1. How much should I bid for a country?

There are several things to consider. First, what is the value of the inside option compared to the value of the outside option. In this case, the outside option is Nigeria for $100mm. But what is this option worth? Clearly, it’s worth the cash flows less the price.

But how much are the cash flows? This depends on the degree of cooperation which, in turn, depends on who is running each of the countries. In making cash flow calcs, it is useful to distinguish between a scenario in which you are engaging in leadership versus when you are not (as is likely to be the case for Nigeria). In both cases, it is important to recognize that the degree of cooperation is not determined by nature, but rather socially constructed. If you acquire one of the larger countries, that social construction should price in your plan to achieve cooperation.

Okay. So now we’ve determined the cash flows of the inside and outside options. Since this is an English auction, we can do no better than to bid up to the point where the inside option and outside options (net of payments) are equal and drop out thereafter. Of course, new information about the social construction of value comes in as the auction moves along. For instance, after both Saudis have been auctioned, the price tells you something about the degree of optimism of the winners as well as all the other people in the room. In particular, you now know that the two winning teams are the most optimistic about cooperation and everyone else in the room is less optimistic. This latter phenomenon is called the winner’s curse—there is bad news about the social construction of value when one wins. Namely, you now know you’re more optimistic than others. This too should be priced into the assessment of inside and outside values.

How should that affect your valuations going forward? Here, you need a mental model of the winners. Does it seem likely that their optimism is warranted? Will they be able to execute? Are they going to be hamstrung by sunk cost fallacy and hence unable to carry through with threats? It’s possible that if a very capable team wins Saudi, your valuations for the other countries might increase over baseline.

2. How do I lead effectively?

Leadership in this game is mainly transactional. A successful leader here will have a well thought out plan for how to achieve coordination. Such a plan will emphasize having clear targets both for god behavior and bad, having an effective and clear punishment of limited duration, and having facts and statistics to back up claims being made. A successful leader will also seek to bilateralize transactions—emphasizing trust one on one with each country in the cartel. She will recognize the impossibility of having honest discourse with some countries (like Nigeria) and focus her efforts elsewhere. She will be willing to listen to others’ suggestions and incorporate them to forge consensus.
3. What are the keys to coordination?

Three keys: A clear demarcation for good/bad behavior, credible punishments, and realistic expectations.

Let’s take each in turn. First, a clear demarcation is a price or quantity target for each round. If you studied the regression data, you’ll notice that quantities are noisier than prices, therefore a clear price target is probably best. This target should be understood clearly by all. A standard mistake is to focus agreements purely on output percentages. This is a mistake since these are not monitorable. Better is to take output percentages as a starting point and then translate these into expected prices using the historical data. You might then build a confidence band around these expected prices to deal with noise in the system. At the end, there should be a clear final figure: If the price is above x, we’re in the “nice” state, otherwise we revert to the “mean” state.

Next, one needs to specify what happens in the punishment state. A leading country be open to suggestions for punishments rather than dictating these from on high. Regardless, the best punishment should be severe in the moment but quick to forgive. This argues for a simple scheme like 100% production for one round following a violation with the resumption of “nice” relations immediately following. It is critically important to spell this out UP FRONT. It is also important to demonstrate with evidence that cooperation is more beneficial than defection.

Finally, one needs realistic expectations. The larger the group of colluding members, the more difficult is the detection problem. The reason is that the smaller countries can cheat and have price movements that are hidden by the noise in the data. This makes discipline extremely difficult and pushes the group closer to the threshold for bad behavior from the start. Easier is to begin with a smaller group of countries where cheating is easier to detect and where the rewards for god behavior are greater. Once this group is well-functioning, one can consider adding members.

4. Things are falling apart. What can I do to recover?

Suppose that you’re in a market where Saudi has not taken the lead or done so ineffectively. In that case, it is still possible to lead by making suggestions for an appropriate coordination scheme. The key is to communicate openly and honestly and to be as transparent as possible about the benefits from coordination—both to you and to others in the group. A nice way to do this is to seek to amend a flawed plan put forward so as to make it work for creating coordination without seeming heavy handed. Here again, communication is key.