



## Changes in the employment contract? Evidence from a quasi-experiment<sup>☆</sup>

By Gary Charness<sup>a,\*</sup>, David I. Levine<sup>b,1</sup>

<sup>a</sup> *Department of Economics and Business, Universitat Pompeu Fabra,  
25-27 Ramon Trias Fargas, 08005 Barcelona, Spain*

<sup>b</sup> *Haas School of Business and Institute of Industrial Relations,  
University of California, Berkeley, CA 94720-1900, USA*

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### Abstract

Many authors have discussed an apparent shift to a new employment contract characterized by less commitment between employer and employee, and closer ties between wages within the enterprise and those in the external labor market. We study the issue of when people in the US and Canada feel pay cuts are fair. In contrast to much previous discussion, we find no evidence of increasing acceptance of pay cuts — a measure of whether external, not internal, labor markets are considered fair. These results suggest that new organizational forms might do well to preserve some features of the “old” employment contract. © 2001 Published by Elsevier Science B.V.

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### 1. Introduction

Since the mid-1980s, many authors have written about a change from a traditional employment contract based on long-term loyalty between employees and employers, to a “new employment contract” characterized by lower commitment between employer and

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\* Corresponding author.

*E-mail addresses:* charness@upf.es (B.G. Charness), levine@haas.berkeley.edu (D.I. Levine).

<sup>1</sup> Co-corresponding author. Tel.: +1-510-642-1697.

25 employee coupled with increasingly portable employee skills. Many of these claims can be  
26 summed up as a move from strong internal labor markets (Doeringer and Michael, 1971) to  
27 a system where outcomes are more closely related to those in the external labor market. A  
28 number of knowledgeable observers have claimed that in the new system wages are much  
29 more flexible (e.g. Annable, 1997; Cappelli et al., 1997).

30 Substantial evidence suggests that organizations often find it costly to violate employ-  
31 ees perceptions of the fair employment contract. Thus, to understand the evolution of  
32 organizational forms, it is crucial to understand both the implicit employment contract  
33 and its changes over time. This study measures changes in the employment contract by  
34 comparing respondents views on when pay reductions are fair in contemporary Canada  
35 and Silicon Valley with the results found by Kahneman et al. (1986) in Canada in the  
36 mid-1980s.

## 37 **2. The employment contract: new and old**

38 According to numerous authors (e.g. Hackett, 1996; Cappelli et al., 1997; and the authors  
39 noted in footnote 2), the old employment contract for core employees at large employers  
40 had the following provisions:

41 We expect loyalty from our core mid-level employees, and we provide loyalty in return.  
42 If you work hard, and receive satisfactory performance ratings, your job is secure (we  
43 might take exception if the financial health of the company is threatened).

44 At a small number of large and visible employers (most notably IBM, but also AT&T,  
45 Hewlett-Packard, and a few dozen others (Foulkes, 1980)), this contract was both gener-  
46 ations old, and supplemented with provisions that managers and professionals agreed to  
47 move or be retrained.

48 Many authors have expressed the view that we are in the midst of a major shift away from  
49 internal labor markets and toward a new employment paradigm, characterized by greater  
50 employee mobility and diminished ties between employer and employee.<sup>2</sup> For example, the  
51 Academy of Management Executive recently devoted a special issue to the new employment  
52 contract and its effect on careers (AME, 1996). The new contract is said to be particularly  
53 prevalent in the professional and technical areas.

54 In contrast to the old contract, the new employment contract has the following provisions:

55 The work you do will be interesting, and you will learn new skills while you are here.  
56 Your employability will be high, although perhaps not at this employer. We work on  
57 great projects, but as each project ends, it is up to you to find a new place for yourself  
58 within the company — otherwise, you must find a new place for yourself outside the  
59 company.

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<sup>2</sup> Typical quotes include: “The end of traditional notions of corporate loyalty” (Kiechel, 1987), “A dwindling sense of job security among middle managers and professionals,” (Lee, 1987), “The new employment contract,” (Kissler, 1994), “The dramatic breakdown of [the] tacit agreement [to] exchange hard work and loyalty for security” (Cashman and Feldman, 1995), and “Dramatically changed, and in many cases destroyed . . . employment relationships” (Burack and Singh, 1995).

60 These claims of a widespread change in the employment contract are supported by a subset  
61 of the relevant academic research. For example, there has been a decline in job stability  
62 for prime-aged men (Rose, 1995; Farber, 1996); on average employees perceive lower job  
63 security (Cappelli et al., 1997); several prominent large employers such as IBM and Kodak  
64 have weakened their commitment to long-term employment; and some evidence exists of  
65 more use of bonuses and other flexible forms of pay (O'Shaughnessy et al., 1999). Moreover,  
66 a number of published case studies report on companies that increased the flexibility of pay  
67 (e.g. Kanet, 1987; Manicattide and Virginia, 1992; Stiles et al., 1997).

68 At the same time, other studies have emphasized the relative stability of employment  
69 systems. Evidence against dramatic changes includes the relatively small changes in av-  
70 erage job length for most demographic groups (e.g. Farber, 1995; Neumark et al., 1997).  
71 On the compensation side of the contract, several analyses find relatively constant level of  
72 "rigidity" of overall pay systems, using a number of measures of rigidity. For example, Bel-  
73 man and Levine (1999) and O'Shaughnessy et al. (1999) find no increased responsiveness  
74 of large-company wages to local wage patterns, and Groshen and Levine (1998) find no  
75 change in the variability or persistence of company wage levels or idiosyncratic patterns  
76 between 1980 and 1995.

77 Analysts (e.g. Cappelli et al., 1997) have posited two related sets of causes of the new  
78 employment contract. First, globalization, new technologies, and deregulation have created  
79 an environment that is increasingly complex and unstable. Second, and partly in response  
80 to the first set of factors, the new employment contract is often associated with new or-  
81 ganizational forms such as networks, flexible specialization, or "virtual" organizations. In  
82 many cases, the new organizational forms directly affect the employment contract, as when  
83 employers increase hiring of temporary or contract employees.

84 Ideally, these new organizational forms offer organizations greater flexibility in response  
85 to (increasingly important) product-market and technological shocks. At the same time, new  
86 organizational forms may be less effective than proponents predict if the new forms violate  
87 the traditional employment contract and if the traditional contract remains widely held by  
88 employees. Conversely, an advantage of some organizational forms is that they make clear  
89 to employees when shocks are exogenous (i.e. not under control of management). In such  
90 organizations, management actions such as pay cuts may be increasingly perceived as fair  
91 because employees understand that the continuation of the enterprise is threatened. Thus,  
92 whether new organizational forms conform with or contradict the perceived fair employment  
93 contract is crucial for understanding their ability to flourish.

94 The employment contract can only influence organizational change if the contract af-  
95 fects outcomes that employers care about. In fact, substantial evidence and theory sug-  
96 gests that employees perceptions of fair treatment can have large effects on the organi-  
97 zation (Barnard, 1938; Blau, 1964; Gouldner, 1954). To consider a single channel, nu-  
98 merous studies have found that organizational citizenship behavior (OCB, Organ, 1988)  
99 is higher when employees perceive more fairness, especially procedural justice (e.g. Farh  
100 et al., 1990; Konovsky and Pugh, 1994; Moorman, 1991). Other studies provide fairly con-  
101 sistent evidence that OCB relates to organizational performance (e.g. MacKenzie et al.,  
102 1991; Podsakoff et al., 1997). The implication is that organizations have an incentive to  
103 maintain what employees perceive to be a fair employment contract. More broadly, per-  
104 ceptions of fair treatment (particularly fair pay) can improve outcomes ranging from lower

105 voluntary turnover to higher product quality (see Cowherd and Levine, 1992, and references  
106 therein).

107 It is likely that attitudes toward the fairness of employment policies change more slowly  
108 than technology and organizational form. If there is a lag between the introduction of new  
109 implicit contracts and their widespread acceptance, implementation of new organizational  
110 forms can be slowed. From a managerial perspective, many traditional internal labor market  
111 policies may still be useful (at least until any transition is complete).

112 We examine the extent to which pay reductions are considered to be fair in contemporary  
113 Canada and Silicon Valley, comparing with the results found by Kahneman, Knetsch, and  
114 Thaler (henceforth KKT) in Canada in the mid-1980s. Contradicting press reports of greatly  
115 increased acceptance of market forces, we do not find that pay cuts were substantially more  
116 acceptable in the late-1990s than in the mid-1980s. We also find only modest differences  
117 in the current responses made in Canada and the US.

### 118 2.1. *Perceptions of the fairness of pay reductions*

119 Given that perceptions of fairness may matter, what evidence exists concerning commu-  
120 nity standards of fairness in the employment relationship? In the mid-1980s, Kahneman,  
121 Knetsch, and Thaler conducted a series of quasi-experiments to investigate perceptions of  
122 fair treatment in Vancouver and Toronto, outlining the circumstances under which respon-  
123 dents felt that pay cuts were or were not likely to be accepted by employees. One result  
124 was that reductions in wages due to slack labor markets were considered unfair for current  
125 employees much more frequently than identical cuts in pay for new employees. Another re-  
126 sult indicates that pay cuts during times of unemployment were usually perceived as unfair,  
127 unless the employer was also losing money.

128 The literature on procedural justice emphasizes that not just the level of pay, but also the  
129 causes and processes for changing it can affect employees reactions (Lind and Tom, 1988;  
130 Leventhal, 1976). Among other factors, theories of procedural justice emphasize that most  
131 respondents consider procedures more fair if the decision-maker treats the respondent with  
132 respect, has no vested interest in a decision that is harmful to the respondent, and has limited  
133 choice in making a decision.

134 While the employment contract specifies economic responsibilities, it may also consider  
135 a form of social exchange, as much of the employment contract is implicit. Both firms  
136 and workers typically have expectations about behavior that is not explicitly treated in the  
137 formal contract; these expectations reflect a perspective of social justice. People like to be  
138 treated fairly, both in terms of the allocations made and the process used to determine these  
139 allocations. Seminal works by Homans (1961), Adams (1963), and Blau (1964) assert that  
140 social exchange is guided by considerations of fairness and social norms: (1) rewards should  
141 be allocated in proportion to contributions made; and (2) proportional rewards should be  
142 perceived to be similar to those received by a comparison entity.

143 If the norms for distributive or procedural justice have changed, we might expect to see  
144 changes in the perceived fairness of compensation policies. Homans (1974) suggest that  
145 one's social values are derived from one's experience and so these are likely to change rather  
146 frequently with changes in the social structure. On the other hand, Adams feels that these  
147 values are part of the society's cultural heritage and, therefore, change slowly. Generally,

148 sociologists have taken the view that norms and values are rather “sticky”. However, the  
149 common contemporary perception seems to be that our society and its values have recently  
150 been changing quite rapidly.

151 Dornstein (1991) suggested that different distribution rules may be applied in different  
152 circumstances and posited a dependency on the nature of the social relationships (patterns of  
153 interaction, interpersonal attitudes, and longevity), the goals pursued (e.g. conflict avoidance  
154 or efficient resource allocation), and resource scarcity or abundance. At the same time, the  
155 literature on procedural justice emphasizes that not just the allocation (level of pay), but  
156 also the causes and processes for changing it can affect employees reactions (Lind and Tom,  
157 1988; Leventhal, 1976). Among other factors, theories of procedural justice emphasize that  
158 most respondents consider procedures more fair if the decision-maker treats the respondent  
159 with respect, has no vested interest in a decision that is harmful to the respondent, and has  
160 limited choice in making a decision.

161 If a new employment contract has both spread and become accepted, we should see that  
162 community standards of fairness have changed. If the typical employment contract has,  
163 in fact, undergone important changes to more closely resemble the results in the exter-  
164 nal labor market, then more employees should report that they perceive employer behav-  
165 ior that mimics that market as “fair” in the late-1990s than in the mid-1980s. For exam-  
166 ple, employees should be more willing to judge pay cuts in times of excess labor supply  
167 as fair.

168 In her widely cited book *Psychological Contracts in Organizations*, Rousseau (1995) used  
169 this reasoning to identify trends in the employment contract. She used the same method that  
170 we did, adopting the Kahneman, Knetsch, and Thaler questions about when pay cuts are  
171 fair. Importantly, her respondents demographics were distinctive: her more recent sample  
172 was US executives and managers; the KKTs mid-1980s results were from a representative  
173 phone sample of two Canadian cities. She claimed that from the 1980s to the 1990s typical  
174 answers shifted so that pay cuts were more often perceived as fair (1995, p. 213). Given  
175 that both Rousseau’s research and that of Gorman and James (1992) find differences based  
176 on the occupation and industry of the respondents, these prior results emphasize the need  
177 to make comparisons using a sample comparable to that of KKT.

178 We conducted our study in the two Canadian cities surveyed by KKT: Vancouver and  
179 Toronto. One test is whether there is a change over time. Greater public acceptance of pay  
180 cuts due to the infusion of the new employment contract would lead to:

181 **Hypothesis 1.** Pay cuts will be considered more fair in contemporary Vancouver and  
182 Toronto than in the mid-1980s.

183  
184 On the other hand, it is possible that the employment relation has not changed that much  
185 for most employees (as suggested by the relative stability of average tenure, noted above).  
186 It is also possible that at many companies managers have changed the implicit employment  
187 contract they offer, but that employees do not accept the new contract as fair. That is, norms  
188 of fair behavior may be lagging behind the behavior that is common. Consistent with the  
189 view that companies have changed the contract they offer, Kruse and Joseph (1998, p. 22)  
190 present survey evidence that in 1995 the majority of Americans believes employers were  
191 less loyal to employees than they were 10 years ago. At the same time, separate surveys did

192 not find that Americans have lower trust in their employer in 1997 than in 1989 (Kruse and  
193 Joseph, 1998, p. 22–23).

194 Although the labor market institutions and culture are quite similar, it is possible that the  
195 stability of attitudes we find in Canada has not been matched in the US. Compared to the  
196 United States, for most of this century, Canada has been associated with a stronger welfare  
197 state, a more active government, and lower legitimacy for market forces (Lipset, 1990;  
198 Card and Freeman, 1993). Silicon Valley, in contrast, is an unusual region with a history  
199 of low unemployment and high mobility among skilled engineers. Moreover, the rhetoric  
200 of the new employment contract was clearly enunciated by some Silicon Valley employers  
201 such as Apple Computers (e.g. Sculley and Odyssey, 1987, p. 92–99). These differences  
202 led us to:

203 **Hypothesis 2.** Pay cuts will be perceived as more fair in Silicon Valley than in Canada.  
204

205 We chose Silicon Valley with the expectation that respondents there are probably more  
206 accepting of the new employment contract than would be the typical US respondent. Thus,  
207 the tests provide a one-sided test for US–Canada differences; even if respondents in Silicon  
208 Valley are more accepting the new contract than respondents in Vancouver and Toronto,  
209 most of the US respondents may hold attitudes more similar to those of Canadians.

210 Conversely, francophone Quebec has a very different history and somewhat different  
211 culture than the rest of Canada. In many studies, respondents in Quebec often are less  
212 accepting of the market and are more different from US respondents than are anglophone  
213 Canadians (Lipset, 1990). Thus, any findings of US–Canada similarity may not generalize  
214 to Quebec.

### 215 3. Method

216 Kahneman, Knetsch, and Thaler performed their survey between May 1984 and July  
217 1985 in Vancouver and Toronto. We conducted our survey in those cities between March  
218 and September 1997 and then in Silicon Valley between October 1997 and March 1998.  
219 Following the standard within this literature, we refer to actions as “fair” when respondents  
220 report the descriptions of actions as fair.

221 The KKT protocols consist of a series of telephone surveys with questions about hy-  
222 pothetical situations relevant to price-setting and employment practices. We selected the  
223 questions relevant to labor markets from the KKT surveys, creating separate questionnaires  
224 for the interview purposes. Each separate survey had four or five questions about standards  
225 of fairness. Many of these questions related to the fairness of layoffs, and those results  
226 are presented in a companion paper (Charness and Levine, 1999).<sup>3</sup> For each contrast we  
227 present, comparison questions were asked of different respondents; this between-subjects

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<sup>3</sup> Both papers examine perceptions of the fairness of actions that adversely affect employees. The focus of the present paper is on changes over time (using the KKT study as a baseline) and in differences between the US and Canada in views toward pay cuts. In contrast, the companion paper investigates how the characteristics of the process by which layoffs are implemented affect whether the layoffs are perceived to be fair.

228 design minimizes respondents inclination and ability to answer based on guesses about the  
229 researchers hypotheses.<sup>4</sup>

230 We collected approximately 125 replies for each question. Trained interviewers placed  
231 telephone calls to random listings in area directories, using a standard script. Eleven different  
232 people conducted the survey, so that no single individual's bias in elicitation method could  
233 greatly distort the results.

#### 234 4. Results

235 Table 1 shows the results for 10 questions asked about decreases in compensation. Fol-  
236 lowing KKT, we report the proportion of respondents who claimed the action was unfair.  
237 The results support qualitatively the KKT findings of how the context of the pay cut (e.g.  
238 the profitability of the employer) affected perceptions of fairness.

239 Contradicting press reports of greatly increased acceptance of market forces, we do not  
240 find that pay cuts were substantially more acceptable in the late-1990s than in the mid-1980s.  
241 As discussed here, these results do not support Hypothesis 1.

242 Although the mean level of agreement that pay cuts are unfair has been constant, the gap  
243 between the levels of perceived fairness of "more" and "less" fair pay cuts has narrowed  
244 between 1984–1985 and 1997–1998. That is, respondents were a little more accepting of  
245 pay cuts when the employer had no "justification", and a little less accepting when the  
246 employer had an excuse (e.g. low profits, cutting bonus not basic pay).

247 Although we chose a region in the US frequently associated with the new employment  
248 contract, the differences across nations were minor and do not tend to support Hypothesis 2.  
249 Unless US residents were much more resistant to pay cuts than Canadians were in the past  
250 (an unlikely situation), these results suggest that employees views of fair employer actions  
251 has been stable in the US as well.

##### 252 4.1. Changes over time in Canada

253 Our results were broadly consistent with those of KKT. Specifically, respondents thought  
254 pay cuts solely due to the presence of unemployment were unfair: between 63 and 76 percent  
255 of respondents thought pay cuts were unfair in questions 5, 6 and 7 in the new surveys, similar  
256 to the results of KKT. Respondents were more willing to accept a reduction in pay when  
257 it was accomplished by a nominal increase less than inflation, when replacing a worker,  
258 when changing lines of business, or when the business was losing money. Specifically, 21  
259 percent thought a 5 percent nominal wage increase was unfair during times of 12 percent  
260 inflation (Q2), but 76 percent thought a 7 percent nominal pay cut was unfair in times of  
261 no inflation (Q5). In addition, when a company is making a small profit and there was high  
262 unemployment and an inflation rate of 12 percent a year, 63 percent of respondents felt it  
263 was unfair to cut an incumbent workers pay from US\$ 15 to 12 an hour (Q7). In contrast,  
264 only a fourth of respondents thought a similar pay cut was unfair if the worker quit and a

<sup>4</sup> Gorman and James (1992) mailed KKT questions to US executives, but used a within-subject design. Frey and Pommerehne (1993) asked the KKT questions relating to fairness in pricing decisions in Switzerland, obtaining results similar to KKT. Neither study was able to examine changes over time.

Table 1  
The KKT scenarios in Canada and Silicon Valley: percent stating action is unfair (sample size)

	Canada 1984/1985 (KKT)	Canada 1997	Silicon Valley 1997	Canada 1997–1984/1985	Canada 1997–Silicon Valley
Q1	37 (94)	48 (107)	37 (164)	11	11
Q2	22 (129)	21 (108)	51 (175)	-1	-30**
Q3	61 (100)	72 (109)	61 (153)	11	11
Q4	27 (125)	24 (105)	33 (143)	-3	-9
Q5	62 (98)	76 (100)	66 (149)	14*	10
Q6	77 (195)	76 (144)	63 (136)	-1	13*
Q7	83 (98)	63 (119)	67 (141)	-20**	-4
Q8	32 (195)	34 (122)	27 (139)	2	7
Q9 <sup>a</sup>	50 (153)	53 (142)	56 (128)	3	-3
Q10	20 (96)	44 (100)	41 (127)	24**	3

<sup>a</sup> Question 9 asked whether the action was completely fair, acceptable, slightly unfair, or very unfair. We classify the first two categories as fair and the last two categories as unfair.

\* Statistically significant differences at the 5 percentage level on the test of the equality of proportions (normal approximation to the binomial distribution, two-tailed test).

\*\* Statistically significant differences at the 1 percentage level on the test of the equality of proportions (normal approximation to the binomial distribution, two-tailed test).





265 new worker received the lower pay (Q4). An intermediate proportion thought the pay cut  
266 was unfair if the painter switched to a new business, and retained the incumbent worker (48  
267 percent, Q1). If the firm is losing money instead of making a small profit (Q9 rather than  
268 Q7), 53 percent of the respondents thought the pay cut was unfair.

269 There is no consistent trend in responses over time, in contrast to Hypothesis 1. Two  
270 questions had large and statistically significant changes, but one change showed decreased  
271 tolerance for pay cuts, the other showed increased tolerance. Specifically, the proportion  
272 who thought the pay cut in question 5 was unfair (cut nominal wages with no inflation)  
273 rose 14 percentage points (change significant at the 5 percent level), while the proportion  
274 reporting unfair in question 7 (cut wages with high unemployment) declined 20 percentage  
275 points (significant at the 1 percent level). Other changes were small and not significant.

#### 276 4.2. *Comparing Canada with Silicon Valley*

277 The results in Silicon Valley also support the presence of most of the fairness rules that  
278 KKT identified. Although pay cuts merely due to unemployment were not usually thought  
279 fair, pay cuts were also more acceptable when replacing a worker, when changing lines of  
280 business, or when the business is losing money. Specifically, when a company was making  
281 a small profit and there is high unemployment and an inflation rate of 12 percent a year, 67  
282 percent of respondents felt it was unfair to cut an incumbent workers pay from US\$ 15 to  
283 12 an hour (Q7). In contrast, only one-third of respondents thought a similar pay cut was  
284 unfair if the worker quit and a new worker received the lower pay (Q4), and 37 percent  
285 thought the pay cut was unfair if the painter switched to a new business, and retained the  
286 incumbent worker (Q1). If the firm was losing money (Q9) instead of making a small profit  
287 as in Q7, 56 percent of respondents thought the pay cut was unfair. Respondents were also  
288 more willing to accept cuts in bonuses (51 percent felt unfair in Q3) than in basic pay (61  
289 percent thought were unfair in Q10).

290 The largest difference between Canada and Silicon Valley was lower acceptance of real  
291 pay cuts accomplished with a nominal pay increase of 12 percent and inflation of 5 percent.  
292 Among the respondents 51 percent of the Silicon Valley respondents felt this situation was  
293 unfair, compared with only 21 percent of the Canadians in 1997 and 22 percent of KKTs  
294 earlier Canadian sample. A real pay cut accomplished with a nominal pay cut but no inflation  
295 was considered unfair by even more respondents (66 percent of Silicon Valley respondents,  
296 close to the Canadian responses), so the KKT finding of inflation illusion was supported  
297 (but more weakly) in the Silicon Valley sample as well.

298 There was little difference between Canada 1997 and Silicon Valley on the other “illusion”  
299 manipulation — acceptance of pay cuts accomplished by the elimination of a customary  
300 bonus that was needed to bring compensation to the market level (Q3 versus Q10). While  
301 there was a substantial effect for all samples, the bonus illusion was much stronger in Canada  
302 1984–1985 than in either contemporary study (20 percent unfair versus 44 or 41 percent).

#### 303 4.3. *The effects of justifications*

304 While we qualitatively duplicate KKT results, the effects of the justifications on perceived  
305 fairness were consistently weaker in the newer samples (Table 2). For example, KKT found

Table 2  
Effects of justifications in Canada and Silicon Valley difference in percent unfair

	Canada 1984/1985 (KKT)	Canada 1997	Silicon Valley 1997/1998	Canada 1997–1984/1985	Canada 1997–Silicon Valley
The importance of inflation illusion (Q5 versus Q2)	40**	55**	15**	15**	40**
The importance of bonus versus wage distinction (Q3 versus Q10)	41**	28**	20**	-13*	8
20 percent lower wage; same employee versus new employee (Q7 versus Q4)	56**	39**	34**	-17**	5
20 percent lower wage; same employee in new business versus old business (Q7 versus Q1)	46**	15**	30**	-31**	-15**
20 percent lower wage; business ok versus losing money (Q7 versus Q9)	33**	10*	11*	-23**	-1
Reduce wage by 5 percent; business ok versus losing money (Q6 versus Q8)	45**	42**	36**	-3	6

\* Statistically significant differences at the 5 percentage level on the test of the equality of proportions (normal approximation to the binomial distribution, two-tailed test).

\*\* Statistically significant differences at the 1 percentage level on the test of the equality of proportions (normal approximation to the binomial distribution, two-tailed test).



306 a 55 percentage point difference with respect to whether a real pay cut was achieved by a  
 307 nominal increase or nominal decrease in wages (Q5 versus Q2). That gap declined to 39  
 308 percentage points in our Canadian survey, and to only 15 percentage points in Silicon Valley.  
 309 The effects of the justifications were larger for all six comparisons in the original KKT study  
 310 than in Canada in 1997. KKT found typical effect sizes of 43.5 percentage points, which  
 311 shrunk by about 0.33 to 24–31 percentage points in our surveys. The shrinkage was due  
 312 to trends toward accepting pay cuts when the company did not have the justification of  
 313 low current profits, trends against accepting pay cuts when the company had low current  
 314 profits, and a substantial difference for justifications not related to the firm's profitability.  
 315 In short, the fairness and framing effects that KKT identified, remain prominent in the data,  
 316 but became meaningfully smaller.

317 A summary of the comparisons is presented in Table 3. The main result of this paper is  
 318 that in general, Canada showed no time trend in accepting pay cuts as unfair. In fact, the  
 319 small differences indicate *less* acceptance of pay cuts in 1997 than in 1984–1985 (column  
 320 4, rows 1 and 2 and Fig. 1).

321 There is no overall difference between Canada 1997 and Silicon Valley (column 5, row  
 322 1). At the same time, if we eliminate the questions on bonus and inflation illusion (Q2 and  
 323 Q10), we see that respondents in Silicon Valley were slightly more accepting of pay cuts  
 324 than were the Canadian respondents (column 5, row 2). All of this difference was due to  
 325 questions where a pay cut either was not based on the firm's difficulties or where there was  
 326 a shock to the employment relationship. When the company had low profits, replies in the  
 327 two nations were almost identical.

328 These results suggesting slightly higher acceptance of the market in Silicon Valley are  
 329 roughly consistent with previous research on US–Canada attitudes referred to above. To  
 330 a certain limited degree, the new employment contract, with its concomitant acceptance  
 331 of market forces, may be more slightly prevalent in Silicon Valley than in Toronto and  
 332 Vancouver.

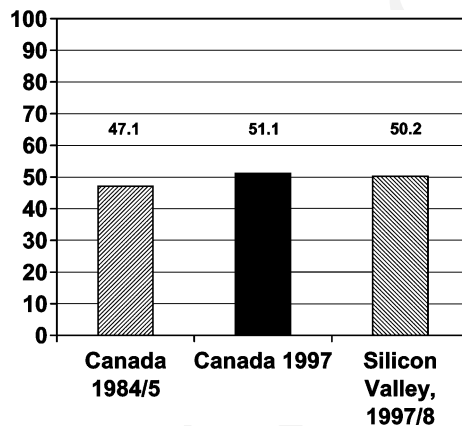


Fig. 1. Mean percent responding a pay cut was unfair (pooling across 10 questions).

Table 3  
Aggregated results<sup>a</sup>

	Canada 1984/1985 (KKT)	Canada 1997	Silicon Valley 1997/1998	Canada 1997–1984/ 1985	Canada 1997–Silicon Valley	Silicon Valley–Canada 1984/1985
Mean proportion unfair: all 10 questions	47.1	51.1	50.2	4.0	0.9	3.1
Mean proportion unfair: 8 questions excluding illusion questions 2 and 10	53.6	55.7	51.1	2.1	4.6*	-2.5
Mean proportion unfair when a pay cut was not based on the firm's difficulties	74.0	71.7	65.3	-2.3	6.4*	-8.7*
Mean proportion unfair when the business is not doing well	36.5	39.7	38.2	3.2	1.5	1.7
Mean change in percent unfair between matched scenarios with versus without a justification	43.5	31.5	24.3	-12.0**	7.2*	-19.2**

<sup>a</sup> The 3rd row includes Q5–Q7. The 4th row includes Q1, Q4, Q8, and Q9. The 5th row is the average of (Q5 – Q2) + (Q7 – Q4) + (Q7 – Q1) + (Q7 – Q9) + (Q6 – Q8) + (Q3 – Q10). “Justifications” include low profits, change in employee, and the other conditions noted in Table 1.

\* Statistically significant differences at the 5 percentage level on the test of the equality of proportions (normal approximation to the binomial distribution, two-tailed test).

\*\* Statistically significant differences at the 1 percentage level on the test of the equality of proportions (normal approximation to the binomial distribution, two-tailed test).



333 In Canada, the gap in percent unfair between replies with and without a justification  
334 declined by 12 percentage points, suggesting that the justifications were somewhat less  
335 important in contemporary Canada. For Silicon Valley, the effect of justifications diminishes  
336 a further 7.2 percentage points.

## 337 5. Discussion

338 In general, our results do not support the hypothesis that market forces have become more  
339 legitimate justifications for wage reductions. Canadians were not increasingly likely to state  
340 that the pay cuts in the scenarios were fair. In Silicon Valley, market forces are sometimes  
341 a bit more acceptable than in Canada, but this effect is modest. While we confirm that  
342 circumstances affect pay fairness norms, we do not find that these norms have changed  
343 much since the mid-1980s.

344 For managers, the results suggest that traditional internal labor market policies such  
345 as avoidance of nominal pay cuts are still useful in promoting high levels of effort. For  
346 policy-makers, these results do not imply that labor market policy should abandon a focus  
347 on creating stable jobs (North American labor markets have high mobility, so policies should  
348 perhaps promote a system with lower costs of mobility; e.g. by encouraging portability of  
349 pensions and health insurance, and certifications for general skills. This recommendation  
350 is based on the high level of mobility, regardless of any recent increases Levine, 1998).

351 Our results also suggest that new organizational forms (particularly ones invoking a  
352 degree of trust in the employment relationship) preserve some buffering from some of the  
353 implications of the new employment. While the implicit labor contract may eventually  
354 need to change, public acceptance has not yet arrived. The panoply of studies on the costs  
355 of violating the employment contract should caution managers against implementation of  
356 policies employees perceive as unduly harsh.

357 At the same time, all of the justifications that KKT described had weaker effects in  
358 1997–1998 in both Canada and Silicon Valley than in the KKT study. KKT wrote a time-  
359 less and placeless paper: a model of human cognitive and emotional processing. They  
360 treated fairness as cognitive psychologists have often treated heuristics such as fram-  
361 ing (Tversky and Kahneman, 1986); i.e. as hard-wired in. In fact, fairness is a percep-  
362 tion that is shaped by culture (e.g. Roth et al., 1991). Our results show that the spe-  
363 cific features that determine respondents perceptions of fairness depend on both time and  
364 place.

### 365 5.1. Limitations and future research

366 Many people perceive what is common as fair. Should the new employment contract  
367 become widespread, it will probably become more acceptable. At the same time, the per-  
368 sistence we find of the norms that KKT identified may slow the diffusion of new contracts.

369 In addition, the 13-year span, we study is not long, even in a rapidly changing economy.  
370 It is worth examining changes in the perceived fair contract over greater spans of time.

371 For social scientists, these results emphasize the need for understanding the foundations  
372 of fairness judgments. Consider the many reasons why the wage–bonus distinction might

373 matter more in one region than in another region. People in one region might view the  
 374 bonus as more of an entitlement — where the creation of entitlement is socially constructed  
 375 (i.e. traditional bonuses may become normative more rapidly in some nations than others).  
 376 Alternatively, respondents in one region could put more value on all entitlements — a dif-  
 377 ference in underlying social values. Thirdly, a cognitive difference might drive the results  
 378 if respondents in the second region were less influenced by a change in framing. For exam-  
 379 ple, citizens who have experienced inflation probably understand the real versus nominal  
 380 distinction better.

381 Furthermore, salience may differ, as people who have experienced a cut in pay or bonus  
 382 may reply differently than others. In addition, individual differences ranging from gender  
 383 to religion to political beliefs can affect perceptions of the fairness of pay cuts and of other  
 384 elements of the employment contract. For example, top-level managers endorse pay cuts  
 385 more readily than others (Gorman and James, 1992; Rousseau, 1995, p. 213).

386 Future research should look at wider differences in space (e.g. more countries), analyze  
 387 more of the individual differences underlying responses (e.g. responses of managers versus  
 388 low-level employees), and investigate more of the rationales and justifications underlying  
 389 the responses.

### 390 **Uncited references**

391 Levine (1993); Piron and Luis (1995); Rabin (1993).

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