Figure 1. Budget constraints (Freebairn, Lecture 3).

Figure 2. The effect of price changes on budget constraints (Freebairn, Lecture 3).

Combining indifference curves with budget constraints we get this marvellous graph which shows us how many burritos and pizzas an individual will choose during whatever period the budget covers (Figure 3). Point e in Figure 3 occurs where the slope of the budget line and the indifference curve are the same. At this point the Marginal Rate of Substitution (MRS) equals the Marginal Rate of Transformation (MRT).

Figure 3. Indifference curve meets budget constraint and the eating habits of individuals are explained (Freebairn, Lecture 3).

We can use these "insights" to determine the rational outcome of purchasing goods within a budget constraint. There are two approaches, both of which are overly simplistic and lead predictably to the same simplistic conclusion. One approach is to "maximise utility subject to a budget constraint" and the other is to "minimise cost subject to a given utility outcome.

Flogging these charts to the point of tedium we can change prices and look at the effect on utility and create a "price consumption curve" (Figure 4). This provides an individuals demand curve. These can be aggregated to determine market demand. You can do the same thing for income on the chart and construct an income consumption curve and the associated Engel curve.

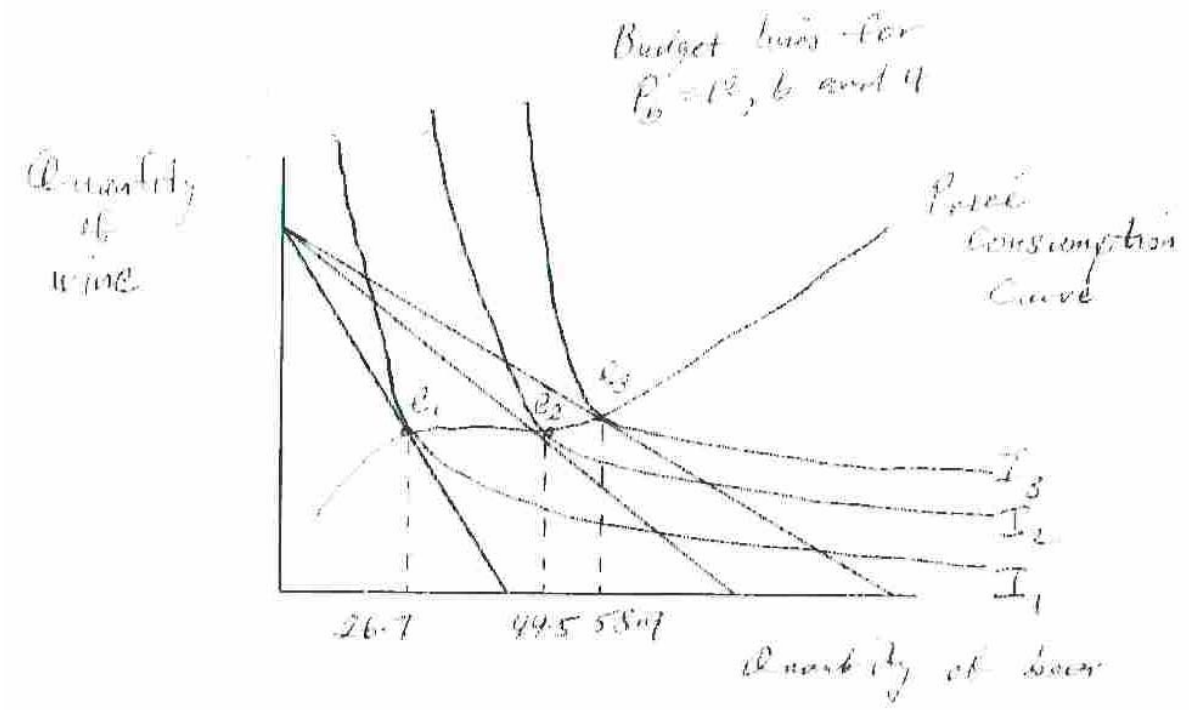

Figure 4 Price consumption curves (Freebairn, Lecture 4).

Substitution effects are seen as a movement along indifference curves and **income effects** are seen as movements between indifference curves (Figure 5). So, if prices change we can maintain the same utility as before but minimize costs and go from e1 to e3 in Figure 5. This is a **substitution effect**. Alternatively we can maximise our utility while maintaining our previous expenditure taking us from e1 to e2 in Figure 5. This is an **income effect**.

Figure 5. Substitutions and income effects (Freebairn, Lecture 4).

Slutsky equation

Critique

Sexual arousal has very significant effects on decision making (Ariely and Loewenstein 2006). Similarly, more relevantly, and equally obviously, hunger has significant effects on decision making (Loewenstein 1996). According to neoclassical economics, such things have no bearing on our decision making or, if they do, they

simply create random “errors” of judgement. I contend that there is nothing random about the influence of hunger on decision making.

I found it very interesting throughout the semester how well Dr Freebairn chose examples that were perfect for illustrating the flaws with the theory he was trying to teach us. Perhaps that’s unfair. Dr Freebairn didn’t choose these examples; mostly he just copied them from Perloff.[1]

Neoclassical economics makes no allowance for every day phenomena such as hunger influencing what we eat and when. According to Dr Freebairn we are supposed to believe that people actually look at how much money they have for lunch each week or month and decide how many of what kind of food they are going to eat to maximise their utility. They base this on known and relatively stable preferences for one food type over another and will exchange them at a known substitutions rate. Not only would they make this kind of extraordinary calculation but they would then stick to it as the budget period unfolds. Common experience, of course, tells us that this is complete nonsense.

Not only do our preferences change depending on whether or not we are hungry but they change for totally unidentifiable reasons. One day we’ll feel like a pizza, another day we’ll feel like a burrito and sometimes arbitrary actions actually create our preferences (Ariely and Norton 2008). We might decide for totally rational and justified reasons that pizzas are too fattening or too expensive and we should stop eating them. Then we find ourselves hungry and walking past our favourite pizza shop and, while consciously aware that it is the wrong thing to do, we walk in and buy a pizza. Dr Freebairn’s neoclassical economics has no allowance for weakness of will but relies on totally rationally based logical decision making processes. Problems

[1] A quick aside; this is another pedagogical problem with the way we are taught economics. One of the benefits of using specific examples to illustrate general points is that cross referencing different examples allows the student to draw out the principles which are common across them. The variety also keeps it interesting. By using the same examples used in the text books our lecturers make the learning environment not only boring but also pedagogically infertile. This probably helps to turn us into sheep who just unquestioningly follow the neoclassical dogma.

with self-control may be totally foreign to *Homo economicus* but are everyday experiences for us *Homo sapiens* (Loewenstein 1996, Herabadi *et al.* 2009). Studying for exams provides a great example of weakness of will. We can make all the rational decisions about our study plans we like but then we spend ages on Facebook or reading emails about "swing flu" (sic). We do this even while knowing it's the wrong thing to do and knowing that we will probably later regret it and that such behaviour may have lasting impacts on our entire careers (Ariely and Wertenbroch 2002).

Visceral factors such as hunger, sex drive and tiredness have significant effects on the decisions that we make (Loewenstein 1996). Neoclassical economists will argue that these factors cause "errors" in decision making but that these errors occur in both directions and on average will cancel each other out in the market place and across time in the individual. However, these "errors" are not always the random events that neoclassical economists assume but are often persistent and predictable biases (for examples of this see Loewenstein 1996, Ariely *et al.* 2005, Ariely and Loewenstein 2006, Kaufman 1999, Cokely and Feltz 2009).

Another example given to us by Dr Freebairn was a budget constraint with parties and gigs as competing goods. Again, this is a perfect example for illustrating the failures of neoclassical economics. Decisions about whether to go to social events are textbook (though not in toxic textbooks) examples of interdependent preferences (Sobel 2005). Decisions about going to parties and gigs are usually made socially. That is, our decisions about these things are strongly influenced by the decisions and preferences of our social group. Particularly charismatic and popular people (those with popularity surplus as its sometimes called) within a social circle might make decisions about things like this purely on their own preferences knowing that others will follow them but for most these are group decisions (de Bruyn and Cillessen 2008).

Aggregate demand

I'm not going to go into great detail on this as it's pretty obvious stuff. Needless to say you get aggregate demand by aggregating the demand of individuals. For **private goods** (i.e. rival in consumption) market demand is determined by the horizontal (quantity) sum of the individual demands. Aggregate demand for **public goods** (non-rival) is determined by the vertical (price) sum of individual demands. The result of these calculations shows that private goods are well catered for by market forces and public goods are undersupplied by the market.

Labour supply functions

H = f(W, Non-wage income, taxes, tastes, ...)

Where H = hours worked. However, we're going to forget all the complex stuff and really just look at:

H = f(W; *ceteris paribus*)

And

U = f(G, N)

Where G is the utility function of goods and N is leisure time.

Now we resurrect the accursed indifference curve to look at the trade off between the utility of goods and the utility of leisure (Figure 6). After the horror of revisiting indifference curves, we now pretty much repeat the entire last section of the course but substituting burritos for goods and pizzas for leisure. I won't go through it all as I just can't bear to look at it again. Hopefully you get the gist.

Figure 6. Indifference curves for goods and leisure (Freebairn, Lecture 6).

Critique

It's time to turn our sights on the indifference curve. In neoclassical economics the shape of the indifference curve is exogenous. This means it is outside of the explanatory power or area of interest of economics. It's as if it just falls from the sky. Critical to the neoclassical model is methodological individualism; the idea that we explain the behaviour of society and of markets by aggregating the behaviour of individuals. This seems reasonable enough. However, how do we explain the behaviour of individuals? Neoclassical economics simply shrugs its collective shoulders at this point and raises its eyebrows hopefully towards sociology, political science and psychology. This is not because these things are considered by economists to be unimportant but because they are considered too difficult (Varian 1997 p 108). There can be no doubt that society plays a role in shaping the behaviour and preferences of individuals. This casts doubt on explaining society by aggregating the preferences of individuals and turns it on its head, telling us that to some extent we can explain the individual by examining the society. The chicken and egg problem that results is obvious.

Marketing professionals know that neoclassical economics doesn't explain the behaviour of individuals. They know that individuals can be manipulated into making decisions that are not in their best interests and into making decisions that are not evaluatively rational. A product advertisement accompanied by attractive young people is more effective than an advertisement with ordinary or unattractive people. The attractiveness of models is unrelated to the utility of the product to the consumer but it influences the decisions he or she makes anyway by creating subconscious false connections between the product and attractiveness. These kinds of manipulations would affect the shape of indifference curves. Given that the shape can therefore be influenced by things which have nothing to do with utility, we can conclude that indifference curves are not valid representations of utility.

Edward Bernays, often considered the grandfather of the public relations industry said that we have the capacity to regiment people's minds as effectively as the army regiments people's bodies and that we must do this for the sake of the economy (Bernays 1928). People are not independent rational agents. They are social animals that make their decisions based on complex interactions of different cognitive and emotional processes both conscious and subconscious (for just a small sample of recent research demonstrating these points see Connolly and Hardman 2009, Zeelenberg *et al.* 2008, Zak 2008, Tobler *et al.* 2008, Morhenn *et al.* 2008, Hermalin and Isen 2008)

There are some instances where people behave as neoclassical economics predicts they will. People with massive brain damage or who have had the right half of their brain surgically separated from the left side try to rationally and consciously evaluate the utility of most of their decisions. The result is almost complete decision paralysis as the complexity of even deciding which breakfast cereal to choose in the supermarket is overwhelmingly complicated (Gazzaniga et al. 1962, Haidt 2007). This kind of research demonstrates not only that we don't make decisions the way neoclassical economics says we do but that we are incapable of making decisions this way. Research on trust in ultimatum games shows that the only people who behave the way neoclassical economics would predict are those who exhibit the clinical traits of sociopaths (Zak 2008).

So, neoclassical economics is not without its' predictive power when it comes to the decision making of individuals. If you are seriously brain damaged or a sociopath then neoclassical economics might be for you. Otherwise, I would recommend studying a little more broadly. As I said at the beginning of this document, the course outline claims:

> "**this subject seeks to provide you with a more formal understanding of how decisions are made by households and businesses, and then how these decisions interact to determine market outcomes"**

As I hope I've demonstrated, if you want a formal understanding of how economic decisions are made by individuals (households) then I would suggest looking to

behavioural economics, psychology and sociology and taking neoclassical economic explanations with a grain of salt... but that's just me.

> "Whoever undertakes to set himself up as judge in the field of truth and knowledge is shipwrecked by the laughter of the Gods."
> Albert Einstein

I'm afraid I'm out of time and I'm going to have to turn my attention to actually studying for tomorrow's exam. What's written above is just the tip of the iceberg in terms of criticisms that could be made of this course but we'll have to let the part tell the whole - as they say.

> "It's no measure of health to be well adjusted to a profoundly sick society."
> Krishnamarti, (1895-1986)

> "The ability to quote is a serviceable substitute for wit."
> W. Somerset Maugham

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