University of Basel

Exploring Possible Futures

Video Transcript

Last essential steps

We now come to the final stages of modelling, the interpretation of our results, and then putting all of those model elements together to get a consistent story.

When we interpret the results of a model, we have to accomplish three things. We have to phrase results that are usually contained in mathematical expressions and numbers in words that can be understood and remembered. We have to provide a sound intuition of what happens in economic terms, and argue why the underlying mechanism is relevant for real world cases. And we have to embed the results in the storyline of our analysis, and into the literature. These three parts of interpreting results have to convince our audience that our results are not only consistent, but are interesting and relevant, and that they contain new or original ideas.

And if you want your audience to appreciate what you have done, you have to interpret your results in a way that makes them accessible. And that shows their scope and their applicability to real world problems. You will find many examples in the literature that contain highly interesting insights that have remained mostly hidden, because the authors were not able or did not care to do this.

Now how do you transfer your model findings into a story? Pretty simple. Just follow this structure. This structure gives you a handy guide of all those elements you will need for your story. The first and most important part is, again, not your model; It's your problem. Tell your audience why do you do the things you do. What is your initial motivation behind building your model? If you find it interesting enough to design a model for that problem, tell your audience why it's so interesting. Model building and solving are the next steps. Why is your model a credible representation of your problem? You need to make sure to explain why the chosen design of your model fits your purpose.

Modelling is often a black box for a lot of people out there, but not for modellers. They will take your black box, and figure out how it works. So better make sure you tell them how it works. Finally, your result interpretation and explanation of the underlying intuition and mechanisms will need to link this back to your problem. This provides the overarching frame of your model, and thereby your story. Don't just present all your results, and then call it a day. Some final thoughts to keep in mind in presenting your model and results. Other words credited to George Box that summarise what modelling is all about. "All models are wrong, but some are useful."

The first part simply refers to the fact that all models are simplifications of reality based on assumptions and limitations. They cannot capture the full complexity of reality, because they're not designed to capture the full complexity. So in that sense they are all wrong. But that's not what matters. The big question is, what are you doing with your model? In the end, the model is a tool to help you address your initial problem. A hammer is a perfect tool if you have a nail, but not quite as useful if you have a bolt.

The context in which you apply your model defines if it's useful, and since you decide about the context, it's also you who decides if your model is useful. And telling that context is your story.

Now the tricky question is, how to make sure your model is useful. First, you should make sure your model is only wrong because it's a model, not because it's a bad model. So know your model basics, know all

those limitations we learned, all those mathematical aspects we have addressed. Then make sure you know what drives your results. Figure out what are the important variables. What are the elements that have an impact on your results? What are elements that are not so important? Make a sensitivity analysis. Don't overstate the generality and importance of your results. Be honest. If your results rest on restrictive assumptions, point this out. If it's only of interest in special cases, point this out as well.

Believe me, you are in good company. And finally, always relate your model and your results to your problem. What is your initial question? What was your motivation to design your model?

If you keep all that in mind, you can ensure that your model is useful. And if you have a useful model, you should also have a useful story.