Interview with Marcus Schreiber, CEO of TWS Partners

After studying economics at LMU Munich, Marcus Schreiber worked as Procurement Director at Siemens AG until 2001 before founding TWS Partners together with Professor Achim Wambach, the current President of the Centre for European Economic Research. Marcus Schreiber has many years of experience in strategic Procurement and possesses broad industry know-how. His focus is on commercial application of game theory, applied industrial economics and market design.

What was your motivation when you founded TWS Partners back in 2001?

At that time, we wanted to take game-theoretical concepts and make them applicable to real-life business problems. The variety of applications that game theory offers companies has convinced us that our expertise in this area can fill a gap in the market.

What is so special about TWS Partners?

We are the first, and so far, the only company globally where more than 70 experts put game theory methods into practise for companies. That is, we help companies apply game-theoretical concepts to their complex business decisions. This allows our customers to achieve significantly better results in, for example, negotiations in Procurement or Sales, M&A deals or in market entry decisions.

What exactly is game theory?

Game theory is a branch of microeconomics and mathematics and offers numerous applications, not only for companies, but also with respect to social interactions. Research in this field has been recognised with several Nobel Prizes over the last 15 years. The concepts can be used to optimise any interaction between decision makers in business as well as in private life.

The term "game theory" means that these interactions are modelled as a "game". The decision makers are players because they operate within defined rules and try to maximize their own outcome or, more effectively, influence the rules of the game themselves. Rational behaviour in situations such as in negotiations can be examined with game theory to formulate recommendations for action.

How does that work in practice?

A well-known example from game theory is the so-called Prisoner's Dilemma. In this scenario, two prisoners accused of committing a crime together are interrogated separately. If both deny having committed the crime, both will receive a relatively mild sentence, because, for example, they can only be charged with illegal possession of weapons but not with the actual crime. If both confess, both will receive a more serious sentence, but because they have voluntarily confessed, not the maximum penalty. However, if only one prisoner confesses and acts as state’s witness against the other, the former goes unpunished, while the latter receives the maximum penalty as a convicted and unconfessed criminal.

The dilemma here is that it is to the collective advantage for both to simply deny the crime. If both prisoners cooperate and remain silent together, then each one would only have to go to prison for a relatively short time. Individually, however, it is strictly better for both to confess. If I assume that my accomplice will deny everything and remain silent, then it is better for me to confess, if freedom is being offered. On the other hand, if I assume that my accomplice will confess to the crime, then a

confession on my part would avoid the maximum penalty for myself. Thus, no matter what I assume about my accomplice, it would be better for me to confess. Game theorists call this "having a dominant strategy".

What does the application of game theory in a company look like in practice?

In practice, we often ask ourselves what the rules or incentive schemes must be in order for the other side to have a "dominant strategy", for example, so that suppliers do not to try to undermine an awarding process, but instead compete in fair competition, and reveal their best possible offers, or so that employees in a company behave in the best interests of their employers. For any strategic decision-making process or negotiation, game theory offers appropriate tools for developing and pursuing optimal strategies. Making the right choice is critical to market entry decisions, the purchase or sale of company assets and divisions, the marketing of IP rights, and the optimisation of Procurement and Sales. It is for exactly these kinds of situations that we act as consultants.

In what areas of business does this work especially well?

One of the core competencies of TWS Partners is the optimisation of Procurement processes. Procurement usually has the power to set the rules by which it chooses its supplier partners. And those who have this power usually achieve better results.

What other benefits do companies gain from this?

We introduce our customers to a completely new perspective on their problem. It is extremely helpful to approach decisions analytically and derive recommendations for action from the end backwards. This allows companies to make optimal decisions with maximum security. Introducing this new perspective and mindset bestows a significant and sustainable benefit to companies. So, we usually ask first what the possible outcomes are, and which ones would be especially desirable. We then work from "back to front" and develop concrete strategies. If my primary goal is that I want to prevent a price war in the market, then it may be best not to make any offer at all in order to signal to other market participants that I have no interest in a negative price spiral. First and foremost, we always look at the playing field and find out if we can influence it. This applies to Procurement as well as to Sales or to M&A projects. A completely new perspective for most companies.

Numerous companies in the automotive, transport, high-tech, telecommunications, pharmaceuticals, chemicals and consumer goods industries have already benefited from this. So far, we have successfully implemented more than 2,200 transaction projects with a cumulative contract volume of more than 250 billion Euros.

How does your approach look like?

Our approach is unique and designed specifically for each client and project. Before anything else, we first must analyse the decision in question and the context: which players are involved, what interests do they have, what are the rules of the game? We are then best able to anticipate the behaviour of the players as well as each player’s reactions. This allows for predictable results. With the help of so-called backward induction, which describes the consistent thinking from the end backwards, taking all possible outcomes into account, we can thus develop an optimal strategy for decisions that bring companies the greatest possible return.