How long would you hold on for a car?

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Q How does economics drive contestants in the MediaCorp Subaru Impreza WRX Challenge?

A Would you like to earn $1,000 an hour for standing around? The catch is that you have to do it outdoors come rain or shine, with the palm of your hand on a car for many hours on end, say, for more than 82 hours, which was what the winner of the 2002 MediaCorp Subaru Impreza WRX Challenge did last year to win a Subaru worth $85,000 (excluding certificate of entitlement, or COE).

Since its inauguration in 2002, the car challenge has been a yearly event, usually in November, in which 400 individuals slog it out at Ngau Ann City for a chance to win a Subaru. The rules have differed slightly from year to year, but they are generally as follows: The contest starts at 1pm on Saturday; everyone gets assigned a “palm print” on a car to put a palm on; there is a five-minute break every six hours; if you lift your palm off, you are disqualified; and the last person left wins a car.

Can we use economics to explain how hard people try to win? Suppose you really want to win a Subaru so you can drive it. Before this year, a COE was not included in the prize. Should you have won the car you would have had to fork out extra money for a COE.

This suggests that in the years in which COEs were expensive, the incentive to win the car was not very high, because, even if you won, you would have had to pay a lot to drive the car. If this reasoning is right, we should observe a negative relationship (or “negative correlation” as economists like to say) between how long it took to win the car and how high the COE was in a particular year.

In fact, though, it seems many winners had no intention of driving the cars themselves, and instead planned to sell them. In those cases, the COE price, while still important, was less relevant; what mattered most was the sale value of the car.

This means that for years in which the car price was high, people would have put in more effort to win the car. That is, there is a positive relationship (or “positive correlation”) between the car price and the time needed to win the car. Are these patterns consistent with what happened in reality?

We collected data on past challenges and used a statistical method called regression analysis to measure the relationship between the winning time and the value of the prize car and the October COE price. Dollar values were deflated to account for inflation over time.

We found that our economic reasoning is reflected by the data. When the COE price increased by $10,000, the winning time decreased on average by about 90 minutes. And when the value of the car increased by $10,000, the winning time increased on average by about 72 minutes.

Interestingly, the data does not seem to fit as well for the last five years or so. The winning time flattened and was less responsive to the value of the car and COE price. So what might be going on here?

Most likely the mix of participants changed. In the beginning many contestants were casual participants. Then contestants in the most recent challenges seem to be very determined to win the contest, and hence they maximised their effort. In fact, we know there are some people who have competed in the challenge several times and even trained for it. As they have become more experienced and skilled, they may have pushed the winning times to the limits of what is humanly possible. In other words, even if the value of the car increases, these “professionals” cannot push themselves too much further and, as a result, the winning times may have stagnated.

As fate would have it, the prize has been sweetened for this year’s challenge – the COE will be included with the car for the first time.

With the COE price currently around $60,000, the payoff for winning is much higher than in previous challenges, around $135,000 in total. It will be interesting to see whether contestants will be able to rise to the challenge and push themselves even further than in the past.

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