



# **Does organizational identification, being a manager and complexity predict level of engagement?**

---

**An exploratory study with 168 respondents in an automotive company in Sweden**

School of Industrial Economics  
Blekinge Institute of Technology  
SE-371 79 Karlskrona Sweden

Contact Information:

Author:

Erik Edvardsson

E-mail: [ere08@bth.se](mailto:ere08@bth.se)

University tutor:

Doctor Urban Ljungquist

School of Industrial Economics, Blekinge Institute of Technology

School of Industrial Economics  
Blekinge Institute of Technology  
SE-371 79 Karlskrona, Sweden

Internet: [www.bth.se](http://www.bth.se)  
Phone: +46 455 38 50 00  
Fax : +46 455 38 50 57

## Abstract

Employee engagement is of great interest for leaders. It is not surprising that leaders seek ways to influence, manage and enhance level of engagement among its employees. Instead of asking directly how engaged their workforce is, leaders often ask questions on related constructs to engagement. The objective of this research is threefold. First is to determine if organizational identification (OID) is a predictor of engagement. Second is to conclude if being a manager with direct reports predicts higher level of engagement versus non-managers. Third is to decide if complexity in an organization has a moderating contextual effect on the relationships between employee engagement, employee OID and the role as a manager with direct reports. This research contributes to the established theories by testing a theoretical model with variables not found to be tested empirically together before. Data was collected in a survey with 168 respondents. The validity and reliability of the data was good, upon two multiple regression analyses were completed in order to test three hypotheses. Results show significant support for two of three hypotheses. First, high employee OID predicts high employee engagement ( $p$ -value 0,000 significant at 0,05 level). This is a complement to existing literature. Leaders can practically measure OID if they are interested in understanding and predicting level of engagement in their workforce. Second, managers with direct reports predicts higher engagement versus non-managers ( $p$ -value 0,021 significant at 0,05 level). This research does not answer why such difference is found, but an analysis is provided from both a manager's and a subordinate's view. Third, an employee (manager or non-manager) who spend a high percentage of time in meetings requested/organized by others does not make the relationship between OID and engagement weaker ( $p$ -value 0,440 not significant at 0,05 level). This study also indicates that most managers and non-managers spend less than 30% of their work week in meetings requested/organized by someone else. This speaks for a majority of both managers and non-managers are in control over the majority of their time during a working week.

Keywords: Employee engagement, Organizational identification, OID, Organizational complexity, Antecedents to engagement, Antecedents to organizational identification, Multiple regression analysis

## Acknowledgments

Hereby I would like to express my gratitude to Doctor Urban Ljungquist at BTH. You have been my tutor throughout this research and provided endless of support and inspiration. Without your contribution this study would not have been possible.

I also want to give my appreciation to my two external advisors. First, a Doctor at Gothenburg University, Department of Psychology. Second, a Doctor at the company I have studied. You have helped me throughout the complete study, including design review of my survey and interpretation of the result.

Finally, I want to say thank you to all employees participating in the survey. Your individual contribution is much appreciated. Without your answers there would not have been any result to analyze.

*Erik Edvardsson*

*14<sup>th</sup> of February, 2015, Gothenburg*

## Contents

1. Introduction .....	7
1.1 Background.....	7
1.2 Problem discussion .....	8
1.3 Problem formulation and purpose .....	8
1.4 Thesis structure .....	9
2. Theoretical framework .....	10
2.1 Engagement .....	10
2.1.1 Introduction .....	10
2.1.2 Related constructs .....	10
2.1.3 Definition of Engagement .....	13
2.1.4 Types .....	14
2.1.5 Input and antecedents .....	15
2.1.6 Outputs .....	15
2.1.7 Measures of engagement.....	15
2.2 Organizational identification .....	16
2.2.1 Introduction .....	16
2.2.2 Related constructs .....	16
2.2.3 Definition of organizational identification .....	18
2.2.4 Types .....	19
2.2.5 Input and antecedents .....	19
2.2.6 Outputs .....	20
2.2.7 Measures of organizational identification .....	20
2.3 Complexity in an organization .....	21
2.3.1 Introduction .....	21
2.3.2 States of un/predictability .....	21
2.3.3 Complex system theory .....	21
2.3.4 Metaphors for complex organizations .....	22
2.3.5 Approaches to organizational complexity.....	22
2.3.6 Measures of complexity.....	22
2.4 Theoretical research model and hypothesises .....	23
3. Method.....	26
3.1 Research paradigm .....	26
3.2 Research method .....	26
3.3 Questionnaire and measures .....	28
3.3.1 Questionnaire design.....	28
3.3.2 Measures .....	28
3.3.3 Risk assessment of scales used .....	29
3.4 Statistical Measurement .....	29
3.4.1 Validity and reliability .....	29
3.4.2 Multiple regression analysis .....	30
3.5 Data collection .....	32

3.5.1 Primary data, sample and survey distribution .....	32
3.5.2 Description of sample .....	33
3.5.3 Descriptive statistics .....	34
3.5.4 Measure of internal consistency .....	34
3.5.5 Measure of multicollinearity .....	35
3.5.6 Secondary data .....	36
3.6 Credibility of the study .....	36
4. Results .....	38
4.1 Test of hypothesizes .....	38
4.1.1 Test of H1 and H2 .....	38
4.1.2 Test of H3 .....	39
5. Analysis and discussion .....	41
5.1 Analysis of sample and generalization .....	41
5.2 Analysis of theoretical model .....	41
5.2.1 Analysis of org. identification in relation to engagement .....	42
5.2.2 Analysis of role in relation to engagement .....	42
5.2.3 Analysis of time in meetings in relation to engagement .....	43
6. Conclusions .....	44
6.1 Recap of research .....	44
6.2 Limitations of the study and results .....	44
6.3 Conclusions .....	45
6.3.1 Implications .....	45
6.4 Future research .....	46
7. References .....	47
8. Appendices .....	58
Appendix A – Scale for Role .....	58
Appendix B – Scale for complexity in an organization .....	58
Appendix C – Scale for control and sample variables .....	58
Appendix D – Survey design .....	59

## Abbreviations used in thesis

AOC	Attitudinal Organizational Commitment
MBA	Master in Business Administration
OC	Organizational Commitment
OCB	Organizational Citizen Behaviour
OID	Organizational Identification
SET	Social Exchange Theory
SIT	Social Identity Theory

# 1. Introduction

This chapter provides an introduction which maps out the background, problem discussion, purpose and overview of the thesis. The background offers an understanding for the importance of employee engagement and its definition. The problem discussion outlines how leaders want to understand level of engagement but do not want to measure it directly. Instead, they often measure engagement with closely related constructs. The linkage between engagement, the role as a manager and organizational identification (OID) is also introduced, as well as complexity in an organization. Following that, the purpose of the thesis is presented. The chapter closes with a structure overview.

## 1.1 Background

The Human Capital Institute lists interesting financial consequences of employee engagement: Fully engaged employees return 120% of their salary in value, engaged employees return 100% of their salary in value, somewhat disengaged employees return 80% of their salary in value and disengaged employees return 60% of their salary in value (HCI, 2014). This makes it clear that employee engagement really matters.

On the same terms, several researchers argue that engagement can help to make predictions on employee outcomes, organizational successes and workplace performance (Shuck, Reio Rocco, 2011; Saks, 2006), as well as to spur generation of revenues, growth and profit (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). Others argue engagement is related to job performance and extra-role behaviour (Schaufeli and Bakker, 2004; Sonnentag, 2003). Given the possibility for such positive outcomes by employee engagement, it is not surprising that organisations seek ways to influence, manage and enhance level of engagement among its employees.

The definition of employee engagement vary greatly across corporations, consultants and researchers (Figure 1). It is not unusual that questions are being asked how such an elusive concept can be quantified. Psychologist William Kahn (1990) completed some of the earliest work on engagement. Today, researchers have developed techniques how to measure the construct and some of its ingredients. These ingredients often include the degree to which employees fully occupy themselves in their work, as well as the strength of their commitment to the employer and role.



Figure 1: Examples of definitions of employee engagement

## 1.2 Problem discussion

The level of employee engagement in organizations declines worldwide (Gebauer, Loman & Gordon, 2010). The trend is well recognized (Morieux, 2011; Richman, 2006; Bates, 2004). According to Chalofsky (2010), an estimated 30% of those who go to work are partially engaged with their work. To single out a specific cause for declining engagement is probably not possible. Engagement is more likely a result of many, not to say countless, interacting parameters.

Organizations want to understand how engaged their workforce is. They want to predict levels of engagement, too. These kind of studies are often completed through surveys with questions. When data is collected and results are analysed, organizations can prioritize improvement activities and make development plans (Ketter, 2008). However, organizations might not want to directly ask how engaged their workforce is. Instead, they ask questions on related constructs to engagement. Those questions aim to understand constructs such as employee turnover intentions, organizational commitment, organizational citizenship behaviour, employee satisfaction and well-being. Saks (2006) recommends to study additional predictors of engagement.

Wollard & Shuck (2011) summarized empirically tested antecedents of engagement in a meta-analysis. When reviewing those antecedents of engagement, many of them seem to be related to an employee's willingness to belong to, and to identify with, an organization. This fits well with Ashforth and Mael (1989) definition of an employee's organizational identification (OID): "The perception of oneness with or belongingness to an organization, where the individual defines him or herself in terms of the organization(s) in which he or she is a member". This supports that OID strongly overlaps with antecedents of engagement. Thus, it opens for the interesting possibility that OID is a predictor for engagement.

Most companies' today operate in a highly dynamic and a global complex environment. Organizations must be flexible and rapidly respond to change (Hendrick, 2009). Their ability to adapt is crucial and necessary (Kim & Park, 2008; Terry, Carey & Callan, 2012). This environment does not make it easier to spur level of engagement in a workforce. Supported by Nolan (2011), "The difficult economic climate and accompanying restructuring and resizing has brought it further to the fore as companies try to maintain and increase engagement throughout these difficult processes." As companies' seek to gain competitive advantages and survive, it involves organizational change.

Organizational change often adds complexity in organizations, with more structural layers and more procedures, resulting in significant increase of interface structure, coordination bodies and decision approvals. In such organizations especially managers become highly occupied in attending coordination meetings and writing reports. This situation does not allow managers to work with their teams. This is according to Morieux (2011) a main contributor to why we see decrease in employee engagement. If that is true, there is a chance that there is a general difference in level of engagement between managers and non-managers.

It can also be that complexity in an organization has a general negative impact on employees' level of OID and engagement, regardless of being managers or non-managers. This is supported by Hongwei and Brown (2013), whom found that employee OID is dynamic and sensitive to alterations in the employee-organization relationship or person- or context-related change.

## 1.3 Problem formulation and purpose

The objective of this research is threefold. First is to determine if OID is a predictor of engagement. Second is to conclude if being a manager with direct reports predicts higher level of engagement compared to non-managers. Third is to decide if complexity in an organization has a moderating contextual effect on the relationships between employee engagement, employee OID and the role as a manager with direct reports.



This thesis contributes to the established theories by testing a theoretical model with variables not found to be tested empirically together before. This paper therefore strive to provide results which on one hand expand the academic theory and on the other hand are useful in practical considerations. The greatest contribution is if this study can empirically test and find significant support that OID predicts level of engagement. That will expand the opportunities for leaders to practically predict level of engagement in their workforce by measuring OID, beyond other empirically tested and related constructs.

## 1.4 Thesis structure

This paper is subdivided into six main chapters, which are themselves divided into numerous sections. Chapter 1 gives an overview about the problem and objectives of the thesis. It provides a background to why engagement is important and why further studies are motivated. The problem discussion funnel down to a problem formulation with purposes and objectives. It ends with a description of the thesis structure.

Chapter 2 focuses on the theory behind the topics of interest and presents a comprehensive summary on the related topics. The theoretical model is also presented, as well as hypotheses.

Chapter 3 describes the methodological context of the thesis to show how the problems were approached, how the study was developed and how the results were achieved. A step-by-step overview is provided and specified. The chapter contains a description of the research method, survey method, sample, data collection, measurements and credibility of the study. The scales used and developed for the survey are explained and motivated, as well as the descriptive statistics of the sample and testing of internal consistency and multicollinearity.

Chapter 4 focuses on the empirical results of the research. It presents the regression analyses and test each hypothesis. Support or rejection per hypothesis are also included.

Chapter 5 completes the analysis and discussion on the result. It links the findings with the literature. The results from the tested hypotheses are also discussed.

Chapter 6 ends the thesis with conclusions and contributions. It contains a summary of findings. It also covers how this study can affect research within organizational behaviour, as well as limitations and suggestions for future studies.

Chapter 7 and 8 contains references and appendices, respectively.

## 2. Theoretical framework

This chapter contains the literature review, the theoretical research model and hypotheses. The literature section is primarily focused on the three constructs in scope of this study: employee engagement, organizational identification (OID) and complexity in an organization. It also contains a review of closely related concepts to employee engagement and OID. The theoretical research model summarizes the most important findings in the literature review. It shows the linkage between engagement and OID. Hypotheses are imbedded in the development of the theoretical research model.

### 2.1 Engagement

#### 2.1.1 Introduction

The history of engagement in the academic literature started in 1993. That was when Smith et al. (1993) defined the concept of engagement as “an employee’s involvement with, and commitment to, and satisfaction to work. Employee engagement is part of employee retention”. Today, employee engagement is a growing and evolving domain in business, management, psychology and human resource fields.

Still, much of what has been written about engagement comes from the practitioner literature and consulting firms (Robinson et al, 2004). Therefore, it should be welcome with additional empirical and academic studies within the domain of engagement. Compared to other organizational behaviour constructs, the number of empirical studies on engagement are still few. For example, in a literature search on “Employee Engagement” together a closely related construct being “Organizational Commitment” (BTH’s summon database, Oct, 2014), more than twice the amount of relevant hits were returned on “Organizational Commitment” (Table 1). That is a substantial difference. This reinforces the need to contribute with additional academic studies on engagement and its relationship with other related constructs within the area of organizational behaviour.

▶ “Employee Engagement”	▶ “Organizational Commitment”
150 000 relevant items	340 000 relevant items
- 71 000 journal articles	- 230 000 journal articles
- 48 000 books	- 65 000 books

Table 1: Comparison of literature hits – BTH Summon database (24<sup>th</sup> of Oct, 2014)

One of the complications with engagement is that there are still relatively few academic studies performed on the construct. There can be natural reasons for this. When engagement is applied in an organizational setting it tends to have a significant overlap with other better known and established constructs, such as employee organizational commitment (OC) and organizational citizenship behaviour (OCB). (Robinson et al., 2004) Therefore, efforts might have often been directed in favour of these better known and established constructs. But that has changed. According to May et al. (2004), engagement is distinguishable from other related constructs, such as OC and OCB. Naturally, there has been an increase of empirical studies directly addressing employee engagement and organizational outcomes.

Before defining engagement and understanding what makes it a unique construct, below is a summary of two related concepts mentioned above; employee commitment and organizational citizenship behaviour.

#### 2.1.2 Related constructs

##### 2.1.2.1 Employee Commitment

Michael Silverman reviews current research on employee commitment in an article by Robinson et al. (2004). It is a comprehensive summary on the construct.

### Types of commitment

In the last 15 years, more and more scholars agree that commitment should be viewed as a multidimensional construct. Allan and Meyer (1990) summarized existing definitions and created a three-component model. They identified the three themes of commitment being:

- an affective emotional attachment towards an organization (affective commitment, also called attitudinal commitment)
- the recognition of costs associated with leaving an organization (continuance commitment), and
- a moral obligation to remain with an organization (normative commitment)

More recently, O'Malley (2000) explored how the social environment created by the organization makes employees feel incorporated, and gives them a sense of identity. That produced five general factors with regards to commitment. Those are:

- Affiliative commitment – The compatibility of the employee's and the organization's interests and values
- Associative commitment – The employee's perception of belonging to the organization
- Moral commitment – The sense of mutual obligation between the employee and the organization
- Affective commitment – The feeling of job satisfaction experienced by the employee
- Structural commitment – The belief that the employee is engaged in a fair economic change

In summary, when an organisation plans to assess the commitment of their workforce, not only should it ask how much commitment exists, but also what types of commitment exists.

### Antecedents

A total of twelve antecedents to commitment are reviewed in the article by Robinson et al. (2004). Starting with demographics, a range of demographic variables has been found to be related to employee commitment. For example age and gender (Mathieu and Zajac, 1990). Further, the recruitment process matters for commitment. Making employees feel welcomed and valued in the recruitment procedure is beneficial (Parks and Floyd, 1996). Research literature also shows that commitment is effected by employee expectations met (Wanous et al., 1992), a good introduction programme (Mignerey et al., 1995), quality of relationship with managers (CIPD, 2001) and colleagues (Beumeister and Leary, 1995), group membership (Hogg et al., 1995), organizational justice and trust (McFarlin and Sweeney, 1992), promotion (Schwarzwald et al., 1992), work-life balance (Families and Work Institute, 1998), job satisfaction (Iaffaldano and Muchinsky, 1985) and pay and reward (Grover and Crooker, 1995). Also, when employees are sure they will grow and learn with their current employer, their level of commitment to stay with that particular organization is higher (Opkara, 2004). Once established, commitment has to be maintained by ensuring clear roles and responsibilities for employees and managers and an understanding of what is required of them in their jobs.

### Outputs

Research has shown that committed employees display more positive attitudes and behaviours at work (e.g. satisfaction, performance) than noncommitted employees (Meyer, Allen & Smith, 1993; Meyer, Stanley, Hercovitch & Topopnytsky, 2002). Affective commitment ( – feeling of job satisfaction – ) is the form that has the highest potential benefit for an organization. Ayeni and Phoolpa (2007) found a strong relationship between job satisfaction and organizational commitment. According to them job satisfaction determine how well the organization meets employees expectations. Mathieu and Zajac (1990) also found that older workers are more satisfied with their job. Probably because receiving better positions and having 'cognitively satisfied' themselves in the organization. They also found that number of years in a position is significantly positively related to affective commitment, and length of service is significantly positively related to behavioural commitment.

### 2.1.2.2 Organizational Citizenship Behaviour

Rob Barkworth reviews current research on organizational citizenship behaviour (OCB) in an article by Robinson et al. (2004). It is a comprehensive summary on the construct.

#### Definition

OCB includes a large group of behaviours, ranging from helping colleagues to spread positive impressions of the organization to others. Research literature has produced many definitions and types of OCB. Organ (1977, as cited in Organ and Paine, 1999) was one the first to express ideas of the concept. He stated that employees that perform OCBs promote effective running of the organization. However, OCBs are discretionary and employees can choose to not perform those. Further, given OCBs are usually not part of the reward system, absence of OCBs is not punishable by an organization. Organ (1988) defined OCB as “Individual behaviour that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective running of the organization”.

#### Types

Podsakoff et al. (2000) review OCB and find 30 forms of behaviours. Their paper classifies them into seven themes, which are summarized below. Each of the theme, and its related behaviours, can be further classified as directed at the organization (OCB-O) or individual (OCB-I) (Barbuto et al., 2003; Turnley et al., 2003).

- Helping behaviour – involves the voluntarily helping of others. Examples are assisting others that have fallen behind and identifying and stopping work-related problems.
- Sportsmanship – include behaviours such as carry on with a positive attitude in the face of adversity, being willing to set aside personal interests for the good of the group and being unfazed by the rejection of suggestions.
- Organizational loyalty – consists of behaviours that involve promoting the organization to the outside world, and staying committed to it. It could also involve a personal sacrifice.
- Organizational compliance – when the employee follows organizational rules when not monitored. Many employees do not follow all of rules all of the time.
- Individual initiative – include behaviours working with extreme enthusiasm, taking on extra roles and showing interest in improving things to increase performance. It is when an employee demonstrates performance over and above what is expected.
- Civic virtue – include behaviours such as volunteering and taking an interest in organizational committees and being alert for threats to the organization. It is when an employee shows interest in the organization as a whole.
- Self-development – include behaviours of employee’s voluntarily improving of knowledge, skills and abilities in such way to be helpful to the organization.

#### Antecedents

Research on OCB has identified multiple antecedents. Organ and Ryan (1995) found that attitudinal predictors such as job satisfaction, organizational commitment, leader supportiveness and fairness correlate positively with OCB. They also found that individuals’ personalities can effect various forms of OCB, such as agreeableness, affectivity and conscientiousness. Rousseau (1995) investigates so called psychological contracts. This is much related to an employee’s perception of receiving a fair treatment. Psychological contracts are usually believed promises made between an employee and the employer. When such contract is broken by the employer, it has been found that it can have effects on employee’s job satisfaction, organizational commitment and OCB(s). Zellars et al (2002) found that ‘abusive supervision’ has a negative effect on OCB. Other areas which affects outcome on OCB involves job tenure, gender, feedback, task routinisation, satisfying task, involvement in decision-making and leadership style (Podsakoff et al., 2000).

#### Outputs

Some support has been given to the idea that OCBs can lead to increased organizational effectiveness. However, research on that question is still in its beginning. Output from OCBs can be described both in organizational-level outcomes and individual-level outcomes.

On an organizational-level, Podsakoff et al. (2000) reported that of the 160 papers on the topic, only five had tested the organizational effectiveness link. Karambayya (1990, as cited in Podsakoff et al., 2000) found that employees in high-performing work units were more likely to show OCB than those in low-performing units. Podsakoff and MacKenzie (1994) found that sportsmanship and civic virtue correlated positively with departmental success but helping behaviours did not. Their study was conducted in an insurance company with high turnover. The result suggests that lost performance by high-performing employees taking time to help others, was not compensated by the gains of lower performing colleagues due to their generally short stay. This study highlights that context in which OCB occurs needs to be taken into consideration. It also suggest that OCB might not be suitable in all circumstances. Podsakoff et al. (1997) found that sportsmanship and helping behaviour have significant impact on organizational effectiveness. The study was conducted in a paper mill. This strengthen the importance of context in which OCB occurs. Wals and Niehoff (1994, as cited in Podsakoff et al., 2000) found that helping behaviours was associated with greater operating efficiency and customer satisfaction. The study was comparing fast food restaurants. Additional research conducted in the insurance sales sector revealed that employees who display higher levels of OCB are perceived by customers to provide better service management (Bell and Manguc, 2002).

With regards to individual-level outcomes, it has been found in a study that OCB counts as much, in employee evaluations, as objective performance levels (MacKenzie et al., 1991). This raise concerns since all employees might not be aware of that. Furthermore, all managers might not communicate that. Chen et al. (1998) found in another study that employees with lower levels of OCB were more likely to leave the organization. Therefore, OCB seems to have implications in terms of employee performance and retention.

### 2.1.3 Definition of Engagement

Kahn (1990) completed some of the earliest work on engagement as a construct. He defined it as “the harnessing of organization members’ selves to their work roles; in engagement, people employ and express themselves physically, cognitively and emotionally during role performances”. He viewed it as people bring themselves into or remove themselves from particular task behaviours, where he focused on moments of task performance. His starting point was work and metaphors by Goffman (1961). Goffman (1961) suggested that peoples’ attachment to and detachment from their work roles varies, consequently people act out momentary attachments and detachments in role performance.

Kahn’s (1990) work on engagement integrates the notion (Alderfer, 1972; Maslow, 1954) that people need both self-expression and self-employment in their work lives. When people get both self-expression and self-employment they can be their “preferred self”. When people act with their “preferred self” they use and express dimensions of themselves (cognitive, emotional, and physical) that results in self-employment and self-expression. In other words, the combination of self-employing and self-expressing offers behaviours that bring alive the relation of oneself to the work role. Very similar to Kahn’s definition, Shuck and Wollard (2010) defined employee engagement as “an individual employee’s cognitive, emotional and behavioural state directed toward desired organizational outcomes.” Aligned with previous scholars, May et al. (2004) define engagement as “to do with how individuals employ themselves in the performance of their job.”

Today there are three models which can be used to explain engagement in theory; (1) psychological states, (2) burnout theory with work factors and conditions, and (3) Social Exchange Theory (SET). First, Kahn (1990) tested and found three psychological conditions related with engagement and disengagement at work: meaningfulness, safety and availability. Second, from the burnout literature Maslach et al. (2001) found six factors which lead to job engagement or burnout. Engagement was viewed as the opposite to burnout and burnout involves the erosion of engagement at work. Third, Saks (2006) argued that SET can be used as a theoretical foundation to explain why individuals are more or less engaged in their job and organization. The basic principle of SET is that the relationships [organization-employee] evolves over time into trusting, loyal

and mutual commitments as long as the parties accept by certain “rules” of exchange (Cropanzano & Mitchell, 2005). In other words, when employees feel they receive resources (economic and socioemotional) from their organization they feel pleased to repay the organization with greater levels of engagement.

With the roots in SET, Saks (2006) define engagement “as a distinct and unique construct which consists of cognitive, emotional (affective), and behavioural components associated with role performance.” He states that engagement is distinguishable from other related constructs, such as organizational commitment, OCB and job involvement. For example, commitment refers to a person’s attitude and attachment towards their organization. Engagement is not an attitude, rather the degree of attentive and absorption in role performance. Saks (2006) anchors his definition with the use of two other scholars’ work. First, Robinson et al. (2004) state “...engagement contains many of the elements of both commitment and OCB, but is by no means a perfect match with either. In addition, neither commitment nor OCB reflect sufficiently the two aspects of engagement, its two-way nature (organization-employee relationship), and the extent to which engaged employees are expected to have an element of business awareness”. Second, May et al. (2004) states the “engagement may be thought of as an antecedent to job involvement in that individuals who experience deep engagement in their roles should come to identify with their jobs.”

In summary, the three models are correlated. SET provides the foundation to explain why employees choose to become more or less engaged at work. The psychological states (Kahn, 1990) and work factors and conditions (Maslach et al, 2001) can all be viewed as input to SET (Saks, 2006).

While engagement lacks a distinct definition, the importance of it or closely related constructs is clear. Most often, engagement has been defined as cognitive (emotional and intellectual) commitment to the organization (Baumruk, 2004; Richman, 2006; Shaw, 2005) but certain definitions emphasise the affective components (feelings and “state-of-mind”) (Schaufeli et al., 2002) and behavioural components (Saks, 2006). However, Robinson et al (2004) describe employee engagement as, “one step up” from commitment. He states that “research shows that committed employees perform better, therefore, commitment drives engagement. This indicates that perception begins at the inception of the organization-employee relationship. Consequently, organizations that wish to improve levels of employee engagement can focus on increasing and strengthening employees’ perceptions of support they receive from the organization (Saks, 2006).

#### 2.1.4 Types

Kahn (1990) coined two concepts of personal engagement; (1) engagement and (2) disengagement. First, personal engagement is defined as “the harnessing of organization members’ selves to their work roles; in engagement, people employ and express themselves physically, cognitively and emotionally during role performances”. When people employ themselves it can also be referred to as [for example] effort (Hackman & Oldham, 1980). When people express themselves it can be referred to as [for example] creativity (Perkins, 1981). Personal disengagement is defined as “the uncoupling of selves from work roles; in disengagement, people withdraw and defend themselves physically, cognitively, or emotionally during role performances”. When people withdraw themselves it can also be referred to as [for example] burned out (Maslach, 1982). When people defend themselves it can be referred to as [for example] impersonal and emotionally unexpressive (Hochschild, 1983; Rafaeli & Sutton, 1987).

Saks (2006) created two types of employee engagement; (1) job engagement and (2) organization engagement. These are the two most dominant roles for most employees. They have their work role and their role as a member of an organisation. Saks (2006) tests some antecedents for each type and conclude that impact varies between the types of engagement.

### 2.1.5 Input and antecedents

Literature suggest that antecedents to employee engagement should be in place before organizations can reap the benefits of an engaged workforce (Rich et al., 2010; Saks, 2006). May et al (2004) tested a model developed by Kahn (1990) with antecedents such as job enrichment, role fit, rewarding co-worker and supportive supervisor relations. Saks (2006) investigated both job engagement and organizational engagement. He considered antecedents such as job characteristics, perceived organizational support, perceived supervisor support, rewards and recognition, and procedural and distributive justice. He found consequences in divers ways. Konrad (2006) supports that job involvement is key antecedent to employee engagement. In a meta-analysis, Wollard & Shuck (2011) addressed additional antecedents of engagement, such as corporate social responsibility (CSR) and work-life balance. The antecedents they found with empirical evidence are summarized in figure 2.

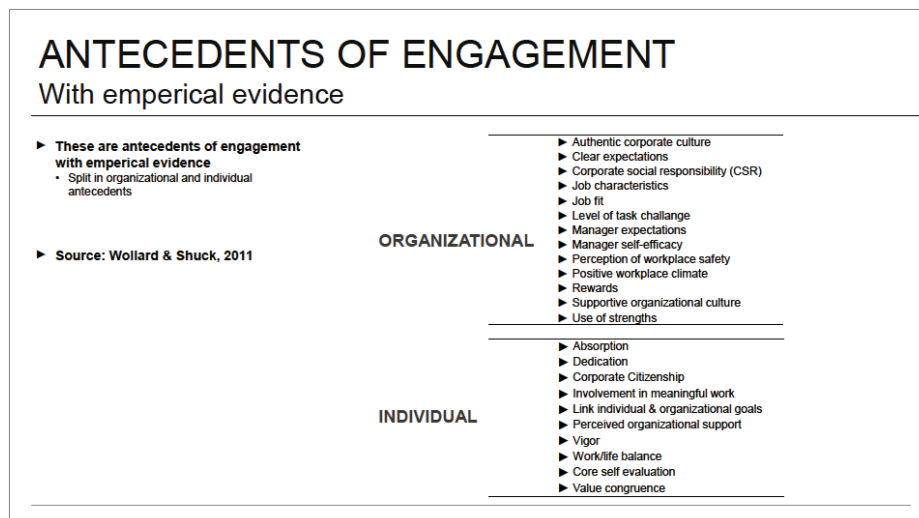


Figure 2: Antecedents to employee engagement with empirical evidence (Wollard & Shuck, 2011)

### 2.1.6 Outputs

Saks (2006) found that engagement predicted job satisfaction, organizational commitment, intention to quit, and OCB. Engagement has also been found to be positively related to organizational commitment and believed to be related to job performance and extra-role behaviour (Schaufeli and Bakker, 2004; Sonnentag, 2003). Vance (2006) states, “The greater an employee’s engagement, the more likely he or she is to ‘go the extra mile’ and deliver excellent on-the-job performance.” Shaw’s (2005) definition of engagement is “translating employee potential into employee performance and business success”, indicating engagement includes behavioural components and employees act/perform more when engaged.

### 2.1.7 Measures of engagement

Two scales to measure engagement, with high internal consistency, have been found in the literature review. First is developed and tested by Robinson et al. (2004). The scale contains 12 statements with an acceptable alpha score. If a survey does not allow space for 12 questions, there is an opportunity to use a sub-set of 5 statements. Second is developed by Saks (2006). The scale contains 11 statements, split in five elements for job engagement and 6 elements for organizational engagement. The alpha scores were acceptable for both categories of engagement.

## 2.2 Organizational identification

### 2.2.1 Introduction

Organizational identification (OID) has been hypothesised in a number of ways. Maybe the most common approach is in terms of shared values and goals between the individual and the organization (e.g. Schneider et al., 1971; Porter et al., 1974; etc.). The first detailed model of OID was proposed by March and Simon in 1958. Later, Patchen (1970) defined OID as “a variety of separate, though related phenomena... (1) feelings of solidarity with the organization; (2) [attitudinal and behavioural] support for the organization; and (3) perception of shared characteristics with other organizational members (p. 155). This form of definition of OID has often been used interchangeably with its related construct organizational commitment (e.g. Gregersen and Black, 1992). The interchangeability probably occurred since Patchen’s definition of OID also contains the three components required in a commitment; being identification, willingness to exert effort for the benefits of the organization, and a desire to remain a member of the organization (Porter et al., 1974; Cook and Wall, 1980). With the three component definition, OID overlaps with additional work behaviours, such as job involvement, job satisfaction and attitudinal organizational commitment (AOC) (Ashforth & Mael, 1989; Mael & Tetrick, 1992; Pratt, 1998). Consequently, for a long time OID was included (Porter, Steers, Mowday, & Boulian, 1974) as a component of AOC.

Before defining OID as a separate construct, below is a summary of the three related concepts; job involvement, job satisfaction and attitudinal organizational commitment (AOC).

### 2.2.2 Related constructs

#### 2.2.2.1 Job involvement

Most researchers have agreed that job involvement is a unique construct, different from other associated constructs such as job satisfaction and organizational commitment (Shore, Thornton & Shore, 1990; Patterson & O’Driscoll, 1990; Brooke, Russell & Price, 1988; Dolke & Srivastara, 1988; Blau, 1986).

##### Definition

Li and Long (1999) define job involvement as the degree to which one show emotional or mental identification with his job. It can be said that employees are involved in their job if they enthusiastically take part in the job related matters (Allport, 1943), they view job as the most important and significant part in life (Dubin, 1966), and recognize performance as main feature of their self-worth (Gurin et al., 1960). Gurin et al. (1960) proposed that most practical sight of job involvement might be relationship between the individual and role of job. Job involvement can also be considered as the opposite of isolation (Argyris, 1964; Kanungo, 1979, 1982).

##### Antecedents

Job involvement is the most important and essential component of work behaviour (Manojlovich, Laschinger, & Heather, 2002; Soong, 2000). Giving employees power over their work content i.e. decisions, quality of product and job related abilities and resources can motivate employees to enhance their job involvement. Hackman & Oldham (1980) developed a job characteristics model and stated that features of job may encourage employee motivation and job involvement. Lawler (1992) and Pfeffer (1994) also argued that through job design, job involvement could be increased. Similar applies to job factors, which can influence the involvement level of individual in his job (Vroom, 1962). Research also shows that job involvement for full time employees are higher than part time or contractual employees (Martin & Hafer, 1995). In addition, individuals’ own personality and variables influenced by different situations can change the level of job involvement (Rabinowitz & Hall, 1977).



## Outputs

Job involvement is an important element with significant impact on individual employee and organizational outcomes. It is a key factor for creating and increasing employees' motivation and plays an important role in productivity and performance of individuals (Lawler, 1986). High job involvement has been found to make employees more self-determining and self-assured (Wood, 1974). For individuals where involvement in job is high, it can be said that the job is important for an individual's self-image (Kanungo, 1982). Job involvement has also been found to effect an employee's self-esteem (Gurin, Veroff, and Feld, 1960) and to be significant to employees' growth and satisfaction as well as motivation and attitude directed towards goals (Hackman & Lawler, 1971; Kahn, 1990; Lawler & Hall, 1970).

Empirical research has also found negative relationship between job involvement, absenteeism (Rabinowitz & Hall, 1977), turnover (Bass, 1965) and job stressors (Frone, Russell, & Cooper, 1995). Several studies related to job involvement and organizational commitment have revealed correlations (Cheloha & Farr, 1980; Gechman & Wiener, 1975; Hall & Schneider, 1972; Mowday, Porter & Steers, 1982; Mowday, Steers, & Porter, 1979; Rabinowitz & Hall, 1977; Weissenberg & Gruenfeld, 1968; Wood, 1974). Further, the combination of job involvement and organizational commitment have often been used by researchers to predict turnover and absenteeism (Brown, 1996).

### 2.2.2.2 Job satisfaction

Job satisfaction is a complex construct with multiple definitions and related concepts. The topic has been widely researched, probably because most people spend their life-time for work, and understanding of the factors that increase satisfaction is important to improve the well-being of individuals. Much of the research around job satisfaction is built on Maslow's five-level hierarchy from psychological needs safety and security, belonging, esteem to self-actualization. Herzberg's motivation-hygiene theory (Herzberg et al., 1959) has dominated in studies on job satisfaction and is built on Maslow. (Lu et al., 2005). Herzberg's motivation-hygiene theory proposes two categories of needs, motivating (intrinsic) and hygiene factors (extrinsic), where job satisfaction and/or is dissatisfaction is the function of the two need system. Motivating factors are related to the job itself and seem to influence positively on job satisfaction. The motivators include advancement, growth and development, responsibility for work, challenging, recognition, and advancement. The hygiene factors are primarily related to the environment and condition of the work, which can lead to job dissatisfaction. Hygiene factors includes supervision, pay, company policy and administration, working condition and interpersonal relation. (Herzberg et al., 1959)

## Definition

Job satisfaction has many definitions. Ivancevich et al.'s (1997) define job satisfaction as an attitude that individuals have about their jobs. It results from their perception of their jobs and the degree to which there is good fit between the individuals and the organizations. Glisson and Durick (1988) and Kim (2005) define job satisfaction as the feelings or a general attitude of the employees in relation with their jobs and job components, such as the working environment, working conditions, equitable rewards, and communication with colleagues. According to Robbins and Judge (2009), job satisfaction involves positive feelings about a job, resulting from an evaluation of its characteristics versus expectations.

## Types

Luthans (1998) shared three important dimensions to job satisfaction. First, job satisfaction is an emotional response to a job situation. Second, job satisfaction is often determined by how well outcome meet or exceed expectations. For instance, if organizational participants feel that they are working much harder than others in the department but are receiving fewer rewards they will probably have negative attitudes towards the work, the boss and or co-workers. On the other hand, if they feel they are being treated very well and are being paid fairly, they are likely to have positive attitudes towards the job. Third, job satisfaction is affected by job characteristics.

### Antecedents

Locke (1976) presented a summary of job characteristic that significantly contribute to employee job satisfaction. The six dimensions are summarised below (Luthans, 1998):

- The work itself – employee grow satisfaction from work that is interesting and challenging, and job that provides them with status
- Pay – salaries assist employees to attain their basic needs, but are also instrumental in satisfying the higher level need of people
- Promotions – employee opportunities for promotions are likely to exert an influence on job satisfaction
- Working conditions – if employees work in a clean, friendly environment, they will find it easier to come to work. If the opposite should happen, they will find it difficult to accomplish tasks.
- Supervision – supervisor support and corporation are likely to exert an influence on job satisfaction
- Co-workers – better co-worker relationships are likely to exert an influence on job satisfaction

### Outputs

Job satisfaction influences many aspects of organizational life. The most relevant with regards to organizational loyalty is found by Vanderberg and Lance (1992). They found that higher degree of job satisfaction lead to higher level of employee loyalty. Usually three types of employee loyalty are considered: affective loyalty, normative loyalty and continuity loyalty. Affective loyalty has to do with the cases when an employee feels an emotional connection to the company, normative loyalty is a sort of loyalty that appears in cases when the employee feels like he owes something to the company and continuity loyalty comes as a result of the fact that the employee does not have an opportunity to find a job somewhere else.

#### 2.2.2.3 Attitudinal organizational commitment (AOC)

Attitudinal (or affective) organizational commitment (AOC) is one of three main themes in the construct defining employee commitment. The concept of commitment as such, including antecedents and outputs, is reviewed in chapter 2.1.2.1 in the literature review.

#### Definition

The definition of AOC has evolved over the years. Mowday et al. (1979) defined it as “the relative strength of an individual’s identification with and involvement in a particular situation”. A few years later, Mowday, Porter, and Steers (1982) slightly revised the definition to “a strong belief in and acceptance of the organization’s goals and values; a willingness to exert considerable effort on behalf of the organization; and a strong desire to maintain membership in the organization.”

Researchers focusing on employee work experience suggest that individuals’ whose work experiences are consistent with their expectations and satisfy their basic needs tend to develop stronger affective attachment to the organization (Hackett et al., 1994).

#### 2.2.3 Definition of organizational identification

Several scholars have criticized Patchen’s (1970) three component definition of organizational identification (OID). Mainly because of the failure to differentiate sufficiently between the psychological state of commitment (identification), and some of its presumed consequences (e.g. willingness to exert effort and desire to stay). Therefore, OID has long been included as a component of organizational commitment (OC) (Porter, Steers, Mowday, & Boulian, 1974). It took until late 1980’s before empirical evidence emerged that proposed to separate OID and attitudinal OC (AOC). In 1989, Ashforth and Mael (1989) reconceptualised OID based on Social Identity Theory (SIT) and argued to distinguish it from other related constructs. Using SIT was helpful to explain the employee-organization relationships (Ashforth & Mael, 1989, Dutton et al., 1994, Hogg & Terry, 2001). According to SIT, an individual’s social identity is the “knowledge of his or her membership of a social group (or groups) together with the value and emotional significance attached to that membership” (Tajfel, 1978). Individuals classify themselves and others into social groups,

such as gender, age and organizational membership. Social identification is the perception of belongingness to a group classification. For example “I am a women. I am a member in the local group for women rights”. Identification allows the individual to participate in accomplishments beyond his or her powers (Katz and Kahn, 1978) and can engage in harmful activities as long as they aid the larger self (Staw, 1984). Under that perspective, OID is a specific form of social identification where the individual defines him or herself in terms of the membership in a particular organization.

With the use of SIT, Ashforth and Mael (1989) argued two aspects which distinguish OID from other related constructs, such as organizational citizen behaviour (OCB), job involvement and organizational commitment (OC). First, OID is a perceptual/cognitive construct. The individual need only to perceive him or herself as intertwined with the fate of the group, without need to engage in certain behaviours or effects. This distinguish OID from related behavioural/affective constructs such as OCB, efforts on behalf of the group, loyalty or satisfaction. Second, OID is distinct from AOC since AOC does not define identification. Commitment is a person's: (1) belief in and acceptance of the organization's goals and values, (2) willingness to exert effort on behalf of the organization, and (3) desire to maintain membership (Mowday, Steers and Porter, 1979). Based on those aspects, Ashford & Mael (1989) defined OID as the perception of oneness with or belongingness to an organization, where the individual defines him or herself in terms of the organization(s) in which he or she is a member. Dutton, Dukerich and Harquail (1994) refers to similar definition of OID as “a cognitive linking between the definition of the organization and the definition of self.”

#### 2.2.4 Types

In addition to organizational identification, other types and states of identification which can be found in the literature are: (1) disidentification, (2) ambivalent identification and (3) neutral identification. More specifically, disidentification occurs when an individual defines him or herself as not having the same attributes or principles that he or she believes define the organization (Elsbach & Bhattacharya, 2001). Ambivalent identification occurs when an individual can simultaneously identify and disidentify with his or her organizations (or aspects of it) (Dukerich et al, 1998; Elsbach, 1999, 2001; Pratt and Doucet, 2000). Neutral identification occurs when an individual's self-perception may be based in the explicit absence of both identification and disidentification with an organization (Elsbach, 1999).

Scholars have also moved beyond basic OID to explore a wider and more complex range of attachments to organizations. Dick et al. (2004) suggest OID can be differentiated into foci of identification, such as an employee's identification with his or her career, with the work unit, with the organization as a whole, or with an occupational group. The same authors also propose four dimensions of identification – cognitive, affective, evaluative and behavioural. Further, some researchers have also explored the “darker-side” of organizational identification (Dukerich, Kramer, & McLean Parks, 1998; Elsbach, 1999; Michel & Jehn, 2003). That is when OID is very strong. The perspective of the “darker-side” looks at the potential negative effects of identification on both individuals and organizations. For example, an 'overidentified' individual can become consumed by work and thereby lose a sense of identity, or might be less able to see faults of the organization or less willing to point them out.

#### 2.2.5 Input and antecedents

Pratt (1998) proposed two conditions that are necessary for OID to occur: “(1) the individual must perceive the organizational identity to be salient, and (2) the individual must self-categorize him or herself in terms of his or her organizational identify.” For example, a perceived OID is attractive when it satisfies three principles of self-definition: self-continuity, self-distinctiveness, and self-enhancement (Tajfel and Turner, 1985; Steele; 1988; Shamir, 1991; Dutton, Dukerich, and Harquail, 1994). That is, a perceived organizational identity that helps the individual maintain a consistent sense of self, distinct from others, while enhancing self-esteem, will be viewed as attractive. The attractiveness of this image leads to stronger OID.

Reade (2001) notes, 'there is not an established model of antecedents of OID which has been in constant usage', let alone an 'established model' of the newer constructs of disidentification and ambivalent and neutral identification. However, the antecedents which have been found during the literature review are listed in figure 3, where only antecedents which have been empirically tested are included. The vast majority of these focus on "identification" and not newer constructs, such as dissatisfaction-, ambivalent- and neutral-identification.

ANTECEDENTS OF OID (ORGANIZATIONAL IDENTIFICATION)				
With empirical evidence				
	Antecedent	Definitions	Author	Empirical evidence
<p>► These are antecedents of organizational identification (OID) with empirical evidence</p> <p>► Source: Multiple sources • see table for references</p>	► Organizational reputation	Stakeholder's overall evaluation of a company over time	Gotsi & Wilson, 2001	Dick et al., 2004
	► Organization identity	Central, distinctive, and enduring characteristics of an organization	Albert & Whetten, 1985	"
	► Need for organizational identity (NOID)	Desire to be 'imprinted upon' by an organization and receptivity to socialization, and negatively associated with a desire to separate from an organization	Glynn, 1998	"
	► Positive affectivity	General attitude that one cannot depend on other people to be trustworthy and sincere	Andersson & Bateman, 1997	"
	► Perceived attractiveness	-	-	Duikerich, Golden & Shortell, 2002
	► Leadership styles	-	-	Carmeli et al., 2011; Epitropaki & Martin, 2005; Liu, Zhu, & Yang, 2010
	► Leader-Member exchange	Leaders' development of meaningful and long lasting personal relationships with subordinated	-	Tangirala, Green & Ranmanujam, 2007
	► Organizational distinctiveness	Perceived distinctiveness of the organization's values and practices relative to those of comparable groups	Oakes & Turner, 1986	Mael & Ashforth, 1992
	► Organizational prestige	Perceived prestige of the institution	March & Simon, 1958	"
	► Intraorganizational competition	Such competition tends to reduce cohesion	e.g. Biau, 1954	"
	► Support and appreciation of superiors	-	-	Lee, 1971; Bankhoff, 1997
	► Opportunity for career advancement & fulfillment	-	-	Brown, 1969
	► Access to organizational hierarchy	-	-	Brown, 1969; Lawler, 1992
	► Sense of share fate with the organization	-	-	Dutton et al., 1994

Figure 3: Antecedents of OID with empirical evidence

## 2.2.6 Outputs

Work behaviours which can be positively affected by OID are turnover intention, organizational citizenship behaviours, employee satisfaction and well-being and employee performance (Ashforth, et al, 2008, Riketta, 2005). There is a relatively high correlation between OID, AOC and extra-role behaviour. Extra-role behaviour is defined as voluntary behaviour that is beneficial to the organization (Organ, 1988). The motivation for such a behaviour may come from internalization of organizational norms and emotional attachment to the organization (van Knippenberg, 2000). These two variables, organizational norms and emotional attachment, are often core in most definitions and measures of OID.

## 2.2.7 Measures of organizational identification

Since OID has an operational overlap with especially AOC, it is important to understand how to specifically measure OID. OID can be measured with the Organizational Identification Questionnaire (OIQ; Cheney, 1983). However, many of those questions overlap with measuring AOC, where AOC are often measured with either the Organizational Commitment Questionnaire (OCQ, Mowday et al., 1979) or the Affective Commitment Scale (ACS; Allen & Meyer, 1990). Another scale to measure OID, and one of the most common used, is the Mael Scale (Mael & Tetrick, 1992). That scale's questions has shown to not overlap with either items from OCQ and ACS (Riketta, 2005).

In a meta-analysis performed by Riketta (2005), it is found that the Mael Scale seems to be the most representative OID measure with regards to empirical outcomes. The Mael Scale may also be superior in predicting extra-role behaviours whereas AOC scales may be superior in predicting absenteeism and intent to stay.

## 2.3 Complexity in an organization

### 2.3.1 Introduction

In the nineteenth century factories were lean, flexible and adaptive to change in headcount, work and financing. The executives were often owners and emphasised mainly on sales and distribution. Sub-contractors made up a substantial percent of the workforce, outsourcing were widespread and middle-managers were basically non-existent. As sub-contractors profits grew factory owners began with insourcing. They changed their organizational structures such as foremen and employees replaced most sub-contractors (Ogilvie & Stork, 2003). This added organizational hierarchy and challenge to leadership and employee management, and thus complexity in an organization.

### 2.3.2 States of un/predictability

According to Lewis (1994), using Systems Theory, organizations typically find themselves in one of three states of un/predictability: Stability; Chaos; or the middle ground between these two opposite states. An organization's state can rapidly change from one to another. Each of these three states represents a low to high intensity of organizational complexity. From an organizational perspective, stable organizations are relatively static and can be characterised by certainty. Few forces in the environment change because the organization is contained from internal and external organizational stimuli. There is for example no new competitors or no new technologies. Chaotic organizations can be characterised by uncertainty. They are highly sensitive to internal and external organizational stimuli, such as, rapid changing regulations that affect the business, new competitors or continuously changing product preferences. Organizations between stable and chaotic can be characterized by patterns of short-term predictability and unpredictable movement in the pursuit of fitness.

### 2.3.3 Complex system theory

Complexity in an organization can be described with help of complexity theory. Complexity theory is the study of complex and chaotic systems and how order, pattern and structure can arise from them (Marison & Uhl-Bien, 2001). Complexity theory is often used as a metaphor for organizational life and organizations belong to such system. Organizations are dynamic and complex settings, because of continuous restructuring activities, increasing global competition, demand, demographic changes and rapid technological innovations (Hooijberg, Hunt & Dodge, 1997).

Chu (2011) describe a complex system as one comprised of interconnected parts, in which the whole explains more about the behaviours of the system than the parts in isolation. Cohen and Havlin (2010) list nine characteristics of complex system: (1) Coupling, (2) Boundary-less, (3) Open-systems, (4) Memory, (5) Nested, (6) Multiplicity, (7) Emergence, (8) Non-linearity and (9) Feedback loops. Systems may display all characteristics, others only some. First, Coupling states that complex systems are comprised of coupled components. Linkage between components triggers a need for cascade to all the units to which the unit is linked. Second, Boundary-less involves the cascade between components and the difficulty to determine the boundaries of a complex system. Third, Open-systems involves the state of the complex system. It can be either stable, chaos or middle ground (Lewis, 1994). The state of the system can be determined by the degree of coupling between the components, driven by internal or external factors. Fourth, Memory states that complex systems have a memory between components. Fifth, Nested involves that complex systems are comprised by complex systems. Each component represents a complex system. Sixth, Multiplicity is that components interact locally rather than disperse. Seventh, Emergence involves that complex systems produce behaviours without deliberate coordination or intention. Eighth, Non-linearity means that events within complex systems does not follow direct sequences. In addition, a complex system can show a "butterfly effect", which is an analogy for how small changes to a seemingly unrelated thing or condition can affect large, complex systems. Ninth and final, Feedback loops refers to the regulation between the components in the complex system.

### 2.3.4 Metaphors for complex organizations

Morgan (1997) takes another approach to the complex internal life of an organization. He proposes the use of metaphors as an approach to analyse organizations, namely four metaphors; (1) organizations as machines, (2) as organisms, (3) as cultures and (4) as political systems. First, organizations as machines means that the functionality of the organization is defined, understood and analysed in a similar way as how a machine works. The strength of a mechanistic approach to organizational work are when there is a clearly limited task to perform, clear input and outputs and the operations are fairly standardized. Second, organizations as organisms refers to the importance of understanding human motivation. Third, organization as cultures outline the impact of national cultures on organizational life. Fourth and final, organizations as political systems refers to the continuous ongoing politics within an organization. The politics is often invisible to all but those directly involved. Morgan (1997) argues “an organization’s politics is most clearly manifest in the conflict and power plays that sometimes occupy centre stage, and the countless interpersonal intrigues that provide diversion in the flow of organizational activity”.

### 2.3.5 Approaches to organizational complexity

Damanpour (1996) proposed factors that contribute to complexity in organizations. These can help to determine the state of stability organizations find themselves in. The four factors are: (1) Structural complexity, (2) Organizational size, (3) Environmental uncertainty and (4) Innovation.

First, Structural complexity (Mileti, Gillespie & Haas, 1977) considers the number of locations in which work is performed, the number of services and jobs carried out, the diversity of the tasks and the hierarchical differentiation between individuals who perform these tasks. Damanpour (1996) recommends considering two dimensions when measuring Structural Complexity:

1. Departmental and functional dimensions. This represent (Aiken, Bacharach & French, 1980) the degree to which the organization is arranged into functional units and structures.
2. Role specialisation and occupational dimension. This represents (Hage & Aiken, 1967) the degree of occupational specialisation present within an organisation.

Second, Organizational size (Hitt, Hoskisson & Duane Ireland, 1990) is associated with access to resources and operations being formal versus flexible. Small organizations typically operate on a simple structure. As organizations grow, structure becomes more complex with the introduction of formalized structure, increased employee specialism and organizational hierarchies that attempt to create a sense of order in times of uncertainty (Child, 1973, Mintzberg, 1979). Pierce and Delbecq (1979) recognize that structure can be restrictive if are too rigid.

Third, Environmental uncertainty (Daft, 1992; Duncan, 1972) can be explained in terms of variability, which is the degree of environmental un/predictability and the frequency with which such variability occurs within a given context. Increased Environmental Uncertainty is linked to environments that are highly complex and with a high degree of change (Galbraith, 1973).

Fourth and final, Innovation (Damanpour, 1996) is linked to Environmental Uncertainty and Organisational size. Environmental Uncertainty triggers the need for incremental or radical innovations. Organisational size can help to promote innovation with greater resources and acting as a buffer if innovations fail.

### 2.3.6 Measures of complexity

Damanpour (1996) highlight the main themes in the organizational complexity literature and created an organizational complexity scale. No such scale existed before. The closest measures available before derived from perceived environmental uncertainty, developed back in the 1970's. The scale consist of four separate areas and in a total of ten questions. The areas assessed are (1) Structural complexity, (2) Organizational size, (3) Environmental uncertainty and (4) Innovation. Given the scale offers a broad assessment of complexity, it is judged to be most effective when surveying a wide range of companies, active in different industries, of different sizes, and having different commodities.

Since complex systems include unpredictability and are boundary-less many of the characteristics in a complex system cannot be empirically tested. But characteristics can be used as an analogy to explain complexity in an organization and offer an attempt to test them in practice. The use of an analogy is a simplification of the complex system and a Paradox. Kierkegaard (1985) explains a Paradox as "...the passion of thought..." and "...to discover something that thought itself cannot think". With use of a paradox and the principle of Occam's razor (the simplest explanation), complexity in an organization, through analogy with Complexity Theory, can be measured using a paradox.

## 2.4 Theoretical research model and hypotheses

At first glance, it seems to be a considerable overlap between the definitions and antecedents of reviewed constructs in the literature study. Rousseau's (1995) investigation on psychological contracts identifies a starting point for employees developing OCBs. That is when employees perceive they receive a fair treatment. Such perception encourage many of the behaviours within the concept of OCB, which overlaps with typical behaviours of "engaged employees" (Wollard & Shuck, 2011). Another construct is employee attitudinal organizational commitment (AOC). AOC can emerge when an individual and organization have similar values (Shore and Tetrick, 1991). For example, if employees are involved in their jobs they will probably be satisfied with their job and thus committed to the organization (Knoop & Robert, 1995). Also, if job involvement is important for an individual and if an employer gives importance to it, an individual is more likely to be loyal to work as well as to the organization (Reitz and Jewell, 1979).

With job involvement and job satisfaction in mind, AOC overlaps especially with Patchen's (1970) definition of OID, as "a variety of separate, though related phenomena... (1) feelings of solidarity with the organization; (2) [attitudinal and behavioural] support for the organization; and (3) perception of shared characteristics with other organizational members (p. 155). Knowing the overlap between AOC and OID, Allen and Meyer (1990) suggests that AOC is the most important form of commitment. They state that "individuals who have strong AOC remain in the organization because they feel they want to". This form of commitment is also usually measured by organizations and often referred to as 'engagement' (Meyer and Allen, 2002).

The extensive overlap between AOC and OID is likely due to the constructs being used to test OID's relation with engagement have been a mix between cognitive, emotional and behavioural components. However, clear distinctions can be made with additional analysis of the components. It enables to filter out a discrete relationship between employee engagement and OID, without the involvement of AOC.

OID involves how an individual is cognitively intertwined with a group, without the need to be emotionally committed or engage in certain behaviours (Ashforth and Mael, 1989). OID is the "cognitive linking between the definition of the organization and the definition of self." (Dutton, Dukerich and Harquail, 1994). Therefore, it is right to say that OID is being an outcome from an employee's cognitive organizational commitment to an organization, from where emotional commitment can be built and finally transformed into behaviours. This is further supported when AOC does not define employee cognitive linkage with the organization (Mowday, Steers and Porter, 1979).

While it has not possible to exactly filter out a clear distinction between AOC and engagement from the literature review, it is not needed either. AOC is an important component to establish engagement. However, it is not the starting point. Robinson et al. (2004) describes employee engagement as, "one step up" from commitment. This indicates that employee perception begins at the inception of the organization-employee relationship.

Research has also showed that committed employees perform better, thus, commitment drives engagement. Therefore, organizations that wish to improve levels of employee engagement can

focus on increasing and strengthening employees' perceptions of support they receive from the organization (Saks, 2006).

Above analysis makes it right to say that cognitive organizational commitment is input to employee engagement. In other words, OID seems to be a prerequisite for employee engagement. This relation enables to create a conceptual model (figure 4) which describes the exploratory relationship between OID and employee engagement from an isolated cognitive perspective. This relationship enables to establish the first hypothesis (H1).

- ▶ H1 – High employee OID predicts high employee engagement

The relationships between OID and employee engagement as particularly interesting to analyse since both constructs have a common relationship with employee performance. More specifically, it has been found that OID might predict extra-role behaviours (Riketta, 2005) and extra-role behaviours are believed to be an outcome from employee engagement (Schaufeli and Bakker, 2004; Sonnentag, 2003; Vance, 2006). In another report, Hongwei and Brown (2013) found that OID has a moderate impact on employee performance. That suggests some moderating conditions may exist for the relationship between OID and employee performance. They argue that understanding the impact of OID on employee performance is a central research issue. However, employee performance and employee engagement seems to be closely related constructs, with an important distinction: engagement seems to be a prerequisite for performance. Equal applies to OID, which does not seem to have a direct effect on performance but very well can be a requirement for engagement. Therefore it is of great importance to understand a relation between OID and engagement.

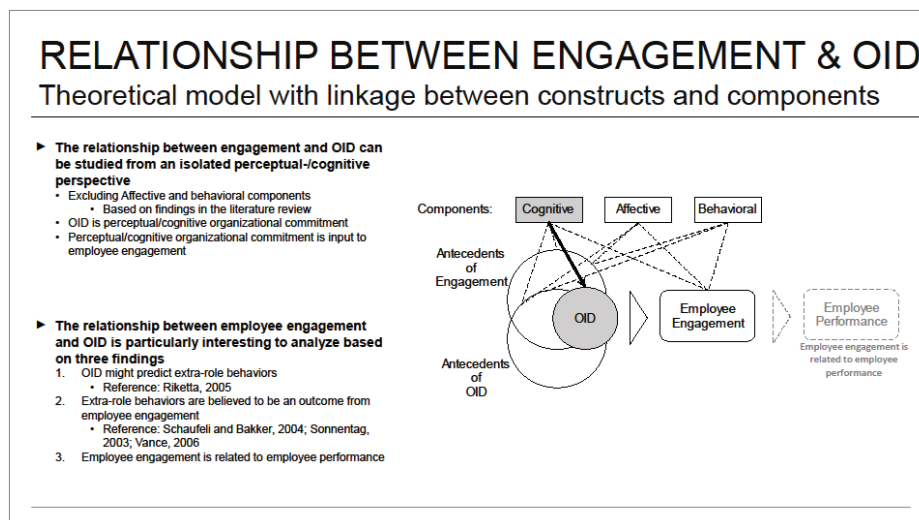


Figure 4: Linkage between OID and employee engagement

Morieux (2011) made an attempt to describe consequences of complexity in an organization and its effects on engagement. He uses the word complicatedness. He describes how complicatedness it is built up by a sequence of events. It starts when companies tries to resolve the many conflicting goals, such as customized products versus standardized offers, price versus quality and innovativeness versus efficient development. These problems are often thought to be resolved by redesign of the organization. New roles are added creating new vertical layers, interface structure, coordination bodies and decision approvals. This added complicatedness demands a price.

The sequence of events described by Morieux (2011) fit well with activities that build up and characterise a complex system described by Chu (2011) and Cohen and Havlin (2010). For each



new role (individual, unit or component in the complex system) with specific responsibilities, new couplings in organizational system are constructed. The new role often establishes its own micro business management system, which includes a network, coordination of activities, action lists and series of meetings which employees are expected to participate in. The new role becomes part of the complex system, but is also a complex system in itself. The new role contribute to the growing number of nested roles in the complex system. Since complex systems are characterized by multiplicity, roles often communicate locally rather than disperse. With more vertical layers the distance between roles increase. With that communication and coordination becomes even more challenging.

The increased complicatedness [complexity] makes employees, especially managers, find themselves spending a great deal of time in coordination meetings. In organizations with high complicatedness managers often spend 30-60% of their time in coordination meetings (Morieux, 2011). These meetings does not necessarily contribute to deliver managers' own personal goals and objectives.

More critical, all time in coordination meetings does not leave managers much time to work with their teams. As a consequence, employees are much more likely to be disengaged and productivity can be disappointing. However, they [managers] are not likely to be effected the very same way since they still feel deeply involved with the company and things going-on. This situation enables to establish a second hypothesises (H2).

- ▶ H2 – Being a manager (with direct reports) predicts higher engagement versus being a non-manager

Large global organizations of today are so complex that no research can cover all aspects of an organization over a reasonable long time. It is clear in this literature review that each scholar has a limited scope regarding the areas studied. Researchers have identified the clear risk for inefficiency in an organization linked to increase of complexity, but no one have defined a clear limit for when complexity automatically leads to inefficiency. Neither how it effects employee engagement. Literature shows that both employee OID and employee engagement are potentially affected or moderated by a large number of concepts, constructs and antecedents, where complexity can be such one.

Coordination meetings are often chaired by employees whom feel a need to secure these meetings to obtain their personal targets (Morieux, 2011). It could for example be to secure cross-functional targets between different functions or systems. However, as mentioned earlier, these meetings does not necessarily contribute to deliver each meeting participants own personal goals and objectives. Furthermore, these meetings are often not even requested by the required participants.

Facing a situation with spending a lot of time in other peoples meeting makes employees distracted from their own job and deliveries. It can hurt their attachment to the company and their aptitude to deliver their goals and objectives. This situation enables to establish a third hypothesises (H3).

- ▶ H3 – High percentage of time in meetings requested/organized by others make the relationship between OID and engagement weaker

### 3. Method

This chapter contains the research paradigm, research method, questionnaire and scales, statistical measurements, data collection and credibility of the study. The research paradigm introduces the general approach which guides the research method. The research method motivates the ways how empirical data is collected, as well as the variables included in the theoretical research model. The section for questionnaire and scales contains a complete review and motivation of the measurements used in the study. Statistical measurements introduce multiple regression analysis and relevant knowledge needed to interpret the results. Data collection contains a description of primary and secondary data, in combination with the description of the sample and calculation of internal consistency and multicollinearity. The chapter ends with a review of the credibility of the study with a focus on generalization, validity and reliability.

#### 3.1 Research paradigm

The definition of a paradigm is a set of rules, beliefs, values and techniques accepted by science that provide different conceptualizations of the world (Kuhn, 1970). Before any research starts, the researcher must decide which paradigm to use. It will determine how knowledge is shared and affect the methods adopted in the research.

Delanty (2002) recommends the positivistic paradigm. Positivism is based on two assumptions: (1) Realism, the idea that truths exists outside of our minds and (2) Objectivism, the belief that objects have a meaning independently of any awareness of them, since the social world exists independently of our appreciation of it (Crotty, 1999). Positivism also integrates empiricism, the perception that knowledge is restricted to immediate experience and what can be a logical output from that. Knowledge is obtained through observation, linked to science through verification.

At the center of the positivist approach is the concept of “value freedom”, by which data and analysis do not change under examination. This assumption make it possible to identify and test hypotheses relating to that one construct predicting hypothesized outcomes on one other. In addition, the positivistic approach fits well with a deductive approach, where main hypotheses are established from available theoretical knowledge that is tested through observation and verification. The results are analyzed and feed back to the theory. (Delanty, 2002)

This study is primary based on pre-existent literature and will be approached empirically by collecting knowledge through observation. This fits well with the definition of a positivistic paradigm and a deductive approach. Therefore these approaches are also chosen for this study.

#### 3.2 Research method

Edmondson & McManus (2007) makes recommendations to researchers before choosing their research method. They recommend that the research method should be aligned with the research paradigm. It should be made sure an internal consistency between the research question, prior work in the field, research design and contribution to the literature. In addition, the level of maturity for the topic being researched must also be considered.

Garziano and Raulin (2004) recommends to start with a systematic review and rational thinking. That should be followed by a method for data collection, which can be either qualitative, quantitative, or both. Finally, in order to analyse the empirical data the researcher chooses experimental or correlation study which supports the purpose of the study.

A qualitative study asks questions as “how” and “why”. It captures data through the use of for example interviews or focus groups, case studies, grounded theory and analytic induction. A quantitative study rather answer the questions “what”, “where” and “when”. Data is most frequently captured through the use of surveys. Surveys are perfectly well suited for statistics and computational techniques (Gill et al., 2008), as well as when you have a clear picture of what information you need (Winter, 1988).

Traditionally, qualitative studies fit well when performing exploratory studies where there is little or no earlier research. They allow for more detailed data and an opportunity to modify the study along the way when for example interviewing. Negatives with qualitative studies are being time consuming and hard to replicate, Quantitative studies, on the other hand, are more objective and can be replicated. They generally support to collect data from a relatively large sample in a relatively short time. Negatives with quantitative studies is that the data collection usually is rigor and there is no opportunity for respondents to answer freely.

This exploratory study will investigate the linkage between multiple different variables. The theoretical model (figure 5) is developed from a comprehensive review and analysis of available literature from many prominent scholars and cited research papers. Mainly it will determine the linkage between OID, being a manager with direct reports and outcomes on engagement. It will also explore the moderating effect of complexity in an organisation on the linkage between OID, being a manager with direct reports and outcomes on engagement.

The theoretical research model acts as the systematic review and rational thinking. It secures that there is a consistency between the research objective, theory analysis and contribution to the literature. Its final design supports to collect data and to determine if there is statistical support for the three hypotheses developed in the previous chapter. It also supports to make general assumptions on a population, based on collecting data from a sample.

Data is collected with a quantitative method using a survey. This method is primarily chosen since (1) there is already much existent research and (2) as much data as possible is wanted in only a short time. That aligns well with taking a positivistic paradigm approach for this study, by which often is associated with quantitative methods too.

Quantitative methods requires high level of scientific accuracy through processes that involve careful definition and measurement of the variables under investigation. Each variable in this study has been carefully chosen and the combination of variables, which supports to answer hypotheses developed in previous chapter, have not been found studied together before. Quantitative methods are also deductive where probability statistics are used to decide whether an effect is significant or not (Delanty, 2002). Probability statistics is also what will be used in this study. Finally, as a consequence by latter, a correlation study is performed to analyse the empirical data and answer hypotheses.

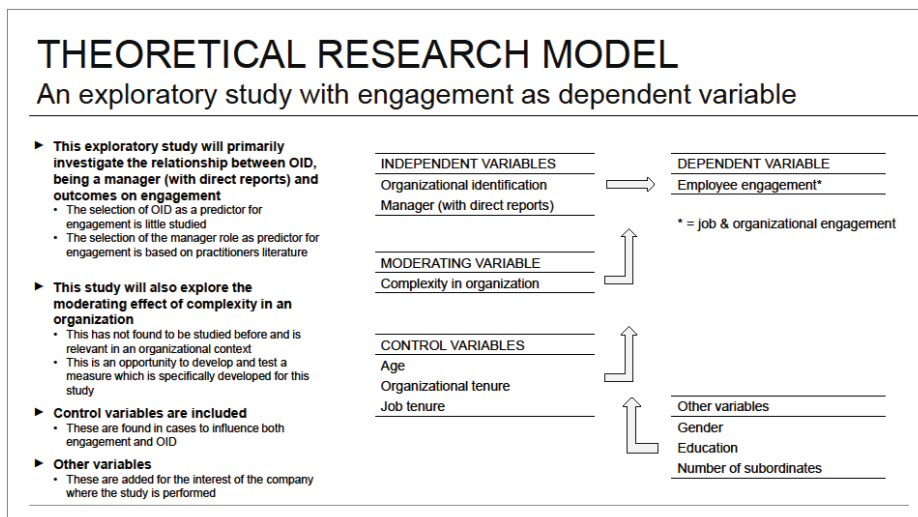


Figure 5: Theoretical research model

## 3.3 Questionnaire and measures

### 3.3.1 Questionnaire design

The questionnaire, or survey, in this study included a battery of questions related to the variables in the research model (figure 5). The design of the questionnaire required respondents to answer all questions and limit to only one choice (one answer) per each question. The respondents self-rated each question.

The scales chosen for the dependent and independent variables have been validated in earlier research by other scholars. Majority of the control variables were also identified via earlier research. In addition, a few control variables tailored for this study were added. Those enabled to understand potential differences within the sample being studied. The moderating variable was developed especially for this study and was exploratory in nature.

### 3.3.2 Measures

#### 3.3.2.1 *Organizational identification*

Organizational identification (OID) is one of the two independent variables. It was chosen to be measured with Mael's 6-item scale (Mael & Ashforth, 1992), developed by Mael (1988). The Mael scale (Mael & Tetrick, 1992) was elected since it does not overlap with items measuring organizational commitment (OCQ scale, Mowday et al, 1979) and AOC (ACS scale, Allen & Meyer, 1990). All items are measured on a five-point Likert-like scale with anchors (1) strongly disagree and (5) strongly agree and logged on an ordinal scale. The scale is available in Appendix D.

The internal consistency of the Mael Scale (Cronbach's alpha) was reported .83 in a study by Ashforth (1990) on managers from a variety of organizations and hierarchical levels.

#### 3.3.2.2 *Manager or non-manager*

The second independent variable is if being a manager with direct reports or being a non-manager. This variable is needed to investigate if there are differences between the two categories. The answers are converted to a categorical scale and all answers are logged on an ordinal scale. The scale is available in Appendix A.

#### 3.3.2.3 *Employee Engagement*

The dependent variable is employee engagement. It was chosen to be measured with an 11-items scale developed by Saks (2006). The scale was chosen based on, first, having the fewest items and, second, offers a separation between job engagement (5 measures) and organizational engagement (6 measures). However, in the scope of this study, engagement will not be split in job- and organizational engagement. If the study will be continued it enables to gain additional knowledge from the data collection. All items were measured on a five-point Likert-like scale with anchors (1) strongly disagree and (5) strongly agree and logged on an ordinal scale. The scale is available in Appendix D.

In earlier work by Saks (2006), the internal consistency (Cronbach's alpha) for job engagement was reported .82. The internal consistency (Cronbach's alpha) for organizational engagement was reported .90.

#### 3.3.2.4 *Complexity in an organization*

The moderating variable is complexity in an organization. Instead of using Damanpour's (1996) scale measuring organizational complexity, a unique measure was developed specifically for this study. The measure for complexity utilizes the opportunity to use a paradox. It is grounded in Morieux's (2011) statement that employees, especially managers, in high technology organizations with high complexity spend 30-60 percent of their time in meetings. However, knowing already employees in complex organizations spend a great deal of time in meetings, the question was modified to measure something different.

The purpose of the measure was to understand how much time employees (managers with direct reports and non-managers) spend in meetings not summoned by themselves. A high percentage of time would indicate employees are less in control of their time. The scale is titled TiOpM, which is an abbreviation for "Time in Other people's Meetings".

The purpose of the measure is to capture how much time in a work week an employee spends in meetings not requested or organized by himself or herself. The formulation of the measure was completed in cooperation with the champion at the surveyed company. The scale contains a single item with four choices. The scale's answers are converted to a categorical scale and logged on an ordinal scale. The scale is available in Appendix B.

#### *3.3.2.5 Control and other variables*

The control variables are (1) age, (2) organizational tenure, (3) job tenure and (4) number of direct reports. Many studies within organizational behaviour find positive correlation between age, organizational tenure and job tenure. OID is one of them constructs where such correlation is often seen. Therefore, it is important to include organizational tenure and job tenure (e.g., Schneider, Hall, & Nygren, 1971; Wan-Huggins et al., 1998). All control variables are measured on intervals, with the same interval between each item in scales. The answers are converted to categorical scales and logged on an ordinal scale. These scales are available in Appendix C.

Other variables included to describe the sample in the study are (1) gender and (2) education. These are traditional demographic variables used in person-organization research. They have been found at times to modestly correlate with OID (e.g. Schaubroeck & Jones, 2000, Wan-Huggins et al., 1998; Lee, 1971). Furthermore, a variable with number of direct reports is included to ensure managers with direct reports could be sorted out in the sample. All variables are logged on ordinal scales. These latter scales are also available in Appendix C.

#### **3.3.3 Risk assessment of scales used**

The scales used to measure OID and engagement have low risk. Both constructs are unique and scales have been validated in previous research. Both measure respondents' perceptions without a mix of objective facts.

The exploratory style of measuring complexity in an organization has high risk. The purpose of this study is to test if the developed one-item-complexity-scale has a correlation with engagement. If not, it can be rejected for future use.

The control variables can have a potential overlap, given they all take into account number of years within the organization. However, a potential overlap among the control variables does not hurt the result in the multiple regression analysis.

### **3.4 Statistical Measurement**

The primary purpose of this research is to test the correlation between the different variables in the theoretical model presented earlier (figure 5). This will be done in a multiple regression analysis. Before the analysis starts, it is important to calculate Cronbach's alphas and multicollinearity.

#### **3.4.1 Validity and reliability**

##### *3.4.1.1 Cronbach's alpha*

Cronbach's alpha provides a measure of the internal consistency of a scale. Internal consistency describes the extent to which all items in the scale measure the same construct. The measure is described as a value between 0 to 1. In general, if the value is greater than .70 one can assume that the internal consistency of scales are acceptable. However, it is not recommended to have a value greater than .90, which indicates that one or several items within the scale overlap. (Cronbach, 1951)

#### *3.4.1.2 Multicollinearity*

Multicollinearity refers to the size of correlations among the independent variables in a regression analysis. Multicollinearity among variables, or association between ranked variables, and one measurement variable can be tested using many different tools. For example Spearman rank correlation (done on ranks) or Pearson correlation (done on measurements). Both provides an understanding for how variables covary. The result on correlation coefficients range between +1 and -1. In general, if coefficients are higher than 0.2 or 0.3, it can be suspected that multicollinearity exists between variables. However, it is not until independent variables correlate at +/- 0.7 they possibly can fully replace one other. High correlation among control variables is not of importance to consider if data is to be used for a regression analysis.

#### *3.4.1.3 Skew and kurtosis*

Skew occurs if the data is not symmetrically distributed. A negative skew starts out flat whereas a positive skew starts off going up. Kurtosis occurs if the distribution is symmetrical but does not have the characteristics of a normal distribution (bell curve). If the curve is too flat with heavy tails it is called negatively kurtosed. Alternatively, if the distribution is too peaked, then the distribution is described as being positively kurtosed.

### 3.4.2 Multiple regression analysis

Multiple regression analysis is a statistical tool for understanding the relationship between two or more variables. Multiple regression involves a variable to be explained – called the dependent variable – and additional explanatory variables. In this study the explanatory variables are also called independent or moderating. Multiple regression may be useful (1) in determining whether a particular effect is present, (2) in measuring the magnitude of a particular effect, (3) in forecasting what a particular effect would be, but for an intervening event. (Rubinfeld, 2014) Another more advanced method, which will not be used in this study, is hierarchical multiple regression. That method offers to understand which of the independent variables have the highest impact on the dependent variable.

For this study the Microsoft statistics package in Microsoft Excel is used. The two main reasons for this are (1) it is free of charge and (2) it supports all the analysis needs for the study. Other statistical software, which would achieve the same end-result, could also have been used, such as SPSS, Amos, Listerel, etc.

#### *3.4.2.1 Models and components*

The most frequently selected regression model is the linear regression model, which will also be used in this research. In the linear model, the magnitude of the change in the dependent variable associated with the change in any explanatory variables is the same no matter what the level of the explanatory variables. (Rubinfeld, 2014)

Another form, not relevant for this research, is the nonlinear model, where changes in explanatory variables will have different effects on the dependent variable as the values of the explanatory variables changes. One particular type of nonlinearity involves the interaction among several variables. Here, an interaction variable is the product of two other variables that are included in the multiple regression model. The interaction variable enables to take into account the possibility that the effect of a change in one variable on the dependent variable may change as the level of another explanatory variable changes. (Rubinfeld, 2014)

#### *Scatter plot and correlation coefficient*

Scatter plots are useful visual displays in multiple regression analyses. In such graphs values on x-axis can be related with values on y-axis. With several data points the relationship can be summarised as a correlation coefficient from -1 to +1, being a perfect negative or positive relationship, respectively. (Rubinfeld, 2014)

### Regression line

Beyond returning a correlation coefficient, multiple regression offers making a regression line equation which relates the average of one variable – the dependent variable – and additional explanatory variables. With that, regression analysis can be used to predict the values of one variable using the value of others. The regression line is the best-fitting straight line through a set of data points in a scatterplot. The regression line is often estimated using the standard method of least-squares. (Rubinfeld, 2014)

### Standard method of least squares

Most statisticians use the least-squares regression technique because of its simplicity and good features. A major benefit with the least-squares method is its usability in all sorts of sample distributions, i.e. the sample does not need to follow a normal distribution. The method builds on having means from several samples. The probability distribution for all samples can be summarized by a total mean and a measure of dispersion around the total mean, with respect to all samples, called the standard error. (Rubinfeld, 2014)

The standard error tells how much a parameter estimates are likely to vary from sample to sample. Usually, the level to obtain a statistical significant results is set to be within 1.96 standard errors of the mean. This is equal to a 95% confidence interval. This can also be expressed as statistically significant at .05 (5%). Sometimes, levels of .01 (1%) and 0,1 (10%) can also provide useful information. (Rubinfeld, 2014)

The least squares regression generalizes all samples by calculating means, whose values depend on one or more explanatory variables. The least-squares regression offers both an indication on direction and magnitude on the effect of a change in the explanatory variable(s) on a dependent variable. It also estimates the reliability of the parameter estimates and the overall goodness-of-fit of the regression model. (Rubinfeld, 2014)

### 3.4.2.2 Interpreting multiple regression results

Multiple regression results can be interpreted statistically, through use of significance tests, or they can be interpreted in a more practical, nonstatistical manner. Quite often, these two interpretations complement each other. When interpreting the results of a multiple regression analysis, it is important to distinguish between correlation and causality. Two variables are correlated when the events associated with the variables occur more frequently together than one would expect by chance. From a statistical tests approach, below multiple regression output needs to be interpreted. (Rubinfeld, 2014)

**Standard error** – The level of standard error. In general, the lower standard error, the more reliable regression results.

**F-test** – The F-test involves to test if F in the analysis is larger than the F-test, also referred to as  $F_{critical}$ . The F-test is calculated by using probability, regression degrees of freedom (df) and residual degrees of freedom (df). The formula in MS Excel is `F.INV.RT( 'probability' ; 'Regression df' ; 'Residual df' )`.

**t-statistics** – The level of t-statistics per parameter. In general, with a 95% confidence interval (equals +/- 1.96 standard errors of the mean), the t-statistics per variable needs to be greater than +1.96 or below than -1.96.

**T-test** – The T-test involves to test if t Stat in the analysis is larger than the T-test, also referred to as  $T_{critical}$ . The T-test is calculated by using probability and degrees of freedom (number of observations-variables). The formula in MS Excel is `T.INV.2T( 'probability' ; 'number of observations-variables' )`.

**p-value** – Indicates the significance level. In doing a statistical test, the p-value is computed and compared with the level required to determine if significant. For example, with a 95% confidence

interval, the result is significant if the  $p$ -value is below .05 (5%). Note: Models can be divided into one-tailed and two-tailed tests. One-tailed tests usually produces  $p$ -values that are one-half the size of  $p$ -values using a two-tailed test.

R-square ( $R^2$ ) – R-square measures the percentage of variation in the dependent variable that is accounted for by all the explanatory variables. It offers the overall goodness-of-fit of the multiple regression equation. Its value ranges from 0 to 1 – where 0 means that explanatory variables explain none of the variation of the dependent variable – and – 1 means that the explanatory variables explain all of the variation. In cases where the result from a sample is planned to be applied on a population, the Adjusted R Square value is more appropriate measure to use.

### 3.5 Data collection

Primary data is data which have not been collected before. That includes for example data from a sample. Secondary data is already published information. Such data is mainly used to build up the knowledge on the theory and methodology. This section explains more how both these sources of data are used in the study.

#### 3.5.1 Primary data, sample and survey distribution

Primary data in this study was collected with a survey and using a questionnaire. The survey was created in an online web tool (Google Drive Forms) and distributed via the internet. The targeted respondents were all from one large Swedish manufacturing company. The study received a champion being an Executive Vice President from within the studied company. The purpose of the champion was to secure answers from a population of both managers and non-managers.

The general recommendation in statistics is to have at least  $54+7x$  respondents in the survey, where  $x$  is the number of hypotheses. Given there are three hypotheses in the study, the recommendation is to have a minimum of 75 respondents. The target for the survey was set to get 150 respondents, with a minimum of 50 being managers with direct reports. Experience shared by the external advisor was that 50% of asked respondents normally answer at first invitation. Another 25% of those not answering will likely participate after a first reminder. A few additional respondents can participate with a second reminder.

Since this study was directed at one company only and with an Executive Vice President as champion, it was assessed that the response rate would be better than normal. With an expected response rate of 75%, a total of 200 respondents ( $150 / 0,75 = 200$ ) were required to be identified. Given 75 respondents were required in the study and 200 invitations were sent out, no reminders were planned to be used.

Preparations started with doing two activities in parallel. One activity was to identify 200 respondents for the survey. The champion supported with identifying 50 managers within the organization. An additional 30 managers and 120 non-managers were identified by the author, mainly through his cross-functional network. The other activity was to start producing the complete set of questions in the online web tool, from now on will be referred to as 'the form'. Before going live with the survey a test was completed. The form was distributed to five people for feedback, including the university PhD advisor, an external PhD advisor, the champion and two of the champion's direct reports. The feedback received allowed to update the form's design and replace few words in the questions which were not easy to understand. The final design of the survey is available in appendix D.

A personal invitation per each respondent was assumed to be an easy way to increase chances of quick response. Therefore 200 e-mails starting with the respondent's first name were prepared.



### 3.5.2 Description of sample

168 employees responded of the 200 personal invitations sent out. That is equal to an 84% response rate. None of the responses were invalid due to missing data. Below is a summary which describes the sample (figure 6) and how much time of their work week they spend in meetings requested/organized by someone else (figure 7).

The average age of the sample is 41 years old. 57% of respondents were below 46 years old. 64% were men. 80% of respondents had been through university. 64% of the respondents had been less than four years in their current position. 32% had worked in the organization less than 11 years. 25% had worked in the organization 11-15 years. 40% of respondents were managers with direct reports. 46% of non-managers spend less than 30% of their work week in meetings requested/organized by someone else. 32% of non-managers spend less than 30% of their work week in meetings requested/organized by someone else.

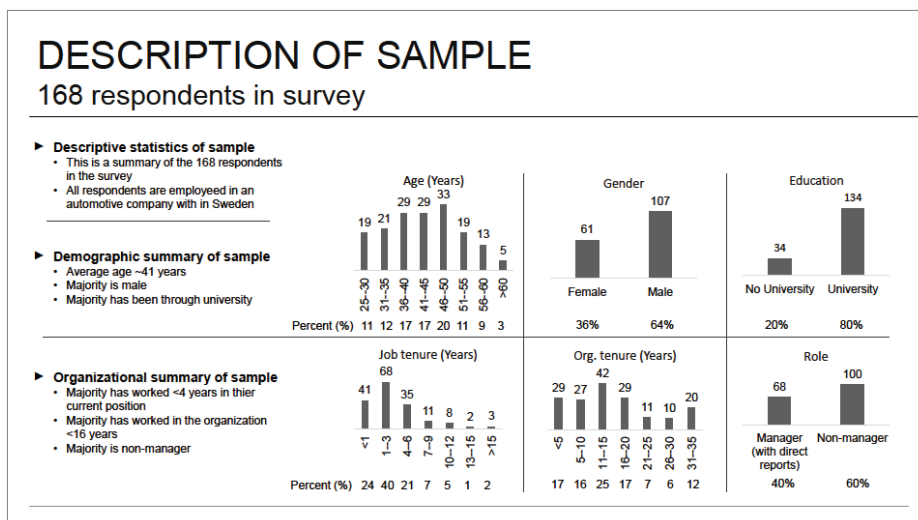


Figure 6: Descriptive statistics of sample

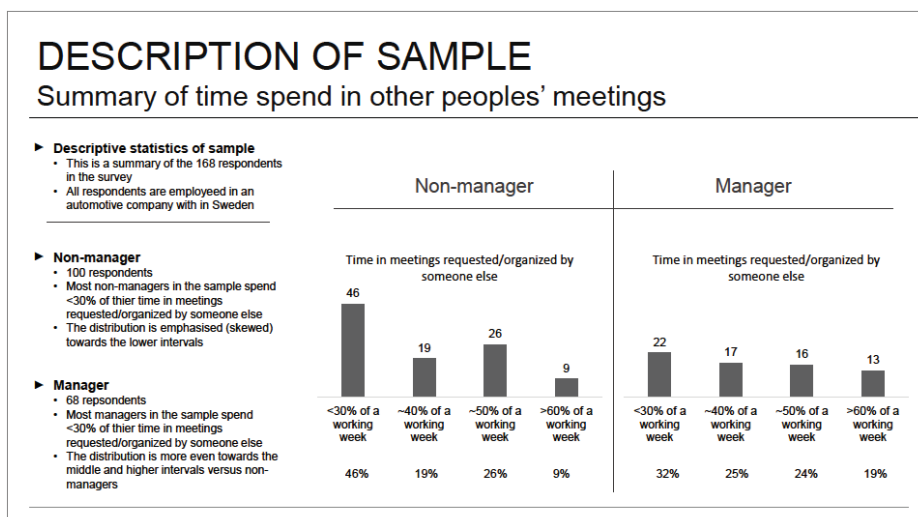


Figure 7: Summary of respondents' time in meetings

### 3.5.3 Descriptive statistics

Skewness and kurtosis per variable is focus when reviewing descriptive statistics of the sample (figure 8). Skewness for the variables engagement and age are close to zero. This means they are close to normally distributed. Other variables have skewness between -0,97 up to +0,41. OID (-0,973) and role (-0,392) have negative numbers, indicating long tails of lower likert-scale scores. The opposite applies to job tenure (1,38), organizational tenure (0,536) and time in other peoples' meetings (TiOpM) (0,413), with positive numbers, indicating long tails of higher likert-scale scores.

The excess kurtosis for engagement is close to zero. This means it is close to normally distributed with clear 2-tails. The other variables have kurtosis between -0,67 up to +3,3. OID (3,249) and job tenure (2,259) have very high positive numbers, indicating exponential distribution. Compared to a normal distribution, positive numbers makes the central peak higher and sharper, and its tails longer and fatter. Other variables being age (-0,783), organizational tenure (-0,668), role (-1,869) and time in other peoples' meetings (TiOpM) (-1,203) have negative numbers. Compared to a normal distribution, negative numbers makes the central peak is lower and broader, and its tails shorter and thinner.

Overall, there are no disturbing levels on any of the variables which makes the data inappropriate to use in regression analysis.

	Engagement	OID	Age category	Org. tenure category	Role	Job tenure category	TiOpM *	VarInteract (OID*TiOpM)
Mean	3,76	3,90	4,01	3,45	1,60	2,38	2,11	8,26
Standard Error	0,038	0,045	0,145	0,145	0,038	0,099	0,084	0,352
Median	3,73	4,00	4,00	3,00	2,00	2,00	2,00	7,67
Mode	3,64	4,17	5,00	3,00	2,00	2,00	1,00	3,83
Standard Deviation	0,499	0,589	1,880	1,882	0,492	1,284	1,084	4,562
Sample Variance	0,249	0,346	3,533	3,543	0,242	1,649	1,174	20,809
Kurtosis (Excess)	-0,132	3,249	-0,783	-0,668	-1,869	2,259	-1,203	-0,692
Skewness	-0,022	-0,973	0,114	0,536	-0,392	1,380	0,413	0,627
Range	2,727	4	7	6	1	6	3	19
Minimum	2,273	1	1	1	1	1	1	1
Maximum	5	5	8	7	2	7	4	20
Sum	632	656	674	580	268	399	354	1388
Count	168	168	168	168	168	168	168	168
Confidence Level (95%)	0,076	0,090	0,286	0,287	0,075	0,196	0,165	0,695

\* TiOpM = How much time spent in other peoples meetings

Function used: MS Excel Data Analysis package: "Descriptive statistics"

Figure 8: Descriptive statistics of the variables

### 3.5.4 Measure of internal consistency

The internal consistency is calculated for the purpose of validating the reliability for the sum of items in each scale used. For this study two scales have been used and validated, being the scales for engagement and OID. The exploratory scale for complexity, i.e how much time spent in meetings requested/organized by someone else, has not been tested since being a single item only.

The internal consistency is measured by Cronbach's alpha. The result from the calculations are acceptable (figure 9). The OID scale with six items had a Cronbach's alpha of .75. The engagement scale with eleven items has a Cronbach's alpha of .82. Both scales are above the critical threshold .70 and below critical threshold .90. This indicates a solid internal variance and no overlap between individual items in each scale.

# MEASURE OF INTERNAL CONSISTENCY

Acceptable Cronbach's alphas for scales used in study

► **Calculation of Cronbach's alpha was performed to validate internal consistency of scales used in survey**

- Total respondents (k) = 168

► **Cronbach's alpha is described as a value between 0 to 1**

- If value is greater than .70 the internal consistency of scales is acceptable
- It is not recommended with an alpha above .90. That indicates an overlap between individual items within scale
  - If so, one or several items in scale should be removed and scale re-tested

► **This study has acceptable alphas for both Organizational Identification and Engagement**

- Organizational Identification = .75
- Engagement = .82
- TiOpM is single item and can not be measured

Items	ORGANIZATIONAL IDENTIFICATION 6 items						ENGAGEMENT 11 items											TiOpM 1 item
	Q1	Q2	Q3	Q4	Q5	Q6	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q1
Respondents (k)	168						168											168
Item Variance	1,15	0,58	0,57	0,74	0,76	0,90	0,57	0,92	0,89	0,74	0,51	0,53	0,62	0,87	0,83	0,66	0,57	1,17
Σ of Item Variances (SD)	3,53						5,49											1,17
SD <sup>2</sup>	12,47						30,12											1,08
Cronbach's alpha	.75						.82											-

Formula used:  
Cronbach's alpha =  $k / (k - 1) * (1 - (SD / ((SD)^2)))$

Figure 9: Calculation of Cronbach's alpha

## 3.5.5 Measure of multicollinearity

Multicollinearity among variables is calculated to verify that independent variables does not correlated with each other to a high extent. For this study there is one dependent variable, two independent variables, one moderating variable and three control variables. The result from the correlation calculation is summarised below.

Overall, the correlation analysis shows no significant multicollinerarity among the independent variables OID and Role (figure 10). This means variables can be used in the multiple regression analysis. In detail, engagement is the dependent variable and shows a high correlation with OID. That is positive with regards to hypothesis 1 and fully acceptable. Engagement also correlates moderately with Role, but does not correlate to a large degree with any other variable. OID is one of the two independent variables. OID does not correlate significantly with any variable. The same applies to the second independent variable which is Role. The control variables Job tenure and Organizational tenure (Org. tenure) correlates highly with Age. That is normal since more years in a job or at the company naturally would result in a person with a higher age. Correlation among the control variables does not affect the performance of the regression analysis. Therefore, their correlation do not need to be reviewed in detail. The main purpose of the control variables are to describe the sample. The moderating variable, how much time spent in other peoples' meetings (TiOpM), does not correlate highly with any of the other variables.

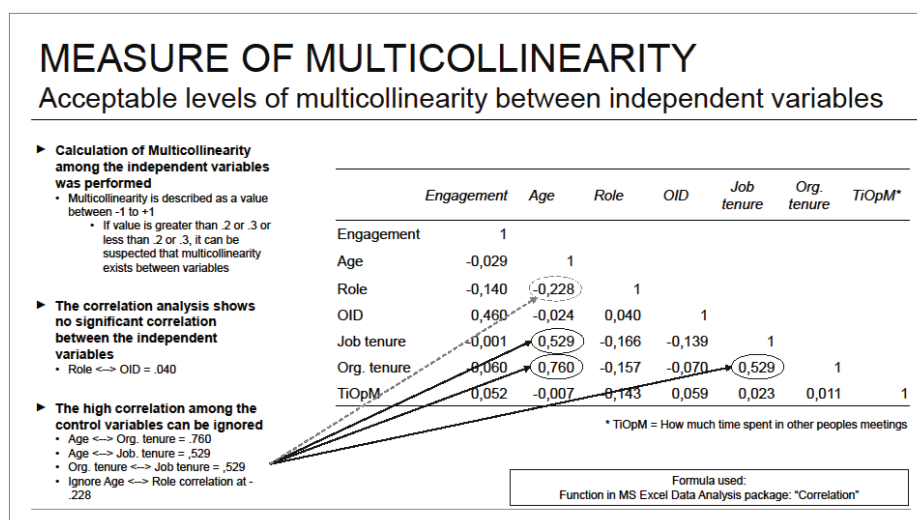


Figure 10: Calculation of multicollinearity

### 3.5.6 Secondary data

Secondary data is already published information. This can be found in for example articles identified via Summon at BTH's library. Example of search words to build the literature review section are: organizational complexity, engagement, employee engagement, organizational identification, OID, organizational complexity, antecedents to engagement and antecedents to organizational identification.

### 3.6 Credibility of the study

The purpose of this study is to empirically test the correlation between ten different variables (figure 5) in multiple regression analyses. As a consequence, generalization is an important topic to consider. According to Norén (1990), generalization means that the research findings, in some form, can be applicable to other industries and contexts. Given this study is completed within one specific manufacturing company, it is not easy to say that the result is valid for a broader population. However, in terms of organizational behaviour it is not likely that psychology and individuals will differ much in other industries and contexts. Therefore, any significant findings in this study can likely be used as directional for a broader population.

Validity of the study is another important area. Norén (1990) defines validity as how correct the result from the study is interpreted and how facts are discussed. In addition, one can separate into inner- and external-validity. Inner validity refers to that the study measured what is intended to measure. External validity refers to that the participants in the study actually gave honest replies.

The inner- and external-validity of the study is good. First, the inner validity is secured with the use of validated scales. These scales are ensured to measure the intended constructs and are further complemented with recommended control variables. The inner validity has also been verified with calculation of internal consistency through the use of Cronbach's alpha. Second, the external validity is secured with a completely anonymous survey. It is completely impossible to track individual replies within the surveyed company. There are no indications that participants in the survey have given other than honest answers.

Reliability of the study is also an important part which needs attention. Norén (1990) define it as being free of random errors in measurement, thus the meaning could be interpreted in several ways. The reliability of the study is high. Stability in the study is ensured with the same survey and information supplied to all participants at the same timing. Furthermore, the survey did not

allow participants to not give an answer, meaning the random errors or incomplete answers were eliminated. Reliability of the variables has also been verified with calculation of multicollinearity. The result from the calculation shows no significant correlation between the independent variables. This is a prerequisite for using the data in a multiple regression analysis. Finally, a consistent interpretation of performed multiple regression analysis has also been ensured with a comprehensive review of the statistical method as such, including definitions and meaning of outputs.

## 4. Results

This chapter contains the results from the empirical study and test of hypotheses. All data from the multiple regression analyses are presented including significance level per variable and supporting scatter plots and regression equations.

### 4.1 Test of hypotheses

The variables OID and engagement in the model have passed the tests for internal consistency (Cronbach's alpha) and multicollinearity. This means they, together with all other variables, are legitimate to use in the multiple regression analyses.

The purpose of the multiple regression analyses are to test if there is support for the three developed hypotheses, which require conduct two separate multiple regression analyses. The first analyse supports to test the first and second hypotheses – H1 and H2. The second analyse supports to test the third hypothesis – H3.

#### 4.1.1 Test of H1 and H2

The first analyse requires all variables to be included in the multiple regression model. The result shows (figure 11) that the model passes the F-test ( $F_{8,811} > F_{critical} 2,155$ ) and  $R^2$  is 0,247. The relationship can also be seen in the scatter plots together with the regression equations (figure 12 and figure 13).

$R^2$  indicates that the variables explain 24,7% of the variation in level of employee engagement. The variables OID and Role are both significant with a  $p$ -value  $< .05$ . These findings establish support for H1 and H2.

- ▶ H1 – High OID predicts high engagement Supported
- ▶ H2 – Being a manager (with direct reports) predicts higher engagement versus being a non-manager Supported

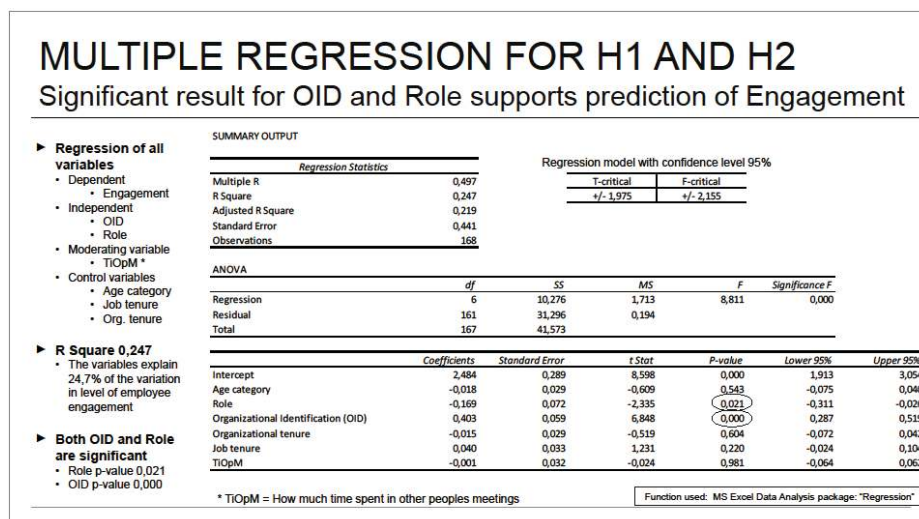


Figure 11: Multiple regression to test H1 and H2

## SCATTER PLOT FOR H1

Significant result for OID as predictor of Engagement

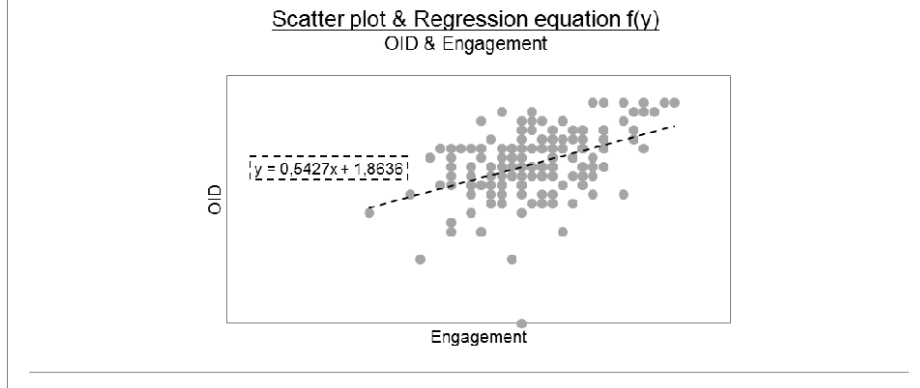


Figure 12: Scatter plot and regression equation for H1

## SCATTER PLOT FOR H2

Significant result for Role as predictor of Engagement

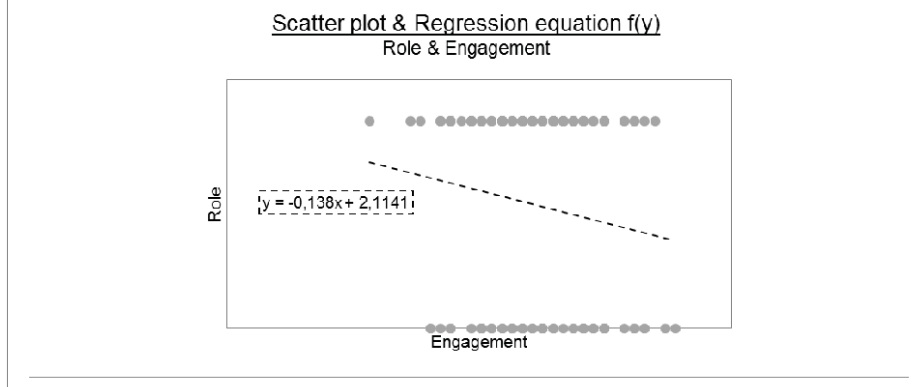


Figure 13: Scatter plot and regression equation for H2

### 4.1.2 Test of H3

The second analyse requires all variables to be included in the multiple regression model and an interacting variable. The interacting variable is the product of the variable TiOpM multiplied with OID. The result shows (figure 14) that the model passes the F-test ( $F 7,619 > F_{critical} 2,067$ ) and  $R^2$  is 0,250. The relationship can also be seen in the scatter plot together with the regression equation (figure 15).

$R^2$  indicates that the variables explain 25% of the variation in level of employee engagement. The variables OID and Role are both significant with a  $p$ -value  $< .05$ . The interacting variable is not significant. This finding does not establish support for H3.

- ▶ H3 – High percentage of time in meetings requested/organized by others make the relationship between OID and engagement weaker Rejected

# MULTIPLE REGRESSION FOR H3

No significant result for interacting variable

**Regression of all variables + interacting variable**

- Dependent
  - Engagement
- Independent
  - OID
  - Role
- Moderating variable
  - TiOpM
- Control variables
  - Age category
  - Job tenure
  - Org. tenure
- Interacting variable
  - OID \* TiOpM

**R Square 0,250**

- The variables explain 25% of the variation in level of employee engagement

**Interacting variable is not significant**

\* TiOpM = How much time spent in other peoples meetings

Function used: MS Excel Data Analysis package: "Regression"

SUMMARY OUTPUT		Regression model with confidence level 95%				
<b>Regression Statistics</b>		T-critical	F-critical			
Multiple R	0,500	+/- 1,975	+/- 2,067			
R Square	0,250					
Adjusted R Square	0,217					
Standard Error	0,441					
Observations	168					
ANOVA		df	SS	MS	F	Significance F
Regression		7	10,393	1,485	7,619	0,000
Residual		160	31,179	0,195		
Total		167	41,573			
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	2,109	0,564	3,740	0,000	0,995	3,222
Age category	-0,017	0,029	-0,587	0,558	-0,075	0,041
Organizational tenure	-0,015	0,029	-0,520	0,604	-0,072	0,042
Role	-0,167	0,072	-2,304	0,023	-0,309	-0,024
Organizational Identification (OID)	0,496	0,134	3,702	0,000	0,232	0,761
Job tenure	0,042	0,033	1,293	0,198	-0,022	0,107
TiOpM	0,162	0,213	0,762	0,447	-0,258	0,582
Interacting variable (OID * TiOpM)	-0,042	0,054	-0,774	0,440	-0,148	0,064

Figure 14: Multiple regression to test H3

# SCATTER PLOT FOR H3

No significant result for interacting variable (TiOpM \* OID)

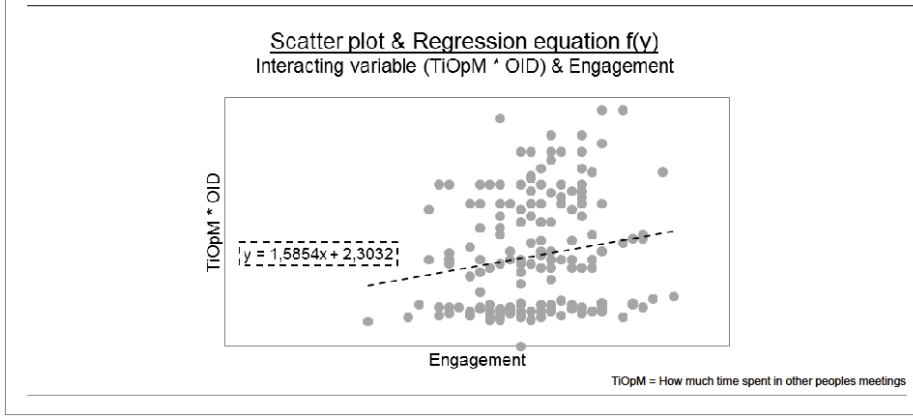


Figure 15: Scatter plot and regression equation for H3



## 5. Analysis and discussion

This chapter presents the analysis of the empirical results and relate it to the theoretical framework from the literature review. It starts with an analysis of the sample. That follows by a review of the overall results of the developed theoretical model, including an analysis of the result per each hypothesis.

### 5.1 Analysis of sample and generalization

The descriptive statistics and distribution of the sample looks according to expectations. The total distribution is skewed towards the younger age categories but, overall, fits quite well a normal distribution. With regards to gender, having 64% men in the sample is an expected result. Men represents well above majority of employees at the targeted company for the survey. Given the survey was aimed for managers and white collar employees, it is natural that 80% of respondents have been through university. The most common job tenure is 1-3 years in current position, which is also aligned with expectations. The organizational tenure in the sample is very diverse, with most common being 11-15 years in the company.

With regards to skewness of the independent variables, most notably is OID (-0,973) and role (-0,392) with negative numbers, indicating long tails of lower scores. In other words, many respondents have assigned a high score on the likert-scales for these two variables. With regards to kurtosis, most remarkably is OID (3,249) and job tenure (2,259) with very high positive numbers. This indicates an exponential distribution, meaning many respondents have scored same and therefore creates a narrow peak area with high frequency of scores.

Since respondents were promised complete anonymously there are no reasons to expect that answers in the survey are other than honest. The result from the sample can likely be representative for the total population of managers with direct reports and non-manager white collar workers at the studied company. However, the sample is not assumed to be representative for managers and non-manager blue collar workers. Blue collar workers situation differs often significantly from white collar workers and needs to be confirmed in a separate study. It is also doubtful if the sample, being from the automotive industry, can be representative for other industries as well without additional studies. Indeed, there is no reason to believe the difference in level of engagement at the company studied is unique. Actually, the result is in line with practitioners findings which are based on a broad study covering multiple industries (Morieux, 2011).

### 5.2 Analysis of theoretical model

Before analysing and discussing the result per each hypothesis, the overall theoretical model's result including all seven variables was  $R^2$  at 0,250 (figure 11). This means 25% of the variation on the dependent variable, being engagement, can be explained by the model. That is, relatively speaking, a high percentage and gives strong support for the model.

The strong support for the model enables to achieve the main objective of the study, which is to empirically test and find significant support that level of employee OID predicts level of employee engagement. In this study the employee role is also distinguished (manager or non-manager), but can be viewed as an optional consideration. This empirical results enables leaders to expand their opportunities to practically predict level of engagement in their workforce by using OID as a measurement, beyond other empirically tested and related constructs. These will be covered more in detail in next section (chapter 5.2.1).

With two significant variables in the theoretical model, being OID and role, they of course explain most of the variation in level of employee engagement. In order to better understand the significance of each of these variables, next follows a more detailed review of each hypothesis and their individual relation to engagement.

### 5.2.1 Analysis of organizational identification in relation to engagement

The multiple regression analysis gave support for H1. That is high employee OID predicts high employee engagement ( $p$ -value 0,000 significant at 0,05 level). This findings means it is sufficient to say that engagement seems starts as “a cognitive linking between the definition of the organization and the definition of self” (Dutton, Dukerich and Harquail, 1994). It supports that a cognitive organizational commitment, as represented by the independent variable OID, is input and predictor for engagement. This is aligned with current findings, such as organizations that wish to increase engagement can focus on improving the employees’ perceptions of support they receive from the organization (Saks, 2006). Furthermore, support for H1 indicates that cognitive organizational commitment is the starting point from where a combination of cognitions and emotions are translated into behaviours (i.e. actions) (May et al., 2004). At the end, the three components of cognitions, emotions and behaviours define engagement (Wollard & Shuck, 2011) and have been found related to employee performance (Vance, 2006).

Since OID is a predictor for engagement, a natural follow-up question becomes how leaders can spur levels of OID. Tangirala, Green and Ranmanujam (2007) found that Leader-Member exchange has a positive relationship with OID. The definition of Leader-Member exchange is “Leaders’ development of meaningful and long lasting personal relationships with subordinated”. Pratt (1998) proposed two conditions that are necessary for OID to occur: “(1) the individual must perceive the organizational identity to be salient, and (2) the individual must self-categorize him or herself in terms of his or her organizational identify.” Therefore, areas of importance to influence employee OID can be organizational reputation (Dick et al., 2004) and perceived attractiveness to the organization (Dukerich, Golden & Shortell, 2002). For these areas organizations can also investigate and identify activities to carry-out.

The correlation between OID and engagement does not mean that organizations solely can focus on one construct. They need to work on both OID and engagement in parallel. Bottom line, antecedents to employee engagement should be in place before organizations can reap the benefits of an engaged workforce (Rich et al., 2010; Saks, 2006). Antecedents for engagement with empirical evidence are job enrichment, role fit, rewarding co-worker and supportive supervisor relations (May et al, 2004), Others are job characteristics, perceived organizational support, perceived supervisor support, rewards and recognition, and procedural and distributive justice (Saks, 2006). Konrad (2006) supports that job involvement is a key antecedent to employee engagement. In a meta-analysis, Wollard & Shuck (2011) addressed additional antecedents of engagement, such as corporate social responsibility (CSR) and work-life balance.

Now when leaders of organizations have knowledge about antecedents to OID and engagement, together with the knowledge about their correlation, they have a great foundation to tailor a program which can impact individual constructs that offer to either increase either OID or engagement.

### 5.2.2 Analysis of role in relation to engagement

The multiple regression analysis also gave support for H2. That is managers with direct reports predicts higher engagement versus non-managers ( $p$ -value 0,021 significant at 0,05 level). This is consistent with Morieux (2011) statements as a practitioner. However, one can argue the causes for this finding. The analysis of the result can be made from either a manager’s or a subordinate’s view.

Starting from a manager’s view. One reason for this finding can be that managers in general (with direct reports) feel they have come closer to both self-expression and self-employment, which leads to being their “preferred self” (Kahn, 1990). The combination of self-employing and self-expressing offers behaviours that bring alive the relation of oneself to the work role, where higher level of engagement is an outcome. Another reason for the obvious difference could be explained if applying findings by Cropanzano & Mictchell, 2005. They found that a better organization-employee relationship makes employees more prone to repay with greater levels of engagement. It might be that managers with direct reports, in general, feel they have a better organization-

employee relationship. They have been given responsibility by the organization to lead resources. Consequently, managers may feel more pleased to repay the organization with their engagement.

From a subordinate's view, Morieux (2011) states that managers in complicated organizations spend up to 60% of their time in meetings and the rest writing reports. Subordinates' thus suffer when managers do not have time to work with them. As a consequence level of employee engagement in the teams decline. This study supports that there is a significant difference in level of engagement between managers and non-managers. However, it is not possible to point out the causes for this finding in this study. Blaming it on managers' operating in a complicated and complex organization, where they spend much of their time in meetings, is a too simple reasoning. Rather, from the literature it is evident that many of the antecedents which leads to OID and engagement involve the manager-employee relationship, in addition to the organization-employee relationship. For example manager expectation, rewards, link between individual and organizational goals, involvement in meaningful work, perceived organizational support (Wollard & Shuck, 2011) and support and appreciation of superiors (Bankhoff, 1997). This puts a strong emphasis on the manager's role to understand when and how to improve employees OID, which is a prerequisite when building engagement in a workforce. There are also much existing literature on antecedents for employee OID, which was covered in the previous sub-chapter.

### 5.2.3 Analysis of time in meetings in relation to engagement

The multiple regression analysis did not give support for H3. In other words, an employee (manager or non-manager) who spend a high percentage of time in meetings requested/organized by others does not make the relationship between OID and engagement weaker ( $p$ -value 0,440 not significant at 0,05 level). Given the low correlation for this exploratory measure it can be rejected for future use.

Even if the tested measure did not well indicate the level of complicatedness or complexity in an organization, the question offered to collect data on how much time managers and non-managers spend in other peoples meetings. This was valuable data in itself. The result from the survey indicates that most managers and non-managers spend less than 30% of their work week in meetings requested/organized by someone else. Knowing that the studied company is according to the definition complex (Chu, 2011; Cohen and Havlin, 2010), this finding speaks against Morieux (2011). He stated that managers in complicated organizations spend up to 60% of their time in meetings. The results from this study rather speaks for the opposite. The majority of both managers and non-managers are in control over the majority of their time during a working week.

This is very positive news. According to this study, managers do not have a lack of time to develop their relationships with their teams and direct reports. Rather, it is a matter of prioritization. The first priority of a manager must be to make the team engaged in their individual work and collective deliveries. Even if this is hard to objectively measure, a great step forward has been taken if such priority is at the top of managers' minds. That will make managers look for tools how to improve their direct reports level of engagement.

## 6. Conclusions

This chapter contains a recap of the research, limitations of the study and results, contributions, implications and proposals for future research. The recap of research focus on the methodology, data collection and results from test of hypotheses. Limitations of the study and results contain a summary of limitations. Contributions share how this study expands existing theory. Implications translate how the results can be used in practical considerations. The chapter ends with proposals for future research.

### 6.1 Recap of research

In the introductory chapter the importance of having an engaged workforce was clearly defined. Many antecedents to engagement have been identified in earlier research. However, since engagement is a relatively new construct, additional studies are much welcome.

The purpose of this study was to determine the correlation between employee engagement, employee organization identification (OID) and being a manager with direct reports. This study also determines if complexity in an organization, studied with an exploratory approach, influences the correlation between engagement, OID and being a manager.

The starting point was to make an extensive literature review. From that a theoretical model was developed with three hypotheses. Hypotheses were decided to be empirically tested with the use of a quantitative research method. Empirical data was collected in a survey where a total of 168 respondents participated. The validity and reliability of the data was tested without concerns. Upon that two multiple regression analyses were completed in order to test the hypotheses. The tests gave support for two of three hypotheses, which are presented below.

- |      |   |           |
|------|---|-----------|
| ▶ H1 | – High OID predicts high engagement   | Supported |
| ▶ H2 | – Being a manager (with direct reports) predicts higher engagement versus being a non-manager                               | Supported |
| ▶ H3 | – High percentage of time in meetings requested/organized by others make the relationship between OID and engagement weaker | Rejected  |

### 6.2 Limitations of the study and results

The study is limited to input from white-collar workers and managers of white-collar workers from Sweden. It is also limited to be conducted with respondents from one manufacturing company with a strong engineering heritage. As a consequence, generalisation outside the population of employees with similar roles and responsibilities is probably hard. It might also be difficult to say that the result can be applied to other industries outside the manufacturing industry. Moreover, this results can likely not be generally applied on companies located outside Sweden or with a non-Swedish workforce. Differences in for example industries and peoples economic situation, culture, values and beliefs may lead to a various results.

Another limitation is the brief review of the linkage between employee performance and the two focused constructs OID and engagement. From the literature review it is evident that there is clear relationships between these constructs. However, the correlation between the studied constructs and employee performance is not tested or proven in this study. This study assumes that high employee engagement is always positive and it leads to positive results on employee performance. However, the author has experienced situations where high employee engagement leads to high productivity but not prioritizing to do the most important things. That reduces effectiveness and efficiency of an employee's contributions, thus reduced employee performance. But it might not be so simple. Therefore, a well thought through approach is needed before investigating the relationships between employee performance, OID and engagement.

Also, the study is limited to the collection of quantitative data using a survey. No qualitative data was included, such as interviews or focus groups. Adding qualitative data could likely broaden the perspectives on the quantitative results. Especially, it could offer enhanced understanding why there is a significant difference in level of engagement between managers and their direct reports. The same applies to the finding that spending time in other peoples meetings does not make the relationship between OID and engagement weaker.

## 6.3 Conclusions

This study enables to make three conclusions. First, there is a significant correlation between OID and employee engagement from an isolated cognitive perspective. Therefore, cognitive organizational commitment is input to employee engagement and, consequently, OID is a prerequisite for employee engagement.

Second, there is a significant difference in level of engagement between managers and non-managers. This thesis does not answer why such difference is found, but it outlines an analysis in the next sub-chapter from both a manager's and a subordinate's view.

Third, the strength of the relationship between OID and level of engagement is not significantly affected if a manager or employee spends a high degree of time in other peoples' meetings.

### 6.3.1 Implications

The developed theoretical model tests variables not found to be tested empirically together before. Probably the greatest contribution with this study is that it has empirically tested and found significant support that level of employee OID predicts level of employee engagement. This is a complement to existing literature. This finding can also be used in practical considerations. Leaders can now practically measure OID if they are interested in understanding and predicting level of engagement in the workforce. When they want to enhance employee engagement they can also expand their views and identify activities that can improve employee OID, in addition to antecedents to engagement itself or other related constructs.

This study also determine that there is a significant difference in level of engagement between managers and non-managers. There can be endless reasons for this finding. Below follows some views to shed some light on the result, including both manager and a subordinate perspective.

From a manager's view, one reason can be that they have come closer to both self-expression and self-employment. The combination of self-employing and self-expressing leads to "preferred self". This offers behaviours that bring alive the relation of oneself to the work role, which gives higher level of engagement as on outcome. Another reason can be if managers with direct reports, in general, feel they have a better organization-employee relationship. With this managers may feel more pleased to repay the organization with their engagement.

From a subordinate's view, many of the antecedents which leads to OID and engagement involve the manager-employee relationship. This puts a strong emphasis on the manager's role to understand when and how to improve employee OID and engagement. Managers need to build conditions within and outside the organization so that the employees develop a strong bond and attachment with the organization. For example managers can work on the link between individual and organizational goals, involvement in meaningful work, expectations, rewards, perceived organizational support and support and appreciation of superiors. These settings establish a foundation for attitudes and work behaviors that leads to employee OID or engagement.

From this study in can also be concluded, with regards to complexity in an organization, that spending a high degree of time in other peoples' meetings does not affect the relationship between OID, being a manager and level of engagement. This study also indicates that most managers and non-managers spend less than 30% of their work week in meetings requested/organized by someone else. That speaks for a majority of both managers and non-managers

actually are in control over the majority of their time during a working week. Therefore, it can also be concluded that managers do not have a lack of time to develop their relationships with their teams and direct reports. It is a matter of prioritization.

#### 6.4 Future research

It would be interesting to replicate this study on other industries outside the automotive industry of similar size as this studied company (approximately 20 000 employees). It would be of equal interest to replicate this study in a much smaller firm, where employees are likely to have broader roles and responsibilities. Such context differences might affect level of OID.

It is also interesting to further explore the linkage and relationships between OID, engagement and employee performance. For example, which one of the constructs that has the strongest effects on performance. It would also be interesting to add additional related constructs discussed in this thesis in such study, such as job involvement and commitment. From the author's view, the way to measure employee performance with precision on white-collar workers can be discussed. The two most important areas of white-collar performance is a combination of effectiveness and efficiency. That means making the right things with the right quality at the very first time. That is a challenge larger than just focusing on productivity. That gets even more challenging since many white-collars have non-repetitive tasks.

Another area of interest could be to investigate if the significant differences in level of engagement between white-collar workers and white-collar managers also applies to blue-collar workers and managers of blue-collar workers. This might be better understood in a qualitative study, rather than a quantitative study. Such study can also be further expanded to review if level of task challenge and task content explains any difference in level of engagement between managers and non-managers.

Also, this study tried but did not manage to develop a simple measure to assess complexity in an organization. It is encouraged to follow research on complexity in organizations and in an exploratory manner try new ways to assess this, from the author's view, increasingly important topic.

## 7. References

- Aiken, M., Bacharach, S.B., French, J. L. (1980). Organizational Structure, Work Process, and Proposal Making in Administrative Bureaucracies. *Academy of Management Journal*, 23:631–652.
- Albert, S., Whetten, D.A. (1985). Organizational Identity, *Research in organizational behaviour*. 7:263-295.
- Alderfer, C. P. 1972. Human needs in organizational settings. *New York: Free Press of Glencoe*.
- Allen, N. J., Meyer, J. P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*, 63:1–18.
- Allport, G. (1943). The ego in contemporary psychology. *Psychological Review*, 60:757–760.
- Andersson, L. M., Bateman, T. S. (1997). Cynicism in the workplace: some causes and effects. *Journal of organizational behaviour*. 18:449-469.
- Argyris, C. (1964). *Integrating the individual and the organization*. New York: Wiley.
- Ashforth, B. E. (1990). Petty tyranny in organizations: A preliminary examination of antecedents and consequences. *Manuscript in preparation, Concordia University, Montreal, Quebec*.
- Ashforth, B.E., Harrison, S.H., & Corley, K.G. (2008). Identification in organizations: An examination of four fundamental questions. *Journal of management*, 34:325–374.
- Ashforth, B. E., Mael, F. (1989). Social identity and the organization. *Academy of Management Review*, 14:20–39.
- Ayeni, C. O., Phopoola, S. O. (2007). Work Motivation, Job Satisfaction, and Organizational Commitment of Library Personnel in Academic and Research Libraries in Oyo State, Nigeria. *Library Philosophy and Practice*, 2007.
- Barbuto, J. E., Brown, L. L., Wheeler, D. W., Wilhite, M. S. (2003). Motivation, altruism, and generalized compliance: A field study of organizational citizenship behaviours. *Psychological Reports*, Vol. 92:498–502.
- Bates, S. (2004), Getting engaged. *HR Magazine*, Vol. 49 No. 2:44–51.
- Bass, B. M. (1965). *Organizational psychology*. Boston: Allyn & Bacon.
- Baumeister, R., Leary, M. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, Vol. 117:497–529.
- Baumruk, R. (2004), The missing link: the role of employee engagement in business success, *Workspan*, Vol. 47:48–52.
- Bell, S. J., Menguc, B. (2002). The employee-organization relationship, organizational citizenship behaviours, and superior service quality. *Journal of Retailing*, Vol. 78:131–146.
- Benkhoff, B. (1997). Better Performance through Organizational Identification: A Test of Outcomes and Antecedents Based on Social Identity Theory. In Wickham, J. (ed.) *The Search for Competitiveness and Its Implications for Employment*. Dublin: Oak Tree Press.
- Blau, G. J. (1986). Job involvement and organizational commitment as interactive Predictors of tardiness and absenteeism. *Journal of Management*, 12:577– 584.

- Brooke, P.P., Russell, D.W., Price, J.L. (1988). Discriminant validation of measures of Job satisfaction, job involvement and organization commitment. *Journal of Applied Psychology*, 73:139–145.
- Brown, M. (1969). Identification and Some Conditions of Organizational Involvement. *Administrative Science Quarterly*, 14:346–55.
- Brown, S. L., Eisenhardt, K. M. (1997). The art of continuous change: linking complexity theory and timepaced evolution in relentlessly shifting organizations. *Administrative Science Quarterly*, 42, March:1–34.
- Carmeli, A., Atwater, L., Levi, A. (2011). How leadership enhances employees' knowledge sharing: The intervening roles of relational and organizational identification. *Journal of Technology Transfer*, 36:257–274.
- Chalofsky, N.E (2010). *Meaningful Workplaces: Reframing how and where we work*. Wiley.
- Cheloha, R. S., Farr, J. L. (1980). Absenteeism, job involvement and job satisfaction in an organizational setting. *Journal of Applied Psychology*, 65:467–473.
- Chen, X. P., Hui, C., Segó, D. J. (1998). The role of organizational citizenship behaviour in turnover: Conceptualization and preliminary tests of key hypotheses. *Journal of applied psychology*, Vol. 81(3):922–931.
- Child, J. (1973). Predicting and Understanding Organizational Structure. *Administrative Science Quarterly*, 18:168–185.
- Chu, D. (2011). *Complexity against systems: Theory in Biosciences*. Verlag: Springer.
- CIPD (2001). Employers' perceptions of the psychological contract. *CIPD report 112*.
- Cohen, R., & Havlin, S. (2010). *Complex Networks: Structure, Robustness and Function*. Cambridge University Press.
- Cook, J., Wall, T. (1980). New Work Attitude Measures of Trust, Organizational Commitment and Personal Need Non-fulfilment. *Journal of Occupational Psychology*, 53:39–52.
- Cronbach, L. (1951). Coefficient alpha and the internal structure of tests. *Psychoamerika*, 16:297–334.
- Cropanzano, R., Mitchell, M.S. (2005). Social exchange theory: an interdisciplinary review. *Journal of Management*, Vol. 31:874–900.
- Crotty, M. (1999). *The foundations of social research: Meaning and perspective in the research process*. London, Sage.
- Damanpour, F. (1996). Organisational Complexity and innovation: Developing and testing multiple contingency models. *Management Science*, 42 (5):693–716.
- Daniel L. Rubinfeld, D.L. (2014). Reference Guide on Multiple Regression. *University of California, Berkeley, California*. [http://www.fjc.gov/public/pdf.nsf/lookup/sciman03.pdf/\\$file/sciman03.pdf](http://www.fjc.gov/public/pdf.nsf/lookup/sciman03.pdf/$file/sciman03.pdf)
- Delanty, G. (2002). *Social Science: Beyond constructivism and realism*, Buckingham: OU Press
- Dolke, A.M., Srivastara, P.K. (1988). Need satisfaction, job involvement and intrinsic motivation: A factor analytic study. *Indian Journal of Applied Psychology*, 25:13–17.



Dubin, R.J. (1966). Industrial worker's world: A study of the central life interest of industrial workers. *Social Problems*, 3:131–142.

Dukerich, J. M., Golden, B. R., Shortell, S. M. (2002). Beauty is in the eye of the beholder: the impact of organizational identification, identity, and image on the cooperative behavior of physicians. *Administrative Science Quarterly*, 47:507–533.

Dukerich, J. M., Kramer, R., McLean Parks, J. (1998). The dark side of organizational identification. In D. A. Whetten, & P. C. Godfrey (Eds.), *Identify in organizations: Building theory through conversations* (pp. 245-256). *Thousand Oaks, CA: Sage*.

Duncan, R. B. (1972). Characteristics of Organizational Environments and Perceived Environmental Uncertainty. *Administrative Science Quarterly*, 17:313–327.

Dutton, J.E., Dukerich, J.M., Harquail, C.V. (1994). Organizational images and member identification. *Administrative Science Quarterly*, 39:239–263.

Edmundson, A. C., McManus, S. E. (2007). Methodological fit in management field research. *Academy of Management Review*, 32:1155–1179.

Elsbach, K. D. (1999). An expanded model of organizational identification. *Research in Organizational Behavior*, 21:163–200.

Elsbach, K. D., Bhattacharya, C. B. (2001). Defining who you are by what you're not: organizational disidentification and the National Rifle Association. *Organization Science*, 12:393–413.

Epitropaki, O., Martin, R. (2005). The moderating role of individual differences in the relation between transformational/transactional leadership perceptions and organizational identification. *Leadership Quarterly*, 16(4), 569-589.

Frone, M. R., Russell, C. J., Cooper, M. L. (1995). Job stressors, job involvement and employee health: A test of identity theory. *Journal of Occupational and Organizational Psychology*, 68:1–11.

Galbraith, J. R. (1973). *Designing Complex Organizations*. Reading: Addison-Wesley.

Gebauer .J, Lowman .D., Gordon .J (2008). *Closing the engagement gap: How Great Companies Unleash Employee Potential for Superior Results*. Reed Business Information

Gechman, A. S., Wiener, Y. (1975). Job involvement and satisfaction as related to mental health and personal time devoted to work. *Journal of Applied Psychology*, 60:521–523.

Gill P., Stewart K., Treasure E., Chadwick B. ( 2008). Methods of data collection in qualitative research: interviews and focus groups, *British dental Journal*.

Gioia, D. A., Schultz, M., Corley, K. G. (2000). Organizational identity, image, and adaptive instability. *Academy of Management Review*, 25(1):63–81.

Glisson, C., Durick, M. (1988), Predictors Of Job Satisfaction And Organizational Commitment In Human Service Organizations, *Administrative Science Quarterly*, 33, 1:61–81.

Glynn, M.A. (1998). Individuals need for organizational identification (nOID): speculations on individual differences in the propensity to identify. In D. A. Whetten, & P. C. Godfrey (Eds.), *Identify in organizations: Building theory through conversations* (pp. 238-244). *Thousand Oaks, CA: Sage*.

Goffman, E. (1961). *Encounters: Two studies in the sociology of interaction*. Indianapolis: Bobbs-Merrill Co.

- Gotsi, M., Wilson, A. M. (2001). Corporate reputation: seeking a definition. *Corporate communications*, 6:24-30.
- Graziano, A. M., Raulin, M. L (2004). *Research methods* (5<sup>th</sup> edition), Boston: Person education.
- Gregersen, H., Black, J. (1992). Antecedents to Commitment to a Parent Company and a Foreign Operation, *Academy of Management Journal*, 35(1): 65–90.
- Grover, S., Crooker, K. (1995). Who appreciates family-friendly policies on organizational attachment. *Personal psychology*, Vol. 48:271–288.
- Gurin, G., Veroff, J., Feld, S. (1960). *Americans view their mental health*. New York: Basic Books.
- Hackman, J., Lawler, E. (1971). Employee reactions to job characteristics. *Journal of Applied Psychology*, 52:259–286. (Monograph).
- Hackman, J. R., Oldham, G. R. 1980. *Work redesign*. Reading, Mass.: Addison-Wesley.
- Hackett, R. D., Bycio, P., Hausendorf, P.A. (1994). Further Assessment Of Meyer And Allen's 1991 Three Components Model Of Organizational Commitment. *Journal of Applied Psychology*, 79:340–350.
- Hage, J., Aiken, M. (1967). Program change and organizational proper-ties: A comparative analysis. *American Journal of Sociology*, 72:503–519.
- Hall, D. T., Schneider, B. (1972). Correlates of organizational identification as a function of career pattern and organizational type. *Administrative Science Quarterly*, 17:340–350.
- Hendrick, H. W. (2009). A Sociotechnical Systems Model of Organizational Complexity and Design and its Relation to Employee Cognitive Complexity. *Human factors and Ergonomics Society Annual Meeting*, 2009, 53:1028–1032.
- Herzberg, F., Mausner, B, Snyderman, B., (1959). *The motivation to work*. John Wiley & Sons, New York.
- Hitt, M. A., Hoskisson, R. E., Ireland D.R. (1990). Mergers and acquisitions and managerial commitment to innovation in M-form firms. *Strategic Management Journal* ,11:29–47.
- Hochschild, A. R. (1983). *The managed heart: Commercialization of human feeling*. Berkeley: University of California Press.
- Hogg, M.A., Terry, D.J. (2001). *Social identity process in organizational contexts*, Philadelphia, PA, Psychology Press.
- Hogg, M., Terry, D., White, K. (1995). A tale of two-theories: A critical comparison of identify theory with a social identify theory. *Social psychology quarterly*, Vol. 58:255–269.
- Hooijberg R, Hunt, J. G., Dodge, G.E. (1997). Leadership Complexity and Development of the Leaderplex, Model. *Journal of Management*, 23 (3):375–408.
- Hongwei, H., Andrew, D.B. (2013), Organizational identity and organizational identification: A review of the literature and suggestions for future research, *Group & organizational Management*, 38:3.
- Human Capital Institute (HCI) (2014). <http://johnspence.com/the-cost-of-disengaged-employees-and-what-you-can-do-about-it/>

- Iaffaldano, M., Muchinsky, P. (1985). Job satisfaction and job performance: A meta-analysis, *Psychological bulletin*, Vol. 97:251–273
- Ivancevich, J.M., Olekalns, M., Matteson, M.T. (1997). *Organizational behavior and management*. Sydney: Irwin.
- Katz, D., Kahn, R.L. (1978). *The social psychology of organizations* (2<sup>nd</sup> edition), Wiley, New York.
- Kahn, W.A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33, 4:692–724.
- Kanungo, R. N. (1979). The concepts of alienation and involvement revisited. *Psychological Bulletin*, 86:119–138.
- Kanungo, R. N. (1982). Measurement of job and work involvement. *Journal of Applied Psychology*, 67:341–349.
- Karambayya, R. (1999). *Contexts for organizational citizenship behaviour: Do high performing and satisfying units have better 'citizens'?*, York University working paper.
- Ketter, P. (2008). What's the big deal about employee engagement? *T+D*, 62(2):44–49.
- Kim, J., Park, K. (2008). A study on the multidimensional approach of employee resistance to organizational change [in Korea]. *Korean Journal of Management*, 16:1–41
- Kierkegaard, S (1985). Hong, Howard V.; Hong, Edna H., eds. Philosophical Fragments. *Princeton University Press*:37.
- Kim, W.G., Leong, J.K., Lee, Y. (2005), Effect Of Service Orientation On Job Satisfaction, Organizational Commitment, And Intention Of Leaving In A Casual Dining Chain Restaurant. *Hospitality Management*, 24:171–193.
- Knoop, R. (1995). Relationships among job involvement, job satisfaction, and organizational commitment for nurses. *Journal of Applied Psychology*, Nov 95, Vol. 129, Issue 6.
- Konrad, A.M. (2006). *Engaging employees through high-involvement work practices*. Ivey Business Journal.
- Kuhn, T. (1970). The structure of scientific revolutions, *Chicago: Chicago University Press*.
- Lawler, E. (1992). Affective Attachments to Nested Groups: A Choice-process Theory. *American Sociological Review*, 57:327–339.
- Lawler, E. E., III. (1992). *The ultimate advantage: Creating the high-involvement organization*. San Francisco: Jossey-Bass.
- Lawler, E. E., III., Hall, D. T. (1970). Relationship of job characteristics to job involvement, satisfaction, and intrinsic motivation. *Journal of Applied Psychology*, 54:305–312.
- Lee, S. M. (1971). An empirical analysis of organizational identification. *Academy of Management Journal*, 14:213–226.
- Lewis, R. (1994). From Chaos to complexity: Implications for Organisations. *Executive Development* 7(4):16–17.
- Li Ye., Long Lirong. (1999). A literature review on job involvement. *Social Psychological Research*, (4):57–63 (in Chinese).

- Liu, W., Zhu, R., Yang, Y. (2010). I warn you because I like you: Voice behavior, employee identifications, and transformational leadership. *Leadership Quarterly*, 21(1):189–202.
- Locke, E. A. (1976). *Organizational Behavior: Effect in the Workplace*. Annual Review of Psychology
- Lok, P., Crawford J. (2001). Antecedents Of Organizational Commitment And The Mediating Role Of Job Satisfaction. *Journal of Managerial Psychology*, 16(8):594–613.
- Lu, H., While, A.E., Barriball, K.B. (2005). Job satisfaction among nurses: a literature review, *International Journal of Nursing Studies*, Volume 42, Issue 2, February 2005:211–227.
- Luthans, F. (1998). *Organisational Behaviour*. (8th edition). Boston: Irwin McGraw-Hill.
- MacKenzie, S. B., Podsakoff, P. M., Petter, R. (1991). Organizational citizenship behaviour and objective productivity as determinants of managerial evaluations of Salespersons' performance. *Organizational behaviour and human decision processes*, Vol. 50:123–150.
- Mael, F.A., Ashforth, B.E. (1992), Alumni and their alma mater: a partial test of the reformulated model of organizational identification. *Journal of Organizational Psychology*, Vol. 13:103–123.
- Mael, F. (1988). Organizational identification: Construct redefinition and a field application with organizational alumni. Unpublished doctoral dissertation, *Wayne State University*, Detroit.
- Mael, F. A., Tetrick, L. E. (1992). Identifying organizational identification. *Educational and Psychological Measurement*, 52:813–824.
- Manojlovich, M., Laschinger, S., Heather, K. (2002). The relationship of empowerment and selected personality characteristics to nursing job satisfaction. *Journal of Nursing Administration*, 32(11):586–595.
- March, J.G., Simon, H.A. (1958) *Organizations*. New York: Wiley.
- Marion, R., Uhl-Bien, M. (2001). Leadership in complex organisations. *Leadership Quarterly*, 12:389–418.
- Martin, T. N., Hafer, J. C. (1995). The multiplicative interaction effects of job involvement and organizational commitment on the turnover intentions of full- and part-time employees. *Journal of Vocational Behavior*, 46:310–331.
- Maslach, C. (1982). *Burnout: The cost of caring*. Englewood Cliffs, N.J.: Prentice-Hall.
- Maslach, C., W.B. Schaufeli, M.P. Leiter. (2001). Job burnout. *Annual Review of Psychology*, 52:397–422.
- Maslow, A. (1954). *Motivation and personality*. New York: Harper & Row.
- Mathieu, J., Zajac, D. (1990). A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment, *Psychological Bulletin*, Vol. 108:171–194.
- May, D.R., Gilson, R.L., Harter, L.M. (2004), The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work, *Journal of Occupational & organizational psychology*, Vol. 77:11–37.
- McFarlin, D., Sweeney, P. (1990). Distributive and procedural justice as predictors of satisfaction with personal and organizational outcomes, *Academy of management journal*, Vol. 35:626–637.

- Meyer, J. P., Allen, N.J., Smith, C.A. (1993). Commitment to organizations and occupations: Extension and test of a three-component conceptualization. *Journal of Applied Psychology*, 78:538–551.
- Meyer, J.P., Stanley, D.J., Herscovitch, L., Topolnytsky, L. (2002). Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates and consequences. *Journal of Vocational Behaviour*, 61:20–51.
- Michel, A. A., Jehn, K. E. (2003). The dark side of identification: overcoming identification-induced performance impediments. *Research on Managing Groups and Teams*, 5:189–219.
- Mignerey, J., Rubin, R., Gordon, W. (1995). Organizational entry: An investigation of newcomer communication behaviour and uncertainty, *Communication Research*, Vol. 22:54–85.
- Mileti, D. S., Gillespie, D. F., Hass, J. E. (1977). Size and Structure in Complex Organizations, *Social Forces*, 56:208–217.
- Mintzberg, H. (1979). *The Structuring of Organizations*, NJ: Prentice-Hall.
- Morgan, G. (1997). *Images of organisations*, SAGE publications, California, USA
- Morieux, Y. (2011). Smart Rules: Six ways to get people to solve problems without you, *Harvard Business Review*, September.
- Mowday, R. T., Steers, R. M., Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, 14:224–247.
- Mowday, R. T., Porter, L. W., Steers, R. M. (1982). *Employee-organization linkages: The psychology of commitment, absenteeism and turnover*. New York: Academic Press.
- Nolan, S. (2011). Employee engagement, *Strategic HR Review*, Vol. 10 Iss: 3
- Norén, L. (1990). Fallstudiens trovärdighet. *FE institutionen, Handelshögskolan at Göteborgs Universitet*. FE-report 1990–305
- Oakes, P., Turner, J. C. (1986). Distinctiveness and the salience of social category memberships: Is there an automatic perceptual bias towards novelty? *European Journal of social psychology*, 16:325–344
- Ogilvie, J.R., Stork, D. (2003). Starting the HR and change conversation with history. *Journal of Organizational Change Management*, 16, 3:254–271.
- Okpara, J. O. (2004). Job Satisfaction and Organizational Commitment: Are There Differences Between American And Nigerian Managers Employed In The US Mncs Innigeria?. *Academy of Business & Administrative Sciences*, Briarcliffe College, Switzerland.
- O'Malley, M. (2000). *Creating Commitment*, John Wiley & Sons, Chichester
- Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Toronto: Lexington.
- Organ, D. W., Paine, J. B., (1999). A new kind of performance for industrial and organizational psychology: Recent contributions to the study of organizational citizenship behaviour, in Cooper C. L., Robertson, I. T. (eds), *International review of industrial and organizational psychology*, Vol. 14:337–367, London, John Wiley & Sons

- Organ, D. W., Ryan, K. (1995). A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behaviours, *Personal psychology*, Vol. 48:775–802.
- Parks, M., Floyd, K (1996). Meanings for closeness and intimacy in friendship, *Journal of Social and personal relationships*, Vol. 13:85–107.
- Patchen, M. (1970). *Participation, achievement, and involvement on the job*. Englewood Cliffs, NJ: Prentice Hall.
- Patterson, J.M., O'Driscoll, M.P. (1990). An empirical assessment of Kanungo's 1982 concept and measure of job involvement. *Applied Psychology in International Review*, 30(3):293–301.
- Perkins, D. N. (1981). *The mind's best work*. Cambridge, Mass.: Harvard University Press.
- Pfeffer J. (1994). *Competitive Advantage through People: Unleashing the Power of the Work Force*. Harvard Business School Press: Boston.
- Podsakoff, P. N., Adhearne, M., MacKenzie, S. B. (1997). Organizational citizenship behaviour and the quantity and quality of work group performance, *Journal of applied psychology*, Vol. 82(2):262–270.
- Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., Bacharach, D. G. (2000). Organizational citizenship behaviours: A critical review of the theoretical and empirical literature and suggestions for future research, *Journal of Management*, Vol. 26(3):513–565.
- Podsakoff, P. M., MacKeinzie, S. B. (1994). Organizational citizenship behaviour and sales unit effectiveness, *Journal of Marketing Research*, Vol. 31:351–363.
- Pratt, M. G. (1998). To be or not to be: Central questions in organizational identification. In D. A. Whetten & P. C. Godfrey (Eds.), *Identity in organizations*. Thousand Oaks, CA: Sage:171–207.
- Pratt, M. G., Doucet, L. (2000). Ambivalent feelings in organizational relationships. In S. Fineman (Ed.), *Emotion in organizations* (2nd ed.:204–226). London: Sage.
- Pierce, J. L., Delbecq, A. L. (1977). Organizational Structure, Individual Attitudes, and Innovation. *Academy of Management Review*, 2:26–37.
- Porter, L.W., Steers, R.M., Mowday, R.T., Boulian, P.V. (1974) Organizational commitment, job satisfaction, and turnover among psychiatric technicians. *Journal of applied psychology*, 59:603–609.
- Rabinowitz, S., Hall, D. P. (1977). Organizational research on job involvement. *Psychological Bulletin*, 84:265–288.
- Rafaeli, A., Sutton, R. I. (1987). The expression of emotion as part of the work role. *Academy of Management Review*, 12:23-37.
- Reade, C. (2001). Antecedents of organizational identification in multinational corporations: fostering psychological attachment to the local subsidiary and the global organization. *International Journal of Human resource management*, 12:1269–1291
- Reitz, H. J., Jewell, L. N. (1979). Sex, locus of control, and job involvement a six-country investigation. *Academy of Management Journal*, 22(1):72–88.
- Richman, A. (2006). Everyone wants an engaged workforce how can you create it? *Workspan*, Vol. 49:36–39.

- Riketta, M. (2005). Organizational identification: A meta-analysis. *Journal of Vocational behaviour*, 66:358–384.
- Robbins, S. P., Judge, T. A. (2009). *Organizational Behavior*, Upper Saddle River, NJ: Pearson Education, Inc.
- Robinson, D., Perryman, S., Hayday, S. (2004), *The Drivers of Employee Engagement*, Institute for Employment Studies, Brighton.
- Rothbard, N.P. (2001). Enriching or depleting? The dynamics of engagement in work and family roles, *Administrative Science Quarterly*, Vol. 46:655–684.
- Rousseau, D. M. (1995). Psychological contracts in organizations: Understanding written and unwritten agreements, *Thousand Oaks, CA, Sage publications*.
- Saks, A.M. (2006), Antecedents and consequences of employee engagement, *Journal of Managerial Psychology*, Vol. 21, Iss 7:600–619.
- Schaubroeck, J., Jones, J. R. (2000). Antecedents of workplace emotional labor dimensions and moderators of their effects on physical symptoms. *Journal of Organizational Behavior*, 21:163–183.
- Schneider, B., Hall, D. T., Nygren, H. T. (1971). Self image and job characteristics as correlates of changing organizational identification. *Human Relations*, 24:397–416.
- Schufeli, W.B., Salanova, M., Gonzalez-Roma, V. & Bakker, A.B. (2002). The measurement of engagement and burnout: a two sample confirmatory factor analytic approach, *Journal of happiness studies*, Vol. 3:71–92.
- Schwarzwald, J., Koslowsky, M., Shalit, B. (1992) A field study of employees' attitudes and behaviours after promotion decisions, *Journal of applied psychology*, Vol. 77:511–514.
- Shamir, B. (1991). Meaning, self and motivation in organizations, *Organization Studies*, 12:405–424.
- Shaw, K. (2005). An engagement strategy process for communicators, *Strategic Communication Management*, Vol. 9 No. 3:26–29.
- Shore, L.M., Tetrick, L.E (1991). A construct validity study of the survey of perceived organizational support. *Journal of Applied Psychology*, 76:637–643
- Shore, T.H., Thornton, G.C., Shore, L.M. (1990). Distinctiveness of three work attitudes: Job involvement, organization commitment, and career saliences. *Psychological Reports*, 67:851–858.
- Shuck, B., Reio, T. G., Rocco, T. S. (2011). Employee engagement: an examination of antecedent and outcome variables. *Human Resource Development International*, 14(4):427–445.
- Soong, S. W. (2000). *The study on the devotion and job satisfaction of adults' participation in volunteer services*. Taiwan: National Kaohsiung Administration, Normal University.
- Sonnentag, S. (2003). Recovery, work engagement, and proactive behaviour: a new look at the interface nonwork and work, *Journal of applied psychology*, Vol. 88:518–528.
- Staw, B.M. (1984). Organizational behaviour: A review and reconceptualization of the field's outcome variables. In: Rosenzweig, M.R. and Porter, L.W. (Eds) *Annual Review of Psychology*, Vol. 35, Annual reviews, Palo Alto, California.

Steele, C. M. (1988). The psychology of self-affirmation: Sustaining the integrity of the self. In L. Berkowitz (ed.), *Advances in Experimental Social Psychology*, 21: 261-302, New York: Academic Press.

Tajfel, H. (1978). Social categorization, social identity, and social comparison. In H. Tajfel (Ed.), *Differentiation between social groups* (pp. 61–76). New York: Academic Press.

Tajfel, H., and J. Turner (1985). The social identity theory of intergroup behavior, In S. Worchel and W. Austin (eds.), *Psychology of Intergroup Relations*, 2: 7-24, Chicago: Nelson-Hall.

Tangirala, S., Green, S. G., Ramanujam, R. (2007). In the shadow of the boss's boss: Effects of supervisors' upward exchange relationships on employees. *Journal of Applied Psychology*, 92:309–320.

Terry, D. J., Carey, C. J., Callan, V. J. (2012). Employee adjustment to an organizational merger: An intergroup perspective. *Personality and Social Psychology Bulletin*, 27:267–280.

The Families and Work Institute (1998). Reported in *USA Today*, July, No. 43

Turner, J. C., Oakes, P. J., Haslam, S. A., & McGarty, C. (1994). Self and collective: Cognition and social context. *Personality & Social Psychology Bulletin*, 20(5):454–463.

Turnley, W. H., Bolino, M. C., Lester, S. W. Bloodgood, J. M. (2003). The impact of psychological contract fulfilment on the performance of in-role and organizational citizenship behaviours, *Journal of management*, Vol. 29(2):187–206.

Van Dick, R., Wagner, U., Stellmacher, J., & Christ o. (2004). The utility of a broader conceptualization of organizational identification: Which aspects really matter? *Journal of Occupational and organizational psychology*, 77:171–191.

Van Knippenberg, D. (2000). Work motivation and performance: A social identity perspective. *Applied Psychology: An International Review*, 49:357–371.

Vance, R. J. (2006). Employee engagement and commitment, A guide to understanding, measuring and increasing engagement in your organization. *Society for Human Resource Management*:1–45.

Vanderberg, R.J., Lance, Ch.E. (1992). Examining the Causal Order of Job Satisfaction and Organizational Commitment, *Journal of Management*, Vol.18, No.1:153–167.

Vroom, V. (1962). Ego-involvement, job satisfaction, and job performance. *Personnel Psychology*, 15:159–177.

Wan-Huggins, V. N., Riordan, C. M., & Griffeth, R. W. (1998). The development and longitudinal test of a model of organizational identification. *Journal of Applied Social Psychology*, 28:727–749.

Wanous, J. P., Poland T. D., Premack, S. L., Davis, K. S. (1992). The effects of met expectations on newcomer attitudes and behaviours: A review and meta-analysis, *Journal of applied psychology*, Vol 77:288–297.

Winter, J. (1988), Problemformulering undersökning och rapport, Stockholm: Almqvist & Wiksell

Wollard, K. K., & Shuck, B. (2011). Antecedents to Employee Engagement: A Structured Review of the Literature, *Advances in Developing Human Resources*, 13:429–446.



Weissenberg, P., & Gruelfeld, L. W. (1968). Relationship between job satisfaction and job involvement. *Journal of Applied Psychology*, 52:469–473.

Whetten, & P. C. Godfrey (Eds.) (1998), *Identity in organizations: Building theory through conversations*, Thousand Oaks, CA

Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007). The role of personal resources in the job demands-resources model. *International Journal of Stress Management*, 14:121–141.

Zellars, K. L., Tepper, B. J., Duffy, M. K. (2002). Abusive supervision and subordinates' organizational citizenship behaviour, *Journal of applied psychology*, Vol. 87(6):1068–1076.

## 8. Appendices

### Appendix A – Scale for Role

#### Role scale - 1 measure

Source: The author, Erik Edvardsson (2014)

You should indicate which alternative that correlates best with your situation.

Control variables	
Role	<input type="checkbox"/> Manager (with direct reports) <input type="checkbox"/> Non-manager

### Appendix B – Scale for complexity in an organization

#### Complexity in an organization - measured via time in other peoples' meetings - 1 measure

Source: The author, Erik Edvardsson (2014)

Listed below are some statements that describe complexity in an organization.

You should indicate which alternative that correlates best with your situation at work.

Please note that there is no right or wrong answer.

Complexity in an organization	Choice	Description
In your role as a group manager, indicate how much time of a 40h work week you spend in meetings NOT requested or organized by yourself	<input type="checkbox"/>	I spend > 60% in meetings requested/organized by someone else
	<input type="checkbox"/>	I spend ~ 50% in meetings requested/organized by someone else
	<input type="checkbox"/>	I spend ~ 40% in meetings requested/organized by someone else
Do not include meetings requested by your team members	<input type="checkbox"/>	I spend < 30% in meetings requested/organized by someone else

### Appendix C – Scale for control and sample variables

#### Control variables and Sample description variables - 6 measures

Source: Various

These are control variables. Respondent is required to fill in these before starting survey.

You should indicate which alternative that correlates best with your situation.

Control variables	
Age	<input type="checkbox"/> <30 <input type="checkbox"/> 30-35 <input type="checkbox"/> 36-40 <input type="checkbox"/> 41-45 <input type="checkbox"/> 45-50 <input type="checkbox"/> 51-55 <input type="checkbox"/> 56-60 <input type="checkbox"/> >60
Organizational tenure (how many years in the organization)	<input type="checkbox"/> <5 <input type="checkbox"/> 5-10 <input type="checkbox"/> 11-15 <input type="checkbox"/> 16-20 <input type="checkbox"/> 21-25 <input type="checkbox"/> 26-30 <input type="checkbox"/> >30
Job tenure (how many years in your current position)	<input type="checkbox"/> <1 <input type="checkbox"/> 1-3 <input type="checkbox"/> 4-6 <input type="checkbox"/> 7-9 <input type="checkbox"/> 10-12 <input type="checkbox"/> 13-15 <input type="checkbox"/> >15
Number of direct reports	<input type="checkbox"/> <5 <input type="checkbox"/> 5-10 <input type="checkbox"/> 11-15 <input type="checkbox"/> 16-20 <input type="checkbox"/> >20
Sample description variables	
Gender	<input type="checkbox"/> Male <input type="checkbox"/> Female
Education	<input type="checkbox"/> University <input type="checkbox"/> No university

## Appendix D – Survey design

Page 1 of 5

### -- Engagement survey in "company" -- takes 5 minutes

Hello!

Your contribution in this survey is important. I need your reply as soon as possible.

You will help "company" to better understand employee engagement and organizational identification, in the context of organizational complexity. You will also help me with input to my MBA master thesis, conducted at Blekinge Tekniska Högskola (BTH).

This survey consist of 8 questions and 17 statements – split in 5 pages.

At a first glance, some statements in the survey can sound strange. In that case, be patient, take a breath and read it again :)

Please note that there is no right or wrong answer.

Only one answer per question is possible and all items are mandatory.

All statements have been used and validated in earlier research. They measure concepts within organizational behavior.

Thanks in advance for taking these minutes to answer.

Erik Edvardsson

\* Required

#### 7 introductory questions

What is your gender? \*

What is your age? \*

What is your education? \*

How many years have you worked at "company" \*

How many years have you worked in your current position? \*

Role \*

How many direct reports do you have? (Number of subordinates in your team) \*

Continue »

20% completed

Powered by  
 Google Forms

This content is neither created nor endorsed by Google.  
[Report Abuse](#) - [Terms of Service](#) - [Additional Terms](#)

## -- Engagement survey in "company" takes 5 minutes --

\* Required

### Organizational-related statements - Part I

6 statements below - developed by Mael & Ashforth (1992)

\*  
Tick one of the five options on the scale that relate to each question. Please note that there is no right or wrong answer. Answer statements by indicating from "Strongly disagree" to "Strongly agree".

	1 (Strongly disagree)	2	3	4	5 (Strongly agree)
When someone criticizes "company" it feels like a personal insult.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am very interested in what others think about "company".	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I talk about this organization, I usually say "we" rather than "they".	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This organization's successes are my successes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When someone praises this organization it feels like a personal compliment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If a story in the media criticized this organization, I would feel embarrassed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[« Back](#) [Continue »](#)

 40% completed

Powered by  Google Forms

This content is neither created nor endorsed by Google.  
[Report Abuse](#) - [Terms of Service](#) - [Additional Terms](#)

## -- Engagement survey in "company" takes 5 minutes --

\* Required

### Job-related statements

5 statements below - developed by Saks (2006)

\*

Tick one of the five options on the scale that relate to each question. Please note that there is no right or wrong answer. Answer statements by indicating from "Strongly disagree" to "Strongly agree".

	1 (Strongly disagree)	2	3	4	5 (Strongly agree)
I really "throw" myself into my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sometimes I am so into my job that I lose track of time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This job is all consuming; I am totally into it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My mind often wanders and I think of other things when doing my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am highly engaged in this job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[« Back](#) [Continue »](#)



Powered by  Google Forms

This content is neither created nor endorsed by Google.  
[Report Abuse](#) - [Terms of Service](#) - [Additional Terms](#)

## – Engagement survey in "company" takes 5 minutes –

\* Required

### Organizational-related statements - Part II

6 statements below - developed by Saks (2006)

\*

Tick one of the five options on the scale that relate to each question. Please note that there is no right or wrong answer. Answer statements by indicating from "Strongly disagree" to "Strongly agree".

	1 (Strongly disagree)	2	3	4	5 (Strongly agree)
Being a member of this organization is very attracting.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
One of my most exciting things is getting involved with things happening in this organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am really not into the "goings-on" in this organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being a member of this organization makes me come "alive".	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being a member of this organization energizes me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am highly engaged in this organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

« Back

Continue »

80% completed

## -- Engagement survey in "company" takes 5 minutes --

\* Required

Please answer the 1 and final question below

In your role: Indicate how much time of your week you spend in meetings NOT requested or organized by yourself \*

If you are a manager, do not include time in meetings with your team member(s)

« Back

Submit

100%: You made it.

Never submit passwords through Google Forms.

Powered by  
 Google Forms

This content is neither created nor endorsed by Google.  
[Report Abuse](#) - [Terms of Service](#) - [Additional Terms](#)