Notes for Topic 1: The Black Death

1 Amateur History and Epidemiology

1. The Black Death was an outbreak of bubonic plague, a bacterial infection caused by the y. pestis bacteria. It causes fever, aches, swollen lymph nodes called buboes, and a host of other symptoms that have left it with a 1.5 stars rating on Google reviews. left untreated, it usually, but not always, is fatal.

2. The Black Death was not the first widespread outbreak of bubonic plague. Bubonic plague caused the Plague of Justinian in the sixth century. Earlier outbreaks may have caused the Neolithic decline around 5000 B.C.

3. The Black Death typically refers to a severe outbreak of bubonic plague between 1346 and 1351 A.D. Estimates vary, but it may have killed up to one-third of the population of Europe.

4. The plague would return periodically until the nineteenth century. Although it is now treatable with antibiotics, it still exists today.

2 Core Concepts for this Topic

1. **Supply and Demand in the Labor Market**

Supply and demand is the most fundamental model in economics. It may be applied to many markets including the labor market where workers supply labor and firms demand it.

Supply. Labor supply is how many hours of labor workers choose to supply for a given wage. If the wage is $1/hr perhaps workers choose to work 1 million hours. If it is $2/hr, perhaps they supply 1.5 million hours (these numbers are made up, they do not apply to any actual economy). It may be useful to connect these points on a graph (with wages on the vertical axis and hours on the horizontal) to create a labor supply curve.

The key question is how do workers respond to a higher wage? Most of the time, they choose to work more because the return to doing so is higher.

Some events can change how many hours workers are willing to supply. One example is a decline in the population. Fewer workers mean fewer hours worked. If supply declines, it is harder for firms to hire workers. they must pay them more and wages increase.

Demand.

Firms (often landlords in feudal times) demand labor. If the wage is $5/hr, perhaps firms demand 1 million hours. If the wage is $10, perhaps they demand 500,000 hours. It is useful to plot these on the same graph as labor supply. We call this a labor demand curve.

What happens if wages go up? Firms will usually demand less labor because fewer workers produce enough to make paying them profitable.

Some events can also change labor demand. Suppose that workers become more productive, possibly because if better technology or more arable farmland land. Firms will now be willing to pay more and wages will increase.

2. **Economic Systems**

The economic system of the European middle ages was feudalism, a complicated web of obligations between commoners, land, and the nobility. Oxford Languages provides a definition:

> the dominant social system in medieval Europe, in which the nobility held lands from the Crown in exchange for military service, and vassals were in turn tenants of the nobles, while the peasants (villeins or serfs) were obliged to live on their lord's land and give him homage, labor, and a share of the produce, notionally in exchange for military protection.

An important aspect of feudalism is that there was very little economic mobility and a relatively low incentive to innovate. A serf had minimal hope of ever leaving their lord's land.

By around 1500, Europe had transitioned to capitalism, an economic system defined by strong property rights.

3. **Subsistence**. A subsistence economy is one where the population has just enough food, shelter, and other necessities, but there is little excess and minimal. A subsistence economy is not always on the brink of famine, but is vulnerable with some bad luck. For most of human history, most of the population lived near subsistence (royalty being a notable counterexample). Today, some of the world's poorest economies are still near subsistence level.

Most current economies are no longer subsistence but instead exhibit sustained growth where living standards are expected to trend upwards over time. How economies switch from subsistence to growth is one of the most fundamental questions in economics?

3 Big Questions

1. Given the magnitude of the Black Death, it is hard to say that any major group benefited from it. Surviving workers did, however, see major increases in the wages in the aftermath of the plague. Why did this happen?

The Black Death had massive effects on labor markets. The survivors had more land to choose from and they were able to move from less desirable farmland to more productive acreage. This made workers more productive and landowners (lords) were willing to pay more. At the same time, the plague left fewer workers. Labor supply was restricted. Both of these factors drove up wages.

> such a shortage of labourers ensued that the humble turned up their noses at employment, and could scarcely be persuaded to serve the eminent for triple wages.

Scheidel quoting William Dene, Chapter 10, page 298

Landowners, of course, enjoyed far more political power than workers. In all societies, they imposed measures that attempted to artificially lower wages. In England, the Ordinance of Laborers which required workers to accept work at 1346 wages, if offered. This failed however.

> the workers were so above themselves and so bloody-minded that they took no notice of the king's command. If anyone wished to hire them he had to submit to their demands, for either his fruit and standing corn would be lost or he had to pander to the arrogance and greed of the workers.

Scheidel quoting Henry Knighton, page 300

Note the moralistic tone directed at workers. Religion was often used to justify the social structure in feudal times (and of course at times since). God wanted serfs to work the land, live near subsistence, and be happy about it.

2. For most of human history, the vast majority of the population lived near subsistence levels. At some point, however, much of the global population started experiencing sustained growth in living standards. This shift has historically been attributed to industrialization but some scholars think the Black Death had something to do with it. How could this be?

The "Malthusian view" of economics is that if a population is above subsistence, the excess will lead to faster population growth so that in the long-term, living standards fall back to subsistence. This cheery view does have some applicability to pre-modern agricultural societies. It doesn't mean that the population is always near subsistence. A plague, or period of good weather (*e.g.* the Medieval Climate Optimal) could temporarily lead to better times. In modern economies, technology allows economies to escape the Malthusian view.

> The Black death arrived in Europe at a time when the population had grown massively–by a factor of two or even three– over the course of three centuries. From about 1000 CE onward, a combination of technological innovation, improved agricultural methods and crops, and the abatement of political stability allowed settlement, production, and population to expand. Cities grew in size and number. Yet by the late thirteenth century, this prolonged efflorescence had run its course. As the Medieval Climate Optimum came to end end, an abundance of hungry mouths drove up the price of food just as productivity declined and demand began to outstrip supply. The advance of arable land stalled and pastorage shrank, reducing the supply of protein even as basic grains became an ever-more dominant staple of an increasingly meager diet. Population pressure diminished the value of labor and hence real incomes. At best, living standards stagnated. the early fourteenth century witnessed further deterioration when unstable weather conditions created inferior harvests that resukted in catastrophic famines. Although population levels declined during the first quarter of the century, subsistence crises continued for another generation, and epizootics depleted livestock.

Scheidel, Chapter 10 page 297

In most parts of the world, political forces were able to eventually reverse workers' gains. Western Europe was the notable exception where such measures failed and the wage gains from the Black death lasted for many centuries. Along with industrialization, this is a possible explanation for why the world switched to sustained growth. Wealthier workers had more ability and incentive to innovate. The Black Death also eroded feudal institutions and helped transition from feudalism to capitalism, a system more conducive to sustained growth.

> Elites had a powerful incentive to contain the leveling effects of the Black Death and its recurrences. The success of such measures varied wildly between different societies depending on their power structures and even their ecology. in western Europe, workers benefited because gains from labor scarcity were usually passed onto them. Not only did restrictions on wages and mobility fail, but the demographic shock

> of the plague largely killed off the earlier midieval institution of serfdom. Peasants asserted their mobility, moving to other manors if they offered better work conditions. This drove down rents and led to the commutation and eventual elimination of labor services that had been a standard feature of the manorial economy....
>
> in various countries such as Prussia, Silesia, Bohemia, Moravia, Silesia, Russia, Lithuania, Poland, and Livonia, tenants were prohibited from leaving without permission or paying a large fee...
>
> A different set of conditions applied to Mamluk Egypt. As already noted, the country had been hit hard by the Black Death, and urban wages and consumption levels had indeed risen as they did elsewhere, at least at first. However, an unusual configuration of political and economic power enabled the elite to resist worker demand.

Scheidel, Chapter 10, page 310

3. Scheidel argues that disease can lead to reduced economic inequality. How could the Black Death have had such an effect?

Because workers were much poorer than landowners, society became more equal as workers' wages rose. Scheidel goes further, however, and argues that this was typical of medieval plagues.

> In premodern, agrarian societies, plagues leveled by changing the ratio of land to labor, lowering the value of the former (as documented by land prices and rents and the price of agricultural products) and raising that of the latter (in the form of higher real wages and lower tenancy rents). This served to make landowners and employers less rich, and workers better off, than before, lowering inequality in both income and wealth.

Scheidel, Chapter 10, page 292

> What do we know about the plague's effects on inequality? the underlying logic is clear. A reduction in the price of land and food and a rise in the price of labor were bound to favor the poor over the rich and were thus likely to attenuate both wealth and income inequality.

Scheidel, Chapter 10 page 304