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Work–life (im)‘balance’ and its consequences for everyday learning and innovation in the New Economy: evidence from the Irish IT sector

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Over the last decade, the desirability and means of successfully integrating paid work with other meaningful parts of life has received widespread attention. Despite the profound moral and social significance of work–life balance (WLB), economic ‘business case’ arguments claiming the benefit of WLB provision for firms’ organisational performance continue to dominate the neoliberal policy agenda. However, there remains a paucity of empirical evidence to support the WLB business case. At the same time, conventional business case analyses sideline social equity concerns of workers and their families, and in their focus on revealed output measures of firm performance, say little about the underlying determinants of firms’ competitive performance in the New Economy. In response, this article presents new qualitative evidence from Dublin’s high-tech regional economy to develop an alternative socioeconomic analysis focused on: (i) gendered experiences of work–life conflict in the Irish IT industry; (ii) the arrangements that different groups of IT workers and their families find most useful in ameliorating those work–life conflicts; and (iii) the mechanisms through which workers’ use of those preferred WLB arrangements helps foster and support routine learning and innovation processes within knowledge-intensive firms. As such, the article responds to earlier calls by WLB commentators to develop a ‘dual agenda’ that moves beyond either/or thinking to consider both business and social imperatives in pursuit of optimal work–life balance outcomes.

Keywords: work–life balance; learning; innovation; Celtic Tiger; New Economy

Introduction

More people today want a life beyond work. Employees can work more effectively if they can integrate their work, families and personal lives in more satisfying ways. This becomes a win–win situation for all involved. (Burke 2005, xii)

Over the last decade, the shifting spatial and temporal boundaries between work, home and family that have accompanied the transition to the New Economy¹ have become subject to intense policy and academic debate. As firms reorganise work in response to globalisation and the opportunities afforded by new technologies, ‘flexibility’ for many workers has come to mean increased workloads, less predictable work schedules and more unsocial work hours, as firms demand they work longer and harder in ways which minimise labour costs (Allen and Henry 1997; Hochschild 1997; Beck 2000; Benner 2002; Bunting 2005). Simultaneously, household life has also become more complex as female labour force participation rates continue to grow and an ever-increasing proportion of workers are part of dual earner households (Esping-Andersen 2009; Lewis 2009). These problems are reinforced by the decline of the extended family; increasing numbers of lone-parent

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households; and greater eldercare responsibilities in the context of increased life expectancy. Simultaneously, the neoliberal attack on social provisioning has transferred the burden of care down to the ‘natural’ level of home (Bakker and Gill 2003) where most women retain the major responsibility for the ‘messy and fleshy’ components of domestic and family life² (Katz 2001b; Crompton and Brockmann 2006). The overall result is a complex, gendered, multi-variable balancing act between the competing demands of paid work and responsibilities, commitments and life interests beyond the workplace, for which workers have only ‘finite resources in terms of time and energy’ (Cooper, Dewe and O’Driscoll 2001, 50).

In response, the desirability and means of achieving an appropriate work–life balance (WLB) has received widespread attention from governments, managers, trade unions, academics and the media. At the individual level, WLB refers to ‘the absence of unacceptable levels of conflict between work and non-work demands’ (Greenblatt 2002, 179), or the ‘satisfaction and good functioning at work and at home with a minimum of role conflict’ (Clark 2000, 751). While encompassing earlier ‘family-friendly’ perspectives, the term ‘work–life balance’ was intended to broaden the debate beyond working mothers to include all workers (see e.g. DfEE 2000), and hence a wider diversity of personal life needs, interests and responsibilities such as religious attendance, sports, hobbies and community and charity work. Alternative WLB monikers include work–life reconciliation, work–personal life integration, work–personal life harmonisation and work–life articulation (see e.g. Crompton 2006; Lewis and Cooper 2005; Lewis, Rapoport and Gambles 2003).³ But whatever the label used, the societal and moral significance of the successful integration of paid work with other meaningful parts of life is profound. Many studies have documented how a lack of work–life balance can result in increased stress, deleterious effects on psychological and physical well-being, and increased family and marital tensions (e.g. Burchell et al. 1999; Burchell, Lapido and Wilkinson 2001; Frone, Barnes and Farrell 1994; Lewis and Cooper 1999; Scase and Scales 1998). Moreover, given persistent gender variations in work–life stress as women make the greatest compromises to fit paid work around family (Moen 2003; McDowell et al. 2005), studies have also highlighted the importance of WLB provision as a means for improving gender equity in market employment and household caring (Wise and Bond 2003; World Economic Forum 2005). The labour union movement has also emphasised the social importance of work–life balance as a means of improving workers’ quality of life and combating the increasing work pressures that are destabilising households and societal integration (e.g. TUC 2005; ICTU 2005).

But despite government efforts, evidence of progress in employers making available to employees provisions to help them reconcile their work and personal life commitments is limited (Rigby 2004; Roper, Cunningham and James 2002; Taylor 2001), resulting in continuing hardship for many employees and ongoing gender inequalities in the labour market (Perrons 2004). At the heart of this disjuncture, many scholars argue that employers are unlikely to implement meaningful WLB arrangements unless they can identify ‘bottom-line’ economic advantages that arise from their implementation (see e.g. Healy 2004; Hyman and Summers 2004; Dex and Scheibl 1999, 2001; Dex and Smith 2002). Indeed, this ‘business case’ for WLB lies at the heart of government policy interventions in this area. Yet despite its popularity, there remains a paucity of empirical evidence to support the WLB business case (Glass and Estes 1997; TUC 2005; Wise 2003). Additionally, a range of methodological and conceptual shortcomings impede clear conclusions from the few studies that *do* exist. Not least, ‘few scholars have demonstrated

the mechanisms through which such [WLB] policies function (or do not) to enhance firm performance' (Eaton 2003, 145–6).

In response, this article presents new qualitative evidence from research into the work–life experiences of female and male Information Technology workers in Dublin, Ireland.⁴ The aim of the article is to reject the narrow economism of conventional WLB business case analyses, and to develop an alternative socioeconomic analysis that connects key insights from the burgeoning WLB and gender research literature with key insights from an expansive cross-disciplinary research literature on learning and innovation. Specifically, the article explores: (i) gendered experiences of work–life conflict in the Irish IT industry; (ii) the arrangements that female and male IT workers with a range of caring responsibilities and personal interests find most useful in ameliorating those work–life conflicts (rather than those which are cheapest for employers); and (iii) the mechanisms through which worker uptake of those preferred WLB arrangements supports routine learning and innovation activities through which ideas are transferred and negotiated within knowledge-intensive firms. As such, the article responds to earlier calls by Lewis, Rapoport and Gambles (2003) to develop a 'dual agenda' that moves beyond either/or thinking to consider both business and social imperatives in pursuit of optimal work–life balance outcomes. The article concludes with some interesting directions in which this research might be extended within feminist economic geography.

Conventional WLB 'business case' analyses (and their limits)

Despite the profound moral and social significance of WLB as a means for improving gender equity in market employment, facilitating a more equal gender division of household caring and improving the well-being of workers, families and communities, economic 'business case' arguments claiming the benefits of WLB provision for firms' profitability, productivity and competitive performance continue to dominate the policy agenda. The policy appeal of these latter arguments is rooted in neoliberal claims for the apparent superiority of free-market principles and values of economic rationalism, competition, individualism and independence (see McDowell 2004, 146). Over the last three decades, these values have legitimised a set of policy practices to increase economic productivity, profitability and competitiveness, while reducing the responsibilities of employers and the state to sustain the social reproduction of labour power (Mitchell, Marston and Katz 2004; Katz 2001a). Instead, caring activities are naturalised (returned to the venue of the household) and reprivatised (provided through the market for profit) (Brodie 1994). Analyses which emphasise the benefits of WLB provision for firms' bottom lines also sit well with neoliberal government concerns not to interfere in firms' right to manage (see e.g. DfEE 2000).

Within this framework, the policy-espoused employer benefits of WLB provision are promoted as: improved recruitment, retention; morale and productivity; and reduced stress, absenteeism and thus reduced operating costs (e.g. DTI and Scotland Office 2000; IBEC 2002; see also Bevan, Kettley and Patch 1997; Bevan et al. 1999; Employers for Work–Life Balance 2005; Opportunity 2000 1993). Significantly, these policy claims find some empirical support in a range of studies. Table 1 lists the main types of employer-provided WLB arrangements. Table 2 charts a range of studies which have measured various systematic relationships between the implementation of specific WLB arrangements and various firm performance outcomes (often using quantitative regression approaches).

The problem is that despite the popularity of the WLB business case amongst policy makers, there remains a relative dearth of empirical evidence to support these claims and

Table 1. What do we mean by employer-provided work–life balance arrangements?

Policy type	Description	Examples
Flexible work arrangements	Policies designed to give workers greater ‘flexibility’ in the scheduling and location of work hours while not decreasing average work hours per week	Flextime (flexible beginning or end work time, sometimes with core hours) Flexplace/telecommuting (all or part of the week occurs at home) Job sharing (one job undertaken by 2 or more persons) Annualised hours Part-time work Compressed work weeks (employees compact total working hours into 4 days rather than 5) Term-time working
Reduced work hours	Policies designed to reduce workers’ hours	Extra-statutory maternity leave Extra-statutory paternity leave Adoption leave Unpaid leave during school holidays Guaranteed Christmas leave Use of own sick leave to care for sick children Leave for caring for elder relatives Emergency leave Study leave Sports achievement leave
Personal leave	Policies and benefits that give leave to provide time for personal commitments and family caregiving	Employer-subsidised childcare – in-site Employer-subsidised childcare – off-site Information service for childcare Workplace parent support group Breast-feeding facilities Policy of actively informing staff of benefits available
Practical help with childcare	Policies designed to provide ‘workplace social support’ for parents	

Source: Compiled from CIPD (2000); Eaton (2003); Glass and Finley (2002); Heyes (1997); Hogarth et al. (2000); Maxwell and McDougall (2004); Perrons (2003).

to inform our understanding of what happens in practice (Beauregard and Henry 2009). At the same time, existing studies exhibit a number of conceptual, methodological and ideological shortcomings, which motivate this article.

The first problem concerns the predominant focus of analysis within WLB business case evaluation research that reflects the needs of employers – productivity, profitability and competitiveness – to the exclusion of broader social *equity* concerns at the levels of workers and their families (see Glass and Finley 2002). Problematically, ‘unless we

Table 2. Analyses linking business benefits to the introduction of different WLB policies.

WLB policy Implemented	Identified benefit at the level of the firm				
	Increased productivity	Improved employee retention	Improved recruitment	Decreased absenteeism	Decreased employee turnover
<i>'Flexible work arrangements' / 'Flexible work schedules'</i>	Rodgers (1992) Boyer (1993) Seylor, Monroe and Garand (1993) McCampbell (1996) Shepard, Clifton and Kruse (1996) Perry-Smith and Blum (2000) Dex, Smith and Winter (2001) (part-time)	Rodgers (1992) Hannah (1994) Bevan et al. (1997)	Dalton and Mesch (1990) Rogers (1992) Seylor, Monroe and Garand (1993) TUC (1998) Baltes et al. (1999)	Rodgers (1992) Seylor, Monroe and Garand (1993) Scandura and Lankau (1997) Glass and Riley (1998) Dex, Smith and Winter (2001) (flexitime, job share, homeworking) Batt and Valcour (2003)	
(Specifically, scholars explore different combinations of: flexitime, part-time work, telecommuting/flexplace, job sharing, compressed work weeks)					
<i>Employer-supported childcare policies</i>	Seylor, Monroe and Garand (1993) Perry-Smith and Blum (2000) Dex, Smith and Winter (2001) (parental leave, paternity leave)	Grover and Crooker (1995)	Kossek and Nichol (1992) Seylor, Monroe and Garand (1993)	Goff, Mount and Jamison (1990) Seylor, Monroe and Garand (1993)	Kossek and Nichol (1992) Seylor, Monroe and Garand (1993)
<i>Parental leave</i>				Graham (1996) (paid time off for family illness)	Glass and Riley (1998) (maternity leave - paid and unpaid)
Includes maternity and paternity leave (paid and unpaid)					

consider both business and social imperatives, optimal outcomes cannot be reached' (Lewis, Rapoport and Gambles 2003). Indeed, taken to its logical conclusion, an economic analysis of business imperatives alone would ultimately reject calls for employer-provided WLB arrangements in favour of the simple exclusion of (predominantly female) workers with dependant care responsibilities (Hunt and Hunt 1982; Kingston 1990) who do not fit the (predominantly male) 'ideal worker' model defined in terms of presence and commitment (Acker 1990; Williams 2000).⁵ Instead, this article adopts a 'mutual gains' approach, in which the gendered experiences, feelings and preferences of workers as citizens and parents are analysed *alongside* the economic requirements of the firm from the outset (following calls by Maxwell and McDougall 2004, 390; Rapoport et al. 2002; Wise 2003, 35). This is crucial to avoid producing an analysis that obscures (or worse perpetuates) the genuine WLB problem as lived and experienced by workers.⁶

Second, most studies of the organisational benefits of WLB provision restrict their focus to quantitative 'output' measures of firm performance, especially workforce productivity (output per employee or output per hour) and its attendant variables of labour turnover and absenteeism (see e.g. Dex, Smith and Winter 2001; Glynn, Steinberg and McCartney 2002; Huselid 1995; Shepard, Clifton and Kruse 1996). While these are centrally important measures of 'revealed competitiveness' (Gardiner, Martin and Tyler 2004), of themselves they say little about the underlying sources and determinants of firms' competitive performance, which in the context of the shift to the New Economy is increasingly sustained by becoming a moving target through continuous technological learning – that is, through the rapid production, acquisition, absorption and use of new ideas and knowledge in pursuit of improved economic performance (e.g. Block 1990; Amin and Wilkinson 1999; Burton-Jones 1999; Nonaka and Takeuchi 1995). The learning determinants of firms' successful performance can be summarised as: an ability to access, incorporate and use externally derived knowledge; the capability to learn and generate knowledge internally; and the applicability and effectiveness of problem-solving procedures (Dosi and Malerba 1996). These are not discrete, abstract, disembodied processes but *peopled*, by workers with very real social identities, family commitments and extra-curricular interests, who interact on an everyday basis to combine varied skills, competencies, ideas and prior experience to create new knowledge and apply it incrementally in the pursuit of improved economic performance.⁷ As such, they are *unavoidably* shaped by the workplace institutional environment of which WLB arrangements form an increasingly important component (see also James 2008). Nevertheless, this is an area in which conventional WLB 'business case' analyses remain silent.

Accordingly, this article presents detailed qualitative evidence from Dublin's IT industry to explore gendered experiences of work–life conflict and to identify key mechanisms through which worker uptake of certain *preferred* WLB arrangements helps foster and support learning and innovation processes within the firm. Crucially, the article focuses on female *and* male employees in a range of job positions, including single people with and without 'traditional' caring responsibilities, based on the recognition that persistent gender inequalities continue to be reinforced by dangerously divisive policy and workplace discourses which position WLB as a 'women only problem', especially women with young children (see Lewis, Rapoport and Gambles 2003; Smithson and Stokoe 2005; Emslie and Hunt 2009). Additionally, rather than focus solely on software engineers and programmers, the article also explores the experiences of 'semi-professional' (Collins 1990) knowledge-workers engaged in a broader range of innovative activities – including marketing, sales, management, human resources and logistics – whose daily routines and

interactions also form a crucial component of firms' capacities for learning (see Maskell and Malmberg 1999; Benner 2003). Within this framework, the next section introduces the Dublin case study and research methodology.

Case study and methodology: researching work–life (im)balance in the Celtic Tigress

Over the last decade, WLB has come to assume a strong significance in Ireland as part of an emerging critique around quality-of-life issues following a period of remarkable national economic growth through the 1990s in Ireland known as the 'Celtic Tiger' (see e.g. Kirby 2002; Boucher and Collins 2005).⁸ One of its most distinctive elements – indeed prompting its renaming as the Celtic Tigress (O'Connell 1999) – was a sharp increase in female labour force participation rates, from 34% in 1993 to 48.8% in 2003 (CSO 2003; cf. O'Connell and Russell 2005, 20–21; Sexton, Hughes and Finn 2002).⁹ Indeed, in contrast to the feminisation of the labour market in other EU countries, this growth in women's jobs in Ireland was in full-time rather than part-time jobs (see Collins and Boucher 2005, 6). During the same period, Ireland also witnessed increased proportions of dual earner households and households headed by a working single parent (Russell et al. 2004). Problematically, however, government encouragement of women entering the labour market was not matched by adequate state provision of childcare to facilitate that transition; childcare is instead left to families and employers willing to provide it (Collins and Boucher 2005, 7). Reinforcing these challenges, some research claims Ireland has the longest average work hours of *all* EU member states, with 6.1% of the male – and 4.4% of the female – working population working over 60 hours per week (Cowling/Work Foundation 2005).¹⁰ Moreover, a study (Drew, Humphreys and Murphy 2002) documented 19.8% of Irish workplaces operating 24 hours a day, 7 days a week.

Thus, many workers in Ireland face a complex juggling act between the competing demands of work, home, care and other personal interests and responsibilities. So what, then, are the consequences of these various conflicts for workers' abilities to perform effectively in knowledge-intensive workplaces and to engage in everyday learning and innovation processes? To understand these effects, this research focuses on the IT sector, a major pillar of the Celtic Tiger.¹¹ The Irish software industry employs around 30,000 workers in 900 companies – 83% of those workers and 76% of those firms are located in the Greater Dublin region (see Crone 2002; Grimes 2003). The IT sector (specifically computer software (SIC 72.72)) offers a useful case for WLB research. Crucially, this is a knowledge-intensive industry at the vanguard of new working practices (Ackroyd, Glover and Currie 2000; Newell et al. 2002); in which firms compete intensely on the basis of who can bring new products to market quickest; and in which the separation of work and 'life' is substantially more blurred than in more traditional occupations (Hyman et al. 2003; Scholarios and Marks 2004). Studies have also found that IT employees demonstrate particularly high stress levels (Fujigaki and Mori 1997).

Fieldwork in Dublin was carried out between May 2006 and December 2007. To challenge the dangerously divisive assumption that WLB is *only* a 'women's problem' (following Lewis, Rapoport and Gambles 2003), the research participant sample was constructed to include as diverse a range of female and male workers with varied extra-curricular/family/household commitments and responsibilities as possible, working in a mix of small and medium sized enterprises (SMEs) and in larger companies (over 250 employees). Initially, potential research participants were identified using a database of

479 IT firms in the Dublin region.¹² But as the research progressed it benefited from several enthusiastic research participants willing to introduce colleagues in other firms. The research participant sample is summarised in Table 3. In total, 30 in-depth semi-structured interviews were carried out across 15 different IT firms, interviews lasting between one and two hours. Key interview themes included: commonly experienced negative work-to-home and home-to-work spillovers; the relative utility of different WLB provisions in reducing negative work-to-home spillovers; and the impacts of worker uptake of different WLB provisions on *what, how, where, when* and *with whom* work is done. To incorporate a longitudinal perspective, research participants were also questioned on their ‘before-and-after’ experiences of significant discontinuities in their use of different WLB arrangements. An additional 10 interviews were undertaken with industry watchers and other officials, including union representatives, economic development agency representatives, HR consultants and local relevant researchers. All interviews were tape recorded and transcribed in full through secretarial support, allowing for a detailed analysis of the interview transcripts. Content analysis was used to identify themes and issues within the interview data using a coding process tested and refined in earlier research (James 2005), with the aim of building theory iteratively.¹³ Given the personal nature of the issues discussed, research participants and their respective companies are anonymised.

Connecting work–life conflict, knowledge work and everyday learning

The discussion developed in this latter half of the paper is divided into three sections. The first section explores gendered experiences of work–life conflict amongst IT workers, and the kinds of WLB arrangements that workers with different household responsibilities, personal interests and duties of care find most useful in ameliorating those difficulties. The second section explores the benefits of workers using those preferred WLB arrangements for the kinds of routine social interactions that support learning and innovation within the firm (focused on *what, where, when, how* and *with whom* everyday work is done). The third section explores some of the problems that emerge from worker uptake of certain WLB policies as well as the role of workplace contextual factors in mediating those effects, minimising their negative impacts, and hence ensuring they do not reinforce gender inequalities in the firm in new ways.

Discussion 1: common sources of work–life conflict in Dublin’s IT industry and workers’ preferred WLB arrangements

The popular discourse surrounding the computer software sector is of young ‘Silicon Cowboys’ without family commitments and who instead form their primary social identities around work, regularly working long hours to complete large workloads in relatively short periods of calendar time (see e.g. Saxenian 1994; Bronson 1999). However, this stereotype sits uneasily with work–life realities in the Irish IT sector (see also Ó Riain 2000). Whilst not denying the reality of long hours for many research participants (figures of over 60 hours per week were not uncommon), the majority of research participants typically work 40–45 hours per week (cf. O’Carroll 2005). Thus, everyday experiences of work–life conflict are less a function of long hours *per se*, but of the temporal variability of work hours over the course of software product development and sales life cycles (see also Upadhyia and Vasavi 2006):

Table 3. Summary of Dublin research participant sample (May 2006–December 2007).

Targeted cohort	Job roles included in cohort sample	Examples of commonly cited responsibilities and commitments outside the workplace	Research participants' employers
Working parents with young families (7 interviews with working mothers and 7 interviews with working fathers)	Female participants Director of Software Development, Director of Marketing, Sales Manager Male participants Chief Executive Officer, Chief Technology Officer, Software engineers, Computer programmers Developer, Software Development Lead, Chief Technology Officer, Chief Executive Officer, Software engineers	School run, relieving the nanny, attendance at school sports events, parent-teacher meetings, running a Cub Scout group, charity fund raising	7 multinational IT companies (over 250 employees) 5 indigenous IT SMEs (less than 250 employees)
Workers with 'non-traditional' work-life balance requirements (9 interviews)	Lead, Chief Technology Officer, Chief Executive Officer, Software engineers	Choral singing, acting, international travel, further study, sports, outdoor pursuits, gym	6 different IT companies
HR managers delegated with coordinating workplace WLB programmes (many of whom are also working parents themselves) 7 interviews Industry watchers with a WLB interest (10 interviews)	7 HR managers (including 1 male) with responsibilities for over 1500 IT workers in Dublin Trade union representatives, Economic development officials, Government officers, Media corre- spondents		7 different IT companies (predomi- nantly large multinationals) Irish Equality Authority, SIPTU, Irish Congress of Trade Unions, Irish WLB Network, Irish Business Employers Confederation, National Centre for Partnership and Performance, Econ- omic and Social Research Institute, Irish Times

You can have small projects, you can have large projects. Could have a six month project, could be 11 months, 18 months, 23 months, there are no rules. So the closer you get to that date, they work longer, they work weekends. It's part of the job. (Software Development Manager, female)

Other commonly cited sources of work–life conflict within Dublin's IT sector are illustrated in Table 4, namely: the need for rapid response to client system emergencies, communication between international work team members in different time zones, being on-call for trouble-shooting, and the continual need to maintain skillsets in the context of a continually changing industry.

Whilst there is no simple homogeneity, the results suggest that IT workers' everyday experiences of these sources of conflict across the work–home boundary are gendered. In contrast to the popular image of Silicon Cowboys cranking out code into the early hours, women make up an increasingly significant proportion of Ireland's IT workforce: HR managers typically quoted figures of 30–40% female workforces in their companies. Dublin's IT workers also maintain varied personal responsibilities and interests beyond the workplace, which for the research participant sample (in addition to domestic labour and childcare responsibilities) include: self-building a new house, running a Cub Scout pack, singing in a choir, doing voluntary work and regularly taking time out for international travel. Add to these the kinds of daily work demands placed on IT workers shown in Table 4, and the everyday stresses and strains of juggling work, home and family in the Irish IT sector become clearer. Not unsurprisingly, these tensions are felt most acutely (although not exclusively) by working mothers with young children who, despite a gender convergence in parents' contribution to childcare time, continue to undertake the majority share of household labour and childcare responsibilities (see also Gerson 1993; O'Brien 2005; Tang and Cousins 2005; Strazdins and Broom 2004). The most commonly cited outcomes of these work–life conflicts include: missing out on children's activities, interrupted sleep patterns, stress and exhaustion impacting on relationships with children and partners, working when feeling unwell, missing out on leisure time and hobbies, and an overall reduced quality of life. It is these types of experience which, in turn, have motivated many workers to seek flexible working arrangements to try and effect change for the better, as illustrated by the following interview excerpt:

If you just try and deal with today you'll muddle through, you'll find a way like you always have ... The only way I could make a decision about what was right for us as a family was to play it forward 20 years. What will the children remember, what will their experience of being a child in our home be? OK, there will more money in the bank, that's if we're still talking to each other, if the kids haven't gone off the rails because we haven't had time to sit down and have a proper family conversation. (Business Development Manager, female, two young children, 3-day work week)

One useful framework for understanding the gendering of these work–life conflicts is provided by Irene Hardhill and Joost van Loon (2006). They argue that the 'identity risks' which emerge from the tensions of pursuing parenthood with a professional job place particular pressures on women because the identity of being 'a good mother' invokes an everyday presence and involvement in childrearing that is absent from dominant societal expectations of what constitutes 'a good father'. As such, many working fathers are only able to put in long hours at work because they are supported by female partners who do not (see also Gray and James 2007), which in turn reinforces the infamous masculinist heroic work cultures previously identified in the computer software industry (see e.g. Massey 1995), and their negative spillovers for home, relationships and family:

Table 4. Major sources of work-life conflict in Dublin's IT industry.

Source of conflict	Indicative example quotes from research interviews
Project deadlines: variability of workflow	You look at releases going out into the marketplace when we would have people who were working 24 hours at times, wrongly. Similarly in some of the shared service centres, people are closing the books at the end of the month, they might work for 18 hours at a stretch. (HR Manager, male, two young children)
Rapid response to client system emergencies	We've got really large companies [as customers], they're demanding and expect top notch service and whenever there's a problem they'll ring, say quarter past six, that's happened to me loads of times – you can't say 'sorry I'm just in the middle of cooking a meal here' or 'reading a bedtime story'. You know, basically tough, you just have to get on with it. (Business Development Manager, female, two young children)
Evening and weekend working as part of financial cycle	People who are leading sales revenue in IT, you essentially have no life for the last month of any quarter and you have absolutely no life for the last six weeks of your financial year. So from mid October right through to December we could be doing anywhere between 40 and 60% of our revenues – you try and marry that with family life, with anything else going on outside work and it quickly becomes a difficulty. (Business Development Manager, female, two young children)
International work team communication and daily work hours	The problem was when I was working on a project both with India and the US, that was when my days got longer. Because I'd have to be in early to catch India and deal with their calls, and then stay late to catch the US afterwards. That was a pain. (Software Engineer, male, two young children)
International customers and weekend working	We're increasing our focus on the Middle East and they don't share a weekend with us, so their weekends are Thursday and Friday, so Saturday and Sunday is a working day for them and they like to schedule meetings for those days. (CEO, male, three children)

Table 4 – *continued*

Source of conflict	Indicative example quotes from research interviews
Need to be on call for trouble-shooting	<p>A 24 hour website that has to be supported, so you had to be on call maybe once every two weeks during the week. So that ‘on call’ meant from 6 am to 6 pm</p> <p>I could get called at any time . . . and maybe once every 10 weeks you’d have a full weekend, you’re tied to your house, you can’t leave because you need to be within ten minutes of an internet connection.</p> <p>I could keep the kids with me but yeah it is intrusive. (Software Engineer, male, two young children)</p>
Ongoing need to maintain relevance of skills: conference and seminar attendance	<p>There’s definitely pressure because everything’s changing so fast, things that I learned in college will pretty much have no relevance any more you know. There’s a pressure to keep up your skill level and I don’t know exactly what time you’re going to do this.</p> <p>Because the very last thing I want to do is spend my weekend on the computer. (Developer, female)</p>

I think like all macho men, you subjugate the needs of your family. One bank holiday weekend, I was in work for something like 18 hours on Saturday, 14 hours on Sunday and 12 hours on Monday, and my wife nearly drove off and left me . . . But everybody [at work] knew what we were trying to achieve and we had brilliant fun. We actually put beds there and some people didn’t go home, they just slept up there for maybe six hours, we brought pizzas in, it was great fun. (HR Manager, male, two young children)

So, what policies and practices do research participants in Dublin’s IT sector identify as helping them to reconcile everyday work–life conflicts in ways that make their lives easier? Strikingly, despite a clear gendering of work–life conflict as described, the results do not indicate a similarly clear gendering of preferred WLB arrangements.¹⁴ Indeed, the results suggest that there is no panacea: WLB requirements vary not only within gender groups (by job function, department, household situation) but also for individual workers over the life course. Thus, for example, while working mothers and fathers with young families often identified extra-statutory provision of maternity, paternity and parental leave as their preferred WLB arrangement, this was less important for working parents with children of school age and an irrelevance for research participants without children. The point is that different home and work factors mean WLB provisions suitable for one class of employees at one point in time may have little or no effect in reducing work–life conflict for another class (see also Phillips, Bernard and Chittenden 2002).

Despite this complexity, however, it is possible to discern some general agreement around the need for more radical WLB provision by employers. Research participants commonly highlighted a disjuncture between the kinds of WLB arrangements they favoured most (particularly reduced hours and flexplace) and the kinds of WLB arrangements most

commonly available to them (flexitime) (cf. Russell et al. 2009). Fundamentally, while flexitime allows workers to re-jig the temporal pattern of hours worked, it is problematic because it merely addresses what for many workers is a *symptom* of work–life conflict rather than its deeper underlying *causes*: namely, total hours worked and lengthy Dublin commutes. Commuting in Dublin is particularly problematic as a function of strong increases in house prices over the last decade (see Horner 1999), which have forced many workers to move out of the city to more affordable housing outside Dublin. The following quote is typical:

When the commute gets to an hour/an hour and a half, you've got to ask yourself why am I doing this? What's the point? What can I be doing with that three hours of my day? If I'm going to move this far out, what's the option of working from home? (Software Engineer, male, two young children)

Within the context of reduced commute times, research participants cited the personal advantages gained from working from home, and of three- or four-day work weeks as: more time for extra-curricular activities, hobbies and interests; better quality of personal time; reduced levels of stress and exhaustion; increased autonomy; and, particularly for working parents with young families, better quality of time spent with children. But what, then, are the consequences of workers using these same preferred WLB arrangements on the kinds of social interaction and workplace activities that support learning and innovation within knowledge-intensive high-tech firms? These form the focus of the next section.

Discussion II – mechanisms through which worker uptake of preferred WLB arrangements supports everyday learning and innovation processes

In the New Economy, creativity, learning and innovation are recognised as fundamental to the economic success of firms, workers and nations alike (see e.g. Block 1990; Burton-Jones 1999; Leadbeater 1999). Firms compete successfully by becoming a moving target through technological learning, thereby anticipating and outrunning attempts at imitation by competitors (Castells 1996; Porter 1990; Storper 1993). The dominant focus within economic geography has been on firms' 'strategic' organisational learning through R&D, or the application of new technologies for improvements in production, that contribute *directly* to firms' competitive success and observed economic performance (see Gray and Parker 1998). However, scholars are now broadening their focus to explore the routine interactions which support 'worker learning' on an everyday basis (see Benner 2003). Within this, the aim is to explore how everyday worker learning processes are supported or hindered by different organisational structures and institutionalised learning environments. Nevertheless, the learning consequences of firms making available different kinds of WLB arrangements to help workers harmonise their responsibilities, interests and commitments within and beyond the workplace remain unexplored. The analysis presented here focuses primarily on reduced working hours (particularly three- and four-day work weeks); working from home; and – as a function of its widespread incidence across the research participant sample, often in combination with reduced hours and teleworking – flexitime.

The Dublin case demonstrates three dimensions along which work–life conflict and the take-up of workers' preferred WLB arrangements shape everyday routine interactions and worker learning processes within knowledge-intensive firms. The first dimension concerns worker self-determination. Research participants emphasised the benefits for their work of having increased autonomy over the spatial location and temporal pattern of

their work hours, in terms of doing think work when they work best, at times which often do not coincide with ‘normal’ office hours:

In the creative sense I get all of my best ideas when people stop talking and the phone stops ringing, and when I can listen to music, no one can ask me anything and I can just chill out. And that’s always been in the evenings. I might have been trying to do something all day and it’s crap, and then I’ll spend a couple of hours in the evening and it’ll come together perfectly. So it suits me to work later and then come in the next day at eleven or twelve. (Developer, female)

Indeed, far from being self-identified by workers alone, several managers also explained the benefits for learning and innovation of giving their team increased freedom and autonomy:

I remember we were starting to employ some designers and we employed a manager, he says to me, ‘By the way, don’t put any hours in the contract.’ ‘Why?’ ‘Because my guys are artists, they will get ideas when they get ideas, so they’ll come in when they come in.’ They had total flexibility of when they worked, all they had to do was deliver. Sometimes they’d work for 16 hours at a stretch, other times you wouldn’t see them for three days, but that was how we got the best out of them, to let them do it. (HR Manager, male, two young children)

Research participants availing of home working were particularly keen to outline the benefits for the quality of their everyday performance at work, in terms of fewer distractions and longer windows of interrupted time for focused thinking and creative problem solving:

I find working at home can be extremely effective, because you’re not getting interruptions all the time, you’re not getting people tapping you on the shoulder or ringing you up or, another email comes in and you feel you instantly have to read it and reply because they’re gonna be on your back. At home, I find in a lot of cases my productivity rises effectively because I can just get on. (Software Developer, male, two young children)

Indeed, the benefits of an improved work–life balance for worker learning as revealed in the Dublin IT context are not confined to home working, but also extend to reduced work weeks, based on the premise that to learn and innovate effectively, workers must feel motivated and engaged (see Osterlow and Frey 2000; Benner 2003). The point is that by availing of different WLB arrangements – effectively reshaping the temporal and spatial boundaries between home and work – workers are able to effect changes in their workplace learning environment which result in a self-perceived improvement in their concentration, focus, motivation and engagement:

I run in here on a Monday morning, absolutely love it, thrilled to be back here and charge out again on a Wednesday and say ‘that’s great, see you again next Monday. The joke is that you get to see steam coming off the top of my head, you know, and everybody heaves a sigh of relief when I’m gone on Thursday because they feel they can work at their own pace. (Recruitment Officer, female, two young children)

In conceptualising these impacts it is useful to draw on an established research literature in organisational and social psychology that demonstrates how learning and the generation of ideas is enhanced when individuals and teams have relatively high autonomy in the day-to-day conduct of their work (see e.g. Bailyn 1985; Paolillo and Brown 1978), as a function of individuals producing more creative work when they perceive themselves to have choice about how to go about scheduling and accomplishing allocated work tasks (e.g. Amabile and Conti 1997). Additionally, this same literature has also highlighted how undesirably high time pressure, overwork and stress further undermine creativity amongst knowledge workers (e.g. Andrews and Farris 1972; Amabile et al. 1996), a problem also recognised by IT managers and workers in Dublin:

Some tech places, they'll turn every project into another big death march: long hours til it's done. But you can only pull that trigger so many times. We try to set deadlines appropriately so we don't have to just exhaust everybody every time and they screw things up. So a bit of tension and energy around deadlines is good but having the peaks and troughs being distinguishable is important, or you just get fatigue. (Chief Technology Officer, male, no children)

Much more than workers simply being fatigued and less able to think clearly (see also MacEwen and Barling 1994), what makes overwork and stress part of a second dimension of the WLB/learning nexus is its impacts on interaction and communication between colleagues. At their most fundamental level, learning and innovation are interactive processes, dependent on the quality of social communication and lines of communication (see e.g. Cooke and Morgan 1998; Lundvall 1992). When individuals with diverse and partially overlapping knowledges come together and collectively seek to articulate their ideas about a new product or technology, they are forced to clarify those ideas and to derive more adequate concepts and models about the technology they are trying to develop (Lawson and Lorenz 1999, 312). Interaction allows ambiguities in the perceptions and orientations of the individual partners to surface, and provides a basis for comparison of evolving ideas with other practices that are not internally generated. As such, there is an increased potential for new and unexpected ideas, interpretations and synergies to develop (Grabher 1993; Oinas and Malecki 2002). However, there is significant recognition by the research participants in Dublin of how the kinds of everyday work–life conflict they experience often undermine their ability to maintain effective lines of communication. Or, as one working mother put it, 'if you're stressed out of your head you can't communicate, you know, you can't come down because you're ill at ease'. As such, the benefits of employers reducing worker stress by providing the kinds of worker-preferred WLB arrangements analysed in the previous discussion are not insignificant in relation to learning and creativity:

In IT, you buy the brain power of your consultants so it's important for them not to get overworked because as their stress levels go through the roof, their creativity, their problem solving just goes right down and they make mistakes. (Diversity Manager, female, two children)

Reinforcing the various learning effects outlined above, a third dimension concerns the consequences of WLB provision on firms' repertoires of perspectives, skills and hence capacities for comprehensive problem solving in the face of new events. Here, one major mechanism centres on the retention and recruitment of female workers with childcare responsibilities, many of whom deliberately leave companies with limited WLB provision in preference for firms with more comprehensive WLB arrangements:

Right across the board they've really cut back on part time working and I think that's been to the detriment of the organization because they've lost a lot of really good strong people over the years, people like myself who have a lot to bear . . . so much embedded knowledge of the industry, of the market, of the customer base. Because the norm is they just get out, they leave when they find the situation untenable at home. (Business Development Manager, female, two young children)

One wake up call we had a couple of years ago was when we looked at people coming back from protected leaves (maternity leave, parental leave), a year later only 50% of them were still here. That was very disturbing, so we used some of that data to drive the business case for part-time, for offering more flexible work. (HR Manager, female, large IT company)

As such, the business case for WLB here is not just about the costs of replacing female employees who have left the company, but also about the limits to learning as a result of the loss of workers as embodied expertise, skills and ‘tacit knowledge’ (Polanyi 1967).

We’d spent a lot of time and money as a company in developing people, and we were seeing female workers have kids and then leave because they couldn’t handle the overtime. There was all this talent and knowledge of all the processes we’d put in, it was quite innovative, all vanishing out the door. So we developed a working from home policy. Did it impact our turnover? Absolutely ... we put in home working and turnover came down by 25%. (HR Manager, male, two young children)

The point is that some female workers are responding to differential employer provision of WLB arrangements by voting with their feet.¹⁵ Thus, while for some working mothers, the availability of teleworking is paramount, for others, the major concerns are extra-statutory maternity leave, extra-statutory maternity pay and paid paternity leave (there exists no statutory requirement for the latter in the Irish context). Indeed, the advantages of offering a range of different WLB arrangements have implications beyond working mothers. By attracting and retaining a workforce with a diversity of caring responsibilities and other extra-curricular responsibilities and commitments (themselves rooted in other dimensions of worker diversity such as gender, age, position in the life course, organisational tenure and accumulated experience) research participants outlined significant consequences for fostering everyday innovation, creativity and learning:

If you’ve got five people maybe around the same age, the same culture, they’ll probably come out with some fairly similar ideas. But if you’ve got a lot of people with different ideas, you can manage those different ideas for innovation, the creativity. So let’s bring people in because they’re different and use that experience ... I mean it’s a business motivation you know, I’m not here [in HR] because it’s nice to have diversity, I’m here because it affects the bottom line. (Diversity Manager, female, two children)

Encouragingly, these insights from Dublin’s IT sector are consistent with empirical studies on heterogeneous work teams from management studies, organisational psychology and human relations which suggest that, in work environments characterised by high levels of uncertainty (such as high-technology), demographic diversity based on gender, age and organisational tenure is positively correlated with superior corporate performance through enhanced creativity and innovation (see e.g. Filley, House and Kerr 1976; Eisenberger, Fasolo and Davis-LaMastro 1990). Robinson and Dechant (1997) have argued that workforce diversity can stimulate creativity and innovation because attitudes, cognitive functioning and beliefs are not randomly distributed in the population, but tend to vary systematically with demographic variables such as gender, race and age. As such, work teams which draw their members from diverse demographic categories have an enhanced capacity for creative problem solving because team members can draw on a wider diversity of technical skills, experiences and organisational perspectives when dealing with novel problems (see Bantel and Jackson 1989; Pelled, Eisenhardt and Xin 1999; Reagans and Zuckerman 2001). The natural conflict that emerges from the interaction of these different perspectives ensures that a wider range of possible solutions and alternatives are entertained, impacting positively on creative thinking (Parnes and Noller 1972) and increasing the likelihood of higher quality and innovative solutions to problems (Jackson, May and Whitney 1995). Additionally, the quality of reasoning in majority opinions is enhanced by the existence of consistent counterarguments from members of the minority (Nemeth 1986), such that workgroups think in more realistic and complex ways (Milliken and Martins 1996). Finally, work teams which draw their members from diverse demographic categories have also been shown to demonstrate an

enhanced capacity for creative problem solving because they can draw on a more diverse set of personal contacts and external sources of information (see Ancona and Caldwell 1992, Pelled, Eisenhardt and Xin 1999).

Discussion III: overcoming the challenges of WLB provision for learning and innovation within knowledge-intensive firms

In addition to the learning benefits that arise from employers helping workers to reconcile work–life conflict as outlined above, a number of challenges also arise. Indeed, because working mothers experience work–life conflict most acutely and are therefore more likely than other worker groups to avail of WLB arrangements (Bailyn, Fletcher and Kolb 1997; Houston 2005; Gregory and Milner 2009), it is important for feminist economic geographers to explore these difficulties and technological solutions to reduce them. One set of challenges concerns the effect of teleworking and reduced work weeks on agile models of software development. This family of software engineering processes rejects bureaucratic, micro-managed, slow models of development in favour of a ‘lightweight’ approach that reduces market risks associated with drawn-out product development life cycles. Agile methods are based instead around short iterations of one to four weeks, in which new functions are planned, analysed, designed, coded, tested and documented.¹⁶ Importantly, agile software development methods emphasise a preference for face-to-face communication over written documentation; close daily cooperation between developers and customers; and regular adaptation to changing circumstances. One problematic effect of teleworking, therefore, is it tends to undermine the frequency of spontaneous unplanned direct face-to-face interactions which support agile development. Problems arise, albeit to differing extents depending on the number of days per week spent working at home:

Three days crosses a threshold where it begins to cause problems. Because if somebody goes on a four day week, they pick a day they’re not in, gradually people get used to it. But a three day week, the permutations of what those two days when they’re not working could be, people can never get their heads around. Basically after a while no one knows when you’re in or out, so it has a wear and tear on the person and on everyone else’s interaction with them. (Chief Technology Officer, male, no children)

Face-to-face interaction between co-workers is vital because it enables communication to occur on many levels simultaneously – verbal, physical, contextual, intentional and non-intentional (Storper and Venables 2004, 354–5; see also Gertler 2003; Bathelt, Malmberg and Maskell 2004). Consistent with this, research participants explained the potential constraints of homeworking for knowledge-intensive firms:

I worked from home for six months and after about two months, I didn’t have any interaction with anyone. And that disconnection can be real for a lot of people. If you have an organisation where everybody works from home, you won’t have that group dynamic, that group think, problem solving. It could limit the innovation you bring in definitely. (HR Manager, male, two young children)

However, the challenges to learning identified here appear to be far from monolithic and inevitable in all firms.¹⁷ Research participants described two important mediating factors: the role of the work group ratification and managerial acceptance of the necessity and desirability of workers adopting non-traditional work arrangements in pursuit of improved WLB; and the development of information communication technologies which allow for ‘face-to-face’ interactions *virtually*. The importance of the first mediating factor lies in the need for work team members to be willing to work together to overcome many of the minor problems (molehills) associated with working from home and reduced weeks,

which might otherwise collectively amount to constraints on learning that are far greater than the sum of their parts (mountains). How far co-workers are willing to accommodate colleagues with extensive caring commitments is typically shaped by their own personal experience (or lack of it) of work–life conflict, as illustrated by the following two contrasting experiences:

One of the guys [in my team] doesn't have kids yet, the other three have stay at home wives. So if you don't have somebody who's feeling the same sort of pressure as you, having to get to crèche or get home to release an au pair, they're not aware ... one guy in my team, he's almost taken it personally at this stage, like 'what, you're not available? But I'm scheduling this call now!' (Business Development Manager, female, two young children, 3-day work week)

My team, 70% of the people have two or more children and all of them work from home so teleconferences will often be filled with children appearing in the background, spilled a glass of milk, or whatever. You get those types of interruptions but it's just accepted. (Manager, male, two young children)

Indeed, these effects are particularly powerful in the computer software industry as a function of decentralised management structures in which autonomous work teams are disciplined by subtle yet strong systems of 'subjective' or 'normative' control through peer pressure (see Uphadya and Vasavi 2006; Kunda 1992), influenced by broader societal gender norms about the 'ideal worker', usually defined in terms of presence-as-commitment (Gambles, Lewis and Rapoport 2006) or over-work as 'a badge of honour' (Gershuny 2005). Although, as in Massey's earlier (1995) study of male IT engineers, some male research participants in Dublin are also challenging work team cultures of presenteeism and dominant notions of the 'ideal IT worker', motivated by concerns for a more fulfilling life beyond work and not to miss out on children growing up.

Research participants also acknowledged the role of communication technologies in mediating the negative impacts of WLB arrangements on interactive learning and innovation processes, and hence for reducing tendencies to marginalise women and men with domestic responsibilities working from home. The advantage of face-to-face interaction is that it offers an usual capacity for interruption, repair, feedback and learning, making it possible for two people to send and deliver messages virtually instantaneously (Nohria and Eccles 1992, 292). In order to mimic these advantages for home workers, some Dublin IT employers are experimenting with online team meetings and brainstorming sessions using instant messaging and video conferencing facilities to maintain work group capacities for multi-directional, simultaneous cycles of discussion, interruption, repair, feedback and learning quickly *at a distance*. Other relevant technologies include secure web-based project repositories where team members post task status information, data and documentation, and which are accessible to all team members whether at work or at home. An advantage of these centralised web-based systems is that they overcome problems of team members leaving crucial files on memory sticks at work when working from home (or vice versa), or else saving files on a home or work computer only. Other research participants described the benefits of group email systems that help ensure the quality and timeliness of client interactions when team members work from home or work a reduced work week. For example, time-sensitive emails might be accompanied by text alerts, or else prompts linked to instant messaging software. And once a team member has replied to the client query (typically from a generic team email to provide continuity to the client), the email system automatically copies in all other team members, whilst simultaneously preventing anyone else late to the conversation replying to the same email again and logging the communication string centrally for future

reference. Of course, it is important not to position these technologies as some WLB panacea (see also Hill et al. 1998; Loscocco 1997). Several research participants acknowledged the ‘double-edged sword’ nature of technologies such as instant messaging, broadband and Blackberries in terms of their facilitating more effective integration and team interaction whilst working from home, yet also making the boundaries between home and work even more blurred:

Although it’s possible to turn them off but ... when you’ve a customer saying ‘I’ve been trying to get you for the past day, have you got your mobile off?’ ‘Er, yeah, I was at home last night, yes it was turned off you know’. But it creates an expectation that you *should* be available *all* of the time. (HR Manager, male, two young children)

Thus, for some workers, such technologies contribute to decreased personal perceptions of an acceptable WLB, as ‘what is possible’ becomes ‘what is expected’ in order to demonstrate career commitment (see also Eikhof, Warhurst and Haunschild 2007). These problems notwithstanding, there remains considerable potential here, especially within the IT industry.

Conclusion

Despite the profound moral and social significance of WLB as a means for improving gender equity in market employment, facilitating a more equal gender division of household caring and improving the well-being of workers, families and communities; employers are unlikely to implement meaningful WLB arrangements unless they can identify ‘bottom-line’ economic advantages that arise from their implementation. In response, this article has presented detailed qualitative evidence from Dublin’s IT sector to explore gendered experiences of work–life conflict across the work–home boundary and the impact of workers using their *preferred* WLB arrangements on the routine workplace interactions and activities that underpin complex processes of learning and innovation within knowledge-intensive firms. The results highlight a series of common sources of work–life conflict amongst knowledge workers in the IT sector, including: temporal variability of work hours over product development life-cycles; communication between international work team members in different time zones; evening and weekend trouble-shooting; and the continual need to maintain skillsets in a dynamic industry. In contrast to enlightened policy rhetoric, the results also suggest that everyday conflicts between the activities of work, home and family are felt most acutely by working mothers with dependent children, who continue to undertake the majority share of household labour and childcare. Women make up on average 23% of employees in the IT firms studied. The most commonly cited negative work-to-home spillovers include: missing out on children’s activities, interrupted sleep patterns, stress and exhaustion impacting on relationships with children and partners, working when feeling unwell, missing out on leisure time and hobbies and reduced quality of life. These, in turn, motivate many workers to seek flexible working arrangements to effect change for the better. While workers’ preferred WLB arrangements vary within gender groups (by job function, department, household situation) and for individual workers over the life-course, the research has also identified worker dissatisfaction with the kinds of WLB arrangements most commonly available to them: flextime. While flextime affords some advantages by allowing workers to re-jig the temporal pattern of hours worked, it fails to address what for many workers are the underlying *causes* of work–life conflict: commonly, total work hours and lengthy commutes. The results indicate the advantages afforded to workers by greater spatial flexibility of work (e.g. teleworking) and/or by reduced total work hours (e.g. three- or

four-day weeks) as: more time for extra-curricular activities, hobbies and interests; better quality personal time; reduced levels of stress and exhaustion; and better quality time spent with children.

In terms of repositioning the WLB ‘business case’, the results suggest that by making available the kinds of WLB arrangements (particularly reduced work weeks and working from home) identified by workers as offering meaningful amelioration of everyday work–life conflicts, employers can effect a positive impact on institutionalised learning and innovation environments within the firm. These effects span three dimensions: (i) self-determination of temporal pattern and spatial location of work yielding a self-identified improvement in workers’ concentration, motivation, engagement and creativity; (ii) the reduction of work–life conflicts and stress which otherwise undermine workers’ abilities to interact and communicate effectively with colleagues; and (iii) the potential to attract and retain a more demographically diverse workforce thereby widening firms’ repertoires of perspectives and skills; networks of external contacts; and hence capacities for comprehensive problem solving in the face of new events. Whilst not denying simultaneous challenges to interactive learning that result from team members working from home, or working reduced work weeks, the results suggest that any negative outcomes are not inevitable. Rather, they are mediated by managerial buy-in and work group ratification; and the use of information communication technologies to maintain ‘virtual face-to-face’ interactions at a distance. Thus, rather than understand the WLB ‘business case’ only in terms of any net positive impacts on the firm, there is a need to broaden the definition to include a *lack of any negative* impact (see also Gambles, Lewis and Rapoport 2006).

Inevitably, this article merely scratches the surface of a complex phenomenon. There are several avenues in which this research should be extended, not least given the unfolding economic downturn in which, arguably, the WLB ‘business case’ becomes even *more* salient. First, there is a need to extend the intra-firm focus of this article to *inter-firm* learning and innovation processes (for example, knowledge spillovers through labour churning). Second, how far do the mix of positive and negative impacts on learning discussed in this article give rise *collectively* to different outcomes in different firm contexts (for example, female-owned versus male-owned firms)? And third, given that the terms in which the WLB agenda is cast vary across nation-states (Esping-Anderson 1990 1999), there is a need to explore the role of different local, regional and national legislative frameworks in shaping the impacts of similar bundles of WLB arrangements on learning within similar firms in different place contexts. To this end, the research presented here is currently being extended to a similar regional cluster of IT firms in Cambridge, UK. In combination with a continued emphasis on a mutual gains approach, in which the gendered needs, feelings and preferences of workers as citizens and parents are analysed *alongside* the economic requirements of the firm, these three research foci will help construct a more socially progressive set of ‘business case’ arguments in a language that employers understand. Herein lies the central challenge for work–life balance research in a neoliberal policy environment.

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Notes

1. The 'New Economy' is a short-hand term used to encapsulate the simultaneous rise of feminised services, the global reorganisation of business through ICTs, new forms of 'flexible' work and employment, and the decline of the male breadwinner/female caregiver model since the late 1970s (see Perrons et al. 2006 for a useful introduction).
2. These 'messy and fleshy' activities of social reproduction include: shopping, cooking, cleaning, daily paperwork, social networking, minding, participating in religious or civic organisations, caring for children and the elderly, and hence mediating with educational, medical and religious organisations (Katz 2001b, 711).
3. These alternative monikers each embody a different critique of the WLB term. Gambles, Lewis and Rapoport (2006) have summarised the problems of work–life 'balance' terminology in terms of: its implicit suggestion that work is somehow not part of life; its potential in undermining unpaid care work by implying that it is just another part of the non-work domain; and its (false) implication of work and personal life as mutually exclusive (see also Batt and Valcour 2003).
4. Dublin is recognised as an important European cluster of IT growth of interest to policy makers in other regions (see e.g. Ó Riain 2004).
5. Martin Carnoy (2000, 143) has argued that, in the New Economy 'the very best workers are those who never sleep, never consume, never have children and never spend time socialising outside work'. See also Acker (1998, 197).
6. Indeed, some labour unions also recognise the appeal of the WLB business case. For example in Ireland, the Services, Industrial, Professional and Technical Union (Callender) has argued that: 'Women and unions will continue to argue the "equality case" but we find it a lot easier to make progress at times when the "business case" and "equality case" coincide . . . to harness market forces, as best we can, for the long-term benefit of workers and their families' (SIPTU/Callender 2003, 10).
7. For example, by developing new technological capabilities, and/or new ways or organising production processes and service delivery (see Benner 2003).
8. During the period 1994–2002, Irish national GDP grew by an average of 8% p.a., with concurrent growth in the labour market of 4.5% p.a. over the same timeframe (see Kirby 2002).
9. Key factors underpinning these increased female labour force participation rates in Ireland include changing fertility patterns, higher educational achievement, the removal of legislative barriers on female employment and the introduction of employment equality legislation through the Irish Social Partnership process.
10. The UK has the second longest average work hours of all EU member states with figures of 5.8% and 3.9% respectively (Cowling/Work Foundation 2005; cf. Roberts 2007).
11. Revenues from the Irish computer software sector grew from €2189 million in 1991 to €10,150 million in 2000, contributing almost 10% of national GDP despite accounting for only 2% of Ireland's total workforce (Greco 2005, 87). Moreover, during the 1990s, employment in the computer software sector in Ireland grew by 15% p.a. compared with 6% growth p.a. for the Irish national economy as a whole (Arora, Gambardella and Torrisi 2001, 5).
12. Given the absence of any up-to-date and comprehensive regional directory of IT employers and relevant corporate contacts (reinforced by high rates of firm births and deaths, and high labour mobility of key personnel), this database was built by patching together information from Enterprise Ireland, Irish Software Association and Hot Origin. Cross-referencing with individual firm websites yielded a final database of 479 firms in the Dublin region.
13. In short, this systematic analysis of the interview transcripts involved coding the data to break it down, recategorising it, examining the links between groups and then developing hypotheses with regard to the mechanisms and patterns that best fit the data and helped explain it. To make the analysis more robust, I also employed 'member checking'; that is, checking the credibility of my analytic categories, constructs and hypotheses with members of the groups from which I originally obtained the data.
14. Compare this with a recent nationally representative study in the Irish context by O'Connell and Russell (2005) which documented women more often reporting a preference for part-time hours and job sharing, and men a preference for working from home.

15. The gendered mobilities of high-tech workers in regional high-tech labour markets as a function of the uneven provision of WLB arrangements across firms are analysed in other papers from this project (see e.g. James 2009).
16. The goal of agile development is to have a workable release available at the end of each iteration, when the development team also re-evaluates its project priorities (see Cohen, Lindvall and Costa 2004; Highsmith 2002).
17. Initially, I expected these problems to be more apparent within smaller firms, where potentially having a key member of the workforce take leave or work from home would have a greater impact than in a larger firm. However, the picture is more complex.

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ABSTRACT TRANSLATIONS

(Des)‘equilibrio’ trabajo-vida personal y sus consecuencias para la capacitación cotidiana y la innovación en la Nueva Economía: evidencia desde el sector IT irlandés

Durante la última década, la deseabilidad de integrar exitosamente el trabajo pago con otras partes importantes de la vida y los medios para hacerlo, han recibido mucha atención. A pesar de la profunda significancia moral y social del equilibrio trabajo-vida personal, los argumentos economicistas del ‘argumento de los negocios’ aduciendo los beneficios de la provisión de un equilibrio trabajo-vida personal (WLB, por sus siglas en inglés) para el desempeño organizacional de las empresas continúan dominando la agenda de políticas neoliberales. Sin embargo, todavía es escasa la evidencia empírica para sostener el argumento de los negocios del WLB. Al mismo tiempo, los análisis convencionales de los argumentos de los negocios marginan las cuestiones de equidad social de los trabajadores y las trabajadoras y sus familias, y en su enfoque sobre los indicadores de rendimiento difundidos del desempeño de la firma, poco dicen sobre los determinantes subyacentes del desempeño competitivo de la firma en la nueva economía. En respuesta, este artículo presenta nueva evidencia cuantitativa de la economía regional de alta tecnología de Dublín para desarrollar un análisis socioeconómico alternativo centrado en: (i) experiencias generizadas de conflicto trabajo-vida personal en la industria IT irlandesa; (ii) los arreglos que diferentes grupos de trabajadores y trabajadoras de IT y sus familias encuentran más útiles para subsanar esos conflictos; y (iii) los mecanismos a través de los cuales el uso de los arreglos de aquellos WLB preferidos por parte de los trabajadores y trabajadoras ayudan a fomentar y apoyar los procesos cotidianos de aprendizaje y de innovación con firmas que son muy conocimiento-intensivas. De esta manera, el artículo responde a previos llamados por parte de los comentaristas del WLB a desarrollar una ‘agenda dual’ que va más allá del pensamiento de ‘o una cosa o la otra’ para considerar tanto los imperativos de los negocios como los sociales en busca de resultados óptimo del equilibrio trabajo-vida personal.

Palabras claves: Palabras claves: equilibrio trabajo-vida personal; capacitación; innovación; Tigre Celta; Nueva Economía

新经济中日常生活学习与创新的工作 - 生活 (不) 平衡及其后果: 爱尔兰信息科技 (IT) 部门的证据

过去十年来, 受薪工作以及生活其他面向之理想的成功整合已获得广大的社会关注。尽管工作 - 生活平衡蕴含深刻的道德及社会显著性, 经济学式的「业务计划 (business case)」宣称工作 - 生活平衡 (WLB) 得以提高企业组织绩效之论据, 仍持续做为支配性的新自由主义政策议程, 但目前仍缺乏充足的证据支持WLB的业务计划。于此同时, 传统的业务计划分析排除劳工及其家人的社会公平考虑, 在其聚焦企业绩效的展现的同时, 却鲜少提及新经济中企业竞争绩效背后的决定性因素。因此, 本文将透过都柏林的高科技区域经济研究案例, 呈现新的质化证据做为回应, 以建构新的社会经济学分析。兹聚焦如下: (i)爱尔兰信息科技产业中工作 - 生活冲突的性别化经验; (ii)信息科技产业中, 不同劳工族群及其家属认为减轻工作 - 生活冲突的最适安排; (iii)劳工利用这些青睐的WLB安排, 协助并支持知识密集产业中的惯例学习以及创新过程的机制。于此, 本文响应WLB评论者早先的主张, 即建构一超越非此即彼、考虑商业以及社会责任的「三元议程」, 追求工作 - 生活平衡的最理想结果。

关键词: 工作 - 生活平衡、学习、创新、爱尔兰之虎 (Celtic Tiger)、新经济