Classical and neoclassical theories

Political economy emerged contemporaneously with both the Industrial and Capitalist Revolutions. In the mid-18th century, living standards began to rise and so did an interest in studying the process of economic development.

The earliest systematic attempt to understand the social provisioning process came in 1776 with Adam Smith's *Wealth of Nations.* Smith was able to comprehend the changes occurring around him and provide a theoretical structure which championed the market system. Of particular importance for Smith and the classical political economists who followed was advocating for the superiority of the capitalist system of production over feudalist system and mercantilist policies.

Ricardo followed Smith and provided an analytical framework that continues to influence modern economics. The era of classical political economy concludes with Marx's critique.

Marx along with J.S Mill, unlike their classical counterparts and the neoclassical's who followed, did not view capitalism as a natural order, representing the greatest achievement of human development. However, central to classical political economy was a focus on production and how the output was distributed between competing groups.

In response to Marx's critique, neoclassical economics emerges and shifts the focus from growth and distribution to allocation of scarce resources. This framework treats the resources and institutional setting as fixed. Efficiency becomes the focus and conflict disappears as the market system is assumed to compensate individuals according to their contribution.

As we progress through this lecture you will be presented with several foundational models which should facilitate greater understanding of how economists think about economic development.

ADAM SMITH: A THEORY OF COMPETITIVE CAPITALISM AND GROWTH

Adam Smith penned one of the most well-known metaphors of the capitalist economic system: the invisible hand. This metaphor has come to mean that market forces, specifically supply and demand, will lead to an efficient allocation through the price mechanism.

In Smith's writings, self-interest motivates the behavior of individuals and generates an unintended consequence. However, the self-interested behavior is not unregulated nor is it greed. Self-interest derives from asymmetric information about the sensation's others feel. Moreover, self-interest is checked by the need for social acceptance; society dictates norms that must be adhered to. The social constraint on behavior requires competition as a counterweight.

Smith, while describing the virtues of the market, acknowledged a role for the state in creating the legal framework and in providing public works.

Smith's views on economic development

The source of the wealth of nations, according to Smith or at least to most interpretations of Smith, is the division of labor and the accumulation of capital.

The enclosure movement in Britain pushed peasants into cities where the factory system was emerging. Production no longer occurred primarily in the familial unit. Factories and their intensive use of water and steam powered machinery propelled the development of specialization and generated massive increases in productivity. The division of labor and accumulation of capital, particularly if they were to continue to deepen, necessitated free trade among nations. According to Smit, the extent of the division of labor is determined by the size of the market. The largest market is one that contains the consumers of every country.

The key point from Smith in regard to economic development is that a transformed institutional environment unchained the dynamic forces of growth; a competitive capitalist economic system contained the incentives to generate a wave of prosperity unlike anything the world had ever known before.

MALTHUS'S THEORY OF POPULATION AND ECONOMIC GROWTH

Not nearly the optimist like Smith, Malthus sought to explain the misery that followed the emergence of the factory system. According to Malthus, the poor were responsible for their own misery.

The factory system had created tensions within society, divided according to class lines. Malthus sought to justify the division, positing it was the natural outcome of capitalist processes.

Malthus's theory of population

The theory of population describes the dynamics that create an unescapable subsistence equilibrium.

The logic follows: start in subsistence and introduce a positive shock to productivity. Income rises which unleashes the "unquenchable sexual desires of the poor" (and that last phrase is a direct quote) would cause population to rise. As population rises the productivity of labor falls and incomes decline back to subsistence. It is a vicious circle of poverty.

The unavoidable outcome envisioned by Malthus also justified his opposition to any form of charity. Charity would at best delay the misery for the poor, but it might reduce national income through diminished fear of starvation negatively impacting the working habits of the poor.

The thing that Malthus got wrong was not recognizing the permanent technological revolution happening around him.

If it was not the destiny of the poor to live in misery, what then caused the miserable conditions he witnessed? Well one thing Malthus did get right can help us understand, there is no automatic mechanism ensuring gains from increased productivity are distributed so as to benefit all classes in society.

RICARDO'S THEORIES OF DIMINISHING RETURNS AND COMPARATIVE ADVANTAGE

Ricardo was a contemporary of Malthus, but he developed a very different analysis of capitalism. For Ricardo, the industrialists were the driving force and landowners the parasites which acted as drag on economy growth.

To understand Ricardo's take on the problems of capitalism we begin with his theory of diminishing returns.

The law of eventually diminishing returns

Economic growth brings marginal land under cultivation. The ensuing reduction of the productivity of the land drives food prices up. Higher food prices generate windfall profits for those farming on the more productive land which is usurped by the landowners through higher rents.

Kind of like dividing a pie, if one person gets more, the others get less. Increasing rents reduces the share of income available for wages and profits.

Economic growth would be greatest if food was cheap. Cheap food meant wages could be lower and so profits higher. Rising profits encouraged greater capital accumulation and thus even greater productivity in the future.

Technological change was a critical component of Ricardo's analysis, particularly for increasing productivity of agriculture and suppressing wages. However, technological change occurs the long run; what is needed in the sort run, according to Ricardo, is to repeal the corn laws which protected British grain farmers from overseas competition. I bet you see where this is going: escaping diminishing returns could be achieved through free trade.

Free trade could offset the adverse effects of diminishing returns.

The theory of comparative advantage

Free trade will increase total output if each country specializes in the good for which it has a comparative advantage- the good which it can produce at a relatively lower cost. Specialization will expand the feasible set of consumption goods above what it would be under autarky.

The opportunity cost is what matters. Let's see how Ricardo reached this conclusion.

Columns 1 & 2 show the amount of labor to produce a unit of the good. In the table you can see that Portugal has an absolute advantage in the production of both goods. Columns 3 & 4 show how much of the other good you'd have to give up to produce an additional unit: the opportunity cost of producing a unit.

From here Ricardo recognizes that the relative cost is what determines what a country should produce. England gives up less wine per unit of cloth produced than does Portugal. England is the lower cost producer of cloth and thus has the comparative advantage in producing that good. Specialization and trade allow both countries to consume more of both good.

Following Ricardo's logic, specialization and free trade is the best policy for countries to pursue. However, there is no mechanism in capitalism which ensures the gains are not seized by a single country.

A brief evaluation of Ricardo's theory of comparative advantage

Let me briefly list the assumptions necessary for Ricardo's conclusion. The factors of production are immobile, both countries can produce both goods, imports = exports so there is no trade deficit, perfect competition, and full employment.

As Joan Robinson noted, the imposition of free trade on Portugal killed off a promising textile industry and left her with a slow-growing export market for wine, while for England, exports of cotton cloth led to accumulation, mechanization and the whole spiraling growth of the industrial revolution. (Robinson 1978: 103)

Think back to our discussion of path dependence and colonialism. Why might specialization and free trade not yield the hoped-for results?

Contextualizing Ricardo's theory: the political economy of Portugal and England

All of the economic benefit flowed to England, not at all what the theory tells us will happen. Initially though, it was not of too much concern; Portugal financed the deficit with a flow of colonial gold.

England originally gained a comparative advantage in textile because of conscious industrial policy, not from market forces propelling them to specialization. The surplus received by England further stimulated exports and was a major driver of the industrial revolution. Moreover, the large gold inflows spurred English finance and provided funding for ever greater capital accumulation.

It was state-led policies that incubated the textile industry and a growing power to shape trade relations the created a vast and captive market. And this last point is an important one, power greatly influences international political economy relationships.

English capital migrated; ownership of productive resources abroad facilitated the capture of benefits on both sides of the trade. Shaping trade relations, particularly England's ability to penetrate the markets of Portugal's colonies, allowed England to expand trade into countries that did not choose to participate, no they were forced to absorb England's manufactures.

The benefits of exchange were asymmetrically distributed because unequal national power serves as the key variable determining the outcome, not commodity production, efficiency, or trade.

Specialization and dynamic comparative advantage

It's not the decision to specialize per se, but rather the choice about what to specialize in that has grand consequences for a country's trajectory. This decision must also include a vision that considers what to produce in the future. A dynamic understanding of comparative advantage when coupled with the nature of path dependence provides an opportunity to successful development.

Policy needs to be froward-looking.

We will see later that this approach seems to explain the success of the East Asian countries.

A classical model of economic growth

Let's spend a moment to formalize the classical model of growth.

The aggregate production function describes how the inputs land, labor, capital, and technology are converted into output. We assume the restrictions stated in 2 and 3 on the production function ensuring it is concave.

Differentiating the function gives the rate of economic growth over time and is presented in equation 4.

When the stock of capital changes, there is a proportional change in labor and in the short run we will assume that neither the quantity of land or technology will change.

Making use of those assumptions, we can simplify equation 4 and rewrite it as equation 6. Here we see that the rate of growth depends on the rate of capital accumulation. Capital accumulation is positively correlated with the rate of profit.

In this model. capital accumulation drives economic progress.

MARX'S ANALYSIS OFF CAPITALIST DEVELOPMENT

Marx viewed capitalism as one stage in the historical development of society. There existed a clear distinguishing feature between capitalism and previous forms of economic organization. In precapitalist societies economic activity was restricted to self-sufficient agricultural entities and the circuits of money and merchant capital.

Unequal exchange

Commodities (C) are sold for socially defined money (M) which is then used to acquire more commodities to be sold for even more money. How can money be turned into more money? How can commodities be turned into more commodities? How are these circuits expanded?

One way is through unequal exchange and colonialism is a great example of this.

Let's consider the British Royal African Company (BRAC) as a historical example. Funds are raised and a ship is outfitted with goods to barter and sets sail for west Africa. Between C and C' is the first unequal exchange and it arises from deception. The BRAC representatives have asymmetric knowledge that the buy price of the goods exchanged is less than the sell price of the African slaves. The slaves are then transported to the west indies where they are sold for M'.

The second unequal exchange emerges from the forced slave labor and the production of sugar. The slave possessed value in their labor which was transferred to the plantation owner.

Capitalist reproduction: the centrality of technology

Now we come to capitalist reproduction. The transformation of commodities to higher value commodities occurs with the production process.

As capitalism continued to develop, the production process changed. From handicraft to manufacture to conditions where humans operate solely as appendages to machines. Humans no longer drove the pace of production; the pace was set by the machines.

The emergence of capitalist system and the centrality of technology creates problems for peripheral nations. The demand for new technologies can only be met in the periphery nations though importation. These nations become users and not creators and this puts them in a much weaker position.

NEOCLASSICAL GROWTH MODELS

In response to Marx's critique, the profession responded by defending the harmonious nature of capitalism with an array of new tools that spawned from marginalist revolution. Distribution was no longer analyzed through the lens of competing groups; growth was pushed aside as well. The focus shifted to maximizing behavior of individuals and a narrow interest in equilibrium prices and quantities in individual markets.

A Solow-type neoclassical growth model

The Solow growth model is arguably the most influential neoclassical growth model and is depicted in equation 1. Output Y is a function of labor and capital. In the short run, there are diminishing returns to labor and capital with constant returns in the long run. The exogenous technology shifts the production function but doesn't alter the shape and is assumed to be available to all countries regardless of their level of development.

Hold technology and the labor force growth rate constant, assume full employment, then for any saving rate there exists an equilibrium per capita income that will be attained. Diminishing returns to capital drives down the profit rate with an increase in the stock of capital. Diminishing profit rates will ultimately cause the stock of capital to reach a steady state where investment is sufficient to replace worn out capital.

The implications for development: well, if two countries start out of equilibrium with the same savings rate and population growth rate, then the model predicts that the country with lower level of income will actually grow faster.

Skip over the math and the wa-la the equilibrium solution is presented in equation 2. The savings and population growth rates are what drives economic growth. If a country is poor, it's poor because it isn't saving enough. The policy that results from this model and which has and continues to influence developing countries approach: if you want to improve your living standards, then save more.

Capital accumulation, the result of saving, drives income higher.

The Harrod-Domar model: a Keynesian approach

While Solow growth model has been used to explain differences in income and standard of living across countries, it was actually developed in response to economic instability suggested by the Harrod-Domar model.

Let's start with the assumptions of the Harrod-Domar model. Equation 1 shows that the labor force grows at the constant rate n. Equation 2 states that savings equals investment which determines the change in the stock of capital. Both of which are proportional to output. From this you can easily find the Keynesian multiplier 1/s. Equation 3 describes the production which uses fixed proportions of labor and capital, unlike the Solow model there is no substitution. b, v are the labor-output and capital-output ratios, respectively.

Equation 4 is the result. It states that growth rate of the economy is determined by the savings ratio and the capital-output ratio. In the Keynesian approach, investment determines savings; it follows that for an economy to grow, it is necessary to encourage investment.

s/v is known as the warranted rate of growth. It is the rate of growth consistent with equilibrium in both the input and output markets. Greater investment increases capital stock which raises income, this is a standard result now. However, this result is a knife-edge equilibrium. If output grows faster or slower than the warranted growth rate, then it will continue to move further away from. If the growth rate is greater it results in spiraling inflation and if its less, spiraling unemployment.

The policy implication is that there is space for the government to step in and avert economic crisis. State planning, particularly in identifying key outcomes to target with policy decisions, can affect development.