

# Does Performance Pay Increase the Risk of Worker Loneliness?



**AMERICAN  
ECONOMIC  
ASSOCIATION**

Mehrzad B. Baktash, PhD  
University of Trier



## Introduction

Increased wages and productivity associated with performance pay can be beneficial to both employers and employees.<sup>1</sup>

Based on Adam Smith's (1776) concern that piece rates incentivize workers to "ruin their health," an extensive body of literature study the consequences of performance pay on physical and mental well-being.<sup>2,3</sup>

Nonetheless, the unintended costs of performance pay may go far beyond physical and mental well-being, and even encompass social well-being of the workers.

This study uniquely examines the social well-being consequences of performance pay by investigating the following question: **Does performance pay increase the risk of worker loneliness?**

Investigating the association between performance pay and loneliness stands as an important policy issue due to several reasons:

- (1) Loneliness is on the rise globally and is acknowledged as a rising public health and well-being concern.
- (2) Loneliness is associated with numerous negative consequences for individual health and well-being.
- (3) Loneliness entails negative consequences for the firms, families, societies and economy as a whole.

Considering the spread of performance pay among firms in Europe and the United States over the last decades,<sup>2</sup> it becomes increasingly crucial and timely to investigate whether and how performance pay increases the risk of worker loneliness.

The present study is the first to examine this question.

## Performance Pay and Loneliness

There are at least three channels through which performance pay may increase the risk of worker loneliness:

- (1) Workers receiving performance pay are **less likely to be cooperative and exert helping effort** to colleagues.<sup>4</sup>
- (2) Performance pay is associated with an **increased mental focus on work**.<sup>5</sup>
- (3) Performance pay causes **higher work pressure and stress**.<sup>6</sup>

## Data and Variables

I use the German Socio-Economic Panel (SOEP) to test the relationship between performance pay and loneliness directly.

**Performance pay:** A worker is considered to earn performance pay if he/she is subject to regular and formalized performance appraisals by a superior at work and the performance appraisals have consequences for his/her earnings.

**Loneliness:** Based on 3 items: (a) "How often do you miss the company of other people?" (b) "How often do you feel socially isolated?" (c) "How often do you feel left out?"<sup>7</sup>

**Social life satisfaction:** "How satisfied are you with your social life?"

## Results

Workers who receive performance pay are more likely to have an **incidence of loneliness, feel more types of loneliness, and score higher on loneliness index**.

Performance pay is positively associated with each dimension of loneliness: (a) **lacking companionship**, (b) **feeling isolated**, and (c) **feeling left out**.

Performance pay also reduces the **social life satisfaction** of the workers significantly.

**Table 1.** Performance Pay and Loneliness (Method: OLS)

	(1) Incidence of loneliness (0,1)	(2) Number of types of loneliness (0-4)	(3) Loneliness index (0-6)
Performance pay	0.025 (0.008)***	0.043 (0.022)**	0.055 (0.026)**
Control variables	Included	Included	Included
R <sup>2</sup> /Pseudo R <sup>2</sup>	0.076	0.166	0.190
Number of observations	12224	12224	12224
Number of employees	10008	10008	10008

\*\* Statistically significant at the 5% level; \*\*\* at the 1% level.

## The Issue of Endogeneity

While I show a consistent and significant positive effect of performance pay on loneliness, the performance pay variable may nonetheless suffer from endogeneity.

This study uses an instrumental variable (IV) approach to address endogeneity.

**Instrumental variable:** Share of workers receiving performance pay calculated for 257 detailed 4-digit occupations. When calculating the share, the own contribution of the respective worker to that share is excluded.

The IV shows the general tendency within a narrowly defined occupation that workers are on performance pay.

**Table 2.** Performance Pay and Loneliness: The Issue of Endogeneity (Method: 2SLS)

	(1) Incidence of loneliness (0,1)	(2) Number of types of loneliness (0-4)	(3) Loneliness index (0-6)
Performance pay	0.110 (0.043)**	0.237 (0.120)**	0.286 (0.141)**
	Performance pay		
Performance pay share by occupation	0.506 (0.028)***	0.506 (0.028)***	0.506 (0.028)***
Wooldridge robust score test	4.04**	2.68	2.74*
Robust F	329.96***	329.96***	329.96***
Anderson-Rubin test statistic	6.54**	3.90**	4.11**
Number of observations	12198	12198	12198
Number of employees	9990	9990	9990

\* Statistically significant at the 10% level; \*\* at the 5% level; \*\*\* at the 1% level.

## Conclusions

Performance pay not only increases the incidence of loneliness, but it also influences all the three dimensions of loneliness, intensity of loneliness, and overall social well-being of the workers.

The association between performance pay and loneliness is particularly large for private sector employees due to high competition and competitiveness.

The findings of this study represent an important piece of evidence to be considered in any evaluation of performance pay.

Finally, as firms do not bear the full cost of worker loneliness, public intervention to monitor and perhaps even regulate the use or intensity of performance pay could be warranted.

## Contact

Mehrzad B. Baktash, PhD  
University of Trier (Trier, Germany)  
Email: baktash@uni-trier.de  
Website: www.mehrzadbaktash.com



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