

# Analysis of monetary incentives on academic performance Of under performing students.

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## Introduction

### PROBLEM

Ethnic minorities and lower socioeconomic groups continue to underperform compared to white majority populations in higher education attainment.

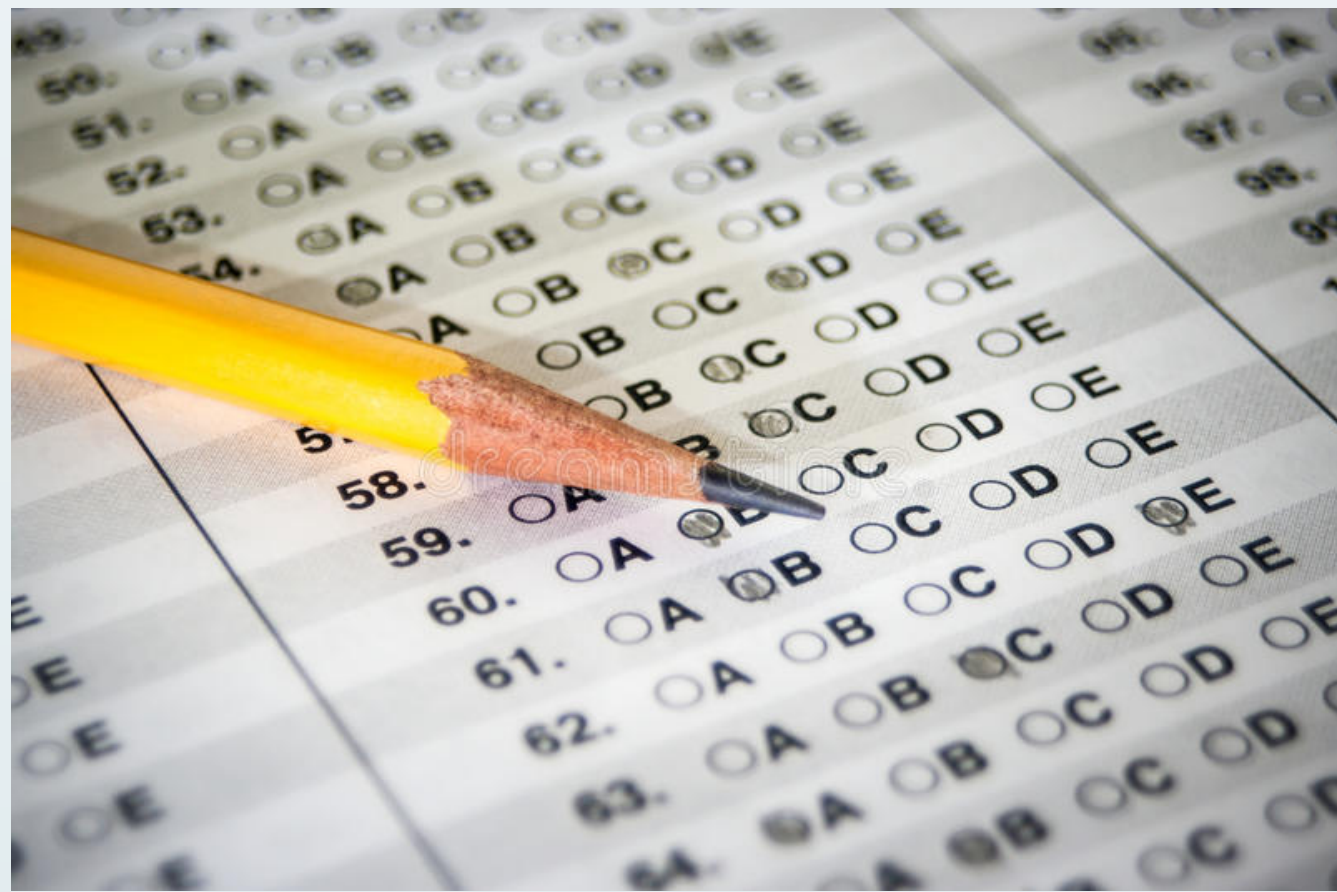
### PURPOSE

Find trends behind public and private schooling, what and how monetary incentives work, and the potential downsides of monetary incentives.

In the case of underachieving student’s financial incentives should be enough to allow students to act and improve their academic performance.

## What is meant by ‘academic performance’?

Academic Performance is defined as grades in standardized tests, attendance and student enrollment (Levitt, List, Neckermann and Sadoff, 2011).



It is also expressed in the terms of a grade point average (GPA) which is the mean of marks from courses (Richardson, Abraham and Bond, 2012).

## Factors influencing academic performance

The first factor is called the *stereotype threat*, this factor is where minority groups suffer from additional anxiety outside of the usual classroom anxiety (such as the fear of giving a wrong answer).



Another factor which plays a larger role in the underperformance of students particularly students of colour is the “Cool Pose”.

This is explained by Majors and Billson (1992), they argue that people of colour, especially African American males, adopt a “cool pose” which is an approach where males want to appear ‘masculine’ compared to their peers to cope with racism and social oppression, this leads to the opposite of a “good student” who is hard-working and highly motivated towards their academics hence the “cool pose” leads to more underperformance and eventual dropout. In Osbourne’s study of high school seniors, the fall in identification in academics was most significant in the African American ethnicity followed by the Latino ethnicity.

## Public schooling us Private Schooling

Public schooling is still lagging in standards and academic performance (the standardized test for the comparison is the PISA exam which tests maths, science, and reading), in the US 8% of the total population attend a private school. (Jerrim, Parker, Chmielewski and Anders)

In terms of standards of facilities and backgrounds of the pupils, private schools excel in their Pupil-teacher ratio, school and environment, an average US private school has a teacher to student ratio of 11:1 while an average public school has a ratio of 16:1 (U.S. Department of Education, National Centre for Education Statistics. (2019)).

This causes public schools to lag which is evident in the PISA scores, in a private school environment, average scores for reading, maths and science was 550 whereas public schools averaged under 500 in all three subjects (Organization for Economic Cooperation and Development (OECD), Program for International Student Assessment (PISA))

## Monetary Incentives

The use of monetary/financial incentives is using money to reward academic performance.

In the research conducted by Levitt, List, Neckermann and Sadoff, financial incentives were issued for improvements in standardized testing, the rewards were the ‘low’ \$10 with the ‘high’ tier reward being \$20.

In a sample size of approximately 6,500 students in a variety of different scenarios to test the incentives replicability (multiple different elementary schools) as well as other settings such as high schools. The results showed financial incentives affect student performance, the low financial incentive (\$10), only worked in one out of the three settings, whereas high financial incentives (\$20) worked in two out of the three settings. In all three settings, the test average scores rose approximately 0.12-0.22 standard deviations which is equivalent to an increase in teaching quality (Kane and Stagier, 2008) or a 20% in class size (Krueger, 1999)

## What downsides could emerge?

Younger children are less familiar with cash and with the \$10 reward, it had a negative effect on their performance. This highlights a glaring downside of financial incentives which is that it doesn’t motivate children and leads to lower results. It also means that a significant proportion of the underperforming children will continue to underperform leading them to exit the education system **before** the financial incentives become the most effective when they are older.



All the research involved rewarding the student immediately after the exam ended however typical test results of a state-wide standardised test take 1 – 2 months to mark. A delay of 1 month effectively diminished the benefits of the incentives (Levitt, List, Neckermann and Sadoff,2011)

## Conclusion

Financial incentives have generally improved underachieving students’ performance however it requires a delicate balance and with the current test results, the balance has not been found due to test criteria that don’t reflect real life conditions. In order to make a judgement more practical tests are required to have enough knowledge to create an incentive system that is effective to a wider audience across the nation furthermore non-price incentives research needs to be conducted on a wider level to gauge the effectiveness of non-price incentives.

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