

# Research Report Optimism and Performance in Call Centers

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January 2013

## **Research Question: What is the relationship between optimism and performance?**

- The results of this study should help [the firm] to decide whether to further pursue the idea of testing an “optimism training” to increase workers’ performance.
- Knowledge about the relationship between optimism and performance can also inform the selection criteria for new sales agents.

## Research Setting

- This study took place in 2011 and 2012 in a large call center located in the Netherlands.
- The call center agents' main task is to do outbound and inbound sales calls.
- The analysis is based on a survey (internet and pen and paper) and internal performance data of [the firm].

## Part 1: Background

- There are two kinds of optimism: Attribution style optimism and dispositional optimism. We looked at both in this study. In this part we introduce the concepts and explain why outbound sales are a particularly relevant task to study the effects of optimism.

# Attribution Style Optimism

- **What is it?** Attribution style optimism refers to peoples' habit of explaining good and bad events along the following dimensions: Internal vs. external, stable vs. unstable and global vs. specific. People with an optimistic attribution style explain positive events with internal, stable and global causes and negative events with external, unstable and specific cause (Seligman 2011). An optimist would, for example, explain a good result on an exam with "I am intelligent" (internal, stable, global) and a bad result on an exam with "the teacher had a bad day" (external, unstable, specific).
- **How is it supposed to work?** Optimists attribute negative events to reasons that are more likely to be overcome – because they are external, temporary and specific – and are therefore more likely to stay motivated after failure and less likely to give up (Seligman 2011).
- **Relevant empirical evidence:** A study among life insurance sales agents shows that agents with an optimistic attribution style sell more insurances and are less likely to quit their job (Seligman and Schulman 1986).
- **How is it measured?** With the attributional style questionnaire (ASQ). In the ASQ people are given a number of positive and negative hypothetical events. For each event they are first asked to state the most likely cause and then rate this cause along the three dimensions (Peterson, Semmel et al. 1982) (see example question in the Appendix).

# Dispositional Optimism

- **What is it?** Dispositional optimism is defined as generalized expectations of good versus bad outcomes in life (Carver, Scheier et al. 2010). This is optimism how we use it in everyday language.
- **How is it supposed to work?** Dispositional optimism has been related to good coping with stressors (Nes and Segerstrom, 2006). Thus, optimists when facing a stressful events can better deal with it and find ways to solve the problem.
- **Relevant empirical evidence:** A study among MBA students has shown that the more optimistic students are offered jobs more quickly and get promoted faster. Part of this effect is explained by the fact that optimists are considered as more charismatic by their peers (Kaniel, Massey et al. 2010).
- **How is it measured?** With the Life Orientation Test Revised (LOT-R) (Scheier, Carver et al. 1994) where people indicate how much they agree from on a scale from 1 to 5 with three positive and three negative statements. Here are two examples (see full list of questions in the Appendix):
  - I'm always optimistic about my future.
  - If something can go wrong for me, it will.

## Relevance

- **Why is it relevant for [the firm] to look for effects of optimism for outbound sales agents?** Outbound sales agents experience many rejections by customers. For some products the average conversion rate are very low. Attribution style optimists might be more likely to keep going after being rejected and less likely to give up. Similarly, dispositional optimists might deal better with this stressful situation and they might also stay more motivated.

## Part 2: Data

- Here we show which performance measures we use and why. We further give some summary statistics about the agents' optimism and the key performance measures.



## How to measure performance?

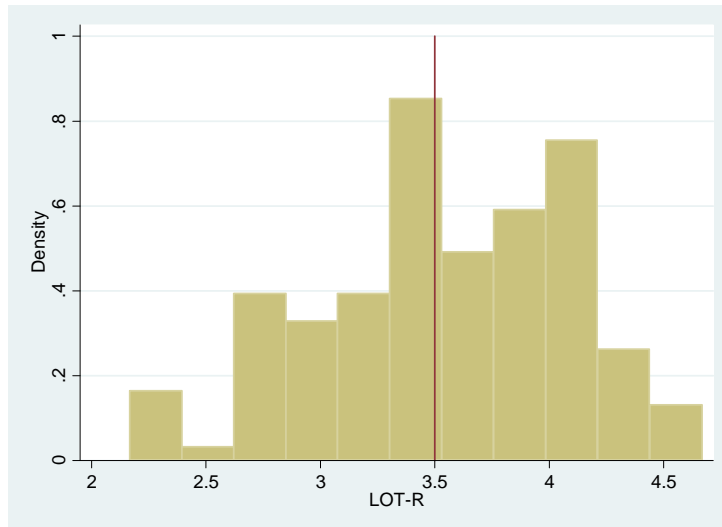
- The agents sell different products which have different performance measures. We therefore choose the following performance indicators because they are available for a number of different projects:
  1. Sales per hour (SPH)
  2. Effective calls per hour
  3. Conversion rate (Sales per hour/effective calls per hour)
- Sales per hour is the central performance indicator, because it translates directly into revenue for [the firm]. Effective calls per hour and conversion rate are interesting to understand the mechanisms through which agents achieve a higher SPH.
- These three measures have different values in different projects. Therefore they are difficult to compare. A SPH of one, for example, can be high in some projects but low in others. We therefore standardized all three measures by project and month. Standardization is a common statistical tool to make results comparable.

## How to measure performance?

- Another performance measure we use is monthly bonus in euros. The monthly bonus is calculated differently for each project taking into account the particularities of each project. We therefore think that it captures the performance of an agent in a particular month well. This measure is only available for [one branch of the firm] projects.

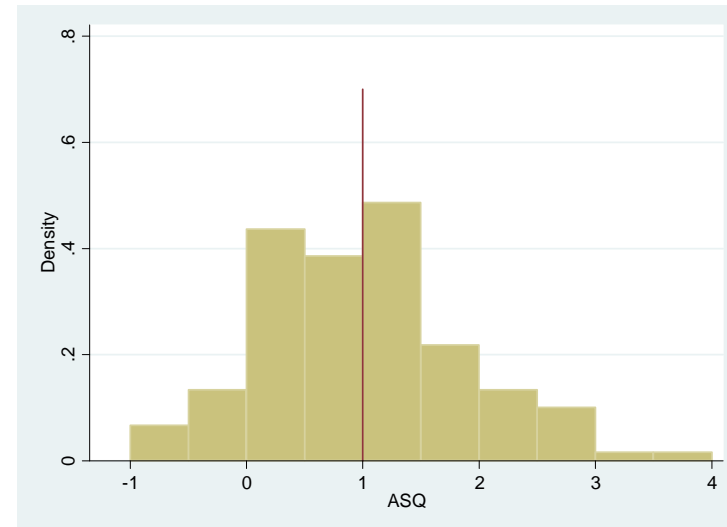
# Data: Optimism Measures

Dispositional Optimism  
LOT-R (134 observations)



Mean Score: 3.54, scale 1 to 5

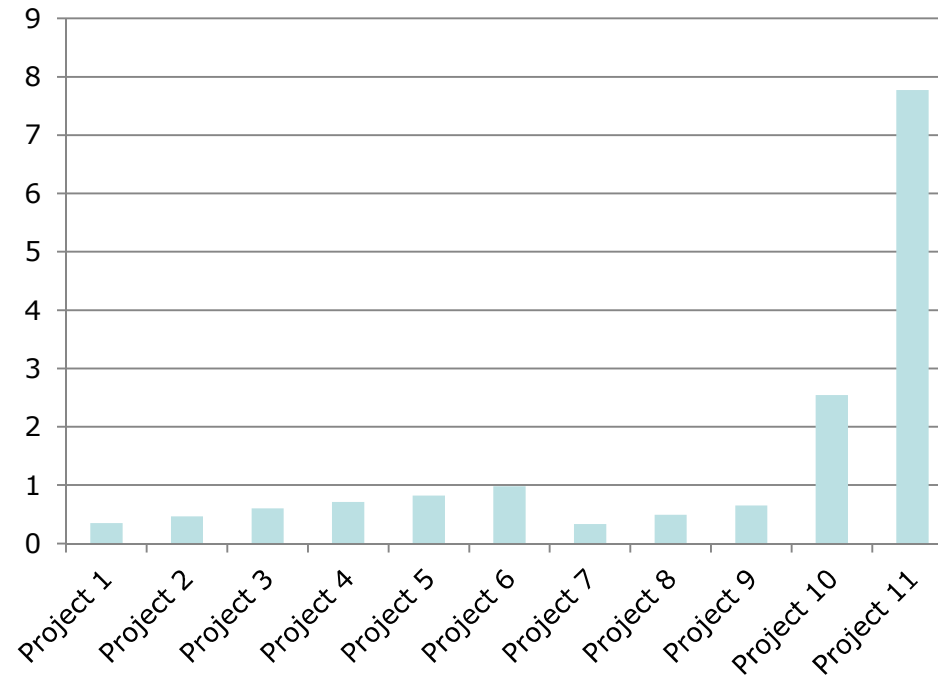
Attribution Style optimism  
ASQ (119 observations)



Mean Score: 0.96, scale -6 to 6

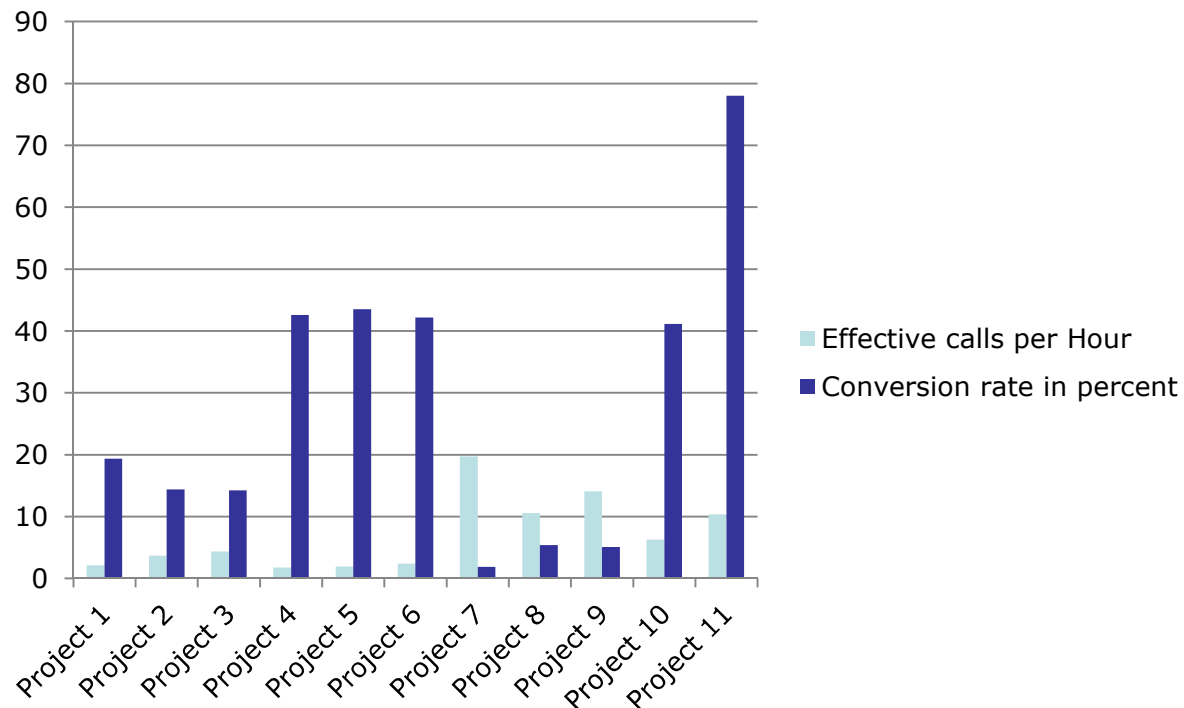
- High values indicate more optimism. The red line shows the median.

## Data: Sales per Hour



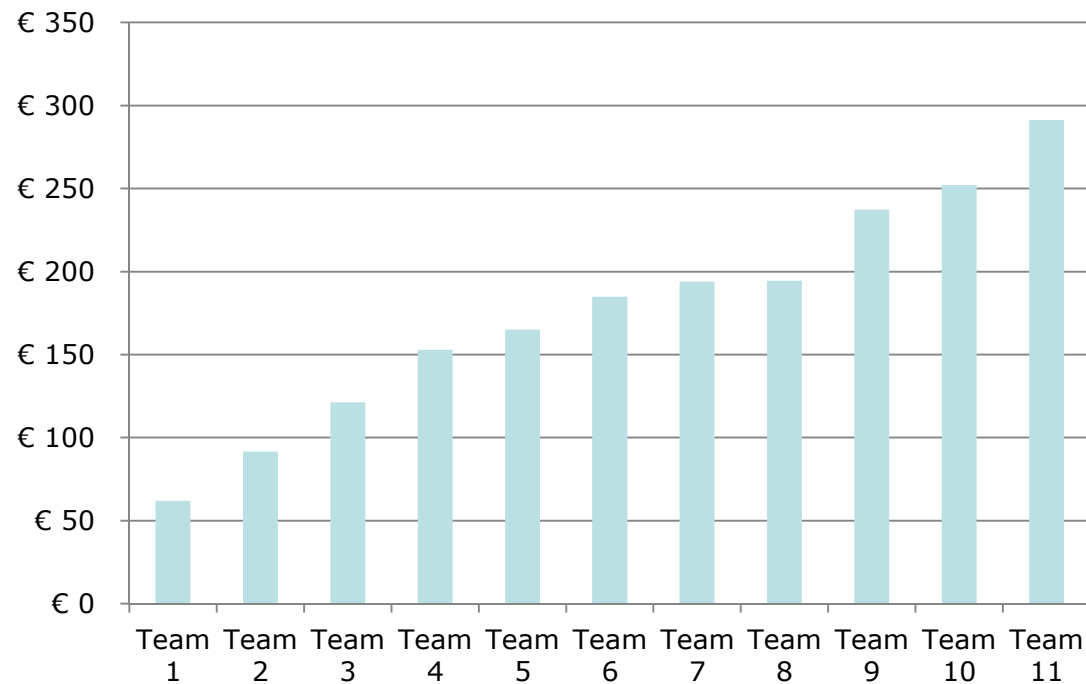
- This figure shows average SPH values from September 2011 to March 2012.

## Data: Effective calls per hour and conversion rate



- This figure shows average effective calls per hour and average conversion rates from September 2011 to March 2012.

## Data: Monthly bonus by team



- This figure shows average monthly bonus by team from May 2011 until March 2012.

## Part 3: Results

- Here we report results of linear regressions that show how attribution style optimism and dispositional optimism predict the discussed performance measure.

## Results: Attribution style optimism

VARIABLES	(1) Standardized SPH	(2) Standardized Conversion rate	(3) Standardized Effective calls per hour
ASQ optimism (1 if above median)	-0.455** (0.184)	-0.511*** (0.184)	0.064 (0.210)
Constant	0.476 (0.387)	0.869** (0.369)	-0.436 (0.399)
Observations	452	456	452
R-squared	0.06	0.11	0.08

This table reports the results of linear regressions with Standardized Sales per hour (1), standardized conversion rate (2) and standardized effective calls per hour (3) as dependent variable. All dependent variables are standardized by month and project.

The independent variable measure attribution style optimism and is 1 if the ASQ score of the agent is above the median.

Additional controls: for age, gender, tenure and level of education. It is based on 46 agents.

Robust standard errors in parentheses

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

- Attribution style optimists have significantly lower SPH and significantly lower conversion rate.



## Results: Dispositional optimism

VARIABLES	(1) Standardized SPH	(2) Standardized Conversion rate	(3) Standardized Effective calls per hour
LOT-R optimism (1 if above median)	0.395** (0.175)	-0.084 (0.164)	0.369* (0.215)
Constant	0.173 (0.312)	0.401 (0.344)	-0.253 (0.310)
Observations	445	449	445
R-squared	0.07	0.08	0.11

This table reports the results of a linear regression with Standardized Sales per hour (1), standardized conversion rate (2) and standardized effective calls per hour (3) as dependent variable. All dependent variables are standardized by month and project.

The independent variable measure dispositional optimism and is 1 if the LOT-R score of the agent is above the median.

Additional controls: for age, gender, tenure and level of education. It is based on 45 agents.

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

- Dispositional optimists have significantly high SPH and higher effective calls per hour.

## Results: Bonus

VARIABLES	(1) Monthly Bonus	(2) Monthly Bonus
ASQ optimism (1 if above median)	19.379 (22.775)	
LOT-R optimism (1 if above median)		77.625*** (29.106)
Constant	126.171** (53.924)	67.908 (67.195)
Observations	432	425
R-squared	0.48	0.51

This table reports the results of linear regressions with monthly bonus in Euros as dependent variable in (1) and (2). Additional controls: age, gender, tenure, level of education, total hours worked per month (total, inbound, outbound), team leader, month. It is based on 67 (column 1) and 68 (column 2) agents.

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

- Attribution style optimists do not have significantly different monthly bonus.
- Dispositional optimists have on average 78€ higher monthly bonus. This difference is statistically significant.

## Results: Summary

- Dispositional optimism predicts **higher** sales per hour.
- This results is explained by the fact that optimists make more calls per hour and not by a higher conversion rate.
- Dispositional optimists also earn significantly higher monthly bonuses.
- However, attribution style optimism predicts **lower** sales per hour.
- This result is explained by lower conversion rates and not by a difference in effective calls per hour.
- Attribution style optimists do not differ significantly in terms of monthly bonus from their pessimistic peers.

## Part 4: Conclusion

- Here we interpret the results and show possible implications for the firm.

# Interpretation

- Dispositional optimism is related to higher performance as measured with SPH and monthly bonus. The results of dispositional optimism are consistent and in line with our expectations. The mechanism through which this higher performance is achieved seems to be higher number of effective calls. We interpret this as a sign of higher effort, that means that dispositional optimists seem to try harder than their pessimistic peers.
- A potential drawback of these findings it could also be that high performance leads to more optimism and not that optimism leads to higher performance. Or both could be going on at the same time.
- However, attribution style optimism is, contrary to our expectations, not related to higher performance. If anything, the results suggest that attribution style optimists perform worse than their pessimistic peers. These results contradict the findings of a previous study in a similar context (Seligman and Schulman 1986).

## Implications for the firm

- We suggest that the firm explores the possibility to include dispositional optimism as an additional criteria in the selection process. The measure of dispositional optimism, LOT-R, consists of only 10 questions and takes about 2 minutes to complete. While we see this as a promising avenue to improve the selection of high performing employees, there is one aspects to keep in mind:
- The LOT-R is quite transparent and it might be that potential employees pretend to be more optimistic than they actually are. In that case the LOT-R would not be a good predictor of success and hence not a good criteria in the selection process. We therefore suggest that the firm evaluates how well the LOT-R fares in predicting performance.
- In as far as good performance might makes agents more optimistic, the firm could take care that every agent is regularly allocated to projects with high average SPH. This might make them more optimistic and less likely to want leave the firm.
- Unfortunately, there is no established way to increase dispositional optimism with a training (contrary to attribution style optimism training).
- We suggest that the firm does not further pursue the idea of testing an attribution style "optimism training".

## Contact

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# APPENDIX



# References

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# Example ASQ question

5 of 6. **Je team leader geeft je een slechte beoordeling.**

5a. Wat is de voornaamste oorzaak (slechts één):

5b. Ligt deze oorzaak bij anderen of omstandigheden, of ligt deze oorzaak bij jezelf?

Ligt volledig bij anderen of omstandigheden (1)         Ligt volledig bij mezelf (7)

5c. Zal deze oorzaak in een dergelijke situatie in de toekomst weer aanwezig zijn?

Zal nooit weer aanwezig zijn (1)         Zal altijd aanwezig zijn (7)

5d. Heeft deze oorzaak alleen invloed op deze situatie, of heeft deze oorzaak ook invloed op meerdere situaties in je leven?

Beïnvloedt alleen deze situatie (1)         Beïnvloedt veel meer situaties in mijn leven (7)

# LOT-R questions

In hoeverre ben je het eens met de volgende stellingen?

	helemaal niet eens	1	2	3	4	helemaal eens
Bij onzekerheid verwacht ik meestal het beste.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik kan me gemakkelijk ontspannen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Als er iets mis met mij kan gaan, zal dit ook gebeuren.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik ben altijd optimistisch over mijn toekomst.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik beleef plezier aan mijn vrienden.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het is belangrijk voor mij dat ik bezig blijf.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik verwacht bijna nooit dat de dingen in mijn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik ben niet zo gemakkelijk van mijn stuk te brengen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik verwacht zelden dat mij goede dingen overkomen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In het algemeen verwacht ik dat mij meer goede dan slechte dingen zullen overkomen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>