

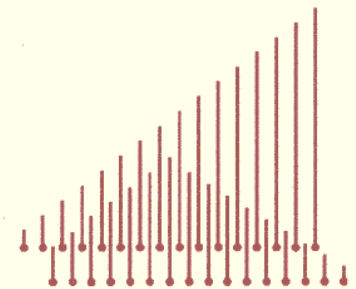
Performance Pay in the Public Sector

Alex Bryson (NIESR, CEP)

OME

London

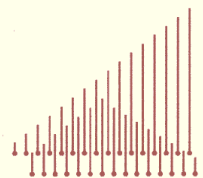
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National Institute
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Social Research

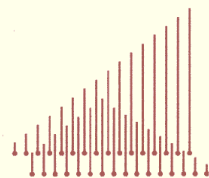
Overview

- What is Performance Pay (PP)?
- Theory
 - Why use it?
 - When to use it?
 - Implications of the theory
- Evidence on effects
- PP incidence in public sector
- PP effects in public sector and why it might be different
 - Theory
 - Evidence



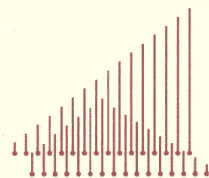
What is PP?

- Individual
 - piece rates, sales commissions, tips etc
 - objective or subjective (“merit pay”)
 - subjective vulnerable to prejudice/ discrimination, objective measures can be too narrow
- Group
 - team or small group
 - project completion, output, rejects, time down for repairs, customer complaints, etc



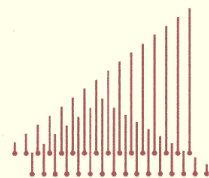
What is PP? Financial Participation

- profit sharing
 - firm-level profit, productivity, etc.
 - cash or deferred or even in company shares
 - Bonuses
- share ownership
 - free or discounted shares
 - incentive plan or “one-off” eg. privatisation
 - Share price appreciation or loss
 - freely tradable or held in trust for employees



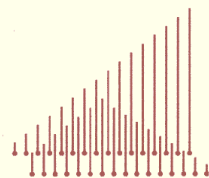
Why Performance Pay?

- Under the standard neo-classical model wages closely approximate marginal product
- Market imperfections mean this is not so
 - eg. costliness of information
- Performance Pay (PP) as the solution aligning wage with workers' marginal product



When Pay for Performance?

- Firms switch from fixed pay (FP) -> PP where benefits exceed costs
- Costs of PP include monitoring effort/output
 - rewarding performance means incur monitoring costs to attribute output to worker effort
 - These rise with multi-task complex jobs etc
- Benefits higher
 - When workers can affect output (job autonomy)
 - For workers with impact on firm output eg. CEO



PP v FP – Overarching Idea

Firms prefer PP where efficiency outweighs monitoring costs

High marginal returns to productivity

Employer seeking to attract high ability workers in markets with high ability variance

Assumptions:

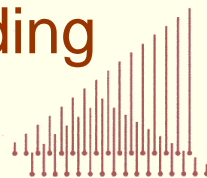
Monitoring costs confined to PP, not FP

Ability/effort not rewarded in FP contracts

Both over-simplifications

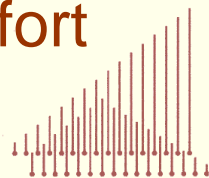
Employee preferences/attributes matter

Tastes for risk, competition, effort; attributes including ability



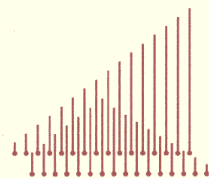
Implications of PP

- Worker sorting
 - Ability
 - Lower effort for same output
 - Higher output for same effort
 - Risk preferences
- Induces effort
 - Assumes worker ability to significantly increase output via effort
 - Assumes wage schedule steep enough to induce effort
 - Trade off between efficiency and insurance
- Aligning interests of principal/agent comes at a price
 - monitoring costs to attribute output to worker effort



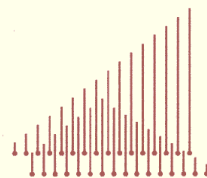
Incentive Pay and Performance: Theory

- Positive
 - Effort
 - Intensity, task focus (CEOs)
 - Via motivation/commitment/satisfaction, eg. absence taking
 - Worker selection
 - The best workers come, stay
 - Flexible labour costs
 - Rewards tied to firm performance
- But
 - Costly monitoring
 - Implementation, maintenance
 - Perverse incentives
 - You (only) get what you pay for
 - Demotivation
 - Relativities
 - Crowds out intrinsic rewards



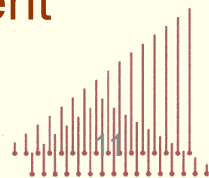
Predictions

- More able sort into PP
- Risk averse sort out of PP
- PP induces higher effort therefore higher output
- PP positively associated with job autonomy
 - Where output more sensitive to effort
- PP increases returns to human capital/ability
- PP increases wage dispersion
 - Recognises heterogeneity in marginal product
 - Induces effort resulting in increased wage variance
- PP wage premium
 - More able
 - More effort



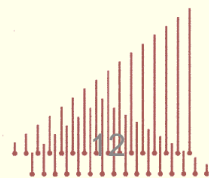
Evidence: Individual PP

- Focus on tree-planting, fruit pickers, jockeys, etc.
 - output easy to observe, inputs costly to monitor, workers can improve performance via own efforts
- Substantial productivity gains in switching to piece-rates
 - worker sorting and incentive effect (Lazear, 2000)
- But costs can outweigh productivity gains
 - costly monitoring under piece-rates can make time-rate pay more profitable (Freeman and Kleiner, 2005)
- Limitations:
 - unobserved factors often affect both the choice of pay system and productivity
 - Piece-rates: no evidence on “merit pay” yet it is more prevalent
 - lack of information: proportion of pay linked to performance



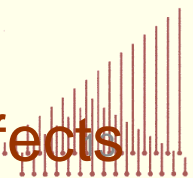
Evidence: group PP

- Focus on switch from piece-rates to group incentive pay
- Positive productivity effects despite “free riding”
- Show importance of worker co-monitoring
- Effects often consistent with social interactions
 - social connections, norms and peer effects (Bandiera et al. 2009)
- Limitations
 - Usually examine switch from piece to group pay but difficulties isolating pay change from other changes, i.e. introduction of team working



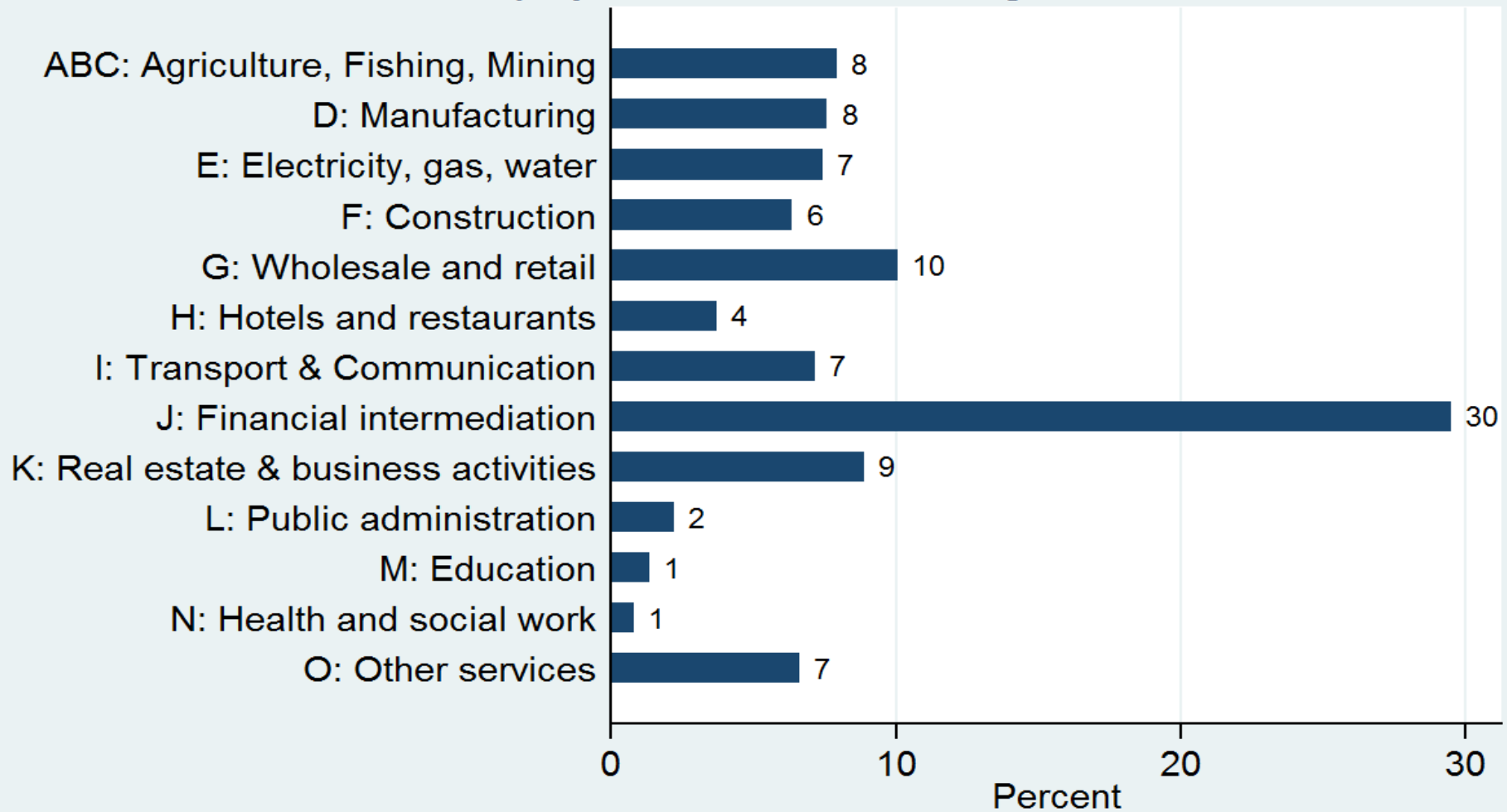
Evidence: Financial participation

- Usually switch from time-rate pay to profit sharing/shares
- Often small positive effects but evidence of upward bias (adoption when firm “do well”) or downward bias (adoption when firm “do badly”)
- Combining with other incentive pay schemes/HR practices often key to success
- Importance of institutional features
 - Japan “strong effect” (Jones et al. 1995; Kato et al. 2002)
 - versus Finland “no effect” (Jones et al. 2010)
- Limitations: difficulties in plausibly identifying causal effects



% Firms Paying Bonuses, 2009-10

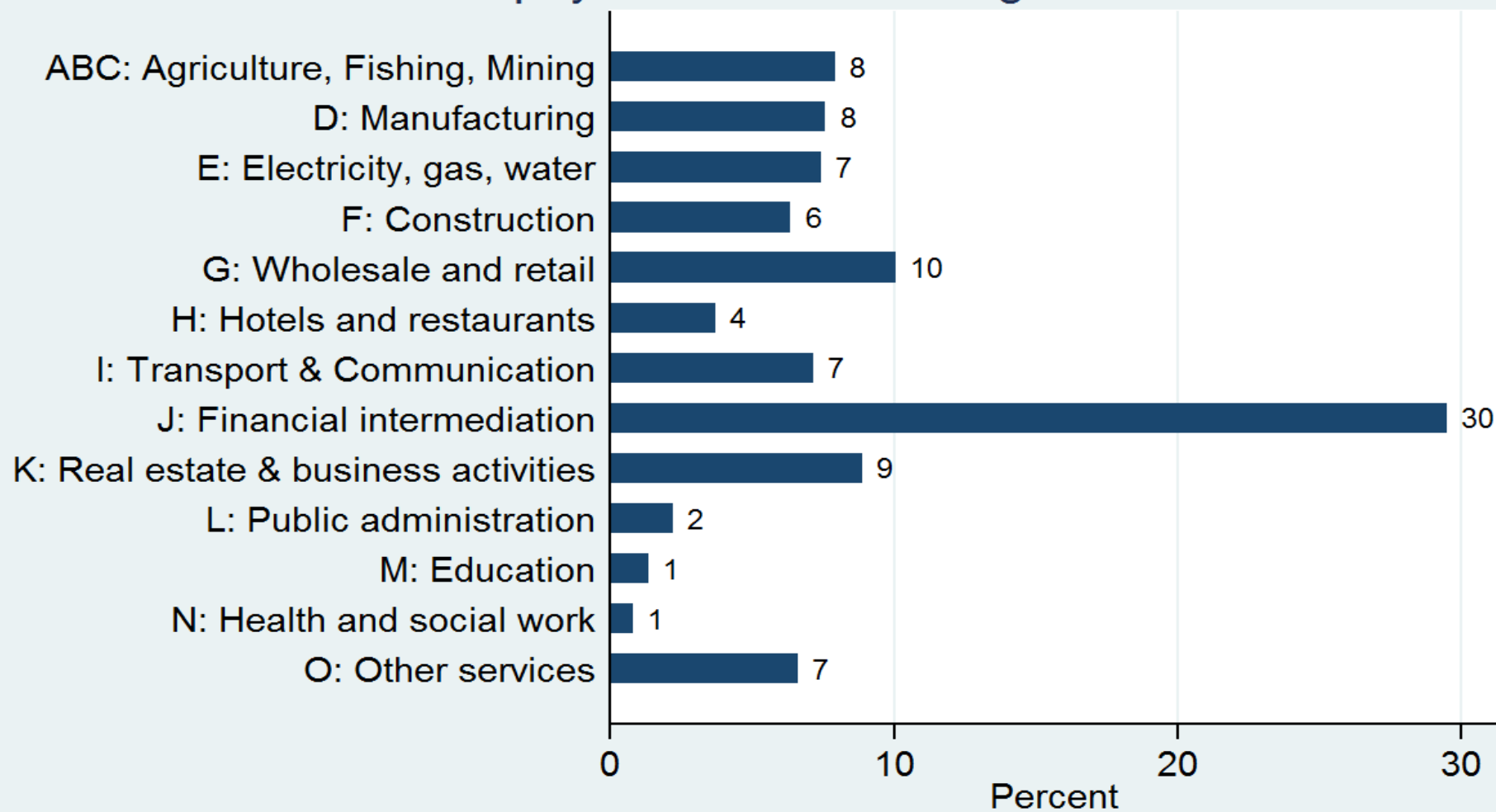
Bonus payments as % of wage bill



Source: Monthly Wages and Salaries Survey, Jun 2009 - May 2010 (pooled)

Public sector

Bonus payments as % of wage bill

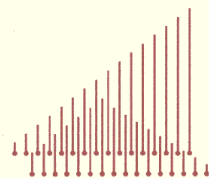


Source: Monthly Wages and Salaries Survey, Jun 2009 - May 2010 (pooled)



Workplaces using PRP (employment weighted), WERS

	<i>Public Sector</i>		<i>Private sector</i>		<i>All</i>	
	<i>2004</i>	<i>2011</i>	<i>2004</i>	<i>2011</i>	<i>2004</i>	<i>2011</i>
Any payments-by-results	12	10	38	37	32	31
Any merit pay	22	20	25	33	25	30
Any PBR or merit pay	32	27	52	55	47	48
Any profit-related pay	2	3	43	41	33	32
Any share schemes	1	2	31	25	24	20
At least one of the above	32	30	71	70	62	60

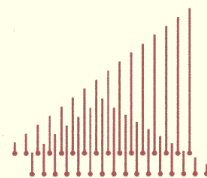


PP measure in WERS 2011

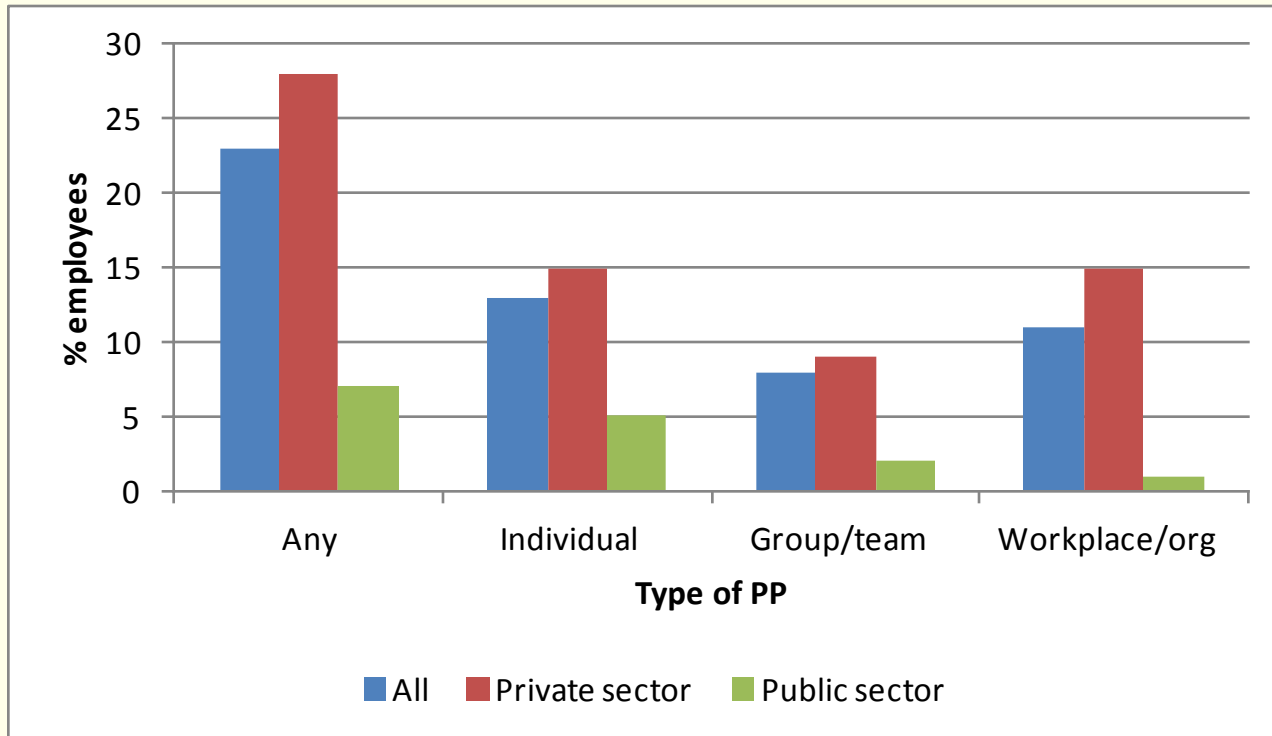
“Which of the following do you receive in your job here...payments based on your individual performance or output; payments based on the overall performance of a group or team; payments based on the overall performance of your workplace or organisation (eg. profit-sharing scheme).”

Tick all that apply so can distinguish between individual PP; team PP; organisation PP

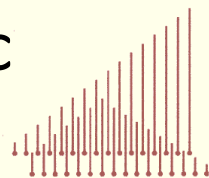
Distinction usually important in theory and sometimes empirically



PP Incidence, WERS 2011

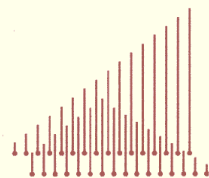


PP incidence is 4X higher in private than public sector



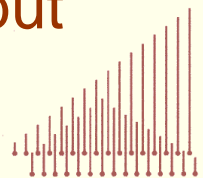
WERS 2011 – PP in public sector but not as we know it

- PP rises with ability (qualifications)
 - Yes, but only in private sector
 - Public sector can attract able/incentivise with careers?
- PP where output sensitive to effort/ability
 - Managerial hierarchy: Yes but only in private sector
 - Job autonomy: Yes but only in private sector



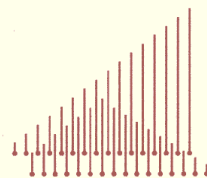
Findings from WERS 2011: women

- 2/3 public sector employees are women
- Some experimental evidence women are more risk-averse
 - Perhaps less likely to enter PP jobs?
- Private sector
 - Yes but not a huge difference
 - 10pp raw differential falling to 4pp with controls and 3pp within workplace
- Public sector
 - 5pp raw differential remaining at 5pp with controls but falling to non-significant 1pp within workplace



Public sector: empirical literature on effects

- It can work, eg. HM Customs and Excise -> group task allocation (Burgess et al)
- Teachers - pay linked to pupil performance (Imberman 2015)
 - PP introduction for teachers in UK
 - Substantial literature in US
 - Results depend on scheme, context etc.
- “Very” fixed pay can have worker sorting implications too
 - National pay bargaining can create regional variance in quality of output via worker sorting
 - Carol Propper
 - Driven by relative value of outside options
 - Hospitals, schools



Teachers' pay: recent reforms

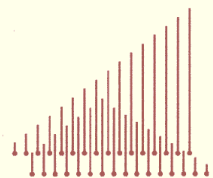
Changes for **classroom teachers** from Sept '13

extension of performance-related pay progression to all;

abolition of mandatory pay points within pay ranges;

new leading practitioner pay range enabling the very best teachers to stay in classrooms;

greater discretion for schools in use of allowances.

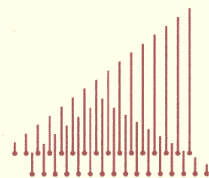


Teachers' pay: recent reforms

Changes to **leadership pay** from Sept '14
new national framework for local decisions
taking account of school circs/challenge
of role;

removal of complex rules on starting pay
and differentials within the leadership
group;

abolition of fixed pay points within pay
bands.



KEY FINDINGS

Pros

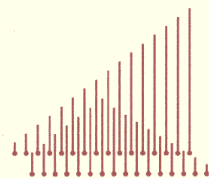
- + Incentives can effectively improve student performance if they are designed well.
- + In developing countries, paying teachers for student performance has been shown to be highly effective at low cost.
- + Incentives based on the collective performance of small groups of teachers strike a balance between loss of effectiveness from free-riding teachers and gains in effectiveness from teachers cooperating with each other.
- + Innovative incentive mechanisms based on loss rather than gain or on relative student performance show promise for high effectiveness but are yet to be rigorously evaluated.

Cons

- Overall, evidence on individual incentives in developed countries is mixed, with some positive and some negative impacts.
- In countries with high teacher salaries, incentives need to be large to elicit a response, which could make them too expensive for general use.
- Incentives based on the collective performance of large groups of teachers have been shown to have little impact on achievement and in some cases even generate negative impacts.
- There is no evidence that incentives tied to specific exams result in improvements in other measures of academic performance, suggesting a lack of general improvements in knowledge.

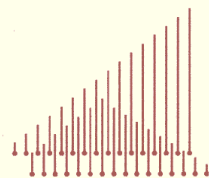
Drawbacks with existing research

- Paucity of evidence;
- Studies mainly in health, education and the civil service;
- Mainly from the US;
- Few experimental studies;
- Little evidence on cost effectiveness or vfm.



Evidence Gaps: research needed

- improve knowledge of what works for UK public sector /professions/groups;
- measure long-term impacts;
- establish differential impacts eg on high/low paid, male/female workers, high/low awards;
- establish the full costs, benefits and vfm.



PP issues in public sector

- Profit v cost centres
 - Cf welfare in US
- Fixed costs
 - Set up, maintenance of monitoring
- Complex jobs and multi-tasking
 - Multiple incentives to avoid single focus
 - Merit pay subjectively appraising complex outputs
- Not what you do it's way you do it
 - Management quality
 - Procedural fairness
 - Unions

