Effectiveness of Share-based Payments

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Outline

1. Context
2. The Study
3. Closing Remarks
Context Matters
What motivates you?

I don't stop when I'm tired, I stop when I'm done.
Question – Do you think share based payments lead to better executive performance?

• Yes

• No
Candle Problem
Question – On average how much quicker did group 2 finish the task?

- 5min
- 3min
- 5 min (i.e. slower)
- 3 min (i.e. slower)
Candle Problem for dummies
Question – On average how much quicker did group 2 finish the task?

- 5min
- 3min
- 5 min (i.e. slower)
- 3 min (i.e. slower)
Dan Ariely Experiment

• Mechanical Skill – bonuses work as expected
  • Larger reward leads to better performance

• Cognitive Skill – bonuses do not work as expected
  • Larger reward leads to poorer performance

• Various studies support this as well
What works?

• Autonomy
• Mastery
• Purpose
The need for share-based payments

- Principle-Agent theory
  - Misalignment of interests

- Realignment of interests due to part-ownership

- Retention of executives due to vesting criteria
Choosing a suitable measure of company performance

- Selected the traditional measures ROA and ROE as suitable measures of company performance
  - More commonly used in past literature (Mehran, 1995; De Wet, 2012).
  - Accounting benchmarks
  - Factors considered by the remuneration committee
  - Subjected to reporting bias (De Wet, 2012)
  - However, well standardised through the reporting standards set by IFRS.
Research Method & Data

- Data from JSE listed retail companies for the period spanning 2008 to 2013.
- Linear regression analysis performed to test hypothesis
  - Performance measure as the response variable
  - Equity-based statistics as explanatory variable
- 12 Sets of models fitted; 2 response variables, 6 sets of annual data
Summary of results

• Only five out of thirty-six models showed significant remuneration variables.

• Thus, no consistent statistically significant relationship between the two performance measures and the equity-based statistics.

• However, in some cases, linked to ROE.
Summary of results

• Example: Model of ROE regressed on the 2012 data

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage Share-based Awards</td>
<td>26.928</td>
<td>0.05869</td>
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</tbody>
</table>

• Low probability indicates that the coefficient is non-zero i.e. there is a strong relationship between PSBA and the company’s ROE during the 2012 financial year.

• However, result did not carry through to other years.
Question – Do you think share based payments lead to better executive performance?

• Yes

• No
Daniel Pink - Drive

• “There is a mismatch between what science knows and what business does”

• What works?
  • Autonomy
  • Mastery
  • Purpose
Call to action

• Remuneration is most significant company expense

• More science required

• Actuaries should get involved
Thank you