

## Motivation Culture--US and South Africa (#120878)

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### 1) Have any data been collected for this study already?

No, no data have been collected for this study yet.

### 2) What's the main question being asked or hypothesis being tested in this study?

We predict that people in the US, compared to people in South Africa, would show a bigger difference in effort in response to a monetary incentive than two non-monetary, psychological incentives (competition and charity).

### 3) Describe the key dependent variable(s) specifying how they will be measured.

The main DV would be the mean number of images rated. An additional DV would be the proportion of people in each country quitting the task at the first opportunity they have in the non-monetary conditions.

### 4) How many and which conditions will participants be assigned to?

Participants in each country will be randomly assigned to one of the three conditions (money, condition, charity) and asked to complete a picture-rating task. Everyone will have an opportunity to quit the task after rating every 10 images without losing their base pay. The maximum duration of the task is 10 minutes.

We will collect one sample in South Africa and two samples in the US. The base pay is \$1.30 in South Africa and the bonus in the monetary condition is 5 cents per 10 images. In the US, one sample has the exact same pay structure as the sample from South Africa. The other US sample in the US will have an increased pay rate to adjust for purchasing power parity. We pre-tested the "subjectively equivalent" conversion rate using the Becker-DeGroot-Marshak procedure (Becker et al., 1964): US Prolific workers, on average, said they would complete our task for 1.725 times more money than Prolific workers in South Africa. Thus, in the "subjective equivalent" sample, workers in the US will be offered \$2.25 (rounded up) base pay, plus a 9-cent bonus for rating 10 images in the relevant conditions.

In the money condition, participants will receive 5 (9) cents per every 10 images.

In the competition condition, participants will receive no additional bonus based on the number of images completed, but will be told that the task is a competition and that they will be shown how they did relative to other participants.

In the charity condition, participants will receive no additional bonus to the self based on the number of images completed, but will be told that the Red Cross will receive 5 (9) cents for every 10 images they complete.

### 5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.

The main analyses will be a linear regression on the number of images rated (DV), with country (US, South Africa) and incentive type (monetary, pooled non-monetary), and controlling for gender, age, and education. For the secondary DV, we will examine the proportion quitting at the first opportunity. We will run an analogous (logistic) regression with the DV being whether participants quit at 10 images (first opportunity they got) or continued with the task in the non-monetary conditions. For both regressions, the primary prediction concerns the interaction between culture and incentive type, and not the main effects. We will run two separate sets of analyses comparing 1) South Africa with the US sample that has the same nominal pay and 2) South Africa with the US sample that has the same (increased) subjective pay.

### 6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.

There will be attention and comprehension checks (e.g., asking people whether they will or will not receive additional pay based on how many images they rate). However, people who don't pass at least one of these checks will not be able to start the image-rating task that contains the DV.

Among people who proceed to the image-rating task, we will exclude those stating they do not currently live in the US (for the US part of the sample) or South Africa (for the South African part of the sample). We will also exclude those who do not rate a single image.

### 7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.

We will recruit a total of 665 participants per sample (3 samples total--one in South Africa and two in the US) to have enough power to detect a small effect size ( $f=0.14$ ) for the 2 (Culture) by 2 (Incentive type) interaction. Within each sample, half of the participants within each sample will be randomly assigned to the monetary condition and half to the non-monetary conditions (half of these to the competition condition and the other half to charity).

### 8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)

–Previous "non-WEIRD" (Henrich, 2010) countries we have tested for this project—India, Mexico, and China—are all considered collectivistic (Hofstede, 1980) and are further from the US based on cultural distance (Muthukrishna et al., 2020). Thus, we expect the effect to be likely smaller than that we observed in the other countries, especially in India and China, and particularly when compared to the US sample with the same nominal pay.

–We will repeat both analyses comparing money to each individual (non-pooled) non-monetary condition (competition and charity); however, we might be underpowered to reach a definitive conclusion involving individual (unpooled) non-monetary conditions.

–We will compare the two US samples. While not directly relevant to the main hypothesis, we tentatively predict that the effort in the pooled non-monetary conditions between the two US samples will not be significantly affected by the amount of base pay they receive, while effort in the monetary condition will be higher in the increased-pay US sample than in the nominal pay US sample.