Available online at www.sciencedirect.com
SCIENCE DIRECT®

ELSEVIER

Journal of Economic Psychology 25 (2004) 591–600

JOURNAL OF
Economic Psychology

www.elsevier.com/locate/joep

Work productivity when knowledge of different reward systems varies: Report from an economic experiment

Richard Burchett [a], John Willoughby [b,*]

[a] Department of Psychology, University College, University of Maryland, College Park, MD 20742, USA
[b] Department of Economics, American University, Washington, DC 20016, USA

Received 6 August 2002; received in revised form 24 February 2003; accepted 2 May 2003
Available online 1 August 2003

Abstract

Recent evidence suggests that both buyers and sellers of labor services prefer uniform wage payments. This study further examines this topic, by offering different monetary rewards for identical activities, and by varying knowledge of the alternative reward systems. The mode and proffered pay scale(s) had little or no impact on work productivity when subjects were ignorant of the alternative reward systems. However, work productivity varied significantly by mode and pay scale when subjects were aware of the alternatives.

PsycINFO classification: 3000; 3020
JEL classification: C9; J2; J3
Keywords: Social behavior; Equity (payment); Money

> The labor market is – by nature, and quite independently of Trade Union Organization – a very special kind of market, a market that is likely to develop "social" as well as purely economic aspects… For the purely economic correspondence between the wage paid to a particular worker and his value to the employer is not a sufficient condition of efficiency;

* Corresponding author. Tel.: +1-202-885-3759; fax: +1-202-885-3790.
E-mail address: jwillou@american.edu (J. Willoughby).

0167-4870/$ - see front matter
doi:10.1016/S0167-4870(03)00066-7

> it is also necessary that there should not be strong feelings of injustice about the relative treatment of different employees (since these would diminish the efficiency of the *team*), and there should be some confidence about fair treatment over time (which is necessary in order that the individual worker should give of his best). The capacities of different workers do in fact differ to a greater extent than the team spirit will allow to be recognized; and the short-period value of a man's work fluctuates over time to a greater extent than longer-run interest will allow to be recognized. Compromise is necessary, with the result that wage-rates are more uniform, both between workers, and over time, than they would be if the labor market worked like a commodity market. (Author's emphasis)

Sir John Hicks (1963, p. 317).

1. Introduction

It has always been difficult to develop a wage payment system that is tailored to each individual worker's productivity. Sir John Hicks recognized this problem long ago when he suggested that most collective work processes require incentive systems that have collective motivational elements. Current evidence from the fields of economics and psychology suggests that Hicks' insights – and those of "old-fashioned" labor economists as well – remain salient. For example, economic studies examining ultimatum and trust games suggest that subjects do not always act to maximize individual economic returns (Thaler, 1998; Camerer & Thaler, 1995; Fehr, Kirchsteiger, & Riedl, 1993). Psychological studies also find factors such as perceived 'fairness', or 'equity' interact with personal motivators to determine workplace productivity (Ambrose & Kulik, 1999; Adams, 1963; Pritchard, Dunnette, & Jorgenson, 1972). Fehr and Falk's (1999) experimental research built on these findings by examining employer wage-setting practices. They found that subjects who hired labor services in the experiment clearly understood the value of positive reciprocity, and often refused to accept low wage bids of workers fearing unemployment. The emerging story is that buyers and sellers alike prefer relatively uniform wage payments because the incentives implicit in specific labor contracts depend on employer and employee perceptions of their impact on collective work effort. Contrary to simplistic neoclassical labor economics, it would be unreasonable to expect that this type of wage setting policy would clear the labor market.

This paper contributes to the literature by examining in a controlled environment the effect of knowledge of alternative reward systems (i.e., uniform vs. non-uniform reward systems) upon work productivity. For identical work activities (collating and clipping stacks of 15 sheets of paper numbered from 1 to 15), subjects were compensated according to one of three different reward systems ($.27 or $.81 per unit individually produced, or an $8.10 flat rate, regardless of individual work productivity). Half of the subjects were informed of the alternative reward systems, and half of the