

The meaning of results oriented pay and its effects on individual performance

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1 INTRODUCTION

In recent decade, there has been an increasing trend for organizations to implement new pay systems such as systems based on job and performance evaluation. In addition, results oriented pay systems have been actively developed. The future plans include these same elements. [1] According to the Confederation of Finnish Industries [2], 52% of the employees in private sector were in a results oriented pay scheme. Results oriented pay is a bonus system with predetermined goals for either individuals or groups. The amount of money involved is usually quite small, about 5 % of annual salary [3].

Financial incentives or pay systems are presumed to affect employee motivation and performance. This is a common thought both in theoretical and practical discussion. Research suggests that financial incentives are related to improved employee performance [4] - [10]. Yet there is also studies indicating that effects of pay systems varies [4] and costs and benefits have been evaluated too narrowly [11].

Still very little research is done to study the importance of pay systems to individuals. As Robert Heneman [12] stated, there is a need for new theoretical knowledge regarding pay systems. The reflection theory of pay [13], [14] was designed to clarify which meanings pay may have to an individual and how pay affects an individuals' behavior at work. The reflection theory of pay has been developed by Henk Thierry [13], [14]. The basic idea of the theory is that pay may be meaningful for an individual if it communicates about issues important to that individual. Pay may have four types of meaning. Firstly, it may have instrumental value in achievement of an important objective. Secondly, via pay a person may get feedback on his or her performance compared to objectives or coworkers. Thirdly, pay may reflect a person's power position at workplace. Fourthly, pay may support material well-being. In addition, the theory suggests that the meaning of pay mediates the relationship between a pay system and individual motivation and performance.

The model of reflection theory of pay has been empirically tested only in few studies that have mainly focused on pay satisfaction, not on performance. Thierry [13], [14] stresses the temporary nature of reflection theory. This paper aims at investigating the relationships between the meaning of results oriented pay and its effects on individual performance and testing the theoretical assumptions of reflection theory of pay in connection to results oriented pay.

1.1 Reflection theory of pay

The reflection theory of pay [13], [14] is based on the proposition that pay is meaningful to individuals because it reflects information from important domains other than pay. Pay is perceived as important when it conveys information about domains that are relevant to the individual. In addition, the reflection theory assumes that pay system affects the performance and pay satisfaction of employees through its perceived meaning. That is, the meaning of pay mediates the relationship between pay system and its outcomes.

Thierry [13], [14] has adopted ideas of several theories in order to construct a way to understand individual perceptions and behavior in context of rewarding. Expectancy theory [15] and Lawler's [16] ideas of importance of pay form the key ideas of the theory. In addition, equity theory [17], goal-setting theory [18], theory of cognitive evaluation [19] plus several other theories have influenced the development of reflection theory.

Thierry [13], [14], [20] - [22] suggests that pay can be meaningful for individuals in four different ways.

1. *Motivational properties.* Pay can be meaningful if a person considers pay as a mean of achieving important goals. In other words, motivational properties refers to the instrumentality of pay. This category is based on propositions of expectancy theory [15] and Lawler's [16] ideas of importance of pay. In addition, Thierry has adopted ideas from reinforcement theory to state that human behavior is not necessarily conscious, but can be guided by its outcomes.
2. *Relative position* stresses two feedback characteristics. An individual can perceive a pay systems as meaningful if it gives her feedback of how successful she has been in relation to her co-workers or in relation to her goals. Several theories relate to this

category of pay meaning [14]. Equity theory [17] relates to the idea of getting feedback of persons effectiveness in relation to others in workplace. Goal-setting theory [18] stresses the role of feedback in increased performance.

3. *Control* dimension refers to power. Pay can be meaningful if it reflects the persons' position in the organizational hierarchy. It stresses the degree to which the individual has influenced other employees performance. A pay system can be perceived as meaningful if it signals the importance of a person to the organization. One theory behind this dimension is theory of cognitive evaluation [19]. Based on this, pay can be meaningful if it supports individual's feeling of competence and self-determination.
4. *Spending*. Pay denotes the goods and services purchased. In this sense pay can be meaningful if it affects persons capability to acquire goods and services. This is especially important if there are no other means available for the person to acquire these goods. This spending dimension is partly based on expectancy theory.

Reflection theory holds the proposition that pay that is not perceived as meaningful, has no effects on performance. On the other hand, the more significant the reward system is the more effects it has. Thierry [13], [14] has created a model of the factors that may affect the pay meaning, performance and satisfaction of the employees. Besides individual factors like personality and demographic factors at least the knowledge of pay is presumed to be a clear predictor to the pay meaning. Structure or type of the pay system, its fit with organization's strategy and participative planning are matters that are according to the core model supposed to be in connection with the perceived meaning of pay [13].

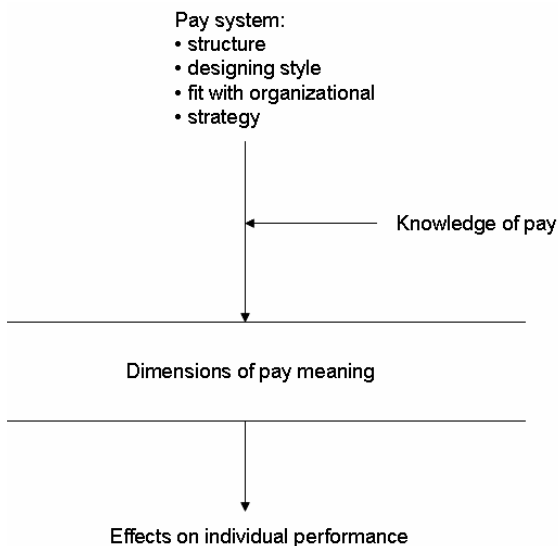


FIGURE 1
THE MODEL OF REFLECTION THEORY IN THIS STUDY

Structure or type of the pay system is supposed to affect on the perceived meaning. Thierry [13], [20] states that different kinds of pay systems may be meaningful in different ways. He argues that relevant questions are weather the pay system is based on performance or not and is it on individual, group or business unit level.

Participative planning. The model [13] is also based on the presumption that when pay systems are developed in participation with employees, the employees will be more satisfied to the final result and it has more effects on behavior. In goal-setting theory [18] it is presumed that goal-setting leads to better performance when individuals are committed to the goal. Participation has been found to be effective mean to enhance goal commitment [19]. In decisions regarding rewarding, participation can be taking part in designing pay system plans or indicators for measuring results. In general, participation has been considered to increase productivity and job satisfaction [24]. Participation or representativeness as in Leventhal's [25] classic justice rules, has been an important argument in justice research. It is suggested that individuals are more committed to final results, if they have been involved in the process [26], [27].

Fit with organizations strategy. According to Thierry [13] an important aspect is the extent to which the pay policy is integrated into the strategic company policy. From the organizations's point of view pay has been thought to be most effective when it supports organizational strategy [28], [29]. According to Lawler [28], to be effective organization's strategy, structure, processes, pay systems and personnel should be in line with each other. Also Thierry [13], [30] argues that as well as pay systems, also other human resource practices should be in line with each other and integrated into the strategic policy.

Knowledge of pay is one of the most important antecedents of both meaning of pay and effects on individual performance. The basic proposition is that a pay system that is not known by the employees can not affect their behavior. This same proposition is also hold by the motivation theories behind reflection theory. According expectancy theory [15] a pay can motivate only if it is known be the individuals. Also goal-setting theory [18] has the proposition that high performance is related to specific and known goals. Is addition, in theory of reasoned action knowledge is a prerequisite for predicting human behavior [31].

According to studies of Shaw and Jenkins [32] and Salimäki [33], [34] knowledge was related to meaning of pay. The better the pay system was known by the respondents, the more meaning it had. In some other studies using the reflection theory perspective knowledge has not been significantly related to pay meaning [13], [14].

The relationships between knowledge of pay and pay satisfaction has been studied. Most research suggests that the better the employees know their pay system the more

satisfied they are with it [35] – [37]. Similar finding has been reported in studies using the model of reflection theory [32] – [34]. Yet some studies are suggesting that knowledge can also lead to lower satisfaction, especially if persons are informed about having lower pay than others in the company [38] – [39].

The reflection theory suggests that the *meaning of pay mediates* the relationship between a pay system and individual motivation and performance [13], [14]. This means that pay affects individual performance through its meaning.

The model has previously been used in explaining pay satisfaction. Miedema [40] studied in her doctoral thesis the relationship between meaning of pay and pay satisfaction. Based on her results both relative and control meaning was related to pay satisfaction. The more meaning the pay system had the more satisfied the respondents were on their pay. According to Thierry [13], [14] the relative dimension of pay meaning has been related to pay satisfaction in several studies, but other dimensions of pay meaning have been in connection to pay satisfaction only in some of the studies.

In one study all the dimensions of pay meaning had positive correlations with pay satisfaction. [32]. In two studies in Finland relative meaning was found to be positively related to pay satisfaction [33], [34] and perceived effects of pay [33].

The aim of this study is to examine how the theoretical frame of this study, that is, the reflection theory of pay works in context of results oriented pay. The more detailed questions are: 1) are the structure of the results oriented pay, pay systems fit with organizational strategy, participative planning and knowledge of pay related to perceived meaning of pay, 2) what are the relationships between the meaning of results oriented pay and its effects on individual performance 3) is meaning of pay mediating the relationship between a pay system and individual performance.

2 METHODS

2.1 Sample

The data for this study was gathered with a questionnaire during the years 2003-2005 from 11 organizations in Finland. In three companies two different results oriented pay systems were used, so the respondents represented altogether 14 different pay systems. The organizations were participating in evaluation of functionality of their results oriented pay system. During the evaluation process also facts of the pay systems were collected.

Altogether 858 employees filled the questionnaire. The respondents were predominantly female (59.3 %) and most respondents (61%) were 35-55 years old.

2.2 Measures

We used both some facts of the pay systems and the

questionnaire data in the analyses. The facts were structure of the pay system (individual or group measures, pay amount), participative planning (is the system designed in co-operation with the personnel) and researchers' estimate whether the pay system in line with the organizations strategy (fit). The measures in the questionnaire were knowledge of pay, meaning of pay and effects on individual performance.

Structure of the pay system. The respondents were classified into four different groups based on the *structure of the pay system*. As a basis of the grouping, we used the level of measures and the amount of reward. First group consisted of respondents who had measures in personal level and the maximum amount of reward was 20 % or more of annual salary. In the second group were respondents with measures in personal level and the maximum amount of the reward was 12-16 % of annual salary. Third group consisted of subjects with measures in unit or company level. The maximum amount of reward was 7-12 % of annual salary. Finally, in the fourth group were respondents with with measures in unit or company level and the maximum amount of the reward was 5-6 % of annual salary. The groups were coded and used in the analyses as three dummy variables.

Participative planning or designing. The respondents were classified in two groups on basis of designing style. Less than half of the respondents (45 %) had a pay system that was designed in co-operation with the personnel (at least an employee representative was attending the group responsible for the designing). Later on in this paper this is called participative planning.

Fit between the pay system and organizational strategy. Estimate whether the pay system is in line with the organizations strategy. This was evaluated by the researcher evaluating the pay system based on the extent to which the pay system is integrated into organization's strategy. Most respondents (79%) were in scheme of a system with clear link with strategy.

Knowledge of pay. The seven item measure developed by Mulvey, LeBlanc, Heneman and McInerney [36] was used to assess the knowledge of pay (e.g. "I know the measures used to determine my reward"). The response scale ranged from strongly disagree (1) to strongly agree (5). The measure reached good reliability ($\alpha = .77$).

Meaning of pay. The meaning of pay was measured with the MOP-scale developed by Thierry and Miedema. We used three items from relative, control and spending dimensions. In addition, we added three questions of respect based on interview study of the meaning of results oriented pay [41]. The items were answered on a five-point scale ranging from strongly disagree (1) to strongly agree (5).

To test the empirical distinctiveness of the meaning of pay dimensions a principal-components analysis (PCA) with oblimin rotation was conducted. PCA yielded two components (Eigenvalue of component 1 = 6.80;

component 2 = 6.80; variance explained by component 1 = 56.6%; component 2 = 12.6%) which accounted for 69.2% of the total variance. All the spending dimension items loaded on the first component (later in this paper called financial meaning) and all relative, control and respect items on the second component (later in this paper called feedback meaning). The Cronbach's alpha for the financial meaning measure was .84 and for the feedback meaning .94.

Perceived effects the pay system on individual performance. The perceived effects of the pay system to individual performance was measured with four item scale. The scale included following items: "Because of the results oriented pay system I put more effort on reaching the goals", "the goals of the pay system are affecting my

work", "the pay system does not influence the way I am working" and "the pay system influences the priorities in my work". The measure reached good reliability ($\alpha = .82$).

3 RESULTS

The correlations between our variables are presented in Table 1. As can be seen all the independent variables had a significant correlation with both dimensions of pay meaning. Besides participative planning, other independent variables also were significantly correlated with the perceived effects of the pay system. Interestingly, both dimensions of meaning of pay had a significant correlation with the perceived effects of the pay system.

TABLE 1
CORRELATIONS

	1	2	3	4	5
1 Participative planning					
2 Fit with organizational strategy	-.105**				
3 Knowledge of pay	-.091**	.009			
4 Financial meaning	.124***	.109**	.240***		
5 Feedback meaning	.173***	.162***	.281***	.503***	
6 Effects on individual performance	-.011	.144***	.353***	.455***	.482***

*p < .05, **p < .01, ***p < .001

To test the effects of independent variables to meaning of pay we regressed the independent variables on both dimensions of meaning of pay. The results are shown in Table 2. As expected, all the independent variables were positively related to the dimensions of pay meaning. They explained 12% of the variance of financial meaning and 16% of the feedback meaning.

TABLE 2
THE RELATIONSHIPS BETWEEN INDEPENDENT VARIABLES AND PAY MEANING DIMENSIONS

Independent variables	Financial meaning β	Feedback meaning β
Structure of the pay system	***	*
Participative planning	.19***	.24***
Fit with organizational strategy	.12**	.18***
Knowledge of pay	.23***	.28***
R ²	.12***	.16***

*p < .05, **p < .01, ***p < .001

Also the structure of the pay system was significantly related to both dimensions of pay meaning. As the structure of the system was coded as dummy variables, we tested the differences with analysis of variance. Pay system was financially most meaningful ($M = 3.48$) for the respondents with measures on personal level and high rewards. Their responses differed significantly from other groups ($M_{g1} = 3.48$ vs. $M_{g2} = 3.04$, $p < .01$; $M_{g1} = 3.48$ vs. $M_{g3} = 2.96$, $p < .001$; $M_{g1} = 3.48$ vs. $M_{g4} = 2.95$, $p < .001$)². Accordingly

² Structure of the pay system: g1 = measures on personal level and high rewards, g2 = measures on personal level and intermediate rewards, g3 =

pay conveyed significantly more feedback meaning ($M = 3.14$) for respondents with measures on personal level and high rewards than for others ($M_{g1} = 3.14$ vs. $M_{g2} = 2.93$, $p = ns.$; $M_{g1} = 3.14$ vs. $M_{g3} = 2.72$, $p < .001$; $M_{g1} = 3.14$ vs. $M_{g4} = 2.86$, $p < .01$).

As shown in table 3 both the financial meaning and feedback meaning of pay were significantly related to the perceived effects on individual performance.

TABLE 3
THE RELATIONSHIPS BETWEEN MEANING OF RESULTS ORIENTED PAY AND EFFECTS ON INDIVIDUAL PERFORMANCE

Independent variables	Effects on individual performance β
Financial meaning	.28***
Feedback meaning	.34***
R ²	.29***

*p < .05, **p < .01, ***p < .001

We used hierarchical regression to test the presumption of mediation. In the first step we entered the facts (pay system structure, participative planning, fit with strategy) and knowledge of pay into the equation. As can be seen from the Table 4, step 1, all independent variables except participative planning, had significant relationships with the perceived effects.

The effects of pay system structure were analyzed in detail with Anova and t-tests. The effects on individual performance were largest among those who had individual measures with large rewards ($M_{g1} = 3.35$ vs. $M_{g2} = 3.07$, $p <$

measures on unit or company level and intermediate rewards, g4 = measures on unit or organization level and small rewards

.05; $M_{g1} = 3.35$ vs. $M_{g3} = 2.68$, $p < .001$; $M_{g1} = 3.35$ vs. $M_{g4} = 2.86$, $p < .001$).

4 DISCUSSION

TABLE 4
HIERARCHICAL REGRESSIONS PREDICTING EFFECTS ON INDIVIDUAL PERFORMANCE

Independent variables	Effects on individual performance β	
	Step 1:	Step 2:
Structure of the pay system	***	*
Participative planning	.06	-.06
Fit with organizational strategy	.11**	.03
Knowledge of pay	.32***	.19***
Financial meaning		.25***
Feedback meaning		.29***
R ²	.17***	.35***
R ² change		.18***

* $p < .05$, ** $p < .01$, *** $p < .001$

In the second step, to test the mediation, both dimensions of pay meaning (the potential mediators) were entered into the regression model. When the meaning of pay was entered to the regression in the second step fit with strategy lost its statistical significance (step 1: $\beta = .11$, $p < .01$; step 2: $\beta = .03$, $p = ns.$) and the coefficient of knowledge of pay became remarkably smaller (step 1: $\beta = .32$, $p < .001$; step 2: $\beta = .19$, $p < .001$). Also the significance of the relationship with the structure of the pay system and perceived effects was lower. Instead, as predicted, both financial meaning ($\beta = .25$, $p < .001$) and feedback meaning ($\beta = .29$, $p < .001$) had strong relationships with the perceived effects. When pay meaning dimensions were added to the equation the amount of variance explained increased significantly from 17.3% to 35.4%.

Considering the results (Table 2) according to which these three variables (structure, fit with strategy, knowledge) also have a main effect on the mediators the traditional requirements of mediation suggested by Baron and Kenny [42] were fulfilled: The meaning of pay mediated fully the relationship between fit with strategy and performance and partially the relationship between structure of pay system and knowledge of pay and performance.

Since the participative planning had no main effect on individual performance the beta coefficient did not change significantly after the entry of the expected mediator (meaning of pay). This pattern violates the classic third rule of the four-step mediation testing strategy, that is, the independent variables should be related to the dependent variable [42]. However, several subsequent authors [43], [44] have suggested that the relationship between independent variables and dependent variable is not a necessary condition for the mediation. The essential criteria for establishing full mediation were here met [43] since participative planning was related to pay meaning (mediator; see Table 2) and pay meaning dimensions were related to individual performance (dependent variable; see Table 3).

Our results show that the more meaningful a pay system is for individuals the more it affects their performance. It was also found that pay systems have more meaning to individuals and affects more to individual behavior at work if the system is designed in co-operation with the personnel, the system is in line with the organizational strategy and it is known by the employees.

Our results indicate that results oriented pay has most meaning for persons who have measures on personal level and large rewards. Moreover, the results oriented pay affects most to the performance of these persons. These results are in line with findings of a Kauhanen and Piekkola [45] that the respondents considered results oriented pay as most motivating when the measures were at personal or team based level and the amount of reward was high enough.

Our results also show that the results oriented pay has more meaning and more effects on individual performance when the pay system is clearly connected to the strategy of the organization. Studies of pay system fit with organization's strategy are highlighting organizational effectiveness. In this study the focus was different and the novelty is in finding that employees are considering pay system as more meaningful if it is in line with organization's goals.

According to our results a pay system has more meaning for employees and affects their performance more when the employees have participated in the pay system development. Participative planning has no main effect on individual performance, the meaning of pay mediated fully the relationship between participative planning and performance. Also these results are supported by Kauhanen and Piekkola [45]. Their study suggested that when the employees participated in the design of pay system, the system was perceived more motivating. Also other studies suggest similar findings. Participation in pay plan development had according to Lawler & Hackman [46] a positive effect in employee attendance and according to Jenkins and Lawler [47] in pay satisfaction and understanding the plan.

Our results suggest that results oriented pay has more meaning and more effects on performance the better the employees know the pay system. Some of the studies using reflection theory of pay are in line with this finding. In those studies knowledge of pay has been positively related to pay meaning dimensions and pay satisfaction [32] – [34] and perceived effects [33]. Yet Thierry [13], [14] states that the role of knowledge has been less clear than expected.

Our findings about importance of knowledge of pay are also supported by Kauhanen and Piekkola [45]. According to their results the pay system was perceived as more motivating when the employees knew their performance measures. Also several other studies suggest that employees are more satisfied with their pay when they

know the system well [35] – [37].

This study provides clear support for the propositions of the reflection theory of pay. The results suggest that the meaning of pay partially mediates the relationships between pay system structure and knowledge of the pay system, and performance. The meaning mediated fully the relationships between the way of pay system was developed, its fit with organizational strategy, and performance. In previous studies the meaning of pay has been shown to mediate the relationship between managerial actions and pay satisfaction [33] – [34].

In conclusion, these results provide further evidence for the reflection theory of pay.

The structure of the pay, participation of the personnel in design of the pay system, pay system's fit with organization's strategy and knowledge of pay were all significantly connected to the meaning of pay. The meaning of pay was found to be a mediator between the independent variables and perceived performance.

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The meaning of results oriented pay and its effects on individual performance

European Productivity Conference
Espoo 31.8.2006

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Introduction

- Increasing trend to implement new pay systems
- New pay systems are presumed to affect positively employee motivation and performance
- Previous research suggests that financial incentives are related to improved performance, but also that effects varies
- -> does results oriented pay affect individual performance and why?
- There is a need for new theoretical knowledge regarding pay systems
- -> how does the reflection theory of pay work in context of results oriented pay?

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Results oriented pay

- A supplementary bonus system. The usage is mainly independent of collective labour agreements.
- Predetermined goals or measures in individual, group or organizational level
- Amount of reward is usually quite small – typical maximum is one month's salary

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Theoretical framework

Reflection theory of pay (Thierry 1998, 2001)

- Theory is based on the proposition that pay is meaningful to individuals because it reflects information from important domains other than pay.
- Pay system affects the performance of employees through its perceived meaning
- Pay can be meaningful in four ways

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Four meanings of pay

- **Motivational properties:** Pay is considered as a mean of achieving important goals.
- **Relative position:** Pay system gives feedback of performance in relation to co-workers or goals
- **Control:** Pay system signals the importance of a person to the organization
- **Spending.** Pay denotes the goods and services purchased

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Aims of the study

To examine how the reflection theory of pay works in context of results oriented pay.

The detailed questions are:

- Are the structure of the results oriented pay, pay systems fit with organizational strategy, participative planning and knowledge of pay related to perceived meaning of pay?
- What are the relationships between the independent variables, the meaning of pay and its effects on individual performance?
 - Is meaning of pay mediating the relationship between a pay system and individual performance?

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Methods

- Sample: 11 organizations in Finland, 14 different pay systems
- Questionnaire for employees + facts of the pay systems
- N = 858

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Measures 1/2

	N	%
Structure of the pay system		
Measures in personal level & large rewards	160	18,6
Measures in personal level & intermediate rewards	96	11,2
Measures in unit or company level & intermediate rewards	253	29,5
Measures in unit or company level & small rewards	349	40,7
Sum	858	100
Fit with organizational strategy		
Good fit	681	79,4
Poor fit	177	20,6
Sum	858	100
Participative planning (designing)		
Yes	387	45,1
No	471	54,9
Sum	858	100

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Measures 2/2

- Scales in the questionnaire, five-point scale ranging from strongly disagree (1) to strongly agree (5)
- **Knowledge of pay:** 7 items, e.g. "I know the measures used to determine my reward", ($\alpha = .77$)
- **Meaning of pay:** 12 items, MOP-scale, two components, financial meaning ($\alpha = .84$) and feedback meaning ($\alpha = .94$)
- **Perceived effects on individual performance:** 4 items, e.g. "Because of the results oriented pay system I put more effort on reaching the goals", ($\alpha = .82$)

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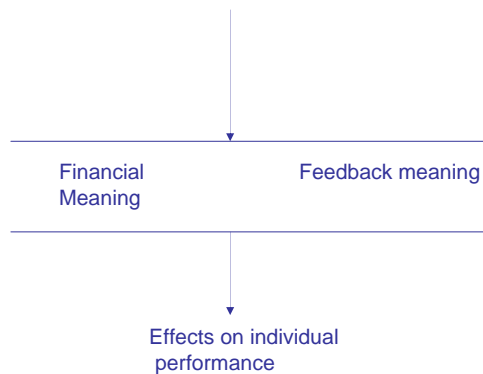
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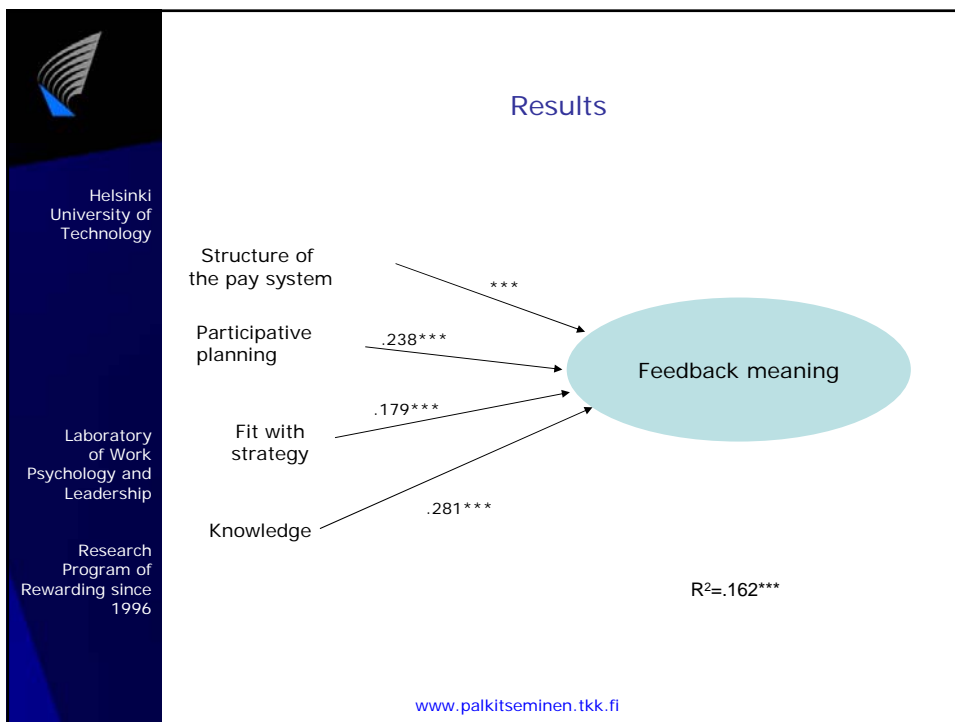
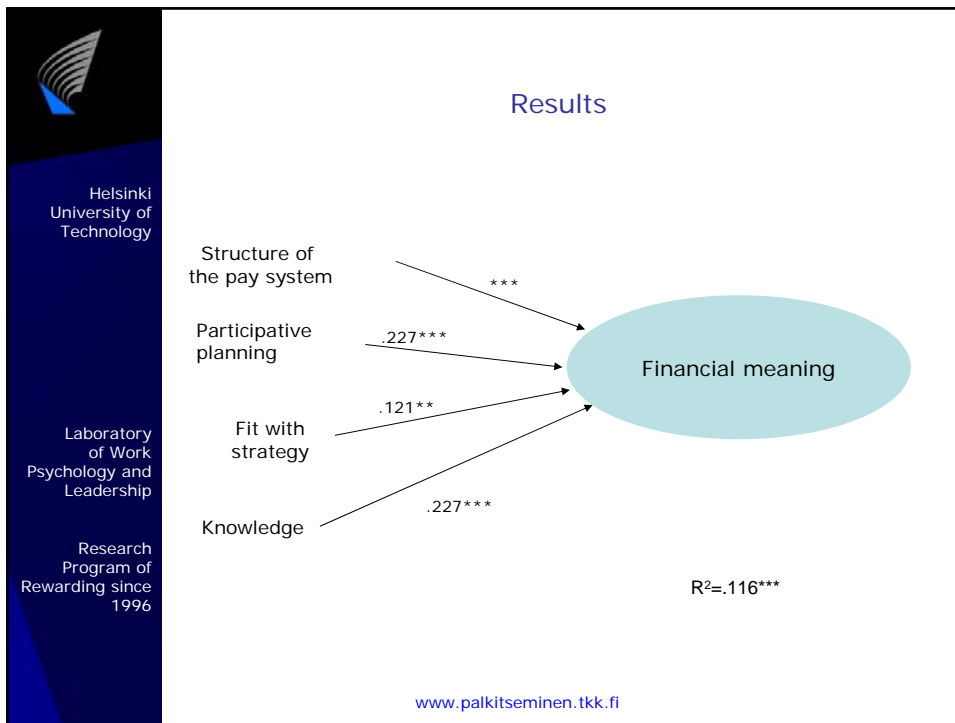
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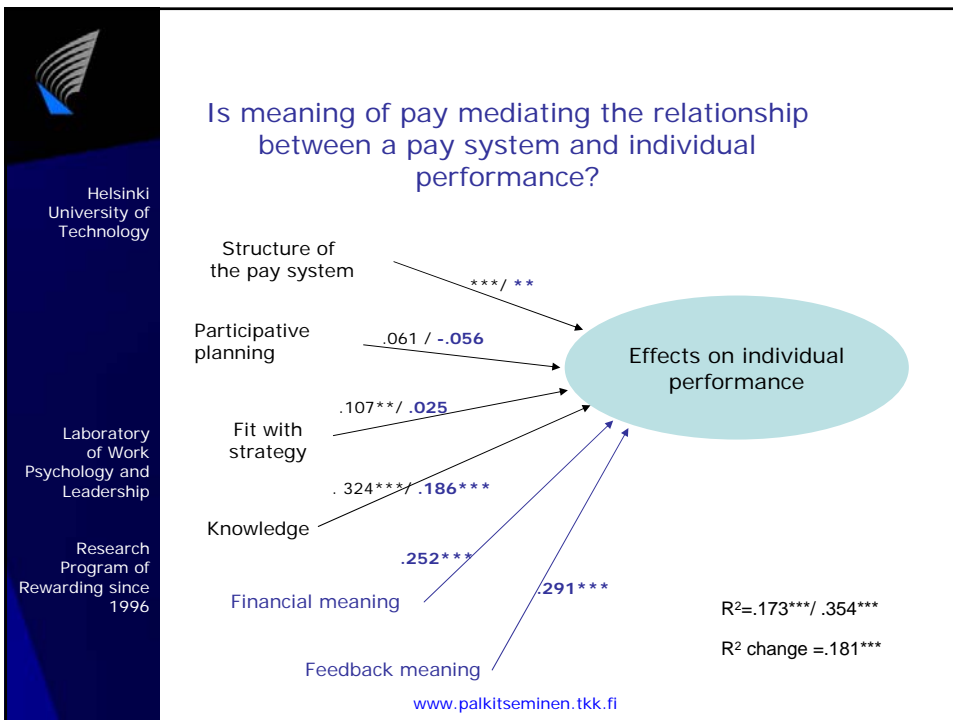
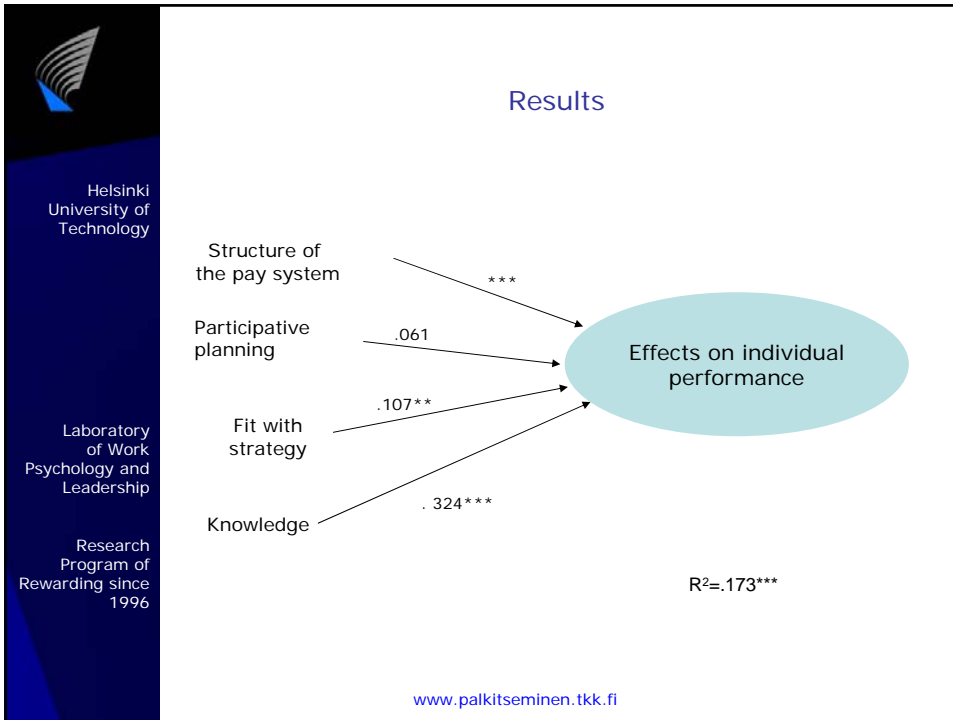
The model tested in this study

- Structure of the pay system
- Participative planning
- Fit with organizational strategy
- Knowledge of pay



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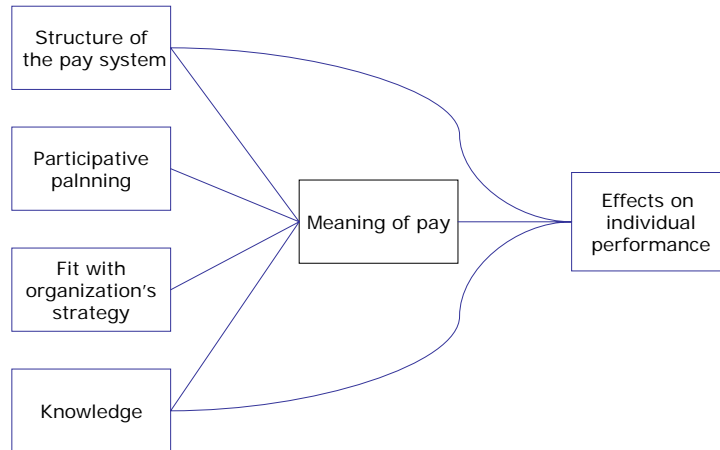


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The final model based on results



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Conclusions

- The results provide further evidence for the reflection theory of pay
- The structure of the pay, participation of the personnel in design of the pay system, pay system's fit with organization's strategy and knowledge of pay were all significantly connected to the meaning of pay.
- The meaning of pay was found to be a mediator between the independent variables and perceived performance.
- The more meaningful a pay system is for individuals the more it affects their performance

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Practical implications

The meaning of pay and via it the individual performance can be enhanced by

- Designing the pay system in co-operation with the personnel
- Connecting the pay system and its goals with organizational strategy
- Informing the employees, ensuring that the employees know the pay system

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