Flexibility/Security Policies and the Labour Market Trajectories of IT Workers

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Executive Summary

This paper responds to the growing interest in "flexicurity" as a framework for helping welfare states reconcile two key pressures: the demand for flexibility in the functioning of labour markets and the organization of work; and the simultaneous demand for income security among citizens, especially those vulnerable to unemployment and under-employment. The appeal of "flexicurity" among public policy communities in Europe, and to a lesser extent Canada, lies in the way it recognizes the important role that welfare provision can play in supporting employment transitions that foster competitive working practices. The approach has gained ground against a backdrop of population ageing, technological change and industrial volatility because of the increasing need for multiple job transitions, lifelong learning and extensions to working lives.

Yet despite the interest in "flexicurity," questions remain over how policies could be formulated to encourage flexible labour markets that are mutually beneficial for global industries and for individual workers. We need a better understanding of current employment trajectories in order to identify promising policies will lead to successful labour market transitions and longer working lives.

This paper uses case study data collected in Canada and the United Kingdom of small and mid-sized firms operating in the information technology (IT) sector. The sector is marked by a high degree of volatility and a lack of formal regulation, including an absence of rigid professional entry requirements. Yet even small firms in this sector often compete at an international level and are having to respond to rapid technological innovation and market fluctuations. By examining the life-course trajectories of IT professionals aged 40 and over, we are able to explore the factors that contributed to their successful work transitions. This focus on "survivors" allows us to understand the resources that were important to them during these employment transitions, whether in finding or keeping a job, setting up a new venture or accessing the skills they needed to remain in employment.

Our analysis uncovered a spectrum of labour market experiences and transitions, with individuals reporting a great variety of entries into and pathways through careers. However, there was a shared sense among respondents of job insecurity and/or disruption. Even firms with seemingly continuous trading records had changed products, ownership, premises, staffing levels and management styles.

Our life-course analysis of career trajectories identified six factors that were critical to successful labour market transitions:

- **Skills and experience**, notably the ability to maintain IT-related skills through on-the-job learning and self-tuition at work or on home-time;

- **Timing**, by entering the industry, firm or position during periods of expansion and opportunity and making timely decisions over employment-related moves;

- **Family**, involving supportive spouses whose financial resources or roles as primary carers allowed their IT "partners" to make risky employment transitions, such as retraining or innovation in a new IT venture;

- **Gender,** with women's IT careers being shaped far more than men's by caregiving and the demands of family life, dependent children and frail relatives;

- **Networks,** both personal and professional, which had provided labour market intelligence and increased job options for IT professionals; and

- **Chance (or risk),** with individuals being able to tolerate uncertainty and developments that were beyond their immediate control, such as re-financing their firms and shifting technological requirements.

Although other factors such as education and income were important, the six features mentioned above indicated successful transitions that allowed our Canadian and United Kingdom professionals to retain a foothold in the IT labour market over a number of decades. Our findings highlight the importance of policies that offer added resources to individuals as they navigate the uncertainties of employment. In particular, these should:

- Recognize the interconnectedness of work, family and caregiving, and that employment strategies are often made in the context of all family resources;

- Allow workers to exert control over the timing of an employment transition, so that they may take advantage of sudden and unexpected shifts in the fortunes of their firm or industry;

- Permit a much greater role to be played by professional organizations, government agencies and sector-specific bodies in providing local labour market information to guide individuals towards promising employment pathways;

- Explore the potential role of specialist brokers or representatives who can exploit existing sector-specific labour market intelligence for the benefit of timely labour market transitions in niche sectors and occupations; and

- Find innovative ways to foster and promote networks that both enhance security of income and improve the ability of people to control their employment fortunes, such as through clusters or collectives of semi-independent consultants that are fostered by sector bodies.

Flexibility/Security Policies and the Labour Market Trajectories of IT Workers

1. Introduction

In recent years, public policy-making in Europe and North America has struggled to cope with a number of interrelated pressures. Economic changes, including the increase in international flows of goods, capital and labour related to globalization, have presented problems for promoting the competitiveness of national firms and industry in international markets. The current turmoil in financial institutions, leading to severe industrial downturn and widespread job losses, have raised further questions about how governments can best support business and entrepreneurship while also protecting the jobs of its citizens. The speed of technological advances, coupled with often fundamental changes to the nature of work, has resulted in a need for continuous learning and an expectation that a working life will consist of many job, career and labour market transitions. At the same time, the demographic aging of the populations in these advanced economies has caused concern about the potential implications of a smaller and older labour force, leading to policy incentives to extend working lives beyond retirement ages.

Such forces of change imply that people will need to navigate multiple job transitions over a longer working life. They also imply that national competitiveness will depend, in part, on how well governments support individuals (as well as entrepreneurs and firms) to make these transitions successfully.

The information technology (IT) sector is a global, technologically advanced industry, which is marked by a high degree of career volatility. As such, it represents an interesting case for exploring career transitions and their successful navigation. In this paper, we examine the life-course trajectories of information technology professionals in Canada and the United Kingdom in order to understand the key supports that helped them make successful transitions across various labour market states, including employment, business start-up, redundancy, re-training, dismissal and inactivity.

Since the late 1980s, countries have attempted to mobilize labour and increase productivity by changing the structure of social provision. Social assistance benefits ("welfare") and income replacement programs for the temporarily unemployed have been restructured to reduce their rolls and to encourage work. The precise changes have been highly political and country-specific, but, in general, there has been an increase, firstly, in the focus on "active" labour market programs designed to enhance the employability of unemployed or under-employed workers by improving their skills or helping them connect to job opportunities. Secondly, there has been a growing emphasis on measures that improve labour force flexibility by increasing firms' ability to set the conditions of work. Recently there have been attempts to create a policy framework that balances employers' need for flexibility with workers' rights to security and protection. The research program on "flexicurity" (Wilthagen, 2002; Tros, 2004) and the "transitional labour markets" (TLM) approach of Günter Schmid (Schmid, 2001; Schmid, 2006) represent the most well-known of these efforts, which are much better-developed in continental Europe than in the Anglo-American welfare states.

Although the flexicurity and TLM projects were not developed primarily to address the ageing of the population and labour force in these countries, they may hold some promise in that regard. Linked to the idea of the life course, it has been suggested that increasing the flexibility of transitions into and out of work across working ages might lengthen working life and help counter slower labour force growth (Policy Research Initiative, 2005). Adult retraining has been long advocated by the Organisation for Economic Co-operation and Development (OECD), which argued for "active ageing" and "life-long learning." As part of his TLM program, Schmid has argued that allowing flexible transitions when people need them, as in the case of working parents with young children, would reduce stress and help reverse the decades-old trend to early retirement. By encouraging an average of 30 work hours per week, but extending the average working life an extra five years, Schmid claims that lifetime stress and burnout could be reduced and that work could be better balanced with other activities (Schmid, 2001; Schmid and Gazier, 2002). In Canada, the Policy Research Initiative (PRI) has explicitly proposed encouraging flexibility, not only in retirement options, but also over the entire life course, in order to help Canada deal with the challenges of a smaller and older workforce (Policy Research Initiative, 2005). In the European Union, a common set of flexicurity principles were agreed upon in December 2007, covering four areas: flexible and reliable contractual relations; comprehensive lifelong learning strategies; effective labour market policies; and modern, adequate and sustainable social protection systems (European Commission Employment and Social Affairs, 2007). A central aim of the principles is to help frame national policy options in a way that supports employment transitions:

> The inactive, the unemployed, those in undeclared work, in unstable employment, or at the margins of the labour market need to be provided with better opportunities, economic incentives and supportive measures for easier access to work or stepping-stones to assist progress into stable and legally secure employment. Support should be available to all those in employment to remain employable, progress and manage transitions both in work and between jobs (Council of the European Union, 2007).

Despite the current popularity of these approaches in policy discussions, there are few examples of how they would work in practice. How, exactly, policies would be formulated to allow flexibility for employers and employees as well as providing sufficient security largely remains to be seen. This is even more the case in the United Kingdom and North America, where labour markets have historically been less regulated and employment and income protections less comprehensive than in other Member States of the European Union (Esping-Andersen, 1999). An understanding of current employment careers is critical to identifying the types of programs that might work in this regard and that could lengthen labour force attachment. In particular, we need to understand how employees currently navigate insecure employment and how policies might be formulated to better provide security. To that end, this paper uses data from the Workforce Ageing in the New Economy (WANE) project to improve our understanding of working careers of employees in one industry that has had considerable instability in recent years, the IT industry. We use interview and survey data with IT employees and managers in the United Kingdom and Canada, two countries with somewhat similar sets of social and employment policies, to explore the strategies and resources that helped IT workers make key transitions in employment and maintain their employability in a turbulent industry.

2. Background: Flexibility/Security and Population Ageing

It has been widely observed that the nature of work in wealthy countries has changed considerably in recent decades. Rapid changes in technology have meant changing skill requirements of employees. Economic globalization and the mobility of capital, goods and labour have put pressure on firms to be able to compete internationally and to respond quickly to changes in demand. In this context, countries have sought to reduce the tax burden of social provisions while mobilizing their labour forces and increasing productivity. Even in countries where social protection has been relatively generous, the trend has been for governments to reduce the availability and terms of various types of social provision. In the Canadian case, this has been done by decreasing the length of employment insurance protection after job loss and by removing the universality of social welfare programs, a change that has allowed provinces to impose work tests as a condition of receiving benefits (Evans, 2002). Similarly, the prime focus of United Kingdom initiatives over the last decade has been to use the social security system to encourage people back into work, moving away from universal benefits and towards means-testing. Nearly half (44%) of all labour market policy (LMP) spending in the United Kingdom is on services, such as job placement and targeted employment schemes for disadvantaged groups – a significantly higher proportion of total LMP spend[1] than in other European Union Member States (European Commission Employment and Social Affairs, 2006).

These countries have also undertaken specific measures to address the possible economic effects of demographic ageing, thought to include higher public pensions and health care costs and lower tax revenues. The OECD has been particularly active in encouraging member countries to prepare for demographic change not only by ensuring the solvency of pension plans, but also by creating policies to improve labour force participation for older workers (Organisation for Economic Co-operation and Development, 2000). These have ranged from "active" policies that assist older workers to find employment, to the restriction of pensions and other routes to retirement and the banning of age discrimination (Cooke, 2006). Not surprisingly, changes to social welfare, pensions and employment protection have been criticized when they increase the risk for workers and former workers, while increasing the relative power of employers (Maxwell, 1995). However, as Pierson (1994) points out, the policy responses to globalization have largely depended on the existing systems of social provision. Few countries have been able to undertake fundamental restructuring (Pierson, 1994). In the northern European countries, which have traditionally had stronger welfare states and a more generous social security entitlement, it has been more difficult to remove these protective benefits and reduce levels of taxation. It is, therefore, not surprising that it is in these countries where researchers have proposed alternative policy frameworks that would balance employer flexibility with employee security. These are the *flexicurity* framework proposed by researchers at Tilburg University, and the *Transitional Labour Market* (TLM) framework of Günter Schmid.

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[1] Labour Market Policy interventions are classified by Eurostat, the European Union's statistical agency, as involving three broad areas of expenditure, namely (1) labour market services, including job placement and advisory functions; (2) labour market measures, such as training, job rotation and employment incentives; and (3) labour market supports, such as out-of-work income and early retirement benefits.

2.1 Flexicurity

The flexicurity framework has been promoted as a pragmatic response to pressures of globalization and demographic change facing advanced economies. Its starting point is the need for regulatory and legislative mechanisms that foster both a competitive economic environment and social, income and employment protection. Wilthagen (2002) argues that these two goals are not necessarily at odds, but that there are usually trade-offs made between them, which are possibly more detrimental to citizens in times of economic downturns. The flexicurity approach is concerned with four dimensions of security for individuals: job tenure; employment security in the labour market; income protection during spells of unemployment or under-employment; and "combination" security, which is the ability or inability to combine paid work with domestic or caring responsibilities. Most recently, the framework has been developed at a series of expert meetings funded by the European Commission to incorporate a set of common principles relevant to the contrasting welfare and labour market systems of the 27 Member States. Principles include a number of flexicurity pathways to which the social partners[2] should aspire. They emphasize the importance of lifelong learning and vocational training systems both within and outside organizations. One pathway seeks to embark on "a higher road towards a knowledge-oriented economy by deepening investment in skills" through improving institutional structures, workplace agreements and government intervention (Wilthagen, 2007).

2.2 Transitional Labour Markets (TLMs)

The other widely cited approach to balancing flexibility and security is Günter Schmid's TLM framework (2002; 2006). Schmid's approach was originally suggested as a means of promoting full employment and higher labour force participation, especially among women. The main idea behind the TLM approach is that barriers between work and other socially meaningful activities should be more fluid. The problem with traditional unemployment and social insurance plans is that they lead to social exclusion, which TLMs would prevent by promoting flexible transitions between various forms of paid work and caregiving, education, disability, full retirement, and between employment and unemployment. These policies would not only make work pay, but would make self-guided and supported transitions pay (Schmid and Gazier, 2002).

"Making transitions pay" requires a new set of institutions that would "flexibly coordinate" these activities. These institutions would be transitional labour markets that, Schmid argues, already exist in a variety of forms in all countries. For example, among media workers and in other artistic fields, social networks help freelance and temporary workers manage short-term risks (Schmid and Gazier, 2002; Platman, 2004). Another form might be retraining pools in which redundant workers would be paid to retrain while looking for other work. These institutions would help workers deal with the risks of unemployment and promote social inclusion and "positive" transitions while not reducing the competitiveness of local employers. However, encouraging TLMs throughout the labour market requires that monetary, wage and financial policies must be better coordinated to stimulate economic productivity, and social and labour market policy must be thoroughly reformed to favour flexibility and transitions (Schmid, 2002: 126).

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[2] In European policy processes, "social partners" refers to the various organizations representing management and labour.

Similarly, from a flexicurity perspective, Tros has argued that, although recent management responses toward older workers have tended to favour early retirement and premature exit, other strategies such as part-time work and flexible retirement could facilitate transitions within and across organizations, and between education, home and the workplace (Tros, 2004). A fundamental idea behind both TLMs and flexicurity is that they should encourage "good" transitions rather than ones that limit future possibilities.

This emphasis on improving the quality of transitional employment states throughout a person's working life is predicated on an understanding of life-course trajectories of individual workers, which is central to the WANE project. The life-course perspective can be summarized as involving "a sequence of age-linked transitions that are embedded in social institutions and history," including labour markets, work and industrial change (Bengtson et al., 2005: 493). Its five underlying principles are, firstly, that lives are linked over time; secondly, that lives unfold in social and historical contexts; thirdly, that the timing of transitions influences outcomes and opportunities; fourthly, that individuals are active in shaping their lives; and finally, that decisions and events which occur earlier in life, have repercussions later on.

A focus on the life course can help direct attention to the sources of various social and economic resources across an individual's lifetime and their accumulation and depletion. These resources are acquired from markets, communities, families, state and other institutions, and are used by individuals to shape their own lives, given their biographical, social, economic and political contexts. Flexicurity, TLMs and other life-course-sensitive policies would take a more longitudinal approach than traditional social programs in providing protection against social and economic "risks." They would recognize that transitions earlier in life affect the resources and opportunities available later, and that the domains of health, the family, and work and education are interrelated. These policies would focus on providing resources for individuals to make transitions and improving labour force participation over their lifetimes, and preventing labour force rigidity.

Despite the interest in the policy directions of flexicurity and TLM and in the life course as a policy research framework, there are few concrete examples of these policies in operation. It largely remains to be seen whether it is possible to really reconcile flexibility for firms with security for workers. Schmid's TLMs exist more as a set of principles than actually implemented institutions. Furthermore, even if there are some European examples of these policies, they might be impossible to implement in the context of the strong market orientation of liberal welfare states. One way to explore the potential of these policies is to examine the transitions actually made by employees and firms and the resources and policies that currently support these transitions. By better understanding how transitions are currently made, we gain some insight into how policies might better support them and encourage positive outcomes. In the remainder of this report, we examine data on IT workers' career trajectories from the WANE project to explore these questions and to draw some conclusions about the prospects for these policies in Canada and the United Kingdom.

3. Research Questions and Methodology

The IT industry is particularly useful for studying workers' transitions as they relate to flexicurity and TLM. IT is a fluid sector where both local and global connections are important and where firms are subject to the pressures for flexibility in workforces and wages. Even relatively small firms often compete in international markets, within their particular IT niches. The industry is characterized by a lack of formal regulation, very low levels of union membership and a lack of rigid professional entry requirements. This suggests that the IT labour market will be highly responsive to the pressures to shed or to hire workers, and that some workers' careers may be characterized by a fairly high degree of instability and risk. As well, the rapid pace of technological change, including a proliferation of qualifications related to particular software products, means that transitions made in order to upgrade skills may be especially important for workers and firms in this industry. This would include transitions between work and formal learning, as well as transitions made between jobs in order to gain additional experience.

We use evidence from the IT industry to provide some insight into the potential for TLM and flexicurity-style programs and policies to provide support to workers and firms across difficult transitions. We do this by investigating the factors that contributed to successful work transitions, including maintaining employment, re-gaining employment and changing jobs. We are interested in the various resources that appear to have been important in these transitions and the strategies in which they were used, in order to understand the types of policies that might support similar transitions. In other words, we are interested in finding out "what matters" for successful transitions. We do this by analysing the life-course trajectories of older IT workers using data from the WANE study. Although the study collected data from six countries, this chapter is based on a detailed analysis of a study group of 41 men and women, aged 40 and over, in 15 case study companies in Canada and the United Kingdom, as detailed in Tables 1 and 2. These two countries were selected for policy-related and practical reasons. Flexicurity and TLM policy frameworks have attracted growing interest in both Canada and the United Kingdom in recent years, although their applicability remains contentious. Secondly, our aim was to build a picture of individual life courses in the context of the firm, the IT industry and the national labour markets in Canada and the United Kingdom. As well, being based in Canada and the United Kingdom, these were the countries with which we were most familiar.

Although there are some similarities between these two countries, there are, of course, important differences in their IT industries and labour forces. We cannot thoroughly compare them here, nor do our data allow us to identify much in the way of country effects in our analysis. However, geography, and the participation in different trading relationships (the European Union and the North American Free Trade Agreement), are very likely to result in differences in these countries' IT industries. Although small and medium-sized enterprises predominate in the IT industry in both these countries, unlike some other WANE study countries (Duerden Comeau, 2004), the Canadian industry may have been affected by the importance of several large telecommunications firms in the 1980s and 1990s (Britton, 1996), while the United Kingdom industry may have a more diverse history (de Hoog et al., 2004; Downie et al., 2004).

Our selected study group was limited to workers 40 and over and to those who had completed both interviews and the survey components of the WANE study. Many of these workers had been in the IT industry through its growth in the 1990s, the downturn of the 2000s and the subsequent semi-recovery. This study group includes only "survivors" in IT, by which we mean those who remained in the industry. Although 40 and older is not generally thought of as "older," the young age structure of the IT industry, reflected in the WANE sample, makes this appropriate for our purpose.

It was our desire to roughly balance the Canadian and United Kingdom study groups in terms of size and composition. The Canadian WANE sample of firms and workers was larger than the United Kingdom sample; the final study group, therefore, included all IT workers 40 and older from the United Kingdom WANE sample. This amounted to 21 workers aged 40 and over employed by six United Kingdom firms, three of which were small (five to 49 employees) and three were medium size (50-249 employees). All of the Canadian firms with five or more employees, and all of the Canadian firms with women aged 40 and older, were included. The result was 20 Canadian individuals, clustered within nine Canadian firms, seven of which were small and two were micro (one to four employees).

Because of the non-random sampling in the WANE project, differences in the size of firms, their ages and their IT niches may or may not reflect systematic differences between the two countries' IT industries. Taken together, however, they present an interesting sample of firms with diverse histories, working in different parts of the IT industry and having a variety of ownership and management structures. United Kingdom firms were located in a number of mainly high-tech corridors. Canadian firms were located in one of three cities, one of which is known as a high-tech centre. The activities these firms were engaged in included producing software for various industries, including manufacturing, logistics, finance and petrochemical industries. Some of them produced off-the-shelf software products and others were more heavily involved in designing and implementing customized systems, often working closely with client firms. Four of the Canadian firms were IT consultancies providing a variety of IT services to clients. The five remaining Canadian firms, and all of the six United Kingdom firms, were in software development and/or services. Only one firm was publicly listed (United Kingdom); the remainder were sole or jointly owned (eight in Canada, three in the United Kingdom) or had multiple owner-managers (one in Canada, two in the United Kingdom). The two sets of firms were also similar in terms of their length of operation. The majority were in existence for five years or longer.

Table 1. Study Group Characteristics: Firms

	Canada	United Kingdom
Firm Size		
Micro (1-4 employees)	2	0
Small (5-49 employees)	7	3
Medium (50-249 employees)	0	3
Firm Niche		
Software development and services	5	6
IT consultancy	4	0
Ownership		
Sole or joint owner-manager(s)	8	3
Multiple owner-managers or consortium	1	2
Public company (listed on stock exchange)	0	1
Location		
Business or science park		
In high-tech corridor	1	3
Outside high-tech corridor	1	0
Rural/suburban base close to or within high-tech corridor	2	2
City base within high-tech corridor	5	1
Company Founded		
Within last 5 years	1	1
5-10 years ago	5	3
11 years ago or longer	3	3

The final study group of IT workers consisted of 17 men and four women in the United Kingdom, and 14 men and six women in Canada. The combined age span was 40 years to 63 years: 66% were in their 40s; 32% in their 50s; and only 2% (one United Kingdom respondent) in their 60s. The Canadian individuals tended to be younger than their United Kingdom counterparts and were predominantly in their 40s. The small number of older women in both study groups was indicative of the poor representation of females in the IT industry as a whole, and their higher exit rates (Panteli et al., 2001; Duerden Comeau, 2004; Platman and Taylor, 2004; Stephan and Levin, 2005). As Table 2 shows, these individuals fell into four professional categories: entrepreneurs, technical managers, technical professionals and IT-related professionals. The category of entrepreneur included the firm's chief executive, president, chairman and owner, while that of technical manager covered senior managerial roles in IT-specific functions, such as directors of engineering. Technical professionals included software developers, programmers and analysts, as distinct from IT-related professionals, who were working in staffing, sales and marketing positions. There were similar numbers of entrepreneurs and senior executives in the Canadian and United Kingdom study groups, although there were slightly more technical managers and slightly fewer technical professionals in the United Kingdom.

They were highly educated in the main, with 61% of the total being educated to degree or post-graduate degree level, although the Canadian group was somewhat less-educated. Most were full-time permanent workers: only one United Kingdom and one Canadian were part-time; and only two of the Canadian individuals were on fixed-term contracts. However, it should be noted that some of the consultants working at the Canadian consultancies indicated in the survey that they were permanent employees despite their formal contract status. Unsurprisingly, given their varying positions, the salaries of these workers also varied widely. Taking the sample as a whole, the salaries were about evenly distributed from the lowest category (under £20,000 [$39,000 CAD]) to the highest (£80,000 [$150,000 CAD][3] or over), although more of the lowest-income earners were Canadian.

None of the sample were members of company associations. The only trade union member was only so because she had kept up membership from a previous career. Four United Kingdom individuals reported being members of professional associations, but none of these were specific to the IT profession, although two Canadians belonged to an IT-specific professional organization. Only two individuals (one in each country) identified themselves as members of racial minority groups. English was a first language for all workers in the United Kingdom and all but two workers in Canada. The majority reported having had some caring responsibilities over their careers, with most having children or step-children.

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[3] The categorizations of income in the United Kingdom and Canadian versions of the surveys were slightly different.

Table 2. Study Group Characteristics: Individuals

Age	Canada			United Kingdom		
	Male	Female	*Total*	Male	Female	*Total*
40-49	12	5	*17*	7	3	*10*
50-59	2	1	*3*	9	1	*10*
60-65	0	0	*0*	1	0	*1*
Total	14	6	*20*	17	4	*21*
Occupational Group*						
Entrepreneur or senior executive (1)	5	3	*8*	7	1	*8*
Technical manager (2)	2	0	*2*	5	1	*6*
Technical professional (3)	6	3	*9*	3	1	*4*
IT-related professional (4)	1	0	*1*	2	1	*3*
Highest Educational Level						
Post-graduate degree (Masters or PhD)	3	1	*4*	5	2	*7*
Undergraduate degree	5	1	*6*	8	0	*8*
College or further education qualification	4	4	*8*	1	1	*2*
Secondary school qualification	2	0	*2*	2	1	*3*
Other formal qualification	0	0	*0*	1	0	*1*
IT Certifications						
IT certifications (proprietary or other) – in addition to above qualifications	3	4	*7*	3	1	*4*
Contractual Arrangement						
Full-time permanent	13	4	*17*	16	4	*20*
Part-time permanent	0	1	*1*	1	0	*1*
Full-time fixed-term contract	1	1	*2*	0	0	*0*
Part-time fixed-term contract	0	0	*0*	0	0	*0*
Membership of:						
Trade union	0	1	*1*	0	0	*0*
Company-based employee association	0	0	*0*	0	0	*0*
Professional association	2	0	*2*	4	0	*4*
Income, Family and Personal Background						
Annual individual income						
Under £40,000 GBP [< $79,999 CAD]	7	5	*12*	4	3	*7*
£40-59,999 [$80,000-99,999 CAD]	2	0	*2*	6	1	*7*
£60-79,999 [$100,000-149,999CAD]	1	1	*2*	4	0	*4*
£80,000 or over [>$150,000 CAD]	4	0	*4*	3	0	*3*
Member of minority group	1	0	*1*	1	0	*1*
English as first language	12	6	*18*	17	4	*21*
English as second language	2	0	*2*	0	0	*0*
Children and/or step-children	11	4	*15*	14	4	*18*

Notes:

1.   Chief executive officer, president, owner-manager, managing director, chairman.
2.   Director of engineering, IT manager, production manager, IT support manager.
3.   Software developer, programmer, analyst, engineer, designer, technician.
4.   Staff manager, sales executive, marketing development manager.

3.1 Analysis

Our approach here is largely qualitative and exploratory. The relatively small and non-random sample makes generalizations to populations impossible, but does allow us to look at the employment transitions of these workers in a rather more complete way, which complements the more statistical methods that had been deployed generally in the past in relation to transitional labour markets (e.g. Bothfeld and O'Reily, 2000). We used three main sources of data for the analysis: online survey responses, transcribed interviews and reports of case study firms. The online survey was designed to capture life-course trajectories and transitions in four key domains: school-to-work; work-to-work; family and care; and future intentions, including retirement. It also collected data on age, marital status, income, gender, ethnicity, disability, health and a number of other characteristics. The second source of information was the interview with respondents. These were confidential explorations of individual biographies, work histories and family narratives. They were designed to complement the survey by exploring work and family issues in depth. Finally, we drew on case study reports of individual firms, compiled by WANE researchers. These combined available firm documents, policies and other records provided by firms with information from interviews with CEOs, owners or executives to create reports that were used for our analyses.

There were two major stages to our analysis. The first was to use these three sources of data to construct a "life-course grid" for each individual, as a way of mapping their lives in a systematic way. Similar grids have been used to collect life-course interview data (Parry et al., 1999), but here we use them as a device for ordering pre-collected interview, survey and case study data. The grid consisted of a time-ordered spreadsheet with dates running vertically and domains or various types of transitions running horizontally. This allowed notes about the experience and quality of various transitions to be included in each cell, and for experiences in each domain to be viewed simultaneously and related to each other. The grid evolved as the analysis proceeded. In its final iteration, the grid included information about individual transitions in work, including the types of firms, aspects of their jobs, their job and income satisfaction; reasons for career changes; education and training; health, marital and family events; and other major life-course transitions, such as geographic mobility. Columns also recorded individuals' experiences during the IT sector's expansion in the 1990s and contraction during the early 2000s. Additional rows were used to record their expectations for future job changes or retirement. These data came both from the interviews, which provided a narrative account of respondents' experiences, and from survey responses, which collected detailed information on the timing of various transitions and jobs, self-rated health, retirement plans and feelings about the future.

In addition to the columns indicating individual transitions and experiences, there were columns that pertained to the firms where these employees worked, with information taken from background documents about the company and the company case study reports. Expansions or layoffs, changes of ownership and changes in product focus were extracted from the company case study documents and listed parallel to the individuals' histories.

These data sources were mined in order to fill in each cell in the grid as comprehensively as possible. However, these were retrospective accounts; therefore, it was impossible to check for information that had been missed in the survey or by the interviewers. Nevertheless, it has been possible using these three data sources to build up fairly complete pictures of the major transitions in the lives of these individuals and firms. In parallel with grid completion, separate documents were created for each individual, containing quotes, examples and fuller summaries from the transcribed interviews.

The second stage of analysis involved creating meta-analytical grids, allowing us to compare one case against the next in terms of their exposure to and entry into IT, critical work transitions, career influences, caregiving and family support, child-rearing and future intentions. Four separate grids were created, one each for Canadian men and women, and United Kingdom men and women. These were compared, with attention to the research questions presented above and to the common patterns experienced by individuals as well as to cases that stood out as unusual and that, therefore, might yield new information about these transitions.

4. Findings

As described above, the 41 men and women in our study group were in a variety of jobs at the time of the surveys and interviews. Some were CEOs, presidents or owners of their own firms, some were consultants or other independent contractors, and some were IT technicians or programmers working for others. They also varied widely in terms of the paths they had taken to arrive at their current positions. Some had begun IT careers directly out of a post-secondary program in their early 20s, while others had begun in IT later in life, often after careers in other industries, such as manufacturing or printing. Some of these respondents had seen relatively few employment transitions over the years, sometimes only one major job change, while others had much more turbulent employment careers. However, all respondents indicated some periods of insecurity or disruptions associated with their employment. Even those IT firms with long histories had often gone through rounds of restructuring and ownership changes that were profoundly destabilizing for employees, often including temporary layoffs and cuts in hours. Entrepreneurs and executives also often spoke of periods when their firms and their own employment were in danger of collapse.

Figure 1 characterizes the career trajectory of one male worker in our United Kingdom study group who had been an IT worker, a contractor and an entrepreneur over his IT career. His experiences were far from atypical and include several short layoffs due to the collapse and restructuring of firms. The vertical axis gives an impression of the general direction and volatility of transitions for this man. More positive transitions were subjectively identified by increased security, income or general happiness, as indicated in the interviews and in the survey data. The slight downward slope after age 47, the time of the interview, indicates his lack of confidence for the future and his concern for his ability to find another job, should he need to.

Figure 1. Stylized Career Trajectory, UK IT Employee
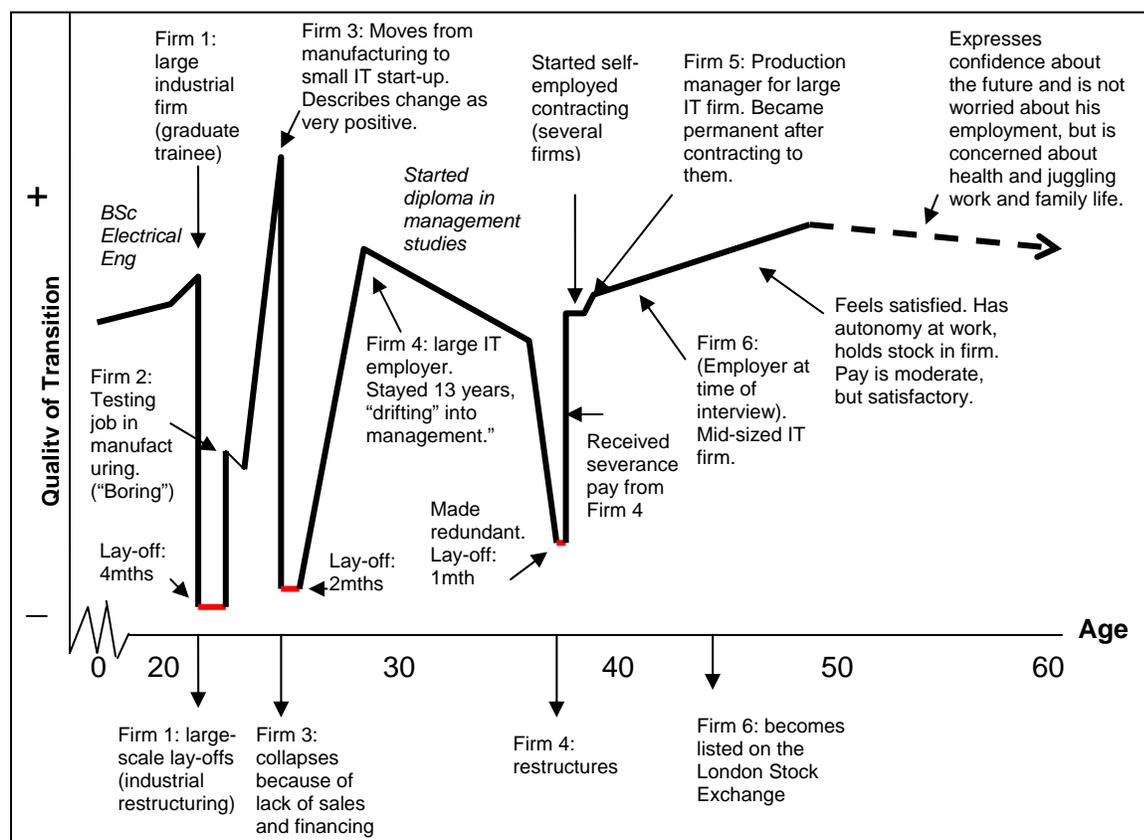
Notes: This trajectory is drawn from interview and survey data and is intended to illustrate the types of career transitions made by IT workers and how they are related to firm transitions. "Quality of transition" refers to the researchers' assessment of whether a particular transition increased or decreased the employee's income, security, autonomy or happiness, as indicated in the interview data.

The result was that, for this man and many others in the study group, their futures in the IT industry were unclear. For some, pressure to re-train to maintain their skills, and the relative insecurity of work with small IT firms, made continuing in IT unattractive. At the same time, it is clear that periodic career transitions seem necessary for this industry, both for individuals and firms. Transitions were important for gaining various kinds of experience or training, and were often felt to be keys to future success. The WANE data also illustrated the importance of flexibility among firms. Many had grown and contracted with the IT industry and had gone through several different incarnations.

The respondents in our study group dealt with these challenges in a number of ways. Some employees facing redundancy needed to find new jobs. Others left their companies to strike out on their own as freelance consultants or entrepreneurs. For some, the entrance to IT was itself a very important transition strategy and often a response to the decline of another industry.

The situations these respondents found themselves in also varied widely in terms of their general satisfaction with their work and the sufficiency of their incomes. As we have indicated, some had quite high incomes. Many of these were relatively satisfied with their current situations. Others were much less satisfied, both with their incomes and with their working lives in general. Not all of those with low incomes and fairly low satisfaction were employees or technical workers. A few were owners of their own small firms. Some managers were also among those earning relatively little.

As might be expected, the study group also varied in terms of their optimism about the future. Some were quite anxious about the futures of their own firms and the industry, or were concerned about their own chances to find employment, should their current jobs end. Others were more sanguine about their own chances on the labour market and about their firms and the industry.

Although these respondents varied in these respects, they shared one common characteristic in our eyes – they had all "survived" as IT workers. They had, with varying degrees of success, navigated the rough waters of IT employment by making choices and transitions with the help of various resources and in the context of their previous work and family life courses. Below, we examine the factors that were important for these workers to make various transitions in the labour market and especially work transitions that have led, in retrospect, to continued incomes, to better income security or to more satisfaction. We ask "what matters?" for these IT workers' employment transitions and find strong evidence that a number of aspects of timing matter, as do skills, family resources, gender, networks and alternative organizations, as well as chance.

4.1 Skills Matter

As one would expect, we found evidence that the skills and experience that IT employees can offer to employers matter for their ability to make career transitions. Certainly the employees themselves thought so; only nine of the 41 study group members indicated in the survey that they were "not at all concerned" about their ability to maintain their IT-related skills. These IT workers were also unconcerned about their ability to be competitive, should they lose their jobs. For the majority, though, both of these were at least "somewhat" of a concern.

Those who were unconcerned about their ability to maintain their skills included most of the group whose careers had moved from technical aspects of IT to management or IT entrepreneur roles, but also some who were currently analysts or programmers. Of those technical IT workers who were confident about maintaining their skills levels, most had university degrees, while those who were concerned about their futures tended to be those with shorter college diplomas or training related to a specific set of products, such as Microsoft software.

It should also be noted that there was little evidence in our study group of opportunities to retrain across working life. Relatively few of them (five United Kingdom, five Canadian) reported having had any computing courses in the past 12 months. Rather, by far the most common means of updating skills was through on-the-job learning, as well as self-tuition at work and on home-time.

We might speculate that those in the sample with university degrees in computing had a somewhat different set of skills than those with other training backgrounds and perhaps a more general foundation upon which more specific skills could be built. Even for those with degrees that were in other fields, such as business or psychology, this may have provided them with skills or credentials that set them on a better career trajectory. Unsurprisingly, nearly all the 25 people in Table 1 who had university degrees had acquired them at the beginning of their working careers, whereas it was much more likely that those with shorter IT-related educations had returned later in life. This suggests one of the ways in which the timing of employment-related transitions may matter to their outcomes.

4.2 Timing Matters

There were a number of ways in which the timing of transitions mattered for their perceived success, with timing being defined in terms of the stage in the individual's own work career, the life course of the firm or the industry and other life-course transitions including marriage and childbearing, as well as age.

The transition into IT work was an important turning point for our IT respondents, despite being experienced at a variety of ages and life-course stages. Some joined IT employment directly from post-secondary programs, which varied from college degrees to post-graduate degrees. Although the data here do not allow us to determine whether early entrants to IT work do tend to have more successful careers than later entrants,[4] there was some evidence that this might be the case. A large proportion of early entrants, who were interviewed in their 40s and 50s, reported being satisfied with their work and optimistic about their future, although this experience was not universal. On the other hand, there were several later entrants to IT who were in less satisfactory situations.

The interview data suggested several possible reasons why those who entered IT work earlier in their lives may have done better. One is that more of the early entrants were those with university degrees, either in computing or a related field, as discussed above. In comparison, a number of those who had come to IT after other careers did so through college or other, shorter, education programs.

There are several factors that might partially explain why our earlier entrants were more likely to have higher education. An obvious one is the relative difficulty of financing and organizing a return to education later in life and, therefore, a preference for shorter programs. One Canadian man, who had begun IT after being a librarian, explicitly mentioned that his wife would not have been willing to support the two of them and their children on her income, for longer than a two-year program.

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[4] Because the study group does not include those who left IT employment, we cannot separate these effects from the fact that those who remained in IT may be better educated, or more successful, for example.

There may also be some country effect. Canadians in our group were much more likely to have two-year college degrees, suggesting that there may be some national differences in IT training systems. The United Kingdom firms in the study group also tended to be linked to universities, often started by former university faculty members. This might lead to more employees with degrees.[5]

For those who entered the industry with little or no training in IT, the transition could be difficult. This could be exacerbated by perceptions of age. The story of one United Kingdom late entrant is telling. At the age of 38, he had switched from a lengthy first career in the British armed forces to a relatively junior role as a computer operator. He was recruited by a mid-sized firm in one of the United Kingdom's high-tech corridors. He described the transition as a shock: he had no formal IT qualifications and had to learn new skills and working methods on-the-job. His colleagues had degrees, unlike himself, and he had difficulty with his much younger supervisor, whom he describes as "an 18-year-old listening to heavy metal music." He was later promoted to systems support engineer, but he had "felt himself shrivel" in these computing roles. At the time of our fieldwork, the company had recognized his people-handling skills and appointed him staff and facilities manager, a role he relished. However, the researchers remained in contact after the fieldwork had ended and discovered that he had been made redundant and was working for a supermarket chain, stacking shelves.

Besides a higher education, some of the early entrants in both the United Kingdom and Canada may have benefitted from joining an industry at a time of expansion (Keeble, 1989; Bowlby and Langois, 2002). For some of these entrants, their first jobs were at large IT firms or utilities that provided additional training and a ladder for promotion.

> So in 11 years there, I actually had 14 different positions and I did everything in IT. I was loading tape drives, tapes at one point, then I got into installing…software into rolling out PCs or, you know, you name it. Got into UNIX, got into database management, so I had a little bit of everything. I was not a specialist in anything, but I could do everything (Case 1107081).

Some of the respondents mentioned the importance of timing, in terms of knowing when to leave a firm and being able to take advantage of fate's hand by controlling the timing of transitions. Several of the interviews indicated the importance of moving to avoid being dragged down with a declining firm. There were many examples of individuals repositioning themselves in a way that saved their careers from possible misfortune, including quick-witted decisions to abandon firms that were on the slide or to leave positions that were heading for redundancy.

In the United Kingdom group, this is illustrated by one breakaway enterprise whose origins lay in a large firm's IT department. Early knowledge of that firm's imminent collapse had led the IT team to re-locate overnight and start working the next day with a former client, a strategy that maintained their employment. In the Canadian group, one firm's vice-president recounted leaving a large IT company where he had been for about 20 years. Having been responsible for hundreds of people in this large firm, he realized that further career progression would mean even greater responsibilities and time constraints, but perhaps more important was that his

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[5] Cohort and period effects could also be at play, in which those who began in IT work right out of school, many in the 1970s, entered an industry for which a university degree was required and for which other programs were not yet available.

pension with the company would have been "locked in" to a defined benefit plan and no longer transferable. Another man in the Canadian group had also been a senior manager at the same large IT firm, but had stuck it out through rounds of redundancies, until he was laid off himself. Both men were working for smaller firms at the time of the interview, but the former was secure and looking towards early retirement, while the other was living off his severance and having difficulty securing a stable position.

One respondent, a production manager aged 49, gave a particularly strong indication of the importance of timing, as well as luck, in career transitions. He had been laid off three times before he reached his 40th birthday, yet these experiences had appeared to equip him with industry and firm-specific sensors, which he had used to his advantage in deciding to join his current firm. Explaining his decision to leave his last job before being made redundant, he said:

> …the company I was at was not looking like a good long-term prospect for me. It's still around, it's still doing very well but as it is now I wouldn't have a job there. […]I do know people [PAUSE], one in particular who was made redundant exactly the same time […] who was, I guess, probably then about as old as I am now, and had a hell of a time finding anything. Ended up contracting part-time stuff, working in Tesco's [supermarket chain], you know, sort of anything to keep going (Case 4405104).

A Canadian man reported being able to take advantage of his employer's leave policy to take a college course and to avoid redundancy.

> Also at that time what was the push that did it, was the [employer] at the time was talking about outsourcing their department, centralizing everything. And in fact, that's when I decided time to take the jump. So I took a leave of absence for four months, went to [college], and did well, and then officially resigned my position…and that summer, sure enough, my department was centralized – swallowed…so to speak (Case 1191133).

The timing of job transitions in relation to the trajectories of firms appears to have been important for a number of our study group members. For others, the relationship between job transitions and family events appears to have been key.

4.3 Family Matters

As described above, the WANE interview and Web survey data included information on family transitions, as well as employment transitions. As expected, they could be seen to interact and to influence each other in the lives of our study group. For these IT workers, family responsibilities such as child care or the care of family members, were issues that needed to be reconciled with employment. On the other hand, family members, especially spouses, provided a resource of support, allowing IT workers to make critical employment transitions. Some career trajectories were more directly embedded in family strategies. There were two United Kingdom and two Canadian firms where husbands and wives worked together. In each of these cases, one or both of the married partners held an ownership stake or a senior position in the firm. This was a strategy that some said allowed them to coordinate work and family life. On the other hand, it also increased their dependence on the firm's success and the risk associated with its failure.

For those who were able to control the timing of employment transitions, this was often possible only through the support of family members, principally spouses. The interviews illustrated several ways in which individual career transitions were made in the context of family resources and caregiving obligations. The availability of support from spouses allowed some to re-train for career transitions and others to begin the risky transition to consulting or entrepreneurship.

An advantage some had was the ability to coordinate the timing of work and family transitions. Respondents at one United Kingdom start-up firm reported having a "baby boom" among the owner/employees as the firm became more stable. One founder of a Canadian firm describes the ability of some entrepreneurs to mesh the timing of childbearing with transitions in their companies.

> ...we were lucky. [Business partner] and I both were just barely married, our wives both worked, and they made good money so, you know, we could work for a couple of years at $2,000 a month…and not have to struggle all that much. And around the time that we were ready to start having kids, we both had kids within a year of each other or so. Around that time you know we were, the company was making money and we could see growth and good potential...(Case 1191042).

This contrasts strongly with the case of one of their employees, who had started his job at the same time as his first child was born and his parents were ill.

> I: So new baby, new job, lots of…tension
>
> R: And recovering from kind of a burnout from the year before. Yeah there was a lot going on […] and two dying parents. One was gone already, my mother was about a year away from it. It was a little wild.
>
> I: How did you do it?
>
> R: Well the environment was a bit tough at first partly because I was very new… and I was dealing with all of what I just described. You know I guess, I dealt with it partly because I have a wife who is… unflappable (Case 1191081).

This man's wife left her own job at this time and had not returned at the time of the interview. Thus, as much as it was important for some to have the support of their spouses' incomes during critical transitions, for others it seems to have been equally important that their spouses, mainly women, were not working, but instead cared for their children full-time.

4.4 Gender Matters

It is important to note that there were strong gender differences in IT career trajectories that could be identified, despite the relatively few women in the study group. As shown in Table 2, women in the study groups were working in a variety of roles in these firms, both technical and administrative. Women were also more likely to have entered IT work later in life. There was only one in the study group who had begun an IT career directly out of school in her 20s. Most of them had begun their working careers in other roles, such as teaching, accountancy, or administrative or secretarial work, and had made a transition to IT.

The most striking aspect of the lives of the United Kingdom and Canadian women is that there was considerably more evidence of the influence of family life on working careers than in men's stories. Several women reported putting their own working careers second to child care. One United Kingdom woman explained this in terms of the central position her growing children held in her life.

> …they are still the most important part of my life; they would always take precedence over my career, you know. Obviously as they're getting older, they have less reliance on you so it's not so important, but, you know, my family life when I go home, I don't want to be, you know, thinking about work when I get home, or trying to learn new stuff, and I just don't want to be doing that (Case 4402094).

Several women described making important work transitions in order to care for others. This Canadian woman decided to work part-time in order to take care of her daughter and her son, who has special needs.

> …being totally and brutally honest, my husband's career comes first because he stands a much better chance of getting anywhere. I, I hit the glass ceiling (laughs) and it hurt. I want to go back to university, I want to actually study education and start working with special ed kids. I've been tutoring and for literacy work and working with my son's class now and I just love dealing with them, so I think that's an area that I'd like to look at further. And, you know, if IT fits in, great (laughs). But it's not, it's not a huge part of my life, or it's not, I've learned not to let it take over (Case 1109042).

Another woman, a Canadian consultant/owner, left to start her own consulting company after having to commute to a remote site for eight months. Her husband's shift work meant that they had to rely on their parents to care for their children, which they found untenable. However, she did not find balancing child care and work any easier as a consultant.

> No, because like I said my husband works shift-work and then you know owning a company means you're never stop working, really. You're doing stuff at …but you know [I] have my laptop and I sit in the same room with my family. So they think I'm there with them, but you know I'm still kind of working […] But you've got to do what you have to do. I am the major breadwinner in the family so you know I pay the mortgage and got to do it. And you know my daughter's grown up now she's 21, she just moved out so I don't have to worry about her now (Case 1113003).

As described above, caregiving is a key factor influencing the career paths of some of these women. Spousal income, as in the case of the woman who chose to work part-time, was naturally a critical component of these decisions. For another Canadian woman, a co-owner of an IT firm, the firm itself is part of a family strategy because she and her husband run it out of their house. They had no children. The distinction between their work and home lives seemed to be virtually non-existent.

4.5 Networks Matter

One of the factors that clearly distinguished those who had successfully made various employment transitions, or who felt secure in their abilities to survive future shocks, was the presence of networks. Professional networks, in the form of current and past colleagues and IT-connected family members, had been critical at various stages in the careers of many. One Canadian man described finding his current position through contacts made at his children's football games. Another, older, respondent in the United Kingdom had benefited from "reverse-patronage," where a younger IT entrepreneur with whom he had worked years earlier had offered him his current position. Relatively few of our respondents reported that they had found their current positions through advertisements, employment agencies or head-hunting agencies. Rather, it was far more common to see that networks and pre-existing relationships played a key role in facilitating transitions.

Some of the small firms in our study group were really held together by the strength of relationships between their members. Several firms had gone through reorganizations and had reformed around the same core group of employees and managers. The strength of personal networks was recognized as important not only for individuals, but also for their firms. One of the respondents had been asked to continue working at his firm because of his extensive industry networks in the high-tech geographical cluster where the firm was located. He described himself as having "a door-opening role" and being "an ambassador-at-large," helping the firm to reposition itself in a highly competitive market.

Two of our firms provided particularly good examples of the importance of networks for career survival and are also examples of innovative responses to an uncertain industry. One United Kingdom firm, described above, was formed on-the-spot by six IT employees of a larger firm that was about to close down. In danger of losing their jobs, these six employees had taken their knowledge of the work and their former employer's major client, and had been able to maintain their own employment. The firm had operated as a consortium, in which each of the six had an equal share, for over a decade. The owner-employees had settled into roles within the company that best suited them. Another, Canadian, firm was founded by a number of independent IT contractors in order to pool resources and to contract with larger clients. This "collective" helped match client firms and contractors, who would often work at a single client firm for months or years. The contracting firm improved contractors' networks, helped them find work and provided administrative services, in exchange for a percentage of the contract. Both of these innovative firms tended to be somewhat flexible in terms of working time. The owner/employees of the consortium company all had a fair amount of latitude concerning taking time off to deal with caregiving or other tasks. The contracting arrangement at the "collective" firm meant that employees were able, to some degree, to have more control over their working lives and to turn down work in favour of other activities.

4.6 Chance (or Risk) Matters

Ultimately, the IT industry as experienced by these workers was an unstable one for owners/managers, contractors and employees alike. Many or all of them were currently experiencing some uncertainty about the futures of their firms. For many small firms, the problems faced stemmed from difficulty securing ongoing capital financing. Some were having problems creating new products with which to compete in a fast-moving industry. Changing technology meant that some firms, as well as many individuals, had to re-tool to work with or produce new products.

These factors affecting the working lives of IT workers are perhaps more accurately presented as aspects of the economic or social-structural context in which they work than as "chance." However, from the perspective of the individuals, these and other events were among the uncontrollable aspects of their environment. One United Kingdom entrepreneur reflected on the role of fate rather than on pre-determined goals in deciding outcomes in IT.

> I'm sort of minded to think of pinball machines or something, you know. You'd like to get the ball from the plunger round the circuit and down into one of the high-scoring pockets at the bottom. But in reality, there are lots of bumpers and mushrooms and things in the way. And, and you know, you can give the whole machine a heave with your hips every so often, but on the whole, gravity does most of the work and, you know, your ability to influence exactly what happens is not as great as, you know, management textbooks might like you to believe (Case 4405272).

However, he also referred to the experience he had gained running three previous IT ventures that had equipped him with a sense of the industry.

> …if you've had 15 years' business experience that makes a big difference because it means you've already had some corners knocked off, you've already survived some crises, you've already maxed out your credit cards, you know, once, where it concentrates the mind admirably (Case 4405272).

5. Discussion

Clearly, there are other things that "matter" to successful career transitions, and other resources that provide support in times of employment insecurity. Income and savings are probably the most obvious, providing the freedom to leave a job, to re-train or to leave the labour market entirely. We also take it as given that education matters – that having saleable skills can make a crucial difference in the outcomes of employment transitions and whether workers are able to navigate a risky labour market. However, our intention here is to use the WANE data to explore other factors that affect transitions and that speak to the possibility of programs and policies that would balance flexibility and security for employees and firms. By examining the resources and factors that did help these workers make successful transitions, we hoped to identify how programs might offer further support.

The data used here do not allow us to generalize about a population, but they do give us a glimpse into the types of experiences and resources that were important in allowing these IT workers to maintain employment in the industry. Generally, these results seem to reaffirm the validity of the ideals of the flexicurity and TLM enterprises. For workers, this means that policies should be designed to support workers by helping them through transitions across the life course. The findings here support the idea that transitions in the labour market are often affected by transitions or conditions in other aspects of life, particularly in the realm of the family. Policies that recognize the interconnectedness of these domains, and that strategies are often made in the context of all family resources, including time and income sources, might be important.

We also find that it was important for these workers to have control over the timing of some labour force transitions, including being able to leave a firm or industry when things appear to be in decline, rather than waiting to be made redundant. Policies that improve workers' ability to control the timing of labour market transitions might be able to improve outcomes. Although workers require security, especially for income, the other side of this security is the flexibility for workers to make the transitions that they feel will improve their situations.

Flexicurity is also concerned with providing flexibility for the firm and balancing security with workers with a firm's need to be flexible and respond to market conditions. Many of these small and medium-sized enterprises had been faced with situations when they needed to reduce their costs by shedding workers, although they were often hired back once conditions improved or the firm had reorganized in a slightly different form. The expansion and contraction of these firms seemed to be particularly rapid in the IT industry, perhaps because of the rapid pace of technology change and the culture of the "start up" company, but this might be the case for small and medium-sized firms in general. As some of the entrepreneurs pointed out, failing in start-up ventures was seen as an important part of learning how to operate in the industry and developing a product.

What directions, then, might flexicurity or TLM policies take to assist these IT firms and employees? One aspect that became clear through our analysis of the interview and Web survey data was that there was very little use of traditional income security programs, job-finding programs or retraining programs, among workers in either country. Although many of the respondents had experienced unemployment, mainly for short periods, none of them mentioned receiving employment benefits of any kind, although this may be influenced by stigma associated with these programs.

In addition to the lack of formally provided training opportunities, this suggests that there seems to be scope for a much greater role to be played by professional organizations, government agencies and labour market intermediaries in providing local but sector-specific labour market information. Our study group of individuals often relied on their own networks or personal experience to gauge when a career move might be necessary and what form the move might take. Support might take the form of a new type of broker or representative organization to support and guide individuals in niche sectors and occupations, and that would be capable of understanding and passing on vital trends in changing roles, positions and skills sets. These sorts of supports may help improve people's sense of current and future security and would allow them to approach periods of uncertainty and risk-taking with more confidence.

Sector-specific trade bodies have an influential role to play in assisting such a broker or representative organization. The sector skills council for IT and telecoms in the United Kingdom, e-skills and its Canadian counterpart, the Information and Communications Technology Council (ICTC), have developed a range of resources and tools that are designed to address issues of job-preparedness and training given the speed of change in the sector. However, further work may be needed to ensure that the considerable amount of career and labour market intelligence now available through these bodies is reaching, and is deemed to be relevant to, professionals in mid and late careers.

The importance of networks for maintaining employment suggests that institutions that foster and promote these networks may be helpful. As well, the two innovatively organized firms in our sample, the six-person consortium in the United Kingdom and the Canadian "collectives," provide concrete examples of organizational responses by individuals that have served to maintain their income security and employability in an uncertain environment. In some ways, these organizations were able to provide individuals with both enhanced security of income and increased flexibility, in terms of control over their working lives. Although these sorts of innovative organizations are not likely to replace many traditional firms, they might provide some guide to implementing Schmid's "flexibly coordinated" and locally controlled transitional labour markets. Networks of semi-independent contractors or consultants might be one way to maintain employment for workers made redundant or for those who need to increase their control over their working lives. Sector-specific bodies, such as the IT councils of e-skills and ICTC in the United Kingdom and Canada, could be instrumental in nurturing and supporting such networks.

As the flexicurity and TLM programs continue to be developed into specific policy suggestions, these will certainly be country-specific and shaped by pre-existing welfare states.

In the United Kingdom and Canada, countries with minimalist welfare states and an emphasis on market-mediated transitions, these policies could take the form of institutions that focus on providing individuals and firms with information or other resources that would improve their ability to make successful transitions, rather than on guaranteed incomes or other supports. Although the findings presented here are exploratory, they do suggest that these life-course perspectives on employment policies may be important, even if their precise forms may be difficult to imagine.

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