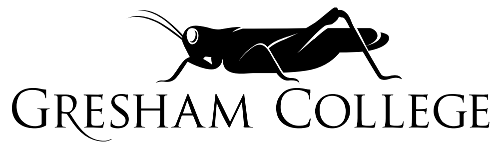


12 December 2018

Executive Pay: What's Right, What's Wrong, and What's Fixable

Professor Alex Edmans

The Controversy

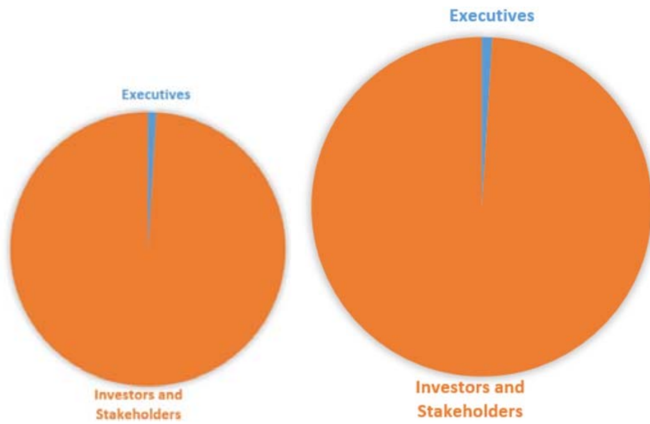
Executive pay is a topic that has captured nearly everyone's attention – and anger. While most company decisions, such as appointing a new CEO, changing its strategy, and selling a division, typically only make the business pages of a newspaper, executive pay frequently makes headlines. And while politicians used to run for election promising to reform healthcare and education, now they also promise to reform pay. In the 2016 US Presidential election, Donald Trump and Hillary Clinton didn't agree on much, but one of the few things they did agree on was that pay was too high. In the same year, Theresa May launched her ultimately successful campaign to become UK Prime Minister with a speech that promised to curb executive pay.

It's easy to see why executive pay is so controversial. The sheer numbers suggest that it's out of touch with reality. In the US, the average S&P 500 CEO earned $14 million in 2017, 361 times the average worker – compared to a ratio of only 42 in 1980. In the UK, the median FTSE 100 CEO earned £4 million in 2017, 137 times the median worker. It seems that almost all the fruits of economic growth have gone to investors and executives, with workers gaining very little – their wages have been relatively stagnant. How can it be fair for a CEO to earn in just three days what an ordinary citizen earns in a whole year? This explains many citizens' views that current capitalism benefits only the elites, and the strength of the calls for reform.

The Approach

I fully agree that pay can be substantially improved – but along different dimensions to what critics typically focus on. As with all of my Gresham lectures, my approach has two features. The first is the *pie-growing mentality* that I introduced in my inaugural lecture, "Purposeful Business: The Evidence and the Implementation." A business absolutely has a responsibility to wider society, not just executives (or shareholders). The value that a company creates for society can be represented by a pie. Executives, shareholders, and wider society (e.g. workers, customers, and the environment) share in the pie. Common criticism of pay is based on the *pie-splitting mentality*. It argues that if executives didn't take so much of the pie – were paid less – there would be more to pay ordinary workers or invest in new products. But the amount that can be redistributed by splitting the pie differently is very small. A £4 million salary is only 0.04% of the median size of a FTSE 100 firm, which is £9 billion. In contrast, reform efforts should focus on giving the CEO the correct incentives to grow the pie for wider society (rather than, say, to hit short-term profit targets). Growing the pie creates substantially more value than splitting it differently. Indeed, correctly-designed incentives create 4-10% of firm value per year.[1]

[1] Von Lilienfeld-Toal, Ulf and Stefan Ruenzi (2014): "CEO Ownership, Stock Market Performance, and Managerial Discretion', *Journal of Finance* 69, 1013-1050.



The second feature of my approach is its grounding in rigorous evidence. As mentioned in my inaugural lecture, and my TED talk "What to Trust in a Post-Truth World", it's almost always possible to find "research" to support whatever view you'd like to support. This is especially dangerous given confirmation bias – the willingness to accept evidence that supports your pre-existing viewpoint, and reject evidence that contradicts it. This is a particular issue in executive pay given how strong opinions are, and how compelling the idea of executives being "fat cats" is. As a result, it's easy for myths to shape public opinion on pay:

- In the UK House of Commons' 2016 inquiry into corporate governance, a witness quoted a study "found that firm productivity is negatively correlated with pay disparity between top executive and lower level employees", referencing a January 2010 work-in-progress draft. The finished version had actually been published in August 2013. Having gone through peer review and tightened up its methodology, it actually found the opposite result: "We find that firm value and operating performance both increase with relative pay."[2] This highlights how easy it is to find a study that supports any viewpoint – even a half-finished version of a study when the completed version finds the opposite.
- In December 2016, a highly respected newspaper published a story headlined "UK chief executives earn much more than European peers. Study also fails to find link between higher pay and better performance," referring to the findings of a paper. However, the paper did not actually yet exist – it wasn't completed and released to the public until several months later. The newspaper took the authors' press release at face value without scrutinising the paper.

It is very important to stress that, even if one accepts the need to use rigorous evidence, it does not mean that there is only one correct view on pay. Even if we all agree on the price and characteristics of different cars, different people may prefer different cars given the different importance they place on price, fuel efficiency, acceleration, safety, and so on. Similarly, even if higher pay ratios are associated with higher firm performance, this does not mean that higher pay ratios are desirable – some citizens may believe that income equality is more important than firm performance. The goal of focusing on the highest-quality evidence is not to argue that only one view is correct. It is instead to put the facts on the table so that practitioners, policymakers, and voters can understand the trade-offs associated with different pay reforms – just like making hidden charges transparent allows customers to make informed purchasing decisions, even though not all will make the same choice.

Even when looking at the evidence, it seems that there are very legitimate concerns about pay which need to be addressed. I now turn to them.

Concern I: The Level of Pay

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[2] Faleye, Olubunmi, Ebru Reis and Anand Venkateswaran (2013): "The Determinants and Effects of CEO–Employee Pay Ratios." *Journal of Banking and Finance* 37, 3258-3272.

Arguably the clearest evidence that CEO pay needs to be reformed is its sheer level. The rise in the pay ratio since 1980 seems to debunk a common justification for high pay – that it's needed to attract talented CEOs. It's hard to argue that CEOs are much more talented now than in 1980, so why has pay skyrocketed? However, one of the most influential finance papers written this millennium argues that the rise in pay is justified not because CEOs have become more talented – but because talent has become more important.[3]

It's helpful to start with an analogy from football. Even though Harry Kane is a great footballer, it's hard to agree that he's more talented than Pele. Yet, Kane gets paid far more than Pele ever did, even adjusting for inflation. This is because football is now a multi-billion dollar industry, due to TV advertising and a global marketplace, unlike in Pele's time. Even if Kane is only a tiny bit better than the next-best striker, these tiny differences in talent could have a huge effect on Spurs' profits. If Kane's goals get Spurs into the Champions League, that's worth many millions. So, it's worth it paying top dollar for top talent.

Now, let's translate this from the football pitch to the boardroom. Just as the football industry has got much bigger, so have firms. Firms also now compete in a global marketplace, and technology changes so rapidly that the inability to change with the times can render firms virtually extinct (compare Blackberry with Apple). Thus, just like in football, it's worth paying top dollar for top talent. Average firm size in the FTSE 100 is £9 billion. Thus, even if a CEO is only a tiny bit more talented than the next best alternative, and contributes only 1% more to firm value, that's £90 million. Suddenly, her £4 million salary doesn't seem so outrageous. The huge impact that CEOs can have suggests that the best way to create value for society is to attract the right CEO, rather than to cut her pay. It's expensive to hire a good CEO – but it's even more expensive to hire a bad one.

This argument isn't just an abstract theory; you can test it. The authors show that the increase in pay between 1980 and 2003 can be fully explained by the rise in firm size over that time. An update studying 2004-11 shows that subsequent changes were also linked to firm size – in 2007-9, firm size fell by 17%, and CEO pay by 28%.[4]

Why doesn't this argument apply to employees? Because a CEO's actions are scalable. If she implements a new production technology, or improves corporate culture, this can be rolled out firm-wide, and thus has a larger effect in a larger firm. 1% is £9 million in a £900 million firm, but £90 million in a £9 billion firm. In contrast, most employees' actions are less scalable. An engineer who has the capacity to service 10 machines creates £50,000 of value regardless of whether the firm has 100 or 1,000 machines. Of course, this all assumes that CEOs have a significant impact on their firms. If a company's performing well, how do we know that it's due to the CEO? It could be due to thousands of other workers, or the company already performing well before the CEO was appointed (e.g. Apple before Tim Cook). However, research has shown that a single CEO has a substantial effect on firm value.[5]

Moreover, this argument shows that the rise in CEO pay is part of a general phenomenon, rather than being an issue specific to CEOs. In a global marketplace, anything scalable commands substantially higher greater salaries. JK Rowling earns far more than Jane Austen because books can be sold worldwide and made into films. Singers, actors, and even reality TV stars also have a global marketplace. In a business context, the pay of other professions has risen even faster than that of public company CEOs, such as private equity, venture capital, and hedge fund investors[6] – and perhaps also lawyers, management consultants, and private company CEOs.

Inequality is indeed a major concern. We care not only about the size of the pie, but its distribution. But these findings suggest that attempts to tackle inequality should be systematic, rather than piecemeal and only targeted

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[3] Gabaix, Xavier, and Augustin Landier (2008): "Why Has CEO Pay Increased So Much?" *Quarterly Journal of Economics* 123, 49-100.

[4] Gabaix, Xavier, Augustin Landier, and Julien Sauvagnat (2014): "CEO Pay and Firm Size: An Update After the Crisis." *Economic Journal* 124, 40-59.

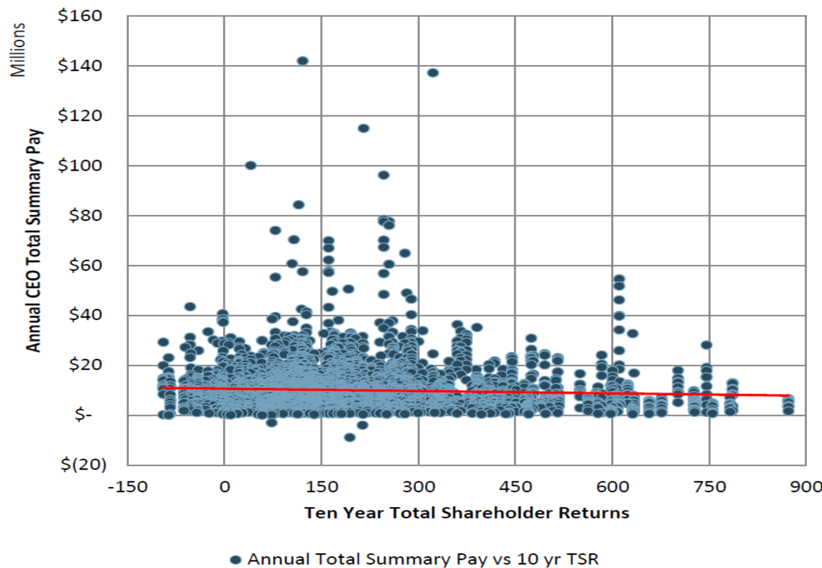
[5] Jenter, Dirk, Egor Matveyev, and Lukas Roth (2018): "Good and Bad CEOs." Bennedsen, Morten, Francisco Perez-Gonzalez and Daniel Wolfenzon (2006): "Do CEOs Matter?"

[6] Kaplan, Steven N. and Joshua Rauh (2009): "Wall Street and Main Street: What Contributes to the Rise in the Highest Incomes?" *Review of Financial Studies* 23, 1004-1050.

at public company CEOs. For example, a higher tax on incomes above £1 million would address inequality arising from high pay in all professions.

Concern II: The (In)sensitivity of Pay

Some citizens don't begrudge high pay if the CEO has deserved it due to good performance. However, a common concern is that pay is insensitive to performance, rendering CEOs unaccountable. For example, a widely publicised study from MSCI claimed to find zero link between pay and 10-year performance. Their smoking gun was the following graph[7]:



The first line of their executive summary was "Has CEO pay reflected long-term stock performance? In a word, 'no'." But the study only considered how much the CEO's pay changed from year to year and ignored the main source of her incentives – the amount of her own wealth tied up in the company. For example, Steve Jobs was paid $1 a year at Apple, regardless of performance, but he was certainly accountable as he had substantial wealth invested in Apple stock. Note that the same error was made by study that a newspaper claimed "fails to find link between higher pay and better performance", highlighting the importance of scrutinising a study rather than taking its claims at face value. Taking existing shareholdings into account, accountability is substantial. A 10% fall in the stock price costs a US Fortune 500 CEO $6.7 million, and a UK FTSE 100 CEO £800,000. Moreover, evidence shows that these incentives work. Companies where the CEO owns a large stake in her firm outperform those who own little, by 4-10% per year.[8]

In short, we want CEOs to be accountable for firm performance – in particular, for their wealth to fall upon poor performance. This requires the CEO to invest a substantial chunk of her wealth into the firm, so that she's paid like an owner, rather than a salaried bureaucrat. Note that this remedy would be ignored by most reform proposals, which focus on the level of pay. A salary of £4 million doesn't tell you whether this is £500,000 in cash and £3.5 million in shares, or £3.5 million in cash and £500,000 in shares – but each has very different implications for how accountable the CEO is to performance, and her incentives to improve performance.

Concern III: The Short-Termism of Pay

[7] "Are CEOs Paid for Performance? Evaluating the Effectiveness of Equity Incentives."

[8] Von Lilienfeld-Toal, Ulf and Stefan Ruenzi (2014): "CEO Ownership, Stock Market Performance, and Managerial Discretion', *Journal of Finance* 69, 1013-1050.

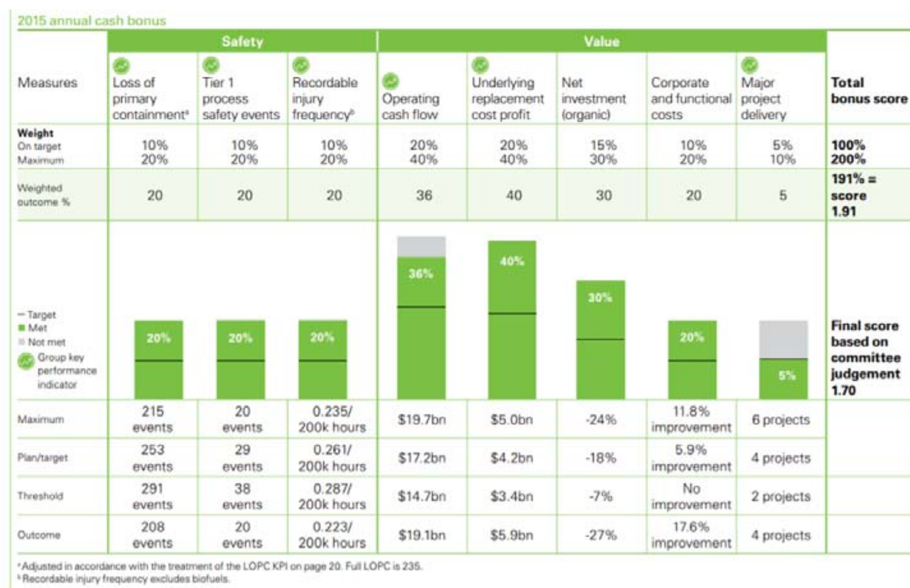
Tying CEO wealth to the stock price seems narrow – the CEO is only held accountable for the value she delivers to investors, not to wider society. However, as discussed in my inaugural lecture, in the long run, the stock price captures not only the value delivered to investors, but also to many stakeholders.[9]

The important words are "in the long run". In reality, some CEO packages are tied to the short-run. For example, Angelo Mozilo, the former CEO of Countrywide Financial, sold $129 million of shares when he quit – meaning that he was relatively unscathed in the financial crisis, even though Countrywide's stock price fell 70% in five months. More generally, a study found that, when CEOs are about to sell their shares, they cut investment and focus on hitting short-term earnings targets.[10]

The remedy is simple – to extend the horizon of a CEO's equity, so that it's locked up for many years. Importantly, this requires the lock-up to extend beyond the CEO's departure, so that she plans for succession and undertakes investments even if they won't fully pay off until after she's left. Indeed, a study shows that long-term incentives improve not only profitability, but also innovation and the value delivered to suppliers, customers, society, and particularly employees – they grow the pie for the benefit of all.[11]

Concern IV: The Complexity of Pay

Most current pay structures are highly complex. For example, the following table shows how BP calculated the $1.4 million bonus for CEO Bob Dudley in 2015:



2015 annual cash bonus

	Safety			Value					
Measures	Loss of primary containment[a]	Tier 1 process safety events	Recordable injury frequency[b]	Operating cash flow	Underlying replacement cost profit	Net investment (organic)	Corporate and functional costs	Major project delivery	**Total bonus score**
Weight On target / Maximum	10% / 20%	10% / 20%	10% / 20%	20% / 40%	20% / 40%	15% / 30%	10% / 20%	5% / 10%	**100% / 200%**
Weighted outcome %	20	20	20	36	40	30	20	5	**191% = score 1.91**
— Target ■ Met ■ Not met ● Group key performance indicator	20%	20%	20%	36%	40%	30%	20%	5%	**Final score based on committee judgement 1.70**
Maximum	215 events	20 events	0.235/ 200k hours	$19.7bn	$5.0bn	-24%	11.8% improvement	6 projects	
Plan/target	253 events	29 events	0.261/ 200k hours	$17.2bn	$4.2bn	-18%	5.9% improvement	4 projects	
Threshold	291 events	38 events	0.287/ 200k hours	$14.7bn	$3.4bn	-7%	No improvement	2 projects	
Outcome	208 events	20 events	0.223/ 200k hours	$19.1bn	$5.9bn	-27%	17.6% improvement	4 projects	

[a] Adjusted in accordance with the treatment of the LOPC KPI on page 20. Full LOPC is 235.
[b] Recordable injury frequency excludes biofuels.

The table indicates there were several measures of performance, each with their own targets. Complexity in turn leads to several concerns:

- *Transparency*. It's much harder for society to understand the basis on which a CEO is being paid. In 2015, BP made the biggest lost in its history, yet Dudley's pay rose from $16.4 million to $19.6 million.

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[9] See also Edmans, Alex (2016): "Performance-Based Pay for Executives Still Works" *Harvard Business Review*, February 23, 2016; Edmans, Alex (2011): "Does the Stock Market Fully Value Intangibles? Employee Satisfaction and Equity Prices." *Journal of Financial Economics* 101, 621-640; Edmans, Alex (2012): "The Link Between Job Satisfaction and Firm Value, With Implications for Corporate Social Responsibility." *Academy of Management Perspectives* 26, 1-19.

[10] Edmans, Alex, Vivian W. Fang and Katharina Lewellen (2017): "Equity Vesting and Investment." *Review of Financial Studies* 30, 2229-2271.

[11] Flammer, Caroline and Pratima Bansal (2017): "Does Long-Term Orientation Create Value? Evidence from a Regression Discontinuity." *Strategic Management Journal* 38, 1827-1847.

- *Distraction*. The CEO may be distracted from creating value for society and instead focus her efforts on how to hit the numbers in the pay scheme. Indeed, evidence shows that CEOs cut R&D do so.[12]
- *Arbitrariness*. It's not clear what measures of performance to include in the bonus calculation, nor what the correct targets are. Often the targets are accused of being too easy to hit. Then, the CEO gets a bonus for ordinary performance – but workers don't, leading to perceptions of unfairness.

The remedy is again straightforward: to simply pay by removing complex target-driven bonuses and instead pay the CEO in long-term shares. This is transparent: society knows that the CEO will be paid based on long-term stock performance. It avoids distraction as the CEO can focus on creating value for society rather than hitting short-term numbers. It avoids the arbitrariness of selecting particular performance measures (which leads to the CEO ignoring the performance dimensions which aren't captured in the measure) and particular targets.

A very important advantage of shares is that they can be given to all employees as well. This will help address fairness concerns. If the firm succeeds, why should only executives benefit? Employees contributed to the firm's success as well. If they are given shares, they will benefit too. CEOs can't gain without employees gaining also. But, if CEOs get bonuses and workers get shares, the bonus might pay off even if the stock price falls, leading to concerns of "one rule for them, another rule for us". Indeed, evidence shows that broad-based equity schemes are generally associated with higher firm performance. This link is particularly strong in companies with higher growth opportunities, where tapping into colleagues' full potential is particularly important.[13] Giving shares to all employees will allow them all to – quite literally – share in the firm's success that they all helped create.

Conclusion

Pay should definitely be reformed to ensure that companies create value for wider society, rather than just executives and investors. However, the best way to do so is not to reduce the CEO's pay in an attempt to split the pie differently. CEO pay is very small compared to firm value, so the amount that can be redistributed to other stakeholders is tiny. Indeed, a reduction may lead to worse CEOs being hired, at the detriment to society. Instead, reform should ensure that the CEO's wealth is tied to long-run value creation, by giving her equity that she must hold for the long-term, including after her departure. This will give her incentives to grow the pie by investing for the long-term. To ensure employees also benefit from pie growth, they should be given shares as well. In short, rather than bringing the CEO's pay down, reform should incentivize the CEO to bring everyone else's up. Concerns about inequality should be addressed by a high tax rate for very high incomes, which will address inequality from all sources, not just public company CEOs.

[12] Bennett, Benjamin, J. Carr Bettis, Radhakrishnan Gopalan and Todd Milbourn (2017): "Compensation Goals and Firm Performance." *Journal of Financial Economics* 124, 307-330.

[13] Hochberg, Yael V. and Laura Lindsey (2010): "Incentives, Targeting, and Firm Performance: An Analysis of Non-Executive Stock Options." *Review of Financial Studies* 23, 4148-4186.