical Engineer

Availability of wider care networks also had a huge impact on successful return to work. Many of the women had strong support for childcare from extended family members, especially grandparents.

"I have a lot of help from their grandparents and I take them to school in the morning but after school the grandparents will often pick them up – my mother and my partner's parents. I have support from the children's grandparents and my partner ... I travel much more than him but when I went abroad to Norway he got parental leave and came with me for half the year and then my mother came for the other half."
42 year old Geophysicist

Gendered cultures in the workplace

There is still an unwritten assumption within workplace culture that taking maternity leave is a deviation from the traditional (male) model of continuous full time employment and this stereotype is deeply rooted especially within SET industries in which women are still in a minority:

"... There are few women, 2 or 3 % who are in management roles, there are so few that I know them all by name! They are all an exception to the rule. [...] I think it's a cultural thing. The whole industry is for real men and I think that it is possible to change but I don't think this company wants it to change".
42 year old Geophysicist

There was a perception that companies continue to assume the model of an ideal worker as a male employee with stay at home (or part time) wife:

"I think a lot of it's because the guys who are the managers here, they've generally moved around with the company and they have stay at home wives and they have the expectation that when you have children you will want to become that type of person - and they apply, what we all do we all apply our models to other people. But unfortunately the world's changed a bit and when they had their children 20 years ago women didn't return to work as much, it's just a different world these days".
32 year old Quality Assurance Engineer

All of the companies involved have extensive equality and diversity policies, some of them very high profile indeed, but evidence suggests that these are not always taken up or implemented to the best advantage of women who may need them.

Promotion and career progression

In many cases line managers acted as interpreters of policies and were seen as gatekeepers to promotion and progression, either helping or hindering the process. In one company this was quite pronounced and the promotion process lacked transparency and was considered to be totally at the discretion of the manager. This was perceived by some as a potential source of gender bias:

"The only solution is transparency – if there is a position that is free then everyone must be informed and be able to apply and then someone must be chosen because they are the best. At the moment everything is personal and private. They call you and ask you if you are interested – this is the case everywhere. If I wanted a promotion I would have to wait and ask – there is no official way. Transparency is the only real solution, this way they will choose a person, not their gender".
42 year old Geophysicist

The study found evidence of indirect discrimination against women in the promotion process. Where internal vacancies are not advertised as part time, some women were discouraged from applying as they feared they would be at a disadvantage.

Most of the women have had very conventional career paths moving straight from school to university to study some kind of engineering or scientific discipline and then straight into the company they still work for. Within SET companies there are both technical and managerial career routes and for those reaching mid or high level scientific and technical roles (male or female) there is often nowhere further to climb on the career ladder. There are opportunities to move from technical/scientific roles to management but this entails giving up on technical identity which some women are reluctant to do, having struggled to assert their presence in a male dominated field. With such considerable investment in the technical identity there is perhaps less incentive to leave this behind, which is what is required for a move into senior management (Faulkner 2007, Simard 2008).

Moreover in some companies, the opportunity to move out of technical careers and into a managerial role is limited to a particular stage in career progression (usually in early to mid thirties) and not possible at a later age. This once again assumes a male career model as decisions about promotion into management happen at precisely the time when many women are either taking breaks or have slowed down their career in order to raise a family. This is a general phenomenon but particularly marked in SET companies that have a dual career trajectory system (technical and managerial).

Success criteria

Among respondents in the interviews, success was felt to be achievable but this required being available as well as visible both of which were difficult for women who were working part time or had caring responsibilities. It was no good just doing your work well, what created success was networking with the right people and getting your work known about in the company. Moreover you would need to be tough and very determined to reach higher levels of management, something many of the women were clear they were not prepared to do. Overwhelmingly women who succeed do so because they work according to the 'male model'. They work hard at being visible at work and available for 'missions' or work abroad.

One issue identified was the perception that women on maternity leave are not productive and are a drain on the productivity of the group, especially if their time must be accounted for against project budgets. So for example:

"My boss phones me up and says [...] why is that you haven't written up any time against projects' 'Listen, I've been on maternity leave' 'Yes of course of course'. So even though he has been closely involved and is very understanding he also had to make the mental switch".

35 year old Senior Well Engineer

Mobility

The norm within many global companies, especially in the energy and IT sectors, is of being available for travel and this availability for travel is significant in career progression and promotion. Perceptions of colleagues about availability include the need to 'prove' competence and commitment. The more ambitious of the women had succeeded in showing their availability, going to great lengths to ensure that they could take up positions abroad. However for some there was a sense of resignation that their 'choice' would result in a slowing down of career progression:

"I mean it's a choice; it's what I've chosen to do. I've chosen to have a family and therefore I don't particularly want to travel much so I'm already constraining myself in terms of what I can do".

36 year old Thermal Conversion Technologist

Most of the companies in the study have some dual career policy but this is in practice very difficult as for senior posts there are often very few available options in overseas postings. Although there were examples of 'trailing husbands' who accompanied women abroad, this was not frequently the case – especially after maternity women increasingly allowed a partner's career to accelerate while their own was put on hold for a while.

Lack of senior women

The lack of senior women as role models was cited by many of the women as a barrier to their own progression. The message was clear, that there was a choice to be made between career and family life.

"I think what I miss a bit is a lack of role models in my position. It seems like every time you go to some kind of women's event or networking event they have speakers, but I think most of the high level women in [this company] either have a husband who doesn't work and takes care of the family and follows them around or they don't have a family. Very few role models of women with a family and very few who have dual careers".

36 year old Thermal Conversion Technologist

Discussion points and conclusions

There is still an unwritten assumption within many company cultures that taking maternity leave or a career break is a deviation from the traditional (male) model of continuous full time employment. Although there is some variation in the norms and expectations of gender roles after maternity within different European cultures, combined with other structural factors these reinforce a particular view of mothers and their careers. Workplace cultures even in global companies are in turn shaped and reinforced by social, political and cultural factors in each country.

Following their career break or maternity leave, many women perceive that they need to sacrifice career potential and progression in order to reconcile working and family life. This is usually expressed as a personal choice rather than seen as an external or systemic problem. For some there was a worrying tendency towards self limiting beliefs – they did not have a sense of entitlement to both a career and family life and therefore expressed this in terms of personal choice and passive acceptance. Decisions made at time of maternity can be critical in determining future career progression. For example returning to work part time after maternity can be detrimental to career progression, or at least result in slowing down of progression. However there are signs this is changing among younger women and, in departments where there are a critical mass of women working part time, there are some who are ambitious to progress. There were also examples of older women who had succeeded despite periods of part time work even though they are still perceived within the company as pioneers and role models rather than ‘normal’.

Short breaks for maternity leave do not have the same consequences for women’s employment potential that extended career breaks have been shown to do. However, the impact of working part time after taking maternity leave is so closely linked to the period of leave itself, that the consequences are not easily distinguishable. Even among those who return to full time hours after maternity, their availability is usually reduced either for travel or for extra work on top of contracted hours, or there is an expectation from colleagues that this will be the case. How this change is viewed by managers and colleagues can impact on career progression opportunities.

Managing maternity leave is generally well organised – however the experience of returning often depends on the type of work being done and timing of the break. Keeping in touch during the break is one strategy used to help ease the return process, but not universal. In the UK there is a legal entitlement for so called Keeping in Touch days “Employees on maternity or adoption leave can agree to work for their employer for a maximum of ten days during their maternity or adoption leave. Work can include training, or anything else that helps the employee keep in touch with the workplace. The work must be agreed by both parties, and the employer does not have the right to demand that an employee undertakes any work”⁽¹⁾. The benefit of this is that they continued to see themselves primarily still as workers rather than just being ‘mothers’ and the transition back to work can be made more smoothly.

Work life balance policies (including parental leave, flexible working and reduced working hours) can have the unintended consequence of reinforcing gender stereotyping within the workplace if it is only mothers/female carers who make use of these and not fathers or male carers. However the availability of remote working/working from home is hugely popular and beneficial for working parents. Similarly a workplace nursery gives a symbolic message of support for parents of both genders within the company.

The period immediately after maternity leave is a danger time for women who may slow down or dropout of careers altogether and so companies need to ensure that they offer positive support at this time. This is not a sign of reduced commitment, but realistically it may not be possible for returners to resume the same level and pace of work and this should not be penalised. Although they are highly committed to their careers, professional women in SET usually rely on a complex set of support networks to maintain their work life balance. If these fail or if they feel too undervalued by the company, these women are at risk of leaving or halting their careers.

Recommendations

What can companies do or do better?

This section includes a number of practical recommendations that companies can implement to affect change. These are not necessarily new – companies have been developing and implementing policies in these areas for many years. A number of companies particularly in the financial and legal sectors have developed some excellent policies to support women to ‘Off Ramp’ and ‘On Ramp’ their careers (see for example Hewlett 2007). However within SET companies, the implementation of so-called work-life policies often lags behind other businesses. Such policies are still seen as women’s issues and professional women are still in a minority in these sectors – the challenge is to tackle and change behaviours and practices that continue to reinforce the traditional (male) model of continuous full time employment.

Policies are not enough in themselves. It is crucial to challenge myths and stereotypes throughout the organisation by offering training and awareness-raising, especially for managers. As gatekeepers and interpreters of company policy, the attitudes and actions of line managers can be critical in the successful return and progression of women after maternity breaks.

Monitor the implementation of work life policies

- Companies should make sure that there is parity in the way policies are implemented and that everyone has the same chance to benefit from WLB measures – leaving too much to the discretion of the line manager means that inequalities can emerge and resentments build up.
- Line managers should routinely undergo training and be given support in the implementation of policies. They should then be monitored as part of their own appraisals about how they have handled maternity leave (for example by 360 degree appraisals that include confidential testimonies from returners about how their leave and return has been managed).

¹ <http://www.ecu.ac.uk/law/Gender-legislation-keeping-in-touch>

Develop specific policy of support for returners

- Avoid making assumptions about a woman's availability or reduced capacity following a career break. Maintain ongoing dialogue and discussion to establish what women want and are able to do. This requires an open and flexible attitude from managers.
- Implement a structured system of 'Keeping in Touch' during maternity leave. Ensure women on maternity leave are consulted and informed about opportunities and changes that are taking place.

Support childcare

- Provision of a workplace nursery should be considered – although not all employees would choose this form of childcare, it gives a strong symbolic message of company involvement in the overall 'care network'. This could also include a crèche for emergencies when childcare arrangements break down, or the parent is ill.
- Provide childcare support (financial and practical) for employees who are required to work abroad. Enough advance notice of travel should be given to employees to be able to make appropriate arrangements.

Flexibility

- Enable parents to work from home if a child is sick.
- Ensure important meetings and networking events are held during core office hours where possible.

Career planning

- Encourage women to actively plan their careers – this includes planning pre and post maternity breaks, but also as a long term strategy to support and motivate women and retain their ambition.
- Introduce a mentoring scheme to raise ambitions.
- Companies should monitor pay rises and progression after women return from maternity for a number of years to really assess impact.

Role models

- As well as senior women acting as role models, identify men who have taken career breaks or work part time so that it is no longer seen as only a women's issue.

Promotion and progression

- Create transparency and fairness in promotion: Review promotion criteria to ensure that part time workers are equally eligible for promotion and posts are advertised with a part time option.
- Career breaks and periods of part time working can mean that women miss out on the traditional points when talented employees are selected for fast track or management jobs (usually in their early 30s). Remove any formal or informal age barriers to enable women whose careers have slowed down due to a career break to be considered at a later stage.
- Availability for travel is an important factor in career progression in many global SET companies. However this should not be considered to be an automatic requirement for a successful career. Alternative methods of communication (video and telephone conferencing) should be used where possible.

Normalise maternity leave/ career breaks within organisational structures

- Review internal financial procedures to ensure that they do not penalize a department in which someone has taken maternity leave or a career break.
- Encourage more men to take career breaks either to do family care work or for other personal development.

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Analysing the Leaky Pipeline in Academia⁽¹⁾

Sara Connolly⁽²⁾ and Stefan Fuchs⁽³⁾

Abstract

This report considers the question of whether current career structures allow universities to attract and to retain their best talents. To answer the question of how prevalent working arrangements influence gender diversity and which of the measures that aim to address work-life imbalance are most successful in promoting greater gender diversity, we analyse unique data collected at a prestigious technical university in Europe for the WIST 2 working group. The focus is on what universities can do to stem any loss of talent through the leaky pipeline. We take a look at the employment choices of men and women, analyse relevant industrial and academic practices in relation to work-life balance. We take into account the specifics of careers in SET in academe, and take into consideration the specific needs of couples and parents.

Our approach is quantitative, thus providing complementary evidence to the qualitative studies undertaken by Clem Herman and Suzan Lewis. The results from this survey also help to identify areas of best practice.

Introduction

The situation of women in science today is perhaps best described by “allowed in but not to fully partake of science” (Etzkowitz et al., 2008: 405). Despite their expanded participation and the widespread institutionalisation of gender equality programmes in the last three decades, women’s advancement is slow. Of particular concern is the situation in science, engineering and technology (SET), where both female students and scientists continue to be a minority.

Why are there so few women at the top in science and why is their advancement so slow? Why do women disproportionately drop from the pipeline if – like most studies show – there are little or no differences between men and women regarding career relevant personal characteristics?

The career profile in many universities is flat with very small proportions reaching the very highest grades. Scientific quality and productivity determine a successful career in science. However, the ‘typical’ career continues to mirror, privilege, and finally reward the life patterns of men – who historically could

rely on a traditional support structure at home to engage in long hours of research activity. Female academics are significantly more likely than their male counterparts to live alone or – a more recent development – to be part of a dual career couple. Women in science have fewer children than men. Even in dual career couples, female scientists were found to be primarily responsible for domestic responsibilities. Women also account for the majority of part-time employees. A considerable proportion of younger female and male academics find the relationship between home and work in science unsatisfactory and unhealthy (Sturges & Guest, 2006). Unlike male scientists, female scientists anticipated having to decide between career and family already at early stages in their career (see e.g. Fuchs et al., 2001; Lind 2008). Working in science and engineering also means working in a markedly hierarchical environment predominantly populated by men. It is an environment where a tendency to reproduce existing structures in selection and recruitment procedures prevails. Most women find that during long periods of qualification female colleagues and role models are scarce. This minority or ‘token’ position (Kanter 1977) makes women especially visible and prone to stereotyping and discrimination.

How scientists manage to reconcile domestic and family (and other) responsibilities has long been considered a purely private matter by academic employers. Women’s attrition from science was explained by ‘choice’ or ‘deficit’. Academic and scientific organisations were either unaware or blind regarding their own contribution to gender inequality (for case studies in science see for example Massachusetts Institute of Technology 1999; Wimbauer 1999; Matthies et al., 2001; Fuchs et al., 2001; Stebut 2003). Today persistent gender inequalities together with expected shortages of skilled workers in SET have made it an imperative to attract and retain female talent in both public and private organisations (see e.g. Greenblatt, 2002; Drew & Murtaugh, 2005; Lewis & Campbell 2008, Brough et al., 2008).

¹ The authors gratefully acknowledge the members of the EU WIST 2 group who made this research possible. We thank Claartje Vinkenburg and Pierre Bismuth for helpful comments on earlier versions of this report.

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This research considers the question of whether current career structures allow universities to attract and to retain their best talents. To answer the questions of how prevalent working arrangements influence gender diversity and which of the measures that aim to address work-life imbalance are most successful in promoting greater gender diversity, we analyse unique data collected at a prestigious technical university in Europe for the WIST 2 working group. The data includes information on the administrative and academic staff. The focus is on what universities can do to stem any loss of talent through the leaky pipeline. We take a look at the employment choices of men and women, analyse relevant industrial and academic practices in relation to work-life balance. We take into account the nature of careers in SET in academe, and take into consideration the specific needs of dual career couples. In particular the focus of this research is on two crucial dimensions of the leaky pipeline in academic SET:

- Attraction – the reasons why women in SET choose their employment, thus offering insight about what can be done to tap and enlarge the pool of female potential.
- Retention – career ambitions, achievement and progression from the perspective of female scientists and professionals in SET, thus offering insight about what is necessary to develop women's careers in SET and keeping them there.

Data collection

Our approach in this study is quantitative, thus providing valuable complementary evidence to the qualitative studies undertaken by Clem Herman and Suzan Lewis. We have designed an online survey based on the Athena Survey of Science Engineering and Technology (ASSET) surveys – which were run in the UK in 2003, 2004 and 2006 (†). The data analysed in the following were obtained from a prestigious European university. To gather a unique set of data, University A granted access to all academic and administrative employees. The online survey link was distributed via email with a response rate of 10%.

Data description

University A is a prestigious European university offering a wide range of study opportunities with a focus on SET. The total number of students across departments is approximately 27 000, and the proportion of female students is 35.2% which is not atypical for a technical university. In engineering female students account for only 21%, with even lower proportions in electrical engineering (7%), machine construction (10%) and information sciences (13%). In the sciences, the proportion of female students is higher with 40% but varies between the disciplines – only 20% in physics but 40% in mathematics and chemistry.

The total number of employees at University A is over 7 000, including student assistants. Among the personnel, there are

roughly 2 300 academics and 2 000 persons working in the administration. In recent years the proportion of female academics employed at University A has increased slightly and is currently about 13% among professors and 28% among the other research and teaching personnel with considerable variation between departments. In administration, the proportion female is around 58%. Of the employees that answered the WIST 2 survey (270 academics, 132 in administration), the administrative personnel are underrepresented, academics overrepresented (Figure 1).

Regarding the proportion female among groups of employees at University A, we find that considerably more women answered our survey – probably because the header of the survey was “Women in Science and Technology” and these issues were considered more relevant by female than by male university employees.

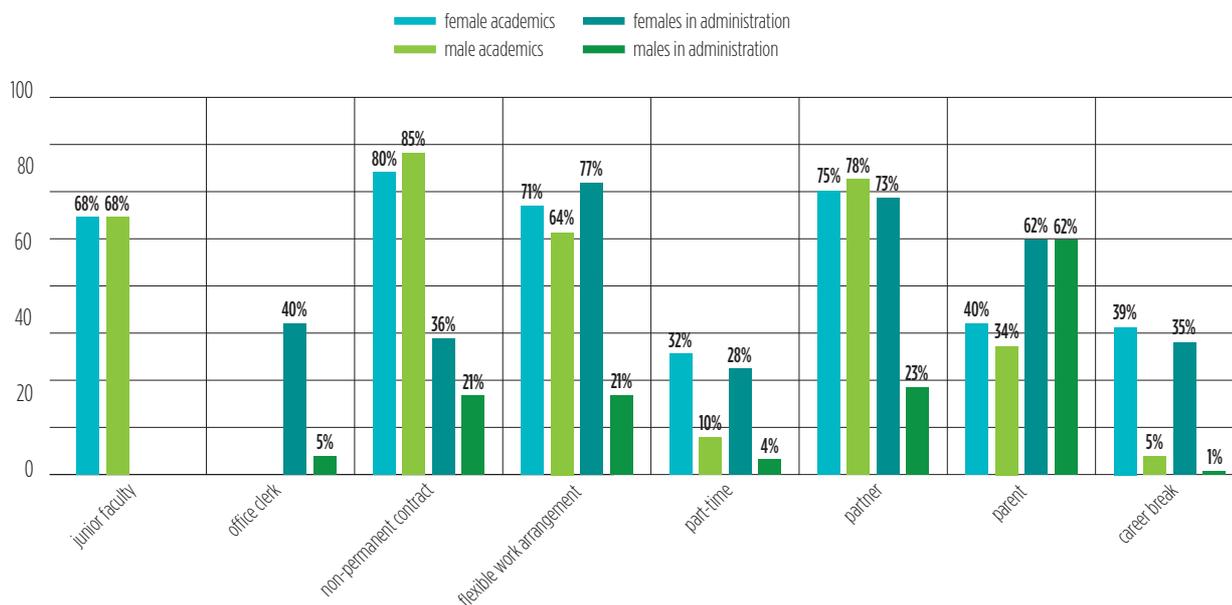
4 These were undertaken as part of the Athena Project launched in 1999 with the aim of advancing the position of women in science. It works with UK universities, research organisations and professional bodies in Science, Engineering and Technology.

Figure 1 Proportion Faculty and Proportion Female at University A and in WIST2 Sample.



Figure 2 Demographics of Academics at University A

Figures are percentages of overall sample and do not sum up to 100%



Sample description

In this section, we describe the sample of academic and administrative staff in the WIST 2 survey in more detail. Figure 2 shows the proportions of staff across various dimensions and it is obvious that the majority of male and female academics are very similar regarding their position (junior faculty), working contract (non-permanent), work arrangements (flexible), and family status (partner, parent). Two significant gender differences in the academic sample are also obvious: Although equal proportions of male and female academics are parents, considerably more women work part-time and have taken a career break – mostly for maternity leave, and for half of the female academics these career breaks have been for longer than one year.

Most female academics in the sample have a partner or a spouse who works full-time. Male academics are more likely to have a partner who is in part-time employment, on a career break or engaged in full-time domestic responsibilities (not shown). Differences between men and women are more pronounced in the administrative staff sample, often reflecting the fact that women are disproportionately represented in the lower ranks of the administration (office clerk) and among those with a flexible work arrangement or who work part-time. The proportion of parents is equal among male and female administrative staff but higher than among academics. Amongst the administrative staff, considerably more women than men have taken a career break – again mostly for maternity leave.

Fixed term employment is an important feature of scientific employment at universities, particularly amongst early career researchers. Therefore, it is not surprising to find that academic

staff are more likely to be employed on fixed term contracts, reflecting their younger age. The majority of the administrative staff is employed on permanent contracts.

Results

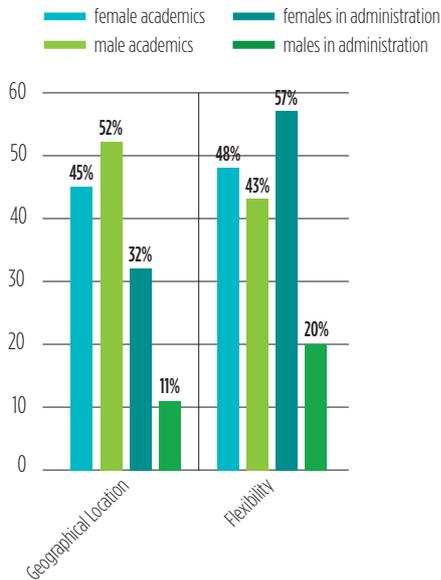
Geographical location and flexible working

To all employees of University A, the employer's geographical location was the most important single factor in their choice of employment (Figure 3). While there are no differences between male and female academics, these are considerable between men and women in the university administration. ⁽⁵⁾

While family reasons and work-life balance issues were of minor concern to all respondents, among what are important working conditions the top reason is flexibility of working hours – a very important dimension of work-life balance related policies and practices. At a first glance, addressing 'flexibility' in an academic context may seem odd because there is little that is not flexible. At the same time, flexibility is a prerequisite for the relentless and uninterrupted research activity expected from academics and scientists. In the WIST 2 survey, we use a narrow definition of flexibility when we look at hours worked and the content of work contracts. A much wider definition of flexibility is used in the survey when we address careers and career structures in academe, where flexibility extends to issues such as deviance from the ideal linear career path or possibilities to come back after a career break. The scheduling and timely completion of meetings is a related issue which is also often identified in discussions of flexibility at work.

Figure 3 **Geographical Location, Flexibility**

Figures are percentages of overall sample and do not sum up to 100%



Female and male academics alike consider flexibility of working hours of importance, but more women than men in the administration do so. The predominant flexible work arrangement is annualised or compressed hours. Around half of the academics report working from home. We find that men more typically report working at home in the evenings or at the weekend. Women are more likely to work 1 or 2 days at home during the working week.

It is interesting to note that the issues associated with reconciling work and family were considered more important by the administrative than by the academic personnel. While women generally found a family-friendly workplace more important than men, with 40 percentage points the difference was especially marked among employees in the administration of University A (women: 50%, men: 10%; not shown). This finding lends support to the notion that at University A, there are two worlds of work – the academic one, where flexibility is important but inherent to the task, and the world of the administration, where women are crowded at the bottom of the hierarchy. To most women in the administration, balancing family and work life is crucial because most managerial and administrative functions are done at the desk and often require continuous presence at the workplace.

Generally speaking there are a range of factors which individuals identify which contribute towards successful career outcomes. There are those which we might identify with the individual, such as hard-work, luck and support from family. Of these, hard work is most frequently identified as a main contributory factor towards successful career outcomes. There are also a range of institutional factors such as flexible working, success of the employer, working on high profile projects, willingness

to travel. Of these, the availability of flexible working is once again an importance factor and is identified as a key factor in terms of contributing most towards a successful career. Finally, there are a set of workplace cultural factors which are considered to be of importance such as support from managers or visibility. The key factors identified by all employees with a good work-life balance are flexibility in working hours and awareness of work-life balance issues amongst senior managers. Women working in University A valued enhanced parental leave and predictability of the meetings schedule.

Career Breaks

We have already highlighted the 'either-or' nature of decisions between career and family in science. At University A, most academics who have taken a career break had more years of professional experience and also spent most of their careers with their current employer. While only 13% of all academic staff report having been promoted by their current employer, interestingly 17% of the female academics who have taken career breaks have been promoted which suggests that taking a career break is more feasible or more acceptable once you have achieved a certain level of seniority and have survived the early selection barriers in the field. Women who decide to have a career break – mostly for maternity leave and for half of the sample for more than one year – also find that their employment is more secure when compared to other women in the sample.

When planning their career break, 40% report that their boss and/or colleagues were supportive of their plans. Around one-third of the women who have taken a career break report that their supervisor kept contact. After the career break, 70% returned to the same job, 15% to a different job but at the same level. Worryingly, 20% report that having taken a career break has harmed their career. All respondents were also asked about which factors were likely to be most helpful in easing the transition back to work after a career break. There was clear agreement that flexible working and the guarantee of the same job when returning after the career break are key factors – particularly amongst women who also identified the availability of other care support, and building up from part to full time work and training as factors helping in the transition back to work.

Female academics in the WIST 2 sample who report having considered but not taken a career break (16%) offer explanations that underline the 'either-or' nature of the decision, its tight coupling to becoming a mother, and the anticipation that the decision is potentially harmful to career advancement (see Box 1).

5 *Virtually no one had taken up his or her employment because of partners' choices (2-3%; not shown).*

Box 1: Reasons why women in science did not take a career break

- Money
- Insecurity
 - “No permanent post”
 - “Chain of non-permanent contracts for years”
 - “Project work with no possible replacement”
 - “Re-entry not safe or guaranteed”
- Career preference
 - “Career is too important to waste time”
 - “I like research and teaching and work is attractive”
 - “Career is great and fun – regarding family it is either or “
 - “Career doesn’t allow a break”
 - “Career was more important, now it is too late”
- “Stupidity”

(Source: WIST 2 university survey; selected answers to open-ended question)

Given the very different nature of academic and administrative employment, in the following sections, we concentrate upon the factors which have an influence on the choice of academic employment in SET. In particular, we consider two crucial dimensions of the leaky pipeline for scientists in SET:

- Attraction – The reasons why women in SET choose their employment, thus offering insight about what can be done to tap and enlarge the pool of female potential in SET.
- Retention – Career ambitions, achievement and progression from the perspective of female scientists and professionals in SET, thus offering insight about what is necessary to develop women’s careers in SET and keeping them there.

Attraction - factors which influence career choice

We identify three dimensions of employment which matter for academic scientists – academic freedom and issues related to it (a), working conditions (b), and personal / quality of life issues (c) – and controlled for a variety of factors in a series of logistic regressions.

We find that intellectual dimensions of an academic job – academic freedom, area of research, intellectual challenge and autonomy – were particularly important factors for those in the most senior positions and also for those on fixed-term contracts. Those who regularly work from home are more likely to indicate that they value the academic freedom and intellectual challenge of their academic career. Unsurprisingly, those who value autonomy and quality of life dimensions of their job are employed on contracts which allow for flexible working. Women are more likely to value academic freedom and working conditions. Finally those who work part-time are more likely to have taken quality of life issues into account when making their career choice.

Figure 4 Key factors influencing choice of career in academe?
Evaluated probabilities – controlling for age, grade and contract

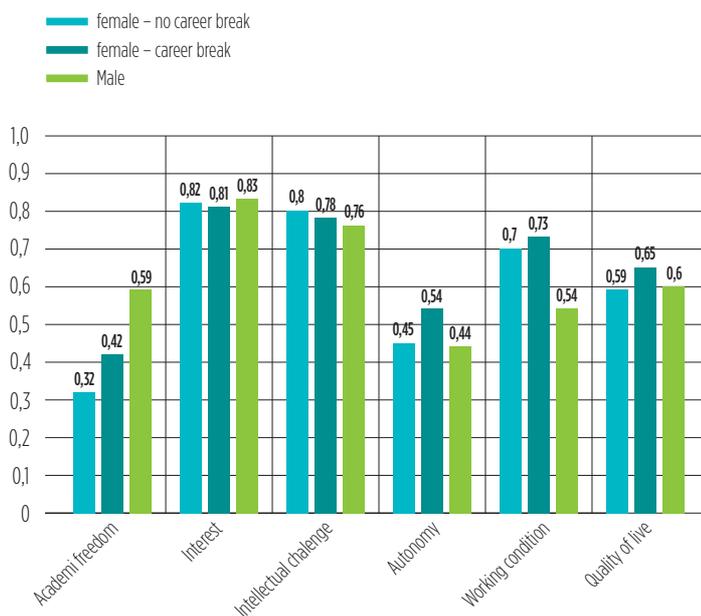
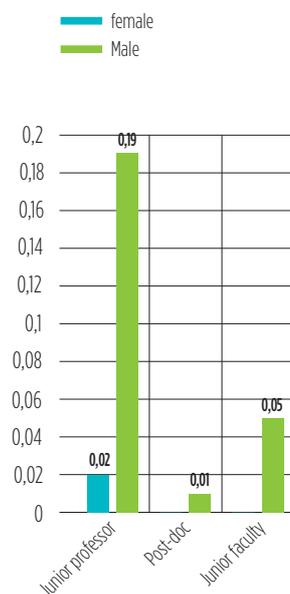


Figure 5 Expectation of becoming a senior academic
Evaluated probability of becoming a senior academic

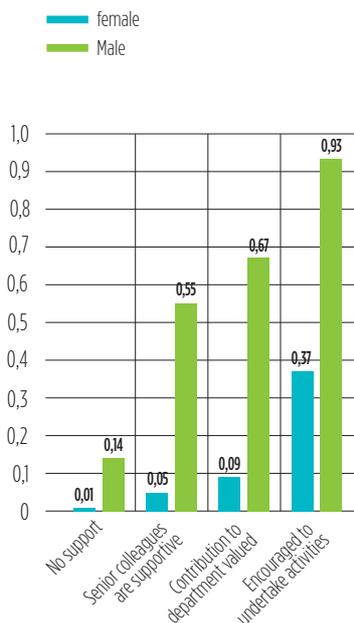


One advantage of undertaking a multivariate analysis is that it is possible to examine the likelihood of an outcome whilst controlling for a range of factors. We now compare the probability of particular dimensions of employment being important for men, women who have and women who have not taken a career break. All other things being equal, (that is being the same age, at the same grade and employed on the same contract) we find that women are less likely than men to choose an academic career due to academic freedom – though they are equally likely to choose a career due to interest or intellectual challenge. Women are more likely to choose an academic career on the basis of working conditions or autonomy – this is particularly true for women who have taken a career break. Finally, women who have taken a career break are more likely to indicate that quality of life issues are an important dimension in their choice of an academic career.

Retention - Career attainment and ambition of scientists

If scientists, particularly women who have taken career breaks, find that their career has stalled or if their ambitions are diminished as a consequence of the difficulties in managing work and family responsibilities, this may cause them to leave academe but stay in SET or to completely leave the field. We consider this issue by examining the responses to questions posed about expectations and ambitions. Here we analyse career aspirations by considering whether faculty at University A expect to become a senior academic and whether the respondents indicate that they have achieved their ambitions.

Figure 6 **Achieved career ambition**
Probabilities - controlling for age, grade, contract



In the WIST 2 university sample, only a very small proportion, even amongst professors, expects to become a senior academic and of those who responded, 68 % claim to have achieved their career ambitions within academe. We consider the impact of a range of factors upon whether an employee expects to reach the 'top', that is become a senior academic (Figure 5). We control for individual demographics – gender, age, family status and domestic responsibilities; position; type of work contract; and whether the employee has taken a career break. Those who are already employed as junior professors are more likely to indicate that they expect to become a senior academic – but those employed in junior faculty or in post-doctoral positions report very low (but possibly realistic) expectations of becoming a senior academic. Once again, comparing like with like (same age, same grade, same contract) we find a significant gender differential nonetheless, women are much less likely to expect to reach the 'top'.

In considering whether scientists have achieved their ambitions (Figure 6), we also include some indicators of research performance – number of publications and degree of engagement with the national or international research community – and some variables which indicate the workplace culture – support from senior colleagues, encouragement to apply for promotion and so on. We find that when we take into account gender, age, type of employment contract, grade at which the scientist is currently employed and whether the scientist has worked part-time or taken a career break, that female scientists and parents of young children (aged under 6) are less likely to have achieved their ambitions. Those in more junior positions – post-docs or junior faculty - are less likely to report that they have achieved their ambitions. We find that those who report benefiting from a supportive work environment were much more likely to have achieved their ambitions. Having controlled for the range of demographic and work based factors, we find that women are much less likely to have achieved their ambitions.

Retention – Risks of Leaks from the Pipeline

A key concern in this report is to identify risk factors which may result in the loss of talent through the leaky pipeline. We therefore consider three indicators of potential leaks and analyse whether academics expect:

- to leave their current employer (31 %);
- to remain in academe, their current sector of employment (74 %);
- to remain in SET (95 %)⁶.

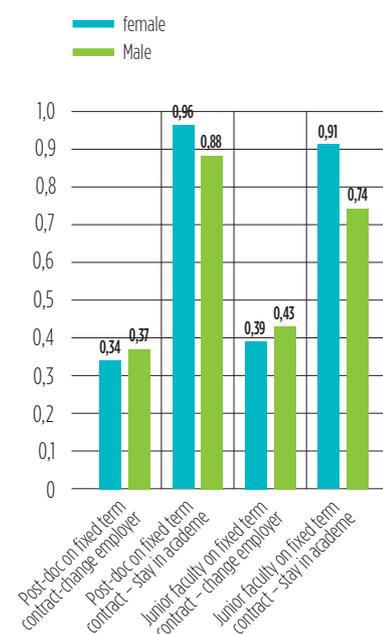
Turning to the first of these, the factors associated with expecting to leave employment at University A. Our results here capture quite strongly some of the key features of research

6 We do not present a model for this due to the very limited in-sample variation in the response to this question.

careers for young scientists. Those on fixed-term or other non-permanent contracts or in more junior positions are much more likely to expect to leave their current employer – obviously reflecting the uncertain nature of their employment at University A or the slim chances of getting further ahead with the same employer. We also find that those who might be described as having successful research careers – who have a presence on the national or international research stage, presenting papers or giving plenary sessions – are more mobile, more likely to receive outside offers and hence more likely to expect to leave employment at University A. Finally, those who report that their senior colleagues are supportive or that their contract allows for flexible working are more likely to expect to remain working at University A.

Our final set of results appears to reinforce those obtained in the earlier models. Some of the factors associated with as yet unfulfilled ambition, also make it more likely that scientists expect to remain in academe. For instance female scientists, parents of young children (aged <6), those who have presented papers at national or international conferences are more likely to expect to remain in academe. We also find that some of the factors associated with expecting to leave the current employer – those on fixed-term contracts or in more junior positions – are more likely to expect to leave academe. We illustrate this by contrasting the evaluated probabilities of young scientists either leaving the University or leaving academe. We see that those on fixed contracts which do not allow for flexible working are more likely to expect to leave their current employer or academe. Interestingly, women are more likely to expect to stay with their current employer and in academe.

Figure 7 **Expectation of changing employer or leaving academe**
Probabilities - controlling for age, grade, contract



Conclusions

This research tracks the question of whether current career structures and organizational efforts allow universities to attract and to retain their best talents. To answer this question, we analyze unique data collected at a prestigious technical university in Europe for the WIST 2 working group. The focus is on what universities can do to stem any loss of talent through the leaky pipeline.

Tenure Track

In choosing an academic career, we find that work-life balance and intellectual benefits of academic employment are clearly attractive to all respondents. However, we also find that working conditions are generally of more importance to women than to men and particularly so to women who have taken a career break. Looking at the attractiveness of careers in science from a female academic's perspective, flexibility and working conditions are not going without saying, especially with regards to balancing the conflicting demands of work and family, and regardless of whether these demands are fact or anticipated. These findings show that synchronizing the timing of career and family at a time of fierce competition remains a challenge particularly to women in science. The importance of security of employment in this context points at the fact that the situation is amplified by, for example, non-permanent contracts, part-time work, and low pay. Beyond a family-friendly infrastructure and support in reconciling work and family, possible remedies academic employers can address are:

- the allocation of tenure track positions to junior and post-doc faculty, allowing the development of long-term career perspectives by extending the dissertation and tenure clock;
- the provision of replacement funds if women (and men) go on leave to reduce the costs of turnover and to prevent gender bias in hiring in non-permanent projects.

Flexibility

Regarding the attraction of male and female talent we find that the employer's geographical location and the availability of flexible work arrangements are the two single most important factors in the choice of employment of male and female academics alike. While it is debatable if flexible work arrangements and work-life balance policies are important in academe beyond what academic employment offers by default, most issues addressed by the respondents in the survey concern issues of work and family. We found a general disbelief among both male and female academics that taking a leave would not harm one's career. Career breaks at University A were also taken predominantly by women and almost exclusively for maternity leave. Against this background, we may conclude that, first, policies to support the balancing of work and family are important but also have a potential to amplify existing gender inequalities.

Second, academic employers can address a variety of issues to show that they care for a female-friendly hence progressive work environment beyond a culture of 'long hours', for example:

- schedule meetings at times favorable to part-time faculty and those who work from home; begin and end on time;
- raise awareness among academic supervisors and professors for the negative effect of a 'long hour culture' on the perception of academic careers, in particular on those whose employment conditions are insecure or who have to balance domestic and professional demands;
- actively promote sabbaticals and other available flexible work arrangements in addition to work-family policies;
- advise the hiring of female student helps and assistants to trigger a positive bottom up effect from their presence on male departmental cultures.

Standardization of assessment

In the WIST 2 survey, we asked male and female academics if they expect to become a senior academic. We found women are much less likely to do so than their male counterparts. Female academics were also found to be less likely to have achieved their career ambitions – with a supportive work environment playing a significant role in the process. It is also evident that female academics were not to the same extent encouraged to undertake career relevant activities and less likely to receive support than their male colleagues. In combination with our analyses of what contributes to the risk of attrition from the pipeline – insecure employment conditions, vague career prospects, lower levels of support, shortages in international exposure and lower publication records – female academics appear to be less well equipped for the competition, and they are particularly at risk regarding outside options. At the same time, we found women scientists to be more likely than their male counterparts to expect to stay with their current employer and in academe. If we consider that mobility is a requisite in building a career in academia, and if we acknowledge that in the academic system small differences turn large in the competition, we see no contradiction here. Rather we think that these results point at the fact that the cooling out of female academics starts early, i.e. before they even finish their PhD. The challenge to academic employers, then, is to reduce the dependency on informal exchange and casual evaluation that eventually results in the disappearance of female scientists from both the academic pipeline and employment in SET. To prevent cooling out of young scientists and to retain female talent in particular, we recommend:

- The inauguration and documentation of regular status talks to institutionalize early feedback on performance, transmit information on what is expected for advancement (e.g. conference exposure, where to publish and how much), as well as assessing career opportunities outside academe.

Attraction and retention of female talent in a time of crisis

Regarding the grim financial and labor market perspectives in the current crisis, the wells may run dry for costly programs aimed at the attraction and retention of female talent, e.g. regarding the hiring of dual career couples or expensive mentoring programs. Female academics in particular may suffer from the change in macroeconomic conditions in two respects. First, if the employment conditions and salaries in private sector SET deteriorate, working in the public sector and a career in academia may become an increasingly attractive option to men. Since women's inroads in academic SET were partly paved by male flight, the trend might as well be reverse again. Second, if (additional) funding from private sources stays away, this will probably hit the most vulnerable groups of academic employees first, among them the non-permanent and female part-time staff.

The current financial crisis might also play out in favor of universities. Most of the female academics at University A have already survived a series of barriers of selection and are ambitious to make a career in science. For quite a while now, universities have been competing for this female talent with companies in the private sector and seemed to fall short because of budget cuts, a worsening image of academic careers, and little progress regarding women's advancement. At the same time, budgets and efforts of human resource management increased considerably regarding gender equality and diversity. Viewed from this angle, the current crisis offers universities and public sector employers a rare occasion to catch up and seriously invest in the attraction of female talent and the sustained retention of the female talent present.

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Appendix

Tables 1-4 provide further details of the results of estimated models which are used to evaluate the probabilities which are depicted in Figure 4-7

Table 1: Career Choice	Did any of the following factors influence your choice of career in academe?					
	Academic freedom	Interest	Intellectual challenge	Autonomy	Working conditions	Quality of life
Female	-1.11**	-0.06	0.25	0.05	0.68**	-0.04
Fixed term contract	0.96**	0.82**	0.75	0.49	-0.22	-0.60
Other type of contract	0.49	0.41	0.54	0.73	-0.49	-0.55
Professor	1.56**	0.39	1.67**	0.46	0.38	0.74
Junior faculty	-0.47	0.40	0.09	-0.45	-0.07	0.29
Age	0.09	0.14	0.04	0.15	0.02	-0.12
Age squared	0.00	0.00	0.00	0.00	0.00	0.00
Works part-time	0.13	-0.60**	-0.29	-0.19	0.35	0.73**
Has taken a career break	0.43	-0.10	-0.13	0.36	0.14	0.25
Does your contract allow for flexible working?	0.15	0.01	-0.26	0.61**	0.17	0.67**
Do you regularly work from home?	0.46**	0.10	0.55**	0.16	0.09	-0.37
Constant	-2.33	-2.54	-0.61	-4.04	-0.12	3.26

Exp(B); *p<.05; **p<.01; ***p<.001

Table 2: Probabilities to expect to become a senior academic

Expect to become a senior academic	B	S.E.
Female	-2.33	1.62
Fixed term contract	7.24	1.97
Other type of contract	5.58	1.96
Professor	3.76	1.58
Junior faculty	2.14	1.42
Has a partner/spouse	2.96	1.32
Has care responsibilities	2.41	1.56
Constant	-5.18	1.44

Table 3: Probability to have achieved career ambitions

Achieved career ambitions	B	S.E.
Female	-3.06	1.57
Fixed term contract	3.51	2.27
Other type of contract	-1.73	1.94
Professor	8.83	3.06
Junior faculty	3.35	1.47
Has worked part-time	1.23	1.23
Has taken a career break	0.37	1.86
Age in years	-0.22	0.10
Senior colleagues are supportive	2.04	1.21
Contribution to department valued	2.53	1.27
Integrated within department	-1.14	1.22
Opportunity to participate	1.35	0.98
Encouraged to undertake activities	4.36	1.76
Successes in my work are celebrated	1.19	1.46
Been promoted by current employer	1.26	1.68
Currently work part-time	6.80	2.56
Has exposure at national/international conferences	-1.12	1.32
Has no sole authored publications	-3.21	2.45
Has no lead authored publications	0.06	1.55
Has no joint authored publications	-1.75	1.70
Has a partner	0.42	1.07
Not a parent	-4.69	2.34
Has children < 6	-5.63	2.40
Has children 6-16	-4.14	2.14
Does your contract allow for flexible working?	1.72	1.16
Do you regularly work from home?	1.69	1.09
Constant	5.31	5.12

Table 4: Analysing the Leaky Pipeline

The Leaky Pipeline in Academe	Change current employer		Stay in academe	
	B	S.E.	B	S.E.
Female	-0.14	0.47	1.23	0.68
Fixed term contract	5.09	1.56	-6.50	2.22
Other type of contract	5.33	1.58	-6.03	2.16
Professor	-2.80	1.25	23.25	6137.83
Junior faculty	0.25	0.49	-0.96	0.69
Has worked part-time	0.14	0.55	1.30	0.73
Has taken a career break	0.10	0.70	-2.16	1.09
Age in years	0.09	0.04	0.00	0.05
Senior colleagues are supportive	-0.91	0.51	0.97	0.69
Contribution to department valued	0.29	0.52	-1.05	0.63
Integrated within department	0.47	0.61	-0.70	0.85
Opportunity to participate	0.19	0.45	0.26	0.59
Encouraged to undertake activities	-0.31	0.47	0.88	0.64
Successes in my work are celebrated	-0.38	0.51	0.29	0.70
Been promoted by current employer	0.14	0.73	0.06	1.01
Currently work part-time	-0.73	0.69	1.12	0.77
Has exposure at national/international conferences	0.41	0.48	1.27	0.66
Has no sole authored publications	0.02	0.56	0.44	0.81
Has no lead authored publications	0.02	0.63	-0.51	0.94
Has no joint authored publications	-1.23	0.64	1.33	0.90
Has a partner	-0.10	0.51	-0.44	0.73
Not a parent	0.19	0.85	2.45	1.41
Has children < 6	-0.40	0.94	3.61	1.57
Has children 6-16	-0.86	1.22	21.32	7788.19
Does your contract allow for flexible working?	-0.79	0.44	-0.27	0.61
Do you regularly work from home?	-0.13	0.44	-0.65	0.63
Constant	-7.45	2.89	3.61	3.66