

Heterodox Economics

Celâl Güney

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Preface

This website is a guide for economics, macroeconomics and especially heterodox macroeconomics. Most of the content and macro models presented here are summaries of Blecker and Setterfield (2019) manual on heterodox macroeconomics. I created this website simply because I need a platform to put all my notes and summaries from my economics classes during my studies, so that I can have a quick access to it and also make it accessible to anyone interested in the topic.

Part I

Introduction

1 Introduction: Market Equilibrium

This website is a compilation of my economics classes' notes and its goal is to provide summaries of important topics in heterodox economics. Since having some basics in mainstream economics is crucial to understand the main schools of heterodox economics, mainly because heterodox economics is constructed partly as a response and critic of mainstream-neoclassical economics, the present introduction will summarize the basics of neoclassical production and consumer theory, the two foundations of market equilibrium.

Let's first recall what market equilibrium is, because it is one of the most important concept in economics.

1.1 Market equilibrium

Market equilibrium is perhaps the most important element of neoclassical theory. Stated simply, market equilibrium tells what will be the price of any object or service, as long as the latters are commodified. Market equilibrium explains not only the equilibrium level of prices and commodities of any good or service, but also the change in prices resulting from exogenous shocks (change in income, confidence, technology...)

Let's directly take an example: suppose that the demand for grain follows a negative linear function.

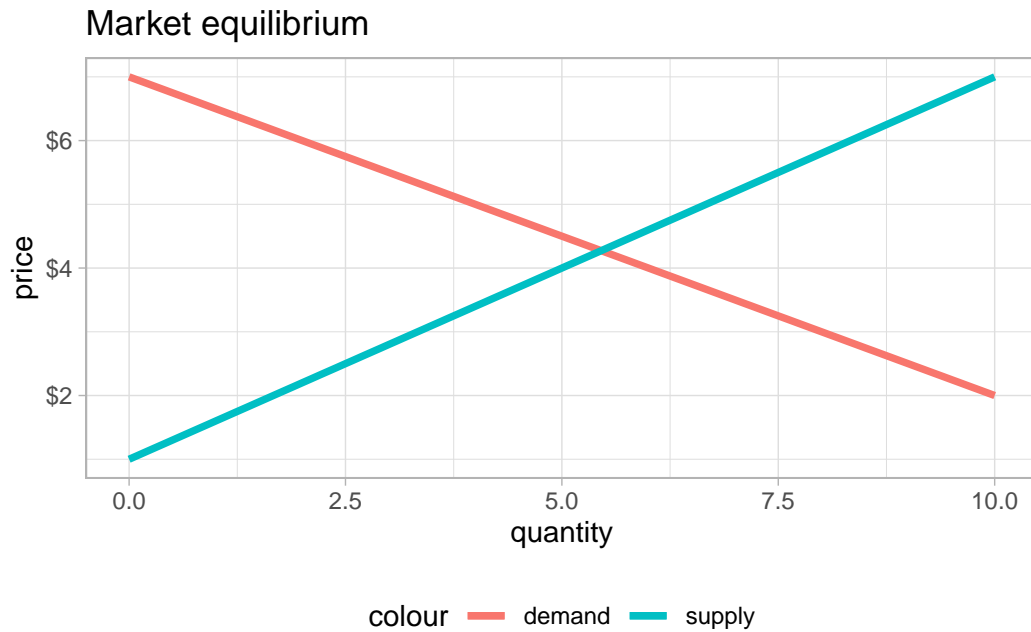
$$Q_{demand} = 7 - 0.5p$$

That means that the quantity demanded for grains decreases if the price for grain increases and vice and versa.

Moreover, let's say that the quantity supplied for grains is a positive linear function of prices for grain: the higher the price, the more are firms willing to supply grains.

$$Q_{supply} = 1 + 0.6p$$

```
demand <- function(p) 7 - (0.5*p)
supply <- function(p) 1 + 0.6*p
```



To find the equilibrium price and quantity, we equate the demand and supply functions and solve for q :

$$\begin{aligned}
 q_{demand} &= 7 - 0.5 * p \\
 q_{supply} &= 1 + 0.6 * p \\
 q_{demand} &= q_{supply} \\
 7 - 0.5 * p &= 1 + 0.6 * p \\
 6 - 0.11p &= 0 \\
 p^* &= 6/1.1 = 5.45
 \end{aligned}$$

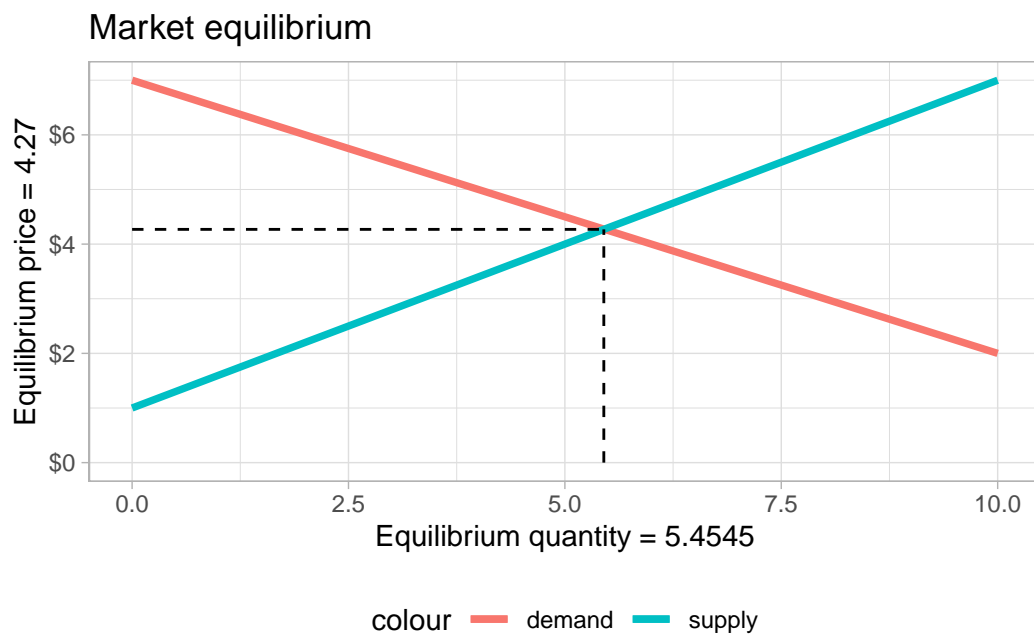
The equilibrium price level is thus $p^* = 5.45$. To find the equilibrium quantity, we simply put the value of the equilibrium price (5.45) into either the supply or demand function: $7 - 0.5 * 5.45 = 4.275 = p^*$

It is easy to check directly if the computation is correct in R:

```
equilibrium <- curve_intersect(demand, supply, empirical = FALSE, domain = c(1,10))
equilibrium
```

```
$x
[1] 5.454545
```

\$y
[1] 4.272727



But how did neoclassical theory arrive to this kind of model of equilibrium price and quantity determination? To understand better this model, we need to know why we have this positive supply curve and this negative demand curve. We will first investigate consumer choice theory, which is behind the negative demand curve, and then production-side theory, which is behind the positive supply curve.

2 Neoclassical-mainstream consumer choice theory

Mainstream consumer choice theory has for ambition to explain consumers' decision, that is to say, the choices consumers make between consuming one good or another.

2.1 The three assumptions

Consumer theory makes important assumptions, which are the foundation of the theory:

1. **Completeness:**

consumers have complete knowledge about the goods and services they can potentially consume, they have clear preferences about these goods and services and can rank all of them (like a descending list where we would have the most preferred goods and services at the top and utility associated with goods and services would decrease as we go down in the list)

2. **Transitivity:**

Preferences regarding goods and services are transitive. That means that if a consumer prefers A to B and B to C, A is better than C.

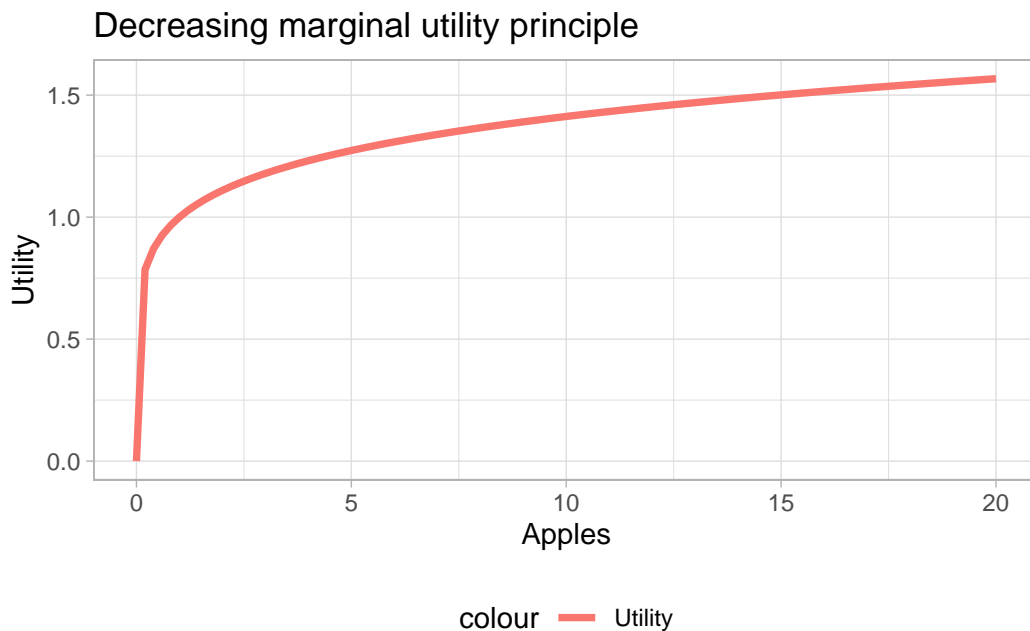
3. **More is better than less**

(non satiety assumption): Goods and services are always desirable. For example, if someone gives you one apple, then two, then three, then twenty, and then one thousands, you would always accept those apples, because you are still better off even if one gives you too many apples.

2.2 Utility function, marginal utility

Consumer theory then illustrates any choice between two goods with the help of the famous indifference curves , which show the relation between the demand for one good against the demand for another good (for example food and clothes, cars and bikes...). Indifference curves are based on **utility functions** whose really important property and assumption is the decreasing

marginal utility principle. Decreasing marginal utility means that for every one additional unit of a given good a consumer get, the utility for this consumer increases less than the previous additional unit. Let's say, for instance, that you don't have food at the moment and you are hungry: if i give you one apple, you will be a lot better off and your utility will increase a lot when I give you this one apple. Then, if I give you another apple, your utility will still increase, but by less than when I gave you the first apple. Finally, after I give you an additional apple for the fifteenth time, your additional utility will still be positive, but by far more less than when I gave you the first apple.



Decreasing marginal utility is an important assumption which explains the shape of the indifference curves. The latter, if the two goods are substitutes (but not perfect substitute) and not perfect complements, are convex-shaped. If, for instance, we consider an indifference curve for the choice between units of apples and bikes, the line of the indifference curve represents all the possible combination of the two goods which give the same utility for the consumer.

2.2.1 Indifference curve

Indifference curves are based on utility functions. An utility function can be for example:

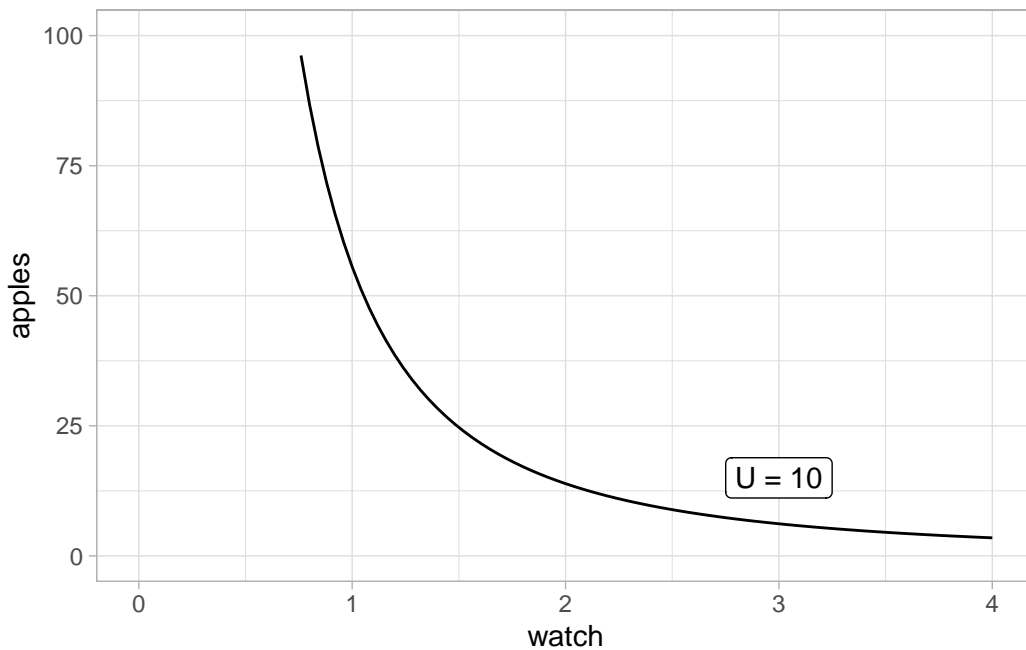
$$U(x, y) = x^2 0.18y$$

With x and y two different goods, apples and watches for example. To get the indifference curve function, we fix utility U at any positive value, and rearrange the function above to get y as a function of x and U :

$$U = x^2 0.18y$$
$$y = \frac{U}{0.18 * x^2}$$

Yacas vector:

```
[1] y == U/(0.18 * x^2)
```



2.3 Budget constraint

In the indifference curve graph above, the consumer can choose any combination of apples and watches on the line, and those combinations would bring the same utility $U = 10$. However, one important element was not taken into account yet. This element is the fact that consumers are limited in their consumption decisions by their income. Neoclassical theory calls this **budget constraint**. For instance, let's say that our consumer has an income of 600 francs. The price of one apple is 4 francs (one bag of apples to be more realistic) whereas the price of a watch is 200 francs. The budget constraint can be written as: