Activity 3 – Identifying the Consumer Equilibrium

Indifference curves offer an illustrative solution to the utility-maximisation problem that individuals face. While each individual will of course have their own preferences and choices that affect their utility, the general features of indifference curves discussed so far, namely a downward slope and a convex shape, will be the same for everyone.

Individuals like Harry look to maximise their utility and strive to achieve a consumption bundle on the ***highest*** possible indifference curve. However, like any individual, Harry faces a constraint in the form of his available budget. His budget constraint therefore limits the consumption bundles of apples and oranges available to choose from.

Let's revisit Harry's problem of choosing a bundle of apples and oranges, but now with the inclusion of the budget Harry faces. In Figure 3, Harry's budget line (dictated by his income) is given by the yellow straight line. In this example, Harry has a total budget of £100 that can be split across oranges (£5/orange) and apples (£4/apple). He can afford to buy any bundle *on* the line, as well as any bundle *underneath* the line.

Three possible indifference curves are also shown. **How we do we determine the choice that maximises Harry's utility?**

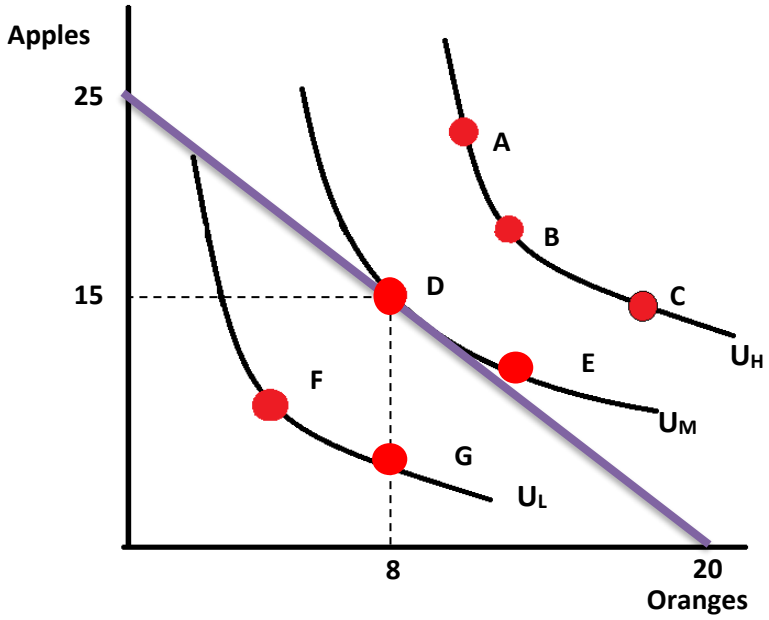

Figure 1

- From what we know, curve $\mathbf{U_H}$ gives bundles providing the highest level of utility to Harry.

- Bundle B, for example, would be Harry's preferred choice. However, this bundle lies beyond Harry's budget constraint and so is ***unaffordable***.
- In contrast, bundle F would be ***inefficient***, as it lies below Harry's budget constraint. Harry can afford to consume more of both goods. Harry will therefore always choose a bundle ***on*** his budget constraint.
- What about Bundle D? This is on the budget constraint – great!
- The highest indifference curve that Harry can reach while also satisfying his budget constraint is D!
- Harry spends all of his budget on 8 oranges and 15 apples.

This demonstrates that the highest achievable indifference curve for an individual is ***tangent*** to the individuals budget line. This just means that the indifference curve touches the budget line at a ***single point***. There are multiple indifference curves for every individual, but there will only ever be a single indifference curve that is tangential to the budget line. The bundle at this point of tangency will maximise utility!