

## DECISION ANALYSIS

# Booths Model with Bribe

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Welcome back. Hopefully, you have your spreadsheets working pretty smoothly now. And, what our task is - is to add a bribe. So let's go ahead and do that.

In cell A2, let's enter the word 'Bribe'. This is going to become our model input. We'll go ahead and shade that green, and we'll give that a border. Here [B2] we'll just enter what the bribe actually is. And Tony mentioned the number 6000, so let's assume, the bribe is \$6,000.

Remember that is the amount money that you would pay to play in the blue booth.

If you do play in the blue booth, we need to record what our earnings would be. So let's go ahead and enter 'Earnings With Bribe'. And this is a very simple equation. Because all we have to do is take the earnings that we would've earned by playing in the blue tent, and take off the value that we paid in the bribe in cell B2. And in this case it's not a very good outcome. Let's shade that blue as a model output. And let's go ahead and put borders on these as well.

Now, we want to do another macro. Because we see that as we press F9, again there is variation to variation. And so this time, let's enter our 'Bribe Earnings' and record the Monte Carlo results when we play this game with the bribe. Now as we have done before, we can simply edit our Visual Basic code. Because now we have a blue session here, a blue macro results here. And all we need to do, is instead of referencing cell D5 for our earnings, we reference cell E5. And then we want to record our results in column K.

Go up to View and Macros, and it really doesn't matter, let's choose any one of these. We're going to edit them. Here's our red macro [Playred]. Here is our erase macro [EraseResults]. There is our - we have two red macros. I must have forgotten to change that so - oh there is Playblue. I forgot to change the notes here. So this is Play blue. What we can do is copy the Playblue. And then scroll down to the bottom of the page and paste that in. And we said that the value that we want to copy the earnings, is no longer in D5, it's in E5. And we want to record our results in column K. Let's call this 'PlayBribe'. So our sub routine is PlayBribe. Let's go ahead and change the notes [Play bribe] while we're in this particular section. When you're finished, press the red X.

And now we have another macro. So let's add a symbol here for playing the bribe. And choose any symbol that you would like. I'm going to choose the sunny symbol. Perhaps it's not such a sunny result, it's a shady dealing here, but we're going to use the sun symbol anyway. Right click and assign that macro to the PlayBribe. And now we can play the bribe macro by pressing on our icon.

We have a new simulation, so let's add the blue with the bribe [Blue Bribe]. And, we'll calculate and enter our results in the same section that we have been working on here. We're going to calculate the minimum [Min] that we've earned when we play the blue booth with a bribe. And let's go ahead and enter the best [Max] that we have done in that particular set of simulations. \$40, that's not too good. And now let's calculate the average [Average]. And again your results will look different than this, because you have different random numbers.

So this just convinces us that playing the blue booth, with a bribe of \$6,000 is not going to be a good investment or a good choice. One question that Tony asked us to explore is, 'What is the value that you are willing to pay?'

So you can make a third choice, here, now. Play red or play blue, this time with the bribe.

Why don't you go ahead and fiddle around with this number and see if you can come up with something, that you feel comfortable with, for your own values.

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