



Does Modern Organization and Governance Threat Solidarity?

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Abstract. This article focuses on solidarity behaviours of employees to team members (horizontal solidarity behaviour) and to their manager (vertical solidarity behaviour). The question is asked to what extent and how are both types of solidarity related to three aspects of modern organization and governance: dual earner families, flexible labour contracts, and formal and informal governance structures. Survey data of 17 Dutch organizations ($N = 1347$) show in relation to dual-earner families that having children has a positive relationship with horizontal solidarity behaviour, and working overtime has a positive relationship with vertical solidarity behaviour. Related to the flexible labour contracts, no relationship was found with type of labour contract and expected years within the organization. Finally, some traits of informal and formal governance structures, namely information on rules and the presence of explicit fair play rules are found to be positively related to solidarity.

Key words: employment relationships, formal and informal governance structures, solidarity behaviour

1. Introduction

Recent developments inside and outside organizations have sparked new research questions about the behaviour of managers and employees within modern work organizations. One of the characteristics of modern organizations is that employees bear a much larger responsibility for attaining production goals than in the classical hierarchical firm, and that employees are often working in teams or groups, such as management teams, project groups or self-managing teams (Goodman, 1986; Cohen and Bailey, 1997). Such teams may be responsible for a department within a hospital, the saving of a ship and his cargo, or a special unit of the police.

In these self-managed teams, employees enjoy a considerable amount of autonomy and have more challenging tasks as compared to the classical workplace. Managers expect teamwork, voluntary participation, willingness to cooperate and mutual informal control of their employees in order to keep

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the organization running (Appelbaum and Batt, 1994; Handy, 1995). The managers' dependence on employees' voluntary participation, willingness to cooperate and mutual informal control in these new organizational structures is interpreted here as the managers' *demand for solidarity behaviour* of the employees. Solidarity is seen as one of the most important success factors within modern organizations (Wickens, 1995). Indeed, research has shown that solidarity behaviour is negatively related to employees' resistance against organizational changes (Torenvlied and Velner, 1998), and to short-term absenteeism (Sanders and Hoekstra, 1998; Sanders, 2004).

Compared to previous research on solidarity behaviour within organizations our focus is relatively new. Traditional research studied mainly solidarity between employees in a conflict with the management or in the enforcement of local work group norms (Roethlisberger and Dickson, 1939; Seashore, 1954; Blau, 1955; 1964; Homans, 1974). Because we assume that solidarity behaviour within (informal) relationships is characterised by a norm of reciprocity (Gouldner, 1960; Hechter, 1987; Sanders, Emans and Koster, 2004), and since employee-employee and employee-manager are qualitatively different relationships (Smith et al., 1995), we distinguish theoretically and empirically between solidarity behaviour from employees towards other employees (horizontal solidarity behaviour), and solidarity behaviour from employees to their manager (vertical solidarity behaviour). Research shows that these two forms of solidarity behaviour not always go along with each other (Sanders and Hoekstra, 1998; Flache, 2003; Sanders, 2004). In line with this and consistent with previous research, we define solidarity behaviour towards other employees as the behaving in the spirit of agreements to other employees even when not convenient and not formally described; and define solidarity to the manager as the behaving in the spirit of agreements to the manager even when not convenient and not formally described (Sanders, et al., 2002).

In popular and scientific journals a lot is written about the dangers of reducing solidarity within society as a whole, and within organizations in particular in the last decades. Because nowadays more employees try to combine work with domestic and caring tasks it is sometimes argued that this should hinder the emergence of situations in which goals and interests of individuals and organizations are aligned (Schor, 1992; Scandura and Lankau, 1997). Conflicts could also arise when the career pursuits of individual employees lead them to push the goals and interests of the organization to the background (Appelbaum and Batt, 1994). Moreover, hierarchical control by means of authority chains is often replaced by more horizontal organization structures (Taplin, 1995; Wright and Kroll, 2002). Furthermore, in order to satisfy the demands of a rapidly changing environment and increasingly competitive markets, the number of non-standard employment relationships rapidly increases, and the use of temporary employment has found its way into virtually every organization (Brewster and Mayne, 1997; Piore, 2002).

Because these tendencies might influence the employment relationships within organizations, solidarity behaviour within modern organizations might threaten. However, little is known about the effects of these tendencies. If it is true that these tendencies lead to a decrease of solidarity behaviour, a *paradox* within modern organization should be observed (Sanders et al., 2002): changes in the environment and structure of organizations lead to an increasing *demand for solidarity*, but more or less related changes could erode the corresponding *supply of solidarity*.

In this article, we focus on three aspects, which are prominent aspects of modern organization and governance and are often mentioned as the causes for a decreasing solidarity within organizations: dual earner families, flexible labour contracts, and formal and informal governance structures within organizations. In the theoretical part we elaborate on the possible relationships with the dual-earner families, flexible labour contracts and the formal and informal governance structures and solidarity behaviour of employees within organization. To examine the effects of the possible threats of solidarity we collected data within 17 Dutch organizations. In the empirical part of this article, we empirically examine if we can find relationships between these aspects of modern organization and governance on one hand, and horizontal and vertical solidarity behaviour of employees within organizations on the other hand. The question of this article is formulated as follows: *to what extent and how are horizontal and vertical solidarity within modern organizations related to dual-earner families, flexible contracts, and formal and informal governance structures within organizations?*

2. Solidarity Behaviour within Organizations

It is not self evident that employees within organizations show solidarity behaviour. Solidarity behaviour within organizations exemplifies the free rider problem: it is tempting to employees to lean back, relax and hitchhike on the work of others (Kerr, 1983; Organ, 1988, 1997). But if all employees within an organization act in such an opportunistic way, tasks and projects may fail and the goals of the organization will not be served. A requisite for solidarity is that long-term costs and benefits through the use of positive and negative sanctions offset short-term incentives for opportunistic behaviour (Raub and Weesie, 1990; Raub, 1997). If relationships within today's organizations are characterised by decreasing long-term benefits, and increasing short-term incentives for opportunistic behaviour, this implies that individual willingness to invest in relationships decreases.

For a better understanding of solidarity behaviour it seems helpful to keep in mind that solidarity behaviour is a characteristic between two or more actors. This means that solidarity behaviour may be associated not only with individual characteristics but also with embeddedness in the social

environment (Granovetter, 1985). Various types of embeddedness can be distinguished (Raub, 1997; Raub and Weesie, 2000). First, there is temporal embeddedness: social relationships have a common history (which can consist of mainly positive or mainly negative experiences) and a common future, since actors expect to have continued dealings with one another. As relationships progress, individuals receive more information about the other, allowing them to formulate expectations about his or her reliability. When individuals are certain about their common future, solidarity behaviour will thrive due to the increasing benefits of solidarity as opposed to the growing costs of opportunism in the long term. Second, there is network embeddedness: two people in a relationship also have relationships with third parties. This means that a relationship between two team members is not isolated and independent, but is embedded in the whole of relationships between all team members. Third, relationships are institutionally embedded: certain institutions, which provide opportunities to control opportunistic behaviour, influence them. Formal and informal governance structures within organizations provide examples of institutional embeddedness within modern organizations.

In the following we discuss the possible relationships of dual-earner families, flexible labour contracts and formal and informal governance structures with vertical and horizontal solidarity behaviour within organizations.

2.1. THE INCREASE OF DUAL-EARNER FAMILIES

Organizations have to contend with social circumstances, like the significant increase in labour force participation of women over the past few decades (ILO, 2002). Today's highly educated women are eager to be financially independent, so the traditional single-earner – or breadwinner – family is rapidly becoming extinct. The decline of the 'breadwinner' family and the rising numbers of dual-earner families mean that both male and female employees are confronted, to an ever-increasing degree, with conflicting responsibilities and duties to their work organizations, their households and their children.

Moreover, statistics on hours worked show a considerable difference between the number of contractual hours and the number of hours actually worked. Most of the overwork is not paid, but part of the job. This pattern meshes well with the many indications that a considerable and increasing number of employees work long weeks. A growing amount of employees report experiencing significant time pressures on the job and complain of burnout. Schor (1992, 7) remarks that "the quality of life is threatened as relatively short working hours, relaxing daily life and appreciation for the 'finer things' are giving way in a number of countries to longer hours of work, a faster pace of life, and American style consumption".

The increase in time pressure in dual-earner families may cause employees to reallocate their loyalties more towards the activities at home. The consequence of the choice to give priority to activities outside the organization is that it becomes more attractive to hitchhike on the work of one's colleagues. So, the question can be asked if it is true that employees who are under time pressure with regard to work and household show less solidarity towards their team members and their managers. On one hand because time and energy is limited and both work and family activities are in conflict with each other, it can be expected that the domestic and caring tasks of working mothers and fathers influence the willingness to participate within organizations, and can be expected to have a negative effect on the solidarity behaviours of employees.

On the other hand, instead of a work-family conflict mechanism, a competing, a spill over can be expected. According to this mechanism, the emotions, behaviours and skills associated with one domain spill over to other domains. Moen and Yu's (1999) research on dual-earner couples are in line with this idea: they found that dual-earner men and women reported greater perceived success in both family and work domains relative to other couples. A study of Greenhaus and Parasuraman (1999) show that employees, highly involved in work and families domains, manage to find time and energy for both. According to this spill over mechanism, it can be expected that dual-earner families show more solidarity behaviour than employees with fewer responsibilities at home.

In the empirical part of this article, we examine the relationships of having children, having household and childcare responsibilities, and working overtime with the vertical and horizontal solidarity behaviours of employees within organizations.

2.2. THE INCREASE IN FLEXIBLE LABOUR CONTRACTS

Organizations are dependent on the relationship between demands and supply in the consumers' market in which the organization operates. Managers increasingly deploy their workforce in more flexible ways in order to cope with the demands of a rapidly changing environment (Pfeffer, 1982). An important form of workforce flexibility concerns quantitative flexibility (Atkinson, 1984). Functional flexibility or task flexibility (Blyton and Morris, 1992) refers to a firm's ability to deploy employees between activities and tasks to match changing workloads, production methods or technology. In contrast with quantitative flexibility, functional flexibility is always internal: it concerns employees who have a short- or long-term agreement with the organization. By assigning them to different functions or positions within the organization, organizations can cope with the demands of the outlet market.

Quantitative flexibility refers to an organization's ability to adapt the amount of labour in response to changes in levels of demand (Blyton and Morris, 1992). Practices to achieve this include the use of short term, and temporary contracts (external quantitative flexibility), part-time work and the use of overtime (internal quantitative flexibility). As in other countries, these forms of flexibility in the Netherlands have grown rapidly in the last decades (Brewster and Mayne, 1997). The question can be asked if the use of flexible labour contracts has a relationship with the employment relationships within organizations, and as a consequence with the solidarity behaviour within modern organizations?

Let's first focus on the temporal aspect of workforce flexibility. As above-mentioned the history of a relationship and the (expected) future of a relationship form the temporal embeddedness of relationships. In relationships with a longer history, actors have had more opportunities to gain information about each other's reliability and to learn from previous experiences. Another result of a shared history is the accumulation of relation-specific investments (Raub and Weesie, 2000). Relation-specific investments can be described as investments that make the relationship more valuable for both partners. Within an organization, an example can be found in good productive relationships among employees, and between employees and managers. These valuable assets will be lost if an employee decides to accept a job offer from another organization. Mutual relation-specific investments reduce opportunistic behaviour and stabilise the relationship (Williamson, 1975, 1996).

Besides a common history, a common future plays an important role in temporal embeddedness. One important effect of a common future is that opportunistic behaviour can be controlled by the threat of future sanctions, while solidarity behaviour can be encouraged by the promise of future rewards.

Because the threat of future sanctions for opportunistic behaviour and the promise of future rewards for solidarity behaviours is stronger for employees with a permanent labour contract, this may encourage them to put in more effort to perform well and show more solidarity behaviour. If both employee and manager are aware of the long shadow of the future, both will be prepared to put in effort to maintain the employment relationship based on expectations of the future relationship. Or the other way around: flexible employees may have little obligation to the organisation and consequently, are not really penalized for performing poorly (Ellingson et al., 1998). This suggests a positive relationship between types of labour contract, the expected length engagement on one hand, and solidarity behaviour on the other hand. Koster et al. (2002) found support for the idea that near the end of the employment relationships incentives to act selfishly are greater than at the beginning or the middle.

On the other hand, research on commitment (Muhlau, 2000) shows that employees with a permanent labour contract are less committed to the organization than employees with a flexible labour contract. Muhlau (2000) explains this difference through the possible bad experiences and conflicts between employees and managers. The longer the employee within an organization, the higher the chance he or she had have some bad experiences and conflicts within the organization, and the less likely employees would be committed. This should mean that it is realistic for organizations to assume that their temporary employees are more committed to the organization (McDonald and Makin, 1999). In line with this, temporary work is often regarded as a 'waiting-room' stage: performing poorly at this time can easily be penalised by withholding a new (flexible) contract. In this sense, employees with a flexible labour contract may be more likely to put in extra effort to perform well, expecting a sort of delayed gratification (Foote and Folta, 2002). Van Emmerik and Sanders (2004) found that temporal embeddedness is more important in explaining job performance of tenured faculty members than of non-tenured ones. This should mean that employees with a flexible labour contract would show more solidarity behaviour.

In the empirical part we examine the differences between employees with a permanent and a flexible labour contract and the relationship between expected years within the organization and vertical and horizontal solidarity behaviour.

2.3. FORMAL AND INFORMAL GOVERNANCE STRUCTURES

Finally, threats to workplace solidarity are examined at the organizational level in the form of the governance structure of organizations. Governance structures can be classified as formal or informal. The formal content of governance structures within an organization is evident in the organization's human resource policies. Examples of formal governance structures adopted by managers are monitoring and control systems, as well as career systems. In addition to the formal content of governance structures, informal governance structures may also be – and usually are – present within an organization. For instance, managers may make use of social networks and informal social control in order to develop and maintain cooperative relations with and between their employees (Flap et al., 1998).

Governance structures provide incentives in social relations. In other words, institutions like formal and informal governance structures constitute the formal and informal rules in which managers and employees are involved (Batenburg et al., 2002). It is sometimes argued that traditional forms of control, such as formal governance structures are no longer suitable for the demands of team work, and that informal governance structures are becoming important mechanism to encourage employees to behave in the

organization's interest (Kandel and Lazear, 1992; Baron and Gjerde, 1997). In the optimistic vision of post-bureaucratic organization, management control relations are supplanted by strong ties among co-workers (Heckscher and Applegate, 1994). More informal governance structures, however, does not necessarily signal a significant decrease in formal governance structures. Most literature on control and governance structure within organizations seems to neglect that both forms are mutual exclusive and can co-exist. For both formal and informal governance structures there are a variety of factors, which theoretically can enhance employees' outcomes within organizations. The question can be asked: what are the relationships between different formal and informal governance structures and horizontal and vertical solidarity within organizations?

Concerning the formal governance structures we focus on two prominent aspects of formal governance: information concerning the rules and presence of explicit fair play rules (Baron and Kreps, 1999). Earlier research (Van Emmerik et al., 1998) shows that employees' sense of fairness depends to a considerable degree on the way in which rewards and promotions are obtained. The more employees perceive that the rewards and promotions are distributed according to a certain rule, regardless of the rule, the more they perceive the governance structure as fair, and the more they are willing to show solidarity behaviour. In this sense presence of explicit fair play rules can be seen as the transparency of codes of 'good behaviors'. Also Denison and Mishra (1995), and Tyler (2001) found that a certain degree of predictability of resources and rewards is essential for meaning and satisfaction in work. Such predictability is essential for the establishment of trust between workers and management (Fox, 1974). It can be assumed that the more management is show the presence of explicit fair play rules, the more employees perceive predictability of rewards and resources. It can be argued that information concerning the rules within an organisation and presence of fair play rules are likely to foster employee cooperation and effort (Fox, 1974; Miller and Monge, 1986). Therefore, we can expected that the more employees receive information concerning the rules from management, and the more presence of explicit fair play rules within the organisation are followed by managers, the more they will show solidarity behaviour.

On the other hand, it can be expected that simple hierarchical control breeds personal favouritism and negatively affects solidarity within organizations. In modern organizations, managers are not capable anymore to monitor and judge the work of employees in an objective way (Baron and Kreps, 1999). In this sense, presence of rules are perceived by employees as unfair, because the situation of employees may differ and slightly adjustments in rules may sometimes necessary for different employees. In line with this, we can expect presence of explicit fair play rules is negatively related to horizontal and vertical solidarity behaviour within organizations.

Concerning informal governance structures, research shows that long-term, stable and close informal relationships among employees, and informal activities within and outside the organization, have in general the ability to enhance one's willingness to behave solidarity (Sanders et al., 2002). With informal activities within and outside the organization, we mean activities such as taking lunch with team members, having a drink together after work, and visiting each other at home. It is these kinds of informal activities in particular that give employees the opportunity to get to know each other better. As relationships become close, there are more possibilities to sanction solidarity behaviour positively and opportunistic behaviour negatively.

Informal governance structures can be related to team cohesiveness. When team cohesiveness is associated with informal relationships, it can be expected to have more effect because members of cohesive groups may interact more frequently. In this case they enjoy being together and therefore have more opportunities for co-workers control. Therefore, we focus on informal relationships within a team as an indicator of the informal governance structure. In cohesive groups, members usually know each other contribution (Sniezek et al., 1990). A cohesive group will have a strong impact on its members, who will strive to keep the group intact and remain a member of the group, conform to the group's norms and demands, and regard the group's interest above their own. Research shows positive relationships between group cohesiveness and employee satisfaction (Dobbins and Zaccaro, 1986) and cooperative behaviour (Kidwell Jr et al., 1997).

On the other hand, because long-term, stable and close relationships are under threat due to conditions at the time pressure within dual-earner families and the temporal embeddedness of flexible labour contract, informal activities can also be at risk. The increasing numbers of short-term, flexible contracts have led to diminishing long-term perspective. Growing time pressures within dual-earner households also put pressure on voluntary participation in informal activities, further undermining the conditions under which solidarity behaviour arises. This means that cohesiveness within teams will have less chance to emerge, and informal relationships will be less effective in terms of horizontal and vertical solidarity behaviour. In the empirical part of this article, we examine the relationships between formal and informal governance structures and horizontal and vertical solidarity behaviour.

3. Method

3.1. SAMPLE

A total of 1347 employees (a response of 52%) from 17 Dutch organizations participated in this study. The organizations represent both the public and private domain, and consist of, among others, three faculties of a university,

a ministry, the royal air force, a consultancy, a printing office, some small manufacturing organizations, a nursing home, and a swimming pool. 60% of the respondents were male, and the mean age was 39.9 years of age (S.D. = 9.36). 77% had a high education (S.D. = 1.69). Most employees (84%) have a permanent contract, 8% have a temporary job but will have a permanent job in the near future, and eight percent have a temporary job. The respondents had on average 12.2 years work experience within this organization (S.D. = 9.7) and 5.5 years work experience in the current position (S.D. = 5.12). The mean work experience in total is 16.9 (S.D. = 10.9). The respondents work on average 27.9 h a week (S.D. = 14.4).

3.2. PROCEDURE

The questionnaire with standardised questions was distributed within the different organizations. Questionnaires were developed to gather data among employees (for the complete questionnaire see Lambooij et al., 2002). Before the data collection, within all organizations a number of meetings were held with the board of directors and the management. The employees' organization was also informed of the goal of the research, the design of the data collection and the consequences of possible results. After this, all employees of the organization were informed about the research and the way the data were obtained. All these activities were thought necessary to improve the social basis of acceptance for this research.

In each of the organizations, the questionnaire was modified to fit to the specific needs of the specific organization. Because the questionnaire was modified to fit the specific needs of the specific organization this was expected to be the case. The modification of the questionnaire took place by adding questions about topics that of special interest to the organization. The items measuring the variables that are used in this paper are asked in the same fashion across the different organizations. A graduate student who was present during this period collected data. The aim of this data collection procedure was to increase the response rate. Another advantage was that the students could respond to employees' questions and complaints regarding the questionnaire or the research in general. Through this procedure respondents were more informed about the aim of the research and were more willing to participate.

3.3. MEASUREMENTS

3.3.1. *Horizontal and vertical solidarity behaviour*

We used, related to the definition of solidarity behaviour of Lindenberg (1998, 2000) a five item-scale for horizontal solidarity behaviour (see also

Sanders, 2004; a Sanders, Schyns et al., 2003). The five items for horizontal solidarity behaviour are as follows: (1) I help my team members to finish tasks, (2) I am willing to help my team members when things went wrong that nobody is responsible for (go wrong unexpectedly), (3) I apologise to my team members when I have made a mistake, (4) I try to divide the pleasant and unpleasant tasks (equally) between me and my team members, and (5) I live up to agreements with my team members. These items were supposed to be outcomes of relationship with a strong reciprocal norm (see for more information Sanders et al., 2004).

For vertical solidarity behaviour, we used three of the five items for horizontal solidarity behaviour, which were supposed to be most appropriate for the relationship between employees and managers (items 1, 2 and 5). For these items the term 'team members' was replaced for 'manager'. Furthermore we add three items of the OCB (Organisational Citizenship Behaviour, Organ and Lingl, 1995; Organ and Ryan, 1995) scale to these items. An item measuring OCB "I will help around new employees, even though this is not part of my job". Answers ranged from 1 = totally disagree, to 7 = totally agree. The reliabilities for the two scales were sufficient, Cronbach alpha for horizontal solidarity behaviour = 0.84 and for vertical solidarity behaviour = 0.75.

3.3.2. *Dual-earner families*

To examine the possible relationships between aspects of dual-earner families and solidarity behaviour, respondents were asked if they had children (0 = no, 1 = yes) and how many hours per week spending on domestic activities and child care ($M = 14.48$, $S.D. = 12.61$). Furthermore, the respondents were asked if and to what degree their job can be characterised by overtime. Answers could be given on a scale from 1 'less', to 7 'very much'. To control for the effect that mostly women are responsible for childcare and domestic activities, an interaction term of gender and children was added in the regression analyses.

3.3.3. *Flexible labour contract*

To examine the possible relationships between type of the labour contract, the expected length of the labour contract on one hand, and solidarity behaviour on the other hand, two variables are calculated. First, the type of employment was asked to the respondents (0 = temporary labour contract, 1 = permanent; $M = 0.84$, $S.D. = 0.61$). And second, for the expectation of respondents concerning his or her future within this organization, we used a three items scale: "How long do you expect to stay (a) within this organization, (b) within this job, and (c) with this manager". Respondents could answer this question by given the number of years they expected to stay.

Reliability of this scale is 0.83 (Cronbach alpha). The mean expected stay was 3.83 years (S.D. = 3.84).

3.3.4. *Formal and informal governance structures*

To examine the relationships between formal and informal governance structures and solidarity behaviour, a number of questions were asked concerning the perception of employees concerning the governance structure within the organization. Information about rules was measured by means of the following three items: "The organization I work for, lets me know (1) why certain activities are important, (2) which of my activities has highest priority, and (3) on which issues adjustment between me and my colleagues is important". Respondents were asked to give their opinion on the three items on a scale from 1 (totally disagree) to 7 (totally agree). Reliability of this three-item scale was good (Cronbach alpha = 0.86).

For the presence of explicit fair play rules inside the organization, respondents are asked to give their opinion for three items: "Management of the organization has rather strict rules on (1) getting to work on time, (2) making deadlines, and (3) living up to agreements". Answers ranged from 1 (totally disagree) to 7 (totally agree). The reliability of this three item-scale was sufficient (Cronbach alpha = 0.78).

Partly based on the scale of Dobbins and Zaccaro (1986) the informal relationships within a team were measured by asking employees to rate nine items concerning their willingness to share activities, personal talks and advice within the team. Examples of the items were: "With how many people of your team do you occasionally talk about personal things?" and "With which part of your team do you have a good personal relationships?". Answers ranged from 1 = (*with*) *nobody*, to 7 = (*with*) *everybody*. The scale was reliable (Cronbach alpha = 0.90).

3.3.5. *Control-variables*

In previous studies (Sanders et al., 2003) a relationship between task interdependence within teams and solidarity behaviour was found. Therefore, we control for task interdependence between the employees within a team. A scale originally formulated by Van der Vegt (1998) measures the task interdependence between the employees. An example of this scale is "In order to do my job, I need information from my team members". Answers ranged from 1 (*totally disagree*) to 7 (*totally agree*). The reliability of this scale was 0.77. Besides task interdependence we add degree of responsibility and autonomy of the job as characteristics of the job that possible influence solidarity behaviour. Responsibility and autonomy were asked by means of a one-item question: "What is the degree of responsibility (autonomy) in your current job?". Answers ranged from 1 (very small) to 7 (very large).

Furthermore, age, gender, and education level were added to the analyses as personal characteristics.

4. Results

4.1. PRELIMINARY ANALYSES

The organizations differ with respect to horizontal and vertical solidarity behaviour, $F(16,1277) = 5.14$, $p < 0.01$, and $F(16,1301) = 3.42$, $p < 0.01$, respectively. However, when the analyses are controlled for job characteristics – autonomy, responsibility, and task interdependence, the organisations do not differ significantly anymore: horizontal solidarity behaviour: $F(16,1251) = 1.49$, $p = 0.22$, and vertical solidarity behaviour: $F(16,1287) = 2.91$, $p = 0.08$. Because the organizations do not differ significantly after controlling for job characteristics no dummies for the different organizations are included in the regression analyses.

In Table I the descriptive of the different variables and their correlations are given.

Horizontal and vertical solidarity behaviour of employees are positively correlated ($r = 0.60$, $p < 0.01$). This means that, although both forms of solidarity behaviour are related, it makes sense to distinguish horizontal from vertical solidarity behaviour of employees. Moreover, the level of education of employees are negatively related to both horizontal and vertical solidarity behaviour, while responsibility, autonomy and task dependence are positively related to both horizontal and vertical solidarity behaviour.

Having children household and childcare activities are not related to vertical and horizontal solidarity behaviours of employees. Working overtime is positively related to vertical solidarity behaviour, but is not related to horizontal solidarity behaviour. The type of labour contract and the expected years within the organizations are not related to both horizontal and vertical solidarity behaviour. Information concerning the rules, the presence of explicit fair play rules and informal relationships are both positively related to vertical and horizontal solidarity behaviour.

To examine the possible relationships between aspects of dual-earner families, flexible labour contracts and formal and informal governance structures on one hand, and solidarity behaviour on the other hand, regression analyses are calculated for horizontal solidarity behaviour (Table II) and vertical solidarity behaviour (Table III). For both analyses in the first model (Model 1) the control variables, gender, age, education, task dependence, responsibility and autonomy are examined. In the second model (Model 2) the effects of dual-earner families, having children, doing home and childcare, and working overtime are added. In the third model (Model 3) the effects of flexible labour contract, type of labour contract and expected

Table II. Results of regression analyses with the horizontal solidarity behaviour as dependent variable

Variables	Model 1	Model 2	Model 3	Model 4
Gender	0.17*	0.38 +	0.13**	0.16*
Age	0.02	0.01	-0.11	-0.08
Education	-0.21**	-0.20**	-0.28**	-0.24**
Interdependency	0.24**	0.22**	0.24*	0.22*
Responsibility	-0.25**	-0.24**	0.04	0.05
Autonomy	0.37*	0.38**	0.26**	0.28**
Children		0.34*		
House activities		0.17		
Overtime		-0.02		
Gender * Children		0.01		
Type of labour contract			0.06	
Expected years within organization			-0.08	
Information rules				0.03
Presence of fair play rules				0.17**
Informal relationships				0.21**
R^2	22	23	23	32
R^2 change		1	1	7**

years within the organization are added. And at least, in the fourth model (Model 4) the effects of formal and informal governance structures, information about the rules, the presence of explicit fair play rules and informal relationships, are added. Because not all questions of the survey are asked in the same organizations, no model is given with all the independent variables.

Considering the first model (Model 1, Tables II and Table III) a positive effect of gender and task interdependence was found: women show in general more solidarity behaviour to team members than men, and the more employees are interdependence on each other for achieving their goals, the more horizontal and vertical solidarity behaviour they show. Besides this, negative relationships between level of education and responsibility on one hand, and horizontal solidarity behaviour on the other hand, and a positive relationship between autonomy and vertical solidarity behaviour are found. The control variables explain 22% of the variance in horizontal solidarity behaviour and explain 15% of the variance in horizontal solidarity behaviour.

To examine the possible effects of dual-earner families on horizontal and vertical solidarity behaviours having children, doing home and childcare activities and working overtime are added to the first model. The results show that while controlling for employee and job characteristics having children

Table III. Results of regression analyses with the vertical solidarity behaviour as dependent variable

Variables	Model 1	Model 2	Model 3	Model 4
Gender	0.05	0.06	0.09	.07
Age	0.14*	0.15*	0.07	.08
Education	0.03	0.04	0.06	0.07
Interdependence	0.17**	0.21**	0.22**	0.21**
Responsibility	0.13	0.18	0.07	0.12
Autonomy	0.25**	0.30**	0.18*	0.12
Children		0.07		
House activities		0.02		
Overtime		0.22**		
Gender * Children		-0.31		
Type of labour contract			0.01	
Expected years within organization			0.08*	
Information rules				0.04
Presence of fair play rules				0.19**
Informal Relationships				0.09*
R^2	15	18	17	26
R^2 change		3	1	11**

has a positive relationship with horizontal solidarity behaviour, and working overtime has a positive relationship with vertical solidarity behaviour. Female and male employees with children show more solidarity behaviour to other team members than female and male employees without children, and the more employees work overtime the more solidarity behaviour they show towards their manager. Household and childcare activities and the interaction between gender and children have no effects on horizontal and vertical solidarity behaviour. Adding the dual-earner family aspects for both models the percentage explained variance increased not significantly: the percentage explained variance for horizontal solidarity behaviour increased from 22 to 23, and for vertical solidarity behaviour increased from 15 to 18.

To examine the possible effects of flexible labour contracts, the effects of type of labour contract and the expected years within the organization are added to Model 1. The results show that only expected length within the organization has a positive effect on vertical solidarity behaviour: the longer employees expect to stay in the organization the more solidarity behaviour they show to the manager. The expected years within the organization has no significant effect on horizontal solidarity behaviour. No significant effects were found for type of labour contract. Compare to the first model, the

percentages explained variance increased only slightly to 23 for horizontal solidarity behaviour and to 17 for vertical solidarity behaviour.

To examine the possible effects of formal and informal governance structures – information concerning rules from the management, the presence of explicit fair play rules, and informal relationships between employees within a team on horizontal and vertical solidarity behaviour, these effects are added in Model 4 of Tables II and III. No effects were found for information about the rules. Presence of explicit fair play rules was found to be positively related to both horizontal and vertical solidarity behaviour: the more employees perceive the rules within the organization as the presence of explicit fair play rules, the more employees show solidarity behaviour to both other team members and their manager. Also, informal relationships have a positive effect on both horizontal and vertical solidarity behaviour of employees. The more employees are informally related to each other, the more they behave solidarity towards other team members and the manager.

The percentage explained variance increased for the fourth model to 32 for horizontal solidarity behaviour and to 26 for vertical solidarity behaviour.

5. Conclusions and Discussion

In this article, we examine aspects of modern organization and governance that may threaten solidarity behaviours within organizations. The question was asked what are the associations of dual-earner families, flexible labour contract and formal and informal governance structures with horizontal and vertical solidarity behaviour of employees within organizations. In the theoretical part of this article, the possible relationships of these aspects of modern organizations were discussed. Three main conclusions can be drawn from the results of this study. First, concerning the dual-earner families: having children has a positive effect on horizontal solidarity behaviour, while working overtime has a positive effect on vertical solidarity behaviour of employees. Second, according to the results of this study, type of labour contracts and expected years within the organization have no effect on horizontal and vertical solidarity behaviour. Third, formal and informal governance structures, in terms of the presence of explicit fair play rules and informal relationships have a positive effect on horizontal and vertical solidarity behaviour of employees within organizations.

Let's have a closer look at the results related to the different aspects of modern organization and governance. Instead of examining dual-earner families as a threat for solidarity behaviour, the results show a positive relationship between having children and horizontal solidarity behaviour, and show a positive relationship between working overtime and vertical solidarity behaviour. No effects were found household and childcare

activities. In general, these results show more support for the spill over mechanism, than for the competing mechanism.

A possible moderator for the relationship between having children and solidarity behaviour of employees could be the age of the children. Especially when talking about responsibilities in the family domain the age of the children is important. Although questions concerning the ages of the eldest and youngest child were included in some of the questionnaires, the number of respondents who answered this question was too small to take into account. Related to the work family conflict and spill over mechanisms, the age of children can be crucial and may explain when the work–family conflict and when the spill over mechanism is more relevant. Subsequent studies can examine this point.

The relationship between working overtime and vertical solidarity behaviour should be discussed in terms of causality. In this study the causal direction between working overtime and vertical solidarity behaviour was ignored. Given the cross-sectional data of the study no statements concerning the causality direction can be made. So, it can be that more vertical solidarity behaviour leads to working overtime, or the other way around. Furthermore we do not know if working overtime is voluntary, or it is part of the job. It can be assumed that if working overtime is voluntary, it goes together with vertical solidarity behaviour. Moreover, in this case working overtime can be seen as a form of solidarity behaviour to the manager. Further research and longitudinal data are necessary to examine these possible explanations.

Related to the use of flexible labour contract, no effects were found between the type of labour contract and the expected years within the organization on one hand, and solidarity behaviours of employees on the other hand. In this study, however, we focus only on one aspect of the employment relationships within organization, namely the length of the employment relationships, while neglecting the quality of the relationship. Because we proposed that solidarity behaviours within informal relationships are characterized by a norm of reciprocity (Gouldner, 1960; Hechter, 1974) instead of the temporal aspect of the relationship, the quality of the relationship can be expected to have a positive effect on solidarity behaviour. Further research is needed to test this hypothesis.

In contrast to the relationships between aspects of dual-earner families and the flexible labour contracts, the formal and informal governance structures can be seen as most effective in enhancing solidarity behaviours within organizations. Presence of explicit fair play rules and informal relationships were positively related with both horizontal and vertical solidarity behaviours. The more employees perceive the presence of explicit fair play rules, and the more informally employees within team are related, the more employee behave solidarity to the other team members and to the manager. It was assumed that the presence of explicit fair play rules could be seen as the transparency

within organizations of codes of 'good behaviours'. Given the cross-sectional data of the study also for this relationship statements concerning the causality direction can be made. It can be that employees who perceive the presence of explicit fair play rules are more willing to show solidarity, but it can also be the case that employees who are willing to show solidarity behaviours perceive the presence of explicit fair play rules and the informal relationships more positive than employees who show less solidarity behaviour. Further research and longitudinal data are necessary to test this causality.

In sum, the results show no evidence for the possible dangers of reducing solidarity within organizations. What the present study makes clear is that solidarity behaviours within organizations have more to do with formal and informal governance structures than with dual-earner families and the use of flexible labour contracts. At a practical level, the results of our study suggest that formal and informal governance structures could be a powerful instrument to encourage solidarity behaviours of employees, both towards other team members as to their manager. Based on the results presented here, a useful thing that organizations can do to improve solidarity behaviours of their employees is to promote clarity fair play rules and intense and pleasurable relationships between employees.

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