# Do HR practices affect Organizational Citizenship Behavior and (how) is this relation moderated by Leader Informing Behavior?

An analysis of Dutch survey data at team level

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# Abstract

This research investigates the effect of HR practices on Organizational Citizenship Behavior in teams and how this relation is moderated by elements of leadership. It was hypothesized that HR practices have a positive effect on Organizational Citizenship Behavior and that leadership positively moderates this relation. HR practices were conceptualized using the AMO model by Appelbaum. Separate hypothesis were formulated for each of the elements of the model (Ability, Motivation and Opportunity). In order to answer the research question, a questionnaire was dispersed amongst 72 teams in a total of 37 organizations. Based on the results only the hypothesis with regard to the moderating effect of leadership on the relation between HR practices that enhance employees' Opportunity and Organizational Citizenship Behavior is confirmed. All other hypothesis were rejected. Results of the regression analysis indicate, against expectations, that there is a negative relation between HR practices that enhance employees' Opportunity to participate as reported by the team leader and OCB. A closer inspection of this unanticipated finding reveals the appealing possibility that this relation is actually mediated by perceptions of HR as experienced by the team. The relation in turn between perceptions of HR by the team and OCB is found to be positive. In the final section of this paper reasons for this finding are discussed and recommendations for future research and practical implications are given.

**Keywords:** Organizational Citizenship Behavior, the AMO model, leadership, leader informing behavior

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# 1. Introduction

"When on the brink of complete discouragement, success is discerning that... the line between failure and success is so fine that often a single extra effort is all that is needed to bring victory out of defeat" (Elbert Green Hubbard).

The above quotation by Elbert Green Hubbard in the beginning of the 20<sup>th</sup> century, illustrates what many corporate managers advocate: work hard, because it could very well be the difference between success and failure of this company. The quotation suggests a relation between effort and a preferable outcome, indicating that there is some discretion with the individual to make the difference between success and failure. In a work situation, this is not different. In any kind of work system there always remains some discretion with the worker. In relatively uncomplicated production environments the extra efforts on the part of the employee may seem minor, but a growing number of jobs is becoming more complicated, consisting of large numbers of unstructured tasks, so more discretion is with the employee, and thus the difference between a good performer and a bad performer becomes increasingly large (Hunter et al., 1990). Furthermore, the willingness to 'walk the extra mile' on the part of the employee is extremely important in the employer – employee relationship because it is difficult for the employer to define, monitor and control the amount of effort.

In this study the willingness to walk the extra mile, is referred to as Organizational Citizenship Behavior. OCB is "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization" (Organ, 1988: 4). One can think of customer friendliness, helping each other out so the production can continue or, in case of a retail company, suggesting an alternative product to the customer. OCB is chosen because it is relevant in the changing nature of work (e.g. globalization and post-Fordism) where the focus is more on information and services than on manufacturing (Millett & Harvey, 1999), resulting in a greater discretion with the worker. A second reason for why OCB is relevant is because previous research has shown a strong correlation with important individual level outcomes (turnover intention, absenteeism) and relevant performance outcomes (productivity, efficiency, customer satisfaction), (Podsakoff et al., 2009). Most of aforementioned researchers considered OCB to be an individual characteristic, these individual level outcomes are then aggregated to some higher level outcome (Pearce & Herbik, 2004). In this research OCB is regarded a team attribute, and is measured by the team leader. Not much research on OCB has been published

on OCB at team level, but as Pearce and Herbik (2004) suggested, it is a logical next step to take. Organ et al. (2006) suggests that it is the collective level of OCB that matters and that isolated individual occurrences of OCB usually have a limited impact.

This study includes two important antecedents of OCB: HR practices and elements of leadership. HR practices are here defined as the policies and practices designed to elicit favorable employee reactions. According to Appelbaum et al. (2000) a company would most benefit from a system of HR practices that ensures that employees have the right skills to do the job, are given the opportunity to experiment and to codetermine how they do their work and finally are motivated to show discretionary effort and upgrade their skills when necessary. HR practices are included in this study because research has indicated that they can, under the right circumstances, positively influence business performance (e.g. Huselid, 1995; Becker et al., 1997; Paauwe, 2004; Combs et al., 2006; Guest, 2001; Ostroff & Bowen, 2000). In the past twenty years there has been a growing interest in Human Resource Management (HRM) and, to be more precise, how HRM influences business performance (Paauwe, 2004). Despite growing empirical evidence about this relation, particularly how the former influences the latter, there is still no consensus about how this relation works (Boselie et al., 2005). Often cited models all argue that favorable outcomes occur through positive employee reactions, in this case conceptualized as OCB. The search for the mechanisms how HRM influences business performance, is often referred to as the search for the 'holy grail' because it is, for obvious reasons, of great interest for practitioners. Although researchers do not have a definitive answer yet, HRM is unquestionably on the agenda of every self respecting manager.

Leadership is included because leaders play an important role in delivering HR (Purcell, 2004; Boselie & Paauwe, 2004; Bowen & Ostroff, 2004). In similar vein Nishii and Wright (2004) point out the critical role of the work group leader in implementing HR. They suggest that unit-leaders strongly determine the effectiveness of HR, leading to differences in employee perceptions about HR. The inclusion of leadership is of academic relevance because although researchers agree on the importance of including it in HR – performance research, the role of especially front line managers is neglected up until now, (Purcell, 2004; Boselie et al. 2005). Purcell and Kinnie (2007) go one step further and plea for expanding the territory of HR to include front-line management. The goal of this research is to get a deeper understanding of how HR influences favorable employee outcomes (OCB) that positively influence business performance and how this relationship is influenced by leadership. Aforementioned leads to the following research question:

**Research question**: what is the effect of HR practices and team leadership on Organizational Citizenship Behavior and is this relation moderated by leadership?

This study contributes to the field of HR by including the role of front-line management, using the concept of Leader Informing Behavior (LIB), in the research model and investigating both the direct effect on OCB and the moderating effect on the relation between HR practices and OCB. Furthermore, as recommended by Boselie and Paauwe (2004) this research answers the request for more proximate measure of 'performance' in HRM – performance research. A more proximate measure of performance, in this case OCB, is vital because there is a closer relation with HR and thus less interference of other factors. When using typical financial measures, numerous aspects beside HR, have an effect on the outcome measure (e.g. sector, ownership structure, geographical location, previous performance). It is difficult to control for all of these effects and thus the influence of HR is not easily distilled. The practical relevance of this study is that it gives insight in how HR affects employees' behaviors that are becoming increasingly important for organizations. But, maybe even more important, it further investigates the role of line-management behavior in this relationship.

In the next section there will be an overview of the most important constructs in this research. After that the main hypotheses will be described that will result in the final conceptual model. In the next chapter the methods will be described, after that the results and finally the conclusion and implications will be discussed.

## 2. Theoretical background and hypotheses

In the next section there will be a further elaboration of the theoretical background. First the concept of OCB will be explored. Second, the independent variables and their main relation with OCB will be investigated. After that the moderating effect of leader informing behavior will be introduced and discussed. Finally a presentation of the conceptual model and the hypotheses will be given.

#### 2.1 Organizational Citizenship Behavior

Organizational citizenship behavior was first brought to the attention in the early 80s by Smith, Organ and Near (1983). They described a two dimensional construct consisting of altruism (helping colleagues) and generalized compliance (compliance with general rules, norms and expectations). Subsequently Organ (1988: 4) defined OCB as *"individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization"*. The emphasis is on behavior that is not part of the formal job description and therefore difficult to control, and to a large degree on the discretion of the employee to deliver. His five dimensional model includes altruism (this time more narrowly defined), courtesy, consciousness, civic virtue and sportsmanship.

It becomes clear, by studying the literature, that there has been a lack of consensus about what exactly is OCB. There are a growing number of different conceptualizations and there is a great deal of overlap between the different constructs. Lepine et al. (2002) conducted a meta-analysis on the nature and dimensionality of OCB. The results of their analyses suggest that most of the dimensions of OCB, at least those conceptualized by Organ (1988), are highly related to one another and that there are no apparent differences in relationships with the most popular set of predictors. They opt for the possibility that OCB rather than being an aggregate construct (an aggregate construct is a product of averaging items from different dimensions to form one overall measure), OCB is a latent construct. A latent construct cannot be measured directly, it takes the different dimensions of a construct and treating these dimensions as an imperfect measure of a higher order construct. Regarding OCB as a latent construct would mean that OCB is a trait that *causes* the dimensions previously seen as distinct aspects of the construct (like for instance the five dimensions by Organ). As a result of their findings Lepine and colleagues ask for more research explicitly defining OCB as a latent construct. A study done by Hoffman et al. (2007) about the dimensionality of OCB confirms that current operationalizations of OCB are best viewed as indicators of a general OCB factor. Finally Gong et al. (2010) found in their empirical research about the effect of High Performance Work Systems (HPWS) on OCB that the model including the five factor model of OCB (as defined by Organ, 1988) and the model with OCB as one latent construct showed a similar fit. Because of the extensive work concerning the dimensionality of OCB done by Hoffman and colleagues, and the empirical evidence of the relationship of OCB with HPWS as a latent construct, in this study OCB will be regarded as one latent construct, consisting of the five components as mentioned by Organ (1988).

Most of aforementioned researchers considered OCB to be an individual characteristic. These individual level outcomes are then aggregated to some higher level outcome (Pearce & Herbik, 2004) like productivity, customer satisfaction and efficiency (Podsakoff et al., 2009). As mentioned in the introduction, in this research OCB is regarded a team attribute and is measured by the team leader. A team is defined as: a distinguishable set of two or more individuals who interact dynamically, interdependently and adaptively to achieve specified, shared and valued objectives (Weaver et al., 1995). Podsakoff and colleagues (2004) found strong empirical evidence that team cohesiveness and all of the elements of OCB as defined by Organ (1988) are strongly related, thereby further supporting the case for investigating the construct at team level. Finally, Organ et al. (2006) suggests that it is the collective level of OCB that matters and that isolated individual occurrences of OCB usually have a limited impact.

#### 2.2 HR practices

One of the distinct features of contemporary HRM is the claim that some combination of practices has advantages above and beyond the careful application of specific techniques (Guest et al., 2004: 79). As a result much research has been devoted to the question what practices together lead to superior outcomes. In an overview of research done about the linkage between HRM and performance in the period 1994 - 2003, Boselie et al. (2005) found three main theories used: the contingency approach (e.g. Lawrence & Lorsch, 1967), the recourse based view (e.g. Barney, 1991) and the high performance work system (HPWS) (e.g. Baily, 1993). Especially Appelbaum et al. 's (2000) conceptualization of a high performance work system, the so called AMO model, received

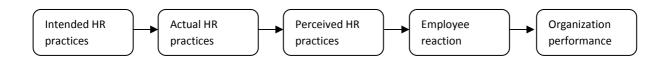
much attention. In the last three years of the research done by Boselie et al. (2005), the AMO model was mentioned in 27 out of 42 empirical papers, more than any other theory during that period. The AMO model (Appelbaum, 2000) argues that:

#### *Performance = f {employees' Ability, Motivation and Opportunity to participate}*

This means that a company would most benefit from a HR system that ensures that employees have the right skills (A) to do the job, are given the opportunity (O) to experiment and to codetermine how they do their work and finally are motivated (M) to show discretionary effort and upgrade their skills when necessary. According to Boxall and Purcell (2008) and Boselie and Paauwe (2004), the AMO model is suitable for the identification of components of a High Performance Work System. In order to describe the relation between HR practices and OCB in all its richness, we need to find a way to identify the different components of HR, and thus possibly different effects of the HR system on OCB. Boselie et al. (2005) suggested that the components of AMO (Ability, Motivation and Opportunity) may have different effects on outcome measures (both employee outcomes and performance outcomes). In order to get an in depth understanding of the process, this research treats AMO as three separate constructs, and thus three separate hypotheses will be formulated.

#### 2.2.1 Level issues

A second discussion point in contemporary HR research concerns the level of analysis. Nishii and Wright (2004) also investigated the relation between HR practices and firm performance. They bring to the foreground issues with respect to the level of analysis. They distinguish five levels, part of the model is described below:



#### Figure 1: partial model by Nishii and Wright, 2004

They elucidate that actual HR practices may be different from intended Practices in the way they are implemented (by line-management). They go on and argue that the effect of those practices and the way employees chose to react does not reside in the practices themselves but in the way they are

perceived by employees, again influenced by the implementation of the front-line manager. Finally these reactions will have an effect on the performance of the organization. The first two steps in the Nishii and Wright model are measured at unit level, the third and fourth step at individual level and the last step again at team level.

In this research HR practices are measured both at team level by the front-line manager (actual HR practices, step 2) and at the level of the teams perceptions (perceived HR practices, step 3). This way it can be investigated whether there are differences, like Nishii and Wright hypothesize, in the way practices are intended and perceived and finally responded to in the form of organizational citizenship behaviors.

#### 2.2.2 Relation with OCB

Appelbaum et al. (2000) suggest that it is discretionary effort on the part of employees that positively mediates the relation between HRM and firm performance. They defined discretionary effort as the contribution above and beyond what is called for in the job description. Most of the worker outcomes used in their research have showed to have strong correlations with the construct used in this study: OCB (Hoffman et al., 2007), so similar effects are expected in this research. Analogous to their colleagues, Nishii and Wright (2004); Purcell and Kinnie (2007); Bowen and Ostroff (2004) all argue that employee reactions, like commitment, satisfaction and OCB, flow downstream from the actual HR practices as implemented by line management. Gong et al. (2010) studied the effect of HPWS on OCB amongst managers. They use social exchange theory to describe this relationship. The principle of reciprocity is used to explain that employees respond with OCBs as a reaction of the HR policies and practices that are provided to them by the organization. They found empirical evidence to support the positive relation between HPWS and OCB at group level.

In this study it is expected that the components that make up a HPWS will show positive effects on OCB . Following Appelbaum's(2000) logic, organizations need to organize their work in such a way that it offers employees enough opportunities to participate (O), employees value the fact that they have a say about how they organize their work. It is therefore expected that the opportunity to participate has a positive effect on OCB (hypothesis 1a). In order to fully benefit from the leeway employees have in how they organize their work, employees need to possess the necessary skills as well. It is therefore expected that employees' skills are also positive related to OCB (hypothesis 1b). Finally employees must be motivated to use the skills they have learned and put them in effect. It is therefore expected that employees that are motivated (M) score higher on the valued employee

outcomes (hypothesis 1c). To investigate whether the findings of Appelbaum also apply to this study, the following hypotheses are formulated:

**Hypothesis 1a**: HR practices that enhance employees' ability have a positive effect on OCB in teams. **Hypothesis 1b**: HR practices that increase employees' motivation have a positive effect on OCB in teams.

**Hypothesis 1c**: HR practices that increase an employees' opportunity to participate have a positive effect on OCB in teams.

#### 2.4 Leader Informing Behavior

The Chartered Institute of Personnel and Development (CIPD), Europe's largest professional institute for people management and development, reported that the critical role of immediate, front-line managers in delivering HR has been neglected up to now in most HR and performance research (CIPD, 2004). Furthermore, because the employer – employee relationship becomes more individualized, the role of leaders (especially team leaders and operational leaders) is becoming increasingly important. Boselie and Paauwe (2004) also plea for a greater attention to the role of front-line management in research about the HR – performance relationship. They argue that the omission of these ingredients that are so paramount to the working environment may result in unwanted covariance. Purcell and Kinnie (2007) go one step further and challenge what is meant by Human Resource Management, they argue that at least leadership and operational management should fall within the area of interest. They state that HR practices are necessary, but not sufficient, to elicit favorable employee reactions. Purcell and Kinnie conclude that the role of the front-line manager in delivering HR is so important that it should be controlled for in HR research, or even better, it should be considered an element of HR itself.

This study is a response to this request. Both the direct effect of leadership on OCB and the possible moderating effect on the relation between HR practices and OCB will be investigated. In order to explore this relationship, the construct of Leader Informing Behavior (LIB) will be used. Gonzalez-Roma et al. (2002) defined LIB as the extent to which leaders inform team members about new

practices and strategies, the goals to be reached, the work to be carried out, and other work-unitrelated issues.

#### 2.4.1 relation with OCB

According to Nishii and Wright (2004) employee perceptions flow downstream from actual practices (see figure 1). Leaders influence team members perceptions, step three in the Nishii & Wright model, trough their leadership style and their behaviors, but also by communicating their own perception. What can't be seen from the summarized model is that, in order for employees to perceive anything at all, a signal needs to be send to them. In most cases the signal will be send by line management informing their team about what is expected from them (e.g. operational targets, and working arrangements). In this study, these types of behaviors are referred to using the construct of LIB as defined by Roma et al. (2002). If the leader sends strong and consistent signals it will lead to similar perceptions by employees and thus contributes to similar reactions of the team members as well (Bowen & Ostroff, 2004).

Gonzalez-Roma et al. (2002) hypothesized that greater LIB leads to a greater uniformity of team members perception, promoting within unit agreement. Within unit agreement is in turn, strongly related to organizational commitment. The researchers indeed found strong correlations between LIB and organizational commitment. In this study the construct of OCB, which is highly related to commitment, is used to capture a wider range of behaviors that are highly desirable by typical companies. Aforementioned therefore leads to the following expectation (hypothesis 2):

**Hypothesis 2**: Leader informing behavior has a positive effect on OCB in teams, so higher amount of leader informing behavior leads to higher values of OCB.

#### 2.6 The moderating effect of LIB on the relation between HR practices and OCB

As mentioned before, Bowen and Ostroff (2004) hypothesized that employee responses to HR practices can be idiosyncratic in that perceptions of individuals, and thus reactions as well, can differ from one person to another. As a result the HRM system still may not elicit appropriate behavior.

They argue that HRM continually sends signals that employees use to make sense of their working environment. Their argument is that a HRM signal is strong when it leads to all persons to interpret events in the same way and thus induce similar expectations to the appropriate behavior regarding organizational policies, practices and goals. The notion in this research is that direct linemanagement is the one sending the signal, through leader informing behavior, and therefore the team leaders influence how HR practices within the team are perceived. Following the logic proposed by Bowen and Ostroff, it is expected greater LIB will lead to greater within unit agreement about HR practices which in turn amplifies the effect of HRM on OCB.

Empirical evidence shows that the way employees perceive HRM is indeed for a great deal influenced by the enthusiasm and implementation of front-line management (Purcell, 2004; Purcell & Kinnie, 2007). HR practices designed to enact favorable employee reactions only come to live through the enactment of leaders. Front-line leaders inform employees, trough LIB, about the availability of HR related practices and work-unit level goals. They are the ones capable of connecting organization wide practices to workgroup level relevance. As a result, team members will know what these practices mean to them and how they can put them in to work. These two processes (the translation of HR practices to unit-level relevance and the signal strength that promotes within unit agreement) together leads to the expectation that LIB positively moderates the relation of HR practices on OCB in such a way that greater LIB leads to a stronger effect of the HR practices on OCB (hypothesis 3).

**Hypothesis 3a**: the effect of HR practices that enhance employees' ability on OCB is moderated by leader informing behavior; the effect of these HR practices on OCB will be stronger when leader informing behavior is high.

**Hypothesis 3b**: the effect of HR practices that increase employees' motivation on OCB is moderated by leader informing behavior; the effect of these HR practices on OCB will be stronger when leader informing behavior is high.

**Hypothesis 3c**: the effect of HR practices that increase an employees' opportunity to participate on OCB is moderated by leader informing behavior; the effect of these HR practices on OCB will be stronger when leader informing behavior is high.

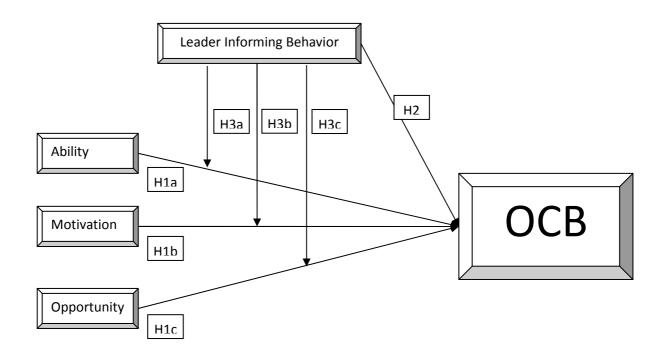


Figure 2: The conceptual model

# 3. Method

In this paragraph the research methods that are used to test the hypotheses will be explained. First an overall picture of the general setup of the research will be presented, then the population and sample are described, followed by an elaboration about the procedure. Finally the instruments that are used to measure the constructs used in this research are defined and evaluated.

#### 3.1 Research set-up

This research is explanatory in nature. The model that is presented will be tested using a crosssectional survey design, this means that the data is gathered at one point in time using a questionnaire. The units of observation are the team members and team leaders, the units of analysis are the teams in the participating organizations. This research is part of a bigger research about the linkages between HR and organizational performance. Eight other students participate in this research project. Although they each have their own research questions, the same questionnaire will be used. This means that the questionnaire also contains questions that are not relevant in this research.

#### 3.2 Population and sample

In this paragraph the sample will be described. In table 1 a number of basic characteristics of the sample are presented. In the next part some distinctive elements will be elaborated further.

In total 454 employees and managers filled in the questionnaire. They are members of 71 (N=71) teams that work in 37 organizations. 47,5% of the organizations in the sample are big (more than 500 employees). 20,3% of the companies have 101-500 employees and 13,6% are relatively small and have 51-100 employees. Consistent with the Dutch context, most companies operate in the commercial services sector (25%). Here companies like Earnst & Young, Interpolis and CZ are represented in the sample. The second large branch of industry in the sample is manufacturing & construction (15%). Here a big technical services companies like Cofely is represented. Next in line we find Government and care-sector (both 10%). Here one finds the city council of Amsterdam and the Central Bureau of Statistics (government) and St. Radboud hospital and CIZ (care-sector). Trade,

transport and education together cover 5,9% of the sample and are thus in this sample fairly underrepresented. The average reported team-/ department size is between 5 and 108 (mean = 17, SD = 17,8).

Characteristic		Frequencies	Frequencies %
Sex	Female	244	50,3
	Male	247	49,7
Age	Minimum	18	
	Maximum	63	
	Mean	37,9	
	SD	11,1	
Education	LBO:	14	2,9
	High school:	55	11,4
	MBO:	176	36,4
	НВО:	180	37,2
	University:	55	11,4
Branch of industry	Commercial services:	19	26,8
	Manufacturing:	9	12,7
	Government:	6	8,5
	Care:	6	8,5
	Other:	43	43,7
Organization size	10-20:	4	5,7
	21-50:	7	10,0
	51-100:	9	12,9
	101-500:	18	25,7
	>500:	30	42,9

Table 1: descriptive statistics

It was not possible to determine the response rate because the participating researchers generally handed out 10 questionnaires per team, regardless the team size. Also it is not possible to comment on the degree to which the sample is representative for the population. This however is not considered to be an issue because the goal of this research is not to make statements about this particular population. The last issue regarding the sample has to do with the level of homogeneity. Most techniques used in this study assume an equal distribution of variances. Since the sample that is used in this study consists of a great number of different companies and contexts, unwanted variance may occur that influences the results.

#### 3.3 Procedure

This research is part of a bigger research project carried out by nine colleagues doing their master thesis about the HR – performance linkage. Data was collected by all the researchers. They each approached organizations, mostly from contacts close to them (family, friends, colleagues etc). Participants were confronted with a leaflet that was made by the researchers explaining what the study is about. If the company agrees to participate, questionnaires were handed out to at least one manager and eight to ten employees per unit, the total number of units per company fluctuates per case. The questionnaire for the employees contains questions concerning topics like job satisfaction, engagement, perceived HR practices and turnover. The questionnaire for the line-manager contained, amongst others, questions about HR practices, HR attributions, absenteeism and turnover. The reason for this broad coverage of topics is because within the HR – performance research, each student investigates their own research questions.

#### 3.4 Instruments

In this paragraph the instruments that were used to measure the constructs are discussed.

#### 3.4.1 HR practices

HR practices are measured using both data from the front line-manager (first analysis) and data gathered from team members (complementary analysis). This way actual HR practices (step two in the Nishii and Wright model) and perceived HR practices (step three in the model ) are measured.

Data is collected using a scale developed by Kroon, Van de Voorde and Van Veldhoven (2009). This scale consist of six categories of HR practices that are consistent with the AMO model (Appelbaum, 2000), Boselie (2002), den Hartog and Verburg (2004) and de Kok et al. (2002). Kroon and colleagues grouped the High Performance Work Practices (HPWPs) into six categories, in this study five of them are used: strict selection (four items), development and career opportunities (seven items), rewards (five items), performance evaluation (four items) and participation and communication (four items). A sample question is: "wordt er gebruik gemaakt van selectie-interviews". Answers applied not just to the presence of a practice, but to the coverage of employee groups affected by the practices (Boselie et al., 2005). Answering categories where "never," "incidentally," "for some jobs," for many jobs," and "for all jobs". Together these five items make up the AMO model as defined by Appelbaum (2000):

- Ability is measured using the practices: strict selection and development & career opportunities,
- Motivation is measured using the practices: rewards and performance evaluation,
- **Opportunity to participate** is measured using the practices: participation & communication (work meetings).

#### 3.4.2 OCB

OCB is measured using data gathered from unit leaders. For each dimension of the construct as defined by Organ (1988), two items are used to measure it. Items are based on a scale developed by Podsakoff et al. (1990). A sample question is: "Medewerkers in deze afdeling nemen deel aan bijeenkomsten die niet verplicht zijn, maar als belangrijk worden beschouwd." and "Medewerkers in deze afdeling besteden veel tijd aan het klagen over onbelangrijke zaken." (reverse-scored). Answering categories ranged from 1 ("strongly disagree") to 7 ("strongly agree"), there is a middle-point of 4 ("neither agree nor disagree"). Following recommendations done by Hoffman et al. (2007) and Lepine et al. (2002), who stated that OCB may be nothing more than equivalent indicators of OCB and that researchers should not be tempted to focus too much on specific dimensions, OCB is in this study regarded as one construct.

#### 3.4.3 Leader informing behavior

LIB is measured using data gathered from unit members. In order to measure the construct a three item scale that is developed by Roma et al. (2002) is used. A sample question is: "Mijn leidinggevende informeert me over werkpraktijken en strategieën". Respondents were given the opportunity to answer using a five-point scale that ranged from 1 ("I strongly disagree") to 5 ("I strongly agree"). Since hypotheses are about unit-level data and LIB is measured at individual level, data needs to be aggregated. Whether this is valid will be tested using intra class correlations ICC1 and ICC2.

#### 3.4.4 Control variables

In order to isolate the effects of the independent variables on the dependent variable, it is important to rule out other explanations for variance in the dependent variable. To do this, control variables are used. This study is conducted in different organizations in diverse industries. Since it may very well be the case that in different industries, different levels of helping behavior are prevalent, it is important to control for the industry in which a company operates. For instance, in a high-tech company it may be necessary to corporate together with other specialist, whilst in a regular manufacturing company one generally works alone (Gong et al., 2010). In this example, the helping behavior, an important element of OCB, is not explained by HR practices, but by the sheer fact of operating in a certain industry. In order to control for this, four dummy variables are created: (manufacturing, government, care and remaining), commercial services is the reference category. Other variables that are controlled for in this research are: sex and education level of team members. Both variables where measured using the answering categories in the questionnaire. In order to control for sex, the sex ratio within teams is calculated. This is done by averaging the values for gender within each team, as reported by the individual team members. Since being a man is coded (1) and being a woman is coded (2), values closer to 1 indicate that more men are represented in the team and values closer to 2 indicate more woman represented. This way the sex ratio is considered to be a continuous variable. In order to control for education, the average education level within teams is used. Education is treated as a continuous variable, answer categories range from 1 (LBO) to 5 (University), a lower value indicates lower average education within the team, a higher value indicates a higher average education within the team. A second reason to include control variables is to avoid spuriousness. A spurious relation between variables is when two occurrences have no causal connection, but due to a third unseen variable it may seem like they are (Tian & Pearl, 2000). If such a third variable is feasible, it is important to include it in the analysis.

#### 3.5 Quality of the instruments

The variables used in this research are all measured using existing scales that are extensively tested in previous empirical research. This generally helps to improve the reliability and quality of the measures that are applied. However, to establish valid and reliable instruments it should be tested whether the expected pattern of inter-correlations between the items in the questionnaire will also emerge in this dataset. Therefore factor analysis (FA) and reliability analysis is performed and results are discussed in the next section.

Before the factor analysis is conducted, a Bartlett's sphericity test and Kaiser-Meyer-Oklin measure of sampling adequacy (KMO) is performed. To see if the data is suitable to perform a principle component analysis (PCA), the outcomes should be respectively < .05 and > .6. PCA is a specific type of FA and is often used interchangeable by researchers. Both PCA and FA are used to detect a structure in the relationship of the items and to reduce the number of items to explain constructs. The main difference is that a in a PCA all variability in the items is used in the analysis, whereas FA only uses the common variance. To interpret the results of the PCA, both Oblimin and Varimax rotation will be used. Reliability of the scales that emerge after FA, was measured using Cronbach's alpha coefficient ( $\alpha$ ). This measure is an indication of the extent to which the individual items indeed measure the same underlying construct (e.g. OCB). A value of .7 or higher is considered to be reliable. For a summary of the scales used and their reliability, see table 2. For a complete overview, see appendix B.

#### 3.5.1 HR practices

As mentioned earlier, HR practices are divided into three separate variables: Ability, Motivation and Opportunity to participate. These three variables are derived from one single measure of HR practices . Principle Component Analysis (PCA) has been used to test whether the expected pattern of results is also surfacing in this dataset.

Values of Bartlett's sphericity test and KMO measure of sampling adequacy are .553 (KMO) and p = 0.000. The moderate value of KMO measure of sampling adequacy indicates that correlations between items is rather low, suggesting that there may not be enough base to assume that there is in fact one overarching construct. A closer inspection of the correlation matrix learns that there are few correlations above .3, again indicating that there is not one construct describing the relation between the items. Reliability analysis also shows some mixed results. Although the reversed items

were properly mirrored, some correlations in the inter-item correlation matrix are negative, and many have low values, indicating that some items do not measure the same construct. A Cronbach's alpha of .779 shows an acceptable internal consistency. Both the low values of the KMO measure of sampling adequacy and the low and negative inter-item correlations means this scale is not measuring one construct. Theoretically this makes sense since the HR practices that are described in the questionnaire are quite distinctive in nature, for instance one can imagine that the use of screening methods (aHRM2) does not correlate strongly with the use of a team based rewards (aHRM15). Therefore the three underlying constructs: Ability, Motivation and Opportunity, will be used as separate concepts and are described below.

#### 3.5.2 Ability

Values of Bartlett's sphericity test and KMO measure of sampling adequacy are .683 (KMO) and p = 0.000 (Bartlett's), indicating that it is appropriate to conduct PCA on the 11 items that together measure the ability of employees. Principal components analysis shows four eigenvalues exceeding 1. Inspection of the screeplot however revealed a clear break after the second component indicating a two factor solution. Factor analysis also shows a two component solution, making clear distinction, like expected, between the recruitment part of ability and the development & career opportunities part of ability. One exception is item aHRM1 ('wordt er gebruik gemaakt van selectie-interviews') which is loading more strongly on the development & career opportunities part of ability. Because of validity reasons it was decided to keep the item in the scale. The 11 items together explain 50,3% of the variance and have a reliability, expressed in Cronbach's alpha, of  $\alpha = .757$ .

#### 3.5.3 Motivation

Values of Bartlett's sphericity test and KMO measure of sampling adequacy are .595 (KMO) and p = 0.000 (Bartlett's). Although this value is below the threshold of .6, it was decided to conduct factor analysis anyway. Principal components analysis shows three eigenvalues exceeding 1. Inspection of the screeplot also suggest a three component solution, but because FA did not result in a simple structure and because of theoretical reasons it was decided to continue FA with two components. Broadly items aHRM12 up to aHRM16 focus on rewards and item aHRM17 up to aHRM 21 focus on performance evaluation. Some variables need explanation. Item aHRM12 ('betaalt uw afdeling hogere salarissen dan marktconform is?') loads, after rotation, on the wrong factor (.272). Item aHRM21 ('speelt de teamprestatie een rol in de beoordeling van de prestaties van medewerkers?')

was anticipated to load on the performance evaluation part of motivation, but instead loads more strongly on the reward part of motivation. It is expected that this is due to an unclear distinction between reward an performance. Finally item aHRM16 ('verdienen medewerkers naast hun basissalaris een team- of afdelingsgebonden prestatiebeloning?') loads, although not very strong, more on the performance evaluation part of motivation. It was decided to remove items aHRM16 and aHRM21 to increase the reliability of the scale. Item aHRM1 was retained for validity reasons. After removing aforementioned items a simple structure is revealed with two clear components. The remaining eight items together form a scale with a reliability expressed in Cronbach's alpha  $\alpha$  = .694. Together they explain 51,3% of the variance.

#### 3.5.4 Opportunity

Values of Bartlett's sphericity test and KMO measure of sampling adequacy are .693 (KMO) and p = 0.000 (Bartlett's), indicating that it is appropriate to conduct PCA on the four items that together measure the opportunity to participate. Principal components analysis shows one eigenvalue exceeding 1. Also FA shows a one component solution, explaining 48,4% of the variance and with a reliability, as expressed in Cronbach's alpha, of  $\alpha = .641$ . No items were removed.

#### 3.5.5 OCB

Values of Bartlett's sphericity test and KMO measure of sampling adequacy are .709 (KMO) and p = 0.000 (Bartlett's), indicating that it is appropriate to conduct PCA on the 10 items that together measure OCB. Items OCB3 and OCB4 where reverse scored since they are negatively formulated. A Principal Component analysis revealed three eigevalues exceeding 1. Based on results from the screeplot and because of theoretical reasons it was decided to conduct FA on one component. Results show that 9 out of 10 items have corrected item total correlations > .3. Only OCB1 ('aanwezigheid van medewerkers in deze afdeling is bovengemiddeld') scores with a score of .271 below the threshold of .3. Because of validity reasons it was decided to keep the item in the construct. The 10 items together explain 35% variance and with a reliability, as expressed in Cronbach's alpha, of  $\alpha = .755$ .

#### 3.5.6 LIB

Values of Bartlett's sphericity test and KMO measure of sampling adequacy are .704 (KMO) and p = 0.000 (Bartlett's), indicating that it is appropriate to conduct PCA on the three items that together measure OCB. Only one factor has an eigenvalue greater than one (Kaiser's criterion). Closer inspection of the Cattell's screeplot confirms that LIB consists of only one component. The three items together explain 69.9% variance and the reliability, expressed in Cronbach's apha is  $\alpha = .783$ .

Scale	Org. items	Chronbach's α	Items removed	Chronbach's α	% variance
Scale	org. items	chi onbach 3 u	items removed	chronoden s u	/o variance
Ability	11	.757	0	.757	45.9
Motivation	10	.638	2	.694	51.3
Opportunity	4	.641	0	.641	48.4
LIB	3	.783	0	.783	69.9
ОСВ	10	.755	0	.755	35.0

Table 2: Reliability and explained variance of the scales used

#### 3.6 Aggregation

The data that is obtained from the questionnaires has been analyzed using the Statistical Package for the Social Sciences (SPSS) version 18. Most data was collected at the team level (the teamleader makes statement about the team), LIB however is measured at the individual level (team members value the informing behavior of the team leader). In the complementary analysis where the perceptions of teams is concerned, data is gathered at individual level. Since this research is about teams, before hypothesis testing could take place all data had to be aggregated so that they are on the same level (team). Aggregation is the process of averaging individual scores to a higher level, this way analysis can take place all at the same level. To determine whether it is valid to do this, the Intraclass Correlation Coefficient (ICC1 & ICC2) have to be calculated (Bliese, 2000). ICC (1) is based on one-way random effects of ANOVA, it estimates how much variance of individual scores can be explained by team level properties of the data. It is calculated using MS<sub>B</sub> (the variance between groups), MS<sub>w</sub> (Variance within the group) and N<sub>G</sub> (average team size). According to Bliese (2001), values between .05 and .20 are 'acceptable'. ICC (2) estimates the extent to which group means can be reliably differentiated. It is calculated using MS<sub>B</sub>, this way the means within the group are compared with the means between the groups. Bliese (2000) indicates that values between .5 and .7 are sufficient, values above .7 are good. Using this criterion all ICC values are acceptable. In table 3 the ICC scores are presented, for a complete overview including formula's used, see appendix A.

Table 3: ICC values

Construct	ICC (1)	ICC (2)
LIB	0.176	0.605
Ability	0.404	0.830
Motivation	0.404	0.828
Opportunity	0.262	0.718

#### 4. Results

In this section the results will be analyzed. First, there will be a preliminary observation about mean scores and standard deviations. After that, the correlation matrix is used to highlight meaningful correlations between dependent and independent variables that are found in the sample (see table 4). Then, a regression analysis is performed to explain linear relations between the variables and test the hypotheses. Till this point data regarding the AMO constructs is gathered at team level by the manager. Complementary analysis will be presented to further explore the moderating effect of LIB using group comparisons. Finally, there will be an analysis of perceptions of the AMO construct as experienced by the team (at team level). Due to colinearity it was not possible to perform a regression analysis at the level of perceptions so hypothesis will only be tested using data gathered by the manager.

#### 4.1 Descriptive statistics

First, let's look at some general tendencies in the correlation matrix (table 4). First, standard deviations of the variables used in the conceptual model are all between .42 and .63 indicating that there are no major deviations from the normal distribution. It is shown that the mean level of OCB

valued by the team leader as above average. The mean score on this variable in the sample is 4.94 while the scale maximum is 7. Two out of three AMO components (Ability and Motivation) score about average or just below with a mean score of resp. 2.37 and 2.40, whilst the maximum score on these scales are 5. Opportunity, the final component of het AMO model, scores slightly lower with a mean score of 2.19 while the scale maximum is 5. The general tendency is that leaders value the policies they provide to improve abilities and motivation of teams as average, whilst the opportunities to participate, and put in practice the team members' capabilities as mediocre. Team leaders are in general satisfied with the amount of Organizational Citizenship Behaviors that are expressed by the team. Finally, team members value the amount of communication from the team leader to them about things that affect their daily practice and their job more in general as above average with a mean score of 3.58 where the scale maximum is 5.

Perspectives to confirm the model as presented in figure 2 are slim. This is mainly indicated by the lack of significant correlations with the dependent variable. Only one significant correlation is found: OCB is significantly correlated with Opportunity. The main concern here is that it was expected that these two would be positively correlated, instead they turn out to be negatively correlated (r = -.364, p < .01). If there are no direct effects on the dependent variable, chances are even smaller that moderating effects are found (hypothesis 3a till 3c). It was decided that a regression analysis is conducted anyway to confirm whether this is true. Concerning the control variables, only education shows a close to significant correlation. In the sample education is significantly correlated with OCB. For this reason it was decided only to include education in the regression analysis as control variable.

Table 4: correlation matrix														
	Ν	Mea	SD	1	2	3	4	5	6	7	8	9	10	11
		n												
1. Ability (1-5)	71	2.37	0.52	1						<u> </u>			-	
2. Motivation(1-5)	70	2.40	0.51	.369**	1									
3. Opportunity (1-5)	71	2.19	0.63	.208	.085	1								
4. OCB (1-7)	69	4.94	0.56	106	024	364**	1							
5. LIB (1-5)	70	3.58	0.42	231	185	149	.142	1						
6. Sex ratio (m=1)	71	1.50	0.33	.123	.065	.136	046	.180	1					
7. Education	71	3.53	1.06	118	067	209	.021	.050	103	1				
8. Manufacturing	71	0.13	0.34	.215	.110	099	.120	.014	176	129	1			
9. Government	71	0.85	0.28	209	059	153	.015	013	062	.087	116	1		
10. Care	71	0.85	0.28	047	.080	.090	181	039	.224	002	116	092	1	
11. Other	71	0.44	0.50	007	.034	.050	057	130	.001	114	335**	267**	267**	1

\* p <.05 \*\* P <.01

4.2 Regression analysis

Before interpreting the results of the regression, first a check for multi-colinearity was performed. Multicolinearity takes place when predictor variables are highly correlated. This is problematic because it makes the coefficients for these variables harder to estimate. The use of aggregated data makes the problem more likely to occur because there is less random measurement error. These random errors that more often present in non-aggregated data attenuate correlations, making the problem less likely to occur (Asher, 1976). The colinearity statistics that were performed in SPSS produce values of Tolerance and VIF that are indicators of multi-colinearity. Pallant states that a value of Tolerance (less than .10) and VIF (above 10) are indicators of multicolinearity. The values that were found in the dataset are well below this threshold. To rule out any unexpected correlations, a manual inspection of the correlation matrix was performed. There was only one correlation found above .5 indicating that correlations where not to high.

In order to test the hypotheses, a hierarchical multiple regression analysis was performed. In a standard multiple regression all variables are entered at once whilst in a hierarchical regression the

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researcher can enter independent variables in steps based on theoretical grounds (Pallant, 2005). In the first block all the independent variables (Ability, Motivation and Opportunity) and the dependent variable (OCB) are added. It was decided to first enter the main variables used in the model instead of first entering the control variables, because in this way it is more feasible to find significant results. In the second block, the control variables (Education and Sex ratio) and LIB join the equation. In the third and final block the three new product variables are added to investigate the moderation effect as described in hypothesis 3a, 3b and 3c. The new variables are a product of LIB and the independent variables: LIB\*Ability, LIB\*Motivation and LIB\*Opportunity to participate. In table 5 the results of the regression are presented.

	М		Model 2	Model 3		
	β	Sig.	β	Sig.	β	Sig.
Ability	040	.756	026	.844	053	.713
Motivation	.021	.866	.031	.811	.102	.435
Opportunity	357	.004	357	.006	303	.008
LIB	-	-	.095	.454	.156	.235
LIB*Ability	-	-	-	-	.209	.264
LIB*Motivation	-	-	-	-	059	.571
LIB*Opportunity	-	-	-	-	352	.022
Education	-	-	061	.617	015	.900
Sex ratio	-	-	019	.876	019	.880
R <sup>2</sup>	.134		.145		.222	
$\Delta R^2$	.134		.011		.077	
F	3.296	.026	1.727	.130	1.839	.080
ΔF	3.296	.026	.270	.847	1.910	.138

Table 5: results regression analysis OCB

Dependent variable = OCB

From table 5 it can be seen that only the first model is significant with an F value of 3.296 (p <.05), a total of 13,4% variance is explained. Also it can be seen that from the AMO variables, only Opportunity has a significant negative effect on OCB ( $\beta$  = -.357, p < .05). Against expectations there was no direct effect of LIB on OCB. The third model did not significantly explain more variance, and therefore cannot be interpreted as a whole. However it can be seen that the product variable LIB\*Opportunity shows a significant relation ( $\beta$  = -.352, p = <.05) indicating that LIB indeed

moderates the relation of Opportunity to participate on OCB (although negative). In a complementary analysis the interaction effect of LIB will be further investigated. Finally, none of the control variables in the model turned out to be significant. In the next part the hypotheses will be tested using the results from the regression analysis.

Hypothesis 1a (HR practices that enhance employees' ability have a positive effect on OCB in tams), and hypothesis 1b (HR practices that enhance employees' motivation have a positive effect on OCB in teams) are both rejected. No significant effects where found using the regression analysis, this is not in line with the expectation of this research. Hypothesis 1c (HR practices that enhance employees Opportunity to participate have a positive effect on OCB in teams) was also rejected. Although a significant effect was found, this effect was negative ( $\beta$  -.357, p<.05) where a positive effect on OCB in teams, higher amount of leader informing behavior result in higher values of OCB) was rejected. No significant effects were found (see model 2).

Hypothesis 3a (the effect of HR practices that enhance employees' ability on OCB is moderated by leader informing behavior, the effect of these HR practices on OCB will be stronger when leader informing behavior is high) and hypothesis 3b (the effect of HR practices that enhance employees' motivation on OCB is moderated by leader informing behavior, the effect of these HR practices on OCB will be stronger when leader informing behavior is high) are both rejected. There was no significant relation found between both ability and motivation on OCB and the moderating effect of LIB is also not significant. Although there is no positive direct effect found of Opportunity to participate on OCB (as hypothesized), a significant interaction effect is found (see model 3). The interaction term LIB\*Opportunity is significantly ( $\beta = -.352$ , p <.05) related with OCB. In this case this means that hypothesis 3c (the effect of HR practices that increase employees' opportunity to participate on OCB is moderated by leader informing behavior, the effect of these HR practices on OCB will be stronger when leader informing behavior is high) is confirmed. Again although a negative primary effect was anticipated, the negative effect entails that the primary effect is stronger (though negative).

#### 4.3 Complementary analysis

Since, besides hypothesis 3c, all of the anticipated hypotheses are rejected it was decided to conduct some additional analysis. In order to find traces of an interaction effect, the data is categorized by

scores on the independent variable (the AMO variables) and the moderator variable (LIB). Analysis between the groups will reveal different levels of OCB that can easily be compared. Second, there will be a complementary analysis on the level of perceptions of team members to see if this brings a new perspective of things to the table. In a third analysis the AMO constructs themselves are further explored. Since Ability and Motivation are both composed of two underlying constructs, a great deal of detail is lost. It is interesting to investigate whether parts of the construct do correlate with OCB.

#### 4.3.1 Comparison between groups

Although there was a moderating effect of leader informing behavior expected, except for opportunity to participate, this effect did not turn out to be significant in the regression analysis. There are many reasons why the hypothesized results failed to materialize. Amongst them are the small amount of participating teams (N=71) decreasing the power of the statistical tests, and the fact that the main effect of the independent variables (IV) on OCB are modest at best. In this paragraph the moderating effect of LIB will be further explored.

To further discover traces of the moderating effect of LIB, the sample is divided in groups. Groups are formed based on scores (high = +1SD, mean and low = -1SD) on the independent variables (the AMO variables), and scores on the moderating variable (LIB), which is also divided in three categories. This way nine groups emerge, creating a 3x3 matrix for each of the AMO variables. For each of the nine groups the mean score of the dependent variable (OCB) is calculated and presented using a graph (see figure 4, 5 and 6). The complete results can be found in appendix B. In the next part the results of the three analysis will be discussed.

Moderating effect of LIB on Ability: the first thing that can be seen is that the lines of the three groups go downward, indicating that the groups that score high on Ability on average score low on OCB. This is consistent with the results of the regression analysis. The second thing that can be seen is that values of OCB are high when both Ability and LIB are +1SD above the mean. This is an indication that LIB positively moderates the relation Ability – OCB. However it must be noted that there is only one team that suffice this requirement, so it must be interpret with consciousness. Since the regression did not result in a significant moderation effect, and the fact that there is only one team that has both +1SD Ability and +1SD LIB, it is only fair to reject the moderating effect of LIB on Ability.

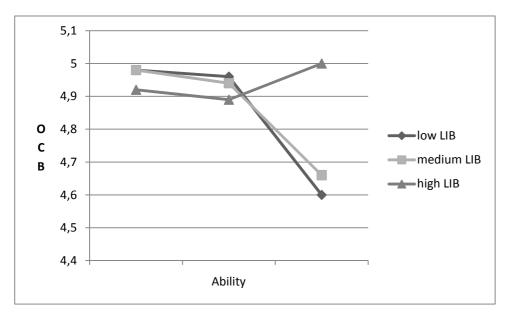


Figure 4: graph LIB\*Ability

Moderating effect of LIB on Motivation: The first thing that can be seen is that when the groups score low on LIB, the is a slight negative effect of motivation on OCB (the blue line). When LIB is moderate or high, leader informing behavior seems to positively moderate this relation in such a way that the effect becomes positive (red and green line). This is consistent with the hypothesis but these results failed to materialize in the regression analysis. Again, the statistical power of this test is very fragile and for the high LIB group there was no score at all when motivation is high to.

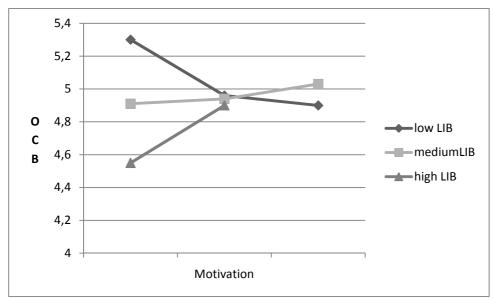


Figure 5: graph LIB\*Motivation

*LIB\*Opportunity*: when LIB is moderate, the negative effect of opportunity on OCB becomes apparent. This is consistent with the results of the regression analysis. When LIB low and LIB high are

involved the picture becomes more complicated. First in the situation in which LIB is high, the effect of adding one SD opportunity has a positive effect on the levels of OCB in teams. But when adding more opportunities to participate, the effect becomes negative again. This opens up the possibility that there is some kind of optimal level of opportunity to participate. For instance, it is good to have some freedom in arranging work, but to much freedom will lead to negative results. When LIB is low (the blue line) there is a trace of a positive effect of informing behavior on the relation opportunity – OCB to, but unfortunately there were not enough scores to complete the picture.

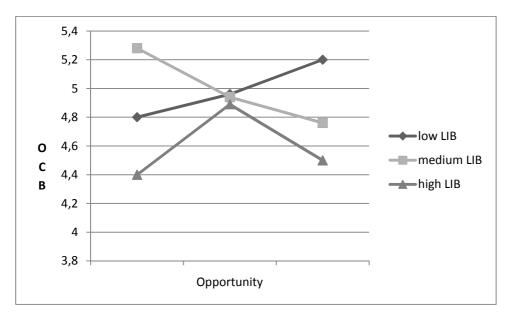


Figure 6: LIB\*Opportunity

The results of the comparison between the groups, there are some signs that indicate a positive moderating effect of informing behavior on HR practices. Unfortunately the dispersion of the scores on both the AMO variables and the LIB variable around the mean did resulted in missing scores in the 'high' or 'low' situations making it difficult to get reliable results. This complementary analysis did not result in convincing evidence of a moderating effect of LIB on the relation between HR practices and OCB, however there are some traces of such a positive moderating relation.

#### 4.3.2 Analysis of perceptions of HR practices at team level

To further explore the relation between HR practices on OCB and the role of LIB in this relation, it was decided to conduct a complementary analysis at the level of perceptions of the team. In the Nishii and Wright model (2004) this is one step to the right and also, one step closer to performance in the HR – performance linkage (see figure 1), so in that light it is a logical next step to take. In the employee questionnaire the same items are included on the AMO constructs as the ones used at the

team leader level, so the same constructs for Ability, Motivation and Opportunity to participate are formed. Because colleague researchers (B. Rijsbergen and H. Banken) did not find better interpretations of the constructs in this dataset using PCA, it was decided to retain the original items to form the AMO constructs. Data for the AMO constructs and LIB had to be aggregated since they are measured at the individual level. Intraclass correlations where calculated (see appendix A)to see whether it is valid to aggregate the data to team level. OCB is already measured by the team leader so could readily be used in the analysis. The results are presented in table 6.

Ν	Mean	SD	1	2	3	4	5	6
71	3.55	1.11	1					
70	3.21	0.54	.668**	1				
71	3.48	0.46	.404**	.462**	1			
69	4.94	0.55	001	.202	.240 <sup>*</sup>	1		
71	3.58	0.42	304**	.456**	.139	.142	1	
71	3.53	1.07	044	011	.086	.021	.050	1
	71 70 71 69 71	71       3.55         70       3.21         71       3.48         69       4.94         71       3.58	71       3.55       1.11         70       3.21       0.54         71       3.48       0.46         69       4.94       0.55         71       3.58       0.42	71         3.55         1.11         1           70         3.21         0.54         .668**           71         3.48         0.46         .404**           69         4.94         0.55        001           71         3.58         0.42        304**	71         3.55         1.11         1           70         3.21         0.54         .668**         1           71         3.48         0.46         .404**         .462**           69         4.94         0.55        001         .202           71         3.58         0.42        304**         .456**	71       3.55       1.11       1         70       3.21       0.54       .668**       1         71       3.48       0.46       .404**       .462**       1         69       4.94       0.55      001       .202       .240*         71       3.58       0.42      304**       .456**       .139	71       3.55       1.11       1         70       3.21       0.54       .668**       1         71       3.48       0.46       .404**       .462**       1         69       4.94       0.55      001       .202       .240*       1         71       3.58       0.42      304**       .456**       .139       .142	71       3.55       1.11       1         70       3.21       0.54       .668**       1         71       3.48       0.46       .404**       .462**       1         69       4.94       0.55      001       .202       .240*       1         71       3.58       0.42      304**       .456**       .139       .142       1

Table 6: correlations of perceptions at team level

\* p <.05

\*\* P <.01

The first thing that attracts attention is that, team members experience HR practices different from the way team leaders perceive them. On average, team's indicate a higher use of all the AMO constructs. This is in line with the argument put forward by Nishii and Wright (2004) that the way employees perceive HR practices may be different from the way these practices are presented to them (by line management). Following this line of thought, the most interesting finding is the positive relation between a team's perceptions of the opportunity to participate and OCB ( $\beta$  = .240, p < .05). This is very different from the results of the analysis on the level of the team leader, where a negative relation was found ( $\beta$  = -.317, p < .01). Unfortunately, due to colinearity it was not possible to perform a regression analysis of perceptions at team level. VIF and values of Tolerance of Ability and Motivation are respectively above 10 and below .10 indicating colinearity. In the discussion section there will be a further elaboration on this interesting finding.

### 4.3.3 Analysis of the AMO constructs

So why are there no effects found between Ability and Motivation on the one hand and OCB on the other hand? Well, possibly because the way the constructs are put together. As in the study performed by Kroon and colleagues (2009), this study uses composite constructs. Ability is composed of recruitment & career opportunities and employee development, and motivation consists of both rewards and performance evaluation. Since these are distinctly different practices (as is shown by the results of the factor analysis), it is interesting to investigate their relation with the concept of Organizational Citizenship Behavior. Two correlation matrices are created, one using team leader ratings of the AMO variables and one using perceptions at team level of the same variables. The results are presented in table 7 and 8.

	Ν	Mean	SD	1	2	3	4	5	6	7		
1. Recruitment	71	2.88	0.62	1								
2. Development	70	2.07	0.63	.306**	1							
3. Rewards	70	3.30	0.67	.162	.439**	1						
4. Appraisal	70	1.63	0.55	.047	.250 <sup>*</sup>	.378 <sup>**</sup>	1					
5. Opportunity	71	2.19	0.63	.081	.223	.054	.167	1				
6. OCB	69	4.94	0.56	109	073	.064	095	364**	1			
7. LIB	71	3.58	0.42	248 <sup>*</sup>	158	049	326**	149	.142	1		

#### Table 7: AMO components separated (as reported by the team leader)

#### Table 8: perceptions of AMO components (at team level)

	Ν	Mean	SD	1	2	3	4	5	6	7
1. Recruitment	70	2.99	0.58	1						
2. Development	71	3.67	0.51	.604**	1					
3. Rewards	70	2.72	0.68	.557**	.620**	1				
4. Appraisal	71	3.70	0.52	.390 <sup>**</sup>	.601**	.596**	1			
5. Opportunity	71	3.48	0.46	.366**	.506**	.412**	.388**	1		
6. OCB	69	4.94	0.56	.078	.139	.123	. <b>261</b> <sup>*</sup>	.240 <sup>*</sup>	1	
7. LIB	71	3.58	0.42	.221	.349**	.308**	.531**	.139	.142	1

This comparison between team leader reports and employee perceptions is a clarifying summary where the differences that are mentioned earlier are very apparent. First, there is the differences in

mean scores (teams report much higher scores on all the AMO components than team leaders). Second evident finding is the effect of opportunity to participate on OCB. This relation is negative for ratings by team leaders and positive for employee perceptions. This brings to the foreground the possibility that the opportunity to participate as defined by the team leader is mediated by the perceptions of the employee. To test this a correlation analysis is performed (table 9), results show that actual HR practices are negatively correlated with perceptions of the team (r = -.293, p = .013). In the conclusion and discussion part of the paper there will be a further elaboration about this relation. Third and final, from the results of this analysis it is learned that apart from opportunity to participate, no significant relations can be found between the HR practices on which the AMO constructs Ability and Motivation are founded.

	N	Mean	SD	Actual Opportunity	Perceived Opportunity
1. Actual Opportunity	71	2.19	0.63	1	
2. Perceived opportunity	71	3.48	0.46	<b>2</b> 93 <sup>*</sup>	1

#### Table 9: correlation Actual Opportunity and perceived Opportunity

# 5. Conclusion and discussion

In this research a quantitative research design was used to examine the relation between HR practices and favorable performance related outcomes, in this study conceptualized as OCB. It was investigated how this relation is being influenced by informing behavior of team leaders. For a complete picture of the research model, see figure 2.

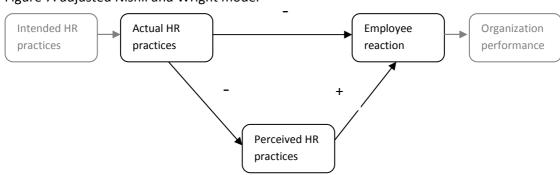
#### 5.1 HR practices and OCB

The relation between HR practices and OCB is explored with the use of the AMO model by Appelbaum and colleagues (2000). According to respectable researchers in the field of HR, the three components of this model are good indicators of the spectrum of HR practices (Boxall & Purcell, 2008; Boselie & Paauwe, 2004). It was expected that through the process of social exchange and reciprocity, HR practices that enhance employees' ability, motivation and opportunity lead to organizational citizenship behaviors on the part of team members. From the three components of AMO, three separate hypotheses (H1a, H1b and H1c) where formed and, all of them were rejected. In the next section the relation between HR practices and OCB, and possible explanations for the effects that are found are elaborated.

From the results of the regression analysis we have learned that, if managers indicate that the job offers little opportunity to participate (work meetings, less contributions for workers in policy making and less freedom for workers to arrange the job activities in their own way), managers experience higher levels of OCB from team members. Two explanations come to mind to explain this unanticipated effect: either, managers like employees to obey to their rules and regulations, valuing confirmation higher than initiative and extra role behavior (expressed in OCB) from employees. Here a picture is painted of an old fashioned manager telling employees what to do, expecting the work to be done just the way he or she thinks best. Putting aside modern working methods like self directed teams, empowerment and worker involvement being mere an obstruction from 'the way things go around here'. A second explanation portraits a different picture. Team leaders may realize that the jobs they offer are low profile ones, they leave little room for employees to adjust the activities to the likings of the workers and bring to the floor their ideas and initiatives. Therefore managers are more easily satisfied with the organizational citizenship behavior that is expressed by the workers, realizing that given the circumstances, maybe this is the best possible result.

The last results that are presented in table 7, 8 and 9 leave an open door to a final option. Let's go back to the theory. The model by Appelbaum (2000) suggests a positive relation between HR practices designed to enhance employees' ability, motivation and opportunity to participate and discretionary behavior on the part of employees (in this study conceptualized as OCB). In this research this positive relation is not found for both ability and motivation, and for opportunity a significant negative relation was discovered. This brings major concerns to the surface and questions the foundation of this research. At the same time it forced the researcher to have a closer look at what actually happens. Modern HR scholars seem to be divided in how HR affects performance in general and more specific, how many 'boxes' there are between practices and actual performance (Ramsay et al., 2000; Purcell, 2004; Nishii & Wright, 2007). In the model by Appelbaum it is suggested that discretionary effort flows directly downstream from the HR practices. The model put forward by Nishii and Wright (2007) however suggests that the relation between actual HR practices and employee reactions is mediated by a third variable: employee perceptions.

That brings us to a possible explanation for the unanticipated negative effect that was found between Opportunity to participate and OCB. Using theory by Nishii and Wright (2007) and the provisional results that are presented in table 9 it can be argued that the negative relation between Opportunity and OCB is actually caused by a discrepancy between manager ratings of the concept and employee perceptions. The employee perceptions are in turn positively related to OCB. This is more in line with what was expected in this research and with a modern high commitment view to HRM. Employees who benefit from a work environment that offers the opportunity to participate, reciprocate these practices that are perceived as benefits with organizational citizenship behaviors to the likings of team leaders. So based on the results of this research a modification of the Nishii and Wright model (2007), with regard to Opportunity to participate, is presented below:



#### Figure 7: adjusted Nishii and Wright model

The fact that no significant relations where found between the rest of the AMO variables and OCB can possibly be explained using theory put forward by Deckop et al. (2003). In this study it was hypothesized that employees would reciprocate with OCB to HR practices on the part of the organization. Deckop and colleagues provide empirical evidence for a different stream of thought. They found that helping behavior on the part of employees is the most important predictor of helping behavior. So, colleagues help co workers because they receive help from them to. This may sound almost to straight forward, but when thinking about it provides a beautiful logic but sets aside some of the of the building blocks of present-day HRM. Like much contemporary HRM, this study assumes that employees respond to HR practices with much sought responses that benefit the organization. This may be true for all kinds of behaviors, but theory by Deckop puts forward the possibility that employees mainly help other employees because they receive help from them too! So instead of a focus on al types of sophisticated HR practices to elicit helping behavior, a organization would more benefit from a working environment where a norm of reciprocity is promoted. For now it is too soon to tell, additional analysis will be needed to further investigate this relation, but it is an interesting line of thought that deserves attention.

#### 5.2 LIB and OCB

The relation between leader informing behavior and OCB was hypothesized based on the concept of signal strength (Bowen & Ostroff, 2004) and Gonzalez-Roma et al. (2002). It was argued that leaders that communicate well (as conceptualized using LIB) would lead to greater within unit agreement of team members, this is in turn related to employee commitment. Since commitment is related to OCB (Podsakoff et al., 2000) it was hypothesized that LIB would have a positive effect on OCB. One hypothesis was formulated (H2) and since no significant results were found this hypothesis was rejected. In the next section there will be a further elaboration on this relation and the results that were (not) found.

One of the unexpected but distinct results that were found was the discrepancy between what team leaders experience and what employees perceive. At least for the construct opportunity to participate this negative correlation is quite strong (r = .293) and significant (p = .013). So one of the reasons that the expected correlation between LIB and OCB was not found could have to do with the fact that team leaders and employees have quite different thoughts about work and what is important. In reality it may even be the case that if a correlation will be found (e.g. in a study with a

38

larger scale), that negative correlations will be found. A second reason why no significant results were found could have to do with the argument put forward by Deckop et al. (2003) mentioned earlier. Maybe the helping behavior of employees is just not so much related to attempts made by the organization or team leader, but much more related to the helping behavior by other colleagues. From a social identity perspective this would also make sense. The social identity theory assumes that in different contexts, different elements of the identity of a person are triggered (Haslam, 2001). It is expected that the identity of being a co-worker (with a colleague) is more triggered in the working environment than being part of the same team (thus with the team leader). If the co-worker identity is stronger than the overall organizational identity, this can according to Tajfel and Turner (1986) lead to in-group favorism, and a 'us' (co-workers) and 'them' (leaders) culture. In this sort of environment, although not always only negative per se, it is obvious that team members would more strongly respond to co-workers than to team leaders. This would explain why almost no results were found between behavior on the part of the team leader and reactions on that behavior by team members.

#### 5.3 The moderating role of LIB

In this study it was expected that the relation between HR practices and OCB is moderated by leader informing behavior. HR practices designed to enact favorable employee reactions come to live trough the enactment of leaders. Front-line leaders inform employees, trough LIB, about the availability and relevance of HR related practices and work-unit level goals. It was anticipated that this leads to an amplified effect of the HR practices on OCB. Three hypotheses were formed (H3a, H3b and H3c). Only hypothesis H3c was accepted, the other two are rejected. In the next section the results will be discussed and alternative explanations will be explored.

First let's explore possible reasons why the anticipated interaction effect of LIB and Ability & LIB and Motivation on OCB did not surface from the data. One reason is certainly that the direct effect of these two variables is not significant. Since the moderating variable is a product of the independent variable and LIB. The fact that the only significant direct effect, the effect of opportunity on OCB, is significantly moderated by LIB makes this all the more a reasonable option.

Another grounds for not finding the expected moderating effect of LIB has to do with the level of analysis. As put forward by Bowen and Ostroff (2004) employee reactions may be idiosyncratic. Their

argument is that a strong HRM signal leads to all persons to interpret events and in the same way and thus induce similar expectations to the appropriate behavior regarding organizational policies, practices and goals. The question here comes to mind, what if employees choose to perceive and respond in their own way? Regardless of how strong a signal is, having their own connection with the subject in question (the HR practice) and the moderator (the team leader)? There is a major stream of research investigating the psychological contract that argues that the relation between employer and employee is one of individual reciprocity, each employee having their own connection with the organization (Rousseau, 1990; Rousseau & Tijoriwala, 1998), not so much a collective response as Bowen and Ostroff argue. Since this research is conducted at the level of the team the moderating effect of leader informing behavior may be filtered out. Another major stream of research argues that the connection with the leader is a unique and personal one, leaders and followers develop a unique connection with each other. This relation is explained in terms of Leader Member Exchange (LMX) by Liden et al. (2006). They found that LMX moderates the relation between low LMX members and individual performance in such a way that it leads to higher individual performance. There was no such effect found on group level, again indicating that the moderating role of the leader may have a more individual nature.

Also the arguments related to the nature of the relations with coworkers and team leaders could play a part here. Basically in this research it was expected that the role of the team leader is positive and reinforcing in nature. Be that as it may, it can also be the case that this relation, although positive is much smaller than anticipated, and that for instance the role of the co-workers is much stronger.

### 6. Limitations and recommendations for future research

In this chapter the limitations and directions for future research will be discussed. Also there will be an elaboration of the practical implications.

#### 6.1 Limitations

This research has some important strengths. First it data is gathered from a wide range of companies operating in different sectors, are of different sizes and ownership structures. This is mainly made possible through the collaboration with different researchers. As explained earlier, this can also be an important weakness. It is preferable to isolate the variables in the conceptual model from the rest of the variables that are not included in the model. This is way the variance in the dependent variable can only be explained by the variables that have changed (the independent variables). By having a heterogeneous sample, in this case teams that are very different (e.g. organizational size, sector or industry) there is a real opportunity that not the independent variables are causing the change in the dependent variable, but some other variable that is not included in the model or is controlled for. Another strength is that data is gathered both of team members and the team leaders. This way it is possible to cross-check the results. Besides these strengths, like in many other research projects, there are some limitations which will be discussed below.

The first limitation of this research has to do with the way HR practices are measured. Although the AMO model has been used before, is conceptually appealing and pretty much covers the spectrum of HR practices, the strength of it, is it's weakness as well: it is too broad. Because the concepts are composed of multiple dimensions, much of the richness of the data is lost and it is more difficult to find meaningful relations. The second limitation has to do with the unit of analysis. This research is conducted at team level. This means that although 510 people filled in the questionnaire, only 71 teams participated (N = 71). With such a small sample it is more difficult to find statistical significant relations and external validity might suffer as well. Power has to do with the ability to reject the 0 hypothesis and it is a function of the strength of the relation between the variables and the sample size. According to Keith (2006), a sample size of N=800 is needed in order to obtain a reasonable power in a model in which an interaction-effect is incorporated. A second issue has to do with external validity. The question here is, how well does the sample represent situations that are not taken into account in this study? The third limitation of this study is common method variance. Common method variance has to do with the amount of variance that is attributed to the

measurement instead of to the constructs in question (Spector, 2006). Variability consists of three elements: the trait effect, random error and systematic error. When data is gathered using one single measure it is possible that the effects are either inflated or deflated because of systematic error. The final limitation of this study has to do with the research design. This study is crosssectional in nature. This means that all the variables are gathered at one point in time. This way the time ordering of events is not always conclusive and it can be difficult to determine causality.

#### 6.2 Recommendations for future research

Even though the AMO model has it's strengths, it's major weakness is that it is too broad. Appelbaum's model covers the spectrum of practices, however it is not specific enough to really explain what is happening. Furthermore, because there is a lot of variation within the AMO construct itself it is more difficult to find significant results, especially with a small sample sizes (like is the case with most master theses). It would be a valuable contribution to both theory and practice to apply a model that is more closely related to actual practices. A second recommendation would be to have a closer look between actual practices (step two in the Nishii & Wright model) and perceived practices (step three in the model). Since this research reveals a negative correlation between these steps, it would be interesting to see whether this is true for other practices too. Third, this research is on the level of the work-group. It was expected that OCB is manifest at team level (Gong et al. 2010). It is however also possible that this concept is more subtle and that both interrelations between coworkers and the relation with the manager plays a part in this. To get a closer understanding, individual level research is a must.

#### 6.3 Practical implications

If one thing is learned from conducting this research, it is the fact that the interrelations between manager and employee are not as straight forward as anticipated. In the daily practice of running a business it would be much easier to have a more simplistic picture of reality with practical guidelines of how the sought behavior of employees can be harvested. But just like everything that has to do with people, this study is the live evidence that it just is not that simple. One lessen though can safely be drawn; employees do not necessary think about HR the same way managers do and relations between HR and employee reactions are not always straight forward. Although this is not a bad thing per se, it can be helpful for managers to be aware of this and think beyond simplistic models of HR.

### 7. References

Appelbaum, E., Bailey, T., Berg, P., & Kalleberg, A. L. (2000). Manufactoring Advantage, *Why high performance work systems pay off. Ithaca, NY: University of Cornell.* 

Asher, H.B. (1976). Causal modeling. Beverly hills: Sage Publications.

- Becker, B.E., Huselid, M.A., Pickus, P.S. & Spratt, M.F. (1997). HR as a source of shareholder value: research and recommendations. *Human Resource Management, vol. 36, 39-47.*
- Bliese, P.D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and Analysis. In K.J. Klein & S.W. Kozlowski (Eds.), Multilevel Theory, Research, and Methods in Organizations (pp. 349-381). San Francisco, CA: Jossey-Bass, Inc.
- Boselie, P. & Paauwe, J. (2004). Human resource management en prestatieverbetering: een overzicht van 10 jaar onderzoek. *Tijdschrift voor HRM, vol. 7*, 9-30.
- Boselie, P., Dietz, G. & Boon, C. (2005). Commonalities and contradictions in HRM and performance research. *Human Resource Management Journal, vol. 15, p. 67-94.*
- Boxal, P. & Purcell, J. (2008). *Strategy and Human Resource Management*. (second edition). Basingstoke: Palgrave Macmillan.
- *Bowen, D.E. & Ostroff, C. (2004).* Understanding HRM firm performance linkages: the role of the strength of the HRM system. *Academy of management review, vol. 29, 203-221.*
- Chartered Institute of Personnel and Development (2004). Vision and Values: Organisational culture and values as a source of competitive advantage. London, UK: CIPD Enterprises Limited
- Combs, J., Liu, Y., Hall, A & Ketchen, D. (2006). How much do high-performance work practices matter? A Meta-analysis of their effects on organizational performance. *Personnel Psychology, vol. 59, 501-528.*
- Deckop, J.R., Cirka, C.C., & Andersson, L.M. (2003). Doing Unto Others: The Reciprocity of Helping Behavior in Organizations. *Journal of Business Ethics, vol. 47, 101–113*.
- Guest, D. (2001). Human resource management: When research confronts theory. *International Journal of Humna Resource Management, vol. 12, 1092-1106.*
- González-Roma, V., Peiró, J.M., &Tordera, N. (2002). An Examination of the Antecedents and Moderator Influences of Climate Strength. *Journal of Applied Psychology, vol. 87, 465-473.*

- Guest, D., Conway, N., & Dewe, P. (2004). Using sequential tree analysis to search for 'bundles' of HR practices. *Human Resource Management Journal,vol.* 14, 79-96.
- Haslam, Alexander S. (2001), Psychology in Organizations The Social Identity Approach. Sage Publications Ltd, London.
- Hunter, J.E., Schmidt, F.L., & Judiesch, M.K. (1990). Individual differences in output variability as a function of job complexity. *Journal of Applied Psychology, vol. 75, 28-42.*
- Huselid, M.A. (1995). The impact of Human Resource Management practices on turnover, productivity and corporate financial performance. *Academy of Management Journal, vol. 38,* 635-672.
- Keith, T.Z. (2006). Multiple Regression and Beyond. Boston, MA: Pearson Education.
- Khoo, H.S., & Burch, G.J. (2007) The 'dark side' of leadership personality and transformational leadership: An exploratory study. *Personality and Individual Differences , vol. 44, 86–97.*
- Liden, R.C., Erdogan, B., Wayne, S.J., & Sparrowe, R.T. (2006) Leader-member exchange, differentiation, and task interdependence: Implications for individual and group performance. *Journal of Organizational Behavior, vol. 27, 723–746.*
- Millett, B., Harvey, S. (1999). Understanding organizations, identifying trends and changes. *Australian Journal of Management & Organisational Behaviour*, vol. 2, 19-29.
- Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Lexington, MA: Lexington Books.
- Organ, D.W., Podsakoff, P.M., & MacKenzie, S.B. (2006). Organizational Citizenship Behavior: it's nature, antecedents and consequences. Thousand Oaks, CA: Sage.
- Ostroff, C., Bowen, D.E., (2000). Moving HR to a higher level; HR practices and organizational effectiveness. In: K.J. Klein, & S.W.J. Kozlowski, (2000). *Multilevel Theory, Research and Methods in Organizations. Foundations, Extensions, and New Directions.* New York: John Wiley, p. 211-266.
- Nishii, L. & Wright, P. (2008). Variability within organizations: implications for strategic Human
   Resource Management. In: *The people make the place: Dynamic linkages between individuals and organizations* (pp. 225-248). D.B. Smith (Ed.). New York: Taylor and Francis
   Group.
- Paauwe, J. (2004). *HRM and Performance: achieving long time viability*. Oxford: Oxford University Press.
- Pallant, J. (2005). SPSS survival manual: A step by step guide to data analysis using SPSS for Windows (2nd ed.). Maidenhead, UK: Open University Press.

- Pearce, C.L. & Herbik, P.A. (2004) Citizenship Behavior at the Team Level of Analysis: The Effects of Team Leadership, Team Commitment, Perceived Team Support, and Team Size. *The Journal* of Social Psychology, vol. 144(3), 293–310.
- Podsakoff, N.P., Whiting, S.W., Podsakoff, P.M. & Blume, B.D. (2009). Individual- and Organizational-Level Consequences of Organizational Citizenship Behaviors: A Meta-Analysis. *Journal of applied psychology, vol. 1, 122-141.*
- Purcell, J. & Kinnie, N. (2007). HRM and business performance. In: *The oxford handbook of human resource management* (pp. 533-551). P.Boxall, J.Purcell, & P. Wright (Eds.). New York: Oxford University Press.
- Ramsay, H., Scholarios, D., & Harley, B. (2000). Employees and High-Performance Work Systems: Testing inside the Black Box. *British Journal of Industrial Relations, vol. 38*, 501-531.
- Rousseau, D.M. (1990). New Hire perceptions of their own and their employer's obligations: A study of psychological contracts. *Journal of Organizational Behavior, 11*, 389-400.
- Rousseau, D. M., & Tijoriwala, S. A. (1998). Assessing psychological contracts: Issues, alternatives and measures. *Journal of Organizational Behaviour, 19*, 679-695.
- Smith, C. A., Organ, D. W., & Near, J. P. (1983). Organizational citizenship behavior: Its nature and antecedents. *Journal of Applied Psychology, vol. 68, 653–663.*
- Spector, P.E. (2006). Method variance in organizational research: truth or urban legend? *Organizational Research Methods, vol. 9,* 221-232.
- Tajfel, H., Turner, J. C. (1986). The social identity theory of inter-group behavior. In S. Worchel and L.W. Austin (eds.), *Psychology of Intergroup Relations*. Chigago: Nelson-Hall
- Tian, J., & Pearl, J. (2000)Probabilities of causation: bounds and identification. *Annals of Mathematics* and Artificial Intelligence, vol. 28, 287 313.
- Weaver, J.L., Bowers, C.A., & Cannon-Bowers, J.A. (1995). Networked simulations: New Paradigms for Team Performance Research. *Behaviror Research Methods, Instruments and Computers. Vol.* 27, 12-24.

# 8. Appendices

## Appendix A: Formula ICC1 & ICC2

$$ICC(1) = \frac{MSB-MSW}{MSB+[(k-1)*MSW]}.$$

$$ICC(2) = \frac{MSB-MSW}{MSB}$$

#### Table A1: ANOVA LIB

	Sum of squares	df	Mean square	F	Sig.
Between groups	66,149	70	.945	2.533	.000
Within groups	162,308	435	.373		
Total	228,457	505			
ICC1: 0.176					

ICC2: 0.605

#### Table A2: ANOVA Ability

	Sum of squares	df	Mean square	F	Sig.
Between groups	185.730	70	2.653	5.888	.000
Within groups	190.160	422	.451		
Total	375.890	492			

ICC1: 0.404 ICC2: 0.830

## Table A3: ANOVA Motivation

1.777 5.830 .000
.305
4

ICC2: 0.828

### Table A4: ANOVA Opportunity

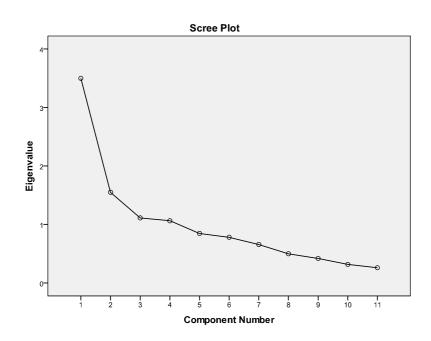
	Sum of squares	df	Mean square	F	Sig.
Between groups	98.220	70	1.403	3.554	.000
Within groups	170.934	433	.395		
Total	269.154	503			

ICC1: 0.262

ICC2: 0.718

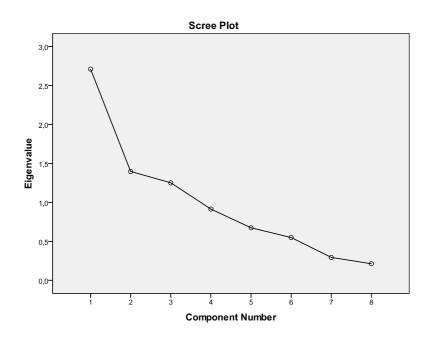
## Appendix B1: FA Ability

ltem	1	2
Wordt er gebruik gemaakt van selectie-interviews?	.157	
Wordt er gebruik gemaakt van selectietests (bijvoorbeeld intelligentie, persoonlijkheid,		
interesse)?		.720
Wordt er gebruikgemaakt van assessment centers?		.825
Wordt er gebruikgemaakt van gespecialiseerde selectiebureaus?		.729
Doet uw afdeling aan enige vorm van opleiden?	.616	
Wordt gebruik gemaakt van formele interne bedrijfstrainingen?	.711	
Wordt gebruik gemaakt van externe trainingen?	.723	
Wordt medewerkers de mogelijkheid geboden om hun vaardigheden verder te		
ontwikkelen?	.394	
Nemen medewerkers deel aan sociale vaardigheidstrainingen zoals communicatietraining		
of presentatietraining?	.675	
Wordt gebruikgemaakt van managementtraining en -ontwikkeling?	.658	
Wordt gebruikgemaakt van formele carrièretrajecten?	.779	
Eigenvalue	3.50	1.55
% variance	31.81	45.90
Chronbach's alpha		.757



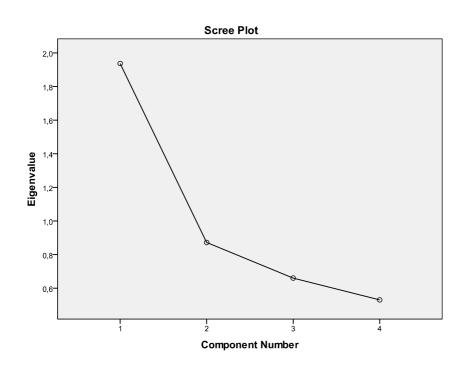
# Appendix B2: FA Motivation

Item	1	2
Betaalt uw afdeling hogere salarissen dan marktconform is?	.099	
Verdienen medewerkers van uw afdeling naast hun basissalaris een bonus of andere financiële		
extra's?	.639	
Verdienen medewerkers naast hun basissalaris een individuele prestatiebeloning?	.907	
Verdienen medewerkers naast hun basissalaris een team- of afdelingsgebonden		
prestatiebeloning?	.870	
Wordt er gebruik gemaakt van een formeel functionerings- en beoordelingssysteem?		.800
Wordt het presteren van medewerkers jaarlijks beoordeeld in een gesprek?		.655
Wordt het presteren van medewerkers meerdere keren gedurende het jaar beoordeeld in een		
gesprek?		.607
Worden met medewerkers prestatiedoelen afgesproken?		.728
Eigenvalue	2.71	1.40
% variance	33.9	51.3
Chronbach's alpha		.694



# Appendix B3: FA Opportunity

Item	1
Vindt er werkoverleg plaats?	.486
Worden medewerkers betrokken bij het maken van beleid?	.794
Hebben werknemers de vrijheid om in nieuwe materialen en technologie te investeren?	.742
Delen werknemers zelf de onderlinge taken in?	.720
Eigenvalue	1.94
% variance	48.4
Chronbach's alpha	.641

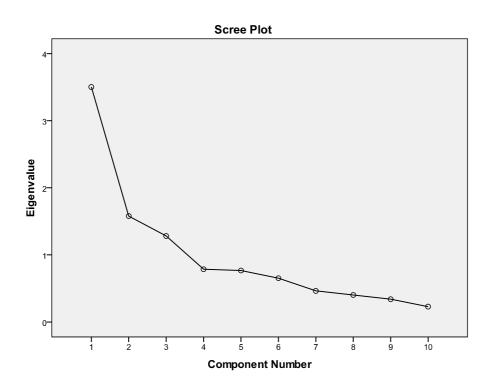


# Appendix B4: FA Leader Informing Behavior

Item	1
Mijn leidinggevende informeert me over zaken die mij kunnen beïnvloeden.	.844
Mijn leidinggevende informeert me over werkpraktijken en strategieën.	.838
Mijn leidinggevende begeleidt mij door het geven van duidelijke informatie over mijn	
baan.	.826
Eigenvalue	2.10
% variance	69.9
Chronbach's alpha	.783

## Appendix B5: FA Organizational Citizenship Behavior

Item	1
Aanwezigheid van medewerkers in deze afdeling is bovengemiddeld.	.271
Medewerkers in deze afdeling komen de regels van deze afdeling na, zelfs als niemand	
daarop toeziet.	.737
Medewerkers in deze afdeling besteden veel tijd aan het klagen over onbelangrijke zaken.	.393
Medewerkers in deze afdeling richten zich altijd op wat er mis/fout is in plaats van dingen	
van de positieve kant te bekijken.	.513
Medewerkers in deze afdeling nemen deel aan bijeenkomsten die niet verplicht zijn, maar	
als belangrijk worden beschouwd.	.473
Medewerkers in deze afdeling houden zich op de hoogte van veranderingen in de unit.	.808
Medewerkers in deze afdeling zorgen ervoor problemen met medewerkers te voorkomen.	.500
Medewerkers in deze afdeling zijn zich bewust van hoe hun gedrag het werk van anderen	
beïnvloedt.	.674
Medewerkers in deze afdeling helpen anderen die een hoge werkbelasting hebben.	.682
Medewerkers in deze afdeling zijn bereid anderen te helpen met werkgerelateerde	
problemen.	.664
Eigenvalue	3.50
% variance	35.0
Chronbach's alpha	.755

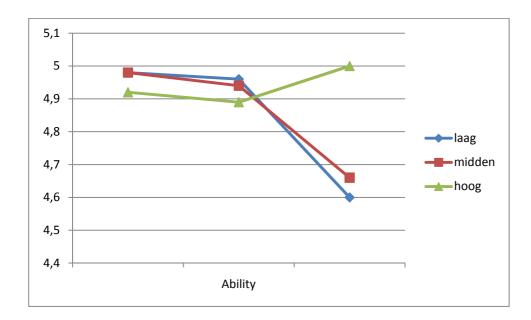


## Appendix C: interaction LIB

Table C1: Interaction Ability

L	LIB	Н	
4,98	4,98	4,92	
4,96	4,94	4,89	Ability
4,6	4,66	5	

Dependent variable: OCB



### Table C2: Interaction Motivation

Н	
91 4,55	
94 4,9	Motivation
)3 -	
	91 4,55

Dependent variable: OCB

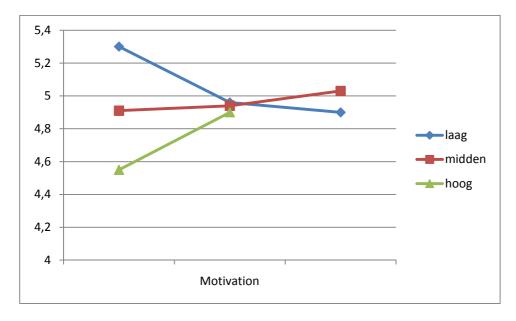
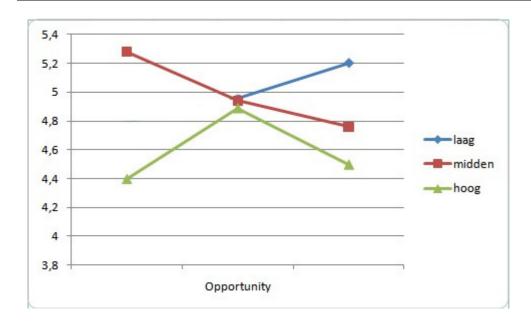


Table C3: Interaction Opportunity

L		LIB		Н		
	4,8		5,28	Z	1,4	
4	,96		4,94	4,	89	Opportunity
	5,2		4,76	Z	ł,5	

Dependent variable: OCB



# Appendix D1: emplyee questionnaire



# Vragenlijst medewerkers

# HRM en bedrijfsprestatie

Informatie: Nander Aarnoutse E: <u>nander@zonnet.nl</u> T: 06 23878675

Deze	vragen gaan over het personeelsbeleid op uw afdeling.		sui			
Geef	per stelling aan in hoeverre u de stelling juist vindt voor uw afdeling.	Helemaal mee oneens	Grotendeels mee oneens	Neutraal	Grotendeels mee eens	Helemaal mee eens
Mijn a	afdeling biedt:					
1	het gebruik van selectie-interviews voor het selecteren van nieuwe medewerkers.	1	2	3	4	5
2	het gebruik van selectietests (bijvoorbeeld intelligentie, persoonlijkheid, interesse) voor het selecteren van nieuwe medewerkers.	1	2	3	4	5
3	het gebruik van assessment centers voor het selecteren van nieuwe medewerkers.	1	2	3	4	5
4	het gebruik van gespecialiseerde selectiebureaus voor het selecteren van nieuwe medewerkers.	1	2	3	4	5
5	enige vorm van opleiden.	1	2	3	4	5
6	formele interne bedrijfstrainingen.	1	2	3	4	5
7	externe trainingen.	1	2	3	4	5
8	de mogelijkheid om vaardigheden verder te ontwikkelen.	1	2	3	4	5
9	sociale vaardigheidstrainingen zoals communicatietraining of presentatietraining.	1	2	3	4	5
10	managementtraining en -ontwikkeling.	1	2	3	4	5
11	formele carrièretrajecten.	1	2	3	4	5
12	hogere salarissen dan marktconform is.	1	2	3	4	5
13	naast het basissalaris een bonus of andere financiële extra's.	1	2	3	4	5
14	naast het basissalaris een individuele prestatiebeloning.	1	2	3	4	5
15	naast het basissalaris een team- of afdelingsgebonden prestatiebeloning	1	2	3	4	5
16	een systeem voor winstdeling.	1	2	3	4	5
17	een formeel functionerings- en beoordelingssysteem.	1	2	3	4	5
18	jaarlijkse evaluatie van prestaties in een gesprek.	1	2	3	4	5
19	beoordeling van prestatie meerdere keren gedurende het jaar in een gesprek.	1	2	3	4	5

		Helemaal mee oneens	Grotendeels mee oneens	လ Neutraal	Grotendeels mee eens	<sup>വ</sup> Helemaal mee eens
20	gezamenlijk overeengekomen prestatiedoelen.	1	2	3	4	5
21	beoordeling van teamprestatie als onderdeel van mijn beoordeling.	1	2	3	4	5
22	werkoverleg.	1	2	3	4	5
23	betrokkenheid bij het maken van beleid.	1	2	3	4	5
24	de vrijheid om in nieuwe materialen en technologie te investeren.	1	2	3	4	5
25	de mogelijkheid om zelf de onderlinge taken in te delen.	1	2	3	4	5
26	deelname in zelfsturende teams.	1	2	3	4	5
27	de mogelijkheid om zelf de kwaliteit en de uitvoer van het werk te bewaken.	1	2	3	4	5
28	het zelf bewaken van de kosten en de productiviteit.	1	2	3	4	5
29	betrokkenheid bij beslissingen over het selecteren van een nieuwe collega.	1	2	3	4	5
30	beïnvloeding van de direct leidinggevende van de eigen werkplanning.	1	2	3	4	5
31	controle van activiteiten door de leidinggevende.	1	2	3	4	5
32	dagelijkse verdeling van taken door de leidinggevende.	1	2	3	4	5

	vragen gaan over de communicatie op uw afdeling. Geef per stelling hoeverre u het eens bent met deze stellingen.	Helemaal mee oneens	Mee oneens	Neutraal	Mee eens	Helemaal mee eens
79 80	Mijn leidinggevende informeert me over zaken die mij kunnen beïnvloeden. Mijn leidinggevende informeert me over werkpraktijken en strategieën.	1 1	2 2	3 3	4 4	5 5
81	Mijn leidinggevende begeleidt mij door het geven van duidelijke informatie over mijn baan.	1	2	3	4	5

Appendix D2: questionnaire team leader



# Vragenlijst afdelingsleiders

HRM en bedrijfsprestatie

Informatie: Nander Aarnoutse <u>nander@zonnet.nl</u> 06 - 23878675

#### Deze vragen gaan over het personeelsbeleid op uw afdeling.

Geef per stelling aan in hoeverre deze geldt voor uw afdeling.

1 = Ja, voor alle werknemers op deze afdeling

2 = Ja, voor een meerderheid van de werknemers op deze afdeling (> 50%)

3 = Ja, voor een minderheid van de werknemers op deze afdeling (< 50%)

4 = Nee, voor geen werknemer op deze afdeling

#### Werving en selectie

1	Wordt er gebruik gemaakt van selectie-interviews?	1	2	3	4
2	Wordt er gebruik gemaakt van selectietests (bijvoorbeeld intelligentie, persoonlijkheid, interesse)?	1	2	3	4
3	Wordt er gebruikgemaakt van assessment centers?	1	2	3	4
4	Wordt er gebruikgemaakt van gespecialiseerde selectiebureaus?	1	2	3	4

#### Medewerkerontwikkeling en carrièremogelijkheden

5	Doet uw afdeling aan enige vorm van opleiden?	1	2	3	4
6	Wordt gebruik gemaakt van formele interne bedrijfstrainingen?	1	2	3	4
7	Wordt gebruik gemaakt van externe trainingen?	1	2	3	4
8	Wordt medewerkers de mogelijkheid geboden om hun vaardigheden verder te ontwikkelen?	1	2	3	4
9	Nemen medewerkers deel aan sociale vaardigheidstrainingen zoals communicatietraining of presentatietraining?	1	2	3	4
10	Wordt gebruikgemaakt van managementtraining en -ontwikkeling?	1	2	3	4
11	Wordt gebruikgemaakt van formele carrièretrajecten?	1	2	3	4
Rolo	ningen				
Belo	ningen				
<b>Belo</b> 12	<b>ningen</b> Betaalt uw afdeling hogere salarissen dan marktconform is?	1	2	3	4
	-	1 1	2 2	3 3	4 4
12	Betaalt uw afdeling hogere salarissen dan marktconform is? Verdienen medewerkers van uw afdeling naast hun basissalaris een bonus	•	-	-	•
12 13	Betaalt uw afdeling hogere salarissen dan marktconform is? Verdienen medewerkers van uw afdeling naast hun basissalaris een bonus of andere financiële extra's? Verdienen medewerkers naast hun basissalaris een individuele	1	2	3	4

<ul> <li>1 = Ja, voor alle werknemers op deze afdeling</li> <li>2 = Ja, voor een meerderheid van de werknemers op deze afdeling (&gt; 50%)</li> <li>3 = Ja, voor een minderheid van de werknemers op deze afdeling (&lt; 50%)</li> <li>4 = Nee, voor geen werknemer op deze afdeling</li> </ul>								
Beo	ordeling							
17	Wordt er gebruik gemaakt van een formeel functionerings- en beoordelingssysteem?	1	2	3	4			
18	Wordt het presteren van medewerkers jaarlijks beoordeeld in een gesprek?	1	2	3	4			
19	Wordt het presteren van medewerkers meerdere keren gedurende het jaar beoordeeld in een gesprek?	1	2	3	4			
20	Worden met medewerkers prestatiedoelen afgesproken?	1	2	3	4			
21	Speelt de teamprestatie een rol in de beoordeling van de prestaties van medewerkers?	1	2	3	4			
Parti	Participatie en communicatie							
22	Vindt er werkoverleg plaats?	1	2	3	4			
23	Worden medewerkers betrokken bij het maken van beleid?	1	2	3	4			
24	Hebben werknemers de vrijheid om in nieuwe materialen en technologie te investeren?	1	2	3	4			
25	Delen werknemers zelf de onderlinge taken in?	1	2	3	4			
26	Opereren werknemers in zelfsturende teams?	1	2	3	4			
27	Bewaken werknemers zelf de kwaliteit en de uitvoer van het werk?	1	2	3	4			
28	Bewaken werknemers zelf de kosten en de productiviteit?	1	2	3	4			
29	Zijn medewerkers betrokken bij het beslissen over het selecteren van een nieuwe collega?	1	2	3	4			
30	Beïnvloedt de direct leidinggevende de planning van de werknemers?	1	2	3	4			
31	Worden de activiteiten van de werknemers gecontroleerd door de direct leidinggevende?	1	2	3	4			
32	Geeft de direct leidinggevende dagelijks taken aan werknemers?	1	2	3	4			

Kunt i	gedeelte willen we kijken naar het presteren van medewerkers. J aangeven in welke mate uw medewerkers scoren op onderstaande gen/punten?	Helemaal niet mee eens	Sterk niet mee eens	Niet mee eens	Neutraal	Mee eens	Sterk mee eens	Zeer sterk mee eens
64	Aanwezigheid van medewerkers in deze afdeling is bovengemiddeld.	1	2	3	4	5	6	7
65	Medewerkers in deze afdeling komen de regels van deze afdeling na, zelfs als niemand daarop toeziet.	1	2	3	4	5	6	7
66	Medewerkers in deze afdeling besteden veel tijd aan het klagen over onbelangrijke zaken.	1	2	3	4	5	6	7
67	Medewerkers in deze afdeling richten zich altijd op wat er mis/fout is in plaats van dingen van de positieve kant te bekijken.	1	2	3	4	5	6	7
68	Medewerkers in deze afdeling nemen deel aan bijeenkomsten die niet verplicht zijn, maar als belangrijk worden beschouwd.	1	2	3	4	5	6	7
69	Medewerkers in deze afdeling houden zich op de hoogte van veranderingen in de unit.	1	2	3	4	5	6	7
70	Medewerkers in deze afdeling zorgen ervoor problemen met medewerkers te voorkomen.	1	2	3	4	5	6	7
71	Medewerkers in deze afdeling zijn zich bewust van hoe hun gedrag het werk van anderen beïnvloedt.	1	2	3	4	5	6	7
72	Medewerkers in deze afdeling helpen anderen die een hoge werkbelasting hebben.	1	2	3	4	5	6	7
73	Medewerkers in deze afdeling zijn bereid anderen te helpen met werkgerelateerde problemen.	1	2	3	4	5	6	7
74	Medewerkers in deze afdeling vervullen de taken zoals vastgelegd in hun functieomschrijvingen.	1	2	3	4	5	6	7
75	Medewerkers in deze afdeling voeren de taken uit die in hun baan van hun verwacht worden.	1	2	3	4	5	6	7
76	Medewerkers in deze afdeling voldoen aan de prestatieverwachtingen.	1	2	3	4	5	6	7
77	Medewerkers in deze afdeling komen hun verantwoordelijkheden na.	1	2	3	4	5	6	7