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The best choice for  
auto glass repair



- ▶ Hourly based wages

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  - ▶ hidden action

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- ▶ Hourly based wages
  - ▶ hidden action
  - ▶ misaligned incentives
  - ▶ long time, long trips to get on site
  - ▶ less than optimal effort
- ▶ In the 90's: productivity is largely below than expected

- ▶ Adoption of a different wage determination system: Performance Pay and Productivity.
- ▶ Wage as a function of the number of worked windshields.
- ▶ Weekly wage **P** thus corresponds to the sum of worked windshields.

PLUS:

- ▶ A “threshold”, minimum, fixed wage is established. Let this be **H**
- ▶ And the following rule is adopted: if  $\mathbf{P} < \mathbf{H}$  then  $w = \mathbf{H}$



Thus, if we let  $w$  stand for wage, we have:

▶  $P < H \rightarrow w = H$

▶  $P > H \rightarrow w = P$

Key point: head management has set a menu that workers can choose from:

- ▶ try to enter the **P** zone: work harder, earn more
- ▶ stay in the **H** zone: work less earn less

Matter of fact, a 44% increase in productivity is observed.

What does this increase stem on?

- ▶ A fraction of workers work harder to get to **P**?
- ▶ Workers would stick to **H** but they fear being confronted with **P**-workers and thus fear being fired
- ▶ Less motivated or fixed-wage-loving workers leave Safelite and they get substituted by more motivated and eager to earn workers.

As to head management:

- ▶ They have to set a piece rate **P**
- ▶ They have to set the fixed wage **H**

- ▶ A first group in the head management maintains that **H** should be fixed at a lower level than that in place before the adoption of the piece rate system. Say, 70%
- ▶ A second group maintains that there is no need to set a lower **H**

The first group is right!

- ▶ With an unchanged **H**, no worker will ever earn less and the wage bill could only stay constant or even get bigger.

The second group is right!

- ▶ The key point is setting **P**, not **H!!!**

See how it works with an example.

Let us suppose that:

- ▶ Workers were paid \$12 per hour for a 40 hours working week
- ▶ We would have a gross pay of  $\$12 \times 40h = \$480$  per week.

Let us also suppose that:

- ▶ Workers do nothing but fixing windshields
- ▶ 10 windshileds per week are worked.

We would have:  $ULC = \$48$  per windshield.



Suppose that:

- ▶ Workload for Safelite is 5.000 windshields per week
- ▶ Workers, as said, work 10 windshields per week.

Then, Safelite:

- ▶ needs to employ 500 workers
- ▶ wage bill would equal  $500 \times \$480 = \$240.000$  (plus taxes)

Suppose now that a PPP wage system is adopted.

- ▶ Safelite sets the piecerate at \$30 per worked windshield.

What is going to happen?

- ▶ Some workers might decide to work harder to earn more
- ▶ Matter of fact: to receive more than \$480 (i.e. the guaranteed wage rate) one has to work at least 16 windshields per week (i.e.  $16 \times 30 = 480$ )

Suppose now that 100 workers would aim at **P** and work 20 windshields per week.

- ▶ They will get  $w = \$30 \times 20 = \$600$
- ▶ The remaining workers will stick to  $w = \$480$  and to 10 windshields per week.

Point is: of the total 5.000 windshields (i.e. Safelite's workload)

- ▶ 2.000 will be worked by the hard working technicians
- ▶ the remaining 3.000 will be left to the "lazier" ones

At 10 windshields per week, Safelite will only need 300 less productive technicians

Let us calculate the wage bill:

The new wage bill:

$$100 \times \$600 + 300 \times \$480 = \$204,000$$

The old wage bill:

$$500 \times \$480 = \$240,000$$

ULC for the hard workers:

$$\$600 / 20 \text{ w.s.} = \$30$$

ULC for the lazy workers:

$$\$480 / 10 \text{ w.s.} = \$48$$

... but you now need only 300 of them for a total work force of 400 people.

- ▶ This shows that Safelite could keep the guarantee at 100% of the old wage rate and improve its bottom line.
- ▶ So: let employees choose how hard to work and have them rewarded the more they make choices that benefit your firm.

# Management

- ▶ Let other people freely choose what you want them to choose
- ▶ Have others maximizing your own utility while they maximize theirs
- ▶ Management is first and foremost about getting things done by the effort of others.

# Some questions

A medley of questions:

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- ▶ How would you define “lazy”?
- ▶ Who is better off with “more productivity”?
- ▶ Is “reacting to incentives” costly?
- ▶ Is “incentivizing” costly?
- ▶ Are incentives always worth using?

## Some more questions

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- ▶ Is “number of worked windshields” a good measure of effort?
- ▶ what is “number of worked windshields” a proxy for?
- ▶ What else should Safelite do in order to have more workers aiming at **P**?
- ▶ What would ever guide you in deciding whether to aim at **P** or not?



Let's move to an Israel' kindergarden

# The Kindergarden

- ▶ Suppose you are the manager of a day-care center for young children.
- ▶ The center is scheduled to operate every day until four in the afternoon, when the parents are supposed to come and collect their children.
- ▶ Quite frequently parents arrive late, and force you to stay after working hours.

- ▶ You have considered a few alternatives in order to reduce the frequency of this behavior.
- ▶ A natural option is to introduce a fine: every time a parent comes late, she will have to pay a fine.
- ▶ Will that reduce the number of parents who come late?

## Aldo Rustichini and Uri Gneezy field study

- ▶ They studied the effect of fines on the frequency with which parents arrive late to collect their child from day-care centers.
- ▶ Data include observations of 10 day-care centers over a period of 20 weeks.
- ▶ In the first 4 weeks they simply observed the number of parents who arrived late.
- ▶ At the beginning of the fifth week they introduced a fine in six of the 10 day-care centers.
- ▶ The fine was imposed on parents who arrived more than 10 minutes late.
- ▶ No fine was introduced in the four other day-care centers, which served as a control group.

...next slide shows what happened...

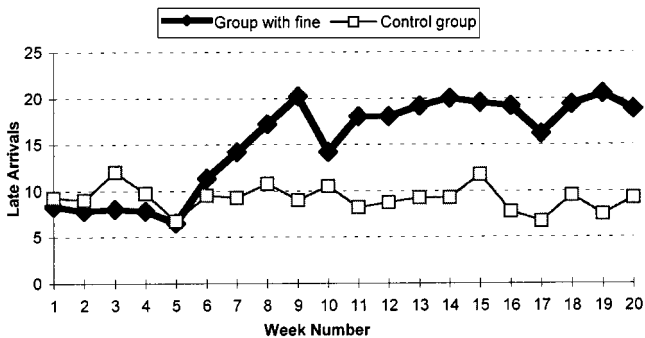


FIGURE 1.— Average number of late-coming parents, per week

# Main findings

- ▶ After the introduction of the fine we observed a steady increase in the number of parents coming late.
- ▶ At the end of an adjustment period that lasted 2-3 weeks, the number of late-coming parents remained stable, at a rate higher than in the no-fine period.