

# IMPACT OF PERFORMANCE MEASUREMENT ON THE INDIVIDUAL EMPLOYEE

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## **PREFACE**

*How will I get motivated to write this thesis?*

By setting targets, measuring what I am doing, and rewarding myself for every target I have reached? Maybe when I did that I finished this thesis earlier. With other words performance measurement systems is what this thesis is all about.

When I was brainstorming for my topic I asked people how to think about. One reaction I will never forget: "Why employees? Managers are much more important. It is too expensive for companies to implement performance measurement systems for employees". This reaction was triggering me for proving that it is a much discussed topic in the literature and that this certain person was wrong by saying this.

This is my last piece before finishing my master in Management Accounting and the study Business economics. I really enjoyed the time here. The study, honoursclass and all the jobs that I have done on the University were very inspiring.

Finally, I want to thank the employees of Assist and Vopak for participating in my survey. And many thanks to my supervisor who put effort in my thesis when he was having a surgery. Furthermore, thanks to my family and Hiskia who were supporting me all the time, especially my Mam and Babs who are the SPSS freaks of the family.

Thanks,

Floor van der Kooy

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## **EXECUTIVE SUMMARY**

Performance measurement systems helps to measures, evaluate and reward managers and employees. In literature performance measurement is mostly discussed in relation to low, middle and higher management. The group which is missing are the employees. Especially they need measures that are understandable and motivating for achieving their targets. From earlier research performance measurement, when it is well implemented, helps to motivate managers. In this research the focus are the employees. In this research it find out that performance measurement systems, when well implemented, helps to improve the quality of work for employees. It brings more interaction between managers and employees. The company goals and job expectations are clearer to employees. Psychological commitment is increasing by using a performance measurement system. Moreover it motivates and takes care of a more dynamical work culture. From the perspective of the employees it is helping to increase your quality of working of the employees.

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## **CHAPTER 1            INTRODUCTION TO THE RESEARCH TOPIC**

This chapter gives an introduction to the research topic about what impact performance measurement has on the quality of work from the perspective of the individual employee. After reviewing the literature on the impact of performance measurement the research gap will be defined. Development, implementation and use of performance measurement systems have been studied extensively, above all in relation with managers. However, literature shows little evidence on what kind of *impacts* performance measurement practices have on the quality of work of individual employees in the organization. Are these performance measurement systems motivating employees? In the first part of this chapter the topics are introduced and a brief review of the existing literature will be given. Second, the research question will be treated. To conclude an overview will be given about what to expect further on in this thesis.

### **1.1 Introduction to the research question**

#### **Performance-measurement**

Performance measurement, as a part of the performance management system is a topic which is often discussed but rarely defined. Literally it is the process of quantifying action, where measurement is the process of quantification and action leads to performance (Neeley et al. 2000). This research focuses on the impact performance measurement has on the quality of work of the individual employees. For many employees, most financial performance measures are too aggregated and too far removed from their actions to provide useful guidance or feedback on their decisions (Kaplan and Norton, 2001). They (the employees) may need measures that relate more directly and accurately to outcomes that they can influence (Kotler, 1984). An performance measurement approach is the balanced scorecard methodology. This approach means more understandable measures that contribute to the company goals. Company measures, also known as performance measures, are a very significant part of performance management, which is more than only measuring. It is also the evaluating, assessing of employees, process or equipment (Business dictionary). The purpose of these operational-level targets is to make clear to employees about what they are expected to do.

#### **Motivation**

Literature show that low task significance results in a low motivation of an employee (Grant, 2008). Problems like; high hiring costs through fast dispatch of employees, low work performance, and low satisfaction rise when employees do not feel motivated. The low motivation is one of the affects of

the quality of work. Other components of quality of work can be: Commitment, job performance and participation in decision making. Because of the fact that the delivered quality of work contributes to the company goals it is important to create incentives to increase this quality of work. Research shows that performance measurement, if well implemented has a positive effect on the quality of work of the employee. Employees' feel that the job is more important (Ukko et al., 2008). Moreover performance measures contribute in making the company objectives more understandable, which ultimately will increase work performance (Kaplan and Norton, 2001).

The aim of this thesis is to determine the impact of performance measurement on the quality of work from the perspective of the individual employee. In earlier literature in the field of performance measurement focus has been on the development and implementation side of performance measurement systems (Kaplan and Norton, 1996; Bititci et al., 1997; Neely et al., 2000). However the impact of performance measurement systems has not received much attention (Ukko et al., 2007). There has been little research on the impact of business performance, and the findings are contra dictionary (Bourne et al., 2005). In literature the topic performance measurement is most of all discussed in relation to top- middle- and lower managers and their incentive to improve the quality of work. Performance measurement can also be helpful to improve the quality of work of the employee. Earlier studies of Martinez (2006) and Ukko et al. (2008) find a positive impact on the quality of work. These studies will be discussed in the literature review.

### **1.1 Research question and sub questions**

This part provides the research aim in a more precise manner by formulating the research question and sub questions in order build a theoretical framework.

Research question:

***Do performance measurement systems, evaluating and rewarding for the individual employee, lead to a better 'quality of work'?***

To answer the above-formulated research question the following sub questions need also to be answered:

- 1 How is performance measurement systems maturing?
- 2 How can performance measurement systems be meaningful for employees?
- 3 What comprises the definition 'quality of work'?
- 4 What is the influence of using a performance measurement systems on the quality of working?



### **1.3 Relevance**

The results of this thesis should be particularly interesting concerning those involved with managing employees. The problems like: lack of motivation, employees who do not participate in the dialog and low work performance can (partly) be solved through a different management control type such as performance measurement. Employees who are being involved in this process will improve their quality of work.

### **1.4 Empirics**

To investigate the impact of performance measurement on the individual employee an analytical survey will be executed. The companies are Assist and Vopak. Assist measure employees individual performance, evaluate it and link it to a reward. The survey is set out at the Support & Service departments. Both companies are in an economic stable situation.

### **1.5 Structure of this thesis**

In the end of this thesis the research question should be answered. The sub question, given above, needs to be answered in the chapters.

In the first chapter an introduction to the research topic is given. This chapter describes why there is a need to conduct this research; also the research and sub questions are defined.

Chapter two gives a review of the existing literature about the impact of performance measurement. And similar researches will be discussed.

The third chapter contains a theoretical background on the field of management control systems, performance management and human elements in the performance management.

Chapter four describes the term quality of work and the influence of performance management systems on the quality of work. The aspects motivation, job performance, participation in decision making and commitment will be discussed.

The relation between the quality of work and performance measurement is stated in chapter five. Moreover the hypotheses are developed and presented. At final the research model is developed. This model is leading for the research.

The method of data collection and the research design are presented in chapter six. This research is using a quantitative research, where surveys have been used to collect the data. It concludes with explaining the data analysis process.

The results of the research and the analyses are presented and discussed in chapter seven.

Finally, chapter eight answers the research question, gives the implications of the results, limitations of the research and suggestions for further research.

## CHAPTER 2            LITERATURE REVIEW

In this chapter, the literature about the impact of performance measurement systems will be reviewed. The purpose of this review is to get a better understanding of the existing literature about this subject.

### 2.1    Literature performance measurement

Performance measurement systems have been discussed a lot in literature the last fifty years. A lot of shortcomings and dysfunctional behavior is lighted out. The traditional measurement systems organizations used were criticized (Johnson and Kaplan, 1987). In the 1990s Kaplan and Norton came on with the Balanced Scorecard as the “new” way of performance measurement. Therefore between 1995 and 2000, 30% to 60% of the companies changed their performance measurement system (Frigo and Krumwiede, 2000).

There is a common view among researchers that performance measurement systems lead to a higher performance of individuals and organizations. Especially when the performance measurement is linked to rewards (Banker et al., 2000; Davis and Albright, 2004; Kaplan and Norton, 2001; Kauhanen and Piekkola, 2006; Simons, 2000; Torrington et al., 2005). A study executed by Davis and Albright (2004) use experimental and a control group to evaluate the impact of the balanced scorecard. The balanced score card also a kind of performance measurement systems. They compare the performance of nine matched pairs in the banking sector and compare their performance. This study shows that those branches that adopt the balanced scorecard have superior financial performance (Davis and Albright, 2004). Kaplan and Norton (2001) have made some demonstrations of the positive impact of performance measurement systems (balanced scorecard), but uses almost only anecdotal cases.

Despite the great promises from these studies, some studies did not find a positive impact from performance measurement. Some studies have contra dictionary findings concerning the motivational aspect in the performance measurement system (Ittner et al., 2003a; Piekkola, 2005; McCausland et al., 2005) The study of Ittner et al. (2003a) on the impact of performance measurement and the incentive scheme show a negative impact on the organization. Through the subjectivity in the incentive scheme there were unsatisfied employees, and therefore performance measures lost their credibility (Ittner et al., 2003a). A study from De Waal (2003) found that the performance measurement system and evaluations for employees is very time-consuming which cost a lot of money and is not always leading to better financial results.

Furthermore it is very difficult to develop the right measures and rewards. By missing some measures or rewarding the wrong measures employees' are aligning the wrong strategy and do what is best for their individual results. Not what is best for the organizations strategy, so resulting in dysfunctional behavior. The measures that are chosen have to be the right one (de Haas & Kleingeld, 1999). When the reward systems are not fair this could result in unsatisfied and unmotivated employees (de Haas and Kleingeld, 1999).

Herpen et al. (2005) researched the effect of performance measurement and compensation on motivation. They set out a survey and show that there is a positive relationship between a compensation system and extrinsic motivation. Furthermore that intrinsic motivation is not affected by the compensation system, but is affected by promotional opportunities. Besides that, the survey shows that work satisfaction is significantly positively affected by the fairness of the monetary compensation system. The feeling of being treated correctly by a company will result in fair behavior. There is need for a fair performance measurement and compensation system. Development of the performance measures is therefore a very critical part of the system (Herpen et al., 2005). That is why there are more studies done on the development of measurement systems and relatively little on their impact on the employees.

The studies that show a positive effect of performance measurement systems differentiated two types of effects (Martinez and Kennerly, 2006), internal and external effects (see figure 1). External effects are shown in the business results, like profit, market expansion, and reputation. (Martinez and Kennerly, 2006). The internal effects are reflected in the way the organization is operating. For example: processes in the organization, behavior, capabilities and involvement of employees. These are internal aspects of the organization's performance and are mainly affected by the employees (Martinez and Kennerly, 2006).

The final goal of performance measurement is to increase the financial performance. Achieving this result is done by first improving the internal organization. In general, organizations should pay more attention to the internal effects of performance measurement systems. These effects are namely directly affected through performance measurement and drive the organizations to external effects (Martinez and Kennerly, 2006). From the research of De Waal (2003) is found that performance measurement systems improve employee satisfaction (internal) and customer satisfaction (external).

Figure 1. Effects of Performance Measurement Systems



Source: Martinez and Kennerly (2006)

The research that are done for investigating the impact of performance measurement systems is little. A survey study was done at 500 organizations by Martinez et al. (2006) on the effects of performance measurement systems, showing that having performance measurement systems improves the focus of people in the organization, helps in achieving the key objectives, improves communications skills, stimulates debate around performance, improves employee satisfaction and motivation. The major negative effects on the 500 organizations are the misleading prioritization: In case a measure is not going to be achieved it attracts attention and resources, even in the case where this measure might not be as important as the other measures. Ukko et al. (2008) researched the impact of performance measurement on the quality of life. They took interviews at eight organizations with managers and employees and find a positive relationship between the impact and the quality of working life (motivation, learning opportunities, job satisfaction, work atmosphere, health and safety, participation in decision making, realization personal targets and rewards). The focus of these were mainly on the managers and their behavior.

## 2.2

## Conclusion

Much of research is done on the topic of performance measurement systems. Development of the systems, the dysfunctional behavior of performance measurement systems have been discussed in the literature. The literature shows little evidence on how employees perceive the measurement system and its impacts. The little research which has been done about the impact of performance measurement systems in general is although not in line with each other. Most studies suggest that performance measurement has a positive relation on both internal as external effects in the organization. However there are studies that show that it brings more problems in the organization (dysfunctional behavior, time consuming, wrong prioritization, etc.). Little attention is given to the impact of performance measurement systems on the individual employee. How they experience a

performance measurement systems, evaluations and rewards. The research which follows in this thesis will study the impact of performance measurement on the individual employee.

## **CHAPTER 3            What is a performance measurement system?**

To have a high probability of success, organizations must maintain good management control. Good control means that management can be reasonably confident that no major unpleasant surprises will occur (Merchant and Van der Stede, 2007). Management control systems are tools for the management helping an organization toward its strategic objectives. Management controls are only one of the tools that managers (can) use in implementing desired strategies. A type of management control is results control, which involves motivating employees reaching the goals the organization wants. This type of management control requires performance measures, evaluations and rewards. Rewards are not only monetary rewards, such as bonuses or loan rises, but also nonmonetary rewards such as recognition, and autonomy.

This chapter will give a theoretical view of a management control system and type of management control, the results control. Performance measures, rewards and its issues are discussed. The purpose of this review is a better understanding about these topics.

### **3.1    Management control**

Simons (1995) introduced a framework based on four levels of control for describing the management control system; 1) belief controls, 2) boundary controls, 3) diagnostic controls and 4) interactive control systems.

The joint use and integration of the four levels of control create a dynamic framework to manage the tension between company growth and being in control. Belief control systems are mission statements to create commitment to the company's core values and beliefs. Boundary control systems are the risks to be avoided by having a code of conduct, guidelines and regulations. Interactive control systems are the formal information systems managers use for regular and personal involvement in the decisions of subordinates, and are used to strategically monitor and learn from the changing environment. Diagnostic control systems are used by managers to monitor results, profitability and progress, and to ensure that important objectives are achieved effectively. The aim of the control system is to make these levers of control act together in a balance, in order to account for strategy, management control and performance management; all in control system ranging from organizational strategy to individual performance. Simons (1995) argues that "Management control systems are the formal, information-based routines and procedures managers use to maintain or alter patterns in organizational activities. Whereas strategic control assesses the question whether the strategy chosen is the best one."

Merchant and Van der Stede (2007) emphasizes another issue than the thoughts of Simons. The issue is whether employees behave appropriately or not. Management control systems are processes to ensure that employees do what is best for the organization (Merchant and Van der Stede, 2007). Management control systems are therefore intended to help the organization to motivate employees to make decisions and to take actions which are in the organization's best interest. Management control systems have the purpose of providing information useful in decision-making, planning and evaluation (Widener, 2007). The focus of a management control system is not only on one form of control like performance measures but on multiple control tools (Widener, 2007). Management control systems thus have two main purposes: providing information useful to management and helping to ensure viable patterns of employee behavior in order to achieve organizational objectives.

Robert N. Anthony (2007) defined management control as the process by which managers influence other members of the organization to implement the organization's strategies. Management control systems are tools to help the management for leading an organization toward its strategic objectives. Management controls are only one of the tools which managers use in implementing desired strategies. Management control is the process by which managers assure that resources are obtained and used effectively and efficiently in the accomplishment of the organization's objectives.

In this thesis the new formulated definitions of management control systems are used. It is a process to ensure that employees do what is best for the organization. It is not only a formal process like Simons (1995) say. There are behavioral elements present. Given the behavioral elements in management control systems, these systems do not exist without problems. Due these problems there is a need for control, these problems can be classified in three main categories: lack of direction, motivational problems and personal limitations (Merchant and Van der Stede, 2007).

#### *Lack of direction*

Some employees perform poorly because they are not certain about what the organization wants from them; they experience a lack of direction. A survey executed by KPMG revealed that 55% of the respondents had a lack of understanding of the standards that apply to their jobs (KPMG, 2005). Moreover, another study showed that 82% of the respondents believe that senior managers in their organizations understand the value drivers of the business strategy. 46% say that middle management understands them, but only 13% believe that the lower level employee understands the organizational goals (World at Work survey report, 2004). Therefore one function of a good management control systems is to inform the employees how they are able to maximize their contributions in relation to the organizational goals.



### *Motivational problems*

Even when employees fully understand the organizational objectives, some employees choose not to maximize their contributions to the fulfillment of the organizational objectives because of motivational problems. These problems are common because organizational goals and personal goals are not aligned, resulting in employees acting in their own personal interest. Moreover it is found out that low task significantly results in a low motivated employee (Grant, 2008). Motivation is more extensively discussed in chapter 4.

### *Personal limitations*

The employees could fully understand the organizational goals and are highly motivated but there could also exist personal limitations. They are for example unable to do a good job due a lack of intelligence, training, experience or specific knowledge. These limitations are a problem because they reduce the probability that employees will make the correct decisions.

These three management control problems, lack of direction, motivational problems and personal limitations can occur simultaneously or in any combination (Merchant and Van der Stede, 2007). Sometimes these problems can be minimized or avoided. Organizations can never avoid all their control problems, but can reduce the maximum loss in case the problems occur. There are several ways to do this.

- Activity elimination;
- Using automated devices to replace human problems;
- Direct control of the employees, with legal or structural limitations and clear boundaries;
- Centralization of decision-making, budgeting processes have been a traditional way of controlling decentralized divisions and projects, and still maintaining an authoritarian line of command and control and centralized decision making;
- Risk sharing by insurance.

Another common and more recent way to solve the management control a problem is through the design of a complete management control model; a collection of control mechanisms (Simons, 1995; Merchant and Van der Stede, 2007). Such system may include results controls, action controls, personnel controls and cultural controls. Results control includes performance management.

### **Results control**

Results control is a type of control in a management control system that influences behavior in organizations. 'Pay for performance' is a prominent example of a type of result control. Besides

monetary rewards the result control goes far beyond monetary rewards. Vicky Wright from the Hay group says: "Performance measurement is about learning how to motivate people – how to link those performance measures to rewards". Other rewards that can be linked usefully to measured performance include job security, promotions, autonomy and recognition (Rynes et al., 2004). Results control influences actions because they cause employees to be concerned about the consequences of actions they make and take. The organization does not dictate to employees what actions they should take, instead of that employees are empowered to take those actions they believe is best for the organization. The organization objectives system is defined as a process whereby the superior and subordinates of an organization jointly identify its common goals, define each individual's major areas of responsibility in terms of the results expected of him, and use these measures as guides for operating the unit and assessing the contribution of each of its members (Odiome, 1965).

These organization objectives should include a set of value drivers. These are the leading indicators of value creation in the organization; the critical success factors of what to concentrate on today in order to create value tomorrow (Merchant and Van der Stede, 2007).

Kaplan and Norton (1992) suggest the Balanced Scorecard, where business strategy is broken down into key performance indicators of financial, customer, internal processes, and learning and growth perspectives. This set of performance measures does have many advantages. They link individual goals with overall organizational objectives and business strategy, thereby balancing short term and long term objectives. Also, the measures provide a timely performance evaluation, on both lead and lag, financial and non-financial measures. Kaplan and Norton (1996) advise that a scorecard should contain both outcome measures and the performance drivers of those outcomes, linked together in a clear cause and effect relationship. Results controls are particularly dominant as a means of controlling the behaviors of professional employees, which have decision authority, like managers. The results control includes performance measurement and will be explained in the next paragraph.

### **3.2 Performance measurement**

Results control is a type of management control which involves motivating employees achieving outcomes the organization desires. This results control includes performance measures, evaluations and rewards. This paragraph explains performance measurement, rewards and its issues.

The definition of performance measurement presented by Neely et al. (2000) is the process of quantifying the efficiency and effectiveness of an action. Effectiveness refers to the requirements

that are met, while efficiency is a measure of how economically the organizations' resources are used when providing a given level. Performance measures say something important about the products, services, and the processes that produce them. They are a tool to help understanding, managing and improving things that our organizations do.

Performance measurement is an aspect of performance management. Performance management is what is done with the information developed from measuring performance. Performance management has a variety of different applications. There is no single established definition for the term performance management. Bititci et al. (1997) define performance management as a process by which the organization manages performance (processes, activities, tasks and personnel) aligned with the strategies and objectives and uses the feedback obtained through the performance measurement system to get appropriate management decisions.

The main reason for measuring performance is to *get what you measure; and you cannot manage a project unless you measure it*. Performance measurement can be used as a tool for implementing an organization's strategy through the whole organization (Kaplan and Norton 1996). Performance measurement can be used to:

- Translate strategy into concrete measures;
- Communicate strategy to employees;
- Guide employees;
- Control system;
- Show the performance of individual employees;

Performance measurement is usually carried out using a performance measurement system, which consists of several individual measures. There are many frameworks for constructing such a system. The most common used model is the Balanced Scorecard. The measures for the performance measurement system chosen are based on an organization's vision and strategy (Kaplan and Norton 1996). Measures are chosen to measure success factors from different points of view, such as that of the customer, employees, business processes and financial success, as well as from the point of view of past, current and future performance. This way, different aspects of an organization's performance can be measured and managed.

There are four main phases related to the performance measurement process (Neely et al., 2000). The first phase is, choosing the measures which reflect the strategy of the company. After choosing the measures, the systems need to be implemented into the organization. This includes determining

the way of measuring and tracking. The third phase is just using the measurement system. So, all the measures are being tracked in for example Excel. The last phase is updating the measurement system. Every time when an organization's strategy or business objective changes, the measurement system must be redesigned accordingly (Kaplan and Norton, 1996), otherwise it will no longer provide strategically important information. Choosing the right measures is very crucial. The organization must strive to set the right key performance indicators and link measures to them. The formulation of the measures should be correctly and reflect the organizations strategy. Moreover the organization should be aware of the possible behavior problems caused by these performance measures and if possible minimize these problems.

Traditionally only financial performance measures are used. The number of organizations using non-financial performance measures in the measurement system is increasing (Banker et al. 2000). Although there are a number of reasons why firms use non-financial performance measures, the primary reason is that some of them are leading indicators of financial performance (Kaplan and Norton, 2001). Non-financial performance measures therefore provide incentives to improve long-term financial performance. Financial performance measures, on the other hand, are more 'backward-looking' and lack predictive ability to explain future performance and therefore provide incentives to improve short-term financial performance.

The literature suggests a great variety of different purposes for using performance measurement. Simons (2000) presents that management information can be used for a variety of purposes, like planning, coordination, motivation, evaluation and education. He continues by categorizing these different uses into five broad categories: decision-making; control; signaling, education and learning; and external communication.

### **Perspectives of using performance measurement**

Traditionally, performance measurement has been seen as a tool for managing the managers (Ukko et al., 2007b). Since the introducing of the non financial performance measures 25 years ago, performance measurement are also being seen in relation with employees (Kaplan and Norton 2001). Financial ratios are not really understandable for employees; on the other hand non financial ratios such as the amount of customer complaints about the cleaning of hotel rooms are much more understandable for the them. When translating the strategy into action, performance measurement can be used for the lower level employees of the organization. A famous approach is the Balanced

score card of Kaplan and Norton. This approach is when employees have understandable measures to reach the organizations objectives.

In this research the focus is on employees. The four most important purposes of using performance measurement from the employees' perspective are (Martinez, 2005a):

- monitoring the results of personal/team measures;
- concentrating on the issues that are most in need of improvement;
- gathering information to support decision-making;
- recognizing how your own work contributes to the company's strategy;

It can be stated that nowadays performance measurement seems to meet employees at all levels of organizations. Thus the purpose of using performance measurement can be examined from different perspectives, for example from the perspectives of the management and the employees. In this research the perspective of the employee will be discussed.

### **Behavioral displacement problems**

The performance of an organization can be seen as an outcome of both organizational and human activities. Nowadays, the human element in performance measurement systems receives much attention in literature. Merchant and Van der Stede (2007) states that performance measurement and control systems cannot be designed without taking into account human behavior. For successful implementation of performance measurement it depends above all on understanding and accommodating the human element. A performance measurement system cannot be designed without the aspect human behavior. Performance measures can bring on behavioral displacement problems. This paragraph discusses the difficulties caused by human behavior. The myopia problem (short term vision), too few or too many performance measures and other behavioral displacement problems.

#### *Myopia problem*

Myopia problem or short term oriented problem is where employees/managers are more concerned with short term profits than long term value.

### *Too little or too many measurements*

Using too little performance measures can result in employees which are narrow minded. The only objectives in their work are the too few performance measures. On the other hand, using too many measurements will result in a diffused employee. Kaplan and Norton came up with the balanced scorecard as a performance measurement tool, with a variety of key performance indicators and measures. But, to address every important aspect of a balanced scorecard there have to be at least twenty measures (Kaplan and Norton, 1992). On the other hand Malina and Selto (2001) suggest keeping the measurement system administratively simple with a limited amount of measures.

A study done by Bourguignon (2004), show that when people have to deal with too many performance measures, they focus on the measures they perceive as most important. This will result in dysfunctional behavior, with managers interpreting the measures different than the organization. From the perspective of the employee there is maybe not enough knowledge to decide which measures are the most important ones.

### *Other behavioral displacement problems*

When setting individual targets for employees there are some challenges. One of the challenge is the ratchet effect (Laezar and Gibbs, 2008). When the performance of one period is the basis for target formulations in the next period, the employee has incentives to minimize efforts in the first period. Another issue by having targets is manipulation, where the employee is manipulate the results to receive a higher score on the performance measures.

Merchant and Van der Stede (2007) emphasizes the importance of balancing the use of incentives by performance measures. The employee's internal motivation to the business strategy and the performance measures is really important. The internal motivation is dedication for work assignments and measures. On the other side, external motivation includes variables outside the employee, like organizational incentives. If the external incentive is too high, it may motivate employees to focus all their attention on the measures. This is especially problematic if the organization uses only financial measures, and the risk of manipulation is present. Merchant and Van der Stede, (2007) suggests a set of performance measures, both financial and non-financial. When the wrong measures are rewarded this will result in a disaster. Employees are aligning the wrong strategy and do what is best for them individually, not what is best for the organizations strategy. The measures that are chosen will have to be the right one.

## **Impacts of performance measurement**

Some studies show a positive relation of performance measures and financial performance. Although these positive relation between performance measurement systems and financial performance, the underlying factors are very different. Bourne et al. (2005) denominate the factor of the interaction in the performance measurement systems. Through the measures and job descriptions and establishing objectives the employees are more involved. This should lead to a better financial performance. Davis and Albright (2004) denominate the factor of using non financial performance measures. Through the use of this long term vision measures the financial performance will increase. Braam and Nijssen (2004) denominate the linkage of performance measurement with strategy. When employees are more aligned with the strategy of the organization the financial performance increases. Which factors exactly enable a positive impact of performance measurement on financial performance still needs further research (Ukko et al., 2009).

Also Lawson et al. (2003) state that the performance measurement system will result in a significant improvement in employee satisfaction. Their study highlights that along with the implementation of the performance measurement system and the linkage to the reward system, the employees throughout the organization became more aware of the goals and objectives of the business plan and strove for higher performance.

Martinez (2005a) presents positive effects from a case study where the performance measurement system was implemented at executive, business unit, team, and individual levels. They list eight positive effects of performance measurement system:

- focusing people's attention on what is important to the company;
- gaining business improvement;
- improving customer satisfaction;
- increasing productivity;
- aligning operational performance with strategic objectives;
- improving people's satisfaction;
- aligning people's behavior towards continuous improvement; and,
- improving the company's reputation.

### 3.3 Rewards

To create stimulus for employees to reach the targets a performance measurement system needs rewards which are connected to the measures. A performance measurement system is less effective without a rewards system (Lynch and Cross, 1995). Rewards are needed for employees to reach their objectives. Rewards are important because they motivate employees to achieve and exceed the performance measures (Merchant and Van der Stede, 2007). In this paragraph first some theoretical assumptions for rewards are enumerated. Secondly, the importance of fairness will be discussed.

Hannula and Lonngqvist (2002) define rewards as follows:

*“Incentives, or pay-for-performance, refer to attaching rewards to the achievement of targets set for some chosen measures.”*

Rewards can be intrinsic and extrinsic. Intrinsic are rewards that come from the employee self. Such as, satisfaction from a well done job. Extrinsic rewards are those which come from other persons than the individual employee. Extrinsic rewards are recognition, prizes, pay for performance, job security, promotions and autonomy (Rynes et al., 2004). This research focuses on extrinsic rewards. In this thesis the study is done in relation with extrinsic rewards.

The principal agent theory (Rees, 1985) is most common used in incentive systems. When a principal hires an agent to act on his behalf, the asymmetric information and moral hazard problems arise. Asymmetric information is a situation where the agent, here the employee, has more information about the business than the principal, the owner. The moral hazard problem is a situation where the agent (employee) and principal (owner) have conflicting interest. Here the employee will act to optimize his interests and not the interest of the owner. In this situations, the owner wants to align the objectives of the employee with his own objectives. Mostly it happens by providing a good job descriptions and performance measures strongly connected to the reward system. In theory, if there are no risks for the owner, incentives would not be necessary. This is only possible if the goals of the employee are exactly the same as those of the owner, and the employee is highly motivated and capable to perform it.

To overcome the principal agent problems incentives (rewards) can be used, in order to align the goals of the owner with the goals of the employee. It was normal that punishments have been used as intensive incentives. Today's incentives are more positively, such as recognition, payment and compensation. However, absence of positive incentives can sometimes be regarded as a punishment



(Merchant and Van der Stede, 2007). Table 1 lists some major forms of rewards that organizations use. Many of them are nonmonetary incentives.

Laezar and Gibbs (2009) argue that employees respond strongly to incentives (rewards), and thereby make incentive systems an important source of value creation if designed correctly. Nevertheless, if designed poorly, they argue that the incentive system can result in value destruction. Individual performance based rewards are becoming more and more common in today's businesses. The reason for more individual performance based rewards is the changes in work assignments. Some years ago a majority of the work assignments could easily be described and directly controlled. However, today many assignments and positions require flexibility and a high degree of independent decision making, especially in knowledge intensive organizations. This makes control more difficult and powerful incentives an alternative control mechanism.

Many researchers have studied the consequences of monetary rewards and have suggested other forms of incentives. Many pros and cons with performance based payments are discussed in the literature (Merchant and Van der Stede, 2007). The reward programs can have positive effects if the results are easily measured and the job descriptions are very clearly. Individual rewarding motivate to higher performance, and thereby support empowerment. Moreover, the rewards will align the individual goals with the goals of the owner(s). However, still organizations uses rewards schemes who are encouraging short term results and discourages teamwork.

Kohn (1993) argues that monetary rewards are not influencing the internal commitment. He suggests compensating employees well, and use other incentives than monetary rewards to improve the internal commitment. Sometimes just evaluating and giving attention is already enough for giving employees positive incentives. One classical example is the Hawthorne-effect, where correlation between lighting and productivity at a production plant was studied. The results showed that productivity increased with a change in the environment, no matter what kind of physical change. The observations (measures) and the attention given was the reason for changes in productivity.

**Table 1. Examples of positive and negative rewards**

<b>Positive rewards</b>	<b>Negative rewards (punishments)</b>
Autonomy	Interference in job from superiors
Power	Loss of job
Opportunities to participate in decision making	Zero salary increase
Salary increases	Assignment to unimportant tasks
Bonuses	Chastisement (public or private)
Stock options	No promotion
Restricted stock	Job evaluation
Praise	Demotion
Recognition	Public humiliation
Promotions	
Titles	
Reserved parking places	
Club memberships	
Job security	
Vacation trips	
Participation in development programs	
Time off	

Source: Merchant (1998)

### **Fairness of rewards**

When an organization is using rewards for their individual employees and especially monetary rewards, it is important to make them fair and justifiable. When employees feel that the rewards are not fairly determined the motivation will decrease. An employee naturally compares his effort and linked reward with other employees. Fairness is very important. Herpen et al. (2005) highlight that employees have to see the performance measurement system as a positive element. If they perceive the system as unfair or incomprehensible they will lose motivation, commitment and respect for the organization.

### **3.4 Conclusion**

A performance measurement system is part of a performance management system which is assigned to a management control system. By measuring the performance you will be able to manage it. Traditionally only managers use these measures. Since the measures can be financial and non financial, the employee is also using these measures. These (non financial) measures can help the lower level employee to understand the strategy of the organization. These measures can be effective on several things such as the motivation of the employee and the performance of the business, on the condition that it is well implemented and limits the behavioral problems which can occur. To link those measures to rewards there will be an incentive for the employee. Important is that those rewards are fair both monetary as non monetary. Such a performance measurement system and rewards can influence the quality of work of the individual employee. The next chapter will explain the quality of work.

## **CHAPTER 4            QUALITY OF WORK**

Business performance is very important for the financial performance. To reach the good financial performance, the quality of the business needs to be sufficient. The quality of the business and also the quality of work are common used definitions. The concept 'quality of work' is a broad concept and there is missing a universal definition. Graber (1980) conceptualizes the quality of work to consist of three key components:

- 1        General and facet satisfaction with work;
- 2        The nature of working conditions, job design, influence in decision making;
- 3        The level of employee performance with regard of organizational objectives.

Packard (1981) splits up quality of working into seven categories: the work itself, working conditions, salary, potential for growth and development, working climate and supervision. The study from Ukko et al. (2008) developed from the literature his definition quality of work, which consists of eight aspects: Work motivation, learning objectives, job satisfaction, work atmosphere, health and safety, participation in decision making, realization of targets and reward system.

In this thesis the impact of performance measurement on the individual employee is investigated. The focus in this thesis is the impact on the internal affect (productivity, employee satisfaction, and motivation). To outline the relevant themes for the questionnaire from the perspective of the employee, the concept of quality of work is developed from the literature and include these four aspects: work motivation, participation in decision making, work performance and commitment. This chapter gives a theoretical overview about these aspects of work.

### **4.1    Work motivation**

Motivation has several definitions: The psychological process that gives behavior purpose and direction (Herpen et al., 2005): The will of an individual to achieve (Bedeian, 1993): The internal drive to satisfy an unsatisfied need (Higgins, 1994). Motivation gives reason, incentive, enthusiasm, or interest that causes a specific action or certain behavior.

The motivation of employees plays a central role in the field of management. A motivated workforce is a strategic asset (Steers et al, 2001). A place that needs motivation is on the work floor. How to

motivate my employees is a frequently asked question. An employee without motivation will not execute the job optimal (Grant, 2008). Literature had find out that low task significance results in a low motivation employee (Grant, 2008). The problems like, motivational, high hiring cost through fast dispatch of employees, low work performance, low satisfaction rises when employees do not feel motivated. Namely, the low motivation of the employee could also affects several other components of the quality of work: commitment, job performance, job satisfaction and participation in decision making.

Many theories have been developed to explain work motivation. Pinder (1998) provides a definition of work motivation: *“Work motivation is a set of energetic forces that originates both within as well as beyond an individual’s being, to initiate work-related behavior, and to determine its form, direction, intensity, and duration”*.

According to Locke (1997) the different definitions of work motivation can be combined in a model (appendix 1). He says motivation is a process and goal setting plays an important role in it. The performance that results from these goal setting efforts affects the level of motivation experienced Locke identified conditions that are necessary for goal accomplishment: feedback, goal commitment, ability, and task complexity.

Motivation distinguishes intrinsic and extrinsic motivation. Extrinsic motivation is that motivation gained externally, for example stimulated by monetary incentives (Frey, 1997). Salary, benefits, working conditions, supervision, policy, safety, security, affiliation, and relationships are all externally motivated needs. Intrinsic motivation is that under certain conditions employees are prepared to undertake an activity for its own sake. And some of these activities will be performed without monetary payments. This is contradictory to the standard economic assumptions of agents being self-interested and the disutility of labor (Herpen et al., 2005). A way to increase intrinsic motivation is to increase empowerment. More empowerment which can be defined in terms of giving power, giving capacity, to energize, or to enable. Spreitzer (1997) focused on psychological empowerment at the workplace which can be divided in four terms: Meaning, competence, self-determination, and impact. *Meaning* is the fit between the requirements of the job tasks and the subjects own values. *Competence* is that the employee belief that he or she possesses the skills and abilities necessary to perform a job or task well. *Self-determination* is over the employee feelings of having control over his or her own work. The last term is the impact, that the employee belief he/she has a significant influence over the outcomes of work (Spreitzer, 1997).

## **4.2 Job performance**

Job performance determines whether employees perform their job well. Among the most commonly accepted theories of job performance is the work of Campbell et al. (1990) deduced from a psychological perspective. They described job performance as an individual level variable. Which means: performance is something a single person does. This differentiates it from organizational performance or national performances which are higher level variables. First they define performance as behavior: It is something done by the employee. This concept differentiates performance from outcomes. Outcomes are the results of individual's performance, but they are also the result of other influences. In other words, there are more factors that determine outcomes than just the employee's behaviors and actions. Job performance is seen as the ability to perform effectively on the job. This requires that the employee has, and understand a, complete and up-to-date job description for the job position, and that the employee understands the job performance requirements and standards that are expected to meet.

## **4.3 Participation in decision making**

In the practice of decision making there is an agreement that everyone engaged in a decision process or meeting should understand his or her role. Yammarino and Naughton (1992) noted that, individuals who are more able to participate in decision making are more satisfied in their work.

Scott-Ladd and Marshall (2004) studied the influence of employee participation in decision making and shows positive gains for the organizations:

- improved employee performance resulting from greater motivation;
- a positive workplace culture as an outcome from greater information sharing;
- improvements in productivity when employees are consulted over changes to job design and work practices;

Organizations should take care for more involvement in the organization. The chance for an employee to participate in decision making brings positive influences. For example: the knowledge of the lower level employee about their own organization, understanding their own job, job satisfaction, productivity, identity, autonomy and employee perception of the effectiveness of reaching the organization objectives (Scott-Ladd and Marshall, 2004).

#### **4.4 Commitment**

Numerous definitions of engagement/ commitment can be derived from the practice and literature. Common to these definitions is that employee engagement is positive for the organization. Issues that describe the term are, organizational purpose, involvement, commitment, passion, enthusiasm, focused effort, and energy, so it has both attitudinal and behavioral components (Meyer and Becker, 2004). Executive Board (2004) suggested that engagement is “the extent to which employees commit to someone or something in their organization, how hard they work, and how long they stay as a result of that commitment.”

In this research the engagement definition of commitment is used. Commitment is regarded as a psychological state of attachment or binding force between an individual and the organization (Meyer et al., 2004). Commitment is measured as the willingness to exert energy in support of the organization, to feel pride as an organizational member, and to have personal identification with the organization (Meyer and Becker, 2004). Employees who are engaged in their work and committed to their organizations give companies crucial competitive advantages including higher productivity, less workplace absenteeism, feeling more responsible, less job hopping etc. That is why many organizations invest in employees to get a high employee commitment.

*“No company, small or large, can win over the long run without energized employees who believe in the [firm's] mission and understand how to achieve it. That's why you need to take the measure of employee engagement at least once a year through anonymous surveys in which people feel completely safe to speak their minds.” (Jack and Suzy Welch)*

#### **4.5 Conclusion**

After reading the definitions of quality of work: ‘Work motivation’, ‘job performance’, ‘participation in decision making’ and ‘commitment’, it is logical to conclude that every organization wants to see these things growing. Employees make the organization. The aspects of work described above are close related to each other, which results in a positive relation between the aspects. To increase the motivation of the employee, job performance, participation and commitment, several tools can be used. In this research the tool performance measurement is discussed. The next chapter shows the relation between performance measurement and the quality of work.

## **CHAPTER 5            HYPOTHESES**

As mentioned earlier, management control involves managers taking steps to help ensure that the employees do what is best for the organization. This is an important function because the employees in the organization make things happen. A performance measurement system is a type of control used to reach the organizations objectives. Nowadays the user group for performance measurement systems has expanded from managers to employees. However, there has been little research of the impact of performance measurement systems by the employee. On the other hand executive compensation has attracted a large amount of academic research. Prendergast (1999) concludes little empirical work has been done on the impact of performance measurement and compensation for the employee. Neeley et al. (2000) says that measuring will eventually change the behavior, often positively. This chapter discusses the earlier research about the impact of performance measurement on the quality of work from the individual employee: motivation, job performance, commitment and participation in decision making. Moreover the hypotheses for the research will be developed. This chapter concludes with a research model which is leading for this research.

### **Motivation and performance measurement systems**

Performance measurement improves the motivation of employees (Martinez, 2005a; 2005b). Herpen et al. (2005) did research and find out that employees are only motivated if the right performance measures are developed and evaluated. If not performance measures could result in a disaster of unsatisfied and unmotivated employees.

For encouraging performance you need information about the employees' current performance. If the employee is increasing his/her performance this should be rewarded, because these employees need incentives to increase their performance. Performance measurement helps to increase the extrinsic motivation (Herpen et al., 2005). Moreover due providing adequate performance information this will enhance the development of psychological empowerment (Luckett and Eggleton, 1991). When performing a task without knowledge of results or feedback from managers is likely frustrating and dissatisfying, thus reduces the intrinsic motivation (Luckett and Eggleton, 1991).



By developing performance measures, setting goals and evaluating them, there is more interaction between the managers and employees. This interaction results in more motivation for the employee (Ukko et al., 2008).

From the literature the first hypothesis is developed:

H1: Performance management for the lower level employee leads to a higher work motivation

### **Job performance and performance management systems**

There is a common view among researchers that performance measurement systems lead to a higher performance of individuals and organizations. Especially when the performance measurement is linked to rewards (Banker et al., 2000; Cameron, 1995; Simons, 2000; Torrington et al., 2005). These measures and targets/ objectives give clarity about what is expected from the employee. Job clarity is that the individual employee is aware of the expectations and behaviors associated with their work. Individuals require sufficient information to accomplish the job effectively. A lack of information about the job and objectives can result in effort that is not efficient and reduces the job performance (Tubre and Collins, 2000). Employees are more effective when they understand what needs to be done and how it has to be performed. Tubre and Collins (2000) find out that when an employee is not fully aware of what needs to be done and how it needs to be done, job performance will decrease. Job clarity is an important aspect of job performance. Performance measurement will lead to a better individual job performance, but if the wrong measures are rewarded it can lead to worse organization performance.

Martinez and Kennerley (2005a; 2005b) investigated the effects of performance measurement in a large energy company. They found that performance measurement improved the employee performance and productivity by focusing the employees' attention on issues that are important to the organization, by linking key objectives to the employees' targets.

Performance measurement systems is leading to an employee that feels more empowered, responsible, for their own targets which increases the job performance. Empowered individuals should perform better than those who are not or less empowered (Liden et al., 2000). This is because empowerment takes care of more employees with initiative and persistence.

From the literature the second hypothesis is developed:

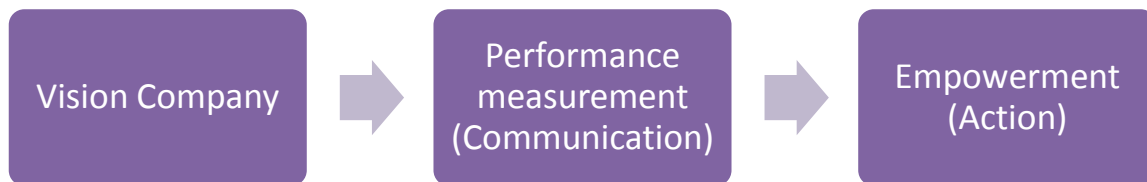
H2: Performance management for the lower level employee leads to a better job performance

## Participation in decision making and performance measurement systems

When performance measurement uses performance measurement systems for the employees, this should take care of more involvement by the employee in the organization. By using these measures and target the organization is empower these employees in their own job. This helps employees, participate in decision making especially regarding their own job. (Johnston et al., 2002; Kaplan and Norton, 1996; Simons, 2000; Lingle and Schieman, 1996).

As shown in figure 2 performance measurements could have been used to communicate the company's vision to the organization (Kaplan and Norton, 1996).

Figure 2. Communicating vision of the company



Source: Revised from Westley and Mintxberg (1989)

The knowledge of the lower level employee about their own organization, understanding their own job, job satisfaction, productivity, identity, autonomy and employee perception of the effectiveness of reaching the organization objectives is increasing with a performance measurement system (Scott-Ladd and Marshall, 2004).

From the literature the third hypothesis is developed:

H3: Performance management for the lower level employee results in more employee participation in decision making

## Work commitment and performance measurement systems

From different researches can be concluded that work motivation, work commitment, empowerment and job satisfactions are closely related to each other. Measures and targets empower employees. Because of more empowerment the intrinsic motivation of employees will increase. Employees are more satisfied which leads to more commitment (Lock and Latham, 1990; Kaplan and Norton, 1996). Commitment can be seen as: feeling more responsible, less workplace absenteeism and less job hopping. Martinez and Kennerley (2005a; 2005b) show in their study that

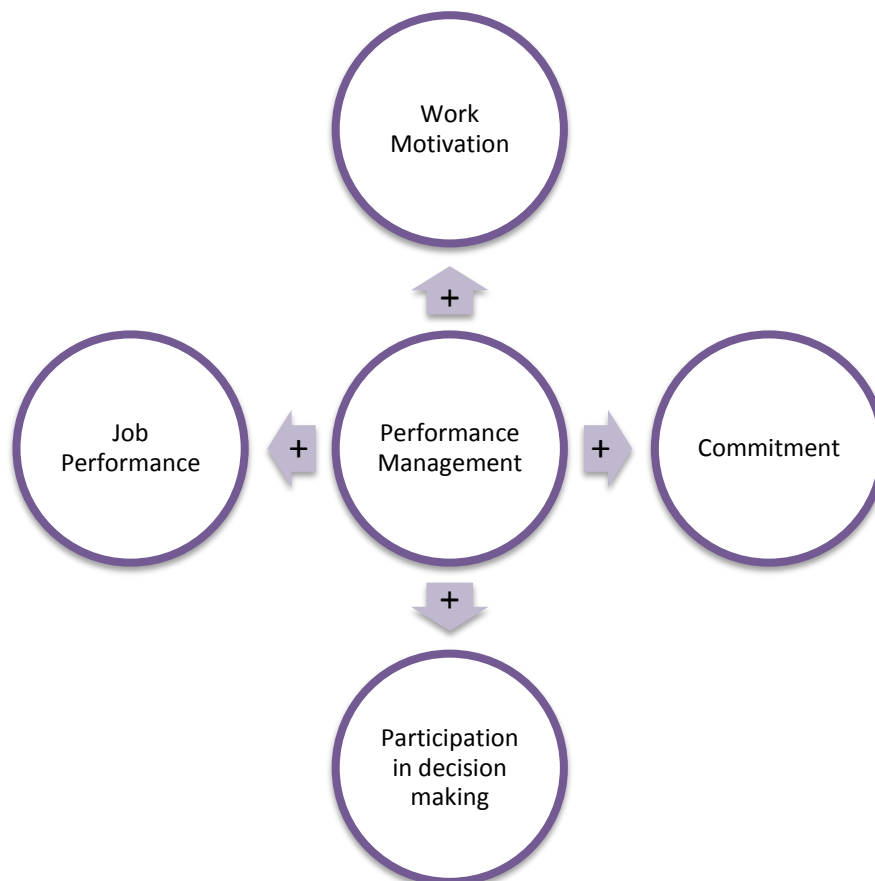
employee satisfaction and the known of values of the company improve by using a performance measurement system. Kennerley and Bourne (2003) find out that people feel more responsible and committed by their organization through performance measurement.

From the literature the fourth hypothesis is developed:

H4: Performance management for the lower level employee leads to a higher work commitment

From the four hypotheses a research model is developed in figure 3. The figure shows that next to the impact of performance measurement there could also be a relation between motivation, commitment, performance and participation in decision making. This model will be investigated in this research. The next chapter discusses methodology of this research.

**Figure 3. Research model**



## **CHAPTER 6 Methodology**

In this study, the aim is to investigate the impact of performance measurement on the quality aspects of work for the individual employee. An employee uses performance measurement in many ways in their own work (Hannalu and Lönnqvist, 2002). However, there is a lack of empirical evidence on what impacts performance measurement has on the individual employee (Prendergast, 1999). In this chapter, the research method, the collection of data and the executive of the research will be discussed. The research model from figure 3 will be investigated.

### **6.1 Quantitative research**

The design of the research can be characterized as a quantitative study. In earlier studies to the impact of performance measurement most authors used the quantitative way. In this research the analytical survey seems to be the most appropriate way to collect the data.

The survey approach discovers relationships and generalizable statements about the object of the study. Vidich and Shapiro (1955) mentioned the high deductibility of the survey methods comparing it to field methods. "Without the survey data, the observer could only make reasonable guesses about his area of ignorance in the effort to reduce bias." Furthermore, Hussey (1997) distinguish descriptive and analytical surveys. In this study, an analytical survey is send out meaning that the intention is to determine whether there exist a relationship between different variables. A survey is hypothesis-testing.

There are critics on the method of using surveys. Developing the right question and asking the right way is very difficult. Moreover when the survey is started, there is little one can do to discover that a question is ambiguous or misunderstood by the respondents (Gable, 1994).

Nevertheless the critics an analytical survey is the most appropriate way to collect the data for this research. When there is a relatively large sample and time and money is limited a survey is the perfect manner to test theoretical hypothesis (Verschuren and Doorewaard, 1999).

### **6.2 Data collection**

The data is collected from support/ service departments of two companies. Because of the research topic related to the individual employee, only the employees of the departments were asked to fill in the survey. The first company is Assist in de Zorg (Assist), a cleaning company. Assist is located in

Limburg and connected to the bigger company Vebego. The employees of the support and service department were asked to fill in the survey. Company number two is the multinational Vopak, it provides storage for chemical and oil. The employees of the service departments were asked to fill in the survey. These departments are located in the Netherlands. Both companies are on the moment of the research in an economic stable situation.

Assist works with performance measures, evaluations and rewards for the individual employee. There is a monetary reward at the end of the year. Besides the monetary reward which is connected to individual targets, they also hand out non monetary rewards. With an interview with the Director of Assist he mentioned several rewards he uses frequently. When people do something extra he makes compliments, gives flowers or diners. When employees perform well there are promotion opportunities. For example they had a very busy week recently and the entire secretary staff had to work more than normal. At the end of the week he gave every secretary a diner with their partner. Vopak is working with performance measures, evaluations and monetary rewards for their managers but not for their employees. This employee group is the control group in this research.

The primary data is collected by the use of a survey. A very common problem by surveys is the response rate. To maximize the response rate, the management of Vopak and Assist where contacted and explained the purpose of the research. Both companies agreed on participating in the survey. The management of the company sends out an email to the employees explaining the purpose of the research and including a link to the online survey. In the communicating with the employees/respondents we highlight that the survey results and answer were strictly confident and is not forwarded to their managers. The purpose of this confidentiality is to encourage participation and receive more responses.

### **6.3 Design of the research**

The questions of the survey are mostly derived from the academic literature. By using these questions this will enhance the reliability of the research. The first version of the questionnaire is evaluated by an academic scholar to face the validity of the questionnaire. Before the hand out the questionnaire to the employees of Vopak and Assist, 5 persons did a pilot study to make sure that the questions have the same interpretation on each person. The survey is shown in the appendix.

For answering the four hypotheses the questions in the survey are split up in groups. Each group represents a hypothesis. The survey exists of 5 key sections. 1 Background information, 2 Motivation, 3 Commitment, 4 Job performance, 5 Participation in decision making. Section one gives the employee information and includes the control variables of the research and the company

(independent variable). Keller and Warrack (2000) mentioned that the first questions are really important because they are demographic in nature and it is easy to answer which result in comfortable with the research. The other sections are specific question for answering the four hypotheses.

#### 6.4 Sample

Of the 70 employees of Vopak service departments, 36 unique survey responses were received. This is an initial response rate of 51.4%. From the employees of Assist, 65 in total, 45 were able to fill in the survey. This results in an initial response rate of 69.2%. Mainly because of the email send by the manager the response rate is very high. These 81 responses were usable for the research.

**Table 2. Sample details**

Variable	VOPAK	ASSIST
Gender Male/Female	27/8	25/21
Full time/ Part time	29/6	33/13
Age	41.49	33.91
Education	2.34	2.24
Years at the company	10.23	4.11

In table 2 the sample details are shown. Under the variables 'gender' and 'full time and part time' the amount employees per company is mentioned. By the variable 'age' the mean of the age from the employees who filled in the survey is calculated. The variable 'education' is the rated point at which level the employee is educated: 1 High school, 2 MBO, 3 HBO and 4 WO. Both means is lying between 2 and 3. This means that the average education is between MBO and HBO.

The variable 'years at the company' ( $p < .001$ ), 'age' ( $p < .001$ ) and 'gender' ( $\chi^2 = 4.494, p = .029$ ) have a significant difference between the two companies. The difference in amount 'full time and part time' ( $\chi^2 = 1.368, p > .05$ ) and highness 'education' ( $p > .05$ ) of the employees between the companies is not significant ( $p > .05$ ).

#### 6.5 Description of Variables

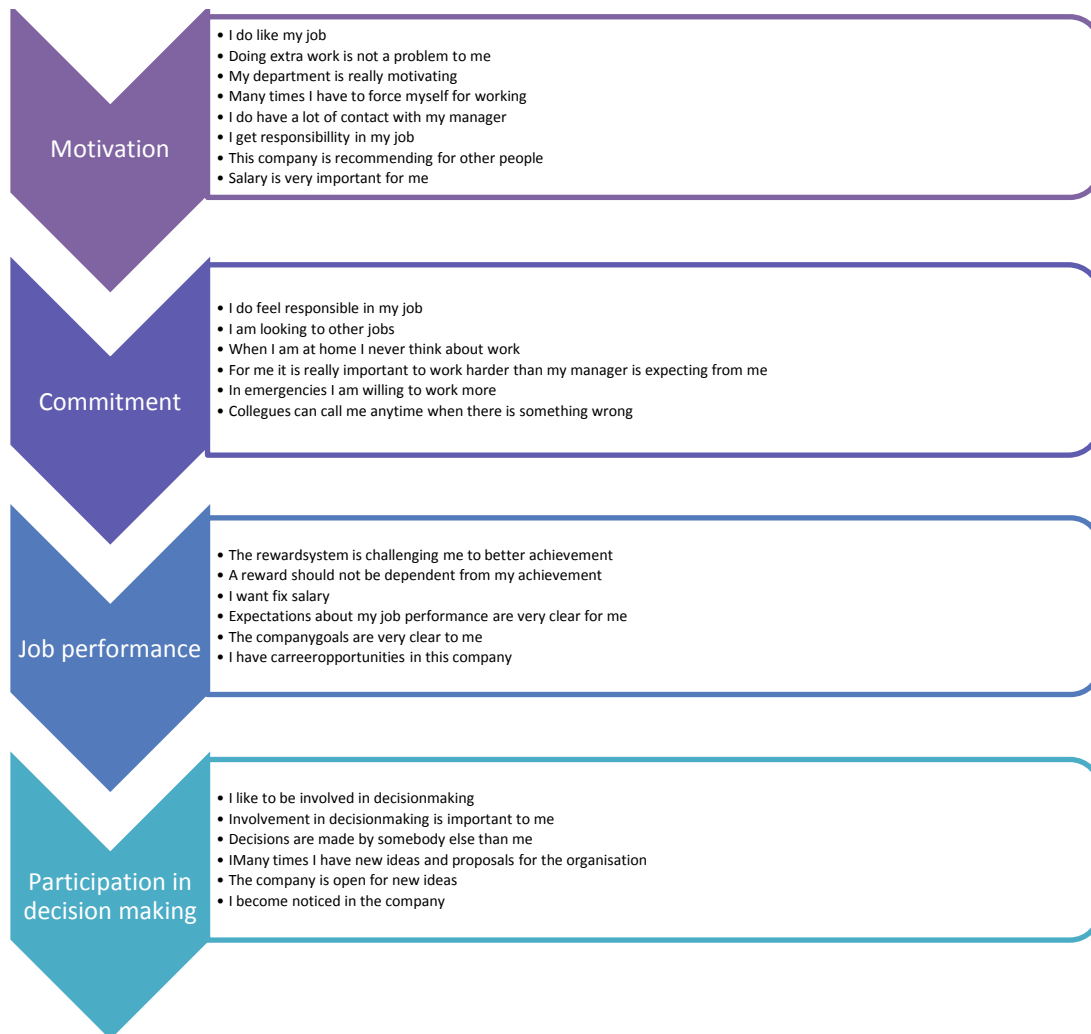
*Independent variable:*

Performance measurement is the independent variable within this research. From literature performance measurement impacts the quality of work aspects. This study investigates the impact of the performance measurement for the lower level employee on this quality of work aspects. Two companies have been investigated. The first company Assist who are using performance measurement systems. Company number two Vopak who does not work with performance measurement systems for their employees'. The variable 'company' is the independent variable.

*Dependent variables:*

Motivation, job performance, participation in decision making and commitment are the dependent variables. Each practice will be measured by the use of different questions in the survey see figure 4.

**Figure 4. Hypotheses linked to the survey questions**



### *Control variables:*

For comparing the groups and conclude something about the impact of performance measurement control variables are needed. By choosing 2 departments of a big company the company size is controlled. Moreover the stress that comes from the crisis is not dominant at both companies. In both departments of both companies the job functions of the employees are comparable.

Furthermore there are various variables which will have possible moderating effects for the main variables, the so-called control variables. The control variables in this research are: gender, age, full time/ par time job and how many years with the company.

## **6.6 Questionnaire**

To analyze the data from the survey, first some issues needs to be solved. The questions in the survey are both positive and negative formulated. To make the right analyses some questions needs to be transformed in the database. The questions are divided in four scales. Each scale represents a hypothesis. The scales are normal distributed. Only the motivation scale have a light skewness, but is surmountable and still been seen as a normal distribution.

Cronbach's alpha ( $\alpha$ ) has an important use as a measure of the reliability of the scales. Cronbach's alpha generally increases, when the correlations between the items increase. A commonly accepted rule of thumb is that an  $\alpha$  of 0.6-0.7 indicates acceptable reliability and 0.8 or higher indicates good. The reliability of the four scales is tested with the use of Cronbach's alpha. Table 3 shows the alpha's. The motivation scale shows a good alpha ( $\alpha = 0.836$ ) and the other three scales show an acceptable alpha. The reliability of the survey shows a very high alpha of 0.927, which also indicates that the questions are much related to each other.

**Table 3. Internal reliability per scale**

Scale	Cronbach's Alpha ( $\alpha$ )	Items per scale
Motivation	0.784	8
Commitment	0.725	6
Job performance	0.757	6
Participation in decision making	0.714	6
All scales	0.927	26



## **6.7 Data Analysis**

To test the four hypotheses stated in chapter 5 an analysis of covariance, ANCOVA is used. An ANCOVA evaluates whether group means, adjusted for differences on the covariate(s) differ across the levels. Thus, there is testing whether the adjusted group means vary significantly from each other. ANCOVA is the same like ANOVA; both are analyzing means of population with each other. Except that ANCOVA is also controlling for other variables (control variables). Besides the ANCOVA analyzes a correlation is executed.

## **6.8 Conclusion**

This chapter described the research, research method, way of collecting data and type of analysis. Developing a survey is a challenge. The risk of misunderstanding of questions is present. Nevertheless the survey takes care of a much data and the employees' real thoughts (confidentiality). In the survey each hypothesis has their own questions developed in scales. Testing the reliability of these scales shows a Cronbach's alpha higher than .7 which is reliable. Furthermore the reliability of the survey as whole is .927 which is high. This says that all questions are related to each other.

## CHAPTER 7 RESULTS

In this chapter the results of the research will be shown and analyzed. In chapter 6 the method for the analysis is described. The first paragraph gives the descriptive statistics. The second paragraph gives the results of the four hypotheses by the use of an ANCOVA. Moreover, because of the outcomes a correlation analysis is done.

### 7.1 Descriptive statistics

For investigating if the hypotheses developed in chapter 5 are supported the questionnaire is divided in four parts which is shown in figure 4. Each part had several questions to test the end goal: motivation, commitment, job performance and participation in decision making. As calculated in chapter 6 the reliability of these scales are high enough to cluster these questions in scales.

Table 4 shows the Max, means and Standard deviation. The Max means that all the question totals can get a score of 40, 30, 30 and 30. The means of the total question are listed per company. The means of Assist are significant higher comparing with Vopak.

**Table 4. Means (SD) of the sub scales**

Sub scales	MAX	VOPAK	ASSIST
Motivation	40	27.400 (2.569)	32.587 (2.926)
Commitment	30	19.257 (2.593)	23.889 (2.367)
Job performance	30	16.800 (2.949)	23.565 (2.570)
Participation in decision making	30	21.229 (2.184)	24.478 (2.168)

### 7.2 Results per subscale

In this paragraph the results of the four scales will be discussed.

#### Results motivation scale

The results of the ANCOVA for the motivation scale are shown in table 6. It presents that variables 'company' and 'age' have a significant explained variance. The variable 'company' has a significant explained variance of 39% ( $R^2=.390$ ). The total model have an explained variance 53.7% ( $R^2 = .537$ ). The control variable 'age' is significant ( $p = .047$ ). The other control variables are not significant.

**Table 5. ANCOVA motivation scale**

Variable	F	P
Age	4.067	.047
Gender	.800	.374
Education	.866	.355
Years at the company	3.206	.077
Full time/ Part time	.044	.834
Company	62.335	<.001

The first hypothesis is linked to the motivation scale and is significant explained through the variable 'company' and 'age'. Which means that the use performance measurement systems and the age of employees are explaining the motivation of employees. There were eight questions in the motivation scale about job satisfaction, contact manager, motivation, recommend the company to others. On the question: if they have good contact with the direct manager, there is a significant difference between Vopak and Assist. They were both positive on this question, but Assist was significant higher. Kaplan and Norton (1996) already discussed that through goal setting, measuring, evaluating and rewarding the contact with the manager is more intensive and leads to more motivation. Furthermore you see that age is significant explaining by motivation. This means that the age is negative for your motivation. This cause maybe because the work level of the employees. Grant (2008) shows that people low significant jobs are less motivated. The job can be bored by the not very difficult activities. The older the employee the more he/she is confronted with the less significant job. On the question if you have job promotion opportunities this question was also explained by age. The younger people have the perspective of more job opportunities than older employees'. On average the motivation from the employees of Assist is higher as the employees of Vopak with a high explaining of company. The company Assist is more stimulating motivation.

### **Results commitment scale**

In table 7 the results are shown from the ANCOVA of the commitment scale. The variable 'company' and 'years at the company' shows a significant explaining variance. The variable 'company' has a significant explained variance of 57.1% ( $R^2=.571$ ). The total model have an explained variance 60.9%

( $R^2 = .609$ ). The control variable 'years at the company' is significant ( $p = 0.006$ ). The other control variables are not significant.

**Table 6. ANCOVA commitment scale**

Variable	F	P
Age	.039	.844
Gender	.162	.689
Education	.599	.441
Years at the company	7.953	.006
Full time/ Part time	1.290	.260
Company	106.503	<.001

The second hypothesis is about commitment and is significant explained through the variable 'company' and 'years at the company'. Which means that the use performance measurement systems and the years at the company are explaining the commitment of employees. So using performance measurement systems is positive related to commitment. Moreover the more years at the company the less commitment is shown. The people who works more feel less physical commit than the people who works less years.

On the results of the question something remarkable is shown. On the question: if people look already to other jobs, the employees from Vopak were on average not really looking even if the job satisfaction is not that high. On the other hand the employees by Assist were on average more satisfied and they were looking significant more to other jobs. When talking about commitment, chapter 3 described already kinds of commitment. Meyer et al. (2004) described commitment as the psychological state of attachment. The willingness to exert energy in supporting the organization, to feel pride as an organizational member, and to have personal identification with the organization. This psychological state of commitment is significant higher by Assist. The physical commitment though less job hopping is significant higher by Vopak. The average employees work there is 10.23 years comparing with the 4.11 years at Assist. This effect shown is not a positive effect for Vopak. It seems to be that the people are more settled and less ambitious for other jobs even if their job satisfaction is not high.

### **Results job performance scale**

The ANCOVA of the job performance scale is presented in table 8. Only the variable 'company' has a significant explained variable by job performance. 'Company' has an explained variance of 50.6% ( $R^2=.506$ ). The total model have an explained variance of 63.6% ( $R^2 = .636$ ).

**Table 7. ANCOVA job performance scale**

<b>Variable</b>	<b>F</b>	<b>P</b>
<b>Age</b>	2.772	.100
<b>Gender</b>	.001	.976
<b>Education</b>	1.971	.165
<b>Years at the company</b>	.566	.454
<b>Full time/ Part time</b>	.155	.695
<b>Company</b>	102.934	<.001

The third hypothesis is about job performance and is significant explained through the variable 'company'. Which means that the use performance measurement systems are explaining the job performance of employees. So using performance measurement systems is positive related to job performance. To make clear, the questions were asked from the perspective of the employee himself. The questions from this scale are indirect affecting the job performance of the employee. The question about job clearances, promotion opportunities, clearness company goals, and preferences fix salary were asked. Assist employees scored significant higher on the question about their job and company goals clearness. This is what Kaplan and Norton (2001) shows in their research. By using more understandable measures for the employees it will helps to understand the objectives of the company and indirect to put effort in the right things. In the results you see on the question about clearness company objectives that the employees of Assist score significant higher than the employees of Vopak.

Vopak works with fixed salary for their employees. There is a significant relation shown that employees who work longer also preferred fixed salary. This could maybe explained by the fact that they have good salary conditions and they do not want to change that.

Moreover the indirect aspects of increasing job performance are significant better than by Assist. In the literature we saw already that performance measurement systems helps with translate strategy into concrete measures; communicate strategy to employees; guidelines employees. The results from the survey are supporting this.

## Results participation in decision making scale

Table 9 provides the ANOVA of the decision making scale. There is a significant explained variance of 'company' and 'age'. 'Company' has an explained variance of 46.3% ( $R^2=.463$ ). The total model have an explained variance of 49.2% ( $R^2 = .492$ ).

**Table 8. ANCOVA participation in decision making scale**

Variable	F	P
Age	7.934	.006
Gender	.005	.943
Education	1.531	.220
Years at the company	.006	.937
Full time/ Part time	.033	.856
Company	66.751	<.001

The fourth hypothesis is about participation in decision making. The scale participation in decision making is representing this hypothesis. From the results the variable 'company' and 'age' is explaining by participation in decision making. Using performance measurement systems and younger employees have a positive relation with participation in decision making. By Assist employees feel more to participate in decision making. The employees from both companies feel responsible in their jobs. On the questions: Do you have much new ideas for the organization, Is the organization open for new ideas, and are you seen in the company the answers from Assist were significant higher. This all deal with how connect is the employee with the company. Assist employees feel more the freedom to say something and to come up with new ideas. Through a performance measurement system the dialogue between the employees and the company is being stimulated (Ukko et al., 2008). Through measuring and evaluating people feel that they contribute in the company.

## Correlation between the scales

The four hypothesis are all supported. That is why the correlation between the four scales can be investigated. In table 5 the correlation between the four scales is shown. The correlation between

the four scales is significant high. This effect can be explained. Through a higher motivation the performance, commitment and participation in decision making is increasing. They are all internal positive effects and influence each other. Through these high correlation the scales measures almost the same effect.

**Table 9. Correlation between the 4 subscales**

Scale	1	2	3	4
<b>1 Motivation</b>	-	.810**	.904**	.779**
<b>2 Commitment</b>		-	.811**	.765**
<b>3 Job performance</b>			-	.823**
<b>4 Participation in decision making</b>				-

\*\* Correlation is significant at the 0.01 level (2-tailed).

### 7.3 Conclusion

From the results of the ANCOVA's all scales: motivation, commitment, job performance and participation in decision making are significant explained by the variable 'company'. Which means that the use performance measurement systems is positive related with motivation, commitment, job performance and participation in decision making. Furthermore by motivation and participation in decision making the variable 'age' is also significant explaining. The younger employees the more motivation and participation in decision making. By commitment is variable 'years at the company' explaining. Employees who works more years at the company the less commitment. The correlation between these four scales is very high. The scales are almost measuring the same thing. To conclude, the following chapter will answering the research question. The interpretations and conclusions of the research will be discussed. Furthermore the limitations, practical and theoretical contributions will be given. At final some suggestion for further research will be given.



## **CHAPTER 8            CONCLUSION**

In this chapter the answer will be given to the research question defined in chapter one. Furthermore, the empirical and practical implications for this research are specified which includes some limitations as well. These will be discussed in the later part of this chapter. Finally, some suggestions for further research will be given.

Various thoughts in the literature have been made about the impact of performance measurement systems. Mainly these thoughts are related with the management level of the organization. They have not yet come to a univocal answer about the effect of performance measurement and rewards on the motivation and performance of employees. The literature has largely focused on developing theoretical models, such as the balanced scorecard, without empirically investigate their impacts. This is not in line with the growing interest from both the public sector and private sector to implement a compensation system for employees.

### **8.1    Discussion**

The purpose of this study was to give a deeper insight in the impact of performance measurement systems from the perspective of the individual employee. Many research is done on developing performance measurement systems, rewarding managers. This research focuses on performance measurement system impacts from the perspective of the employee. It is investigating the impact of performance measurement systems, evaluations and rewards on the individual employee.

To answer the research question if performance measurement, evaluation and rewards lead to a better quality of work is in this research significantly supported. The results of the research suggest that performance measurement, evaluation and rewards have a significant impact on individual employee quality of work: motivation, commitment, job performance and participation in decision making. The four hypotheses which given in the research model (figure 3) are all supported. This is in line with the research of Ukko (2008) who shows that performance measurement systems is affecting the quality of work from managers positively. From the survey by employees which is done in this research, performance measurement increases the quality of working. It helps to increases the motivation, commitment, performance and participation in decision making. For companies who does not work with performance measurement, evaluation and rewards this outcome is an important outcome.

Remarkable is that in theory physical committed of employees takes care of less high hiring costs because employees will do less job hopping. The company with the less motivated employees were staying longer on their workplace. The employees at Assist feel more commitment but the years of turnover per employees is less than at Vopak. That is why in the research the psychological definition of commitment is used. The feeling of the employee and not the physically being there. If employees are more job hoppers this effects should not be noticed as negative. In the theory there are different argues about it. In this research it implicates that ambitious people who do want to makes steps in their careers are present at Assist.

The results shows that these four scales are high correlating with each other. All four scales are positive impacts for the employee. One scale is strengths the other scales. Being more motivated results in have more commitment to the organization and perform better. By Assist, the performance measurement systems, evaluations and rewards have a positive impact on the employees. The environment is more dynamic, younger, ambitious and satisfied. Once there are such employees in your company this will influence the other employees. It is difficult to day that the positive impact is all due to performance measurement systems. Performance measurement systems bring positive aspects for the employees.

## **8.2 Theoretical and practical contributions**

This research is contributing to the research of performance measurement systems. Most of all on the impact of performance measurement systems. This study find out that it impact the motivation positively, psychological commitment positively, physical commitment negatively and participation in decision making positively.

Performance measurement systems bring positive impacts in your organization. Employees have better contact with their manager. They know more what is expected from them. It leads to better motivation more feeling with the company and better results. This all is theoretical and by the company Assist practical as well. These results are generalizable for other organizations. Taken into account that it the performance measurement systems are well used. What we did not investigated the characteristics of the right performance measurement system and how do you develop such a system for employees and implementation of such systems. Earlier literature is more highlighting this.

## **8.3 Limitations**

Despite we can say that performance measurement systems will lead to a better job quality, it is still difficult to mention the specific cause and results effect of performance measurement systems.

Overall Assist had an advantage from this system. The specific characteristics' are not defined. That is why it is very limited to practical tips for running your business.

The two companies Vopak and Assist who participated the survey could have been more comparable. The branches in which the companies operate are different. Vopak is in logistical services of oil and chemical and Assist is providing services, also logistical, in the cleaning branch. Moreover despite the controlling for age, the older people at Vopak can remove the dynamical ambitious work atmosphere on the work floor. So they can influence the younger people as well. It is difficult to say that age is a cause of not having the dynamic of performance measurement systems or the dynamic is gone because of the age. By Vopak there is more a steady atmosphere. The people do like work but they older, less enthusiastic. The organization is more settled. Assist is much younger/ dynamical/ enthusiastic. It would be wrong to ascribe the explaining variance 'company' only by having performance measurement systems or not.

Besides the advantages of surveys like, lot of data in small time and confidential for the employee. There are limitations as well. There are general limitations of using surveys is that you as researcher are not there when the respondent is filling in the survey. There could be misunderstanding of questions, person's can react overdone etc. This all contribute to inaccuracies in the data.

#### **8.4 Suggestions for further research**

Suggestion is to identify more causes from a measurement system. In this research the analysis was overall, but you cannot identify the specific aspects of performance measurement systems which results in a positive impact.

We saw in this research that employees at Vopak are less searching to other jobs and were less satisfied with their job. Identifying psychological changes by employees in an environment where they work with performance management (measurement) systems. Are employees being more ambitious in such environments? Or is such an environment attracting ambitious employees? What are more motors of a dynamical company? And is it positive that employees stay longer at one company?

More research has to be done on the difference of between performance measurement systems for managers and for employees. Both have different measures/ different knowledge.

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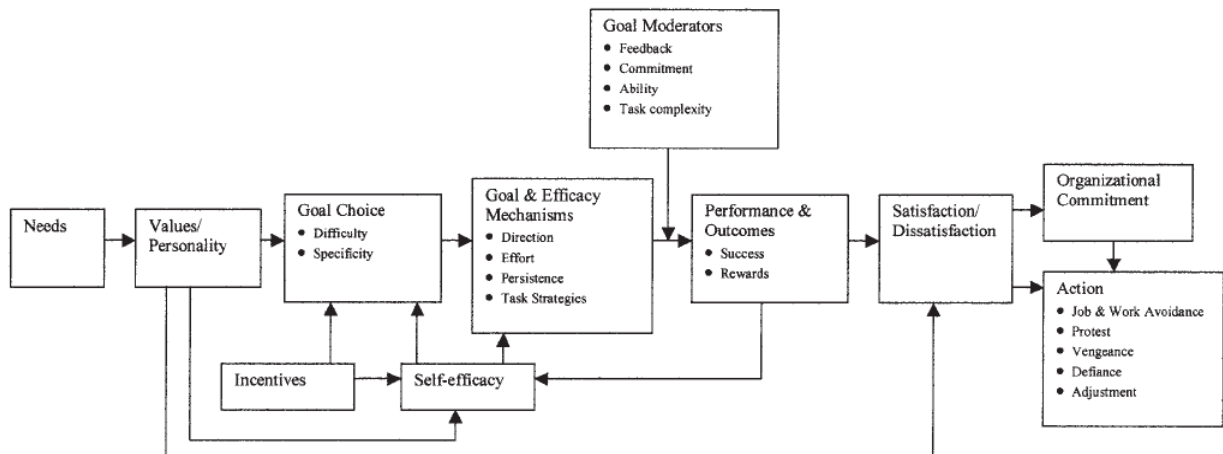
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## Appendix A: The motivation process

Reprinted from "The Motivation to Work: What We Know" by E. A. Locke

in *Advances in Motivation and Achievement*, Vol. 10, M. L. Maehr & P. R. Pintrich (Eds.), p. 402,





## Appendix B: Survey

### DEEL 1      Algemene Vragen

1. Voor welke organisatie bent u werkzaam?      .....
2. Wat is uw leeftijd?      .....
3. Wat is uw geslacht?      m/v
4. Wat is uw hoogst genoten opleiding?      Middelbare school  
MBO  
HBO  
WO
5. Hoeveel jaren bent u al werkzaam bij uw huidige werkgever?      .....
6. Werkt u part time?      Ja / Nee

Toevoegen keuze aantal uur...

### DEEL 2      Stellingen

Bij elke stelling kunt u aangeven in welke mate u het eens bent met de stelling of in welke mate u het oneens bent met de stelling.

Om aan te geven of u het wel of niet eens bent met de stelling maak ik gebruik van een 5-punts schaal. Deze schaal ziet er als volgt uit:

1      2      3      4      5

Zeer mee oneens      Zeer mee eens

Dit betekent dat als u een 1 aanvinkt u volledig met de stelling oneens bent. Als u een 5 aanvinkt bent u volledig eens met de stelling. Een 3 betekent dat u noch eens noch oneens met de stelling bent, u bent dus neutraal.

### *Motivatie*

Ik vind mijn baan leuk

Ik vind het niet erg om extra werk te doen

Ik vind mijn afdeling motiverend

Ik moet mij er vaak toe zetten om naar het werk te gaan

Ik heb veel contact met mijn manager over mijn werk

Ik krijg verantwoordelijkheid in mijn baan

Ik raad anderen aan om ook voor dit bedrijf te komen werken

Salaris is voor mij de belangrijkste drijfveer om te werken

### *Commitment*

Ik voel mij verantwoordelijk in mijn baan

Ik kijk naar andere banen

Als ik thuis ben denk ik niet meer aan mijn werk

Ik vind het belangrijk om harder te werken dan mijn manager van mij verwacht

Wanneer er nood is ben ik altijd bereid om extra te komen werken

Collega's kunnen mij uit bed bellen als er problemen zijn

### *Participatie in besluitvorming*

Ik vind het prettig als mijn leidinggevende mij betreft bij beslissingen

Ik heb graag inbreng in de besluiten die er genomen worden

Beslissingen laat ik aan anderen over

Vaak heb ik nieuwe ideeën en voorstellen voor de organisatie

Het bedrijf staat open voor nieuwe ideeën

Ik heb het idee dat ik wordt gezien in het bedrijf

### *Werk prestaties*

Het beloningssysteem geeft mij uitdaging en zet aan tot prestatie

Een bonus moet niet afhankelijk zijn van mijn geleverde prestatie

Mijn voorkeur gaat sterk uit naar een vaste beloningsstructuur

Wat er van mij wordt verwacht in mijn werk is volkomen duidelijk

De bedrijfsdoelen zijn voor mij duidelijk

Er zijn doorgroeimogelijkheden voor mij in dit bedrijf

Hartelijk bedankt voor uw medewerking. Ik wil nogmaals benadrukken dat de door u ingevulde antwoorden volledig anoniem zijn en niet gepubliceerd zullen worden.

Hartelijke groet,

Floor van der Kooy