

University of Groningen

Pay, promotions, and performance

van Herpen, M.F.M.

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version

Publisher's PDF, also known as Version of record

Publication date:

2007

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

van Herpen, M. F. M. (2007). *Pay, promotions, and performance: essays on personnel economics*. [Thesis fully internal (DIV), University of Groningen]. [s.n.].

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

PAY, PROMOTIONS, AND PERFORMANCE
Essays on Personnel Economics

Publisher: Labyrint Publications
Postbus 334
2984 AX Ridderkerk
The Netherlands
Tel: 0180-463962

Printed by:



Offsetdrukkerij Ridderprint B.V. , Ridderkerk

ISBN-10: 90-5335-107-8
ISBN-13: 978-90-5335-107-9

© 2006, M.F.M. van Herpen

All rights reserved. No Part of this publication may be reproduced, stored in a retrieval system of any nature, or transmitted in any form or by any means, electronic, mechanical, now known or hereafter invented, including photocopying or recording, without prior written permission of the publisher

RIJKSUNIVERSITEIT GRONINGEN

PAY, PROMOTIONS, AND PERFORMANCE
Essays on Personnel Economics

Proefschrift

ter verkrijging van het doctoraat in de
Economische Wetenschappen
op gezag van de
Rector Magnificus, dr. F. Zwarts,
in het openbaar te verdedigen op
donderdag 25 januari 2007
om 13:15 uur

door

Martinus Franciscus Marcellis van Herpen

geboren op 23 juni 1978

te Heesch

Promotores:

Prof.dr. K. Cools RA
Prof.dr. C.M. van Praag

Beoordelingscommissie:

Prof.dr. J. Hartog
Prof.dr. N. Westergård-Nielsen
Prof.dr. A. van Witteloostuijn

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	ix
PART 1	1
1 INTRODUCTION	3
1.1 History of Personnel Economics	3
1.2 Problem Statement and Scope	5
1.2.1 Q1: What is the effect of performance measurement and compensation on motivation?	6
1.2.2 Q2: To what extent do careers within an organization motivate employees?	6
1.2.3 Q3: In what way are external conditions related to mobility within the firm?	7
1.2.4 Q4: Is there an optimal amount of job mobility between organizations for employees?	7
1.3 Relevance	7
1.3.1 Theoretical relevance	8
1.3.2 Managerial relevance	8
1.4 Outline of the Dissertation	10
2 THEORETICAL BACKGROUND	11
2.1 Theoretical Framework	11
2.2 Theories on Motivation	12
2.2.1 Agency theory	12
2.2.2 Tournament theory	14
2.2.3 Crowding theory	15
2.2.4 Empirical results on motivational theories	16
2.2.4.1 Empirical results on incentive compensation and extrinsic motivation	17
2.2.4.2 Empirical results on incentive compensation and intrinsic motivation	21
2.2.4.3 Empirical results on promotions and extrinsic motivation	21
2.2.4.4 Empirical results on promotions and intrinsic motivation	24
2.3 Theory on Ability and Mobility	24

2.3.1	Human capital theory	25
2.3.2	Matching theories	26
2.3.3	The wage effects of mobility	27
2.3.4	Empirical results on ability and mobility theories	27
2.4	Empirical Research on ILMs	29
PART 2		35
3	THE EFFECTS OF PERFORMANCE MEASUREMENT AND COMPENSATION ON MOTIVATION	37
3.1	Introduction	37
3.2	Conceptual Model	38
3.2.1	Compensation system	38
3.2.1.1	Transparency	39
3.2.1.2	Fairness	39
3.2.1.3	Controllability	40
3.2.2	Differentiation within motivation	40
3.2.3	Indicators for the level of motivation	40
3.3	Data and Methodology	41
3.3.1	Research site	41
3.3.2	Firm level descriptives	41
3.3.2.1	Performance evaluation	42
3.3.2.2	Fixed compensation	42
3.3.2.3	Incentive compensation	43
3.3.2.4	Promotion	43
3.3.3	Questionnaires	43
3.3.3.1	Transparency	44
3.3.3.2	Fairness	44
3.3.3.3	Controllability	45
3.3.3.4	Motivation	45
3.3.3.5	Indicators for the level of motivation	46
3.3.3.6	Control variables	46

Pay, Promotions, and Performance		iii
3.3.4	Descriptive statistics	46
3.3.5	Regression techniques	48
3.4	Results	48
3.4.1	The effects of monetary compensation and promotions on motivation	48
3.4.2	The effects of monetary compensation and promotions on indicators of motivation	51
3.5	Conclusion	53
Appendix A3:		55
4	WAGE STRUCTURE AND THE INCENTIVE EFFECTS OF PROMOTIONS	59
4.1	Introduction	59
4.2	Theoretical Background	60
4.3	Research Site	61
4.3.1	Internal rules and regulations	61
4.3.1.1	Broadbands	62
4.3.1.2	Merit matrix	63
4.3.2	Personnel data	64
4.3.2.1	Determinants of assessment scores and promotion probability	67
4.3.2.2	Impact of quartile position, assessment score, and promotion on wage development	69
4.3.3	Empirical analysis of motivation	71
4.4	Conclusion	75
Appendix A4		77
5	DETERMINANTS OF PORTS OF ENTRY AND EXIT	81
5.1	Introduction	81
5.2	Theoretical Background and Determinants of ILM	82
5.2.1	The theoretical concept of internal labor markets	82
5.2.2	Potential determinants of inter-firm variation in stylized facts of ILMs	83
5.2.2.1	Determinants from the CEO-turnover literature	83
5.2.2.2	Determinants from personnel economics	84
5.2.3	Cross-case variation in ports of entry and exit: potential determinants	84

5.3	Data and Methodology	86
5.3.1	Characteristics of the Danish labor market	86
5.3.2	Data, variables and methodology	87
5.3.3	Sample	89
5.4	Results	90
5.4.1	Determinants of ports of entry and exit	90
5.4.1.1	Profitability	92
5.4.1.2	Size	93
5.4.1.3	Growth	93
5.4.1.4	Industry	94
5.4.2	CEO turnover	95
5.4.3	Variance explained	95
5.5	Conclusion	97
	Appendix A5	99
6	LEARNING ON JOBS	113
6.1	Introduction	113
6.2	Theoretical Background	114
6.2.1	Job-mobility models	114
6.2.2	A new perspective on learning	114
6.2.3	Related research: organizational change	116
6.3	Data and Methodology	117
6.3.1	Data	117
6.3.2	Model specification	119
6.4	Results	121
6.4.1	Descriptive statistics	121
6.4.2	Estimates	123
6.4.3	Robustness of the results and limitations	127
6.5	Conclusion	128
	Appendix A6	129

PART 3		131
7	CONCLUSIONS	133
7.1	Research Questions and Conclusions	133
7.2	Limitations	135
7.3	Suggestions for Further Research	135
8	MANAGERIAL SUMMARY AND IMPLICATIONS	139
8.1	Why Care about Intrinsic Motivation?	140
8.1.1	Theory	140
8.1.2	Implications from the various essays	140
8.2	How Does the Design of a Compensation System Impact the Motivation of Employees?	141
8.2.1	Theory	141
8.2.1.1	Elements of incentive compensation	141
8.2.1.2	Elements of promotions	143
8.2.1.3	Design criteria	143
8.2.2	Implications from the essays	144
8.3	What Is an Internal Labor Market and Where Is It Used?	145
8.3.1	Theory	145
8.3.2	Implications from the essays	146
8.4	What Are the Motives and Risks of Internal Mobility?	147
8.4.1	Theory	147
8.4.2	Implications from the essays	149
8.5	How Is It Possible to Trade Off the Use of Incentive Compensation and Promotions as an Incentive Device?	149
8.5.1	Theory	149
8.5.2	Implications from the essays	150
SAMENVATTING		152
LITERATURE		157

FIGURES

Figure 1.1: Publications per classification code (JEL)	5
Figure 1.2: Outline of dissertation	6
Figure 1.3: Articles using the words “Incentive” & “Compensation”	10
Figure 2.1: Outline of theoretical framework	12
Figure 2.2: Outline of the empirical results on motivation	17
Figure 3.1: Conceptual model	39
Figure 3.2: Frequency distribution of salary increments for the editorial staff	44
Figure A3.1: Scree plot	57
Figure 4.1: Broadbanding in the collective labor agreement	62
Figure 4.2: Employees’ position in the broadband	66
Figure 4.3: Average promotion between broadbands	67
Figure 4.4a: Standardized average scores of motivation	74
Figure 4.4b: Factor results for motivation	74
Figure A4.1: Scree plot	79
Figure 6.1: Average tenure per country	117
Figure 6.2a: Predicted log wages over time by mobility pattern (Specification (8))	127
Figure 6.2b: Predicted log wages over time by mobility pattern (Specification (9))	127
Figure 8.1: Value creation from a human capital perspective	139
Figure 8.2: Elements of a compensation system	141
Figure 8.3: Examples of pay and performance relationships	142
Figure 8.4: Recruiting, retention, and separation	146

TABLES

Table 2.1:	Empirical results on the relationship between incentive compensation and performance	19
Table 2.2:	Empirical results compared with crowding theory	20
Table 2.3:	Empirical results tournament theory	23
Table 2.4:	Empirical investigations of ILMs: Single-firm analysis	31
Table 3.1:	Sample descriptives	42
Table 3.2:	Summary of questionnaire	45
Table 3.3:	Descriptive statistics of control variables	47
Table 3.4:	Descriptive statistics and correlations	48
Table 3.5a:	Regression results extrinsic & intrinsic motivation	50
Table 3.5b:	Regression results extrinsic & intrinsic motivation	51
Table 3.6:	Regression results indicators of motivation (ordered probit)	52
Table A3.1:	Complete correlation table	55
Table A3.2:	Factor scores intrinsic and extrinsic motivation	57
Table 4.1:	Salary increase between broadband maximums and minimums	63
Table 4.2:	Merit matrix	63
Table 4.3:	Descriptive statistics	65
Table 4.4:	Number of observations in the merit matrix	66
Table 4.5:	Regression results: Prediction of assessment scores and promotions	68
Table 4.6:	Descriptive statistics of the Monte Carlo results	70
Table 4.7:	Monte Carlo results organized by age groups	70
Table 4.8:	Factor loadings of the constructs extrinsic and intrinsic motivation	71
Table 4.9:	Regression results: Promotions in a time-frame	73
Table 5.1:	Empirical investigations of ILMs: Single-firm analysis	85
Table 5.2:	Summary of results	91
Table 5.3:	CEO-turnover and succession	96
Table 5.4:	Variance explained by the determinants	97

Table A5.1: Sample statistics	99
Table A5.2: Descriptive statistics	100
Table A5.3: Turnover rates for total organization	101
Table A5.4a: Relative turnover of top-management	102
Table A5.4b: Relative turnover of middle-management	103
Table A5.5a: Relative wage of outflow in top-management	104
Table A5.5b: Relative wage of outflow in middle-management	105
Table A5.5c: Relative wage of outflow in lower-levels	106
Table A5.6a: Relative inflow of top-management	107
Table A5.6b: Relative inflow of middle-management	108
Table A5.7a: Relative wage of inflow in top-management	109
Table A5.7b: Relative wage of inflow in middle-management	110
Table A5.7c: Relative wage of inflow in lower-levels	111
Table 6.1: Sample creation	119
Table 6.2: Distribution of the number of job separations during the first 2, 4, 8 and 19 years of career	121
Table 6.3: Duration of jobs held during the first 19 years of career	122
Table 6.4a: Wage changes in the first 8 years of career	123
Table 6.4b: Wage changes in first 19 years of career	123
Table 6.5a: Estimates of alternative wage models, analogous to Light and McGarry (1998)	125
Table 6.5b: Estimates of alternative wage models, including mobility rate	126
Table A6.1: Descriptive statistics	129
Table 8.1: Motives and risks of internal mobility	147