The Micro-Foundations of Macroeconomics

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Introduction

The transition from microeconomics to macroeconomics is generally couched in terms of perspectives. Having looked at the micro behaviour of individual actors (households and firms), macroeconomics gains its relevance by focusing on the 'bigger picture'. 'Bottom up' decision making is replaced by 'top down' investigation and the temptation is to radically separate the macro analysis from that which has gone before. Macroeconomics feels less coherent than its micro counterpart, and the nature of the textbooks is to separate the different areas into individual topics. One way to resist this atomisation is by teaching the micro concepts prior to the macro ones. Both micro and macro are instances of neoclassical theory, and it should come as no surprise that the entire economics curriculum is built on the micro-foundations of rational decision making. If enough American consumers decide to allocate their scarce resources towards Chinese products then the *exchange rate* and the *balance of payments* between the two countries will eventually alter. If enough actors misallocate society's scarce financial resources then a *banking crisis* will eventually emerge. If enough firms decide to increase their prices then *inflation* is the outcome. Each concept from the macro curriculum is ultimately premised on the cumulative effects of millions of (cost/benefit) maximizing decisions and appreciating this literally transforms the way macro is understood.

The centrality of the 'circular flow'

Like the supply and demand model of microeconomics, the circular flow of income and expenditure is the master concept of macroeconomics as it shows the central relationships presupposed by neoclassical theory (see diagram). The key actors are still households and firms. The key relationships are still based on the mutual exchange of scarce resources, and the key considerations are still based on maximizing benefits and minimizing costs.

Households produce factors of production (land, labour capital and enterprise) which they exchange (supply) with firms in return for a payment (rent, wages profit). Firms transform these factors into goods and services which they sell back to households in return for a payment. Each actor continually demands what the other has produced, and this results in a symmetrical flow of income and expenditure around the economy. Like micro, firms and households will only exchange their resources if the 'prices' they receive are sufficient. However, there is one key difference between the two perspectives centred on the role of the state (government).

The role of government

In microeconomics the role of government is always viewed negatively as no external actor – regardless of how benign - could ever presume to understand how best to allocate *your* scarce resources. Tax and spend policies get in the way of individual decision-making and every action by government results in what economists call a 'deadweight loss'. Macroeconomics on the other hand, recognises that the cumulative effects of renouncing the state would be chaos. As well as claiming resources through taxation, the government works to guarantee property rights, increases the flow of information and redistributes income across the economy. Taxation funds all manner of institutions (police, courts, hospitals, schools etc.) and resources are transferred from one group of households to another group on the basis of their particular characteristics. The state also helps to manage the flows of income and expenditure by setting fiscal policy, purchasing products, hiring staff, constructing labour laws, imposing health and safety regulations, defending corporation rights etc. Thinking of the economy in this way throws considerable light on the key parts of the circular flow and from here it is a short step into measuring the macro-economy.

Measuring the macro-economy

Like micro, it is assumed that growth always comes from improvements in the supply of economic resources (factors and outputs) and the actual measurement can be done in three equivalent ways. The **income method** is a supply-side analysis which focuses on all factor payments made to households. This allows planners to know the levels of taxes and transfers that are appropriate for given families. The **output method** is also a supply-side analysis which focuses on the payments received from the supply of goods and services. Understanding the outputs of different sectors is vital for infrastructural advancement, research and development (R&D) clusters, export competitiveness etc. Finally there is the **expenditure method** (often associated with the writings of Keynes). Unlike the other two, the expenditure method focuses on the levels of **demand** in the economy and it allows planners to assess the balance between investment and consumption, public and private activity, imports and exports (the balance of trade) etc. Each method brings valuable information lacking in the other two and explaining this to students helps to increase the relevance of their learning.

Money, banking and prices

Capitalism is the first economic system in human history in which almost all of the key production decisions are made on the basis of 'exchangeability'. Production is done for profit rather than human need and the importance of money should be understood in this context. Without some **universal medium of exchange** households and firms would find it extremely difficult to transact. The circular flow would quickly dry up and the entire basis of the capitalist economy would be severely disrupted. Money can work effectively only if everyone accepts it, and because individuals' understand this fact they are not afraid to hold onto it. Money thus becomes an effective way to hold one's resources and the connection between **storing value** and extending **credit** cannot be overemphasised. Saving may well make sense for the individual firm (or household), but idle resources would quickly become problematic unless some way can be found to recycle them. This is the primary function of the financial system as financial intermediaries are tasked with providing the real economy with important transactional supports. In the first place banks are supposed to be skilled at allocating scarce (and idle) resources to their most profitable activities. This simply means turning savings into investment and banks generally use the credit system to allow people to borrow today before paying tomorrow. Producers give credit to wholesales, wholesalers give credit to retailers and retailers give credit to their customers. All of this allows economic activity to continually flow, but there are also a number of dangers that come with the territory. Money prices inevitably fluctuate and this allows professional financiers to gamble and speculate. Speculation helps to move prices away from their fundamental values and this in turn increases the uncertainty associated with future transactions.

Engaging in exchange relies on reliable information. But in a globalised economy the price of money (exchange rates) and/or final goods may change radically from their prices today. Prices at home can also increase more quickly than those in other countries and this can undermine the competitiveness of exports. Money and banking generally help to facilitate transactions but they have certain attributes that are obviously dysfunctional. We have seen a whole series of problems emerging due, at least in part, to the disrupting influence of financial intermediaries (mortgage crises, banking crises, speculative bubbles etc). And the topics on money and banking should always be related back to the essential ideas of allocating scarce resources through a process of exchange.

International trade

Earlier we saw how millions of rational decisions can impact on exchange rates and the balance of payments, and the trick to understanding international trade is to see it as an extension of trade more generally. Once again the circular flow is a useful starting point as domestic households can be seen exchanging scarce resources with foreign firms (imports) and domestic firms can be seen exchanging scarce resources with foreign households (exports). Trade can also take place between domestic and foreign firms of course, but regardless of whoever is transacting, the underlying idea is always based on the rational allocation of scarce resources to maximize benefits. Trading across borders relies on a means of exchange and unfortunately this 'means' may not be universal once trade becomes international. Chinese firms may not want to receive US dollars for example, and so there is often an intermediary step involved in international trade. Before a firm buys goods and services it must ensure it has the correct means of payment and so a market emerges to account for the different currencies. If a lot of firms want Chinese goods then the price of Chinese goods and the price of the Chinese currency (renminbi) should appreciate. If very few firms want these products the opposite process should occur and so once again we see maximizing decisions underpinning the fluctuations of prices and currencies. Over the longer period, firms and households may also decide to allocate their scarce capital resources across borders (foreign direct investment) and this calls for a second important concept in the international arena. The country's balance of payments is a record of all the current and capital transactions that take place in a country in a given year. Current account surpluses essentially entail that more foreign actors decided to allocate resources towards domestic goods and services, than domestic households chose to allocate to foreign goods and services. This can lead to a country saving. When this occurs the savings may eventually find their way into foreign investment and pretty soon the country is running a capital account deficit (more capital leaving than coming in). This would make the payments balance and this is the essence of a balance of payments.

Pedagogical conclusions

Throughout this exposition I have endeavoured to expose the underlying symmetry between the micro and macro components of the Leaving Certificate curriculum. Like micro, the entire macro framework is built on the presumption of rational calculators attempting to maximize their prospective returns. No matter how far a given concept seems to stray from these ideals, they can always be reinterpreted in terms of the key concepts. Neoclassical economics is always and everywhere a theory of choice and applying its logic consistently can help with all manner of pedagogical issues. In the first place it allows the student to gain a much better understanding of the material as the narrative, the explanations and the structure of the lessons should improve dramatically.

Secondly, it allows for more effective differentiation, as some students are continually given higher order tasks (such as analysis and synthesis), whilst students who find the study of economics more challenging, are continually given a second chance to grasp the key concepts. Finally it allows for a greater level of higher order thinking more generally, as the analysis can always start from the immediate concept at hand before being reinterpreted in terms of the fundamentals. Turing briefly to the particularities of macro, I have argued that every topic should be linked explicitly to the 'circular flow' as the master concept that expresses the vision of the macro-economy presupposed by neoclassical economics. Once this is done, topics like money and banking, growth and development etc. can be slotted into a much better framework and the macro course can become as coherent as its micro counterpart.

Suggested methodology

- Student's drawings of the circular flow of income could be displayed on the classroom wall and referred to on a constant basis to reinforce the centrality of the concept.
- To enhance oral literacy and promote a deeper understanding of the role that the government plays in different economic systems, students could be asked to prepare a debate on the role of government in free-enterprise versus a centrally planned economy.
- Presentations on money and banking that include links to short videos are available on the PDST website.
- Students could look up the CSO website to acquire up-to-date national income statistics and trends.
- Worksheets and differentiated exercises on all topics are available on the PDST website.

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