THE NATURE AND INCIDENCE OF NON-STANDARD WORK ARRANGEMENTS

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Abstract

This dissertation explores the nature and incidence of several non-standard work arrangements (NSWAs). Statistics confirm the growing prevalence of NSWAs. By 1995, less than one third of Canadian workers were employed in a single full-time, permanent job with a "normal" work schedule. Conventional wisdom suggests that the net effect of the increasing incidence of NSWAs is negative for workers. However, certain NSWAs potentially provide better work-life balance for employees and more flexible utilization of labour for employers. Thus, it is suggested that far too little attention has been paid to the varying nature of particular NSWAs. A typology of NSWAs, consisting of five dimensions and three types, is conceptualized. After examining the dataset and some preliminary data analysis, a modified typology of four dimensions and two types is presented and analyzed. In particular, the two key types of NSWAs are categorized as employee-friendly or employer-friendly. In addition to the typology, the workplace and worker characteristics that affect the incidence of NSWAs is examined.

This dissertation has a quantitative research design, and utilizes Statistics Canada's 1999 Workplace and Employee Survey (WES). The chosen dataset and methodology also allow inferences to be made regarding employer strategies. Results suggest that job satisfaction is positively related to employee-friendly NSWAs but negatively related to employer-friendly NSWAs. When controlling for a range of worker and workplace variables, it was found that industry, occupation, gender, tenure, and employee participation are related to the incidence of NSWAs. Finally, consistent with existing research, only a tenuous link was found between workplace outcomes and the incidence of NSWAs. The implication is that the implementation of NSWAs is affected more by employers' strategic choices rather than economic necessity.

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Chapter 1.0: Introduction

This dissertation explores the nature and incidence of several non-standard work arrangements (NSWAs). As an introduction, Chapter 1 will present the context, purpose and research objectives, and theoretical perspective. The presumed *types* and *dimensions* of NSWAs are also provided. Subsequently, several relevant themes in the literature are summarized in Chapter 2. This will be followed by the conceptual models and hypotheses in Chapter 3, and methodology in Chapter 4. Afterwards, the results are provided in Chapter 5. They are followed by conclusions, final thoughts, and implications in Chapter 6. Finally, references and appendices are provided.

1.1 Context

The nature of work continues to evolve. New work arrangements have emerged and the use of previously rare variations has increased. Statistics confirm the growing prevalence of NSWAs. By 1995, less than one third of Canadian workers were employed in a single full-time, permanent job with a "normal" work schedule (i.e. a job featuring only "standard" work arrangements) (Lipsett and Reesor, 1998). In this dissertation, non-standard work arrangements (NSWAs) refer to several of these new elements of work. As an aside, the term "NSWA" is used throughout this dissertation although various terms are also found in the literature. Of particular interest are the ways in which work terms, schedules, locations, duties, and rewards are arranged. Detailed definitions will be provided shortly. At this point it is sufficient to note that NSWAs differ from the *stereotypical* working conditions faced by workers in industrialized countries in the post-WWII era. Many think that a key catalyst for the use of NSWAs is employers' reactions to a changing business environment. (See Kalleberg, 2000 and Smith, 1997 for an overview of the use of NSWAs and the factors contributing to that usage.)

Most of the research on NSWAs identifies negative implications for workers (e.g. Armstrong-Stassen, 1998; Banks, 2001; Cranford, Vosko, and Zukewich, 2003; Jackson and Robinson, 2000; McGovern, Smeaton, and Hill, 2004; Zeytinoglu, 1999a, 1999b).

Much of it also offers public policy proposals to regulate their use (Betcherman and Lowe, 1997; Ruckelshaus and Goldstein, 2001; Zeytinoglu et al., 2003). Less frequently, researchers (such as Zeytinoglu, 1999b and Chaykowski and Gunderson, 2001) hesitate to advocate regulation since employers' need for flexibility conflicts with workers' need for protection. Social science researchers often want to restrain employers from using NSWAs which might harm workers (e.g. Ruckelshaus and Goldstein, 2001; Zeytinoglu et al., 2003). However, there will always be some (exploitative) employers willing to bypass labour legislation (Kalleberg, 2000; Lipsett and Reesor, 1999). On the other hand, some employers are struggling for survival given an increasingly uncertain business environment. These employers might rely more heavily on NSWAs out of economic necessity (see Atkinson, 1987; Grenier, Giles, and Belanger, 1997; Jackson, Schuler and Rivero, 1989; Lawson and Bierhanzl, 2004). Therefore, the context in which employers utilize NSWAs must be thoroughly understood when assessing the legitimacy of that use.

As mentioned above, conventional wisdom suggests that the net effect of the increasing incidence of NSWAs is negative for workers. At the risk of over-generalizing, non-standard work tends to be less stable, provide fewer wages and benefits, and can exacerbate work-life conflict (e.g. Kunda, Barley and Evans, 2002; Ruckelshaus and Goldstein, 2001). On the other hand, certain NSWAs provide better work-life balance for employees (Bielenski and Kohler, 1999; Cangelosi, Markham and Bounds, 1998) and more flexible utilization of labour for employers (e.g. Armstrong-Stassen, 1998; Thompson, 2001). There are differing opinions regarding which NSWAs are positive for workers and which are negative. The lack of clarity is partially caused by the wide variations in the scope of NSWAs and outputs examined by researchers. Far too little attention has been paid to the varying nature of particular NSWAs, and relationships of NSWAs with other working conditions.

1.2 Purpose and Research Objectives

The purpose of this dissertation is to examine selected examples of these new forms of work. The overall objective is to clarify the nature and incidence of NSWAs in Canada, *and* the reasons for their use. To achieve this, the specific objectives are listed below:

OBJ 1: To develop a typology to categorize the nature of NSWAs. This will involve an assessment of the *type* and *dimensions* of each arrangement. Thus, the typology will consist of a matrix of NSWA type-dimension pairings. (NSWA types and dimensions are introduced on p. 12.)

OBJ 2: To quantify the incidence of each type-dimension pairing. This will clarify how prevalent NSWAs have become.

OBJ 3: To examine which workplace and worker characteristics affect the incidence of NSWAs. Among the characteristics of interest are industry sector, occupation, unionization, gender, and employers' economic circumstances. The affect of these characteristics will be accomplished using multivariate regressions. It is also necessary to control for other factors that have been linked to the use of NSWAs in existing research. These factors include workplace size, education, marital status, and full-time work experience.

OBJ 4: To assess the level of empirical support for the NSWA typology. This includes an examination of the relationship between job satisfaction and each type of NSWA. An assumption underpinning the typology is that some NSWAs are positively related to job satisfaction, and others are negatively related to it. A second assumption is that the nature (i.e. type) of an NSWA is more influential than its dimension. If support is found for the typology, that justifies the use of composite variables representing the union of NSWAs of each particular *type*.

OBJ 5: A supplementary objective is to infer why NSWAs are being used. In essence, this involves a search for latent labour utilization strategies of employers. These inferences will be drawn from actual patterns of working conditions (i.e. emergent strategies), rather than stated policies from employers. Simply put, there are a

number of reasons why stated policies may not exist, or may differ from actual practices that workers endure. This will be explored in more detail shortly.

This dissertation has a quantitative research design, and utilizes Statistics Canada's 1999 Workplace and Employee Survey (WES). This large micro dataset has been chosen to be able to assess the situation of workers on a national basis. In fact, it has sufficient size to allow analysis of subsets of records using employer and employee variables. This dissertation is a supply-side analysis of the labour market.

This is essentially the design advocated by Armstrong-Stassen (1998) to improve our understanding of NSWAs in Canada. She suggested that a range of NSWAs be considered in the same study, and that theoretical models or frameworks be developed to classify NSWAs. In addition, she advocated utilizing datasets involving a broad range of employees and employers. She recommended that, when assessing the use of NSWAs, researchers consider the perspective of employees *and* employers. Although several years have passed since Armstrong-Stassen's recommendations were made, this gap remains essentially unfilled. The typology of NSWAs that is presented and tested in this dissertation helps to address Armstrong-Stassen's concerns.

In essence, many existing studies are too narrowly and superficially focused. In this dissertation, it is presumed that the use of NSWAs is related to other human resource policies inside an organization such as the level of employee involvement. It is further presumed that various types of NSWAs will impact workers' job satisfaction levels quite differently. Employers have a spectrum of available choices regarding the utilization of labour. At one extreme, employers can be highly responsive to workers' wants and needs. At the other extreme, employers can be focused exclusively on operational issues to the detriment of their workers. Validating or discrediting these presumptions is critical to having a full understanding of where, why, and with what effects NSWAs are used.

Thus, this dissertation will examine the relationships between NSWAs and a range of worker and employer characteristics.

This dissertation is intended to advance understanding of this topic by clarifying what, where, and *why* NSWAs are used, and which worker sub-groups are most affected. In particular, this dissertation will contribute to the literature by offering a typology of NSWAs, and by assessing the level of support for it. This typology is unique because NSWAs are categorized according to the degree to which they are "friendly" to employees or employers. Thus, it is possible to generate composite variables that represent the union of several conceptually related NSWAs. It will be worrisome if "employer-friendly" NSWAs have a higher incidence than "employee-friendly" varieties. It is suggested that inferences can be made about the labour utilization strategy of employers who have significant economic circumstances yet rely heavily on employer-friendly NSWAs. Economic circumstances can be any measure of resources, such as workplace profitability. Certainly, different inferences will be drawn if employers with poorer economic circumstances provide a markedly better mix of NSWAs to their employees. To draw these inferences, and to legitimize the presented typology, it is critical that the nature of NSWAs impacts the job satisfaction of affected workers. Naturally, these concepts and presumptions will be explained and defended in detail in the following sections.

1.3 Theoretical Perspective

The theoretical perspective of this dissertation is based on a combination of industrial relations (IR) and human resource management (HRM) concepts. Each will be briefly reviewed to establish the relevance to the nature and incidence of NSWAs. This inter-disciplinary perspective was also suggested by Armstrong-Stassen (1998). Organizations are complicated entities that are shaped by a range of internal and external factors. IR theory helps shed light on the variables that affect working conditions in general, and the

use of NSWAs in particular. Some HRM theory will also be offered to reinforce the presumption that strategic choices by employers and employees also impact the nature and incidence of NSWAs that are used. Nonetheless, there is not yet a generally-accepted theory that explains where, when, and why NSWAs are utilized. Thus, this interdisciplinary approach establishes a foundation that will help develop conceptual models later in this dissertation.

Industrial Relations Approach to Studying NSWAs

This dissertation primarily relies on the IR systems framework. Dunlop (1958) was the first to integrate all the factors affecting IR into a single model. The main actors, naturally, were employees, employers, and governments. According to Dunlop, the interaction of the three actors yields a stable set of rules governing working conditions inside organizations. Critics, however, suggest that Dunlop virtually ignored process issues and/or merely listed IR factors, rather than presenting a theory of how IR was affected by them (e.g. Peirce, 2003). The original framework also presumed that workers and employers ultimately share common interests. Other IR researchers- particularly from a political economy perspective- disagree vehemently (see McQuarrie, 2003 or Peirce, 2003 for an overview of various IR schools of thought. See Chaykowski and Gunderson, 2001 for an examination of the diverging interests- and power- of workers and owners in a global economy). To be fair, though, Dunlop addressed those concerns in subsequent refinements. It is now accepted that as environmental factors evolve, the actors react as well. In turn, those changes result in altered conditions of work (Dunlop, 1993).

Since the 1980s, employers seem to have acquired additional power and influence in industrial relations in North America and elsewhere. The first conceptualization of this trend was by Kochan, Katz, and McKersie [KKM] (1986). KKM concluded that IR- and the resulting conditions of work- had changed markedly from previous decades. The main catalyst was evolving employer strategies. KKM hypothesized that employer

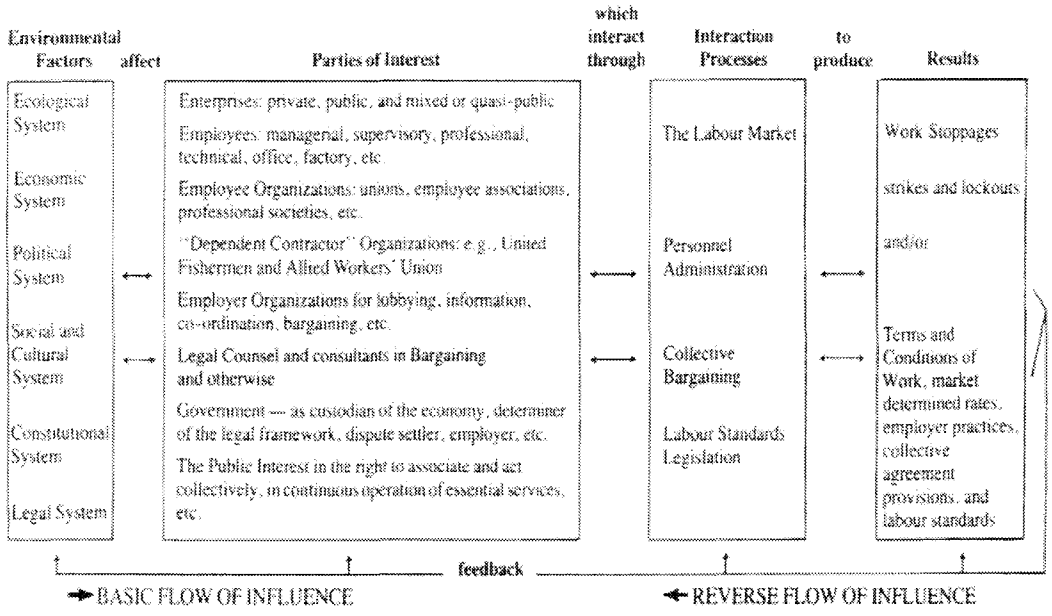
strategies play a key role because they are more dynamic than the policy decisions of government and/or labour. In particular, many employers have altered the employment relationship by increasing the level of employee involvement. Peirce (2003) finds the work by Kochan and colleagues to be sufficiently seminal that the strategic choice perspective is included as a distinct IR school of thought.

Frost (2000a, 2000b, 2001) has established that strategic decisions by labour impact industrial relations as well. In the automotive and steel industries, for example, local unions have taken significantly different strategic approaches. In turn, those choices have yielded vastly different working conditions inside North American workplaces. More generally, research shows that unionization continues to be associated with higher wages (Fang and Verma, 2002) and other benefits such as access to training (Boheim and Booth, 2004). At the same time, the challenges facing unions in a global marketplace with growing use of non-standard workers are also well established (DuRivage, 2000; Van Jaarsveld, 2004; Chaykowski and Gunderson, 2001; Felstead, Ashton, and Green, 2001). Strategic changes in direction by governments in Canada, roughly starting in the 1980s, are also indirectly relevant. A neoclassical perspective has emerged among various governments in Canada (Rose and Chaison, 2001). In this climate, significant deregulation has occurred and market-based forces have been unleashed (Adams, 2001; Carroll and Shaw, 2001). In turn, one effect is a decline in the influence of labour's strategic choices relative to the past, and an increase in the influence of employer strategies on working conditions (Chaykowski and Gunderson, 2001). The relevance, for this dissertation, is that the incidence of various NSWAs might differ depending upon the relative power held by workers (whether or not unionized) and employers. One would expect that employers' power advantage is larger, on average, in non-union settings.

Returning to the IR systems framework, the version presented here as Figure 1 was prepared several years ago by Canadian researchers (see Craig, 1969)[1]. According to Craig's framework, environmental factors affect the interests of employees, employers, governments, and other stakeholders. In turn, altered working conditions- including *employer practices*- result. For instance, if there is a downturn in the economic environment, the parties may interact differently during collective bargaining. Since Craig's framework explicitly included employer practices, KKM's (1986) major contribution is already included to some extent. When Craig's framework is used in this dissertation, it will be interpreted as containing the strategies of all parties. Of particular importance for this dissertation is that Craig's *results* are interpreted (here) to include the nature and incidence of NSWAs, as part of the *terms and conditions of work*. It is also worth noting that the distribution of power is discussed in detail as part of this model. Simply put, power was envisioned to affect the ability of the actors to get what they want when their objectives diverge (Craig, 1983).

[1] Craig's original version was slightly different and had been presented in 1967. By convention, Model 1 presented here will be cited as "Craig 1969". For more information, see Craig 1983.

Figure 1: Industrial Relations Systems Framework



Craig, A.W.J. (1969). The Report of the Task Force on Labour Relations. Ottawa, CAN: Queen's Printer. In Kehoe, F. and Archer, M. (1994). Canadian Industrial Relations (Seventh Ed.). Oakville, CAN: Twentieth Century.

If employer strategies affect conditions of work, then the obvious challenge is to explore the strategic alternatives. Rather than merely noting particular work arrangements as "good" or "bad", the notion of "employer-friendly" versus "employee-friendly" NSWAs will be introduced. In his assessment of the factors that determine whether a job is good or bad, Meisenheimer (1998) considered a number of (potentially non-standard) work arrangements including pay, term, schedules, and duties, among others. In this dissertation, the nature of each arrangement is categorized and analyzed. Ideally, work arrangements are beneficial to employees *and* contribute to organizational objectives (see Kropf, 1999 and/or Comfort, Johnson, and Wallace, 2003 for examples). In a worst case scenario, NSWAs are designed by employers to achieve organizational objectives at the expense of employees. In other words, the power advantage held by employers might result in deteriorating working conditions.

It is also possible that employers utilize different approaches to different groups of employees. For instance, employers might use a pool of peripheral workers on an as-needed basis while insulating a core group from market and operational fluctuations (Atkinson, 1987). (For an introduction to the core-periphery model and its implications for sub-groups of workers, see Zeytinoglu, 1999b; Van Velzen, 2002; Zeytinoglu and Muteshi, 2000). That suggests that more than one labour utilization strategy may exist inside an organization. Osterman (1984, 1987) suggests that there can be several employment subsystems- with sharply divergent implications for workers- inside a single organization. Prior to the core-periphery conceptualization, Doeringer and Piore (1970) had introduced the notion of internal labour markets (ILMs). They suggested that some organizations had divided workers into primary and secondary groups (although not necessarily deliberately). Those in the former enjoyed far better advancement opportunities, wages, security, and other benefits than those in the latter. In any case, all of these nuances can be accommodated using Craig's framework. These worker sub-groups can be viewed as different *parties of interest.* Thus they could interact differently with others, and face working conditions of varying quality.

Human Resource Management Approach to Studying NSWAs

From an HRM perspective, the issue of aligned versus non-aligned interests between employers and employees is represented as person-organization (P-O) fit. (Some authors, such as Kristof (1996) differentiate between P-O fit and P-J (i.e. person-job) fit. Since that nuance is not critical in this dissertation, P-O fit will be used throughout.) The employee-employer relationship is optimized when there is significant overlap between the concerns of the individual with the characteristics of the organization (see, for example, Schneider, 1987; Rynes and Cable, 2001). Thus, there is a better "fit" when an employer and its employees have common interests. Potential employees are more attracted to organizations that they perceive to share similar values, and vice versa. P-O

fit is often assessed from a psychological or value based perspective. Others describe fit in terms of filling the needs- including working conditions- of employees (e.g. Kristof, 1996). If NSWAs alter working conditions, that presumably affects the degree of fit. In a related paper, Rau and Hyland (2002) found that NSWAs- in this case flexible schedules and telecommuting- satisfied the needs of certain workers. Carter (2001) also noted how a "new breed" of workers is seeking organizations that can accommodate their lifestyle *wants*, in terms of hours of work, location, duties, or reward systems. In this dissertation, job satisfaction will be used to assess whether needs and wants are "met" or "unmet" (See Spector, 1997 for an examination of organization, job, and worker variables that can affect satisfaction).

Although not directly tested, P-O fit is raised merely to establish why organizations might implement NSWAs as part of a broader labour utilization strategy. An example is discussed in Grenier, Giles, and Belanger (1997), in which an organization implemented dramatically different work arrangements in two plants facing different environmental pressures. One plant essentially adopted a high road human resource strategy while the other adopted a low road approach, even though both plants sought increased flexibility (see, also, Verma and Chaykowski, 1999). Low job satisfaction could be a sign that work arrangements do not match the needs of a particular worker. Conversely, higher job satisfaction suggests the possibility of a better "fit". Thus, the incidence of NSWAs is *one* way that employers can shape working conditions. If an employer wants risk-takers, the use of temporary employment and variable pay linked to organizational performance targets potentially could be used to attract and retain suitable employees.

A related concept is the emergence of strategic human resource management (SHRM) as a school of thought. Advocates suggest that HR decision-makers should design and implement policies and procedures in a manner that directly supports organizational goals. In other words, piece-meal improvements to recruitment, selection or other HR functions are passé. Rather, "people-related" functions should be intertwined with

organizational objectives (Dyer and Holder, 1988; Snow and Snell, 1993). By extension, the nature and incidence of NSWAs could be implemented to help achieve broader organizational objectives.

1.4 NSWA Types, Dimensions, and Pairings

By convention, formal definitions of variables typically are provided after developing conceptual models and hypotheses. In this dissertation, however, it seems prudent to clarify the definition of NSWAs at this point. In particular, it would be helpful to differentiate between standard and non-standard work arrangements. Afterwards, the typology of NSWAs will be provided. It is hoped that this clarification will be of benefit when relevant literature is reviewed in the following chapter.

NSWAs and Possible Dimensions

In this dissertation, a "standard" job refers to the stereotypical image of post-WWII employment in the industrialized world in which *an employee worked on an ongoing, full-time basis and was assigned a set of stable individual tasks to be completed on a daily basis at a central business location in return for fixed compensation.* While that definition is unwieldy, it is necessary in order to outline several *dimensions* of work. As with any stereotype, it is an oversimplification of jobs in the past. Nonetheless, it is an *even less* accurate representation of current employment, as new work forms emerge (Bielenski and Kohler, 1999; Krahn 1991). Few labour market statistics were available in Canada until the 1970s. However, data indicates that the proportion of part-time jobs has increased since the 1970s (Krahn, 1991), and the proportion of non-permanent jobs has increased since the 1980s (e.g. Grenon and Chun, 1997; Krahn, 1995). Thus, the available statistics suggest that standard jobs are less prevalent than in the past in Canada (see also Adams, 2001).

A difficulty to be explored in the reviewed literature is that a common definition of these non-standard work arrangements (NSWAs) has not yet emerged. In addition to the NSWA term used widely in the literature (Kalleberg, 2000; Polivka, Cohany, and Hipple, 2000; Zeytinoglu, 1994; Zeytinoglu and Weber, 2002), several terms such as alternative work arrangements (Armstrong-Stassen, 1998; Parsley and Wortsman, 1998), flexible work (Houseman, 2001; Lipsett and Reesor, 1998; Mattis, 1990), precarious employment (Cranford, Vosko, and Zukewich, 2003), atypical work (Bielenski and Kohler, 1999; Fuchs, 2004), and contingent employment (Kunda, Barley, and Evans, 2002; Ruckelshaus and Goldstein, 2001) are used in the literature. Kalleberg (2000) bemoaned the lack of standardization-and hence, comparability- in terms and definitions used and scope of undertaken studies. In this dissertation, all of those terms should be viewed as synonymous and interchangeable with NSWAs. *Simply put, non-standard jobs will refer to any form of work that strays in at least one dimension from that stereotypical image of standard employment, and NSWAs are the ways in which they differ.* The *five possible dimensions* of NSWAs used are: term of employment (e.g. non-permanent work), location (e.g. telework), schedule (e.g. the pattern and/or number of work hours), duties (e.g. job rotation), and rewards (e.g. performance-based pay).

Elsewhere, non-standard work is defined as narrowly as non-permanent work (Houseman, 2001), or non-permanent and/or part-time work (Fuchs, 2004; Kalleberg, 2000; Zeytinoglu, 1999a; Zeytinoglu and Weber, 2002). Also, contractors or self-employed individuals are sometimes included as examples of non-permanent workers (e.g. Kunda, Barley, and Evans, 2002; Ruckelshaus and Goldstein, 2001). Non-standard work has also been defined as employment other than full-time indefinite contracts (Zeytinoglu, 1994, p.436; Polivka, Cohany, and Hipple, 2000). In a seminal paper, Krahn (1991) defined non-standard work to be temporary, part-time, and/or seasonal arrangements, plus own-account self-employment and multiple job-holding. Soon, though, even Krahn (1995) amended his own definition. Compounding the problem is

that some refer to non-standard work arrangements *without* including non-permanent work (e.g. Parsley and Wortsman, 1998; Mattis, 1990).

Kalleberg used a similar definition, to the one used here, when he noted that standard work involved an on-going full-time relationship, "performed at the employer's place of business under the employer's direction" (Kalleberg, 2000, p. 341). While he later restricted his definition of non-standard work to part-time and/or temporary arrangements, he also notes the possibility of changes in the location of work as well. Also, Kalleberg implies that self-directed work, enriched work assignments and employee participation are related, if not included, concepts. Others who use a broader approach include Cranford, Vosko, and Zukewich (2003), who consider work arrangements such as pay, term, duties, and schedule. Also, Bielenski and Kohler (1999) considered the dimensions of term, schedule and location to be inter-related. Moreover, Peirce's (2003) *discussion* of changing work included all five dimensions of NSWAs considered in this dissertation. Table 1 provides a selected listing of the terminology used and scope of analyses pertaining to NSWAs.

Table 1: Definitions of NSWAs from Selected Literature

Source	Terminology	Definition
Armstrong-Stassen, 1998	Alternative work arrangements	Part-time work, temporary or contingent work, flextime, compressed work weeks, and teleworking (p. 108)
Bielenski and Kohler, 1999	Atypical work	Flexibility of working time (i.e. flexitime), flexibility of workplace/workspace (i.e. flexispace), and flexibility of employment contracts (i.e. flexicontract) (p. 201)
Cranford, Vosko, and Zukewich, 2003	Precarious employment,	Involving atypical employment contracts, limited social benefits and statutory entitlements, job insecurity, low job tenure, low earnings, poor working conditions and high risks of ill health (p. 455).
Houseman, 2001	Flexible staffing arrangements	Temporary help agency workers, short-term hires, regular part-time, on-call, and contract workers (p. 151)
Kalleberg, 2000	Nonstandard employment contracts	Part-time work, temporary agency and contract company employment, short-term employment, contingent work, and independent contracting (p. 342). Also considers other arrangements such as teleworking, employee ownership of companies, flexible scheduling, and family work
Krahn, 1991	Non-standard work arrangements	Temporary work, part-time work, part-year work, own-account self-employment, and multiple jobholding.
Kunda, Barley, and Evans, 2002	Contingent labor	Short-term employment arrangements, including part-time work, temporary employment, self-employment, contracting, outsourcing, and home-based work. (p. 235)
Polivka, Cohany, and Hipple, 2000	Nonstandard work arrangements	Those in following arrangements: agency temporaries, on-call workers, contract company workers, direct-hire temporary workers, independent contractors, regular self-employed, and regular part-time workers (p.42).
Zeytinoglu, 1994	Nonstandard employment forms	Includes part-time work, temporary work, job-sharing, home-based work, and subcontracting (p. 436).
Zeytinoglu, 1999a	Flexible work arrangements	Temporary/term and/or part-time arrangements (p. 50).
Zeytinoglu, and Weber, 2002	Non-standard employment contracts	Temporary and/or part-time arrangements (p. 14).

Although other researchers typically use a narrower definition of NSWAs, they also discuss more than one dimension. Moreover, their studies tend to identify a common set of environmental determinants. As a result, the *union* of the various definitions of NSWAs used elsewhere effectively validates the approach used in this dissertation. To be clear, though, no other individual source explicitly utilizes such an inclusive definition. However, the body of reviewed literature suggests that all five of these dimensions are conceptually and empirically related.

The non-standard dimensions of term, location, and schedule correspond to Bielenski and Kohler's (1999, p.201) descriptions of flexicontract, flexispace, and flexitime, respectively. Also, the broad scheduling dimension also captures the various nuances explored by Kropf (1999), and Morrow, McElroy and Elliot (1994). It is also common to consider non-standard terms and schedules concurrently under the banner of numerical

flexibility (e.g. Zeytinoglu, 1994, 1999a, 1999b; Smith, 1997). The scope for non-standard duties is captured elsewhere as a component of functional flexibility (source-rework below). Numerical flexibility generally refers to adjustments to the level (i.e. employee counts and/or hours worked) of labour inside an organization, while functional flexibility refers to adjustments inside an organization such that existing labour can be shifted to the highest priority areas (See Grenier, Giles, and Belanger, 1997 and/or Kelliher, Gore, and Riley, 2002 for precise definitions). The dimensions of duties and rewards are also components of high performance work systems (HPWS) (e.g. Delaney and Godard, 2001; Godard and Delaney, 2000; Agarwal and Singh, 1998). Grenier, Giles, and Belanger (1997) essentially captured these five NSWAs dimensions via external, internal, and pay flexibility. Kelliher, Gore, and Riley (2002) did as well via their definitions of functional, numerical, and pay flexibility.

NSWA Types

An additional complication is the overlap between NSWAs as defined here, and other terms in the literature. Among them are high performance work systems (HPWS), strategic human resource management (SHRM), family-friendly practices and the "good versus bad" job debate. Moreover, employers' rationales for their use are virtually identical to the rationale for using NSWAs. There is similar overlap among the presumed effects on workers. These will be discussed in the literature review. Additionally, SHRM and HPWS will be discussed in the following section on labour utilization. At this point, family friendly practices and good versus bad jobs need to be introduced here to complete the definition of NSWAs.

Recently, researchers have begun to refer to family friendly work practices (e.g. Gray and Tudball, 2003; Perry-Smith and Blum, 2000). Although the scope varies somewhat, these practices usually include polices such as flexible hours, teleworking and family leave (Comfort, Johnson, and Wallace, 2003; Honeycutt and Rosen, 1997). As the name

implies, "family friendly" practices are designed to address work-*family* issues. For instance, on-site daycare may be highly valued by employees who have pre-school children. On the other hand, it would be illogical to assume that it is a highly valued benefit among workers without children. Similarly, there has been an on-going study in the literature regarding the existence of good versus bad jobs. The latter category usually includes those that are relatively low-paying, unstable, and insecure (e.g. Dore, 1997; Loveman and Tilly, 1988).

Several researchers argue that jobs containing NSWAs are bad compared to standard jobs (e.g. Banks, 2001; Danford, 2003; Grenon and Chun, 1997; Krahn, 1995). However, the "good versus bad jobs" approach makes several critical leaps of faith (Lautsch, 2002). It assumes that particular working conditions are inherently good or bad. In turn, if those conditions exist, then the associated job is good or bad. Going a step further, advocates then might consider the motives of employers to be good or bad, depending upon which job conditions exist. A refinement, by McGovern, Smeaton, and Hill (2004), is to define certain job traits as good or bad. Then, jobs are classified as bad if any bad traits are present, or good if any good traits are present. Elsewhere, labels are assigned but not formally validated. Some research, such as studies of family-friendly work practices, simply define certain practices as good, and then search for determinants or effects (e.g. Perry-Smith and Blum, 2000). It is suggested that a more prudent approach is to classify work practices of interest, then assess whether those classifications are accurate before proceeding to a search for determinants. A second problem of family friendly research is the focus on work-family, not work-life, balance. The former implies a work arrangement that is favourable primarily to those with dependents. The latter includes the potential wants and needs of all workers. The design used in this dissertation attempts to avoid those two potential problems.

In this dissertation, it is posited that most NSWAs could be categorized, on a prima facie basis, as being employee-friendly or employer-friendly. The former captures NSWAs

apparently designed to address workers' wants or needs. The latter represents examples where the apparent purpose is to contribute directly to non-worker (i.e. operational) objectives. For instance, if employees are *obligated* to work weekends on a rotating basis, that would be relatively employer-friendly. If, on the other hand, workers have flexibility to choose their own work schedule, that would appear to be rather employee-friendly. Since these labels are *presumptive*, data analysis will be undertaken to determine the level of empirical support for them. The key is the *apparent* ranking of interests between employees and the employer. There will, of course, always be exceptions. Studies show, for instance, that some workers prefer temporary employment to a permanent job (Stanworth and Druker, 2001; Rogers, 2000). Nonetheless, the apparent purpose of temporary employment is to allow employers to fluctuate the supply of labour to suit operational needs. In some cases, it is possible that some NSWAs are designed to achieve worker and non-worker objectives simultaneously. Thus, a third set of NSWAs are categorized as neutral. It has been suggested that these NSWAs could be labeled as "optimal" rather than neutral. Instead, neutral NSWAs should be considered to be "balanced", since they are arrangements that are in the middle of the spectrum from being purely employee-friendly to purely employer-friendly. Whether "neutral" is "optimal" depends on the strategic objectives of those implementing NSWAs.

After categorizing each NSWA by type and dimension, the final step is to create pairings. As shown in Table 2, the five possible dimensions and three possible types yield a matrix of 15 type-dimension pairings. Theoretically, any NSWA could be captured somewhere in this typology. Based on this typology, one would presume that the five employee-friendly NSWAs should be more strongly related with each other than with the employer-friendly NSWAs. Moreover, job satisfaction should be positively related to employee-friendly NSWAs, negatively related to employer-friendly NSWAs, and have, at most, a weakly positive relationship with neutral NSWAs. Although existing research will be reviewed in the next chapter, it is noteworthy that only two sources included a formal typology of sorts. Lautsch (2002) presented a 2x2 matrix of conditions for those in

contingent jobs. The two influential factors were management's strategic objectives and the technological systems in use. Lautsch suggested that job satisfaction likely varies for affected workers among those in the different quadrants. A similar 2x2 matrix was conceptualized by Bendapudi, Mangum, and Tansky (2003). The two independent variables were whether an individual was voluntarily in a non-permanent arrangement, and the degree to which non-standard workers are treated differently from standard workers. Thus, these authors were also concerned about worker outcomes and the relative quality of non-standard work arrangements. These typologies were also created seemingly to target potential public policy responses to growing use of employer-friendly NSWAs. While helpful, these two typologies are rather narrowly focused and do not capture the full range of NSWAs.

Table 2: NSWA Typology: Possible Type-Dimension Pairings

Dimension (by column); Type (by row)	Term:	Location:	Schedule:	Duties:	Rewards:
Employee-friendly:	Employee-friendly Term	Employee-friendly Location	Employee-friendly Schedule	Employee-friendly Duties	Employee-friendly Rewards
Neutral:	Neutral Term	Neutral Location	Neutral Schedule	Neutral Duties	Neutral Rewards
Employer-friendly:	Employer-friendly Term	Employer-friendly Location	Employer-friendly Schedule	Employer-friendly Duties	Employer-friendly Rewards

Chapter 2.0: Literature Review

It is well documented that the nature of work is changing (e.g. Comfort, Johnson, and Wallace, 2003; Kalleberg, 2000). In their analysis of the Canadian labour market, Betcherman and Lowe (1997) identify several of these changes. Among them are the ways in which environmental factors are evolving, how organizations have responded, and how workers have been affected. In particular, employers have increasingly utilized non-standard work arrangements (NSWAs) such as non-permanent employment, scheduling variations, and teleworking in Canada (Armstrong-Stassen, 1998; Zeytinoglu, 1999a).

This changing nature of work seems to be affecting certain sub-groups of workers disproportionately. Over three decades ago, Doeringer and Piore (1970) detailed the emergence of internal labour markets (ILMs). They noticed that some workers enjoyed continued job security and privileges while others were significantly disadvantaged in terms of pay, promotion, training, and other working conditions. By the 1980s, Atkinson (1987) explicitly differentiated between core workers in full-time permanent jobs who enjoyed much better working conditions than another group of contingent workers in the periphery. Results suggest that females, young workers, and visible minorities are over-represented in this latter category (Cranford, Vosko, and Zukewich, 2003; Presser, 2003; Zeytinoglu, 1999a). Certainly, a warning sign in Canada is the increasing polarization of wages, schedules, and other working conditions (Betcherman and Lowe, 1997).

Many researchers view the emergence of NSWAs as a negative trend (e.g. Ruckelshaus and Goldstein, 2001). Concurrently, strategic human resource management (SHRM) advocates have promoted-and noted- a closer relationship between broad, corporate strategies and specific strategic choices regarding the utilization of labour (e.g. Hill and Jones, 1992; Murphy and Zandvakili, 2000). Among the strategic choices available to achieve organizational objectives is the greater use of NSWAs (Von Hippel et al., 1997; Kropf, 1999) and/or employee participation (Weiss, 2002; Shafer et al., 2001). Although

these research themes may seem somewhat disparate initially, they share a common link. That is, the increasing prevalence of NSWAs is one of the ways in which work is evolving, and that employers often make strategic use of them, even though certain worker sub-groups bear the brunt of the degradation in working conditions. At the same time, other workers may benefit from these changes. If this is so, then this trend has significant social and public policy implications.

Relevant sources have been grouped into five sections to (roughly) mirror the above discussion. Initially, environmental influences that affect work are discussed. Secondly, the emergence and scope of NSWAs are examined, followed by potential determinants. Afterwards, strategic factors (inside organizations) that are affecting work will be summarized. This includes an overview of how human resource strategies are formed, as well as an examination of relationships between HR strategies, organizational strategies, and organizational outcomes. Next, potentially related issues such as employee involvement and communication, and resulting job satisfaction levels are explored briefly. Finally, a summary section establishes the common ground between these topics.

2.1 Environmental Factors Affecting Work

According to the IR Systems Framework (i.e. Figure 1 on p. 9), among the major environmental factors are political, legal, and economic influences. Beginning as early as the 1970s, there has been a shift to the right of the political spectrum by many governments in Canada (Carroll and Shaw, 2001; Rose and Chaison, 2001). Among the basic tenets of this neoliberal philosophy is that market forces should be unleashed. The result has been a reduced public sector workforce, the implementation of free trade agreements with the US and Mexico, and conservative fiscal and monetary policies (Carroll and Little, 2001; Carroll and Shaw, 2001). The Canadian labour force, like others, has been affected greatly by the increasingly global movement of goods, production, and capital (Carroll and Shaw, 2001; Chaykowski and Gunderson, 2001).

Some industries, such as steel and lumber, have been hit particularly hard by the terms of "free" trade agreements that impose costly tariffs on Canadian exports (Gagne, 2000).

As major employers, governments set an example for private sector organizations (Ponak and Thompson, 2001). In the 1990s, governments routinely undermined existing collective agreements by legislating cost and staff reductions (Adams, 2001). This affected the strategies of private sector employers by legitimizing aggressive cost-cutting and taking a hard line with labour (Yates, 2000). In turn, this resulted in tremendous upheaval in the private and public sectors due to outsourcing, downsizing, and work reorganizations (Carroll and Little, 2001; Rose and Chaison, 2000; Adams, 2001). The philosophical shift has also triggered a number of changes to the economic environment (Chaykowski and Gunderson, 2001), including altering Canada's international and inter-provincial trade patterns (Brox, 2001; Curtis and Chen, 2003).

Canada's economic environment has also been affected by changes to government programs (Jackson and Robinson, 2000; Phipps, 2000). An example is the overhaul of the employment insurance program. This has affected the labour market by altering benefit eligibility for those in non-permanent jobs or those with unstable schedules (See HRDC, 2000; Stratychuk, 2000; Phipps, 2000). There has also been a shift from primary industries to manufacturing to service-based industries over the past century (Osberg, Wien, and Grude, 1995; Peirce, 2003; Zeytinoglu, 1999a). The business environment has also been affected by an evolutionary trend. The service sector now accounts for the majority of jobs in Canada. This sector is known for relatively poor working conditions, and partially accounts for the increasing incidence of NSWAs (Heisz and Cote, 1998). On the other hand, the use of certain NSWAs (e.g. job-sharing) could be encouraged via government policy as a means of improving employment opportunities as well (Bielenski and Kohler, 1999). The initial purpose of working-time flexibility (i.e. non-standard schedules) was primarily to address workers' individual needs. It has since morphed first into a work redistribution strategy in the eyes of some unions and governments, and

finally to its frequent present role as a means of achieving operational objectives (Michon, 1987). Thus, Canada's political and economic environments are interrelated. Moreover, the nature and incidence of NSWAs can be affected by political and/or economic factors, or vice versa.

Labour law changes, such as union organizing rules, can also impact working conditions (Sousa-Poza and Henneberger, 2000). On the whole, labour legislation is somewhat more favourable to unions in Canada than in the United States (Block and Roberts, 2000). All else being equal, stronger labour laws translate into higher union density and more labour bargaining power. Nonetheless, union density has been slowly slipping in Canada, especially in the private sector (Rose and Chaison, 2001). As of 2001, overall union density in Canada remained near 30% (Akyeampong, 2001). However, density exceeded 70% in the public sector yet was only 18% in the private sector (Akyeampong, 2001). Thus, density lags sharply in the private sector where workers are more exposed to economic cycles.

Union power and influence has also declined due to the philosophical changes by governments, and relatively open borders which has increased the options available to employers (Chaykowski and Gunderson, 2001; Rose and Chaison, 2001). The result is an unequal playing field, with employers holding the bulk of bargaining power (Osberg, Wien, and Grude, 1995). As discussed later, this power imbalance conceivably affects the incidence of employee-friendly and/or employer-friendly NSWAs. Unemployment also remained relatively high throughout the 1990s, especially on a regional basis (Peirce, 2003; Perusse, 1997; Picot and Heisz, 2000). One implication is that some have relatively fewer "good" employment options than in the past. When that happens, workers will be more likely to accept non-standard or other unattractive jobs involuntarily (Osberg, Wien, and Grude, 1995; Zeytinoglu, 1999a; Jackson and Robinson, 2000).

In summary, Canadian organizations and workers have faced significant upheaval. There have been a number of political, legal, and economic factors that have altered the business environment in Canada (Cooke and Zeytinoglu, 2004). Naturally, this has dramatically affected those in the Canadian labour market. Workers are more likely to accept unattractive jobs when they have fewer options and less power. Not surprisingly, employers might be tempted to offer non-permanent or other relatively unattractive job conditions when the labour market is weak (Osberg, Wien, and Grude, 1995). Canada-wide statistics confirm that temporary jobs are more prevalent in areas with relatively weak labour markets (Grenon and Chun, 1997; Perusse, 1997). In other words, there are clear signs why the incidence of employer-friendly NSWAs could have increased in Canada. In the next section, the impact of a range of NSWAs will be reviewed.

2.2 NSWAs: Emergence and Scope

Statistics confirm the growing prevalence of NSWAs. By 1995, less than one third of Canadian workers were employed in a single full-time, permanent job with a "normal" work schedule (Lipsett and Reesor, 1998, p. 31). Thus, up to three quarters of workers are in non-standard jobs, depending upon which definition is used. Simply put, the "standard" job of the past is no longer the norm for Canadian workers (Peirce, 2003). For instance, the use of temporary help services (THS) has grown sharply in Canada over the past two decades (Grenon and Chun, 1997), as have other forms of temporary and on-call employment (Krahn, 1995). Using more recent data, 45% of active Canadian workers, during December 2002, averaged *less* than 35 hours, *or more* than 49 hours of work per week (Labour Force Survey, 2003). Almost half of the workers had this particular NSWA, using one possible definition, indicating that the norm in some industries or occupations is now outside of the traditional 40-hour week range. Most researchers use Statistics Canada's definition of part-time (and hence, non-standard) work to be less than 30 hours per week. A well-established cut-off for excessive full-time hours has not yet emerged. However, it is difficult to isolate the use of one NSWA

dimension from another. For instance, one study found that 30% of permanent workers in Canada had a non-standard schedule, but that rose to almost 50% among non-permanent workers (see Grenon and Chun, 1997). This illustrates the possible interaction effects between various NSWA dimensions.

Another body of research examines various NSWAs and the associated effects on workers. For instance, Lowe and Schellenberg (2001), Lipsett and Reesor (1999), and Zeytinoglu and Cooke (2005) found similar gaps in benefit coverage for non-standard workers, albeit using a narrow definition of NSWAs. At the other extreme, Von Hippel et al. (2001) suggest that temporary employment benefits workers who are easing in or out of the job market, or who crave variety or new skills. Taken a step farther, some "free agent" fixed-contract professionals appear to have control over their own reward structures, duties, and schedules (Kunda, Barley, and Evans, 2002). That again highlights a major challenge when researching this topic. The scope of NSWAs and perspective of researchers vary sharply from study to study. Note that the term "NSWAs" is used throughout this dissertation, even if different terms are used in the cited literature.

On the whole, the emergence of NSWAs has tended to degrade working conditions for affected employees via fewer benefits (Zeytinoglu and Cooke, 2005), lower wages, less security or stability, and less legal protection (Banks, 2001; Kunda, Barley and Evans, 2002; Ruckelshaus and Goldstein, 2001). There can be positive implications for workers, though, if work is enriched (see Bielenski and Kohler, 1999; Godard and Delaney, 2000). In tight labour markets, or to address absenteeism and other side effects of low employee satisfaction, some organizations are implementing "employee friendly" policies such as flexible scheduling, incentive pay, and other programs as enticements. For instance, Cangelosi, Markham, and Bounds' (1998) describe innovative ways involving scheduling, rewards, participation, and job rotation that were used to retain and motivate nurses during a labour shortage. It is also possible that some specific NSWAs

are attractive to some workers, and unattractive to others. For instance, some workers seem to prefer non-permanent jobs for the variety or to fit work into lifestyle preferences (e.g. Rogers, 2000; Stanworth and Druker, 2001). However, it is well established that non-permanent jobs tend to be less stable and secure, and have offer fewer wages and benefits (Cooke and Zeytinoglu, 2004; Krahn, 1995; Grenon and Chun, 1997; McGovern, Smeaton and Hill, 2004). On average, though, it is generally accepted that workers prefer permanent work (e.g. Zeytinoglu, 1999a)

Rather than focusing on worker outcomes, some researchers have looked at the implications for employees *and* employers. For instance, McQuarrie's (2003) review of changing work arrangements in the Canadian labour market includes flextime, part-time, teleworking, and non-permanent jobs, which represent the NSWA dimensions of schedule, location, and term. The five specific NSWAs analyzed by Armstrong-Stassen (1998) were: part-time, flextime, and compressed work weeks, temporary employment, and teleworking. Although some of the individual impacts could be positive, Armstrong-Stassen (1998) outlines several potential concerns for workers. In particular, she suggests that it will be difficult to ensure equitable treatment for non-standard workers. Moreover, it will be difficult to motivate them and address their needs when implementing management-driven changes to work arrangements. Parsley and Wortsman (1998) also presented a number of case studies involving the use of non-standard schedules, rewards, location, and duties. In the majority of cases, management strategy was the catalyst for change. Unfortunately, many of the NSWAs that were implemented were clearly employer-friendly. For example, some employers utilize non-standard schedules that result in unpaid work hours being exchanged for later vacation considerations. Thus, it appears that some employers are using their power advantage over their employees to implement relatively coercive changes to work arrangements.

It seems clear that employers have many available options. For instance, non-permanent workers can be used to lower labour costs (e.g. Belman and Golden, 2002).

Alternatively, employers can use them to adjust labour levels up or down to meet operational cycles (e.g. Lautsch, 2002; Bendapudi, Mangum, and Tansky, 2003). Moreover, a single organization may utilize sharply different dimensions (and types) of NSWAs in different workplaces depending on the specific environmental conditions they face. In a key study, Grenier, Giles, and Belanger (1997) documented how one employer utilized radically different non-standard terms, schedules, duties, and rewards in two of their plants. The authors deduced that the variation was caused by different environmental conditions as well as different management responses. Arrowsmith and Sisson (2001) have also documented the relationships between non-standard schedules and rewards provided to permanent and non-permanent workers. The implication is that changing business conditions requires a different mix of work arrangements. Each one could be designed to achieve different strategic objectives. That is, employers could redesign work to address the needs of key employees (if certain types of labour were in short supply) *or* to address operational concerns. Using the terminology of this dissertation, these authors are essentially suggesting that NSWAs can be employee-friendly or employer-friendly. (For examples of each, see Table 5 on p.31.)

Thompson (2001) suggests employers' search for flexibility involves restructuring pay, work schedules, and (reducing) job classifications. Arrowsmith and Sisson (2001) found that the different dimensions of NSWAs were used to achieve different results. Working-time policies were frequently redesigned to address employee needs at a localized level, while pay policies, downsizing, and the use of temporary labour might be altered to address (central) organizational objectives. Lautsch (2002) found that the duties, work schedules, pay structures, and degree of participation in decision-making afforded to temporary workers varied markedly depending on whether employers were trying to achieve cost-savings or other objectives. While introduced below, this strategic theme will be explored in detail in the following section.

Theoretically, NSWAs can be used to achieve business needs *and* improve worker outcomes. Bielenski and Kohler (1999), for instance, suggest that non-standard terms, location, and schedules can be used to increase organizational flexibility and cost-competitiveness, while simultaneously addressing the work-life balance of employees, or even sharing employment more equitably at a societal level. Others (e.g. Parsley and Wortsman, 1998; Godard, 2001; Cangelosi, Markham, and Bounds, 1998) agree that new forms of work can generate win-win outcomes for employees and employers, but insist that most gains have been enjoyed by the latter, rather than being mutually shared. An added complication, though, is that employers may design work differently for core employees versus those in the periphery. In her study of agency workers, Rogers (2000) documented the potential dichotomy in working conditions between standard and non-standard workers. In addition to having less job security, the latter group is more likely to be assigned less desirable assignments, may be underemployed and stuck with de-skilled and less rewarding assignments. On the whole, some worker needs have been met, but invariably those improvements are coupled with increased stress and workloads. The common thread among the sources is that work is evolving, and NSWAs are among the key changes.

Table 3 summarizes the dimensions of NSWAs that are included in selected research (using the same selection shown in Table 1 on p. 15). Based on this summary, non-standard terms, locations, and schedules are routinely analyzed together. Even when a single dimension is examined in detail, other dimensions tend to be discussed as well. It would appear that duties and rewards are related to the other three dimensions, although perhaps to a lesser extent. One possible explanation is that it is much more difficult to define the boundary between standard and non-standard examples of duties and rewards. For instance, Grenier, Giles, and Belanger (1997) describe several ways in which duties have changed inside a single plant. Among them are: enriched work in which employees control their own duties and pace, self-directed teams, reduced job categories, job rotation, and skills acquisition to be able to complete multiple jobs. Certainly, it is

illogical to classify these changes as being favourable to workers without knowing additional specifics. Moreover, it is not clear whether any of these particular changes are non-standard, or whether the non-standard aspect is the number of current changes to duties. In any event, it should be apparent that defining the boundary between non-standard and standard duties is very difficult, even though it is clear that the way that duties are arranged is changing. It is similarly difficult to classify rewards as standard, non-standard, or employee-friendly versus employer-friendly. For instance, bonus plans could be considered employee-friendly if workers share profits in addition to earning competitive wages. Those payouts, however, could be considered to be a company benefit, rather than a non-standard work arrangement. On the other hand, suppose the possibility of earning a significant bonus is in lieu of competitive wages. In that scenario, the bonus plans would appear to be non-standard and employer-friendly. Pfau and Kay (2002), Agarwal and Singh (1998), and Long (2000) all suggest that work reorganizations will not succeed without also revamping the reward system.

Table 3: NSWA Dimensions in Selected Literature

Source	Term	Location	Schedule	Duties	Rewards
Armstrong-Stassen, 1998	X	X	X		
Bielenski and Kohler, 1999	X	X	X		
Cranford, Vosko, and Zukewich, 2003	X	X	X		X
Grenier, Giles, and Belanger, 1997	X		X	X	X
Houseman, 2001	X		X		
Kalleberg, 2000	X	X	X		
Krahn, 1991	X		X		
Kunda, Barley, and Evans, 2002	X		X	X	X
Parsley and Wortsman, 1998		X	X	X	X
Polivka, Cohany, and Hipple, 2000	X		X		
Zeytinoglu, 1994	X	X	X		
Zeytinoglu, 1999a	X	X	X		
Zeytinoglu and Weber, 2002	X		X		

After reviewing the literature, it is apparent that the breadth of changes to work schedules is significant. Part-time work, for instance, represents more than 15% of jobs in Canada (Krahn, 1995; Tabi and Langlois, 2003). In fact, one disturbing trend in Canada is the increasing polarization of work hours (Betcherman and Lowe, 1997). Although less prevalent than part-time schedules, there is also a sizable proportion of employees working more than full-time norms (Lipsett and Reesor, 1998; Sousa-Poza and Henneberger, 2000). Kalleberg (2000) suggests that part-time work had originally been employee-driven. However, he concludes that, since the 1970s, much of the growth in part-time work has been involuntary from a worker perspective. Sousa-Poza and Henneberger (2000) also establish a link between schedule length and worker attitudes. Thus, length seems to be one example of non-standard schedules. Moreover, non-standard schedule lengths apparently can be employee-friendly or employer-friendly.

Work schedules have also changed in other non-standard ways as well. Armstrong-Stassen (1998) differentiates between those working short (or long) work hours from those having fluctuating schedules. In particular, she notes the emergence of flex-hours programs and compressed work weeks. Others focus more on non-standard schedules that have drifted into evenings (Comfort, Johnson and Wallace, 2003; Michon, 1987) and/or weekends (Zeytinoglu and Cooke, 2004; Cooke and Zeytinoglu, 2005b). Unstable, or fluctuating, schedules can be quite attractive or unattractive to workers (Morrow, McElroy and Elliot, 1994; Rau and Hyland, 2002; Scandura and Lankau, 1997). The key, not surprisingly, seems to be the degree to which individuals self-select (and control) those fluctuations.

Based on a review of Table 3, a decision has been made to exclude the dimensions of duties and rewards from further analysis in this dissertation. These dimensions should, however, remain part of a comprehensive NSWA typology. Simply put, excluding these two dimensions makes this analysis more focused and manageable. One additional adjustment is that the schedule dimension will be split into two components. One will

capture non-standard schedule lengths. The other will capture non-standard schedule stability. Although both are scheduling variations, the sheer breadth of scheduling variations requires this refinement. The result should be two more homogeneous sub-sets of NSWAs, rather than one larger, diverse pool. Thus, the scope of analysis in this dissertation will be on the following four dimensions of NSWAs: term, location, schedule length, and schedule stability. To highlight the boundaries between standard and non-standard work arrangements, these are summarized in Table 4. Then, employee-friendly versus employer-friendly NSWAs are provided in Table 5. Note also that the neutral *type* has been dropped as well. From a conceptual viewpoint, the neutral category captures work arrangements that are designed to partially address worker and non-worker objectives. From an operational viewpoint, however, the neutral category captures NSWAs not identifiable as employee- or employer-friendly. Rather than including this catch-all category, these NSWAs will be excluded from this dissertation.

Table 4: Revised NSWA Dimensions (to be tested)

Dimension :	**Standard Work Arrangement**	**Non-Standard Work Arrangement**
Term	Permanent (open-ended)	Non-permanent
Location	No (regular) home-based work (i.e. work carried out on company premises).	Work regularly includes home-based component.
Schedule – Length	Duration of weekly work hours is within full-time norm (i.e. 30-48 hours)	Duration of weekly work hours is atypical (i.e. outside full-time norm of 30-48 hours)
Schedule – Stability	Non-varying schedule	Varying schedule

Table 5: Revised NSWA Type-Dimension Pairings (to be tested)

Dimension :	**Employee-friendly NSWAs**	**Employer-friendly NSWAs**
Term	Non-permanent work based on contractual arrangements (i.e. fixed term).	Non-permanent work without contractual arrangements (i.e. casual/on-call).
Location	Regularly works at home for personal reasons	Regularly works at home for non-personal (i.e. operational) reasons
Schedule - Length	Working atypical, but preferred, length of schedule	Working atypical and non-preferred length of schedule
Schedule - Stability	Work hours vary based on personal choices	Work hours vary based on non-personal choices

2.3 NSWAs: Determinants

After reviewing the scope of NSWAs and the general impact on workers, it is time to look at differential impacts. More than a decade ago, Mattis (1990) found that non-standard work schedules, job sharing, and teleworking were already being used- or *could be used*- in a wide range of industries and occupations (including managers and professionals). She noted that the majority of employers were trying to respond to the changing needs of the workforce and evolving environmental conditions. Mattis concluded that the overall impact was positive, but these changes had potentially negative effects for workers and employers as well. Two schools of thought have emerged (Hoque and Kirkpatrick, 2003). One camp presumes that this privileged group will continue to enjoy favourable working conditions. The other group of researchers predicts that all temporary workers, regardless of occupational and status level, will be relatively marginalized in terms of job ladders, involvement, and other working conditions (e.g. NSWAs). Hoque and Kirkpatrick's results supported the second school of thought. Namely, non-permanent managers and professionals were marginalized relative to their standard counterparts, and female professionals were especially disadvantaged when in temporary jobs. That said, Doeringer and Piore (1970) noted that privileges are bestowed more frequently on managers and other white collar workers relative to blue-collar workers. (In this dissertation, "white collar" and "blue collar" are used loosely to differentiate between office-based and production-based employment.) While all types of workers are exposed to NSWAs, it would appear that less-skilled and/or lower-level workers (that is, those with less power and/or less valued skills) are particularly affected. Simply put, the quality of working conditions for those in non-standard jobs varies according to occupational and educational level (DiNatale, 2001).

There may be a misconception that only lower level employees are being affected by the changing nature of work. Several studies (Grenon and Chun, 1997; Mallon and Duberley, 2000; Van Jaarsveld, 2004) have established that the use of temporary

employment- arguably the most employer-friendly NSWA of all- now extends to managers and professionals. Intuitively, the workers most likely to be affected by NSWAs- or any employer initiative to increase operational flexibility or productivity- would be blue-collar workers or lower level white collar workers. Restructuring plant workers to gain efficiencies has existed, of course, since the days of Frederick Taylor (see, for instance McQuarrie, 2003; Peirce, 2003; and Danford, 2003). To the extent that lower white collar workers, on the whole, have fewer or more interchangeable skills, and/or are less valued, they would be more likely targets for rationalization than higher white collar workers. On the other hand, there are several examples indicating that managers, professionals, and other white collar workers have been exposed to a range of NSWAs.

There is also a trend where workers of all types are pushing for new work-forms to resolve work-life complications. Even among young (professional) lawyers, a recent survey suggests a "new breed" of workers who are looking for flexible work schedules (and reduced hours), the ability to work at home, and performance-based rewards (Carter, 2001). Some actually prefer the freedom and variety of temporary work, or because they cannot or will not commit to a full-time, permanent job (Stanworth and Druker, 2001; Rogers, 2000; Fullin, 2002). Moreover, Kropf (1999) found that the use of flexible schedules and teleworking was favoured by employees and often yielded higher productivity for employers.

It is also well established that females and minority groups are overrepresented in jobs with (employer-friendly) NSWAs, thereby disproportionately enduring the accompanying insecurity and poor working conditions (Zeytinoglu and Muteshi, 2000). Cranford, Vosko, and Zukewich (2003) argue that (White) males have historically enjoyed much better working conditions than females and others. They see the continuing gap in rewards, security, and general working conditions for those in jobs with (employer-friendly) NSWAs to be a regrettable, but natural, extension of that

historical inequity. In their synopsis of a century of labour force data in the US, Kiefer and Philips (1988) determined that the historical wage gap endured by minority males in the US was "explained" as much by institutional theory as it was by human capital theory. That is, they found plausible evidence that there was discrimination in ILMs and the broader labour market in the determination of wages (and job ladders). Therefore, the historical but shrinking education gap was only one possible explanation for the historical but shrinking wage gap. The relevance for this dissertation is that there is reason to believe that the incidence of employee- and employer-friendly NSWAs will not be uniform when workers are separated along various demographic characteristics of interest, even when controlling for workers' education and occupation, and employers' economic circumstances.

Presumably, historically disadvantaged worker sub-groups will be disadvantaged in terms of these new work arrangements as well. Evidence shows that this is a real possibility. In their study, Comfort, Johnson, and Wallace (2003) evaluated access to included flex hours, teleworking, and (on-site) childcare as "family friendly" practices. Consistent with human capital theory and the core-periphery conceptualization, they found that more skilled and/or educated workers- who tended to be in more privileged occupations- had better access to family-friendly practices than others. At an aggregate level, females and workers with dependents- the two groups envisioned to benefit most had lower access to family friendly benefits than the highly educated, high skill worker sub-groups. That is, among workers in Statistics Canada's Workplace and Employee Survey (WES) 1999 dataset, access to family friendly benefits was determined more on the basis of organizational status than need. Moreover, females appear to have higher incidence of bad characteristics (like low pay, benefits access, or promotion) in their jobs than males, even controlling for other factors (McGovern, Smeaton, and Hill, 2004).

In an interesting study, Strober (1990) reflected on the degree of empirical support for the human capital theory as an explanation for the historical and current wage gap between

worker groups in the US. In brief, human capital theory posits that there will be a positive relationship between education and income, since more educated (or skilled) workers have a higher utility (i.e. productivity) function. Bluntly put, more skilled workers are paid more because they are more valuable to employers. Strober's main conclusion was that, at best, human capital theory only provided a supply-side explanation for wage differences. She viewed Doeringer and Piore's internal labour market (ILM) theory as being helpful in understanding other (i.e. demand, or employer-side) reasons why some workers get paid less than others. She suggested that employers have substantial power to set wages and other key working conditions, and that the effect for some workers is marginalization.

In the end, it appears that there are a number of environmental factors that have impacted the growing use of NSWAs. At the same time, it is clear that there are several options available to employers, including wide variation in the types and dimensions of NSWAs that are available. An unanswered question, then, is whether employers are using NSWAs primarily on the basis of need (due to the rapidly changing environment) *or* a strategic choice (i.e. because they can). This question is explored in the following section.

2.4 Job Satisfaction, NSWAs, and Related Issues

The above sections reviewed the factors that affect the incidence of NSWAs. In this section, the task is to assess the effect of NSWAs on worker outcomes. The main outcome variable of interest is job satisfaction. It is necessary to review variables such as employee participation that are also potentially related to job satisfaction and the nature and incidence of NSWAs.

NSWAs can be beneficial for employees if work becomes more rewarding or meshes more closely with individual needs (Bielenski and Kohler, 1999; Godard and Delaney,

2000; Parsley and Wortsman, 1998; Cangelosi, Markham and Bounds, 1998; Baltes et al., 1999). If a particular NSWA addresses a worker's needs, higher job satisfaction should result (Kristof, 1996). Conversely, poor working conditions can lead to stress, work-family conflict, and/or dissatisfaction among affected workers (Grenier, Giles, and Belanger, 1997; Kunda, Barley, and Evans, 2002; Ruckelshaus and Goldstein, 2001; DiNatale, 2001). It appears that each NSWA *could* have positive or negative worker impacts. Lowe and Schellenberg (2001) suggest, however, that focusing on only structural aspects (e.g. NSWAs) is myopic because it ignores the social context in which workers exist. They believe that the extent to which non-standard workers can participate in an organization and contribute to its success also impacts job satisfaction. That is, other factors like employee participation are also relevant. As mentioned earlier, assessing "family-friendly" practices is in vogue at the moment. Examples include on-site daycare and family leave policies. Typically, NSWAs such as flexible schedules and home-based work are included as well (see Comfort, Johnson, and Wallace, 2003; Perry-Smith and Blum, 2000; Gray and Tudball, 2003). Research shows that the existence of these practices is positively associated with higher job satisfaction and improved organizational outcomes (e.g. Honeycutt and Rosen, 1997).

The challenge is to identify how each type of NSWA affects worker satisfaction. It is worth remembering that the labour force is much more heterogeneous than in the past (McQuarrie, 2003). Also, job satisfaction is known to be correlated with working conditions, as well as a range of worker and workplace variables (Spector, 1997). Thus, some workers might be dissatisfied even in standard jobs. Others subjected to employer-friendly NSWAs might find their jobs to be quite satisfying. By the way, job satisfaction can be defined as simply as how people feel about their and different aspects of their jobs (Spector, 1997, p. 2). It can be split into several facets (e.g. regarding pay, co-workers, etc.) or can be examined as an all-encompassing single measure (Nagy, 2002; Spector, 1997). In the WES 1999 dataset that is used in this dissertation, the available options are a global measure and a pay satisfaction measure. In this dissertation, a global measure of

job satisfaction (or being very satisfied) will be used. Since an overall indication of job satisfaction is desired, a single global measure is preferable anyway. Studies confirm that the chosen approach can be as valid as a battery of facet measures (e.g. Wanous, Reichers, and Hudy, 1997).

A minority of workers seem to prefer jobs with *employer*-friendly NSWAs. Possible reasons include the freedom and variety from changing jobs and organizations, or a desire, for personal or family reasons, not to commit to a full-time, permanent job (Stanworth and Druker, 2001; Rogers, 2000; Fullin, 2002). For these workers, nonstandard jobs can result in greater satisfaction, work-life balance, and personal growth. That does not imply, necessarily, that the negative work outcomes are not present as well. Rather, it means that if the positives outweigh the negatives, some workers accept that trade-off (Felstead, Ashton, and Green, 2001). Kropf (1999) found that flexible schedules and teleworking were associated with higher employee morale. She also found that *employers* perceived that these NSWAs contributed to higher productivity because implementation required clarified organizational strategies and improved communication. Whitehouse, Diamond, and Lafferty (2002) similarly found that teleworking yields potential benefits for employees and employers. While employers detected lower turnover and higher productivity, employees enjoyed more autonomy and better work-family balance. Also, Sousa-Poza and Henneberger (2000) found a relationship between work attitudes such as job satisfaction and (non-standard) conditions of work such as flexible work hours, and design of duties and/or the workday schedule, among others. On average, where those working conditions are perceived to be poorer, job satisfaction is lower.

Some workers want or need adjustments to the "standard" working conditions of the past, to balance other demands outside of work, or to fulfill unmet psychological needs. Any NSWAs that address these needs are, by definition, employee-friendly. If employers implement employee-friendly NSWAs, employees' job satisfaction levels will potentially

rise (see, again, Kristof, 1996). Scandura and Lankau (1997), for instance, found that flexible work schedules were positively associated with higher job satisfaction and organizational commitment. Moreover, they found that the relationship was stronger among females and those with family responsibilities (who presumably are more likely to want or need flex schedules). A follow-up issue, then, is whether satisfaction will be affected among *only* those who actually want or need employee-friendly NSWAs. That certainly *could* be the case. Although Scandura and Lankau (1997) confirmed a relationship *among all workers* between job satisfaction and the opportunity to have flexible schedules, that relationship disappeared when selecting only those *without* family responsibilities. Similar effects were noted by Honeycutt and Rosen (1997). So, in some cases, there is not a positive spillover effect for all workers, but rather just for those directly benefiting.

Perhaps the mere presence of various NSWAs affects the *psychological contract* between workers and their employers. In brief, a psychological contract is the implicit and reciprocal arrangement between an employer and an employee involving an exchange of items (such as effect, skills, pay) for mutual benefit (Rousseau, 2004). According to the theory, a strong contract yields more satisfied and motivated employees. A trend, identified by Rousseau, is a shift away from relational psychological contracts to a more transactional version. The former involved a long-term commitment from both parties, while the latter is much more short-term focused. Since employer-friendly NSWAs have the appearance of addressing organizational needs, their presence could weaken the psychological contract. Conversely, the implementation of an employee-friendly NSWA could strengthen it.

A particular employee-friendly NSWA, such as "flex time", is unlikely to be viewed favourably by *all* workers. Nonetheless, it is likely that job satisfaction among affected workers will be higher than among a comparable group of workers without that NSWA. To go one step further, the mere presence of an employer-friendly NSWA might lower

satisfaction, even among those *not* directly affected. For example, a worker who is comfortable with a fixed-term contract may still look dimly on an employer who relies too heavily on temporary labour. Almer and Caplan (2002) concluded that the availability of flex time was valued by those not using it as well as among those who did. Thus, the mere presence of the employee-friendly NSWA increased job satisfaction throughout the workplace. An interesting complication, though, is that the opposite can also be true. Job satisfaction can apparently fall due to NSWAs that co-workers have! Osterman's (1987) employment subsystems analysis showed that the working conditions of subgroups of employees sometimes differ sharply. Core workers (in standard jobs) may be insulated from environmental changes by a buffer of peripheral workers in non-standard jobs (Atkinson, 1987; Bendapudi, Mangum, and Tansky, 2003). This gulf between groups can lead to friction, mistrust, and resentment on both sides (Fox and Sugiman, 1999; Davis-Blake, Broschak, and George, 2003). Core workers may feel threatened by the non-standard workers while the latter group may perceive the former as unfairly receiving extra privileges (Lautsch, 2002; Davis-Blake, Broschak, and George, 2003).

Research suggests a link between job satisfaction and employee participation, particularly during periods of organizational change. Workers who view outsourcing as negative tended to have lower job satisfaction and higher turnover intentions (Kennedy et al., 2002). However, exposure to organizational change (achieved via employee participation) is positively associated with employee well-being and job satisfaction in some cases (Axtell et al., 2002). This is important for two reasons. Firstly, it provides additional evidence that some labour utilization strategies potentially yield positive (or negative) results for employers and employees. Research also suggests that employee participation affects job satisfaction directly (e.g. Kim, 2002). For instance, Lopopolo (2002) found that the job satisfaction was correlated with a high level of interaction and integration with peers, co-workers and being a part of work teams.

Pettit, Goris, and Vaught (1997) found that effective communication was an antecedent of job satisfaction *and* job performance. This suggests that communication is another strategic tool available to employers that potentially yields win-win outcomes. However, when organizational restructuring creates role ambiguity, overload, and/or conflict, job satisfaction tends to decline (Lopopolo, 2002). If NSWAs are implemented as part of a work reorganization plan, it would appear that employers should involve employees if increased job satisfaction is sought. Increasing performance feedback and communication (i.e. participation) is another potential way to achieve increased quality or productivity (Weiss, 2002). In the end, the literature shows a decidedly clear pattern. High job satisfaction among employees- besides being an appropriate end in itself- has positive implications for organizations as well.

At this point, it is worthwhile to briefly consider the scope of employee participation. It is clear that employers are increasingly including employees in decision-making (e.g. Kochan, Katz, and McKersie, 1986; McQuarrie, 2003), and sharing organizational objectives and results with them (Kim, 2002; Pettit, Goris, and Vaught, 1997; Weiss, 2002). It was envisioned that participation and communication were closely-related, but separate, constructs. More specifically, communication was thought to represent the amount of two-way information flow between an employer and its employees regarding operational, performance, and other organizational issues. Employee participation, on the other hand, was thought to represent the degree to which individual workers have the ability to offer input into the decision-making process. After reviewing the literature, it is apparent that communication is a sub-component of employee participation.

2.5 Strategic Factors Affecting NSWAs

Finally, the potential relationship between employers' strategies and the nature and incidence of NSWAs is explored. A reality of the Canadian business environment is that employers now hold the bulk of bargaining power (Thompson, 2001; Chaykowski and

Gunderson, 2001). They can even shift- or threaten to shift- production to lower cost jurisdictions, for instance. Alternatively, employers can choose to implement various types of NSWAs. While employers *can* act strategically when designing working conditions, it is unclear to what extent they *do*. Before proceeding, though, some terminology must be clarified. It was noted earlier that NSWAs represent only a subset of working conditions. Similarly, the utilization of labour represents a subset of possible human resource (HR) strategies. Thus, labour utilization strategies should be viewed as one component of HR strategy.

The first issue is whether there is usually a link between HR and (broader) organizational strategies. In a key study, Huselid (1995) presented a theoretical model of strategic human resource management (SHRM). The objective was to assess whether there is an optimal set of HR practices. He also tested whether productivity improved if HR practices logically fit with each other (i.e. had an internal fit) or whether HR practices were dependent on the broader organizational business strategy (i.e. an external fit). He found that work reorganizations, employee participation, and other HR practices *were* positively related to firms' financial and market measures. He also found that turnover and productivity acted as partial mediators. Although little support was found for the external fit concept, moderate support was found for the internal fit premise.

Delery and Doty (1996) further clarified the theoretical basis of SHRM. They examined whether there is i) one best way to design HR practices, ii) whether the best way is dependent upon the organizational strategy, or iii) whether HR practices are optimized only when bundled properly. These represent the universalistic, contingency, and configurational perspectives. They found moderate support for the universalistic perspective, less for the contingency perspective, and less still for the configurational perspective. Thus, this study established a theoretical *and* empirical (albeit weak) link between HR practices, organizational strategies, and organizational outcomes. Youndt et al. (1996) even found support for the universalistic and contingency perspectives in blue

collar settings. In fact, employee participation, performance pay, and job ladders can reduce absenteeism, increase productivity and employee commitment, and generate improved financial outcomes (Wright, Gardner and Moynihan, 2003; Becker et al., 1997). Rogg et al. (2001) found that HR programs impact organizational climate. In turn, organizational climate can impact customer service outcomes. Rogg's study is important because it helps clarify *how* HR strategies potentially impact organizational outcomes. Some dissenting views also exist. For instance, Delaney and Godard (2001) concluded that there is only a tenuous empirical link between the use of particular HR practices (including NSWAs) and organizational outcomes. Moreover, the authors suggest that too little attention has been paid to the impact of employers' strategic HR choices on worker outcomes.

Overall, employers clearly have a range of strategic options regarding the utilization of labour (e.g. Osterman, 1984). At one end of the spectrum, work can be de-skilled and disposable (Verma and Chaykowski, 1999). The advantage is that wages can be lowered and a larger pool of unskilled labour is usually available. Since labour is interchangeable, bodies are added and shed as needed (e.g. Zeytinoglu, 1999b). At the other extreme, work is arranged so that the internal workforce is highly skilled, motivated, and committed (Osterman, 2000; Godard and Delaney, 2000; Grenier, Giles, and Belanger, 1997; Weiss, 2002). Of course, these represent ends of the spectrum, and there are an infinite number of strategic options in between. As conceptualized by Doeringer and Piore (1970), Osterman (1987), Atkinson (1987), an employer can implement different approaches on subsets of workers. Hendry and Pettigrew (1992) suggest that HR practices should be consistent with the environmental conditions. An organization facing retrenchment, for instance, requires a different labour utilization strategy than a growing business. To summarize, strategically chosen HR practices have been used to drive organizational change and achieve broader objectives. Thus, it would appear that there could and should be a close relationship between HR and organizational

strategies. The next step is to assess this empirical relationship from a conceptual perspective.

Sheppeck and Militello (2000) conceptualized a "configurational model" in which organizational effectiveness is optimized only if the business strategy and HRM practices are aligned well with the operating environment. Their strategic HRM practices include the possible use of NSWAs and the degree of employee participation. In an increasingly global and competitive business environment, organizations need to rethink core business strategies (Walker, 1990). That process must include a review of all HR choices including job enrichment, incentive pay, numerical and functional flexibility, and employee participation. Walker suggests that these changes should be implemented along with family-friendly policies and a high level of support for workers. Although the terminology differs, these recommendations include employee- and employer-friendly types of NSWA terms, duties, and rewards.

Hill and Jones (1992) proposed that the utilization of labour was one of the means by which organizations try to achieve their overall business strategy, and that as the latter changes, so too must the former. Hendry and Pettigrew (1992) explicitly advocated that HRM policies be used to drive organizational change. They suggest that HR practices should support the strategic direction of an organization based on its life cycle stage (e.g. growth, decline). Others, such as Agarwal and Singh (1998) and Long (2000), have advocated the use of specific NSWAs, such as variable pay, as a way to achieve organizational objectives. In fact, Davenport and Beck (2002) suggest that in this age of information overload, shrewd decision-makers should focus the bulk of their attention on HR issues as a way to signal the strategic priorities of the organization to its employees. Ideally, HR programs should directly contribute to the bottom line (Benham, 1999; Buyens and DeVos, 2001). In their study, Buyens and DeVos found empirical support for this conceptual position as well. That is, a tangible portion of line managers that they surveyed now accept that HR department personnel *can* act as strategic partners.

Moreover, those same line managers view HR more favourably when it *is* perceived to be actually contributing to organizational performance.

Shafer et al. (2001) present an illuminating case study of a hospital that transformed itself using a revamped HR strategy. To respond to the changing operating environment, the CEO decided that the organization needed to be much more adaptive. Several new initiatives were implemented, including flexible, rotating, team-based work duties, increased employee participation, and incentive pay. Upon reflection, organizational representatives concluded that the changes achieved the desired strategy, but only after the changes were fully implemented in a consistent, strategic way.

The remaining issue is how NSWAs should be incorporated into a labour utilization strategy. Essentially, a strategy is merely a logical configuration of practices (Fenwick and Cordey-Hayes, 2000). According to the industrial relations systems framework, organizations are shaped by the environmental factors that they face. Much of the human resource research reviewed above indicates that overall organizational strategy must be considered as well. Thus, although there is a wide range of NSWAs to consider, situationally specific factors limit the (HR) choices available to employers (Manzini and Gridley, 1986). Looked at another way, those factors should help determine which labour utilization strategies logically fit. For instance, well over a decade ago, Mattis (1990) recommended that organizations should utilize NSWAs as part of a broader work reorganization strategy. In that case, Mattis was advocating the use of work arrangements that could appeal to all workers (i.e. employee-friendly NSWAs). On the other hand, it might make more sense to design and selectively offer specific NSWAs only to particularly valuable employees (Caudron, 2001). Conversely, if labour is plentiful and an employer has few available resources, implementing employer-friendly NSWAs might be a way to ensure survival.

The general purpose of NSWAs, for instance, is to address the organizational need for increased flexibility (e.g. Bielenski and Kohler, 1999; Parsley and Wortsman, 1998). That need can be addressed by altering the number of employees, their work schedules or locations, or, alternatively, by enriching their work to improve commitment and productivity (Grenier, Giles, and Belanger, 1997; Adams and McQuillan, 2000; Baltes et al., 1999; Godard and Delaney, 2000). As an example, employers' reason for using "agency temps" originally was as vacation fill-ins, but often now is for on-going operational purposes (e.g. Osberg, Wien, and Grude, 1995). Alternatively, employers can choose other, more employee-friendly choices when searching for flexibility (See Zeytinoglu, 1999a; Fox and Sugiman, 1999).

Another reason why businesses may consider implementing NSWAs is direct cost savings (Marshall, 1999; Belman and Golden, 2002). Employer-friendly NSWAs essentially shift business risk to employees. Work is deskilled (so that workers are easily replaceable), job security reduced (at least for some), and schedules modified (Fox and Sugiman, 1999). Fixed costs can also be shed by implementing variable-pay schemes. The result is that fewer workers are required, and worker counts and worker hours, and worker compensation fluctuate with production requirements (Zeytinoglu and Muteshi, 2000). Naturally, there could be more than a single reason why employers utilize NSWAs. In fact, the literature suggests that employers have adopted various NSWAs to *concurrently* lower costs, improve productivity, and increase flexibility in response to changing environmental factors (see, for instance, Krahn, 1995; Ruckelshaus and Goldstein, 2001; Von Hippel et al., 1997; Lipsett and Reesor, 1998; and Houseman, 2001). Lautsch (2002, 2003) detected differences in the nature of working conditions for non-permanent employees, relative to those in standard jobs, depending on whether employers' rationale for using the former is to generate cost savings *or* increase flexibility. The working conditions analyzed in those studies included duties, rewards (i.e. pay and benefits), and "voice" (i.e. employee involvement and communication),

among others. Thus, various employer-friendly NSWAs might fit better with each other than with any employee-friendly examples.

At this point, patterns are emerging. Some organizations have adopted a core-peripheral model involving NSWAs. One option involves a mix of permanent and non-permanent workers who have essentially identical duties, hourly wages, and other job conditions (e.g. Lautsch 2002). The difference is that the peripheral workers, while otherwise treated equitably, likely have a non-permanent term and unstable work hours. Another option is to use non-standard workers as a strategic buffer. In this scenario, core workers are protected by a peripheral group of workers likely enduring several employer-friendly NSWAs (see Grenier, Giles, and Belanger, 1997; Houseman, 2001). Of course, employers are not necessarily insulating a portion of their workers from NSWAs. Some employers have taken advantage of the changing political and economic environment to aggressively implement NSWAs unilaterally (see Yates, 2000). Others have implemented (employer-friendly) NSWAs out of economic necessity for the sake of organizational survival (DiNatale, 2001). Another set of employers are utilizing NSWAs in a win-win manner for themselves and their employees (Godard and Delaney, 2000; Von Hippel et al., 1997; Baltes et al., 1999). Additionally, a few employers have implemented employee-friendly NSWAs even though the organization itself is struggling (see Cangelosi, Markham, and Bounds, 1998; Caudron, 2001). Thus, the use of employee-friendly NSWAs, employer-friendly NSWAs, or both could be part of a sound labour utilization strategy.

In an increasingly unstable and competitive environment, organizations are under pressure to increase operational flexibility and efficiency (Armstrong-Stassen, 1998; Kalleberg, 2000; Zeytinoglu, 1999b). Many organizations consider downsizing as a means of improving their bottom line (Caudron, 2001). Caudron advocates looking for cheaper alternatives to layoffs, using incentive pay, work-life initiatives, and other (employee-friendly) programs to retain and motivate the best employees. Rather than

treating all workers the same, a better approach is to give the *right* workers what they want to retain and motivate them (ibid.). This implies implementing employee-friendly NSWAs for valued workers, and employer-friendly NSWAs for all others. Conversely, Abraham and Taylor (1996) concluded that employers outsource for logical business reasons. The main reasons were to lower labour costs or to match labour levels to production cycles. Grenier, Giles, and Belanger (1997) noted that the use of NSWAs is conceptually related to other employer-instigated flexibility initiatives. Recent case studies indicated that non-permanent work arrangements can help achieve specific operational objectives including staffing for operational peaks, lowering costs, and screening "temps" for possible permanent employment (Kahn, 2000). Thus, implementing temporary rather than permanent workers, while generally unpopular with employees, can be entirely logical.

The focus briefly returns to the role of unions. Union power has declined due to less political input (Carroll and Little, 2001), an increasingly heterogeneous labour force (McQuarrie, 2003) and the growth of the primarily non-union service sector (Heisz and Cote, 1998). Nonetheless, workers- individually and collectively- can still impact the nature and incidence of NSWAs used. At an individual level, some sought-after workers demand employee-friendly NSWAs, such as the right to work at home, performance-based pay, and flexible (or shortened) work schedules (Carter, 2001). Others want additional variety in their duties, and more participation in decision-making (Cangelosi, Markham and Bounds, 1998). Still others need additional control over their schedules and work locations to balance work with family responsibilities (Comfort, Johnson and Wallace, 2003).

Canadian unions have traditionally adopted a business unionism model. Thus, their primary role is to maintain or improve working conditions for their members (McQuarrie, 2003; Peirce, 2003). Generally, unions have *sought* to limit managerial discretion by standardizing working conditions and maximizing job security (Fang and Verma, 2002;

Boheim and Booth, 2004; Booth, Francesconi, and Zoega, 2003). As a result, unions view the deterioration of working conditions with disdain. The growing incidence of NSWAs conflicts with those union philosophies and the terms of work negotiated via collective bargaining, sometimes over many decades (Peirce, 2003; McQuarrie, 2003). It has even been suggested that the growing incidence of NSWAs, and non-permanent work in particular, has *contributed* to declining union power (Chaykowski and Gunderson, 2001; Rose and Chaison, 2001).

Some observers suggest that unions have shifted towards social unionism due to the increasing challenges at a workplace level (Carroll and Little, 2001). This involves a strategy of political action to promote labour rights of labour. Some unions have even reconsidered their stance on non-permanent work and other NSWAs. Unions have also tried to organize non-standard workers (DuRivage, 2000; Martinello, 2000; Van Jaarsveld, 2004). At least half of unionized firms in Canada are now using some form of employee participation (Thompson, 2001). Thus, the relationship between unionization and the incidence of NSWAs is complicated. All else equal, unionized workers might have a lower incidence of NSWAs. On the other hand, some unions might focus on the nature, rather than incidence of NSWAs. If unions successfully organize non-standard workers, the incidence of NSWAs and unionization conceivably could be positively related.

At the workplace level, unions also tend to dislike other management initiatives such as increased employee participation. One concern is that if unions are not independent, then workplace democracy is potentially weakened. Working closely with management could also weaken members' commitment to the union itself (Frost, 2000b). Using Kochan, Katz, and McKersie's [KKM] (1986) strategic choice perspective, Frost (2001) looked at the impact that local union leadership decisions had using examples from the Canadian steel industry. She determined that the degree to which union leaders were willing to participate in work reorganizations dramatically altered resulting work arrangements.

Unions' strategies seemed to depend on the level of power held by the union, the history of cooperation or conflict at the workplace, and several worker (e.g. age, skills) and workplace (e.g. age, productivity) characteristics (Frost, 2000a). In fact, the mere presence of a union also can alter the terms and conditions of work. Unionized settings tend to have more formal work rules, and less use of individual incentives and work arrangements (McQuarrie, 2003; Ng and Maki, 1994). However, it also appears that general training and other perks could be less prevalent as employers react to higher wage demands by looking for offsetting savings elsewhere (ibid.). Thus, it seems likely that unions oppose employee-friendly NSWAs since they reduce the degree of standardization of working conditions. On the other hand, unionized employers might try to implement employer-friendly NSWAs to offset relatively high wages. However, those in unionized jobs are still likely to earn a wage premium (Fang and Verma, 2002), receive more benefits (Lipsett and Reesor, 1999), and have better access to training (Boheim and Booth, 2004). Although labour power has declined, unionized workers can be expected to have superior employment conditions relative to comparable non-union workers. Whether this extends to the incidence of employee- and employer-friendly NSWAs is unclear.

To recap, this section has established that NSWAs can be an integral part of a labour utilization strategy. In fact, the nature and incidence of NSWAs can be a means of achieving broader organizational strategies. However, stated strategies can differ from actual strategies. Since the results of this dissertation are based on the latter, Mintzberg's (1987) perspective is helpful. Mintzberg suggests that *intended* strategies are those explicitly chosen (at the top). On the other hand, *emergent* strategies emanate from the bottom as *patterns* among department level decisions form (see also Hill and Jones, 1992). Of course, an organization might not state their actual HR strategy explicitly or truthfully. For instance, an exploitative employer is unlikely to admit being so, even if that strategy is consciously chosen. Fenwick and Cordey-Hayes' (2000) work reorganization case study is also illuminating. An employer's stated strategy was to

improve work processes in a manner that was desirable to its employees. In the end, the new working conditions were far worse than those previously existing, even though the employer acted without malice. The point is that when a pattern of actual practices is detected- in this case pertaining to NSWAs- it is possible to infer the (emergent) labour utilization strategies without referring to official organizational goals. Nonetheless, there can also be a relationship between NSWAs and stated strategies. It appears that employers intend to implement NSWAs mostly in response to the rapidly changing environment. This section also assessed the impact of unions and individual workers. On the whole, their impact on the nature and incidence of NSWAs appears to be much smaller.

2.6 Synthesis of Literature

Several intermingled threads have emerged from the literature. Employers are facing a rapidly changing business environment. Many employers are seeking increased flexibility and efficiency in particular. Concurrently, human resources policies appear to be increasingly aligned with broader organizational strategies. Thus, employers are increasingly reevaluating their strategies and workplace practices, including the use of NSWAs. Overall, the growing incidence of NSWAs is often associated with lower job satisfaction of affected workers, but the impact could be positive as well. Not surprisingly, a key issue is the nature (i.e. types and dimensions) of the NSWAs used. It also appears that historically disadvantaged groups endure a relatively poor mix of NSWAs relative to others.

The Industrial Relations Systems Framework identifies factors contributing to the growing incidence of NSWAs. Employers are seeking to reduce costs and improve productivity, thereby being able to respond better to a changing environment. Also, those environmental changes have shifted power away from workers. As a result, employers can implement terms and conditions of work (fairly) unilaterally. From an *employer*

perspective, using NSWAs can be logical since labour levels tend to be easier to shed (or increase) to suit operational needs. Moreover, the purpose of introducing NSWAs into the workplace is often-perhaps usually- to decrease or at least contain costs, and/or to increase productivity. Therefore, a direct improvement to the bottom line may materialize. An issue is whether any performance improvements that occur are sustainable. If a worker outcome of the introduction of NSWAs is lower job satisfaction, the ultimate impact may be negative for organizations. It seems plausible, however, that the presence of an employer-friendly NSWA might not harm satisfaction of affected workers if other job conditions are favourable.

It seems clear that organizations have choices regarding the utilization of labour. Among the reasons why employers opt for NSWAs is cost-savings (Houseman, 2001) or efficiency gains (Kahn, 2000). Alternatively, NSWAs could be designed to address worker and non-worker objectives (Bielenski and Kohler, 1999). It is also plausible that some sought-after individuals are able to force their employer into implementing employee-friendly NSWAs (Carter, 2001; Kunda, Barley and Evans, 2002). Finally, the possibility exists that the use of NSWAs- via poor strategic choices or implementation- yields negative outcomes for employees and the employer (see Allan, 2000; Davis-Blake, Broschak, and George, 2003). Naturally, the specific nature and incidence of NSWAs is likely to determine whether the impact on affected workers is positive or negative.

The reviewed literature implies that employers' labour utilization strategies vary sharply. At one extreme, employers can take a "high road" in which workers actively participate in decision-making, enjoy enriched work, and enjoy favourable working conditions (Verma and Chaykowski, 1999). At the other extreme, some employers opt for the "low road". With this approach, the goal is to minimize labour costs. Presumably, other employers could opt for any point in the middle of the spectrum as well. Based on Osterman's (1987) multiple subsystem argument, it should also be possible to implement both extremes for different workers groups inside the same workplace. In fact,

Betcherman and Lowe (1997) have noted that the employment in Canada has already become polarized in terms of work hours, compensation, and other working conditions. In the following chapters of this dissertation, employers' labour utilization strategies will be examined and classified. To recap, it is suggested that employers' economic circumstances and the working conditions (i.e. nature and incidence of any NSWAs) of their employees can be examined to infer the labour utilization strategy being used.

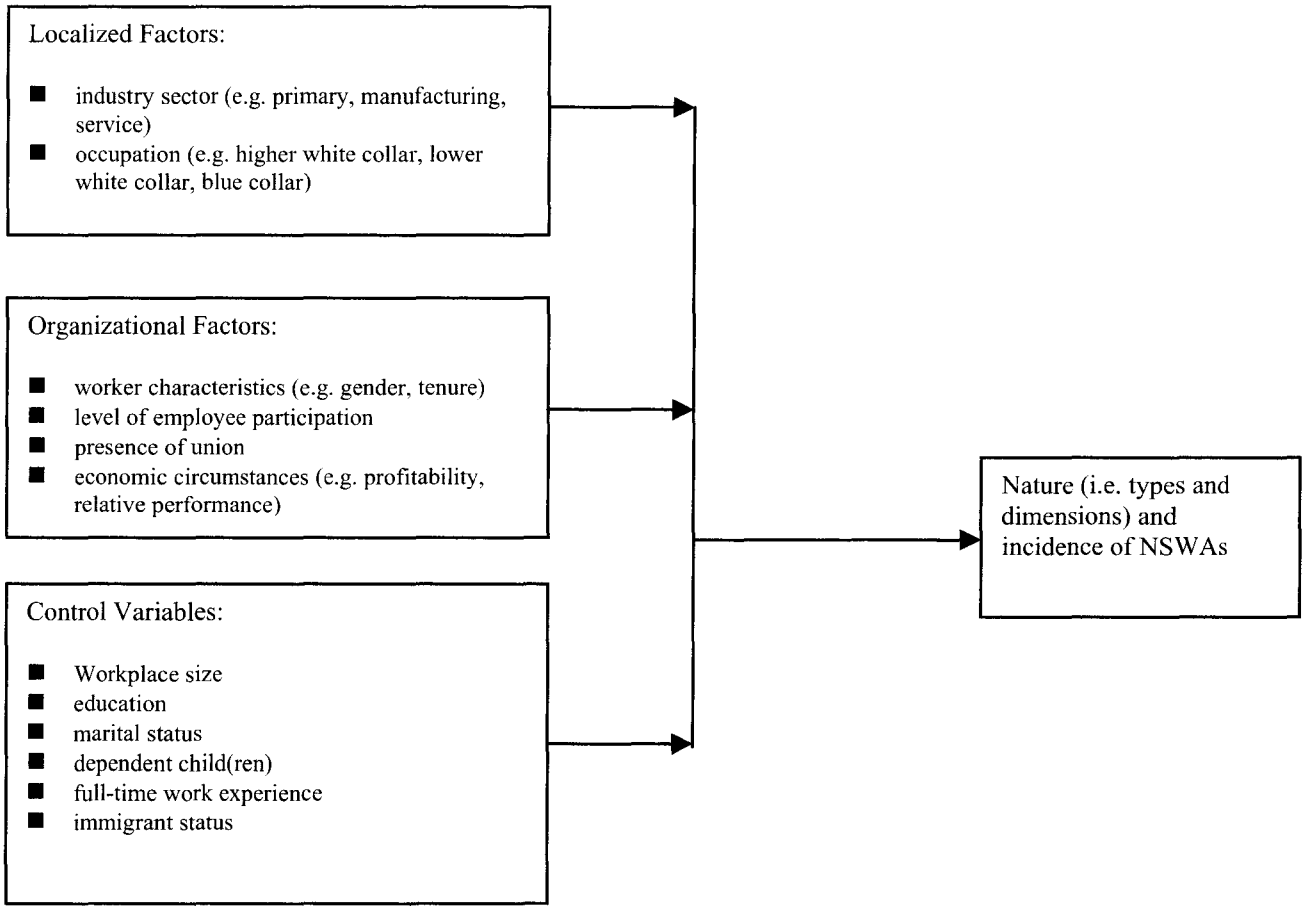
Chapter 3.0: Conceptual Models and Hypotheses

Before proceeding, the findings from the literature are briefly restated. Firstly, the incidence of non-standard work arrangements (NSWAs) is increasing. Secondly, several identifiable factors have contributed to this increase. Among the influential factors are strategic choices made by employers and unions. Also, there appears to be a relationship between job satisfaction and NSWAs. These findings have been incorporated into three conceptual models.

3.1 Model 1: Determinants of NSWAs

In Model 1, the focus shifts to the determinants of NSWAs. This model is essentially a simplified version of the Industrial Relations Systems Framework. The environmental factors in Figure 1 have now been split into two categories. Localized factors are presumed to affect the nature and incidence of NSWAs. The specific factors of interest are industry sector and occupation. In addition, several organizational factors are also presumed to affect the nature and incidence of NSWAs. These factors include worker characteristics, the presence of a union, employers' economic circumstances, and the level of employee participation. As an aside, it should be noted that macro (i.e. economic, political, legal) factors have been omitted. These have been excluded to focus on variables perceived to more directly affect the nature and incidence of NSWAs inside Canadian workplaces. Moreover, geographic details are suppressed in the WES dataset used in this dissertation. Thus, it is impossible to isolate differences in work arrangements between jurisdictions in which the economic, political, and/or legal environment might vary.

Model 1: Determinants of NSWAs



Some researchers suggest that the service sector is associated with relatively poor quality jobs (Meisenheimer, 1998) containing NSWAs imposed by management (e.g. Zeytinoglu, 1999a; Heisz and Cote, 1998). Presumably, that means a high incidence of employer-friendly NSWAs. However, another message in the literature is that service sector jobs are more conducive to all types of NSWAs compared to other sectors (e.g. Cooke and Zeytinoglu, 2004; Heisz and Cote, 1998; Osberg, Wien, and Grude, 1995). This suggests that employee-friendly NSWAs might be prevalent in the service sector as well. Nonetheless, since these jobs are considered to be relatively poor, employee-friendly NSWAs are probably less prevalent than in higher status jobs. The literature did

not indicate whether primary sector jobs have relatively high or low incidence of NSWAs. Additionally, this sector is very small in Canada relative to manufacturing and service. Thus, no hypotheses pertaining to the primary sector are offered.

> *Hypothesis 1: Those in service sector jobs will have a higher incidence of employee-friendly and employer-friendly NSWAs relative to those in manufacturing sector jobs.*

It appears that NSWAs are easier to implement in white collar jobs since most of the academic literature is based on these occupations. Moreover, flex-time or home-based work appear to be conceptually ill-suited for blue collar production settings. All else being equal, this should translate into higher incidence of NSWAs in (higher and lower) white collar jobs relative to blue collar jobs. However, higher white collar workers enjoy higher organizational power and status relative to other workers. Based on human capital theory, managers and professionals are expected to have better access to favourable working conditions, and lesser access to unfavourable conditions (e.g. Doeringer and Piore, 1970; DiNatale, 2001). Presumably, this potentially includes higher access to employee-friendly, but not employer-friendly, NSWAs. Conversely, lower white collar and blue collar workers presumably enjoy relatively similar power and status. Thus, the relative ease of implementing all NSWAs in lower white collar jobs likely yields a higher incidence of employer-friendly NSWAs as well.

> *Hypothesis 2: Those in higher level white collar occupations will have a higher incidence of employee-friendly NSWAs and a lower incidence of employer-friendly NSWAs relative to those in blue collar occupations.*
>
> *Hypothesis 3: Those in lower level white collar occupations will have a higher incidence of employee-friendly and employer-friendly NSWAs relative to those in blue collar occupations.*

Model 1 also conceptualizes several organizational factors that affect the nature and incidence of NSWAs. They include worker characteristics, the presence of a union, the

level of employee participation, and employers' economic circumstances. A review of each follows. Typically, females endure relatively poor working conditions relative to males. This generally holds whether looking at the historical situation (Kiefer and Phillips, 1988), the post-war workplace (Cranford, Vosko, and Zukewich, 2003), or more recent examples (Zeytinoglu and Muteshi, 2000; Zeytinoglu et al., 2003). Many of these same sources suggest that the marginalization of females extends to the incidences of various NSWAs as well. Based on this logic, it is plausible to assume that low tenure workers also endure unfavourable working conditions. Simply put, low tenure employees are unlikely to have sufficient power to extract more favourable working conditions. Much of recent job growth in Canada involves NSWAs (e.g. Cranford, Vosko, and Zukewich, 2003; Zeytinoglu, 1999a). Also, unemployment remained relatively high in Canada in the 1990s (Perusse, 1997; Picot and Heisz, 2000). Thus, it is plausible that employers implement employer-friendly NSWAs more frequently in new jobs, and reserve employee-friendly NSWAs for their more established, valued employees.

> *Hypothesis 4: Female workers will have a lower incidence of employee-friendly NSWAs and a higher incidence of employer-friendly NSWAs.*
> *Hypothesis 5: Low tenure workers will have a lower incidence of employee-friendly NSWAs and a higher incidence of employer-friendly NSWAs.*

It is possible that employee participation is positively related to employee-friendly NSWAs and negatively related to employer-friendly NSWAs. The most compelling conceptualization is offered by Verma and Chaykowski (1999). When taking the "high-road", employers implement a range of human resources approaches that are favourable to employees. Thus, high employee participation and the use of employee-friendly NSWAs should be positively related. Conversely, those taking the low-road seek to minimize labour costs wherever possible. Presumably, this means low employee participation and a high incidence of employer-friendly NSWAs. It should be stated, however, that Verma and Chaykowski did not focus on NSWAs per se. On the other

hand, Betcherman and Lowe (1997) documented a disturbing fact that working conditions have become more polarized in Canada. They also noted that Canadian employers are increasingly relying on a range of new practices including employee participation, organizational restructuring, and several non-standard work arrangements. Some of these NSWAs are aimed at increasing operational efficiency, while others are aimed at retaining valued workers. Numerous sources (e.g. Betcherman and Lowe, 1997; Delery and Doty, 1996; Hendry and Pettigrew, 1992; Hill and Jones, 1992; Houseman, 2001; Ruckelshaus and Goldstein, 2001; Von Hippel et al., 1997) indicate how innovative employers implement numerous work changes concurrently as part of a broader business strategy. Godard and Delaney (2000) suggest that employers' ultimate motivation for implementing new human resource practices is to increase productivity and flexibility, even if the apparent purpose is favourable to workers. Thus, it seems more plausible that (innovative) employers that increase employee participation are also likely to implement both types of NSWAs.

Hypothesis 6: The higher the level of employee participation, the higher will be the incidence of employee-friendly and employer-friendly NSWAs.

Unionization has historically meant better working conditions for members (e.g. Fang and Verma, 2002; McQuarrie, 2003). Although union bargaining power has declined in Canada (Chaykowski and Gunderson, 2001; Rose and Chaison, 2001), one would expect that unionization protects workers somewhat from employer-friendly NSWAs. Unionized workplaces are also more standardized (Boheim and Booth, 2004; Booth, Francesconi, and Zoega, 2003), at least partially due to the preference of the unions themselves. It seems unlikely that unions would aggressively fight for the implementation of employee-friendly NSWAs. Additionally, if employers are paying a wage premium, it is unlikely that they would implement employee-friendly NSWAs. Thus, unionization seems to be less compatible with the use of NSWAs.

Hypothesis 7: Unionized workers will have a lower incidence of employee-friendly and employer-friendly NSWAs.

All else being equal, more favourable business conditions for employers should lead to more favourable working conditions for employees. Richer organizations have more resources to follow new work trends, while poorer organizations are more desperate to adopt potential solutions (Huselid, 1995). A growing number of employers are responding to the changing competitive environment by seeking labour cost savings and other production efficiencies (Jackson and Robinson, 2000; Carroll and Little, 2001; Adams, 2001; Yates, 2000). The poorer the performance of an employer, the more likely they would feel compelled to implement employer-friendly NSWAs. Thus, the incidence of employer-friendly NSWAs should be higher among those employed by a poorly performing organization. Conversely, a strongly performing employer has less excuse to avoid implementing employee-friendly NSWAs. Employers' economic circumstances (i.e. performance) will be measured in two ways. Workplace profitability (i.e. having gross margin greater than zero) is an obvious and easy option. Secondly, the role of performance in industry will also be considered. Much of the literature noted how employers, on average, are facing increased competition (e.g. Brox, 2001; Carroll and Shaw, 2001; Chaykowski and Gunderson, 2001; Curtis and Chen, 2003). The inclusion of this second variable will clarify whether an absolute or a relative measure of performance is more influential on the nature and incidence of NSWAs.

Hypothesis 8: Those employed in profitable workplaces will have a higher incidence of employee-friendly NSWAs and a lower incidence of employer-friendly NSWAs.

Hypothesis 9: The better the employers' performance in industry, the higher will be the incidence of employee-friendly NSWAs and the lower the incidence of employer-friendly NSWAs.

Several control variables are also included. They are: workplace size, education, marital status, presence of dependent child(ren), full-time work experience, and immigrant status.

Arguably, another way to assess employers' economic circumstances is by workplace size (e.g. number of employees). The larger the workplace size, the more resources are available (e.g. Huselid, 1995). Recent studies also suggest that employees in large workplaces have better access to training (Turcotte, Leonard, and Montmarquette, 2003) and benefits (Lipsett and Reesor, 1998). Potentially, there are also fewer logistical hurdles to implement NSWAs. In a simple example, job-rotation is not possible unless there are similar jobs available. Others might speculate that smaller organizations are less formal and bureaucratic, and more willing to try new work arrangements. Since both arguments are equally compelling, no hypothesis is offered. Rather, workplace size is treated as a control variable in case it has an effect of some type.

Consistent with human capital theory, education is associated with relatively favourable working conditions. More educated workers potentially offer more value to employers. As a result, those workers are treated better than others, possibly including access to better NSWAs (e.g. Comfort, Johnson, and Wallace, 2003; Strober, 1990). Recall, however, that a hypothesis pertaining to occupation has already been presented. While those in higher-status occupations might receive a better mix of NSWAs, it seems much less likely that higher education yields additional improvements after controlling for occupation. As a result, education is merely included as a control variable in case there is some remaining effect on the incidence of NSWAs.

The role that work experience plays can also be rather complicated. It seems safe to assume that seasoned workers would not be subjected to unfavourable job conditions as often as those joining the labour force more recently. For instance, full-time work experience is negatively related to weekend work in Canada (Zeytinoglu and Cooke, 2004). However, more work experience does not automatically translate into favourable treatment. For example, one recent study found that low tenure workers actually have higher access to employer-supported training, when controlling for other factors (e.g.

Cooke and Zeytinoglu, 2005a). Thus, a decision was made to control for full-time work experience, but not to predict its effect.

Finally, the potential impact of marital status, presence of dependent children, and immigrant status is controlled. It is well known that immigrants have relatively poor working conditions (e.g. Hum and Simpson, 2003; Thomson, 2002; Zeytinoglu and Muteshi 2000). Several studies (e.g. Cranford et al. 2003, Statistics Canada 2002) also show that married women with dependents tend to be disadvantaged. However, these workers are not always subjected to poor working conditions. As an example, married females with children are over-represented in attractive weekend jobs in Canada (see Cooke & Zeytinoglu, 2005b). Since some emerging HR practices attempt to reduce work-family conflict (e.g. Comfort, Johnson, and Wallace, 2003; Gray and Tudball, 2003; Honeycutt and Rosen, 1997; Perry-Smith and Blum, 2000), it is plausible that workers with dependent children enjoy a favourable mix of NSWAs. Similarly, it is possible that married workers have different work-life preferences than single workers, and tolerate- or seek- a different mix of NSWAs. Thus, it is appropriate to control for these demographic characteristics.

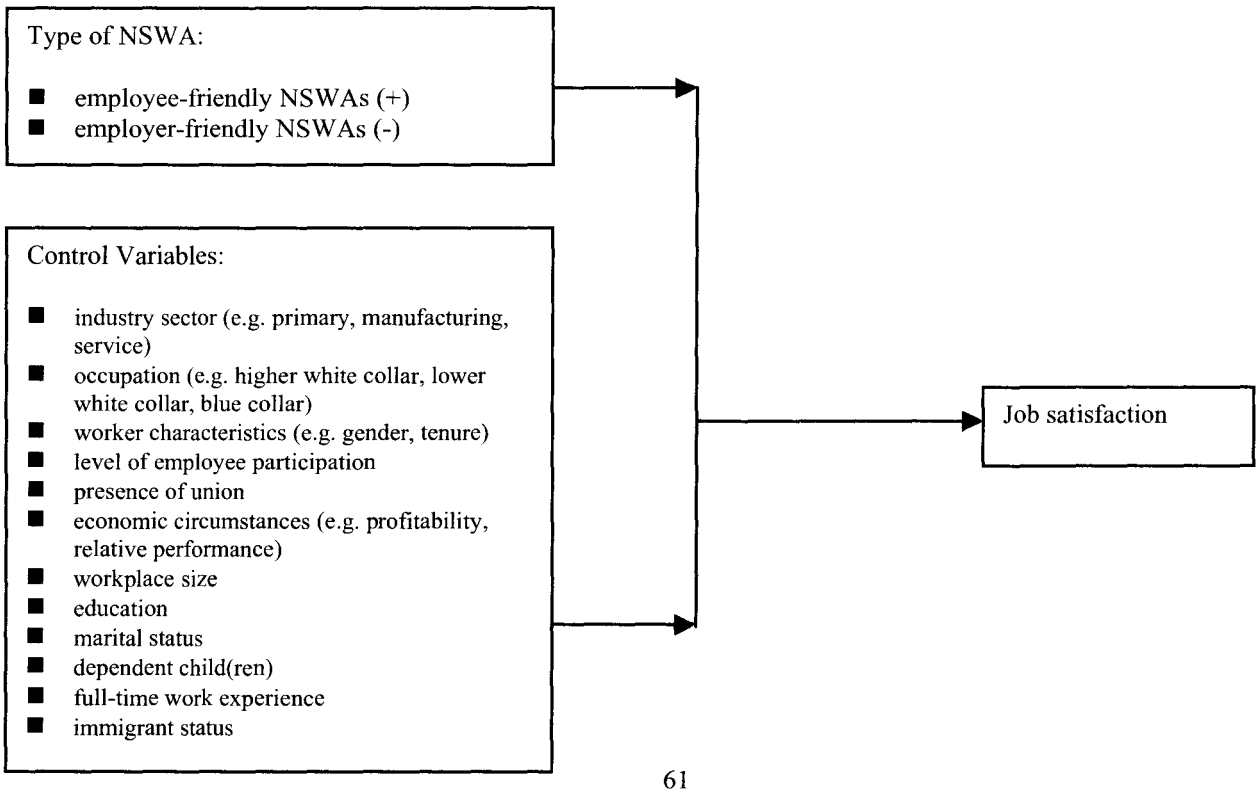
3.2 Model 2: NSWAs and Job Satisfaction

The relationship between NSWAs and job satisfaction is of particular interest. As shown in Model 2, employee-friendly and employer-friendly NSWAs are expected to affect job satisfaction in different ways. The former, by definition, seem to address workers' wants and needs. Thus, the incidence of these arrangements is expected to be positively associated with relatively high job satisfaction. Conversely, employer-friendly NSWAs are potentially associated with lower job satisfaction. The empirical support for Model 2 will clarify the influence of the nature and incidence of NSWAs on a key worker outcome. This is certainly the most important hypothesis in this dissertation. If Model 2 is empirically supported, that would legitimize the earlier presented NSWA typology.

Kristof (1996) noted that job satisfaction is impacted by the degree to which a worker's needs are met. All else being equal, employers having a high degree of concern for their employees should be relatively heavy users of employee-friendly NSWAs and other desirable work conditions. The result should be relatively satisfied workers. This employer strategy is the "high road", according to Verma and Chaykowski (1999). At the other extreme, some callous employers might design work solely to achieve operational objectives. Presumably, this could include the liberal use of employer-friendly NSWAs and other undesirable conditions of work. The result could be relatively unsatisfied workers. This is essentially the low road articulated by Verma and Chaykowski.

Hypothesis 10: The incidence of employee-friendly NSWAs will be positively related to job satisfaction. The incidence of employer-friendly NSWAs will be negatively related to job satisfaction.

Model 2: NSWAs and Job Satisfaction



It is well established that a wide range of worker and workplace factors affect job satisfaction (e.g. Spector, 1997). For instance, high levels of employee participation have been linked to increased job satisfaction (e.g. Petit, Goris, and Vaught, 1997; Kim, 2002). Thus, all of the control *and* independent variables from Model 1 are treated as control variables in Model 2. Simply put, many variables affecting satisfaction could be correlated if affected by a common, but latent, labour utilization strategy. To avoid redundancies, variable explanations provided when describing Model 1 are not repeated in this section.

3.3 Model 3: NSWAs and Employer Strategies

In Model 3, the focus shifts to groups of employees sharing common working conditions. This model will be used to achieve the fifth objective listed on page 3. In brief, the objective is to infer the labour utilization strategies of employers, partially based on the nature and incidence of NSWAs among the jobs of their employees. Using Mintzberg's (1987) concept of emergent strategies, employees are categorized according to their working conditions as well as the economic circumstances of their employer. Those employed in a survivalistic workplace endure relatively poor conditions while working for an employer with relatively poor economic circumstances. A presumption is that these employers cannot address the working conditions of their employees (at least currently). The forced benevolent group has relatively favourable conditions while working for an employer with relatively poor economic circumstances. It is presumed that these struggling employers have opted- or been forced- to implement favourable working conditions for their employees. Those in exploitative workplaces endure relatively poor conditions while working for an employer with relatively good economic circumstances. Thus, these employers have chosen not to improve the working conditions of their employees. Finally, those employed in a benevolent workplace have

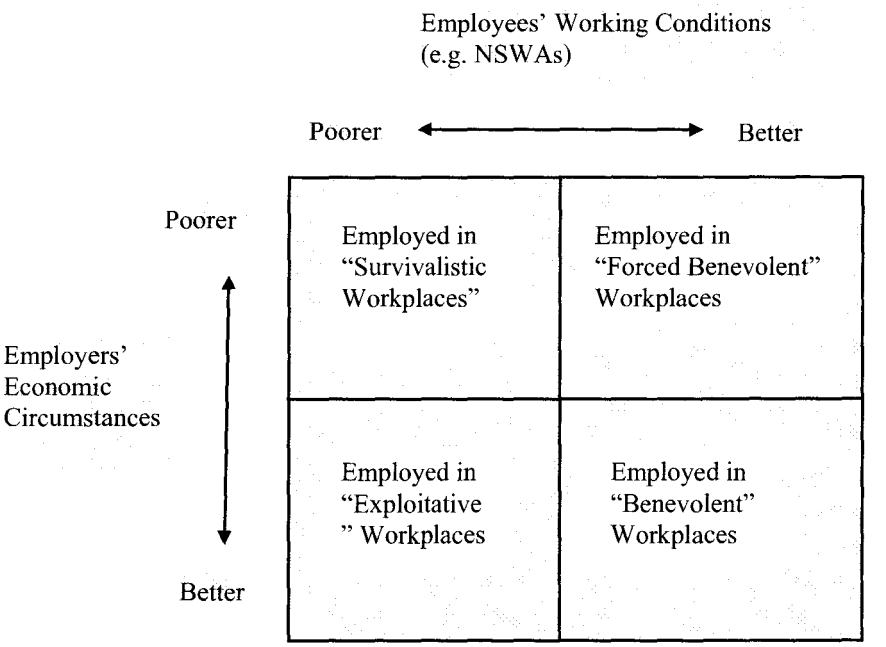
relatively favourable conditions while working for an employer with relatively good economic circumstances. Presumably, these employers have chosen to share their resources with employees via favorable working conditions.

Model 3 suggests that employees can be categorized according to their working conditions *and* the economic circumstances of their employers. It is presumed that each worker sub-group is subjected to a different labour utilization strategy by their employer. Suppose that the categories are determined without regard to NSWAs. If employers have different labour utilization strategies, and NSWAs are an integral element of those strategies, then the nature and incidence of NSWAs should vary between the categories. In particular, the incidence of employee-friendly NSWAs might be higher among those in the benevolent and forced benevolent groupings since these workers enjoy relatively favourable working conditions. Conversely, the incidence of employer-friendly NSWAs is expected to be higher among those in the survivalistic and exploitative groupings where working conditions are relatively poor.

Since the analysis of this model is exploratory, no hypotheses are offered. The intention is merely to assess whether the nature and incidence of NSWAs varies among the four worker groups. It is certainly possible that NSWAs do not vary much between these worker categories. If, however, the nature and incidence of NSWAs varies in the expected fashion, then the implication is that NSWAs can be an integral part of employers' labour utilization strategies. Note that this particular model does not imply unidirectionality in the relationship between economic circumstances and working conditions. For instance, it seems plausible than an employer that implements employee-friendly NSWAs might experience an increase in economic performance (due to lower absenteeism and turnover, or increased worker effort). It also seems plausible that an organization with strong economic performance is more able and willing to improve the working conditions of its employees. Again, Model 3 simply posits that there will be differences in the incidences of employee-friendly and employer-friendly NSWAs

between the four worker groups. If empirical support is found for the presumptions underpinning Model 3, then a more rigorous study can be subsequently undertaken to assess why the incidences vary.

Model 3: Working Condition Groups



Chapter 4.0: Methodology

At this point, the methodology of this dissertation is summarized. Details are provided separately for data, variables, data analysis, and limitations. Afterwards, sample characteristics will be presented.

4.1 Data

This dissertation uses a quantitative research methodology using the 1999 Workplace and Employee Survey (WES) dataset. A survey is the preferred research design because a large number of variables is required. Additionally, many observations (i.e. respondents) are required to examine the incidence of each NSWA.

The WES dataset was created initially in 1999 by Statistics Canada and Human Resources Development Canada. It is intended to be a longitudinal survey tracking changes inside private-sector, non-agricultural organizations in Canada (WES Compendium 2001). The unusually rich set of employer and employee variables in WES make it a logical choice. For this dissertation, 1999 data will be used as a cross-sectional survey. This choice was made because several dependent variables are used. An additional layer of multi-year responses would be an unnecessary complication. One advantage of the WES is that it contains linked employee and employer information. Using the unique organizational identifier, it is possible to select employers based on the variables of interest, and then to examine responses from surveyed employees that work inside those chosen employers (ibid.). The worker information is contained in the employee file, while the employer information is called the workplace file. The employee file contains a number of personal, human capital, and other variables. The workplace file contains information on employee counts, types of workers employed, operating and financial statistics, and market/business line information. The sample consists of over 6,351 workplaces and 24,597 employees, with a response rate of 94% and 83%, respectively. Thus, an additional advantage of the WES dataset is its size and completeness. On a weighted basis, approximately 10.8 MM employees are included.

While some workplaces contain thousands of employees, others have less than a handful. Since the level of analysis in this dissertation is at the employee level, this design nuance does not cause analysis issues. The WES dataset includes a random selection of four to twelve employees from each selected workplace. All employees are included for workplaces with fewer than four employees. Overall, the depth and breadth of this dataset make it ideal for this dissertation. Certainly, the WES is far more comprehensive than could reasonably be expected if a new survey had been undertaken.

4.2 Variables

Due to the numbers involved, the dependent, independent, and control variables are summarized separately.

Dependent Variables: NSWAs

To recap, a typology of five dimensions and three types of non-standard work arrangements (NSWAs) were originally conceptualized in Table 2 (on p. 19). However, after reviewing the relevant literature, a revised set of four dimensions and two types was selected for this dissertation (see Table 5 on p. 31). From a *conceptual* perspective, being employee-friendly means a work arrangement that is designed primarily to address the wants and needs of employees. An employer-friendly NSWA is designed primarily to address the wants and needs or employers. If a NSWA primarily seems to provide increased flexibility, choice, security, and/or benefits to workers, then it will be assumed to be employee-friendly. Meanwhile, an NSWA that appears to address a non-worker objective is considered to be employer-friendly. At this point, operationalized definitions are needed for each of the eight type-dimension pairings of NSWAs shown in Table 5.

Since the term dimension will be excluded, for reasons to be discussed shortly, the location dimension is considered first. In this dissertation, a non-standard location is one in which work regularly includes a home-based component. An employee-friendly

location NSWA exists when duties are carried out at home for personal reasons. Personal reasons consist of i) caring for family members, ii) other personal reasons, or iii) because there is some other advantage to the worker to have this arrangement. To ensure that the worker benefits, the definition has also been restricted to instances where the home-based component involves *paid* work duties. A non-standard location would certainly be employer-friendly, though, if unpaid duties are carried out at home for a non-personal reason. Reasons considered to be non-personal are if the home-based work is a usual part of the job or is required to finish work.

According to Statistics Canada, being part-time is defined as working up to 30 hours per week. That definition, which is common among academic sources (e.g. Zeytinoglu 1999a; Zeytinoglu and Cooke, 2005), is also used in this dissertation. Exceptionally long work weeks are studied much less frequently. Lipsett and Reesor (1998) set the boundary for a standard full-time work week to be between 30 and 48 hours. That same definition is replicated in this dissertation. The additional step is to determine employee-friendly and employer-friendly examples of non-standard schedule lengths. As discussed by Sousa-Poza and Henneberger (2000), the key is whether the worker is able to select the desired schedule length. Thus, an employee-friendly NSWA schedule length is one in which i) the duration is less than 30 hours per week and the worker prefers that length, or one in which i) the duration is greater than 48 hours per week and the worker prefers that length. Conversely, an employer-friendly NSWA schedule length is one in which i) the duration is less than 30 hours per week and the worker prefers to work more, or one in which i) the duration is greater than 48 hours per week and the worker prefers to work less.

Determining the operational boundary between standard and non-standard schedule stability is perhaps more arbitrary than in the other cases. Distinctions can be found, however, when the options are handled carefully. Non-standard schedule stability exists when work regularly occurs outside of normal hours and involves an element of

variability. The employee-friendly NSWA occurs when hours are outside of the conventional 6am to 6pm work window, and workers have control over their schedule via a flex-hours program. A schedule stability NSWA is employer-friendly when i) regularly occurring outside the conventional work window, ii) work days vary, and iii) affected workers do not have the flexibility to choose their schedule.

Finally, the NSWA term dimension is considered. As mentioned earlier, a decision was made to exclude this dimension. This resulted from a critical assessment of its operational definition and a preliminary data analysis. A recap follows. A non-standard term exists when a job is non-permanent. The most favourable non-permanent arrangement, from a worker perspective, is a fixed-term arrangement. Fixed-term (i.e. contract) employment is employee-friendly because it offers a higher degree of clarity (of job conditions) and stability to affected workers. Casual/on-call employment is the employer-friendly variation. When operationalizing the NSWA term dimension, an unexpected problem was encountered. This dimension clearly differs from the others in an important way. The employee-friendly NSWA variable for location, schedule length, and schedule stability appear to be more favourable than the comparable *standard* work arrangement. As discussed earlier, however, most workers would likely consider fixed-term employment to be markedly inferior to a permanent job. As a result of this conceptual anomaly, preliminary data analysis was undertaken to assess the feasibility of retaining the term dimension variables in the presented results. The preliminary results confirmed that *term NSWAs* differed from the other NSWAs. In particular, neither the employee-friendly or employer-friendly term variable impacted job satisfaction. Essentially none of the independent variables was significantly related to the employee-friendly term variable, based on the regression results. (These preliminary results are provided in Appendix A.) Conversely, some independent variables were significantly related to the employer-friendly term variable.

As a result of the preliminary data analysis, the term dimension was excluded from the presented results. While the employer-friendly term variable could have been retained, that would have altered the symmetric pattern of the set of dependent variables, in which an employee-friendly and employer-friendly version exists for location, and schedule length and stability. The decision to exclude term resulted in the revised set of NSWA variables that are summarized below in Table 6. Note that there are three remaining dimensions of NSWAs and two types of NSWAs. This results in six type-dimension pairings. In addition, two composite variables were created, representing the union of the three employee-friendly or employer-friendly NSWAs. These composites exist to help assess the support for Model 2, and the NSWA Typology (in Table 2). Simply put, Model 2 implies that any or all of the employee-friendly NSWAs should affect job satisfaction in a consistent way, and differently from the way that employer-friendly NSWAs affect job satisfaction. The composite NSWAs simply identify whether any of the three selected employee-friendly or employer-friendly NSWAs exist. The formal definitions for the NSWA variables are provided in Table 7.

Table 6: NSWA Variable Summary – Final Set

Dimension (by column); Type (by row)	Location:	Schedule Length:	Schedule Stability:	
Employee-friendly:	Employee-friendly Location	Employee-friendly Schedule Length	Employee-friendly Schedule Stability	Employee-friendly Composite
Employer-friendly:	Employer-friendly Location	Employer-friendly Schedule Length	Employer-friendly Schedule Stability	Employer-friendly Composite

Table 7: Description of NSWA Variables

Variable Description and Source	Purpose/Explanation, Coding
Dimension: Location	
Employee-friendly location NSWA (EQ17a, c)	Those carrying out *paid* work duties at home for a worker-related reason; 1=yes, 0=no. Reasons coded as worker-related were: care for children or other family members, other personal or family responsibilities, better conditions of work, or save time/money.
Employer-friendly location NSWA (EQ17a, c)	Those carrying out *unpaid* work duties at home for a *non*-worker-related reason; 1=yes, 0=no. Reasons coded as non-worker-related were: requirements of the job/finish projects, usual place of work, other.
Dimension: Schedule Length	
Employee-friendly schedule length NSWA (EQ10a,d, 12)	Those with weekly work hours are outside of the full-time norm (i.e. are less than 30 or more than 48) and are working their preferred amount; 1=yes, 0=no.
Employer-friendly schedule length NSWA (EQ10a,d, 12)	Those with weekly work hours less than the full-time norm (i.e. less than 30) and who prefer to work more, OR those with weekly work hours of more than the full-time norm (i.e. more than 48) and who prefer to work less; 1=yes, 0=no.
Dimension: Schedule Stability	
Employee-friendly schedule stability NSWA (EQ13b, 14)	Those who regularly work outside of the hours of 6AM to 6PM AND who have flex-hrs (i.e. have the ability to choose their start and finish times); 1=yes, 0=no.
Employer-friendly schedule stability NSWA (EQ13b,d, 14)	Those who regularly work outside of the hours of 6AM to 6PM AND who do not have the flexibility to choose their start and finish times AND whose usual work days vary; 1=yes, 0=no.

See Appendix B for the exact wording of the questions used.

Dependent Variables: Job satisfaction

In this dissertation, NSWAs are generally utilized as dependent variables. However, NSWAs are treated as independent variables in one case, with job satisfaction as the dependent variable. The purpose is to assess whether NSWAs affect job satisfaction in the manner shown in Model 2 (on p. 61). In the WES dataset, only a single five-item measure of job satisfaction is available. This could be a serious limitation for a detailed study of satisfaction. In this dissertation, however, it is adequate since an overall goal is to assess the factors associated with job satisfaction. In fact, a single global measure can be ideal when an overall assessment of satisfaction is sought (see Wanous, Reichers, and Hudy, 1997). This measure is used in the regression analysis for Model 2. Additionally, a dichotomous variable of being very satisfied (or not) has also been created. This version of satisfaction is used when assessing the level of empirical support for Model 3. In Model 3, it is necessary to separate those with higher and lower satisfaction levels. As

will be discussed in the sample characteristics section, the logical boundary is between those being very satisfied versus those with lower satisfaction. The operationalized definitions for the two satisfaction variables are shown below in Table 8.

Table 8: Description of Job Satisfaction Variables

Variable Description and Source	Purpose/Explanation, Coding
Job satisfaction (EQ38)	Transformed version of original variable. Scale from 0-4 with higher meaning more satisfied when considering all aspects of the job.
(Being) very satisfied (EQ38)	To identify those indicating being very satisfied when considering all aspects of their job; 1=Yes, 0=No.

Independent Variables

The independent variables used in Model 1 are: industry sector, occupation, gender, low (workplace) tenure, employee participation, unionization, and employers' economic circumstances. Each of these is briefly summarized. Individuals have been categorized according to whether they work in the primary, manufacturing (or related), or service sectors. Three occupational categories have also been developed. They represent higher white collar, lower white collar, and blue collar (and related) workers. Gender is a single dichotomous variable with females coded as 1 (and males 0). Low tenure identifies those joining their current employer within the last 30 months. Unionization designates those covered by a collective agreement. The two variables measuring employers' economic circumstances are workplace profitability and performance in industry. The former identifies those employed in a workplace having gross margin greater than zero (i.e. revenues meet or exceed expenditures).

Employee participation and performance in industry have been intentionally excluded from the above definitions and explained here separately. An operationalized definition for each was created using factor analyses. Factor analysis is a well accepted tool to identify smaller sets of latent variables that capture and/or explain variation in a larger set of variables (Pedhazur and Schmelkin, 1991). Since the factor analysis is not central to

this dissertation per se, only the results are presented here. The raw output is provided in Appendix C. Factor analysis confirmed that four workplace variables pertaining to communication and/or involvement loaded on the same latent factor (i.e. labeled here as employee participation). For performance in industry, a scale was created that captures perceived productivity, profitability, and sales growth relative to competitors.

Each independent variable is listed in Table 9 in an order consistent with the hypotheses.

Table 9: Description of Independent Variables

Variable Description and Source	Purpose/Explanation, Coding
Industry Sector: Primary industries (from dom_ind, # unavailable)	Those employed in forestry or mining; 1=Yes, 0=No.
Manufacturing and related (ref. group) (from dom_ind)	Those employed in construction, transportation, warehousing, wholesale, communication or other utilities; 1=Yes, 0=No.
Service sector (from dom_ind)	Those employed in retail trade and consumer services, finance and insurance, real estate, rental and leasing, business services, education and health services, or information and cultural industries; 1=Yes, 0=No.
Occupation: Lower white collar (from ocp_grp, # unavailable)	Those whose occupation is marketing/sales, or clerical/administrative; 1=Yes, 0=No.
Higher white collar (from ocp_grp)	Those whose occupation is manager; 1=Yes, 0=No.
Blue collar and other (ref. group) (from ocp_grp)	Those whose occupation is technical/trades, OR production worker with no trade/certification, or professional; 1=Yes, 0=No. (Reference group)
Gender (EQ44)	1=Female, 0= Male
Low tenure (EQ4)	To identify those whose start date with their current employer is after Dec 31, 1996 (i.e. has tenure of less than 2.5 years); 1=Yes, 0=No.
Employee participation (EQ 31a,b, d, and e)	Generated from factor analysis; Cronbach's alpha=.975. Scale created based on whether workers participate via an employee suggestion program, employee surveys, meetings and/or newsletters about workplace performance, and/or task team or labour-management committees about workplace issues. Higher means more participation.
Unionization (EQ33)	Those who are a member of a union or covered by a collective bargaining agreement; 1=Yes,0=No
Employers' Economic Circumstances: Workplace profitability (WQ29a, WQ30a)	Those working for in a workplace where revenues are equal or greater than expenditures in the last fiscal year; 1=Yes,0=No
Performance in industry (WQ39a,b,c)	Generated from factor analysis; Cronbach's alpha=.990. Scale created based on productivity, sales growth, and profitability changes. Higher means better performance.

See Appendix B for the exact wording of the questions used.

Control Variables

Control variables have been included in the regression analysis so that the statistical relationships between the dependent and independent variables can be assessed with more confidence. For Model 1, the control variables are workplace size, education, marital status, dependent children, full-time work experience, and immigrant status. Each is briefly discussed. As a reminder, all of the independent and control variables from Model 1 are treated as control variables in Model 2. The main workplace size variable, based on employee counts, required a (log) transformation to reduce skewness. Two dichotomous education variables have been created. One captures workers who do not have any post-secondary education. Higher education captures those with at least some post-secondary education. Similarly, there are two categories for marital status. The reference group includes those who are married or in a common-law relationship. The alternative category includes all others. The dependent children variable identifies those having at least one dependent child. Full-time experience is a self-explanatory scale measure. Finally, immigrant status identifies those not born in Canada. Definitions of these variables are listed in Table 10.

Table 10: Description of Control Variables

Variable Description and Source	**Purpose/Explanation, Coding**
Workplace size (WQ1a)	Size of workplace measured using number of employees.
Workplace size (ln form) (WQ1a)	Log form of workplace size variable. Transformed to reduce skewness.
Education: Lower education (EQ48-49)	Those without any post-secondary education; 1=Yes, 0=No.
Higher education (ref.) (EQ48-50)	Those with at least some post-secondary education; 1=Yes, 0=No.
Marital status: Married/Common Law partner (ref. group) (EQ 51,52)	Those who are either legally married or have common-law partner; 1=Yes, 0=No.
Other marital status (EQ 51,52)	Those having other marital status (i.e. separated, single, divorced, or widowed, and no common-law partner: 1=Yes, 0=No.
(Has) Dependent children (EQ53)	To identify those who have at least one dependent child; 1=Yes, 0=No.
Full-time work experience (EQ40)	Number of years of full-time working experience.
Immigrant Status (EQ46)	Those not born in Canada; 1=Yes, 0=No.

See Appendix A for the exact wording of the questions used.

4.3 Data Analysis

Analysis Pertaining to Models 1 and 2

All of the analysis for these models has been generated using weighted micro data accessed at Statistics Canada's Research Data Centre (RDC) located at McMaster University in Hamilton, Canada. This analysis utilizes univariate statistics, bivariate correlations, and multivariate regressions. Univariate analysis, recoding and transformations (as needed), and generation of descriptive statistics were completed in SPSS 12.0. Regressions were undertaken in Stata 8.0. As per the access agreement with Statistics Canada's RDC, only weighted results are presented. A peculiarity of the WES dataset is that geographic information, while recorded in the surveys, is withheld for confidentiality reasons. If geographic information had been available, that would have allowed for testing of differences in the incidence of NSWAs among the economic, legal, and/or political environments. As also mentioned earlier, the WES dataset captures employer information at the workplace level. Thus, this dissertation uses employer information about "this location" (i.e. workplace) in the data analyses.

Univariate Statistics

Descriptive statistics, in the form of means and standard deviations, were used to obtain a general understanding of the variables, where possible. For categorical variables, proportions (i.e. frequencies) were utilized in place of descriptive statistics.

Bivariate Correlations

Bivariate correlations were generated to measure the strength of the relationship between pairs of variables while ignoring the impact of other factors. Given the large number of variables that can affect working conditions, it can be argued that bivariate correlations are somewhat inappropriate here. While that viewpoint has merit, these statistics still provide value by showing whether or not key variables are correlated *notwithstanding*

other influences. One complication is that the WES dataset is so large that statistical significance exists for most correlations even where the effect size is very small. The magnitude of a correlation might be very close to zero (indicating virtually no relationship), and yet be "significant". When reviewing the correlations in this dissertation, attention must be paid to the substantiveness of the relationships as well.

Multivariate Regressions

Two sets of multivariate regressions were used. The purpose of multivariate regression is to isolate the effects of key independent variables on the specified dependent variable, while simultaneously controlling for other potentially influential factors. Firstly, NSWAs as the dependent variable is regressed onto the set of control and independent variables. Since all NSWA variables are dichotomous, logistic regression is used. Since several NSWA variables exist, there are several regression iterations as well. Secondly, the NSWA variables are treated as independent variables to assess their effect on job satisfaction. Since job satisfaction is a scale variable, ordinary least squares (OLS) regression is used.

For each model, the regression coefficient and/or odds ratio (in logistics regression), standard error, and significance level will be provided for each independent and control variable. In logistic regression, odds ratios provide an indication of the relative influence of each independent variable. An odds ratio near 1.0 indicates that a particular variable has minimal effect. An odds ratio straying from 1.0, however, suggests that the variable is potentially influential. As was the case with the correlation results, regression variables may be statistically significant even if the effect size is very small.

In addition, a goodness of fit statistic (e.g. R^2) will also be provided for each model. In the case of logistic regression, the pseudo-R^2 statistic will be referenced, as will other available statistics. It has been suggested that the pseudo-R^2 statistic is somewhat flawed (Kennedy, 1998) and does not have an intuitive interpretation between its limits (George

et al., 1985, p.774). On the other hand, it is a convenient measure that approximates its (R^2) counterpart, and a well-accepted alternative is not available (see George et al., 1985; Kennedy, 1998; Menard, 1995). A second goodness of fit measure, the Wald chi-square, is also provided as part of the logistic regression output. For OLS regression, the two commonly used measures, F-statistic and adjusted R^2, are provided.

Statistics Canada strongly recommends the use of bootstrapping in statistical analysis using the WES dataset due to its complex survey design. Bootstrapping refers to a process of repeatedly drawing random samples with replacement from the data at hand (Hamilton, 2004). In all presented regression results, Statistics Canada's recommended set of 100 bootstrapped employee weights for this dataset are used via the Stata function developed and discussed by Pierard, Buckley, and Chowhan (2004). (For more on sampling and sample design, see the WES Compendium 2001).

Cluster Analysis Pertaining to Model 3: Working Conditions Groups

Cluster analysis has been used to measure the empirical support for Model 3. Cluster analysis is an exploratory technique in which records (i.e. workers) are sorted into like and unlike groups (or clusters) on the basis of specified variables/characteristics (e.g. Albright, Winston, and Zappe, 1999; Hamilton, 2004). In this study, it is exploratory because *unweighted* records are necessarily used. (The cluster analysis function in Stata does not have the functionality to incorporate a weighting variable.) However, the RDC access agreement with Statistics Canada requires that only weighted results be presented. Moreover, the complex survey design renders results based on unweighted data to be non-generalizable. Therefore, the cluster analysis has been analyzed and then *replicated* using weighted descriptive statistics. The presented results, while based on true cluster analysis, are actually descriptive statistics. The benefit, of course, is that these weighted results are more representative and generalizable. However, some methodological details are necessarily provided when the cluster results are shown. Cluster analysis is also considered to be exploratory because (defensible yet) arbitrary boundaries are selected to

define worker sub-samples. Moreover, a significance test is not readily available. More generally, cluster analysis can be considered exploratory because it yields results based on specified parameters. For example, if four clusters are specified, the models will "find" exactly four clusters. Whether the results are meaningful depends on whether those specifications are sound, *and* whether the characteristics of interest substantially differ between clusters.

Despite the potential limitations, cluster analysis has proven to be effective in the past for research in this subject area. Grenon and Chun (1997), for instance, used cluster analysis to show the heterogeneity in hourly wages and work schedules (and hence, income) among non-permanent workers in Canada. Also, Perry-Smith and Blum (2000) evaluated the prevalence of family friendly practices after clustering employers into groups of interest. Finally, Comfort, Johnson, and Wallace (2003) analyzed the prevalence of part-time arrangements and training using the 1999 WES dataset.

4.4 Limitations

In any study design, there is a trade-off between idealism and practicality. In this dissertation, two potential limitations are the cross-sectional design, and the number of included variables.

Since this is a cross-sectional study, one cannot draw causal inferences. As noted by Gerhart et al. (2000), this type of research design is subject to systematic error. It is simply not possible to determine whether particular worker or workplace variables caused the use of employee-friendly or employer-friendly NSWAs. On the other hand, perhaps the relationship exists in the reverse direction. It is possible that the nature and incidence of NSWAs affects workplace outcomes or the types of workers attracted to the jobs in question. Perry-Smith and Blum (2000) found, for instance, that family friendly policies were positively associated with improved organization performance. They noted, however, that those policies may not have been the cause. Instead, their results

might have signaled the existence of a broader progressive labour utilization strategy. In a way, these sources provide support for the broad scope used in this dissertation. While a cross-sectional design can be a limitation, there is nothing particular about this dissertation that is harmed by using a cross-sectional design. On the contrary, the chosen dataset is ideal because of the large size and number of available variables.

Critics might also suggest that a narrower scope of study would have been more appropriate. There is a trade-off with that approach, however. Studying only the dimensions of term and schedule is one alternative, since both are examples of numerical flexibility. Some employers adjust their employee counts or hours up or down to suit operational needs. Therefore, it is likely possible to identify employers using- or avoiding- numerical flexibility. Presumably, the level of statistical significance may be stronger than was found in this dissertation. On the other hand, the implicit assumption is that employers limit their strategic utilization of labour to those two dimensions. In this dissertation, a broad focus was intentionally used to uncover the impact of several factors *concurrently* on several types and dimensions of NSWAs.

Armstrong-Stassen (1998) and others (e.g. Kelliher, Gore, and Riley, 2002; Osterman, 1987) had suggested that a broad study be undertaken to evaluate several NSWAs concurrently. Her rationale was that it was necessary to understand interrelationships between several new forms of work. No subsequent studies were found in the interim that responded to her suggestion. Although the design has potential limitations, it has been chosen because it offers the best opportunity to address the gap discussed by Armstrong-Stassen.

4.5 Sample Characteristics

Univariate statistics are presented in Table 11 for the set of dependent, independent, and control variables. Note, however, that the mean and standard deviation of the scale

variables are not meaningful per se. Thus, discussion of these variables is based on supporting information not shown. One quarter of workers have an employer-friendly NSWA in their job, using the earlier provided definitions (see Table 7, p.70). A slightly smaller proportion of workers have an employee-friendly NSWA. These proportions will be examined more closely in the results (i.e. Chapter 5). More than one third of workers are very satisfied with their job. Another 55% reported being satisfied, leaving only about 10% who were dissatisfied or very dissatisfied. In Model 3, it is necessary to separate workers into higher and lower satisfaction groupings. Based on this distribution, the boundary is between those who are very satisfied versus all others.

Turning to independent variables, workers were also sorted by industry. Two thirds are in the service sector followed by 34% in manufacturing, and less than 2% in mining and related industries. Workers were also categorized by occupation. About one-fifth are in lower level white collar occupations and close to two-thirds are in blue collar or other jobs. The remainder is classified as higher white collar. Slightly more than half (i.e. 52%) of respondents are female. About one in three workers are considered to be low tenure since they have been with their current employer for less than thirty months. About 28% of the workers are unionized. Finally, almost two thirds of employees are in a workplace that is profitable (i.e. annual revenues meet or exceed expenditures).

In terms of employee participation and performance in industry, the variables exhibit fairly normal distributions. Most individuals are employed in a workplace with similar performance to competitors in terms of productivity, sales growth, and profitability. Similarly, the bulk of workers are involved in at least some of the four employee participation components, at least some of the time.

Attention now turns briefly to control variables. The mean number of employees per workplace was 412, albeit with significant variation. Workers were also sorted based on the highest level of attained education. About 28% are classified as having lower

education, while the remainder have higher (i.e. some post-secondary) education. Meanwhile, 69% are married or in common-law relationships, and 47% have dependent children. Respondents have an average of 16 years of full-time work experience. Finally, about one in six workers are immigrants (i.e. not Canadian-born).

Table 11: Univariate Statistics

	Mean	Std. Dev.	Proportion (%)
Selected NSWA Variables			
Employee-friendly NSWA composite			22.4
Employer-friendly NSWA composite			25.0
Satisfaction Variables			
Very satisfied with job			34.8
Job satisfaction	3.23	0.67	
Independent Variables			
Industry Sector: Primary			1.7
Industry Sector: Manufacturing			33.6
Industry Sector: Service			64.7
Occupation: Higher white collar			31.2
Occupation: Lower white collar			22.4
Occupation: Blue collar			46.4
Gender (i.e. female)			52.1
Low tenure			30.2
Employee participation	7.17	2.05	
Unionization			27.9
Workplace profitability			65.4
Performance in industry	10.42	2.12	
Control Variables			
Workplace size (# of employees)	412.16	1144.49	
Workplace size (ln form)	4.12	1.98	
Lower Education			28.2
Higher Education			71.8
Married/Common-law			69.1
Other marital status			30.9
(Has) dependent child(ren)			47.2
Full-time work experience	16.17	10.71	
Immigrant status			17.5

Sample: All workers

Chapter 5.0: Results

Results have been divided into several sections. NSWA proportions are presented first, followed by bivariate correlations. Afterwards, the support for Model 1, Model 2, and Model 3 is assessed individually.

5.1 Descriptive Statistics

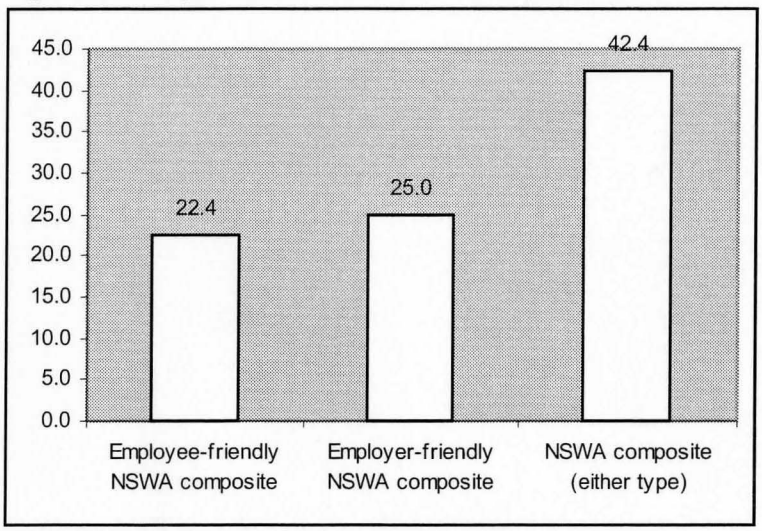
Proportions for the full set of NSWA variables are shown in Table 12. As mentioned earlier, 22% of respondents have at least one of the three specific employee-friendly NSWAs in their job. Similarly, 25% have at least one of the three employer-friendly NSWAs. Overall, 42% of respondents had at least one of the six NSWAs. These proportions are also shown below in Figure 2. The overlap between the two types of NSWAs is noteworthy. Exactly 5% of jobs contain employee-friendly *and* employer-friendly NSWAs.

Table 12: Descriptive Statistics of NSWA Variables

	Proportion (%)		
NSWA Variables			
Employee-friendly location	2.3		
Employee-friendly schedule length	14.0		
Employee-friendly schedule stability	9.0		
Employee-friendly NSWA composite		22.4	
Employer-friendly location	15.1		
Employer-friendly schedule length	6.7		
Employer-friendly schedule stability	5.1		
Employer-friendly NSWA composite		25.0	
NSWA composite (either type)			42.4

Sample: All workers

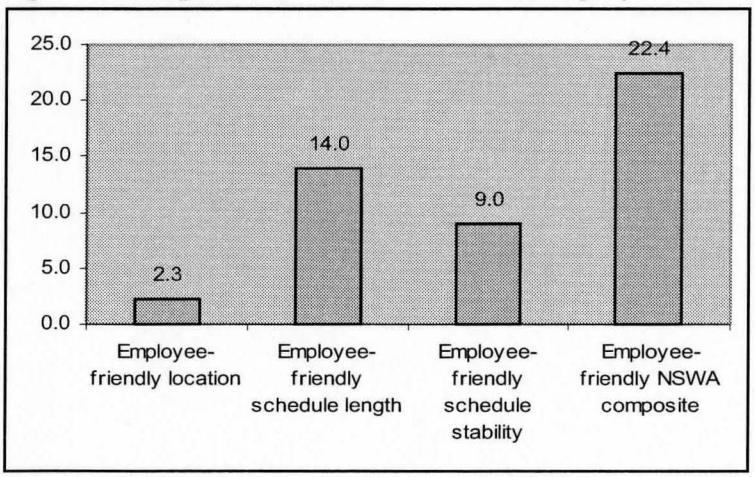
Figure 2: Proportions of Workers with NSWAs



Sample: All workers

Figure 3 illustrates the incidences of the three employee-friendly NSWAs and the composite variable. Very few have an employee-friendly location arrangement in their job. On the other hand, the two employee-friendly scheduling arrangements are much more prevalent. Note, also, that the sum of these three is 25.3%, but the union of the three (i.e. the composite) is 22.4%. Thus, roughly 3% of respondents have more than one of these three specific NSWAs.

Figure 3: Proportions of Workers with Employee-friendly NSWAs

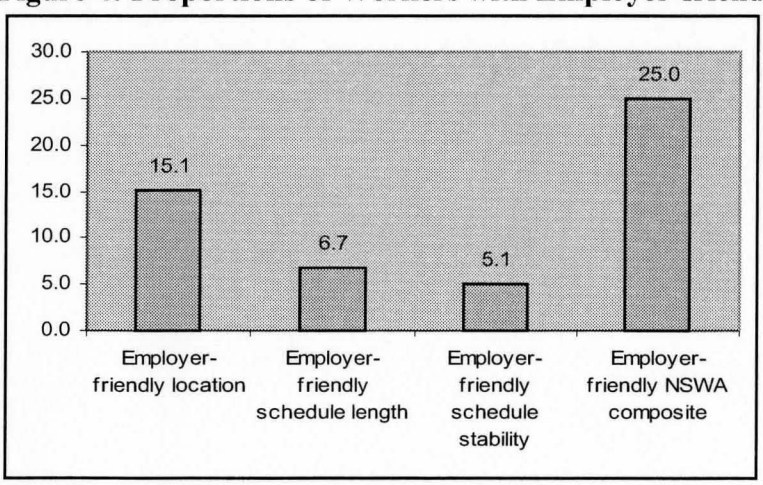


Sample: All workers

Figure 4 shows the incidences of employer-friendly NSWAs. The location arrangement is the most prevalent, while the two scheduling arrangements have much lower incidences. The sum of these three proportions is 26.9% compared to the composite at 25.0%. Thus, roughly 2% of respondents have more than one of these three employer-friendly NSWAs.

Comparing Figures 3 and 4 is also revealing. The incidence of the employer-friendly location NSWA is much higher than the incidence of the employee-friendly location NSWA (at 15.1% vs. 2.3%). A possible explanation is that employers are pressuring workers to complete more unpaid duties. In that scenario, individuals might work at home by choice, but the decision to work is not by choice! Conversely, the situation reverses when comparing the pairs of schedule NSWAs. Each of the two employee-friendly variables are substantially more prevalent (at 14.0% and 9.0%) than the comparable employer-friendly variables (at 6.7% and 5.1%). Perhaps this signals that employee-friendly scheduling arrangements can be implemented in a cost-effective manner by employers. That is, the rewards that employers derive by offering these employee-friendly options are well worth any operational or economic costs incurred.

Figure 4: Proportions of Workers with Employer-friendly NSWAs



Sample: All workers

5.2 Bivariate Correlations

Due to the number of dependent and independent variables, correlations have been separated into two tables. Firstly, the correlations between the NSWA variables are presented. Job satisfaction has been added as well. Employee-friendly NSWAs are expected to be positively correlated with job satisfaction. The reverse is expected between satisfaction and employer-friendly NSWAs. In the second correlation table, bivariate relationships between the two NSWA composites and the independent variables are presented. Two tables are used so that the analysis is more manageable. As mentioned in the methodology chapter, one peculiarity is that all shown figures are statistically significant, even for correlations with a value approaching zero.

In Table 13, bivariate correlations between the NSWA composites and key independent variables are presented. Due to table size limitations, only a subset of some categories is included. Service sector employment is positively associated with both types of NSWAs. This suggests that NSWAs fit better with jobs in the service sector than elsewhere. Higher white collar employment is also positively correlated with both types of NSWAs. This is unexpected, and will need to be verified in the regressions when controlling for other factors. Conversely, lower white collar jobs are relatively likely to have employee-friendly NSWAs, but not employer-friendly NSWAs! Thus, lower white collar workers appear to have the most favourable mix of NSWAs. Both types of NSWAs are positively correlated with female workers and those with low-tenure. Those two worker sub-groups were presumed to have lower incidences of employee-friendly NSWAs, and higher access to the employer-friendly variety. Participation is negatively correlated with employee-friendly NSWAs and positively correlated with employer-friendly NSWAs. According to Verma and Chaykowski's (1999) "high road" and "low road", the opposite relationships were expected. However, it is consistent with Betcherman and Lowe's (1997) observation that new management practices have resulted in many changes to working conditions in Canada.

The correlations involving unionization and NSWAs are also unusual. Unionization is negatively correlated with employee-friendly NSWAs. On the other hand, unionization is essentially uncorrelated with employer-friendly NSWAs. The latter implies that unions are unable to limit the use of unfavourable arrangements on their members. The former correlation implies that unions reduce the implementation of favourable working conditions relative to those enjoyed by non-union workers. Perhaps this is an effect of unions' tendency to standardize working conditions. Workplace profitability was negatively correlated with both types of NSWAs. This might indicate that money losing workplaces are more likely to adopt NSWAs as a potential solution. This is not to suggest that NSWAs are a panacea. Rather, the adoption of NSWAs potentially signals the willingness to do something to address the lack of profitability. Finally, performance in industry is positively correlated with employee-friendly NSWAs, and negatively correlated with employer-friendly NSWAs. This suggests that strongly performing workplaces have the resources to be able to provide employee-friendly NSWAs, and have less impetus to implement the employer-friendly variety.

Table 13: Bivariate Correlations between NSWA and Independent Variables

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Variable:										
1	Employee-friendly NSWA comp.										
2	Employer-friendly NSWA comp.	-0.03									
3	Industry Sector: Service	0.17	0.13								
4	Occupation: Higher white collar	0.04	0.18	0.17							
5	Occupation: Lower white collar	0.06	-0.04	0.13	-0.36						
6	Gender (i.e. female)	0.05	0.02	0.33	-0.04	0.28					
7	Low tenure	0.07	0.02	0.04	-0.06	0.08	0.03				
8	Employee participation	-0.02	0.10	0.04	0.27	-0.12	-0.02	-0.11			
9	Unionization	-0.06	0.00	0.02	-0.05	-0.08	-0.03	-0.16	-0.03		
10	Workplace Profitability	-0.01	-0.10	-0.20	-0.16	0.12	-0.14	0.08	-0.08	-0.29	
11	Performance in industry	0.01	-0.03	0.01	-0.01	0.00	-0.03	0.02	-0.02	-0.06	0.11

Sample: All workers. All figures are significant at $p<.01$ (two-tailed).

As shown in Table 14, the correlations involving job satisfaction generally exhibit the expected pattern. That is, three of the four employee-friendly NSWA variables are

positively correlated with satisfaction. Moreover, satisfaction is negatively correlated with three of the four employer-friendly NSWA variables. One variable in each set of four is correlated with satisfaction in the unexpected direction. In both of those instances, however, the magnitude of the unexpected relationship is relatively small. Note that the employee-friendly NSWAs are positively correlated with each other. The pattern is repeated among the employer-friendly NSWAs. Not surprisingly, employee-friendly NSWAs tend to be negatively correlated with employer-friendly variables. Importantly, the employee-friendly composite and the employer-friendly composite are negatively correlated (at -.03). This supports the presumption that various NSWAs could be used for different purposes on different workers. When an employee-friendly NSWA is present, one would presume that an employer-friendly NSWA is not, assuming that the two types have different determinants. Finally, a point of clarification is necessary. The correlations involving either of the NSWA composites and the component variables are very high. This does not affect the regression results (i.e. multicollinearity is not an issue), since either the component or composite variables are used, *not both*.

Table 14: Bivariate Correlations between NSWA Variables

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Variable:									
1	Employee-friendly location									
2	Employee-friendly schedule length	0.02								
3	Employee-friendly schedule stability	0.00	0.12							
4	Employee-friendly NSWA composite	0.29	0.75	0.59						
5	Employer-friendly location	-0.06	-0.02	-0.03	-0.04					
6	Employer-friendly schedule length	0.01	-0.11	0.09	-0.01	-0.03				
7	Employer-friendly schedule stability	-0.03	0.03	-0.07	-0.02	-0.06	0.07			
8	Employer-friendly NSWA composite	-0.06	-0.05	-0.01	-0.03	0.73	0.46	0.40		
9	NSWA composite (either type)	0.18	0.47	0.37	0.63	0.49	0.31	0.27	0.67	
10	Job satisfaction scale	0.03	0.05	0.00	0.03	0.03	-0.06	-0.07	-0.04	-0.01

Sample: All workers. All figures are significant at $p<.01$ (two-tailed).

5.3 Model 1: Determinants of NSWAs

Separate tables are provided for each of the two sets of specific employee- and employer-friendly variables. First, though, results using the two composite NSWA variables are shown in Table 15. The first observation is that less than half of the independent variables have a significant effect on the incidence of NSWAs. The specific independent variables that have a significant effect are industry sector, occupation, gender, tenure, and employee participation.

At this point, the support for each hypothesis is reviewed separately. As expected, those in service sector jobs have significantly higher incidence of both types of NSWAs relative to those in the manufacturing sector. Thus, hypothesis 1 is supported. Higher white collar workers have higher incidences of both types of NSWAs relative to blue collar workers, albeit not significantly so regarding the employee-friendly variety. Similarly, lower white collar workers also have higher incidences of both types of NSWAs relative to blue collar workers. However, results are only significant with respect to employee-friendly NSWAs. Thus, hypothesis 2 is not supported, and hypothesis 3 is partially supported.

In terms of gender effects, female workers have significantly lower incidences of both types of NSWAs, albeit weakly so regarding the employer-friendly variety. Low tenure workers enjoy essentially the same likelihood of employee-friendly NSWAs as higher tenure workers, but endure significantly higher incidence of employer-friendly NSWAs. To review, females and low tenure workers were expected to endure relatively poor working conditions. These results provide only partial support for hypotheses 4 and 5. As expected, employee participation was positively related to both types of NSWAs. The effect was only significant, however, regarding employer-friendly NSWAs. Thus, hypothesis 6 was partially supported. Insufficient support was found for the remaining three hypotheses pertaining to Model 1. That is, unionized workers have only marginally lower incidences of both types of NSWAs. Meanwhile, those employed in profitable workplaces have higher incidences of employee-friendly NSWAs and lower incidence of

employer-friendly NSWAs. However, neither effect is statistically significant. Similar results were encountered regarding performance in industry.

Table 15: Logistic Regressions for the Composite NSWA Variables

	DV: Employee-friendly composite				DV: Employer-friendly composite			
Independent Variables	Odds Ratio	Reg. Coeff.	Std. Err.	Sig.	Odds Ratio	Reg. Coeff.	Std. Err.	Sig.
Industry Sector: Primary	1.44	0.37	0.24		1.42	0.35	0.15	**
Industry Sector: Manufact'g (ref.)								
Industry Sector: Service	2.68	0.98	0.12	***	1.48	0.39	0.11	***
Occupation: Higher white collar	1.11	0.10	0.15		1.92	0.65	0.13	***
Occupation: Lower white collar	1.52	0.42	0.14	***	1.23	0.21	0.16	
Occupation: Blue collar (ref.)								
Gender (i.e. female)	0.70	(0.36)	0.13	***	0.84	(0.18)	0.11	*
Low tenure	1.00	0.00	0.12		1.34	0.29	0.13	**
Employee participation	1.03	0.03	0.03		1.10	0.09	0.02	***
Unionization	0.83	(0.19)	0.15		0.76	(0.28)	0.18	
Workplace profitability	1.13	0.12	0.13		0.93	(0.07)	0.11	
Performance in industry	1.02	0.02	0.03		0.97	(0.03)	0.02	
Control Variables								
Workplace size (ln form)	0.94	(0.07)	0.05		1.01	0.01	0.04	
Lower education	1.20	0.19	0.12		0.82	(0.19)	0.12	
Higher education (ref.)								
Married/Common-law (ref.)								
Other marital status	1.17	0.16	0.10		1.00	0.00	0.13	
(Has) dependent child(ren)	0.86	(0.15)	0.12		1.06	0.06	0.10	
Full-time work experience	0.98	(0.02)	0.00	***	1.00	(0.00)	0.01	
Immigrant status	0.91	(0.09)	0.13		0.80	(0.22)	0.12	*
Constant		(2.01)	0.47	***		(2.00)	0.39	***
Sample size	14,699				14,699			
Wald chi-square	148.40				131.57			
Prob > chi-square	0.000				0.00			
Pseudo R-square	0.062				0.047			

Sample: All workers. Significance Levels: *** p<.01, ** p<.05, * p < .10

In Table 16, regression results are presented for the three type-dimension pairings involving employee-friendly NSWAs. A noteworthy observation is that the set of independent variables with significant effects varies among the three models. So, although these three NSWAs are positively correlated, they apparently have different determinants. As before, a review of the support for each hypothesis follows.

In all three models, service sector workers have higher incidences of employee-friendly NSWAs, albeit only significantly so in two cases. Thus, results generally support hypothesis 1. A mixed pattern exists regarding occupation. Higher white collar workers have significantly higher incidence of an employee-friendly location. Perhaps these workers have sufficient authority to work at home if they please. On the other hand, higher white collar workers have the same or marginally lower incidences of the other NSWAs. This might reflect the reality that managers must be visible and available during traditional business hours to interact with other workers, clients, and customers. Lower white collar workers are about twice as likely to have an employee-friendly schedule length. However, they actually have relatively low incidence of an employee-friendly location, although not significantly so. Thus, support for hypothesis 2 and 3 is mixed.

Female workers have significantly lower incidence of employee-friendly schedule stability, and a marginally lower (i.e. weakly significant) incidence of an employee-friendly schedule length. Although not significantly so, females actually have slightly higher access to an employee-friendly work location. Across the three models, hypothesis 4 is partially supported. Low tenure status is not significant in any of the three models. Although only weakly significant, employee participation is a positive determinant of an employee-friendly location and schedule stability. In the third case, employee participation has an insignificant, yet negative effect.

Unionization is the only independent variable that has a significant effect in all three models. However, that effect is negative regarding location and schedule length, yet (weakly) positive regarding schedule stability. It had been presumed that unionized workers would have lower incidences of all NSWAs. Thus, the results provide mixed support for hypothesis 7. The odds ratios are greater than one for workplace profitability and performance in industry in all three models. However, none of those six effects are

statistically significant. Thus, support was not found for hypothesis 8 or 9. Nonetheless, the clear pattern warrants further efforts to assess these presumed relationships.

Table 16: Logistic Regressions for Employee-friendly NSWAs

	DV: Employee-friendly location				DV: Employee-friendly length				DV: Employee-friendly stability			
Independent Variables	Odds Ratio	Reg. Coeff.	Std. Err.	Sig.	Odds Ratio	Reg. Coeff.	Std. Err.	Sig.	Odds Ratio	Reg. Coeff.	Std. Err.	Sig.
Ind. Sector: Primary	0.12	(2.13)	0.97	**	2.25	0.81	0.28	***	1.12	0.11	0.29	
Ind. Sector: Manufact'g (ref.)												
Ind. Sector: Service	1.27	0.24	0.28		2.41	0.88	0.14	***	3.48	1.25	0.14	***
Occ.: Higher white collar	3.57	1.27	0.24	***	1.01	0.01	0.16		0.89	(0.12)	0.30	
Occ.: Lower white collar	0.64	(0.44)	0.49		1.93	0.66	0.15	***	1.17	0.15	0.23	
Occ.: Blue collar (ref.)												
Gender (i.e. female)	1.11	0.10	0.32		0.77	(0.26)	0.14	*	0.62	(0.47)	0.17	***
Low tenure	1.35	0.30	0.42		0.91	(0.10)	0.16		0.97	(0.04)	0.16	
Employee participation	1.14	0.13	0.07	*	0.96	(0.04)	0.03		1.10	0.09	0.05	*
Unionization	0.43	(0.83)	0.35	**	0.65	(0.42)	0.19	**	1.48	0.39	0.22	*
Workplace profitability	1.23	0.21	0.30		1.04	0.04	0.14		1.29	0.25	0.21	
Performance in industry	1.08	0.08	0.07		1.02	0.02	0.04		1.00	0.00	0.04	
Control Variables												
Workplace size (ln form)	1.01	0.01	0.11		0.94	(0.06)	0.07		0.90	(0.10)	0.06	
Lower Education	0.61	(0.50)	0.42		1.16	0.15	0.14		1.37	0.31	0.22	
Higher Education (ref.)												
Married/Common-law (ref.)												
Other marital status	0.62	(0.48)	0.37		1.34	0.29	0.16	*	1.16	0.15	0.19	
(Has) dependent child(ren)	0.60	(0.51)	0.32		1.05	0.05	0.13		0.82	(0.20)	0.22	
Full-time work experience	1.02	0.02	0.01		0.99	(0.01)	0.01	**	0.97	(0.04)	0.01	***
Immigrant status	1.59	0.47	0.27	*	0.95	(0.05)	0.15		0.89	(0.11)	0.20	
Constant		(6.62)	0.96	***		(2.33)	0.53	***		(3.16)	0.75	***
Sample size	14,699				14,699				14,699			
Wald chi-square	92.06				98.15				138.73			
Prob > chi-square	0.000				0.000				0.000			
Pseudo R-square	0.118				0.059				0.082			

Sample: All workers. Significance Levels: *** p<.01, ** p<.05, * p < .10

In Table 17, results are shown for the three type-dimension pairings involving employer-friendly NSWAs. As was the case with employee-friendly NSWAs, about half of the independent variables in this table have a significant effect. However, the variables playing significant roles vary from model to model.

Results show that service sector workers have significantly higher incidences of the two schedule NSWAs relative to those in manufacturing. The likelihood of working at an employer-friendly location does not vary across industry sectors. Results generally support hypothesis 1. Higher white collar workers are significantly more likely than others to have an employer-friendly location. However, they are somewhat less likely to have an employer-friendly schedule length, and are significantly less likely to have an employer-friendly schedule stability level. Although the results are mixed, these generally are opposite to the hypothesized direction of the relationship. Lower white collar workers have higher incidences of employer-friendly NSWAs in two cases relative to those in blue collar jobs. Nonetheless, none of the effects are statistically significant. Thus, results do not provide sufficient support for hypothesis 2 or 3.

Females are significantly less likely to have an employer-friendly work location, relative to males. However, females have marginally higher incidences of the two employer-friendly schedule NSWAs, although not significantly so. Tenure has a significant effect in only one of the three models. In that case, low tenure workers have a sharply higher likelihood of having an employer-friendly schedule length. This might indicate that new workers are likely to agree to whatever hours they are assigned when joining a new workplace. Overall, these results provide little support for hypothesis 4 and 5. Employee participation is significantly and positively related to employer-friendly locations, but significantly and negatively related to employer-friendly schedule lengths. In the third model, participation has an insignificant effect. Thus, the results provide mixed support for hypothesis 6.

Results are also mixed regarding unionization. Unionized workers have significantly lower employer-friendly location NSWAs, but have a significantly higher incidence of employer-friendly schedule stability. Unionized workers also have a higher incidence of employer-friendly schedule length, although the effect is not significant. Thus, results generally do not support hypothesis 7. Finally, the effect of workplace profitability and

performance in industry is insignificant for all three of these NSWAs. Nonetheless, the effects are either neutral or negative in five of the six cases. Thus, the results are generally consistent with hypothesis 8 and 9, although insufficient support was found.

Table 17: Logistic Regressions for Employer-friendly NSWAs

	DV: Employer-friendly location				DV: Employer-friendly length				DV: Employer-friendly stability			
Independent Variables	Odds Ratio	Reg. Coeff.	Std. Err.	Sig.	Odds Ratio	Reg. Coeff.	Std. Err.	Sig.	Odds Ratio	Reg. Coeff.	Std. Err.	Sig.
Ind. Sector: Primary	1.03	0.02	0.25		1.51	0.41	0.42		2.98	1.09	0.24	***
Ind. Sector: Manufact'g (ref.)												
Ind. Sector: Service	1.00	(0.00)	0.13		3.90	1.36	0.28	***	1.65	0.50	0.16	***
Occ.: Higher white collar	3.55	1.27	0.14	***	0.62	(0.47)	0.33		0.23	(1.46)	0.34	***
Occ.: Lower white collar	1.09	0.08	0.18		1.38	0.32	0.32		0.94	(0.07)	0.22	
Occ.: Blue collar (ref.)												
Gender (i.e. female)	0.75	(0.29)	0.12	**	1.00	(0.00)	0.25		1.16	0.15	0.18	
Low tenure	0.94	(0.06)	0.16		2.46	0.90	0.22	***	1.07	0.07	0.24	
Employee participation	1.20	0.18	0.03	***	0.89	(0.11)	0.04	***	1.02	0.02	0.05	
Unionization	0.29	(1.23)	0.20	***	1.54	0.43	0.37		1.47	0.39	0.16	**
Workplace profitability	0.92	(0.08)	0.12		1.00	0.00	0.33		0.89	(0.12)	0.20	
Performance in industry	0.97	(0.03)	0.03		0.94	(0.06)	0.04		1.03	0.03	0.04	
Control Variables												
Workplace size (ln form)	1.00	(0.00)	0.05		0.93	(0.07)	0.06		1.09	0.08	0.09	
Lower Education	0.61	(0.50)	0.13	***	1.04	0.04	0.22		1.11	0.11	0.19	
Higher Education (ref.)												
Married/Common-law (ref.)												
Other marital status	0.83	(0.18)	0.15		1.06	0.06	0.24		1.33	0.29	0.18	
(Has) dependent child(ren)	1.21	0.19	0.13		0.99	(0.01)	0.22		0.98	(0.02)	0.18	
Full-time work experience	1.01	0.01	0.01	**	0.99	(0.01)	0.01		0.98	(0.02)	0.01	*
Immigrant (Not Cdn-born)	0.96	(0.04)	0.13		0.73	(0.31)	0.25		0.57	(0.57)	0.27	**
Constant		(3.21)	0.44	***		(2.45)	0.59	***		(3.75)	0.77	***
Sample size	14,699				14,699				14,699			
Wald chi-square	355.16				102.81				63.22			
Prob > chi-square	0.00				0.00				0.00			
Pseudo R-square	0.155				0.109				0.060			

Sample: All workers. Significance Levels: *** p<.01, ** p<.05, * p < .10

5.4 Model 2: NSWAs and Job Satisfaction

As discussed earlier, job satisfaction is an outcome of working conditions. In this dissertation, a key issue is whether job satisfaction is affected by NSWAs. Employee-friendly NSWAs are presumed to increase job satisfaction, and employer-friendly NSWAs are presumed to decrease job satisfaction. Those relationships appeared to exist

when assessing the bivariate correlations. The question is whether the results are unchanged when also controlling for the effects of other variables.

Results are shown in Table 18. Two models are presented. In Model A, the two composite NSWA variables are the independent variables. In Model B, the two composites are replaced by the six NSWA type-dimensions pairing variables. As shown in Model A, the employee-friendly composite is significantly and positively related to job satisfaction. Also, the employer-friendly composite is significantly and negatively related to job satisfaction. In Model B, results are similar, but slightly weaker. Two of the three employee-friendly variables are significant positive predictors of job satisfaction. Similarly, two of the three employer-friendly variables are significant negative predictors. The remaining two (of the six NSWA) variables play an insignificant role. On the whole, the results provide strong support for hypothesis 10. That is, employee-friendly NSWAs are related to higher levels of job satisfaction, and employer-friendly NSWAs are related to lower levels. It appears that the composite NSWA variables are more strongly related to job satisfaction than the specific type-dimension pairing NSWAs. These results support the revised NSWA typology. They also provide significant empirical support for the creation of the composite NSWA variables.

Table 18: OLS Regressions with Job Satisfaction as Dependent Variable

	Model A			Model B		
Independent Variables	Reg. Coeff.	Std. Err.	Sig.	Reg. Coeff.	Std. Err.	Sig.
Employee-friendly NSWA composite	0.067	0.034	**			
Employer-friendly NSWA composite	-0.079	0.027	***			
Employee-friendly location				0.159	0.068	**
Employee-friendly schedule length				0.109	0.041	***
Employee-friendly schedule stability				-0.008	0.063	
Employer-friendly location				-0.037	0.036	
Employer-friendly schedule length				-0.119	0.047	**
Employer-friendly schedule stability				-0.129	0.056	**
Control Variables						
Industry Sector: Primary	-0.059	0.056		-0.056	0.055	
Industry Sector: Manufacturing (ref.)						
Industry Sector: Service	-0.074	0.030	**	-0.069	0.031	**
Occupation: Higher white collar	0.147	0.035	***	0.132	0.036	***
Occupation: Lower white collar	0.020	0.031		0.018	0.031	
Occupation: Blue collar (ref.)						
Gender (i.e. female)	0.036	0.024		0.037	0.024	
Low tenure	-0.027	0.027		-0.025	0.028	
Employee participation	0.065	0.006	***	0.064	0.006	***
Unionization	-0.032	0.027		-0.024	0.027	
Workplace profitability	0.055	0.033	*	0.056	0.034	*
Performance in industry	0.000	0.006		0.000	0.006	
Workplace size (ln form)	-0.008	0.012		-0.008	0.012	
Lower Education	0.033	0.027		0.037	0.026	
Higher Education (ref.)						
Married/Common-law (ref.)						
Other marital status	-0.026	0.033		-0.024	0.033	
(Has) dependent child(ren)	0.060	0.024	**	0.059	0.023	**
Full-time work experience	0.005	0.001	***	0.004	0.001	***
Immigrant status	-0.084	0.027	***	-0.088	0.027	***
Constant	2.648	0.105	***	2.654	0.106	***
Sample size	14,639			14,639		
F statistic	14.58			13.76		
Prob > F statistic	0.000			0.00		
Adjusted R-square	0.080			0.083		

Sample: All workers. Significance Levels: *** p<.01, ** p<.05, * p < .10

5.5 Model 3: NSWAs and Employer Strategies

As mentioned in the introduction, a supplementary objective of this dissertation is to infer why NSWAs are being used, by searching for latent labour utilization strategies of employers. These inferences will be drawn from actual patterns of working conditions

(i.e. emergent strategies). According to Model 3, there will be variation in the nature and incidence of NSWAs among the four working condition groups, if employers consider their economic circumstances and the concerns of their workers when designing working conditions. Firstly, workers were separated into those employed in profitable and unprofitable workplaces. This is a simple yet clear and appropriate boundary when separating workers according to the economic circumstances of their employer. Workers were further separated depending upon whether or not they are *very satisfied* with their job. To recap, this dichotomous form of satisfaction was used to separate workers into similarly sized categories (see the discussion of sample characteristics on p.78). Job satisfaction is used as an indirect indication of working conditions. The rationale is that, on average, very satisfied workers presumably enjoy more favourable working conditions. Conversely, less satisfied workers are more likely to endure poorer working conditions. Although the actual cluster analysis output cannot be presented, the process is briefly reviewed. After forming the four worker groups using workplace profitability and job satisfaction, two *clusters* were generated within each of the four *groups*. Two clusters were specified for the sake of simplicity and to keep the sub-sample sizes as large as possible.

The main finding among the four pairs of clusters is that each contained one with workers having very low incidence of NSWAs and another in which NSWAs were much more prevalent. Therefore, using weighted data, two simulated "clusters" were generated inside each group by sorting workers according to whether or not they had any NSWAs in their jobs. These are referred to as the NSWA-free and NSWA-laden clusters. Thus, although the following results are presented as a cluster analysis, they are actually descriptive statistics. For more information, please review the methodological details on p. 76. Results are presented in Table 19.

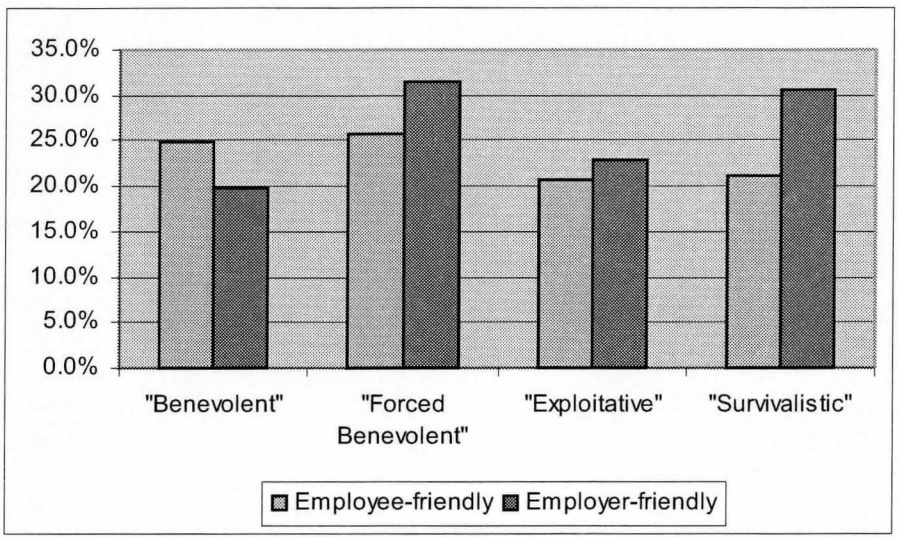
Table 19: Working Condition Groups Using Profitability and Satisfaction

Working Condition Group:	Cluster	Employee-Friendly NSWA Composite	Employer-Friendly NSWA Composite	Female	Unionized	Higher white collar	Service Sector	Sample size
Higher Profitability and Higher Satisfaction "Benevolent"	NSWA-free	0.0	0.0	46.6	18.6	27.9	50.6	1,391,058
	NSWA-laden	61.3	48.8	48.6	11.6	39.2	65.9	952,162
	Average	24.9	19.8	47.4	15.7	32.5	56.8	2,343,220
Lower Profitability and Higher Satisfaction "Forced Benevolent"	NSWA-free	0.0	0.0	59.6	38.2	38.2	71.8	617,930
	NSWA-laden	51.7	63.0	63.0	39.9	55.5	86.8	618,751
	Average	25.8	31.5	61.3	39.0	46.9	79.3	1,236,681
Higher Profitability and Lower Satisfaction "Exploitative"	NSWA-free	0.0	0.0	47.4	21.4	19.1	50.8	2,713,559
	NSWA-laden	53.5	58.7	48.4	14.0	27.1	72.7	1,722,350
	Average	20.8	22.8	47.8	18.6	22.2	59.3	4,435,909
Lower Profitability and Lower Satisfaction "Survivalistic"	NSWA-free	0.0	0.0	58.5	48.8	29.3	70.0	1,253,670
	NSWA-laden	45.5	65.6	66.6	44.7	50.0	88.2	1,094,106
	Average	21.2	30.6	62.3	46.9	38.9	78.5	2,347,776

Sample: All workers.

As presumed, the incidence of employee-friendly NSWAs is higher in the benevolent and forced benevolent groups than in the other two (at about 25% vs. 21%). The pattern of employer-friendly NSWAs was much more mixed. Surprisingly, employee-friendly NSWAs were more prevalent in the forced benevolent and survivalistic groups. The latter was expected, but the former is a surprise. Nonetheless, among those with NSWAs, the incidence of the employer-friendly type is higher in the survivalistic group than in the forced benevolent group. Also, the incidence of employee-friendly NSWA is lower in the survivalistic group than in the forced benevolent group. This suggests that job satisfaction is higher in the forced benevolent cluster because employees have a sense that their employer has tried to implement a relatively considerate mix of NSWAs notwithstanding the lack of profitability. As expected, the benevolent group had the lowest incidence of employer-friendly NSWAs. These proportions are also shown in Figure 5.

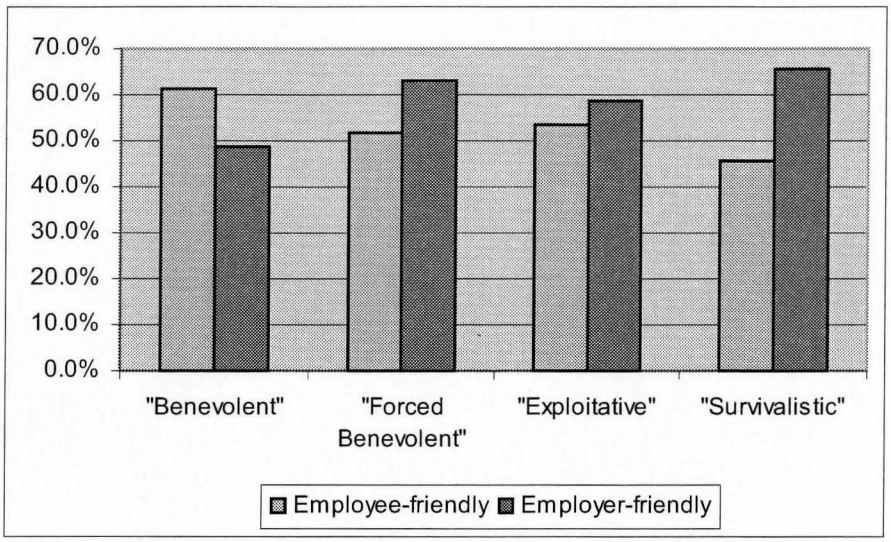
Figure 5: Working Condition Groups – Incidences of NSWAs



Sample: All workers.

The pattern is a little clearer when comparing the four NSWA-laden clusters. As shown in Figure 6, the workers in the benevolent group have a noticeably higher incidence of employee-friendly NSWAs than all others. Moreover, that same group has a noticeably lower incidence of employer-friendly NSWAs than the others. Thus, based on the nature and incidence of NSWAs, it is apparent that those in the benevolent group have the most favourable conditions of work. The similarity between the forced benevolent and exploitative group suggests that working conditions are very similar regarding the nature and incidence of NSWAs. Finally, the NSWA-laden workers in the survivalistic group endure the lowest incidence of employee-friendly NSWAs and the higher incidence of the employer-friendly variety. Thus, they endure the poorest combination of NSWAs among the four groups. Thus, the presumptions underpinning Model 3 appear to be validated, at least based on these exploratory results.

Figure 6: Working Condition Groups – Incidences in NSWA-laden Cluster

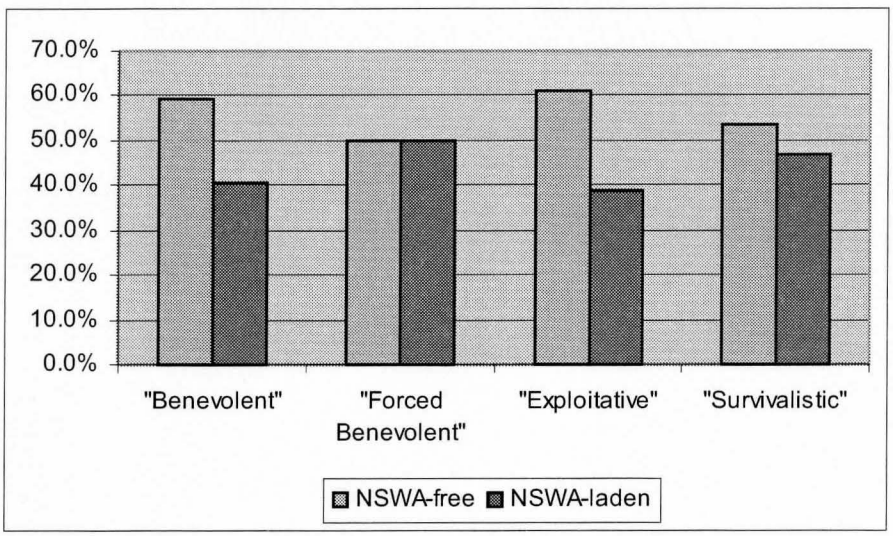


Sample: All workers.

Although the findings provide support for Model 3, many employees do not have any incidence of NSWAs. Using the sample sizes of the NSWA-laden versus NSWA-free categories inside each group, one can see that the majority of workers are "free" of these work arrangements. These proportions are also presented in Figure 7. Exactly half of those in the forced benevolent group have NSWAs. Otherwise, the proportion of workers with incidence of NSWAs is well under 50% in the other three groups. This allows an inference to be drawn. It suggests that unprofitable workplaces do not *need* to rely on employer-friendly NSWAs. Regardless of high or low profitability, the results suggest that employers make strategic choices regarding the use of both types of NSWAs. That is, there is substantial variation in the types and incidence of NSWAs even when essentially controlling for employers' economic circumstances. A second possible inference is *various* NSWAs can be implemented by employers as a way to increase worker satisfaction. Even among those in the NSWA-laden cluster within the benevolent group, the incidence of employee-friendly NSWAs is surprisingly close to the incidence of employer-friendly NSWAs (at 61% vs. 49%). It can be inferred that a high level of

worker satisfaction is possible even if employer-friendly NSWAs exist in a job, as long as employee-friendly NSWAs- or other favourable work terms- exist as well!

Figure 7: Clusters within Working Condition Groups



Sample: All workers.

The focus briefly returns to Table 19 to examine variations in worker characteristics between the groups. It is interesting to note that the proportion of females is higher in the NSWA-laden cluster within each grouping, relative to the NSWA-free cluster. This contrasts with the finding in Table 15 (on p. 88) that females have relatively lower incidences of both types of NSWAs. The difference is that the multivariate regressions in Table 15 isolate the impact of gender from other factors. Conversely, the proportions in Table 19 are based on simple descriptive statistics. While females have higher incidences of NSWAs than males, those higher incidences are explained by one or more factors controlled for in the regression results. It is also apparent that higher white collar workers are more likely to be in the NSWA-laden clusters relative to those in other occupations. Service sector workers similarly have higher incidences of NSWAs relative to those in other sectors. The pattern is broken when considering unionized workers. In three of the four comparisons, there is a higher proportion of unionized workers in the

NSWA-free cluster relative to the NSWA-laden cluster. The one exception is in the benevolent group. However, the proportion of unionized workers in that group is much lower than in the other three groups.

Chapter 6.0: Discussion

Before looking at the implications, the support found for the hypotheses is summarized. Due to the number of dependent variables, support for the hypotheses was generally determined using the iterations involving the non-standard work arrangement (NSWA) composites. As before, each of the conceptual models will be individually reviewed. For convenience, support for the hypotheses is also summarized in tabular format. Afterwards, some final thoughts and implications are offered.

6.1 Conclusions

Pertaining to Model 1: Determinants of NSWAs

Service sector jobs were found to have higher incidences of both types of NSWAs relative to those in manufacturing. Thus, results supported hypothesis 1. Service sector jobs have a reputation of being particularly poor. These results suggest that service sector jobs are likely to be non-standard, but are not necessarily unfriendly. Those in the small and unpredictable primary sector had even higher incidences of NSWAs. These results, and others pertaining to Model 1, are summarized in Table 20.

Turning to occupation, results were rather mixed. Higher white collar workers often had higher incidences of both types of NSWAs relative to blue collar and other workers, although not always significantly so. Lower white collar workers also appeared to have higher incidences of both types of NSWA relative to blue collar workers. However, the results were frequently inconclusive, especially with respect to employer-friendly NSWAs. On the whole, the findings suggest that blue collar jobs have somewhat lower incidences of NSWAs than the other two occupational groups. Clearly, support for hypotheses 2 and 3 was mixed at best.

It was also hypothesized that female and low tenure workers would endure a poorer mix of NSWAs. When controlling for other factors in the multivariate regressions, females had lower incidences of employee-friendly and employer-friendly NSWAs. Other

research clearly indicates that females have relatively poor (and non-standard) working conditions (e.g. Cranford, Vosko, and Zukewich, 2003; Zeytinoglu and Muteshi, 2000). A possible explanation for the difference is that other studies often focus on workers in non-permanent jobs. It might be that females are particularly disadvantaged with regard to that particular non-standard dimension. The results seem to indicate that females seek employment opportunities that are devoid of NSWAs. Experience has possibly taught females that the incidence of *any* NSWAs increases the potential of work-life conflict over time. To recap, the results supported the employee-friendly half of hypothesis 4. As will be discussed later, the findings pertaining to Model 1 and Model 3 conflict with regard to females' exposure to NSWAs. Low tenure workers were found to have somewhat lower incidence of employee-friendly NSWAs and significantly higher incidence of the employer-friendly variety. Thus, hypothesis 5 is partially supported. This is interesting because it potentially signals an asymmetric pattern. Due to their low power, low tenure workers might be unable to avoid employer-friendly NSWAs as easily as those with higher tenure. Perhaps employers tend to extend the implementation of favourable work changes (i.e. employee-friendly NSWAs) more equitably.

The results showed that the higher the level of employee participation, the higher the incidence of employer-friendly NSWAs. To a lesser extent, employee participation was also positively related to the incidence of employee-friendly NSWAs. On the whole, hypothesis 6 was partially supported. This is consistent with Betcherman and Lowe's (1997) finding that Canadian employers are increasingly relying on new management practices. That is, some innovative employers implement several new human resource practices, ranging from altering the organizational climate or structure (e.g. Rogg et al. 2001; Thompson, 2001), through increased employee participation (e.g. Godard and Delaney, 2000; Weiss, 2002), to introducing NSWAs (e.g. Arrowsmith and Sisson, 2001; Verma and Chaykowski, 1999; Thompson, 2001).

It was hypothesized that unionization would be associated with relatively low incidences of NSWAs. The rationale was that unions prefer standardized working conditions for all of their members. Additionally, unions try to protect their members from exploitation. Results were generally consistent with expectations, but the effects were not significant. The schedule stability dimension appears to be responsible. Unionized workers actually had higher incidences of employee-friendly and employer-friendly schedule stability NSWAs compared to non-union workers. This would appear to be an interesting issue for a follow-up study. Since collective agreements typically contain formal overtime and shift-premium provisions, perhaps this explains the unexpected findings. That is, unionized workers might be willing to agree to unstable (and employer-friendly) schedules since they are compensated in return, more so than non-union workers. On the whole, the results were insufficient to accept hypothesis 7.

It was expected that employers' economic circumstances would be positively related to the incidence of employee-friendly NSWAs and negatively related to employer-friendly NSWAs. The rationale was that those with favourable economic circumstances have more resources. In turn, those resources could be used to provide a better mix of work arrangements for their employees. Economic circumstances were measured using workplace profitability and performance in industry. The results provided insufficient support for these hypotheses. While disappointing, the results were only mildly surprising. A wide range of factors are presumed to affect the nature and incidence of NSWAs. In particular, Model 1 identifies several potentially influential localized and organizational factors. Employers' economic circumstances, as only one element, were expected to have a small impact. As mentioned earlier, Delaney and Godard (2001) make a convincing case that the empirical link between specific work conditions and organizational outcomes is tenuous across all of the existing literature. The surprise is that *none-* rather than *some-* of the regression iterations provided support for hypothesis 8 or 9. However, the direction of the odds ratios in the regression results suggests that there *could* be *some* relationship between employers' economic circumstances and the

use of NSWAs. As shown in Table 20, fifteen of the sixteen possible relationships were in the expected (i.e. hypothesized) direction. Thus, it would be prudent to continue assessing the potential relationship between NSWAs and employers' economic circumstances in future studies. Elsewhere, results might be stronger if alternative, but related, variables are utilized.

Table 20: Support for Hypotheses Pertaining to Model 1

Hypothesis Number and Text	Re: Employee-friendly NSWAs	Re: Employer-friendly NSWAs
Hypothesis 1: Those in service sector jobs will have a higher incidence of employee-friendly and employer-friendly NSWAs relative to those in manufacturing sector jobs.	Location: Insufficient support Sch Length: Supported Sch Stability: Supported Composite: Supported	Location: Insufficient support Sch Length: Supported Sch Stability: Supported Composite: Supported
Hypothesis 2: Those in higher level white collar occupations will have a higher incidence of employee-friendly NSWAs and a lower incidence of employer-friendly NSWAs relative to those in blue collar occupations.	Location: Supported Sch Length: Insufficient support Sch Stability: Not supported Composite: Insufficient support	Location: Reverse supported Sch Length: Insufficient support Sch Stability: Supported Composite: Reverse supported
Hypothesis 3: Those in lower level white collar occupations will have a higher incidence of employee-friendly and employer-friendly NSWAs relative to those in blue collar occupations.	Location: Not supported Sch Length: Supported Sch Stability: Insufficient support Composite: Supported	Location: Insufficient support Sch Length: Insufficient support Sch Stability: Not supported Composite: Insufficient support
Hypothesis 4: Female workers will have a lower incidence of employee-friendly NSWAs and a higher incidence of employer-friendly NSWAs.	Location: Not supported Sch Length: Weakly supported Sch Stability: Supported Composite: Supported	Location: Reverse supported Sch Length: Insufficient support Sch Stability: Insufficient support Composite: Reverse supported
Hypothesis 5: Low tenure workers will have a lower incidence of employee-friendly NSWAs and a higher incidence of employer-friendly NSWAs.	Location: Not supported Sch Length: Insufficient support Sch Stability: Insufficient support Composite: Insufficient support	Location: Not supported Sch Length: Supported Sch Stability: Insufficient support Composite: Supported
Hypothesis 6: The higher the level of employee participation, the higher will be the incidence of employee-friendly and employer-friendly NSWAs.	Location: Weakly supported Sch Length: Not supported Sch Stability: Weakly supported Composite: Insufficient support	Location: Supported Sch Length: Reverse supported Sch Stability: Insufficient support Composite: Supported
Hypothesis 7: Unionized workers will have a lower incidence of employee-friendly and employer-friendly NSWAs.	Location: Supported Sch Length: Supported Sch Stability: Reverse supported Composite: Insufficient support	Location: Supported Sch Length: Not supported Sch Stability: Reverse supported Composite: Insufficient support
Hypothesis 8: Those employed in profitable workplaces will have a higher incidence of employee-friendly NSWAs and a lower incidence of employer-friendly NSWAs.	Location: Insufficient support Sch Length: Insufficient support Sch Stability: Insufficient support Composite: Insufficient support	Location: Insufficient support Sch Length: Insufficient support Sch Stability: Insufficient support Composite: Insufficient support
Hypothesis 9: The better the employers' performance in industry, the higher will be the incidence of employee-friendly NSWAs and the lower the incidence of employer-friendly NSWAs.	Location: Insufficient support Sch Length: Insufficient support Sch Stability: Insufficient support Composite: Insufficient support	Location: Insufficient support Sch Length: Insufficient support Sch Stability: Not supported Composite: Insufficient support

Note: "supported" indicates statistical significance with the effect in the expected direction. "Weakly supported" implies only weak significance. "Insufficient support" implies that the odds ratio was in the expected direction, but was not significant. "Not supported" means that the odds ratio was in the unexpected direction and results were not significant. "Reverse supported" indicates that that the odds ratio was in the unexpected direction and results were significant.

Pertaining to Model 2: NSWAs and Job Satisfaction

A significant and positive relationship was found between employee-friendly NSWAs and job satisfaction. This was particularly true when utilizing the employee-friendly composite variable. Also, employer-friendly NSWAs were found to be significantly and negatively related to job satisfaction. This was particularly true when using the employer-friendly composite variable. Thus, the results strongly supported hypothesis 10 (see Table 21).

The empirical support for Model 2 is critical to this dissertation for two reasons. It validates the speculation that NSWAs could be sufficiently influential to impact satisfaction of affected employees. That is, the relationship between NSWAs and job satisfaction is statistically significant. More importantly, the incidence of employee-friendly NSWAs is associated with higher job satisfaction and the incidence of employer-friendly NSWAs is associated with lower job satisfaction. This is compelling evidence that the incidence of NSWAs affects workers, and that the effect can be positive or negative depending upon the nature of those NSWAs. Results were actually slightly stronger when using the composite NSWA variables. Thus, the evidence suggests that these dimensions of NSWA are empirically as well as conceptually related as envisioned in the original and revised typologies.

Table 21: Support for Hypotheses Pertaining to Model 2

Hypothesis Number and Text	Re: Employee-friendly NSWAs	Re: Employer-friendly NSWAs
Hypothesis 10: The incidence of employee friendly NSWAs will be positively related to job satisfaction. The incidence of employer-friendly NSWAs will be negatively related to job satisfaction.	Location: Supported Sch Length: Supported Sch Stability: Not supported Composite: Supported	Location: Insufficient support Sch Length: Supported Sch Stability: Supported Composite: Supported

Note: "supported" indicates statistical significance with the effect in the expected direction. "Weakly supported" implies only weak significance. "Insufficient support" implies that the odds ratio was in the expected direction, but was not significant. "Not supported" means that the odds ratio was in the unexpected direction and results were not significant. "Reverse supported" indicates that that the odds ratio was in the unexpected direction and results were significant.

Pertaining to Model 3: NSWAs and Employer Strategies

No specific hypotheses pertaining to this model were posited since an exploratory design was utilized. Therefore, it is prudent to be cautious about drawing conclusions. Nonetheless, the results supported the assertions underpinning Model 3. The nature and incidence of NSWAs varied among the four subgroups of workers. In particular, those in the benevolent group had a noticeably more favourable combination of NSWAs, on average, than workers in other groups. More specifically, the incidence of employee-friendly NSWAs is higher in the benevolent and forced benevolent groups than in the others. Conversely, those in the survivalistic group had a noticeably less favourable combination of NSWAs. The findings reinforce earlier results since higher job satisfaction levels exist among the worker groups where employee-friendly NSWAs are more prevalent. The pattern is less clear regarding the incidence of employer-friendly NSWAs. These NSWAs are the least prevalent among those in the benevolent group, followed by those in the exploitative group. The incidence is much higher in the forced benevolent and survivalistic groups. It would appear that the prevalence of employer-friendly NSWAs *relative to* employee-friendly NSWAs might be the key. Perhaps job satisfaction is lower among those working for exploitative employers because employees feel that existing work conditions could and should be better.

As mentioned earlier, females have lower incidence of NSWAs when controlling for other factors in Model 1. In Model 3, however, there is a higher proportion of females in the NSWA-laden cluster inside each of the four working condition groups. Similarly, higher white collar workers and those employed in the service sector were also more prevalent in the NSWA-laden clusters within each grouping. The exception was unionized workers, who are more likely to be in the NSWA-free clusters. While one should be cautious about drawing inferences from Model 3, it is interesting to see the consistency of these patterns. At a minimum, it suggests that different types of workers are affected differently by the existence of NSWAs. It is worth noting that stated

business strategies were available in the workplace (i.e. employer) portion of the WES dataset. They were not used in this dissertation because the objective was to assess emergent, not stated, strategies. The rationale is that employers' stated strategies did not refer to the utilization of labour in particular, but focused on more general areas such as growth, quality, or production issues. Moreover, it is possible that employers would not be entirely candid about their intended labour strategy in any case.

6.2 Final Thoughts

Five possible dimensions (i.e. term, location, schedule, duties, rewards) and three possible types (i.e. employee-friendly, neutral, employer-friendly) of NSWAs were conceptualized. However, data analysis was limited to the dimensions of location and (two variations of) schedule. Neutral NSWAs were also excluded. Nonetheless, more than two-fifths of Canadian workers have at least one of the analyzed NSWAs in their job. Of course, it is not enough to document the incidence of NSWAs. It is also critical to understand their nature, and the reasons for their use.

An emerging strategic choice for employers is to address workers' needs via employee-friendly NSWAs. By addressing workers' needs, or at least showing the inclination, job satisfaction could increase. Higher job satisfaction can lead to higher organizational commitment (Rousseau, 2004) and more "shared values" (Koys, 2001). In turn, that can lead to lower turnover and improved productivity. On the other hand, workers' psychological well-being could be negatively affected by their (changing) work conditions. This could lead to declining job performance and productivity (Wright, Larwood, and Denney, 2002), which presumably has negative implications for organizations as well. This illustrates why organizational variables and NSWAs cannot have purely unidirectional relationships. If an organization is performing well, it has more ability to address the needs of its workers. In turn, this might result in higher worker productivity, and hence improved organizational outcomes.

A poorly performing organization facing increased competition or having poor performance might decide to rely more heavily on employer-friendly NSWAs. One possible outcome is a relatively unsatisfied set of workers. Recent research by Elangovan (2001) suggests that stress is an antecedent of job satisfaction, and job satisfaction is an antecedent of organizational commitment. Coupled with the findings from this dissertation, the implication is that employer-friendly NSWAs potentially increase stress levels, thereby leading to negative worker outcomes. If working conditions are attractive to employees, that potentially leads to higher affective commitment. In turn, other favourable worker and workplace outcomes could occur (e.g. Meyer and Allen, 1997). Yet, if an employer is willing to act in an exploitative manner, it could potentially yield increased operational efficiencies. This is not to suggest that all employers should implement employer-friendly NSWAs if performance is poor. Rather, it would be more defensible for an employer who is struggling than if thriving. Some labour proponents disagree with any strategy that shifts business risk to workers or that involves a degradation of working conditions. The intention, in this dissertation, was to determine legitimacy on the basis of a strategic fit between the use of NSWAs, and the localized, and organizational factors faced by an employer. Whether it makes strategic sense to implement employer-friendly or other NSWAs depends on a range of situationally-specific factors, including other organizational characteristics and strategic choices.

Some employers might rely on employee-friendly NSWAs even when results are relatively poor. The implication is that the forced benevolent category might consist of at least two different sets of workers. One might be able to extract favourable work arrangements from their employer. Others, though, might work for employers who strategically choose to maintain favourable working conditions as a way to retain and motivate valued employees. Perhaps the distribution of power, which is an implicit component of the Industrial Relations Systems Framework, is helpful in this regard. In

the new operating environment, some workers hold skills that are scarce. Thus, they have bargaining power and should be able to force employers to implement employee-friendly NSWAs, even if that employer has few resources. Less valued workers, however, are likely to have to endure a less desirable mix of NSWAs as employers adopt new forms of work primarily to achieve operational objectives. These findings are also consistent with Betcherman and Lowe's (1997) observations that working conditions are becoming increasingly polarized in Canada.

It is certainly reasonable for Canadian employers to seek increased labour flexibility and cost-effectiveness given an evolving and uncertain business environment.
The reviewed literature outlines the wide range of available choices regarding the utilization of labour. For instance, Verma and Chaykowski (1999) explored the merits of taking a "high road" or "low road" approach to labour. Naturally, these represent opposite ends of the spectrum. At one extreme, jobs are improved and enriched and workers valued. At the other end, workers are treated as a cost to be minimized and working conditions deteriorate. It is also possible for working conditions and the nature and incidence of NSWAs to be somewhere in the middle. An added complication has emerged from Atkinson's (1987) core-periphery conceptualization of Doeringer and Piore's (1970) internal labour markets theory. In essence, some employers might implement desirable working conditions for a favoured set of employees, while the rest endure poorer conditions.

According to the Industrial Relations Systems Framework (see Craig, 1969, 1983, 1988; Dunlop, 1958, 1993), employers and employees are affected by the environments- or systems- in which they exist. In a sense, working conditions would seem to result from environmental factors. According to Kochan, Katz, and McKersie (1986), however, the employment relationship and resulting working conditions have been transformed by employers' strategies. The results in this dissertation indicate that employers' strategic choices, rather than economic circumstances, have more influence on the quality of

working conditions, judging by the nature and incidence of NSWAs. In many ways, the results reveal that the use of NSWAs is one tool available when employers are contemplating their strategic choices. Since the relationship between NSWAs and economic circumstances is insignificant, an inference is that employers are choosing, rather being forced, to use NSWAs. Nonetheless, the pattern of results in Model 2 suggests that strongly performing workplaces rely more heavily on employee-friendly NSWAs than poorly performing workplaces. Moreover, the reverse is true regarding the incidence of employer-friendly NSWAs.

The evidence was overwhelming that the two (tested) types of NSWAs affect job satisfaction differently. In particular, employee-friendly NSWAs were related to higher job satisfaction and employer-friendly NSWAs were related to lower job satisfaction. Thus, the nature of NSWAs affects the direction of the influence on job satisfaction. The type of NSWA appears to be more important than the dimension. That is, the relationships with satisfaction were (slightly) stronger when using the composite NSWA type variables. Thus, a possible implication is that the incidence of *any* employee-friendly NSWA is likely to favourably impact workers. It seems to be *less* important whether that employee-friendly NSWA has a location, schedule length, or schedule stability dimension. By extension, this finding potentially holds if assessing the impact of employee-friendly terms, duties, or rewards as well.

In a cross-sectional study such as this, it is imprudent to imply causality between variables despite statistical significance. The reason is that some unmeasured variable could be responsible for the apparent relationship between the independent and dependent variables. In a similar study by Godard (2001) which looked at the impact of duties and rewards on organizational outcomes, he noted the possibility of some confounding variable that accounts for the apparent relationship between the others. This is certainly a possibility. However, I suggest that the most plausible confounding variable would be the existence of a (latent) labour utilization strategy used by

employers. If this scenario is true, the value of the dissertation is not undermined. On the contrary, it would provide additional support for the rationale underpinning Model 3 regarding the nature and incidence of NSWAs.

Consistent with SHRM theory and the strategic choice perspective, shrewd employers might address the needs of their employees as a means of retaining and/or motivating them. This could yield improved organizational outcomes. Although not altruistic, these employers might implement employee-friendly work arrangements to achieve organizational goals. Simply put, employer-friendly and employee-friendly NSWAs are among the strategic options available to employers when designing work. When employee-friendly NSWAs are used, there is a greater potential for win-win outcomes for employers and employees. When employer-friendly variations are used, organizational gains may occur at the expense of employees. Employers might utilize labour in a considerate (i.e. employee-friendly) manner, or might utilize employer-friendly NSWAs out of economic necessity. Thus the nature and incidence of NSWAs could be part of a broader labour utilization strategy used by employers.

As is often the case, it was necessary to strike a balance between the conceptual and the practical. After making necessary adjustments, the presented results were based on an analysis of non-standard work arrangements pertaining to location and scheduling. It is true that only a subset of the pairings in the conceptual NSWA typology was tested. However, the results confirm that the three analyzed dimensions (i.e. location, schedule length, and schedule stability) are empirically related. Moreover, each of these three dimensions could be separated into employee-friendly and employer-friendly types. Importantly, the research objectives of this dissertation have been met. A conceptual typology of NSWAs was offered, and empirical support was found, albeit for a revised/truncated version. Nonetheless, the nature and incidence of NSWAs- and relationships between different NSWAs- have been quantified and clarified, as has their impact on various worker sub-groups of interest. By assessing the patterns of NSWAs

among groups of employees sorted by worker and workplace characteristics, this dissertation has begun to shed light on the reasons why NSWAs are utilized.

Critics might question the logic of creating the NSWA composites as was done in this analysis. However, it is well accepted among high performance work systems (HPWS) research to study the effects of bundles of human resource practices on worker and workplace outcomes (see, for example, Delaney and Godard, 2001; Delery and Doty, 1996; Godard and Delaney, 2000). While creating a composite variable to study NSWAs is fairly novel, it is conceptually similar to the formation of the HPWS bundles. It is also noteworthy to remember that the components of each composite were positively correlated. Also, the clearest relationships between the independent and dependent variables involved the use of the NSWA composites. Thus, the creation of the composites is well justified.

Finally, critics might also suggest that the presumed direction of relationships is backwards. For instance, perhaps the use of employer-friendly NSWAs could *result* in poorer workplace performance. Meanwhile, based on Rousseau's (2004) notion of (strengthening) psychological contracts, the use of employee-friendly NSWAs could increase worker satisfaction and possibly commitment, thereby potentially improving organizational outcomes as well. Certainly, Huselid (1995) and others argue that prudently chosen and designed human resource (HR) policies can yield improved organizational performance. Perhaps, in the end, this is where the strategic human resource management (SHRM) and industrial relations (IR) camps necessarily differ on philosophical grounds. The former tend to be interested in NSWAs and other options that can be used to generate improved organizational outcomes. The latter, though, are interested in the NSWAs themselves, or in their impact on worker outcomes (with less emphasis on any root organizational determinants). Hopefully, the findings of this dissertation are thought provoking enough to stimulate related studies to tackle and clarify these outstanding issues.

This study affirms Armstrong-Stassen's (1998) suspicions that the growing use of various NSWAs is interrelated. The proposed NSWA typology- consisting of 5 dimensions and 3 types yielding 15 pairings- was presented as a means of strengthening the conceptual understanding of these possible interrelationships. Using Mintzberg's (1987) notion of emergent strategies, patterns have been detected regarding the nature and incidence of NSWAs. Thus, the contribution of this dissertation is to clarify the interrelationships between the various dimensions and types of NSWAs, and to show how the nature of NSWAs sheds light on the reasons for their use. Ideally, some future study could be undertaken to simultaneously examine the full set of fifteen conceptual pairings of NSWAs. That would, however, require significant effort to ensure that the operationalized definitions of all NSWA variables are sufficiently distinct. Moreover, for the reasons outlined earlier, it might be necessary to restrict attention to those in non-standard term arrangements. Nonetheless, the analysis in this dissertation has made significant progress towards understanding the interrelationships between the full range of possible NSWAs with relevant worker and workplace variables.

In hindsight, using the Workplace and Employee (WES) dataset offered certain advantages and disadvantages. The major advantage is the breadth of worker and workplace variables. This allowed several NSWAs to be examined simultaneously. Conducting data analysis on the WES dataset helped clarify the relationship between various NSWAs and job satisfaction, and shed light on possible determinants of NSWAs. Thus, the use of this dataset was appropriate, even though only a subset of the original NSWA typology could be tested. However, a number of questions remain unanswered. For instance, it would be desirable to clarify the full impacts of employee-friendly, neutral, and employer-friendly NSWAs on affected workers. In particular, it would be helpful to see whether turnover intentions, mental well-being, and work-family conflict are also affected by the incidence of NSWAs, in addition to job satisfaction. Moreover, a qualitative follow-up study would allow a more nuanced measure of NSWA types.

Employee-friendly and employer-friendly NSWAs are at opposite ends of a spectrum, while neutral is in the middle. It might be possible to create a Likert scale of NSWA types using open-ended questions via interviews of senior management, supervisors/managers, and workers within an organization. This type of study would allow the inclusion of non-standard terms, duties, and rewards as well. It should also be possible to identify how NSWAs are implemented, and whether the implementation varies on a departmental basis within a workplace. Finally, employer representatives could be queried to assess the relationship between the use of various NSWAs and broad business strategies, and more specific labour utilization strategies. Thus, a qualitative follow-up study would appear to address many of the unanswered questions raised in this dissertation.

In the future, it would also be desirable to utilize a dataset that includes geographic details. That would allow environmental factors from the Industrial Relations Systems Framework to be analyzed as possible determinants of NSWAs. For instance, the mix of NSWAs might differ between regions (i.e. provinces or states) with very low unemployment versus those with high unemployment, or between jurisdictions considered to have labour laws that are favourable to workers, versus jurisdictions with fewer labour regulations (see, for instance, Martinello's (2000) study showing the effect of political regime changes on labour relations in general).

6.3 Implications for Practitioners

This dissertation shows that the use of NSWAs is a tool available to practitioners as they develop their human resource strategies. Perhaps some practitioners will want to adopt a high road approach because workers are valued. If so, then implementing employee-friendly NSWAs potentially improves work-life balance, increases job satisfaction, and in turn, also increases worker loyalty and retention. If, on the other hand, an organization is seeking increased efficiencies, then implementing employer-friendly NSWAs is a

possibility. However, interested employers should recognize that job satisfaction of their employees will potentially decline.

Practitioners should also be aware that the *dimension* of a NSWA is apparently less important to their employees than the *type*. The key appears to be whether a NSWA is employee-friendly or employer-friendly, rather than if a NSWA involves work schedules, location, or potentially term, duties, or rewards. Moreover, it appears that employees implicitly consider the generosity of their employers. Satisfaction might not suffer if employee-friendly and employer-friendly NSWAs exist within an unprofitable workplace. However, satisfaction is more likely to suffer if a profitable organization relies on a mix of NSWAs that are unfavourable to employees. Thus, the message from workers is that organizations should utilize employee-friendly NSWAs and avoid employer-friendly NSWAs, where economic circumstances make that a feasible strategic choice.

At the same time, workers should consider the existence of NSWAs when assessing employment opportunities. The results suggest that workers need to understand the specifics of any existing NSWAs. It is more important to be able to determine that a flex schedule policy, for instance, is employee-friendly or employer-friendly (or neutral). In fact, the relative presence of employee-friendly NSWAs (versus the employer-friendly variety) seems to provide workers with an opportunity to assess how responsive an employer is to workers' needs. Indirectly, one can make inferences about an employer's labour utilization strategy as well. Thus, from a worker perspective, the devil is in the details also.

6.4 Future Research Directions

This dissertation helps clarify where and how frequently NSWAs are used. Hopefully, the typology presented in this dissertation- and the subsequent empirical support that was found for it- clarifies why the nature of an NSWA affects worker outcomes. At the same time, though, the results were mostly inconclusive regarding the relationship between NSWAs and workplace characteristics. Generally, the direction of the regression coefficients suggested that employers' economic circumstances were positively related to employee-friendly NSWAs and negatively related to employer-friendly NSWAs. Nonetheless, these apparent relationships were not significant. This is consistent with several earlier studies that found no, or only a weak, relationship between organizational outcomes and the use of various human resource practices. It would be worthwhile for others to continue to search for relationships between organizational profits and the nature and incidence of NSWAs.

In this dissertation, little concrete evidence of a relationship between employers' economic circumstances and the use of NSWAs was found. Thus, the use of various NSWAs might be solely a matter of choice, not economic necessity. Supporting this latter viewpoint is that the mix of NSWAs varied sharply between clusters of employers with the same economic circumstances. It would be helpful if a study was undertaken involving one industry or sector, and similar sized organizations. Perhaps sufficient "noise" will be removed to be able to uncover a relationship between employers' economic circumstances and NSWAs. An alternative is to experiment with different economic circumstance measures. It must be remembered, though, that the basis for this dissertation was that employer strategies play a tangible role in the nature and incidence of NSWAs. Therefore, even if economic circumstances are significant, the use of NSWAs should be customized to situational-specific strategies at the workplace level.

The reviewed literature suggested that employers' primary strategy for using NSWAs is to reduce risk, cut costs, or to address workers' needs. However, the results also indicated that a benevolent employer may intersperse the use of some employer-friendly

and/or neutral NSWAs along with the generous use of employee-friendly NSWAs and high employee involvement. As a result, the mere presence of one type of NSWA only reveals part of the story. The critical step- particularly when considering public policy responses- is to shed light on whether employers are behaving exploitatively or (merely) strategically. If it is the former, then labour laws and public policy intervention may be logical. If it is the latter, then perhaps it would be more constructive to work on policy responses to provide security to workers directly via a social safety net. Simply put, it is necessary to know why NSWAs are being used, and what their effect is on workers. Suppose exploitative organizations have implemented employer-friendly NSWAs to bypass labour relations (see, for instance, Kalleberg, 2000; Lipsett and Reesor, 1999). In that scenario, implementing additional protection for non-standard workers would be counterproductive (see, also, Banks, 2001). Even if employers are benevolent or merely survivalistic in their use of NSWAs, it might be more efficient and effective, from a public policy perspective, to ensure that the social safety net protects non-standard workers, rather than trying to restrict the use of NSWAs.

In terms of future research, alternative measures of worker outcomes require additional attention. For instance, Godard (2001) acknowledges that the use of some non-standard work can have positive implications for workers and can result in higher job satisfaction. However, he cautions that even if the overall effect is positive, there can still be negative effects as well, such as stress and/or fatigue, especially if a bundle of new work practices or arrangements is implemented. His argument is that even if empirical support is found for Model 3, *which it was*, the implications for workers is multi-faceted. In essence, Godard is arguing for several measures to be evaluated, perhaps including working conditions, rewards, and mental/physical well-being. Perhaps in a follow-up study to this dissertation, multiple measures, beyond merely job satisfaction, could be assessed.

Another suggestion for future study is to blend quantitative analysis (like was undertaken in this study) with a more qualitative component. The ultimate goal is to quantify and

classify NSWAs, and to understand their impacts- individually and collectively- from a worker perspective. It seems safe to assume that workers with employee-friendly NSWAs will have higher aggregated satisfaction levels compared to those enduring the employer-friendly variety. Of ultimate concern, from a public policy perspective, are the disaggregated impacts on various worker sub-groups. Only a qualitative design can fully capture those differences in rich detail. For instance, additional research would be helpful to clarify the nature and incidence of NSWAs on female, higher white collar, and/or unionized workers. Additionally, the relationships between employers' economic circumstances and the use of NSWAs would be helpful to better assess the legitimacy of the incidence of employer-friendly NSWAs in particular. Finally, all of the dependent variables (excluding job satisfaction) used were dichotomous categorical variables. As such, only the presence of certain NSWAs was detected, not the precise nature or intensity of these work arrangements. Follow-up studies that can capture the relative "friendliness" of each NSWA dimension, from a worker and employer perspective, would be helpful. Bendapudi, Mangum, and Tansky (2003) and Lautsch (2002) have made strides regarding the NSWA term dimension, but typologies for the other dimensions do not yet exist. While this dissertation has made a significant contribution by exploring relationships among a broad range of NSWA types and dimensions, the ideal follow-up step will be to focus on variations of particular NSWA dimensions and measure a fuller range of impacts-good and bad- on workers and workplaces.

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Appendix A: Sample Results Including NSWA Term Dimension

The NSWA term dimension was excluded from the presented results in this dissertation. Nonetheless, sample results are provided here for possible inspection. The first table shows regression results with the employee-friendly or employer-friendly term as the dependent variable. The second shows multivariate regression with job satisfaction as the dependent variable. In the first table, note that none of the independent variables have a (strongly) significant effect on employee-friendly term. Note, also, that the effects of the independent variables on employer-friendly term differ sharply from the effects on the other specific employer-friendly variables. In the second table, note that neither term variable significantly affects satisfaction.

Regression Results With Term NSWAs as the Dependent Variable

	DV: Employee-friendly term				DV: Employer-friendly term			
Independent Variables	Odds Ratio	Reg. Coeff.	Std. Err.	Sig.	Odds Ratio	Reg. Coeff.	Std. Err.	Sig.
Industry Sector: Primary	4.61	1.52	0.72	**	1.98	0.68	0.63	
Industry Sector: Manufact'g (ref.)								
Industry Sector: Service	1.09	0.08	0.46		4.71	1.55	0.23	***
Occupation: Higher white collar	1.44	0.36	0.45		0.70	(0.36)	0.42	
Occupation: Lower white collar	0.70	(0.35)	0.38		0.97	(0.03)	0.27	
Occupation: Blue collar (ref.)								
Gender (i.e. female)	0.54	(0.62)	0.41		2.67	0.98	0.23	***
Low tenure	2.57	0.95	0.55	*	2.15	0.77	0.39	**
Employee participation	0.97	(0.03)	0.10		0.79	(0.24)	0.07	***
Unionization	1.80	0.59	0.47		2.55	0.94	0.41	**
Workplace profitability	0.56	(0.59)	0.49		0.67	(0.39)	0.31	
Performance in industry	1.09	0.08	0.08		0.90	(0.11)	0.05	**
Control Variables								
Workplace size (ln form)	1.09	0.08	0.15		1.00	0.00	0.12	
Lower Education	0.75	(0.29)	0.39		0.68	(0.39)	0.20	*
Higher Education (ref.)								
Married/Common-law (ref.)								
Other marital status	0.67	(0.40)	0.39		0.61	(0.49)	0.32	
(Has) dependent child(ren)	1.21	0.19	0.39		1.00	0.00	0.22	
Full-time work experience	0.99	(0.01)	0.03		0.97	(0.03)	0.02	**
Immigrant (Not Canadian-born)	2.49	0.91	0.53	*	1.19	0.17	0.33	
Constant		(6.36)	1.30	***		(2.35)	0.87	***
Sample size	12,656				12,656			
Wald chi-square	181.42				119.14			
Prob > chi-square	0.000				0.00			
Pseudo R-square	0.070				0.169			

Sample: All workers in workplaces >=25 employees. Significance Levels: *** p<.01, ** p<.05, * p < .10

Regression Results for Job Satisfaction with Term NSWAs Included

	Model A			Model B		
Independent Variables	Reg. Coeff.	Std. Err.	Sig.	Reg. Coeff.	Std. Err.	Sig.
At least one employee-friendly NSWA	0.073	0.033	**			
At least one employer-friendly NSWA	-0.072	0.026	***			
Employee-friendly term				0.105	0.174	
Employee-friendly location				0.156	0.066	**
Employee-friendly schedule length				0.107	0.041	**
Employee-friendly schedule stability				-0.008	0.063	
Employer-friendly term				0.033	0.072	
Employer-friendly location				-0.036	0.036	
Employer-friendly schedule length				-0.122	0.050	**
Employer-friendly schedule stability				-0.129	0.056	**
Control Variables						
Workplace Profitability	0.055	0.033	*	0.056	0.033	*
Performance in industry	0.000	0.006		0.000	0.006	
Workplace size (ln form)	-0.008	0.012		-0.008	0.012	
Industry Sector: Primary	-0.061	0.056		-0.057	0.055	
Industry Sector: Manufacturing (ref.)						
Industry Sector: Service	-0.074	0.030	**	-0.069	0.031	**
Occupation: Higher white collar	0.145	0.035	***	0.132	0.036	***
Occupation: Lower white collar	0.019	0.031		0.018	0.031	
Occupation: Blue collar (ref.)						
Unionization	-0.032	0.027		-0.025	0.028	
Gender (i.e. female)	0.037	0.024		0.036	0.024	
Low Education	0.033	0.027		0.037	0.026	
High Education (ref.)						
Employee participation	0.065	0.006	***	0.065	0.006	***
Married/Common-law (ref.)						
Other marital status	-0.026	0.032		-0.024	0.033	
(Has) dependent child(ren)	0.060	0.024		0.059	0.023	**
Full-time work experience	0.005	0.001	***	0.004	0.001	***
Immigrant (Not Canadian-born)	-0.084	0.027	***	-0.088	0.026	***
Low tenure	-0.028	0.027		-0.026	0.028	
constant	2.649	0.104	***	2.654	0.106	***
sample size	14,639			14,639		
F stat	14.60			12.66		
Prob > F stat	0.000			0.00		
Adjusted R-Sqr	0.080			0.084		

Sample: All workers in workplaces >=25 employees. Significance Levels: *** p<.01, ** p<.05, * p < .10

Appendix B. Exact Wording of Questions from 1999 WES Dataset.

Number	Question
EQ4.	When did you start working for [name of employer]?
EQ10a.	Not counting overtime, how many paid hours on average do you work per week at this job?
EQ10d.	Excluding all overtime, how many paid hours do you usually work per week at this job?
EQ12.	Thinking about the total number of hours you usually work per week, would you at the same hourly rate, prefer to work? Answer choices: 1. The same number of hours for the same pay. 2. Fewer hours for less pay. 3. More hours for more pay.
EQ13b.	Do you work outside the hours of 6AM to 6PM on a regular basis?
EQ13d.	Do you usually work the same days of the week?
EQ14.	Do you work flexible hours? This means that you may work a certain number of core hours, but you can vary your start and stop times as long as a full week is worked.
EQ17a.	(Already agreed that they do carry out the duties of this job at home.) Is your work at home mainly? Answer choices: 1. Paid and within your normally scheduled work hours. 2. Paid and in addition to your normally scheduled work hours. 3. Unpaid and in addition to your normally scheduled work hours.
EQ17c.	What is the main reason you work at home? Answer choices: 1.Requirmeents of the job, finish projects, etc. 2.Care for children 3.Care for other family members. 4.Other personal or family responsibilities. 5.Usual place of work 6.Better conditions of work. 7. Save time, money. 8. Other.
EQ31a.	Are you asked to complete employee surveys? Answer choices: 1. Never 2. Occasionally 3. Frequently
EQ31b.	Do you currently participate in an employee suggestion program or regular meetings in which you offer suggestions to your superiors regarding areas of work that may need improvement? Answer choices: 1. Never 2. Occasionally 3. Frequently
EQ31d.	Are you informed (through meetings, newsletters, E-mail, or Internet) about overall workplace performance, changes to workplace organization or the implementation of new technology? Answer choices: 1. Never 2. Occasionally 3. Frequently
EQ31e.	Do you participate in a task team labour-management committee that is concerned with a broad range of workplace issues? Answer choices: 1. Never 2. Occasionally 3. Frequently/Always

EQ33.	In your current job, are you a member of a union or covered by a collective bargaining agreement?
EQ40.	Considering all jobs you have held, how many years of full-time working experience do you have?
EQ44.	Gender
EQ46.	Were you born in Canada?
EQ46a.	In what year did you emigrate to Canada?
EQ48.	Did you graduate from high school?
EQ49.	Have you received any other education?
EQ50.	What was that education? Answer choices: 1. Trade or vocational diploma or certificate 2. Some college, CEGEP, Institute of technology or nursing school 3. Completed college, CEGEP, Institute of technology or nursing school 4. Some university 5. Teachers' college 6. University certificate or diploma below bachelor level 7. Bachelor or undergraduate degree or teacher's college 8. University certificate or diploma above bachelor level 9. Master's degree 10. Degree in Medicine, Dentistry, Veterinary medicine, Law, Optometry or theology 11. Earned doctorate 12. Industry certified training or certification courses 13. Other
EQ51.	What is your current legal marital status? Answer choices: 1. Legally married (and not separated) 2. Legally married and separated 3. Divorced 4. Widowed 5. Single (never married).
EQ52.	Are you currently living with a common-law partner?
EQ53.	Do you have any dependent children?
WQ1a.	In the last pay period of March this year, how many people were employed at this location?
WQ29a.	For this same fiscal year, what was the gross operating revenue from the sale or rental of all products and services for this location?
WQ30a.	What were the gross operating expenditures for this location for the most recently completed fiscal year?
WQ38.	Considering all aspects of this job, how satisfied are you with the job? Answer choices: 1. Very satisfied 2. Satisfied 3. Dissatisfied 4. Very dissatisfied 5. No opinion Note: Transformed variable used in dissertation reverses the coding of #1-4.
WQ39a	Compared to your main competitors, how would you rate your workplace's performance between April 1st last year and March 31st this year in each of the following areas? Productivity Answer choices: 1. Much worse 2. Worse 3. About the same 4. Better 5. Much better 6. Don't know
WQ39b.	Compared to your main competitors, how would you rate your workplace's performance between

	April 1st last year and March 31st this year in each of the following areas? Sales growth Answer choices: 1. Much worse 2. Worse 3. About the same 4. Better 5. Much better 6. Don't know
WQ39c.	Compared to your main competitors, how would you rate your workplace's performance between April 1st last year and March 31st this year in each of the following areas? Profitability Answer choices: 1. Much worse 2. Worse 3. About the same 4. Better 5. Much better 6. Don't know
Dom_ind (part of WQ survey)	NAICS 3 digit to WES 2 digit Answer choices: 1. Forestry/mining/oil and gas extraction 2. Labour intensive tertiary manufacturing 3. Primary product manufacturing 4. Secondary product manufacturing 5. Capital intensive tertiary manufacturing 6. Construction 7. Transportation/Warehousing/wholesale trade 8. Communication and other utilities 9. Retail trade and consumer services 10. Finance and insurance 11. Real estate, rental, leasing operations 12. Business services 13. Education and health services 14. Information and cultural industries
Ocp_grp (part of EQ survey)	SOC 4 digit to WES 2 digit Answer choices: 1. Managers 2. Professionals 3. Technical/trades 4. Marketing/sales 5. Clerical/administrative 6. Production workers with no trade/certification 7. Other

Appendix C: Supporting Documentation for Factor Analyses

The following is the unedited output from 2 sets of factor analyses.

Set 1 – Scale for performance in industry

Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.795
Bartlett's Test of Sphericity	Approx. Chi-Square	6.1E+07
	df	3
	Sig.	.000

Communalities

	Initial	Extraction
PRF39_A	1.000	.980
PRF39_B	1.000	.980
PRF39_C	1.000	.980

Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.939	97.983	97.983	2.939	97.983	97.983
2	.031	1.026	99.009			
3	.030	.991	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
PRF39_A	.990
PRF39_B	.990
PRF39_C	.990

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

Reliability

```
****** Method 1 (space saver) will be used for this analysis ******
_

 R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H A)

Item-total Statistics

               Scale          Scale      Corrected
                Mean       Variance        Item-           Alpha
              if Item       if Item        Total          if Item
              Deleted       Deleted     Correlation       Deleted

PRF39_A        3.3590       34.2644        .9770           .9846
PRF39_B        3.4159       34.6156        .9776           .9841
PRF39_C        3.5399       35.3989        .9769           .9848


Reliability Coefficients

N of Cases = 10363584                 N of Items =  3

Alpha =    .9896
```

Decision: Since all three variables load onto one latent factor, scale was created by summing those variables. "Relcomp" represents (perceived) performance versus competitors, with higher meaning better relative performance. The "-3" cases from the three original variables were coded as "system missing" cases, as were "don't know" responses.

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std.	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
RELCOMP	7554674	3.00	15.00	10.4213	2.12195	.153	.001
Valid N (listwise)	7554674						

Set 2 – Scale for employee participation

Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.885
Bartlett's Test of Sphericity	Approx. Chi-Square	6.5E+07
	df	6
	Sig.	.000

Communalities

	Initial	Extraction
SUGG	1.000	.938
TASKTEA	1.000	.909
FEED	1.000	.941
WRKPERF	1.000	.944

Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.732	93.288	93.288	3.732	93.288	93.288
2	.121	3.024	96.311			
3	.080	1.995	98.306			
4	.068	1.694	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
SUGG	.969
TASKTEA	.953
FEED	.970
WRKPERF	.971

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

Reliability

```
****** Method 1 (space saver) will be used for this analysis ******
```

```
R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H A)
```

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
SUGG	2.2781	35.6997	.9439	.9644
TASKTEA	2.5994	37.6630	.9175	.9718
FEED	2.5978	38.1337	.9465	.9652
WRKPERF	1.9900	34.0716	.9485	.9646

Reliability Coefficients

N of Cases = 10777543 N of Items = 4

Alpha = .9747

This factor analysis shows that the four original variables load (directly) onto a single latent factor (i.e. participation). With "emppart2", higher values means workers have more opportunities to participate in the workplace. System missing values were coded for all "-3" cases from the original variables.

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std.	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
EMPPART2	8520937	4.00	13.00	7.1686	2.05269	.379	.001
Valid N (listwise)	8520937						