

# ECONOMICS IN THE REAL WORLD

## STUDENT RESOURCES

### A-LEVEL



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Edexcel AS Further Mathematics 3 Game Theory 3.1 Two Person zero-sum games	OCR AS Further Mathematics 7.08a Pay-off matrix Understand the idea of a zero-sum game.	AQA A-Level Further Mathematics 3.5.6 DF: Game theory for zero-sum games
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**A Zero-Sum game is a situation where when one person benefits it is at the expense of someone else.**

Examples of zero sum games:

- Chess - there is one winner and one loser
- Monopoly - every time someone buys a property the other players are no longer able to do the same

Zero sum games are also known as the 'fixed pie fallacy', as the supply of pie is fixed, if some people get bigger slices it means others are forced to receive smaller pieces. So some benefit at the expense of others.

**Zero sum bias is when people have a bias towards zero-sum thinking - they have a tendency to intuitively think a situation is zero sum (where gains and losses are directly balanced).**

**Zero sum bias is also known as the zero sum fallacy. This fallacy can lead to further mistakes and false judgements.**

In Economics, the zero-sum fallacy is mostly referred to when talking about wealth.

- Many incorrectly suppose that the total supply of wealth is fixed. This mistake often leads people to falsely criticise those who are wealthy, as they believe that it is necessarily at the expense of the poor.

The reality is that **wealth is not zero-sum**. Wealth is continually created, this is shown by the fact that total wealth is far higher now than at the start of the industrial revolution.

Those who generate wealth do so because they provide goods and services more effectively than their competition. They are not taking wealth, they are creating it.