Empirical Economics Letters, 20(9): (September 2021) *ISSN 1681 8997*

Downsizing and Affective Organisational Commitment: A Contextual Proximity Perspective

Susel Arzuaga[*]
University of Lincoln
Email: sarzuaga@lincoln.ac.uk

Franco Gandolfi
Georgetown University
Email: francogandolfi@hotmail.com

Magnus Hansson
Orebro University

Taryn Johnston
University of Lincoln

Abstract: While the dominant literature on downsizing suggests that workforce reductions have a negative impact on employee commitment, knowledge of downsizing is limited by the undifferentiated ways in which downsizing activities are usually approached. This study analyses differences in employee commitment depending on a) the downsizing method used (voluntary redundancies, divestment, layoffs and closure of units) and b) the degree of exposure of employees to the downsizing event. Using downsizing announcements and questionnaires, two distinct families of downsizing methods were identified. Layoffs and closure of units have a negative effect on commitment while voluntary redundancies and divestment have a positive effect. Employee exposure (direct, indirect or not exposed) to the downsizing event accounts for significant differences on commitment. Studying downsizing in a differentiated way shows that assuming that all downsizing is detrimental to commitment is inadequate. We outline the theoretical and practical implications of a more nuanced approach to downsizing.

Keywords: Downsizing, Affective Organisational Commitment, Layoffs, Downsizing Methods

JEL Classification Number: L10, L22, L25.

1. Introduction

Social exchange theory (SET) and the psychological contract are popular explanations for the effect of downsizing on employees' attitudes and behaviours (De Meuse et al., 2004; Datta et al., 2010). A common assertion is that downsizing leads to negative socio-emotional outcomes among employees because it induces a perception of violation of the psychological contract which makes employees withhold contributions (Lester et al.,

[*] Corresponding author. Email: francogandolfi@hotmail.com

2003). However, the normalisation of downsizing as an organisational strategy (Gandolfi and Hansson, 2011) has changed employee expectations of the job relationship (Zatzick et al., 2015). Job security and long-term employment have become less relevant; the 'new employee' is more concerned with keeping their skills marketable and their employability high (Kanter, 1989). In such a different context for employment relations, is downsizing still as negative as it was before?

This study looks at the effect of downsizing on affective organisational commitment (henceforth commitment). Although the effect of downsizing on commitment has been studied before (e.g. Mansour-Cole and Scott, 1998; Parzefall, 2012), knowledge remains limited by a number of inadequate assumptions. This paper challenges two such assumptions. Firstly, there is a 'tendency to equate downsizings with layoffs, even though layoffs represent only one of numerous downsizing strategies' (Budros, 2002: 307). Secondly, the field is largely reliant on grouping employees into victims and survivors, assuming that employees within each group will have similar reactions, whilst ignoring potentially significant differences given by employees' proximity to the downsizing event.

This empirical study is set in PharmaTech (pseudonym used), one of the world's largest pharmaceutical companies, that underwent a period of workforce reductions between 2007-2010. Commitment outcomes were analysed following two waves of downsizing, one ending in 2008 and the other one ending in 2010. Through analysing and comparing the effects of four downsizing methods, namely layoffs, closure of units, divestment and voluntary redundancies on commitment, this study shows that, while some downsizing methods are detrimental for commitment, others contrary to common assumptions, have a positive influence on commitment to the organisation.

Furthermore, this research uncovers differences in commitment depending on how proximal employees are to downsizing. Commitment among employees that share contextual characteristics with groups targeted for downsizing, is similar to that of employees directly threatened. In short, the effect of downsizing on commitment is contingent on the downsizing method used and on how close employees are to the downsizing event.

2. Hypotheses development

While downsizing, understood as planned workforce reductions aimed at increasing organisational performance (Schmitt et al., 2011), was initially a phenomenon of the manufacturing sector, it quickly spread across industries and eventually reached knowledge-based organisations (Gandolfi and Littler, 2012). Downsizing in the pharmaceutical industry is particularly challenging because organisational survival depends on successful innovation, which is usually the result of collaborative team efforts

(Amar, 2002). In this industry, workers own the means of production, therefore, organisational success is dependent on employees' commitment to their task, team and employer organisation. But, in the downsizing era 'employees are being advised not to become too attached to their employers, but instead to look out for themselves and to ensure that they remain employable in the event of a layoff' (Meyer and Allen, 1997: 5).

Research shows that committed employees are more likely to remain in the organisation and have greater motivation than non-committed employees (Klein et al, 2012). Therefore, lowering individual attachment to the organisation can have detrimental consequences. At a personal level, commitment is linked to improved health and well-being by becoming a safeguard against the negative impact of work stressors, because commitment increases acceptance for organisational decisions (Wanberg et al., 1999). This paper follows Cook and Wall's (1980) view of commitment as 'a person's affective reactions to characteristics of his employing organisation. It is concerned with feelings of attachment to the goals and values of the organisation, one's role in relation to this, and attachment to the organisation for its own sake rather than for its strictly instrumental value' (p. 40).

Downsizing challenges employees' commitment in several ways. Employees report a sense of loss of control over their working life, also a lack of clarity in their future career path and prospects. Victims of downsizing report feelings of fear, frustration, and stress as they are separated from their jobs (Marks, 2002). Higher uncertainty about the future and a potential sense of unfairness threatens self-esteem and perceptions of self-worth (De Meuse and Marks, 2003). Survivors are also victims in a way because they experience guilt, depression, lowered organisational trust, and an increased perception of job insecurity (Shaw and Barrett-Power, 1997; Gandolfi, 2013).

The negative socio-emotional outcomes of downsizing are well documented. However, as previously stated, excluding layoffs, other downsizing methods remain underrepresented, thus their effect on commitment is less known. The conflation of various downsizing methods makes it harder to appreciate their differences and limits the understanding of how each of them affect employees. Stevens (1997) suggests that some downsizing methods are more detrimental for commitment than others while Buono (2003) contends that if implemented correctly, downsizing can improve affective commitment. Analysing downsizing methods independently provides a more nuanced picture of the downsizing phenomenon, hence the next section provides an overview of the downsizing methods included in this study.

2.1. Downsizing methods

Downsizing methods can be split into involuntary and voluntary terminations, depending on the level of choice given to employees. Voluntary terminations, which include voluntary redundancies and early retirements, are seen as a softer measure (Cascio, 2009),

but there is debate around their 'voluntary' nature because in many cases employees are induced or pressurised to leave the organisation (Budros, 2002). Involuntary termination methods have various targets such as, workforce reduction, divestment or closure of units or production lines without replacement (Hansson, 2017).

Layoffs refer to a permanent termination of employment, also known as redundancies (Cascio, 2010), and are an involuntary form of turnover. Layoffs are characterised by an element of (de)selection that has profound effects for those who are laid-off (Brand et al., 2008). Individual performance may determine the selection process, in that, highly performing employees tend to be left in the organisation while low-performing employees tend to be laid off (Zatzick et al., 2015). However, it is often demographic characteristics, such as ethnicity, age and organisational tenure (Brand et al. 2008; Dwyer and Arbelo, 2012), and not performance that inform layoff decisions. Nevertheless, previous research has indicated that layoffs often generate negative performance outcomes, such as lowered productivity (Gandolfi and Hansson, 2011; Gandolfi, 2013).

Closure of units/sites is the cessation of all activity and employment in a given plant, site, or unit. The decision to close a unit is usually an attempt to level production and market demands (Kirkham et al., 1998). Closing units is a drastic downsizing method which Coucke (et al., 2007) describes as a failure to survive profitably or an alternative when other methods are not possible/affordable.

Divestment is the 'sale of part of the assets, product lines, subsidiaries or divisions of a company for cash or securities or some combination thereof' (Kong Chow and Hamilton, 1993:9). Divestment can yield more positive organisational outcomes, and favourable stock market reactions, than other downsizing methods because of its greater potential for value creation, through concentrating on core competences (Peel, 1995) and the perception that it is a refocusing, not a cost-cutting measure (Wilkinson, 2010). However, for employees it can 'have a greater impact (...) than do mass layoffs or plant closings due to the protracted nature of most divestitures and the uncertainty it generates on all levels' (Sommer, 2003: 249).

Of the four workforce reduction methods included in this study, voluntary redundancy is the one where employees have greater agency. Voluntary redundancy is a form of job loss in which employees put themselves forward for retrenchment, following a company's offer in the context of workforce reduction (Clarke, 2005). Employees are usually offered incentives beyond the severance package to make the deal attractive, this increases the risk of dysfunctional turnover as high-performing employees are likely to volunteer, because their skills and abilities are highly marketable (Clarke, 2005; Iverson and Pullman, 2000). Voluntary redundancy can mask problems of morale, job satisfaction, and commitment which may be the underlying cause of employee dissatisfaction.

It is argued that closing units will be more detrimental to commitment than layoffs, because victims of closing units face a greater shock to their human capital (Hu and Taber, 2005). When the entire unit is affected, individual employees have additional stress because their friends and co-workers suffer too. Faced with mass deinstitutionalisation (Oliver, 1992), victims of closure of units have to unlearn practices, break routines and detach from the workplace culture (Lavén and Bergström, 2014).

In short, differences among downsizing methods lead to significantly different commitment outcomes among employees, leading to the following hypothesis:

> Hypothesis 1 (H1). Commitment differs depending on the downsizing method used: voluntary redundancies have the least detrimental effect on commitment while divestment, closure of units and layoffs has a greater negative effect on commitment.

2.2. Employee segmentation in the context of downsizing

Only a handful of studies have investigated the effect of downsizing taking into account the position of employees relative to the downsizing event. Armstrong-Stassen (2002) grouped employees based on redundancy designation, i.e., 'designated redundant' and 'not designated redundant'. In her study, employees designated redundant who remained in the organisation had the lowest level of organisational commitment after being designated redundant, but it gradually increased to the extent of being higher at the end of the study, than the baseline commitment levels. In contrast, commitment levels among employees not designated redundant remained stable for the duration of the study. The author concluded that individual risk of job loss affects commitment, but it bounces back once the risk has passed. Although there was no conclusive evidence on how redundancy designation affects employees overall, this study suggests that intact survivors, i.e. those not threatened by downsizing, may need as much attention post-downsizing than their more threatened colleagues.

A second study by Armstrong-Stassen et al. (2004) grouped employees based on group changes, that is, the extent to which groups remained intact after downsizing or had changes in membership. Results showed that groups with no changes and groups with minor changes had worse outcomes (e.g., job satisfaction, job security, involvement, perceived justice) than groups with moderate changes. These results further support the notion that employees not touched by downsizing need as much, or more, support than those that have been directly affected.

Grunberg et al. (2000; 2001) separated survivors into three groups based on their closeness to layoff experiences: a) direct contact, for employees who had been laid off and later rehired and those who were designated candidates for redundancy in the next round; b)

indirect contact group, for employees who had friends or colleagues laid off and c) no contact group. They found that survivors with any kind of contact with layoffs experienced more job insecurity, depression, and had worse health and eating habits than survivors with no contact at all. Interestingly, they did not find a significant impact of layoff contact on organisational commitment. Their explanation was that modern employees expect layoffs – if they are not perceived as unfair– therefore, it may no longer be seen as a violation of the psychological contract (Grunberg et al., 2000).

The segmentation strategies discussed above are limited by three issues. Firstly, they have all been formulated in reference to downsizing via layoffs, which may not reflect downsizing that relies upon other methods. Secondly, employee segmentation has been done after the fact, that is after individual-level layoff decisions have been communicated to employees. However, segmenting employees during the early stages of the downsizing process cannot be accomplished using the methods described above, which limits planning and management tasks is the time between high-level downsizing decisions and implementation. Finally, the reliance on perceptual measures in the studies by Grunberg et al. (2000; 2001), that class employees as indirect contact based on whether a friend or colleague was affected by downsizing, introduces a degree of subjectivity that cannot be easily operationalised for planning and management purposes.

To address these issues, we propose a context-based segmentation of employees, one that can be applied to all stages of the downsizing process and that relies on relevant features in the environment of the downsizing organisation. In the case of PharmaTech, these are country and specialism. Specifically, country is relevant for theoretical and practical reasons. Labour costs, local market conditions, and the nature of social networks have a bearing on firm and individual decision-making processes (Dankbaar, 2004), so decisions to downsize and reactions to downsizing are influenced by national factors. In PharmaTech, downsizing decisions were informed by country presence, local competition, and functional specialism which have a geographic distribution. Therefore, country and specialism are meaningful features of the environment for employees and organisation alike. Based on these features, employee proximity to a downsizing event is classified as:

Directly exposed: employees directly threatened with losing their jobs because their units are targeted for workforce reductions.

Indirectly exposed: employees who are in the same country of the directly affected at the same time, but who have not been targeted for reductions.

Not exposed: employees who are in neither of the previous groups.

A segmentation strategy that takes into account the effect of being threatened by downsizing, captures the complexity of a process in which perception plays a vital role.

The threat of downsizing leads employees to assess their situation on the basis of subjective probabilities (Kahneman and Tversky, 1972). Employees rely on subjective estimates and perceptions of risk, rather than objective calculations to assess the likelihood of being downsized. Such assessment is influenced by a) representativeness, in this case, that is the similarity between an employee's situation and those targeted for downsizing and b) availability (Kahneman and Tversky, 1972), in this case, an employee's familiarity with those being downsized. A heightened sense of threat will occur among employees who share some characteristics with units targeted for downsizing, for example being in the same country. On that basis, it is hypothesised that employee reactions to downsizing will differ depending on their level of exposure. Thus, the closer to the event, the larger the impact of downsizing on employees' commitment:

Hypothesis 2 (H2). Proximity to downsizing affects commitment in the following way:

a) Employees exposed to a downsizing method will have lower commitment than employees not exposed.
b) Employees directly exposed to a downsizing method will have lower commitment than employees indirectly exposed.

3. Methods

A repeated cross-sectional design was used to test the hypotheses. Such a design is useful to measure aggregate, that is, population groups' change over time, and overcomes some of the issues of single cross-sectional research (Rafferty and King-Hele, 2015).

3.1. Organisational setting

PharmaTech is a pharmaceutical multinational that operates in over 100 countries. By the end of 2006, the company was at risk due to patent expiry, competition from generic drugs, and a depleted pipeline. A company-wide cost-cutting exercise was implemented from 2007 onwards, threatening around 17,000 positions in Europe and North America.

3.2. Data

The employee opinion survey is the source of data on individual commitment. The survey was developed and conducted by a well-known HR consultancy firm on behalf of PharmaTech. As the responses were anonymous it is not possible to follow individuals over time. Groups are identified by department, functional specialism, and country. In 2008, the response rate was 80.85% (N=52 555) m while in the year 2010, it was 81.31% (N=49 680).

As is traditional in downsizing literature, announcements of workforce reductions were used to operationalise each downsizing event (De Meuse et al., 2004). The downsizing

announcements identify the country, the city, the functional specialism (e.g., Operations, Finance), and the number of positions threatened. There were 16 announcements of layoffs (affecting approximately 11,000 positions), nine announcements of closure of units (affecting approximately 2275 positions), one announcement of a unit being divested (affecting approximately 58 positions), and three announcements of voluntary redundancies (affecting approximately 4,252 employees).

In the absence of a clear-cut point to differentiate between downsizing waves, the timing of the survey was chosen to split them. Thus, the effect of the first wave of downsizing (January 2007 - September 2008) was observed in the 2008 employee survey data. The effect of the second wave of downsizing (November 2008 – September 2010) was observed in the 2010 employee survey data. Two datasets were created, one per downsizing wave, combining survey data and information on the downsizing events. Both hypotheses were tested on the two datasets.

3.3. Sample characteristics

The sample characteristics were almost identical for the two surveys. Around 70% of the sample were employees, while the remainder were managers. The sample was equally divided between males and females. In terms of organisational tenure, 39% of respondents had been with the organisation for less than five years, and 35% had been with the organisation for ten years or more. The majority of the sample (55%) reported themselves to be less than forty years of age, and 14% reported being in the 50+ group. Cases with missing values (3% of the sample in 2008 and 4.2% in 2010) were removed from the analysis.

A subsample of the datasets, employees directly exposed to downsizing, was used to test H1. This was done to eliminate the variance given by the degree of exposure to the downsizing events and concentrate only on those employees who experienced downsizing in close range. The sample size to test H1 was n=6,081 in the 2008 dataset, and n=6,720 in the 2010 dataset.

3.4. Measures

Dependent variable: Commitment was measured through a 4-item scale with items from the Organisational Commitment Questionnaire (OCQ) (Mowday et al., 1979) and the British Organisational Commitment Scale (BOCS) (Cook and Wall, 1980). These items are: 'I am proud to work for PharmaTech' (OCQ and BOCS); 'I am likely to speak well of PharmaTech' (OCQ); 'I am personally motivated to help PharmaTech be successful' (OCQ and BOCS) and 'I would recommend PharmaTech as a good place to work' (BOCS). Responses were recorded on a 5-point scale from 'Disagree' (1) to 'Agree' (5). A composite commitment scale was required because no exact match to an existing

commitment scale could be found in the original survey questionnaires. The scale used in this study follows theoretical and empirical considerations. Confirmatory factor analysis showed that the model is an acceptable fit of the data in both years. This is shown in Table 1. The average variance extracted was above 0.6 for both datasets which is evidence of acceptable convergent validity; construct reliability was higher than 0.8 which shows adequate internal consistency (Hair et al., 2010); and Cronbach's alpha was above the 0.7 cut-off value. Kaiser's criteria, the 'scree test' and item-to-item correlations showed no cause for concern regarding the unidimensionality of the commitment scale (Field, 2013).

Table 1. Confirmatory factor analysis test of the commitment scale

Year	χ^2	d.f.	*p**	RMSEA	GFI	CFI	Cronbach's α
2008	105.93	2	0	0.032	0.999	0.999	0.87
2010	435.14	2	0	0.068	0.995	0.996	0.88

Note: * Significant values are expected with large samples (Hair et al., 2010).

Independent variables: To test H1, the employees directly exposed to a downsizing event were assigned to the variable 'downsizing' which was coded into the following groups: directly exposed (DE) to divestment (coded 1), DE to voluntary redundancies (2), DE to layoffs (3) and DE to closure of units (4). To test H2, each downsizing event was assigned to an independent variable, layoffs, closure of site, divestment, and voluntary redundancies. The four independent variables identify the downsizing method used, layoffs, and the degree of exposure of employees. The group directly exposed to a downsizing event was coded 3, the group indirectly exposed was coded 2, and employees not exposed to a downsizing event were coded 1.

Control variables: Data on respondents' sex, age, tenure, and job level (employee, middle manager and senior leader) were collected from the surveys and controlled for in the analysis.

3.5. Analytical procedure

An analysis of covariance (ANCOVA) was performed. It included a) post-hoc tests (Bonferroni adjustment) which allow for the pairwise comparisons used to test H1, and are robust to the violation of assumptions, and b) special contrasts to test H2. Since the sample size is large, an alpha level of 0.01 was used to protect against Type 1 error.

4. Empirical results

Table 2 reports the means, standard deviations, and correlations of the study variables. In 2008, all variables were significantly correlated with commitment, except voluntary redundancies. As degree of exposure to divestment increased, so did commitment.

Table 2: Means, standard deviations (in parentheses) and correlations among variables

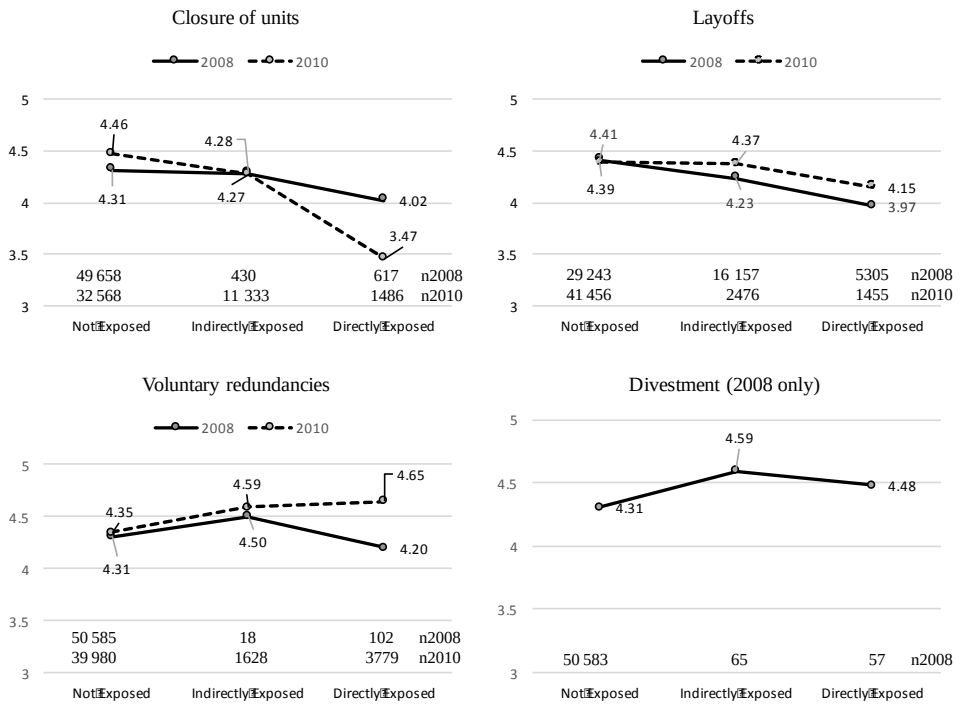
Variables		*M2008*	*M2010*	**1**	**2**	**3**	**4**
1	Tenure	4.60 (1.40)	4.73 (1.58)		.052**	.509**	.140**
2	Gender	1.50 (0.50)	1.51 (0.50)	.033**		.064**	.126**
3	Age	2.44 (0.93)	3.44 (0.96)	.575**	.054**		.191**
4	Job level	1.31 (0.49)	1.35 (0.57)	.116**	.122**	.196**	
5	Commitment	4.3 (0.82)	4.36 (0.81)	-.203**	-.043**	.071**	.087**
6	Closure of units	0.03 (0.24)	0.32 (0.53)	.300**	-.043**	.268**	.059**
7	Layoffs	0.53 (0.68)	0.12 (0.41)	.107**	.005	.093**	-.022**
8	Voluntary redundancies	0.00 (0.09)	0.20 (0.57)	.065**	-.035**	.086**	-.045**
9	Divestment±	0.01 (0.12)					
10	Downsizing	0.81 (1.29)	0.74 (0.97)	.303**	-.042**	.287**	-.002
Variables		**5**	**6**	**7**	**8**	**9**	**10**
1	Tenure	-.170**	.050**	.242**	0.14*	-.023**	.217**
2	Gender	-.049**	-.003	-.022**	-.005	-.003	-.002
3	Age	-.032**	.023**	.204**	.015*	.007	.153**
4	Job level	.093**	-.019**	.021**	.002	-.008	-.026**
5	Commitment		-.049**	-.200**	-.006	.018**	-.209**
6	Closure of units	-.240**		-.108**	-.007	-.007	.338**
7	Layoffs	-.070**	-.172**		-.037**	-.038**	.830**
8	Voluntary redundancies	.097**	-.210**	-.102**		-.002	.075**
9	Divestment±						.028**
10	Downsizing	-.198**	.543**	.400**	.395**		

Note: The top half of the correlations table corresponds to the 2008 dataset (cells in grey) and the bottom half of the table corresponds to the 2010 dataset. N2008 = 50 705; N2010 = 45387. M2008 = mean in the 2008 dataset; M2010 = mean in the 2010 dataset. Tenure (1 = less than 2 years, 2 = between 2 and 4 years, 3 = between 5 and 9 years and 4 = 10 years or more); gender (1 = female and 2 = male); age (1 = between 18 and 29 years old, 2 = 30 to 39, 3 = 40 to 49 and 4 = 50 years old and above); job level (1 = employee, 2 = middle manager and 3 = senior leader). Commitment ranges from 0 = not committed to 5 = highly committed. Closure of units, layoffs, voluntary redundancies and divestment range from 1 = not exposed, 2 = indirectly to 3 = directly exposed. Downsizing (1 = directly exposed to divestment, 2 = directly exposed to voluntary redundancies, 3 = directly exposed to layoffs and 4 = directly exposed to closure of units).
± There were no divestment events in the 2010 dataset. * $p < .01$, ** $p < .001$.

However, the greater the exposure to layoffs and closure of units the lower commitment was. Younger employees, women, and people higher in the organisational ladder had greater levels of commitment. Commitment in 2010 correlated significantly to all the other

variables. More exposure to voluntary redundancies corresponded to greater commitment, but the opposite was true in the cases of layoffs and closure of units. Figure 1 shows the mean value of commitment per downsizing method and degree of exposure. Older employees, women and employees in more senior positions had higher commitment. Correlations among the downsizing methods reflect the organisational reality of targeting units within the same countries and specialisms, such that a country affected by one kind of downsizing method was also frequently affected by others.

Figure 1. Mean values± of commitment per downsizing method and degree of exposure.



± The mean value of commitment has been adjusted for the covariates gender, age, job level and tenure.

Preliminary overall tests, including the covariates, were carried out prior to testing for the hypotheses. As depicted in Table 3, three of the four downsizing methods had a significant effect on commitment in 2008, namely closure of units, layoffs, and divestment. Voluntary redundancies did not have a statistically significant effect on commitment in 2008 ($p=0.229$). In contrast, all three downsizing methods had a significant effect on commitment in 2010. Closure of units in 2010 was the downsizing method with the largest effect on commitment, followed by layoffs in 2008, whereas the effect of divestment,

although statistically significant, was negligible once the effect of the covariates was removed. All the covariates had significant main effects on commitment across downsizing methods in both years. Tenure was invariably the covariate with the largest effect, followed by job level.

Table 3. Main effects of each downsizing method (independently) and covariates on commitment

2008					
Downsizing method		Closure of units	Layoffs	Voluntary redundancies	Divestment
	F	41.80**	803.29**	1.47	5.53*
	df	2, 50698			
	Partial η^2	0.002	0.031	0	0
Covariates±					
Job level	F	700.372**	662.23**	717.22**	718.68**
	Partial η^2	0.014	0.013	0.014	0.014
Tenure	F	1732.164**	1265.66**	1773.92**	1763.43**
	Partial η^2	0.033	0.024	0.034	0.034
Gender	F	166.901**	201.22**	166.99**	166.29**
	Partial η^2	0.003	0.004	0.003	0.003
Age	F	123.489**	216.49**	124.3**	122.08**
	Partial η^2	0.002	0.004	0.002	0.002
2010					
Downsizing method		Closure of units	Layoffs	Voluntary redundancies	No divestment events in 2010
	F	1330.97**	67.12**	318.44**	
	df	2, 45380			
	Partial η^2	0.06	0.003	0.014	
Covariates±					
Job level	F	609.55**	545.14**	589.97**	No divestment events in 2010
	Partial η^2	0.013	0.012	0.013	
Tenure	F	1362.37**	1833.31**	1958.47**	
	Partial η^2	0.029	0.039	0.041	
Gender	F	179.25**	125.93**	105.69**	
	Partial η^2	0.004	0.003	0.002	
Age	F	192.86**	82.21**	46.48**	
	Partial η^2	0.004	0.002	0.001	

Note: ± Degrees of freedom (df) for the covariates are df(1, 50698) in 2008 and df(1, 45380) in 2010. *p< .01; ** p< .001.

Hypothesis 1 predicted that commitment outcomes would differ depending on the downsizing method used. Voluntary redundancies were expected to be less detrimental for commitment than divestments, layoffs and closure of units. Only the employees directly exposed to any of the four methods were selected to test this hypothesis to eliminate the variance in degree of exposure.

The overall main effect of direct exposure to downsizing, after removing the effect the covariates, was significant in 2008, $F(3, 6073)=6.06$, $p=0.000$, partial $\eta 2=0.003$, and in 2010, $F(2, 6713)= 1002.08$, $p=0.000$, partial $\eta 2=0.230$. Bonferroni post hoc tests were used to compare the effect of direct exposure to each downsizing method. They revealed that in 2008 employees directly exposed to divestment had significantly higher commitment ($M=4.54$, $SD=0.73$) than those exposed to layoffs ($M=3.90$, $SD=0.98$; $p=0.001$, $d=0.48$) and closure of units ($M=3.92$, $SD=1.1$; $p=0.01$, $d=0.40$).

Commitment among employees exposed to closure of units was not significantly different to that of employees exposed to layoffs and neither was commitment among employees directly exposed to voluntary redundancies in 2008 ($M=4.18$, $SD=0.86$) significantly different to that of employees directly exposed to the other three downsizing methods. Therefore, in the 2008 dataset, H1 was partially supported.

H1 was fully supported in the 2010 dataset. Employees directly exposed to voluntary redundancies had significantly higher commitment ($M=4.60$, $SD=0.64$) than employees directly exposed to layoffs ($M=4.07$, $SD=0.93$; $p=0.000$, $d=0.69$) and closure of units ($M=3.41$, $SD=1.18$; $p=0.000$, $d=1.43$). There were no divestment events in 2010. Closure of units had a significantly greater negative effect on commitment than layoffs ($p=0.000$, $d=0.64$).

In summary, commitment outcomes vary depending on the downsizing method experienced. Voluntary redundancies and divestment have a more positive effect on commitment than layoffs and closure of units, but there are mixed results in terms of which of the latter two has a more detrimental impact on commitment.

Hypothesis 2 concerned the impact of degree of exposure to each downsizing method on employees' commitment. It predicted that employees exposed to a downsizing method would have lower commitment than employees not exposed (a) and that employees exposed to a downsizing method would have lower commitment than employees indirectly exposed (b). Planned contrasts for each downsizing method were used to test this hypothesis. Table 4 shows the results of the significant planned comparison tests and their corresponding effect size.

Being exposed to any downsizing method - directly and indirectly - had a significant effect on commitment compared to not being exposed, except for voluntary redundancies in

2008 (p=0.66). The nature of the effect, however, was not as anticipated. While it was confirmed that direct and indirect exposure to layoffs or closure of units had a detrimental effect on commitment, compared to not being exposed; the opposite was true when employees were exposed to divestment (2008) and voluntary redundancies (2010). The latter two downsizing methods had a significantly positive effect on commitment. Hypothesis 2a was thus partially supported.

Similarly, hypothesis 2b received partial support. When employees were directly exposed to layoffs and closure of units, their commitment was significantly lower than that of employees indirectly exposed. However, employees directly exposed to voluntary redundancies in 2010 had significantly higher commitment than employees indirectly exposed. Commitment was not significantly different between employees directly exposed and indirectly exposed to divestment (p=0.44) and voluntary redundancies (p=0.14).

Table 4: Significant differences in commitment by downsizing exposure groups±

2008			
	Closure of units	Layoffs	Divestment
Planned contrast 1: exposed to downsizing method vs not exposed			
Sig.	0	0	0.001
99% CI	[0.19, 0.45]	[0.59, 0.67]	[-0.83, -0.09]
Partial η^2	0.001	0.03	0
Planned contrast 2: directly exposed to downsizing method vs indirectly exposed			
Sig.	0	0	n.s.
99% CI	[-0.39, -0.14]	[-0.30, -0.23]	
Partial η^2	0.001	0.009	
2010			
Planned contrast 1: exposed to downsizing method vs not exposed			
Sig.	0	0	0
99% CI	[1.13, 1.25]	[0.19, 0.33]	[-0.6, -0.48]
Partial η2	0.055	0.002	0.011
Planned contrast 2: directly exposed to downsizing method vs indirectly exposed			
Sig.	0	0	0.014
99% CI	[-0.86, -0.75]	[-0.29, -0.15]	[0, 0.12]
Partial η2	0.032	0.002	0

Note: ±Voluntary redundancies did not have a significant effect on commitment in 2008 thus they have been excluded from this analysis.

Overall, H2 was partially supported. There are significant differences on employees' commitment depending on their degree of exposure to a downsizing event, yet the nature of the difference varies. While exposure to closure of units and layoffs has an inverse relationship with commitment outcomes, increased exposure to voluntary redundancies

has a direct relationship to commitment; when one increases the other one does too. Divestment has a positive effect on commitment, but the difference between being exposed directly or indirectly is not significant.

4.1. Robustness tests

Ancillary tests were performed to validate the results described above. A split-data analysis confirmed that the effect of each downsizing method at a country level followed a similar pattern to the main analysis. The analysis was run using increasingly stringent alpha levels due to the high probability of type 1 error given the sample size, results were confirmed with an alpha of 0.0001. Finally, the analysis was repeated using two antecedents of commitment, procedural fairness and perception of senior leader effectiveness (Meyer et al., 2002; Chang, 2002), as dependent variables. Perception of senior leaders' effectiveness refers to higher level strategy outcomes that signal satisfaction with the outcomes of top management decisions. Procedural fairness refers to the fairness of the allocation process of organisational outcomes (Cropanzano et al., 2002). Results were generally consistent with the main analysis. Layoffs and closure of units affect procedural fairness and perception of senior effectiveness negatively, more so for employees closer to the downsizing event, and voluntary redundancies have a positive effect. Divestment did not have a significant effect on either antecedent.

5. Discussion

To ensure organisational survival, it is imperative to understand how downsizing affects employee commitment. The vast literature on downsizing remains limited by the underrepresentation of some downsizing methods; the scarcity of research in knowledge-intensive sectors and the assumption that downsizing affects survivors to a similar extent. Because most of the downsizing literature has analysed the effect of layoffs, which is overwhelmingly negative, downsizing has been stigmatised as an organisational strategy with unfavourable commitment outcomes. However, research showed that there are two 'families' of downsizing methods, separated by their effect on commitment.

One the one hand, closure of units affect commitment negatively, on the other, divestment and voluntary redundancies have a positive effect on commitment. There are also significant differences between each method within the two 'families'. Differences between the two involuntary termination methods with a negative effect on commitment, layoffs and closure of units, were only apparent after the second downsizing wave. The first-time employees were exposed to either method, between 2007 and 2008, their effect on commitment was similarly adverse. This similarity was surprising given the differences in the number of employees directly threatened by each downsizing method. Around 5000 employees were targeted to lose their jobs via layoffs in that period, but only around 600

employees were directly threatened by closure of units. With such a difference in the proportion of the organisation exposed to each method, different effects on commitment were expected. The fact that their effect is not significantly different, highlights the extent to which both kinds of job loss were indistinguishable for employees the first time around.

However, after the second wave of layoffs and closure of units, there were clear differences on how each method affected commitment. An explanation for this difference may lie in the traumatic potential of the first downsizing wave. Moore et al. (2004; 2006) found that the shock of the first downsizing wave is more traumatic for employees than when they are exposed to downsizing for a second time. Therefore, layoffs and closure of units appear to have been equally traumatic for employees in 2008, to the extent that the difference between losing their jobs one way or another was irrelevant. However, as downsizing became normalised with the ensuing wave of reductions, the difference between both kinds of job loss became apparent. In 2010, the closure of units had a greater negative effect (partial $\eta 2=0.06$) than layoffs (partial $\eta 2=0.003$) despite a similar number of employees being directly exposed to both (nclosures=1486 and nlayoffs=1455). The negative implications of closing units, compared to laying off employees, extend to the social fabric surrounding those implicated. Several news media referred to strikes and protests as a result of PharmaTech's announcements of closure of units. However, there was no such reaction to announcements of layoffs, although in total numbers, the latter affected more than 2.5 times the number of employees who lost their job through closing units.

Surprisingly, an involuntary termination method, that is, divestment, as well as voluntary terminations, had a positive effect on commitment. While both were expected to be less detrimental for commitment than closure of units and layoffs, their positive effect was not predicted. There are several plausible explanations for the positive effect of divestment on commitment. Divestment is the only downsizing method, of the four analysed, that falls into reorientation downsizing which is a proactive kind of downsizing, linked to better outcomes than reactive downsizing (Jackson et al., 2000; van Dierendonck and Jacobs, 2012). The positive reaction of markets to this downsizing method (Chalos and Chen, 2002) could frame the perception of downsizing among employees and make them more inclined to see it favourably. Since most employees in the divested unit kept their jobs as part of the sales agreement with the buyer, departing employees could be inclined to view PharmaTech as acting fairly and responsibly towards them. Of course, there is also the alternative explanation that divested employees were happy to be leaving what they could see as a 'sinking ship', for what they perceived to be a 'better' company and such positive affect could have framed their commitment.

Voluntary terminations are characterised by greater discretion in changing individual employment (Cameron, 1994). The positive reaction observed among employees could be a result of having agency over their work situation. An enhanced sense of control coupled with a greater degree of involvement in the downsizing process, are factors that improve employee reactions to downsizing (Buono, 2003; Cascio, 2009). Since voluntary redundancies require little negotiation with unions, government bodies, and other external stakeholders (Lewis, 1986), the process between targeting an area to offer voluntary redundancies to, and the first employees leaving the company was accomplished in less than a month, according to internal sources. A speedy downsizing process avoids prolonging the pain and expedites individual certainty, which leads to better downsizing outcomes (Wilkinson, 2010). PharmaTech avoided issues around the voluntariness of redundancies by making them truly voluntary, employees were not pressurised into applying. Furthermore, units offered voluntary redundancies were not exposed to involuntary terminations afterwards, which may have contributed to the positive effect of voluntary redundancies on commitment.

Although there were voluntary redundancies in both years, their effect on commitment was significant in 2010 only. It can be argued that the number of employees exposed to voluntary redundancies and the scope of the programme in each year explain the differences. In 2008, only two small teams were offered voluntary redundancy (120 employees directly or indirectly exposed). Conversely, in 2010, an entire functional specialism within a country was offered voluntary redundancy (5,407 employees directly or indirectly exposed). The effect of voluntary redundancies in 2008 is thus not strong enough to be detected by the analysis.

In short, voluntary redundancies offer a combination of personal choice, quick implementation, and attractive offerings for employees. Additionally, PharmaTech allowed employees real choice and avoided targeting the same areas for compulsory terminations. All these factors combined portray the organisation as supportive and fair towards employees, which could explain the positive effect of voluntary redundancies on commitment.

It is noteworthy that both a voluntary termination method and an involuntary termination method have a positive effect on commitment. This suggests that the degree of voluntariness alone cannot explain the results observed. Instead, some properties of the work event (in this case the downsizing event) are thought to elicit similar emotional reactions (Weiss and Cropanzano, 1996) in the shape of affective events. Affective events are ‘exogenous factors that influence affective trends’ (Weiss and Cropanzano, 1996, p.43). it can be postulated that unique features of each downsizing method, e.g. the degree of personal choice, social implications, and the kind of downsizing strategy within which

each method is embedded, lead to different kinds of affective events, which demand dissimilar coping resources from employees and thus generate different commitment outcomes.

The four downsizing methods seen here are different kinds of work events, some lead to positive affective events; voluntary redundancies and divestment, whereas some lead to negative affective events; layoffs and closure of units. This means that assuming all downsizing is detrimental to commitment is inadequate, since the effect of different downsizing methods is not homogenous. This study shows that affective commitment can improve in the context of downsizing which lends support to Buono's (2003) proposition that organisational commitment could be enhanced by downsizing, if implemented with care and sensitivity, because employees appreciate the company dealing with problems in a respectful manner.

A second assumption challenged by this study is that of homogeneity in employee reactions to downsizing depending on their designation as victims or survivors. Commitment outcomes were predicted to differ depending on how close employees were to closure of units, layoffs, voluntary redundancies, or divestment. It was anticipated that commitment would be higher among employees not exposed to downsizing compared to employees exposed to any downsizing method - both directly and indirectly- and that it would be lower among employees directly exposed to a downsizing method compared to employees indirectly exposed. It was assumed that the effect of all downsizing methods would be negative, which, as discussed above, was not supported by the empirical results.
The results shed light on the contested issue of the effect of downsizing on commitment. Extant research (Wigblad, et al., 2012; Häsenen, Hellgren, and Hansson, 2011) posits that plant closures would lead to enhanced commitment. However, our study shows the opposite to be true. Greater exposure to either layoffs or closure of units was generally associated to lower commitment. Employees were more negatively affected by these downsizing methods if they were closer to the downsizing event. Events with a positive effect on commitment followed a different pattern. Voluntary redundancies had no significant effect on commitment in 2008, as discussed earlier, but in 2010 their effect was significant in a positive way. Employees exposed to voluntary redundancies had higher commitment than employees not exposed as did employees directly exposed compared to indirectly exposed. There was no significant difference on commitment between employees directly or indirectly exposed to divestment, but their combined commitment was higher than the commitment of employees not exposed to divestment. It is worth noting that although divestment only affected (directly or indirectly) 128 employees, which represents 0.25% of the organisation, the effect on commitment was strong enough to be detected by the analysis.

Regardless of the different nature of the effect of the four downsizing methods, employee reactions were conditioned by how similar their own situation was, compared to that of employees targeted for reductions. Sharing contextual characteristics with the areas directly threatened triggers individual assessments based on the features in common, which intensify the perceived effect of the work event and therefore, evidence that assuming homogeneity among survivors' reactions to downsizing is inappropriate.

Using contextual proximity to separate employees builds upon the handful of studies that acknowledges differences among employees during and post downsizing. Unlike Grunberg et al. (2000), it was found that closer contact with downsizing heightens its effect on commitment. Employees react to the extent to which their own situation resembles that of the employees targeted for reductions. They recognise themselves in the group targeted, thus their increased familiarity with that group magnifies the effect of the downsizing event. Consequently, the perception of threat among those proximal to the groups targeted for layoffs and closure of units is higher than among employees in units not targeted for downsizing via those methods. There is also a contagion effect when employees are exposed to downsizing methods with a positive effect on commitment, which further confirms the relevance of contextual proximity. Employees make assessments related to downsizing events based on representativeness and availability (Kahneman and Tversky, 1972). Therefore, employees comparing themselves to victims of downsizing feel more threatened - or relieved if such is the case- if they share characteristics of the employees targeted for downsizing.

Although the importance of organisational context and psychological proximity to explain human behaviour has long been recognised by social scientists (Klein et al., 2012), a disproportionate amount of the existing literature relies on self-reported perceptions of one's context, which raises questions of whether the results tell 'more about the context or about the respondent' (Mowday and Sutton, 1993: 197). To overcome the limitations of perceptual data, this study turned to factual data from the organisational context, in this case, country and specialism, because they informed downsizing decisions. The relevance of contextual proximity has implications for both theory and practice.

From a theoretical perspective, we can move on from separating employees exposed to downsizing into victims-survivors to more nuanced classifications that account for differences among other important groups of employees. From a practical perspective, the advantages of considering differences in employee reactions based on the context in which they work extend to the planning and implementation stages of downsizing. For example, it is important to consider offering support to individuals in the same country, even if they are not on the same geographical location, as those leaving the organisation via layoffs or closure of units because they seem to be affected by downsizing to a large extent.

Understanding the differences on how survivors react to downsizing is crucial for organisations to have a better chance at thriving after a downsizing programme. This contextual segmentation allows for more flexibility than classifying employees into victims-survivors because it does not rely upon individual downsizing outcomes. Using two antecedents of commitment - perception of senior leaders' effectiveness and procedural fairness - to test the robustness of the main results confirms the relevance of the downsizing method used and of employee proximity to the downsizing event.

6. Summary and Conclusions

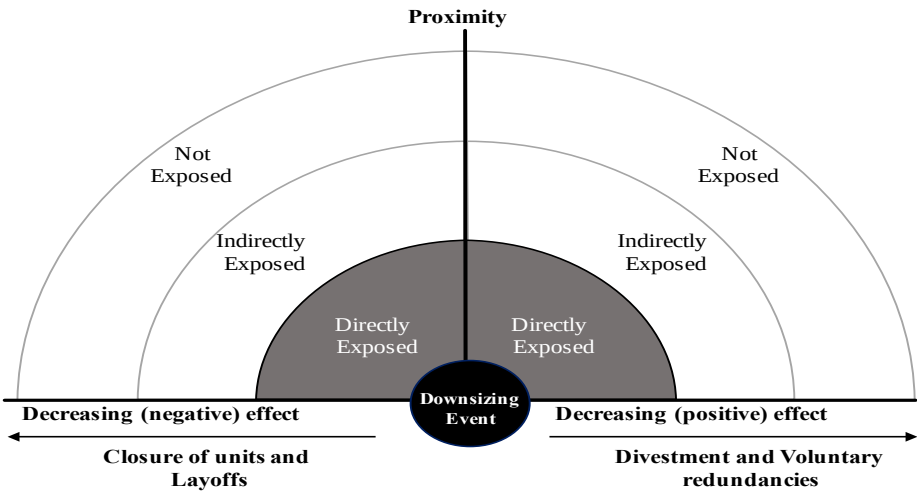
The relationship between people and organisations has changed fundamentally in the last 20 years. Downsizing has become an organisational strategy to address competitive pressures and internal vulnerabilities, and with its normalisation, the exchange relationship between employees and organisation has been altered. While making significant strides towards a greater understanding of the effect of downsizing, the literature in the field is still limited by a number of assumptions. This research addressed two of them. First, downsizing has a negative effect on employees' commitment and second, downsizing survivors react to it in a homogeneous way. The central thesis of this study is that the way downsizing affects commitment is contingent on the kind of downsizing method experienced and on how proximal employees are to the downsizing event.

This study shows that employees' commitment is affected positively or negatively depending on the downsizing method used. The unique features of each workforce reduction method generate different emotional reactions, because they are perceived as distinct work events, some with positive connotations and some with negative ones. This research provides evidence of the positive effect of some downsizing methods on commitment which contradicts the dominant views in both the downsizing (Gandolfi and Hansson, 2011) as well as the closedown bodies of literature (Hansson, 2017). Furthermore, the effect of downsizing on employees' commitment varies depending on their contextual proximity to the downsizing event as shown in Figure 2. Contextual proximity refers to the degree of similarity between features of the environment of employees and the environment of units targeted for reductions. Grouping employees using contextual proximity is useful to explain the differential effect of downsizing. This is because people ground their reactions on subjective judgements based on the similarity between one's own circumstances and those of the groups targeted for reductions, and also on the familiarity with those directly affected.

This study represents a departure from the existing literature on downsizing in two ways. First, it belongs to a small number of studies that examine differences in socio-emotional outcomes of downsizing depending on the nature of the job loss. It is believed that this is the first time that the effect of four downsizing methods has been analysed in relation to

commitment outcomes, and the first empirical evidence of the positive effect of downsizing on commitment. It contributes to redress the balance in a field that has concentrated on layoffs at the expense of other downsizing methods, whose attitudinal effects remain largely unexplored.

Figure 2. The effect of downsizing on commitment depending on contextual proximity and downsizing method.



Second, this research introduces the concept of 'contextual proximity' that has implications for the way exchange relationships are understood. Contextual proximity accounts for more complex and nuanced relationships that emerge within downsizing organisations and moves away from the assumption that, surviving employees react similarly to downsizing. Although this study is concerned with a multinational corporation, the concept of contextual proximity can be applied to national and local settings, for example, to differentiate between employees in different locations or different functions.

These results are relevant for practitioners in that they can make informed choices when deciding how to implement downsizing. The notion that commitment, and potentially other socio-emotional outcomes, need not suffer in the context of downsizing opens the door to a re-evaluation of workforce reduction. Downsizing methods could be used strategically to minimise unfavourable outcomes and to improve affective commitment among those who stay in the organisation.

Mapping employee populations based on contextual characteristics makes segmentation easier for internal planning. It is more flexible than other types of segmentation because it can accommodate the earlier stages of the planning process. For instance, grouping employees from the moment downsizing announcements are made, allows for a more thorough assessment of the effect of change since it includes anticipation, and it can adapt to different contexts through using any number of relevant features. Further research is needed to support the generalisability of these results. Different operationalisations of proximity as well as studying outcomes other than commitment would be valuable in demonstrating the validity of contextual proximity as a concept. Similarly, more research is needed to corroborate the differences among downsizing methods observed here.

References

Amar, A. D., 2002, Managing Knowledge Workers: unleashing innovation and productivity Westport.

Armstrong-Stassen, M., 2002, Designated redundant but escaping lay-off: A special group of lay-off survivors, Journal of Occupational & Organizational Psychology, 75(1), 1-13.

Armstrong-Stassen, M., Wagar, T. H. and Cattaneo, R. J., 2004, Work-Group Membership (In)Stability and Survivors' Reactions to Organizational Downsizing, Journal of Applied Social Psychology, 34(10), 2023-2044.

Brand, J. E., Levy, B. R. and Gallo, W. T., 2008, Effects of layoffs and plant closings on subsequent depression among older workers, Research on Aging, 30(6), 701-721.

Budros, A., 2002, The Mean and Lean Firm and Downsizing: Causes of Involuntary and Voluntary Downsizing Strategies, Sociological Forum, 17(2), pp. 307.

Buono, A. F., 2003, The Hidden Costs and Benefits of Organizational Resizing Activities, in De Meuse, K.P. and Marks, M.L. (eds.) Resizing the Organization: Managing Layoffs, Divestitures, and Closings - Maximizing Gain While Minimizing Pain. San Francisco, CA: Jossey-Bass.

Cameron, K. S., 1994, Strategies for Successful Organizational Downsizing, Human Resource Management, 33(2), 189-211.

Cascio, W. F., 2009, Employment Downsizing and Its Alternatives: Strategies for Long-Term Success: Society for Human Resource Management. Available at:http://www.shrm.org/about/foundation/products/Documents/Downsizing EPG-Final.pdf (Accessed: September 2013).

Cascio, W. F., 2010, Downsizing and Redundancy, in Wilkinson, A., Bacon, N., Redman, T. and Snell, S. (eds.) The SAGE handbook of human resource management. Los Angeles; London: SAGE, 336 - 348.

Chalos, P. and Chen, C. J. P., 2002, Employee downsizing strategies: Market reaction and post announcement financial performance, Journal of Business Finance and Accounting, 29(5-6), 847-870.

Chang, E., 2002, Distributive justice and organizational commitment revisited: Moderation by layoff in the case of Korean employees, Human resource management, 41: 261-270.

Clarke, M., 2005, The Voluntary Redundancy Option: Carrot or Stick? British Journal of Management, 16(3), 245-251.

Cook, J. and Wall, T, 1980, New work attitude measures of trust, organizational commitment and personal need non-fulfillment, Journal of Occupational Psychology, 53(1), 39-52.

Coucke, K., Pennings, E. and Sleuwaegen, L., 2007, Employee layoff under different modes of restructuring: exit, downsizing or relocation, (no. 2), pp. 161.

Cropanzano, R., Prehar, C. A. and Chen, P. Y., 2002, Using Social Exchange Theory to Distinguish Procedural from Interactional Justice, Group & Organization Management, 27(3), 324-351.

Dankbaar, B., 2004, Embeddedness, context, proximity and control, European Planning Studies, 12(5), 691-701.

Datta, D. K., Guthrie, J. P., Basuil, D. and Pandey, A., 2010, Causes and Effects of Employee Downsizing: A Review and Synthesis, Journal of Management, 36(1), 281-348.

De Meuse, K. P., Bergmann, T. J., Vanderheiden, P. A. and Roraff, C. E., 2004, New Evidence Regarding Organizational Downsizing and a Firm's Financial Performance: A Long-term Analysis, Journal of Managerial Issues, 16(2), 155-177.

De Meuse, K. P. and Marks, M. L., 2003, Quicker, Faster, Cheaper, Smarter: Resizing Organizations, Resizing Employees, in De Meuse, K. and Marks, M.L. (eds.) Resizing the organization: Managing layoffs, divestitures, and closings: Pfeiffer.

Dwyer, D. J. and Arbelo, M., 2012, The role of social cognition in downsizing decisions, Journal of Managerial Psychology, 27(4), 383-405.

Field, A. P., 2013, Discovering statistics using IBM SPSS statistics: and sex and drugs and rock 'n' roll (4th ed.) London: SAGE.

Freeman, S. J. and Cameron, K. S., 1993, Organizational downsizing: a convergence and reorientation framework, Organization Science, 4(1), 10-29.

Gandolfi, F., 2008, Cost-reductions, downsizing-related layoffs, and HR practices, SAM Advanced Management Journal, 73(3), 52-58.

Gandolfi, F., 2013, Workforce downsizing – strategies, archetypes, approaches, and tactics, Journal of Management Research, 13(2), 67-76.

Gandolfi, F., 2014, Why do firms downsize? Theoretical underpinnings, Journal of Management Research, 14(1), 3-14.

Gandolfi, F., and Hansson, M., 2010, Reduction-in-force (RIF) - New developments and a brief historical analysis of a business strategy, Journal of Management & Organization, 16(5), 727-743.

Gandolfi, F. and Hansson, M., 2011, Causes and consequences of downsizing: Towards an integrative framework, Journal of Management & Organization, 17(4), 498-521.

Gandolfi, F., and Littler, C.R., 2012, Downsizing is dead; long live the downsizing phenomenon: Conceptualizing the phases of cost-cutting, Journal of Management & Organization, 18(3), 334-345.

Grunberg, L., Anderson-Connolly, R. and Greenberg, E. S., 2000, Surviving the layoffs: The effects on organizational commitment and job performance, Work and Occupations, 27(1), 7-31.

Grunberg, L., Moore, S. Y. and Greenberg, E., 2001, Differences in psychological and physical health among layoff survivors: The effect of layoff contact, Journal of Occupational Health Psychology, 6(1), 15-25.

Hair, J. F. J., Black, W. C., Babin, B. J. and Anderson, R. E., 2010, Multivariate Data Analysis 7th. edn.: Prentice Hall.

Hansson, M., 2017, Organizational Closedown and the Process of Deconstruction and Creativity. Culture and Organization 23(3), 238-256.

Hansson, M and Wigblad, R., 2006, Pyrrhic Victories - Anticipating the Closedown Effect. International Journal of Human Resource Management, 17 (5), 938-959.

Holtom, B. C. and Burch, T. C., 2016, A model of turnover-based disruption in customer services, Human Resource Management Review, 26(1), 25-36.

Hu, L. and Taber, C., 2005, Layoffs, Lemons, Race and Gender, Institute for the Study of Labor (Accessed January 2014).

Häsänen, L, Hellgren, J. and Hansson, M., 2011, Goal Setting and Plant Closure: When Bad Things Turn Good. Economic and Industrial Democracy, 32 (1), 135-156.

Iverson, R. D. and Pullman, J. A., 2000, Determinants of voluntary turnover and layoffs in an environment of repeated downsizing following a merger: An event history analysis, Journal of Management, 26(5), 977-1003.

Jackson, P. R., Brenner, S.-O. and Johansson, C. R., 2000, Downsizing and the lean organisation – a review of the psychological consequences, in Barklöff, K. (ed.) Smärtgränsen? En antologi om hälsokonsekvenser i magra organisationer: Stockholm: Rådet för arbetslivforskning.

Kahneman, D. and Tversky, A., 1972, Subjective Probability: A Judgment of Representativeness, Cognitive Psychology, 3, pp. 25.

Kanter, R. M., 1989, When giants learn to dance: mastering the challenge of strategy, management, and careers in the 1990's. Simon & Schuster.

Kirkham, J. D., Richbell, S. M. and Watts, H. D., 1998, Downsizing and facility location: plant closures in multiplant manufacturing firms, Management Decision, 36(3), 189-197.

Klein, H. J., Molloy, J. C. and Brinsfield, C. T., 2012, Reconceptualizing workplace commitment to redress a stretched construct: revisiting assumptions and removing confounds, Academy of Management Review, 37(1), 130-151.

Kong Chow, Y. and Hamilton, R. T., 1993, Corporate Divestment: An Overview, Journal of Managerial Psychology, 8(5), 9-13.

Lavén, F. and Bergström, O., 2014, Dismantling SAAB: The role of transition agencies in deinstitutionalization, 30th EGOS Colloquium Rotterdam, The Netherlands.

Lester, S. W., Kickul, J. R., Bergmann, T. J. and De Meuse, K. P., 2003, The Effects of Organizational Resizing on the Nature of the Psychological Contract and Employee Perceptions of Contract Fulfillment, in De Meuse, K.P. and Marks, M.L. (eds.) Resizing the organization. Managing layoffs, divestitures and closings. Maximizing gain while minimizing pain. San Francisco, CA Jossey-Bass, 78-107.

Levin, K. A., 2006, Study design III: Cross-sectional studies', Evidence-based Dentistry, 7(1), 24-25.

Lewin, K., 1943, Defining the 'field at a given time, Psychology Review, 50(3), 292-310.

Lewis, P., 1986, Voluntary Redundancy: A Preliminary Investigation, Employee Relations, 8(5), 39-44.

Mansour-Cole D. M. and Scott, S. G., 1998, Hearing it through the grapevine: the influence of source, leader-relations, and legitimacy on survivors' fairness perceptions, Personnel Psychology, 51(1), 25-54.

Marks, M. L., 2002, Charging Back Up the Hill Workplace Recovery After Mergers, Acquisitions and Downsizings. Hoboken: Wiley.

Meyer, J. and Allen, N., 1997, Commitment in the Workplace: Theory, Research and Application. London: London: Sage.

Meyer, J. P., Stanley, D. J., Herscovitch, L. and Topolnytsky, L., 2002, Affective, Continuance, and Normative Commitment to the Organization: A Meta-analysis of Antecedents, Correlates, and Consequences, Journal of Vocational Behavior, 61(1), 20-52.

Miller, M. V. and Hoppe, S. K., 1994, Attributions for job termination and psychological distress, Human Relations, 47(3), pp. 307.

Moore, S., Grunberg, L. and Greenberg, E., 2004, Repeated Downsizing Contact: The Effects of Similar and Dissimilar Layoff Experiences on Work and Well-Being Outcomes, Journal of Occupational Health Psychology, 9(3), 247-257.

Moore, S., Grunberg, L. and Greenberg, E., 2006, Surviving repeated waves of organizational downsizing: The recency, duration, and order effects associated with different forms of layoff contact, Anxiety, Stress & Coping: An International Journal, 19(3), 309-329.

Mowday, R. T., Steers, R. M. and Porter, L. W., 1979, The measurement of organizational commitment, Journal of Vocational Behavior, 14(2), 224-247.

Mowday, R. T. and Sutton, R. I.,1993, Organizational Behavior: Linking Individuals and Groups to Organizational Contexts. Annual Review of Psychology, 44(1), 195-229.

Olejnik, S. and Algina, J., 2000, Measures of effect size for comparative studies: Applications, interpretations, and limitations, Contemporary Educational Psychology, 25(3), 241-286.

Oliver, C., 1992, The Antecedents of Deinstitutionalization, Organization Studies (Walter de Gruyter GmbH & Co. KG.), 13(4), pp. 563.

Parzefall, M.-R., 2012, A close call: Perceptions of alternative HR arrangements to layoffs, Journal of Managerial Psychology, 27(8), 799-813.

Peel, M. J., 1995, The impact of corporate restructuring: Mergers, divestments and MBOs, Long Range Planning, 28(2), 92-101.

Rafferty, A. W., Pierre and King-Hele, H., 2015, Analysing change over time: repeated cross-sectional and longitudinal survey data: UK Data Service, University of Essex and University of Manchester.

Schmitt, A., Borzillo, S. and Probst, G., 2011, Don't let knowledge walk away: Knowledge retention during employee downsizing, Management Learning.

Shaw, J. B. and Barrett-Power, E., 1997, A conceptual framework for assessing organization, work group, and individual effectiveness during and after downsizing, Human Relations, 50(2), 109-127.

Sommer, R. D., 2003, How to Implement Organizational Resizing, in De Meuse, K., and Mitchell Lee Marks (ed.) Resizing the organization: Managing layoffs, divestitures, and closings.: Pfeiffer.

Stevens, A. H., 1997, Persistent Effects of Job Displacement: The Importance of Multiple Job Losses, Journal of Labor Economics, 15(1), 165.

Sutton, R., I., 1987, The Process of Organizational Death: Disbanding and reconnecting. Administrative Science Quarterly, 32 (4), 542-569.

Torre, E. D., Zatzick, C. D., Sikora, D. and Solari, L., 2018, Workforce churning, human capital disruption, and organisational performance in different technological contexts, Human Resource Management Journal, 28(1), 112-127.

van Dierendonck, D. and Jacobs, G., 2012, Survivors and victims, a meta-analytical review of fairness and organizational commitment after downsizing, British Journal of Management, 23(1), 96-109.

Vesala, H. T., Teittinen, A. and Heinonen, P., 2014, Occupational identity of staff and attitudes towards institutional closure, Tizard Learning Disability Review, 19(3), 134-141.

Wanberg, C. R., Bunce, L. W. and Gavin, M. B., 1999, Perceived fairness of layoffs among individuals who have been laid off: A longitudinal study, Personnel Psychology, 52(1), 59-84.

Waters, L., 2007, Experiential differences between voluntary and involuntary job redundancy on depression, job-search activity, affective employee outcomes and re-employment quality, Journal of Occupational and Organizational Psychology, 80(2), 279-299.

Wayne, O. D., Cathy, S., Robert, H. and Peter, H., 2007, The psychological contract of knowledge workers, Journal of Knowledge Management, 11(2), 73-82.

Weiss, H. M. and Cropanzano, R., 1996, Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work, Research in Organizational Behavior, 18, pp. 74.

Wigblad, R., Hansson, M. Townsend, K. and Lewer, J., 2012, Shifting Frontiers of Control during Closedown processes. Personnel Review, 42 (2), 160-179.

Wilkinson, A., 2010, Slash and burn or nip and tuck? Downsizing, innovation and human resources AU - Mellahi, Kamel, The International Journal of Human Resource Management, 21(13), 2291-2305.

Zatzick, C. D., Deery, S. J. and Iverson, R. D., 2015, Understanding the Determinants of Who Gets Laid Off: Does Affective Organizational Commitment Matter? Human Resource Management, 54(6), 877-891.