

PROMPT 1

Evidence shows that workers like to work from home, say one day a week, but they hate monitoring devices that the firm might use to see how they allocate their time during the home day. What do you think the firm should do, if it wants to motivate its workers by giving them something that they like, but at the same time ensure it gets its money's worth during working hours?

Remote-work problems began with wool, not Wi-Fi. Early modern England fashioned the “Putting-out system”, where clothier merchants allocated wool and yarn into workers’ homes-- an arrangement that widened production beyond the workshop. Then followed a tale as old as time: with work lost from sight, so was easy supervision, and sure enough, accusations of material embezzlement followed (Styles, 1983). The modern version of this tale now sits behind a laptop. Yet, work from home (WFH) carries its own value. Mas and Pallais (2017) found workers were willing to give up roughly 8% of wages for a WFH option, a compensating differential in practice. Firms also gain: Bloom, Han and Liang’s (2024) randomized Trip.com trial cut attrition from 7.2% to 4.8%, with no measurable loss in performance: a worker-valued amenity can also create firm value through retention. Intrusive monitoring can therefore become an amenity tax, clawing at the flexibility most workers value. It raises the question of whether employers should care only for the firm’s net value, rather than homing in on whether each of their workers’ minutes is visible.

There is, of course, a reason firms want that visibility. In principle, a worker paid for eight hours could supply much fewer costly hours of effort once removed from direct supervision. This is a principal-agent problem: the firm cannot perfectly observe employee effort. Because effort is costly, hidden action creates moral hazard through shirking or procrastination. The temptation is to measure whatever is easiest to see: mouse movement, Slack presence, screen time or code commits. None are identical to worker output or firm value. The informativeness principle offers a better standard: a signal matters only insofar as it reveals an outcome the firm values. The firm’s problem becomes which information is actually worth buying.

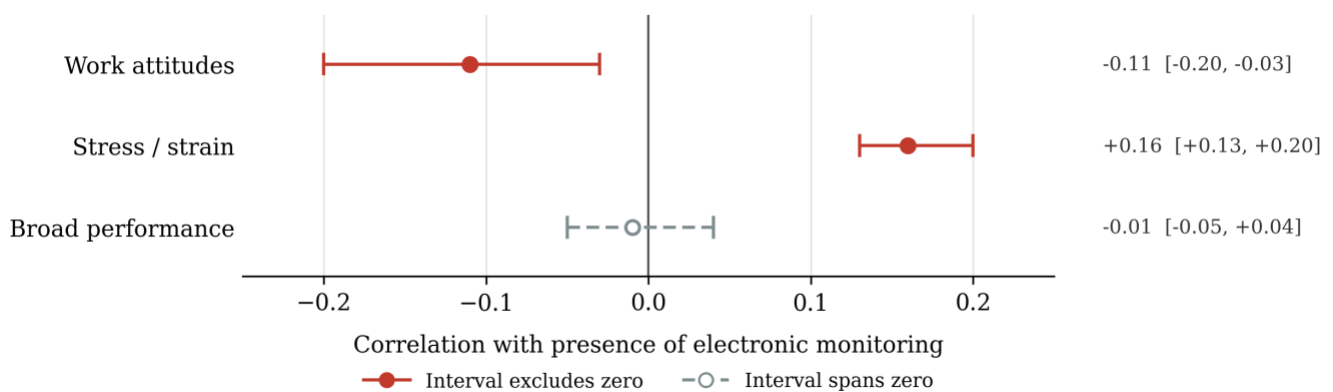
The Hidden Cost of Continuous Surveillance

The drive to make every minute visible can distort effort rather than reveal it. Holmström and Milgrom’s (1991) framework of the multitask principal-agent problem explains this distortion. Jobs contain multiple tasks, some far easier to observe than others. Strong incentives on measurable tasks inevitably pull employee attention away from valuable work that defies easy quantification.

A software engineer judged by commits or ticket closures may maximize those metrics while neglecting overall architecture, junior mentoring or careful debugging. This phenomenon directly reflects Goodhart's Law. Once a

measure becomes a target, it ceases to be a good measure. This leads to a fundamental paradox: the very act of monitoring changes the behavior it is supposed to observe. Surveillance can therefore inflate measured effort while reducing firm value.

Surveillance imposes steep organizational costs beyond privacy. A 2023 meta-analysis by Ravid et al. in *Personnel Psychology* pooled 94 independent samples covering 23,461 workers. Electronic monitoring showed no reliable performance benefit: the pooled estimate is -0.01 , with a confidence interval running from -0.05 to $+0.04$. Worker costs are clearer. Monitoring predicts higher stress ($+0.16$) and more negative work attitudes (-0.11), and both intervals exclude zero.



Graph 1: *The asymmetric effects of monitoring as stated by Ravid et al. (2023)*

These welfare drops carry economic consequences. Falk and Kosfeld (2006) showed a ‘hidden cost of control’: monitoring can generate distrust and crowd out voluntary effort. The mechanism relies on reciprocal motivation. Passive observational monitoring stifles employee voice. Research in *Work & Stress* (2025) indicates that workers treat observational surveillance as encouraging silence, whereas direct supervisor interaction fosters upward communication. Workers who hold localized feedback regarding product failures and process improvements, if suppressed, risk making the firm informationally poorer.

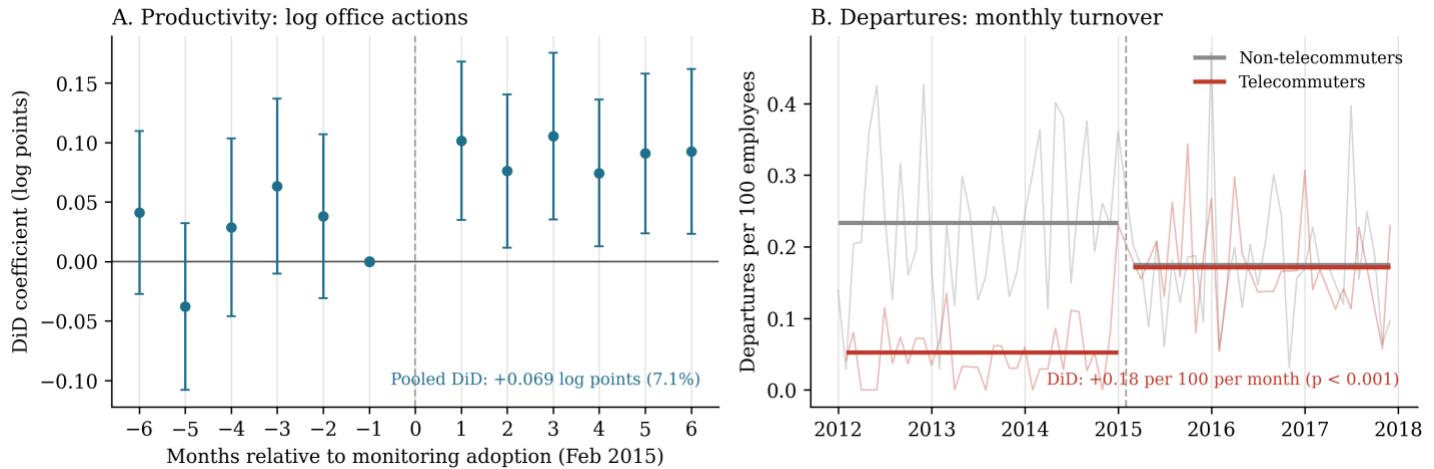
Monitoring could also drive talent away. Ko and Baek found higher productivity but also higher departures among U.S. patent examiners, making turnover a direct cost of surveillance. This points to a counterintuitive conclusion: protecting employee privacy to a healthy degree functions as a productive input, as some degree of opacity supports experimentation and non-linear problem-solving.

The Counterargument: Optimal Monitoring is Interior

Surveillance does not universally fail, however. Ko and Baek provide the clearest counterexample. When they introduced computer monitoring for telecommuting U.S. patent examiners, overall productivity jumped by about

7.1%. The gains were especially concentrated among lower performers, largely because the tracking actively reduced their procrastination. This is moral hazard in action: where hidden effort is genuinely binding, greater observability can reduce shirking.

There is a catch. That same monitoring intervention increased employee departures, solving one specific agency problem but creating a new cost elsewhere (Graph 2).



Graph 2: Monitoring adoption for telecommuting USPTO examiners (February 2015) raised output by 7.1% while roughly tripling departures. Author's estimates from Ko and Baek (2025) replication data, 95% confidence intervals.

It is possible to formalize this reality. Let monitoring intensity be m . The benefits $B(m)$ include less shirking alongside better coordination and security. The costs $C(m)$ encompass system expenses, stress, turnover, metric gaming, and lost autonomy or voice. The rational choice would not be found at the extremes; rather, it would require choosing an optimal m^* where $B'(m^*) = C'(m^*)$. The ideal outcome occurs when a firm does not monitor beyond the exact point at which the marginal information it gains is worth less than the organizational damage it creates.

Selective Verifiability as a Proposed Solution

Putting this into practice requires selective verifiability-- autonomy by default, agreed upon verifiable outcomes, and stronger process monitoring only when specific risks justify it.

Audit rather than continuously surveil

It is more effective to replace continuous activity capture with a credible probability of verification. Managers and workers should agree priorly on deliverables, quality thresholds, deadlines, and specific evidence employers can request if performance deviates. A credible threat of checking disciplines behavior at a lower monitoring intensity.

The evidence backs this up. Ravid et al. show that the invasiveness and transparency of a system heavily shape worker reactions. That supports reducing continuous intrusion while keeping credible accountability intact. UK ICO guidance likewise stresses proportionality and less intrusive alternatives. Monitoring should hence escalate only after a defined trigger (such as repeated missed outcomes or unexplained deviations).

Turn some monitoring into a worker-owned commitment device

Employee private dashboards could optimize focus, pacing, or self-set goals. The employer receives only coarse information about agreed deliverables. Ko and Baek's procrastination result suggests some benefit may come from structure itself, rather than employer access to every behavioural trace. A self-monitoring tool acts as a commitment device, helping workers align short-run behaviour with longer-run goals without converting all data into surveillance. Firms should separate the productivity value of feedback from the power conferred by visibility.

The Heterogenous Proposition for Monitoring Intensity

Heterogeneous treatment effects imply there is no universal optimal surveillance frequency. Costs and benefits of monitoring fluctuate depending on output measurability and safety risks. Additionally, it depends on the worker's own bargaining power and the baseline cost of making errors.

Consider again Ko and Baek's research on patent examiners. The productivity gains from their monitoring intervention were heavily skewed toward lower-performing workers. That distinction tells us something important: even inside the same occupation, the marginal benefit of tracking someone changes drastically from person to person. The utility of surveillance differs across distinct situations.

There is also the fairness dimension. A 2026 *Journal of Business and Psychology* study analysed a nationally representative sample of 2,515 U.S. workers. They found that precarious workers were subjected to significantly more intensive monitoring. Unsurprisingly, these individuals reacted far more negatively to the surveillance. This suggests that monitoring intensity frequently reflects raw worker bargaining power just as much as it reflects any genuine drive for efficiency.

Firms should therefore monitor only risks that genuinely require observability. Deploying every piece of available surveillance merely because it is technologically possible could be a costly error.

Job characteristic	Monitoring Regime	Economic logic
Easily measurable independent output	Outcome + quality targets; very little process monitoring.	Informativeness principle
Creative / complex knowledge work	Milestones, peer/client review, long evaluation windows; protect deep-work opacity.	Multitask agency / Goodhart
Highly collaborative work	Team-level outcomes + interactional supervisor check-ins.	Employee voice / team production
Safety/compliance/security critical	Targeted monitoring tied to the exact regulated or safety-relevant risk.	Externalities / risk control
Routine work prone to procrastination	Structured feedback and limited transparent monitoring may have higher marginal benefits.	Moral hazard / commitment device
Privacy-sensitive home work	Minimal or trigger-based process monitoring; avoid ambient webcam/keystroke surveillance.	Proportionality / costly information

Table 1: Suggested monitoring regimes contingent on varying job requirements

Conclusion

In asking how to ensure a firm gets its “money’s worth”, we must alter the paradigm in which we interpret that phrasing. If defined as eight hours of perfectly visible employee activity, we fail to consider downstream negative effects of employee stress, turnover, metric gaming and silencing of voice. In a re-interpretation where “money’s worth” is the firm’s long-term productive surplus, WFH when implemented under heterogenous non-plenary monitoring conditions can offer a valuable non-wage compensation, and improve employee retention. The central claim of this argument is that the rational firm minimizes the cost of obtaining sufficient verifiability rather than maximizing observability. The technological capacity to observe everything does not mean that observing everything is economically rational.

Word Count (Prompt & References Excluded): 1495 words

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