



On the incentive effects of job rotation[☆]



Hendrik Hakenes^{a,b,*}, Svetlana Katolnik^c

^a Institute for Financial Economics and Statistics, University of Bonn, Adenauerallee 24–42, Bonn D-53113, Germany

^b CEPR, 2nd Floor, 33 Great Sutton Street, London EC1V 0DX, UK

^c Institute of Managerial Accounting, Leibniz Universität Hannover, Königsworther Platz 1, Hannover D-30167, Germany

ARTICLE INFO

Article history:

Received 30 June 2016

Accepted 10 July 2017

Available online 20 July 2017

JEL classification:

D83

J24

L23

Keywords:

Career concerns

Job rotation

Information

Incentives

Reputation

ABSTRACT

A new employee may work hard to build his reputation. This effect is greatest when he starts. The longer he is employed at his job, the more the firm will already have learned about his ability. The incentives for an employee to influence the firm's perceptions of his ability decrease over time. If rotating the employee to a different job leads to new uncertainty about his ability, this generates a fresh impulse for effort. However, job rotation also reduces the employee's time horizon, thus reducing future rents from reputation. This trade-off leads to a unique optimum. We derive a simple rule of thumb for an optimal rotation time. Our main results still hold for cases of complete but imperfect information transmission. The incentive effects of job rotation also prevail in a setting in which skills are job-specific. We study several extensions: rotations across multiple employees, absence of commitment to a rotation time, different bargaining positions, discounting over time, and learning by doing effects.

© 2017 Elsevier B.V. All rights reserved.

1. Introduction

In the presence of career concerns, talent uncertainty of employees plays a central role in the provision work incentives. The employees' wish to develop a positive reputation and receive a pay raise serves as an incentive device: a new employee with uncertain ability wants to work hard to receive a positive assessment. However, an employee who has been at his job for an extended time cannot improve his reputation much more. After some time, there may be a need of a fresh start to create new incentives. Restricting access to past information may therefore be optimal when motivating effort is the goal. If rotating the employee to a different job leads to new uncertainty about the employee's ability, this provides a new impulse for effort. However, this mechanism comes at the cost of lower incentives because the rotation is anticipated. The relevant

[☆] We would like thank an associate editor and two reviewers for their valuable comments and suggestions. We also would like to thank Matthias Fahn, Dirk Jenter, Ian Jewitt, Matthias Kräkel, Christian Lukas, Sebastian Pfeil, Martin Peitz, Ulrich Schäfer, Jens Robert Schöndube, Barbara Schöndube-Pirchegger, Dirk Sliwka, and Stefan Wielenberg for helpful comments. Participants in the GEABA symposium in Magdeburg, the Colloquium on Personnel Economics in Köln, the Annual Conference of the German Academic Association for Business Research in Leipzig, the VFS Annual Conference in Hamburg, and the Workshop on Accounting and Economics in Odense provided helpful suggestions. Remaining errors are our own. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

* Corresponding author at: Institute for Financial Economics and Statistics, University of Bonn, Adenauerallee 24–42, D-53113 Bonn, Germany.

E-mail addresses: hakenes@uni-bonn.de, hakenes@coll.mpg.de (H. Hakenes), katolnik@controlling.uni-hannover.de (S. Katolnik).

aspect of the employee rotation is thus to reduce the amount of information. Other mechanisms may have similar effects, such as rotating the employee's boss.¹

In our model, we concentrate on the incentive aspects of job rotation, abstracting from any technological benefits such as learning on the job or searching for a good employee-job match. Like [Cisternas \(2017a\)](#), we use a continuous-time version of [Holmström's \(1999\)](#) multi-period reputation formation model: a firm hires an employee with an initially unknown ability, and the employee exerts effort to improve the firm's expectations of his ability, and therefore his future wages. In early periods, the employee's type is known only vaguely, so the firm places substantial weight on performance (output) in updating its beliefs about the employee's talent. As information accumulates, the employee's type is revealed increasingly more, and new observations regarding output have less impact on perceived ability. Therefore, the incentives to invest in costly effort decrease over time.

We extend [Holmström's \(1999\)](#) work in three ways. First, we focus on intra-firm learning and assume that only the firm and the employee observe the employee's performance. Second, the firm can use job rotation as a tool to artificially introduce some new uncertainty about ability. The role of job rotation in the model is similar to the stochasticity of the employee's ability in [Holmström's \(1999\)](#) model – it prevents the employee's ability from becoming fully known, and thus keeps the employee's incentives alive. Third, we endogenize the length of these time intervals to optimally balance the employee's reputation incentives over time. There is a unique optimal rotation time, determined by an implicit equation. This optimal rotation time follows a simple rule of thumb: it is four times the ratio of output uncertainty to prior type uncertainty. Right after being rotated, the employee works 60 percent more than in the first best optimum. With the optimal choice of rotation time, the employee reaps 65 percent of the first best level of utility.²

To focus on the pure incentive effects, we first analyze a setting in which ability is constant across jobs, and in which job rotation is used to introduce new uncertainty regarding this ability. Below, we consider an environment in which the employee's productivity can vary across jobs ([Section 6](#)). In this case, job re-assignments may be used to improve the quality of the employee-job match and the optimal rotation decision depends on output. Even when productivity is completely match-specific, the forces underlying the finite rotation time are still prevalent, and this may render contracting to a rotation time optimal. We also analyze how the optimal rotation time is influenced by the amount of information that is communicated to the new department ([Section 4](#)). We present different extensions that suggest the robustness of our model: if employees work in teams, the rotation time increases ([Section 5.1](#)). Commitment to the rotation time is not a necessary assumption ([Section 5.2](#)). More ex ante bargaining power with the firm increases the rotation time ([Section 5.3](#)). Rotating the employee is optimal if discounting is sufficiently low ([Section 5.4](#)). Finally, if the employee becomes more skilled over time, the rotation time depends on the type of on-the-job learning ([Section 5.5](#)).

Literature. In addition to the fundamental [Holmström \(1999\)](#), the most closely related work is [Höfler and Sliwka \(2003\)](#). Their article shows that installing a new manager means deleting information about employees' past performance. If employees compete for a promotion, this competition is re-invigorated. However, the effects of this deletion may lead to the wrong employee being promoted. In [Höfler and Sliwka \(2003\)](#), managers are replaced, but rotating the employees can serve the same purpose. A tournament between employees is at the heart of the argument. However, our paper does not require a tournament, as a single employee is sufficient. Replacing the manager, instead of rotating employees, would also work in our model. Under both approaches, artificially introducing uncertainty about ability is key.³

The implicit incentives we study are comparable to other models on career concerns, beginning with [Fama \(1980\)](#); [Ricart i Costa \(1988\)](#) and [Gibbons and Murphy \(1992\)](#). Following the extensions by [Dewatripont et al. \(1999a, 1999b\)](#), some recent work has examined the implications of career concerns for organizational transparency ([Arya and Mittendorf, 2011](#); [Koch and Peyrache, 2011](#); [Mukherjee, 2008a, 2008b](#)) and task design ([Bar-Isaac and Hörner, 2014](#); [Ortega, 2003](#)). Consistent with the basic notion that improved information may reduce the strength of future incentives, this paper investigates the role of the firm's organizational assignments on learning about types and the incentives provided to employees.⁴ The general learning mechanism used in this paper is related to the seminal job-matching article of [Jovanovic \(1979\)](#). In his

¹ The practice of job rotation is pervasive and increasing. [Osterman \(1994, 2000\)](#) documents that in 1997, 55.5% of large and medium-sized private sector firms in the U.S. implemented job rotation for more than half of their core employees, which is up from 26.6% in 1992. A 1993 U.S. survey by [Gittleman et al. \(1998\)](#) reports adoption rates of 24.2% for firms with 50 or more employees. In a survey of Danish private sector firms, [Eriksson and Ortega \(2006\)](#) show that rotation schemes were implemented for 19.5% of hourly paid workers with variations by firm size and industry.

² We have set our model in a pure rational framework, and the employee builds a reputation to earn higher wages. Other interpretations are close and yield comparable results. Assume, for example, that a person wants to be likeable in a group. Likeability is influenced by character, but the person can also take an action to seem more likeable. Then, if the person is new to a group, he will put in a high effort, trying to increase his likeability. Over time, the true character is learned by the group, and the effort does not pay off any more. One can also think of a mixed situation, where an employee works hard in order to be liked by his boss. In that case, one would have to put reputation instead of the monetary wage into his utility function.

³ Our theoretical predictions differ in two dimensions. First, in the tournament setting of [Höfler and Sliwka \(2003\)](#), wages have an option-like feature in that the expected increase in compensation depends on an employee's probability of promotion. Therefore, incentives are determined by the expected heterogeneity of employees' abilities. This force is not present in our model, as wages proportionally increase with an employee's posterior reputation. Second, in [Höfler and Sliwka \(2003\)](#), the ability risk (associated with the expected difference in employees' uncertain talents) influences the utility by means of an incentive effect and an assignment quality effect. In our model, the ability risk (associated with the employee's uncertain talent) influences the utility by means of divergent incentive effects.

⁴ The optimality of coarse information has also appeared in the performance feedback literature (see, for instance, [Martinez, 2009](#); [Ederer, 2010](#); [Hansen, 2013](#)), studying how incentives are affected by the release of interim performance information.

Download English Version:

<https://daneshyari.com/en/article/5066291>

Download Persian Version:

<https://daneshyari.com/article/5066291>

[Daneshyari.com](https://daneshyari.com)