



HAPPINESS (GROSS NATIONAL HAPPINESS INDEX) AND THE ELECTION

Introduction

This is the second note in our series about South Africa's happiness.

Prof Talita Greyling¹ and Dr Stephanie Rossouw² originally compiled the "happiness index" (gross national happiness index) and Dawie Roodt will assist in interpreting the data. Now is an ideal time to (re-)launch this project. Election fever is heating up while the economic performance of South Africa is under tremendous pressure. Will we see a change in South Africa's happiness over the next few days in tandem with political developments, and will we be able to see similar changes on the financial markets?

Our happiness index is constructed by following what people say about life. We do this by monitoring the Tweets of South Africans and analysing the sentiment of these Tweets. We use sophisticated sentiment analysis, which classifies Tweets as either positive or negative. By using a sentiment balance algorithm, we compile an index which measures happiness over time. Additionally, these values can also be "calibrated" to allow for comparisons between countries. And what better source of "measuring" conversations than Twitter? That is exactly how our happiness index is calculated. On average there are approximately 30 000 Tweets per day and most tweets happen between 19:00 and 22:00.

Historical happiness indices

South Africa's happiness has been measured before. For the period 2005–2014, South Africa had an average happiness score of 6.3. During this period Costa Rica was the happiest country with a score of 8.5, while Tanzania was the unhappiest country with a score of 2.5. Interesting to note that the country who announced to officially pursue happiness in 2008, Bhutan, a small mountain country, only had an average happiness score of 5.6.

In Africa, South Africa was the country with the highest happiness score, even higher than the 5.6 of Mauritius that currently has the highest GDP per capita in Africa. However, South Africa's happiness average was lower than that of the America's and of Western Europe.

Happiness-wise South Africa used to be comparable to Eastern Europe. Since 1996, South Africa's happiness score mostly increased and reached a peak of 7.1 in 2009. Since then South Africa's happiness gradually decreased. The most recent World Happiness Index has South Africa at a score of just less than 5, just below neutral. It is interesting that South Africa's most recent happiness (downwards) trajectory mostly followed events like state capture, weak economic growth and the Zuma years.

Most recently (2018 data), South Africa was ranked number 106 out of 156 countries, with a happiness score of 4.72. Its happiness score has been decreasing steadily since 2009. The top-ranked countries are Finland (7.78), Denmark (7.60), Norway (7.55), Iceland (7.49), Netherlands (7.48) and Switzerland (7.48). Those at the bottom are Tanzania (3.23), Afghanistan (3.20), Central African Republic (3.08) and South Sudan (2.85).

Initial happiness measures

We've just started measuring South Africa's happiness by using Twitter data. It is possible to determine South Africa's happiness score with a lag of only one hour. That means we can determine how happy South Africa was, as little as one hour ago. And we can do it every hour!

The plan is to measure South Africa's happiness frequently over the next few days until just after the elections. A happiness score



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will be determined every day and compared from day to day at similar times. On certain days, like on election day, we plan to measure happiness every hour. Additionally, it will be interesting to see if changes on the financial markets, like the rand exchange rate, moves in tandem with our happiness index.

Over the past two days, 30 April reported a happiness score of 5.5 while the average happiness on Workers' Day was 5.1. This is not a very scientific conclusion, but it is worthwhile pointing out that South Africa was happier on a normal working day than on an official holiday — and Workers' Day nogal!

Anyway, both these readings suggest current happiness levels that are relatively neutral, with the number of positive and negative Tweets mostly equal. If we consider happiness per 12 hours, the happiness for the first 12 hours on 30 April was on average 5.69 and the second 12 hours, 5.29. For the first 12 hours on 1 May it was 5.08. Interesting to note that happiness is at its highest early in the morning (around 5:00).

On 1 May, we had an unexpected increase in happiness levels around 10:00 in the morning. Perhaps because it was a public holiday, a few of us decided to sleep in and the normal 5:00 bout of happiness was postponed to a little later. The first Tweets of the day, which are normally positive, were later than on other non-holiday days.

As the day progressed, the level of happiness started decreasing as more negative Tweets became apparent. Most of the Tweets, as is expected, were from the bigger areas like, Bloemfontein, Cape Town, Centurion, Durban, Johannesburg, Pretoria, Randburg, Diepkloof, and Diepsloot. But there were also significant Tweet-traffic coming from smaller areas such as Addo, Arniston, Bisho and Ogies. In total, there were Tweets from 491 different areas. One of the most tweeted about topics were, you guessed it, the upcoming elections!

Until our next note, “stay tuned” as we discover the happiness levels of South Africa during this exciting period.

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