

Gerschenkron's Theory of Economics Backwardness

Alexander Gerschenkron was an economic historian who specialized in Russia and Eastern Europe. He introduced his theory of "Economics Backwardness in Historical Perspective" in the 1960s as a reaction to uniform stages theories like Rostow's and some forms of Marxism that argued that

- i. all countries went through a similar series of stages and
- ii. tended to treat countries in isolation.

The key idea in Gerschenkron is that of **economic backwardness**. In particular, he argued that a country undergoing industrialization will have a different experience depending on its degree of economics backwardness when industrialization begins.

Economics backwardness is not clearly defined in Gerschenkron, but he relates it to: income per capita, amount of social overhead capital, literacy, savings rates and level of technology. Since many of these are positively correlated, it is often proxied by income per capita.

Generally, the absence of what Rostow called pre-requisites is an indication of economics backwardness. Then he predicted that the country could generally skip much of the pre-requisite stage.

In Europe, Britain was the least backward followed by Belgium, Holland, France, Germany, Austria, Italy and Russia.

One difficulty with any theory that refers to countries is the existence of severe regional differences within countries.

- The Austrian Empire was divided into the more industrialized region of Austria and the more agricultural areas of modern Hungary

- Northern Italy was more economically advanced than the South
- Western Germany was more industrialized than eastern

The general prediction of the theory is since more backward countries lack essential pre-requisites; their path to industrialization will be different than more advanced countries. Basically, the more backward countries need to find substitutes for missing pre-requisites.

The theory predicts that more “economically backward” a country is, the more we will see:

1. More rapid rates of industrial growth
2. A greater stress on producer or capital goods as compared to consumer goods – this is partly for reasons of prestige but also because it is easiest to import capital goods and place them in modern, up-to-date industries that are not encumbered by the false starts that are typical of early innovators
3. More rapid growth spurts rather than gradual growth rates
4. Larger scale of plants and of firms and a greater emphasis on up-to-date technology -- late comers can purchase machinery from early producers as was true with Britain’s export of machinery and transportation equipment –there is no reason not to buy the most up-to-date equipment so industry will tend to be more sophisticated at least in terms of capital used – with the advantage of a clean start, the late-comer can skip early smaller phases of growth. Finally, since labour is often of a low quality, more capital will be used to make up for the lack of skilled labour

5. A lower standard of living as measured by consumption levels since there will be considerable diversion of resources to investment
6. Less role played by agriculture – agriculture will generally be backward and inflexible and unable to do much to increase national income or modernization – in fact, it is usually what helps to make a country “backwards”
7. A more active role by the government and large banks in supplying capital and entrepreneurship. This is usually because the “backward” country needs more institutional help in organizing its newly-emerging industry. Since they are typically going to use modern technology in large quantities, they need sources of capital larger than that commonly found in early adopters. They also usually have lower income levels and less savings.
8. More “virulent” ideologies of growth

You will note that compared to Rostow who puts an agricultural revolution as a pre-requisite, this is specifically denied here. Other Rostowian pre-requisites like development of infrastructure and a banking system are also part of the process rather than pre-requisites and it is the possibility of substituting for missing pre-requisites that differentiate this theory from Rostow.

We can start to evaluate this theory by comparing it to the work of Simon Kuznets on national income growth. For the 13 industrialized countries, Kuznets found an average growth of GNP of 3% annually made up of 1% average population growth and 2% growth in GNP per capita.

Kuznets found a considerable variety of growth rates between countries.

- Low growth countries include Britain, Australia and the Netherlands (10-12% per decade).
- While high growth included Japan and Sweden (c. 30% per decade).
- Other countries like France, Germany, Switzerland, Italy and Canada and the US appear to be near the average.

Country	Total Growth	Per Cap Growth	GNP p.c. at onset
Great Britain 1763-	23.7	10.1	227
France 1831-	21.8	18.1	242
Netherlands 1860	27.7	13.4	347
Germany 1860	31.0	18.3	302
Switzerland 1910	26.3	16.1	529
Sweden 1861	37.4	28.9	215
Italy 1895	31	23	261
Japan 1874	48	32	74
United States 1859	39	19	474
Canada 1870	41	22	508
Australia 1861	36	10	760

Low rates of growth are relative of course since even the low growth countries have done considerably better than any country before 1800.

We can observe from the table that:

- There is no clear relationship between population growth and growth of output per capita.
- All European countries (except Switzerland) had fairly similar income levels at the onset of industrialization. Japan by comparison was much lower and the “New World” countries much higher
- Gerschenkron’s theory is compatible with the relatively slow growth rate of Britain and the Low Countries and France and the much faster growth rates of Germany, Russia and Japan. Indeed, the newly-industrialized countries today have much faster growth rates than richer countries. This relationship is also predicted in the Solow Growth Model.
- Less obvious is the existence of “growth spurts”. Although countries do go through business cycles, except for war time or depressions, the evidence suggests that growth rates are fairly consistent over time.
- The role of banks and government were quite different in late-comers as well.

Banking & Industrialization

1. British banks specialized in short-term credit rather than long term loans for capital projects. Much capital for British firms came from re-investment of profits and local borrowing. As Mathias described it, the type of capital used by firms was overwhelmingly circulating and generally required short-term credit. This was overwhelmingly supplied by small, local banks and by mercantile credit. Original capital came from selling or mortgaging land and from friends and relatives. “18th Century business flourished as a face-to-face society of friends, cousins and business associates.”

⇒ Over time, the British banking system was divided into 3 groups: the Bank of England, private London banks and country banks aided by bill brokers. The Bank of England was largely related to issuing notes and government debt and overseas transactions supplying credit to large merchant companies and supplied little credit to industry. The private London banks were divided into 2 groups. The first group in the West End largely dealt with aristocratic and rich clients and provided long-term mortgages on land. The other group in the City which grew rapidly after 1770 was to discount bills for merchants and industrialists, lending to stockbrokers and lending on call. In other words, they focused on short loans but not on long-term loans. Inevitably this ruled out a role in financing capita.

⇒ Country banks (any location outside London) emerged after 1700 and there were c. 390 by 1800 and 780 by 1820. Country bankers were rarely confined just to banking but were also merchants, industrialists and often lawyers. This grew naturally out of the tendency of successful businessmen to lend money in commercial transactions. They dealt in bills of exchange, usually in partnership with a London bank, and

were a major source of money in the form of their circulating notes. The notes were backed with gold or Bank of England notes but fractional-reserves were the rule and amount of prudence varied. Like London bankers, they also grew gradually into accepting deposits allowing payments to be made using cheques or bills of exchange. Many of these local banks made local loans and were often prone to bankruptcy in difficult times.

⇒ So overall, the British banking system was decentralized and loosely-joined together. There was little direct long-term lending but by discounting bills and making commercial loans to merchants, the banks indirectly freed up capital to be invested in capital projects and many industrialists borrowed from country banks on a short-term basis which sometimes could be renewed repeatedly. So British banks were important in the financing of business but not in the direct way seen on the Continent.

2. Continental banks were generally much larger and more inclined to make loans to industry and even to accept equity shares and seats on the board in return. This was particularly typical of Germany where Universal or Credit Banks (Kreditbanken) arose to supply the large needs of the rapidly growing heavy industry in Western Germany. Banks were also important in Austria, Italy, Spain and France although less so than in Germany.

Government and Industrialization

As mentioned earlier, the British government had little directly to do with the provision of infrastructure or organizing industry.

In later countries, including North America, the government was central in the provision of canals and railways and in integrating markets and directing national economic growth. In Germany for example, the Prussian government built some of the early railways and after the Unification, the government under Bismarck began to nationalize railways. In countries like Russia which had few of the pre-requisites for growth, the government both before and after the Bolshevik Revolution played a large role in the growth of the economy. The original railway construction began in Russia in the 1860s largely financed by the government and relying heavily on imports of equipment and technical knowledge. Under Witte, the Russian government set out on a program of industrialization and modernization in the 1890s which left most industry in private hands but which was heavily directed and financed by the government. Late comers were also often motivated by a desire to catch up or to attain military parity and put a much greater emphasis on economic growth as a national objective.

Agriculture and Industrialization

Britain followed a unique path in the inter-relationship of agriculture and industry. Britain abandoned agriculture far faster than other European countries and chose not to protect its domestic agriculture. As has been discussed earlier, English agriculture was unique in its three-tier system of land owners, tenant farmers and hired labour and in its history of enclosures.

France and Western Germany were both highly influenced by the French Revolution and Napoleonic era. Before the Revolution (1789), France had a largely two-tier system with large land-owners and peasant farmers who owed various labour services, and payments in money and/or in kind. A large part of the surplus was extracted by the land owners but very little was invested back into the estates. During the Revolution, feudalism was abolished which meant the end of required labour services. The Revolution did not abolish rents although many of the aristocrats lost their land. So the revolution established a system of small peasant farmers but did little to consolidate land holdings or to aid small farmers. So the revolutionary land settlement discouraged movement from the land into industry and the relatively slow French population growth did not produce a large labour surplus as happened in England. It is often argued that the agricultural structure in France acted as a drag on economic development by creating a largely self-sufficient peasantry and slowing down increases in productivity in agriculture.

Western Germany had an agrarian system much like that in France with peasants owing rents and payments in kind to the landlord class and with virtually all of the surplus being removed. Productivity was decidedly lower than in the Low Countries or northern France. When the French revolutionary forces occupied Germany, they once again abolished all feudal obligations but did not remove common agricultural practices or redistribute land. The peasant agriculture again was slow to move to modern technology and there was a considerable out-migration from German agriculture especially in the 1840s.

In Eastern Germany (Prussia, modern Poland) classical serfdom existed where the Junkers farmed their estates using forced labour from the peasants. Although peasant status varied, they could owe up to 4 days a week labour on the lord's land in order to work on their own small plots. The soil was generally of lower quality here

and the main crop was rye which was exported. Until the defeat of the Prussian army by Napoleon at Jena in 1807, the Prussian Junkers were little interested in reform or industrialization. The Prussian land reform was almost entirely to the benefit of the land owners; compulsory labour services were abolished, but in return peasants had to surrender 1/3 to 2/3 of their land to the land lord or in some cases buy their land for the price of 25 years rent. Many small holders were left impoverished with not enough land to support them. There was a major move out of agriculture and emigration out of Germany but this was mainly from western Germany where population growth was more rapid in the first half of the 19th Century.

After the German unification in 1871, the country introduced protection for its domestic agriculture from foreign imports and as a result Germany had a large inefficient agricultural sector with higher food and raw material prices than existed in England. So although the German economy increased dramatically after 1870, it carried into the industrial age a much less modern societal structure than that of Britain.

Russia was the most economically backward part of Europe when its industrialization began. Serfdom was common in Russia until it was abolished in 1861 under the leadership of Tsar Alexander II. Before the Emancipation, serfs were not allowed to leave their estates, had to do significant labour services for the lord and could even be sold almost like chattel slaves. The motive for the Emancipation was the Crimean War (1853- 56) which clearly showed that without modernization, Russia would not be a military or industrial power in Europe which it had been during much of the 18th Century. The lack of transportation and modern technology made Russia very backward compared to the rest of Europe by 1850.

Again the agricultural reform was largely to the advantage of the noble land owners since although serfs were freed and were to be given land they had to pay for it by years of rent and the common areas remained in the control of the land owners. Because of the arrangements, many peasants were left with less land after the Emancipation than they had had before and were forced to work as wage labour for the land lords. In addition, the local village or *mir* was made the administrative unit for the reforms and peasants were tied to the *mir* which further reduced labour mobility. Although details of the emancipation were complex and varied from region to region and even from peasant to peasant, the general result was very little change in agricultural productivity or technique. Most peasants did not get enough land to be able to produce more than a tiny surplus and labour remained tied to the land. Russia had a short growing season and not all of the land is particularly fertile so its agricultural sector remained a drag on its development even during the Soviet period.

The United States and other countries of more recent European settlement had a very different experience since they had a large amount of land compared to the populations. Gerschenkron's theory probably does not apply to these countries.

One of the most influential theories of the role of agriculture in economic development is that of Sir Arthur Lewis with his "Economic Development with Unlimited Supplies of Labour". In this model, there are 2 sectors:

1. Agriculture
 - a. Little technology or growth
 - b. Family farming tends to give out income based on average productivity
 - c. As a result, there is excess labour in agriculture with very low or even zero marginal productivity

- d. So labour can be transferred out of agriculture with no decrease in production

2. Industry

- a. Modern with new technology and urban sector
- b. Absorbs labour from agriculture paying a wage above rural subsistence (because of additional costs of urban living)
- c. So industry expands with a perfectly elastic supply of labour until finally all excess labour is drawn out of agriculture and the supply of labour becomes upward sloping and growth will slow down
- d. The initial low wages will allow large profits in industry which will allow for further investment and further growth.

This model and the experience of the Soviet Union helped to support policies that neglected or even squeezed agriculture to try to advance industrialization. In retrospect, this seems a bad policy both in the third world and possible even in the more-rapidly industrializing countries since a low-productivity agricultural sector remains a major drag on the economy.

The Lewis Model is not without its uses in describing the British experience although it is likely an exaggeration that marginal products were zero in agriculture. The rapid birth rate combined with improvements in British agriculture led to a major transfer of labour without a major increase in the wage rate. It has been criticized for several of its assumptions when applied to later economies however:

- i. Marginal product in agriculture may not be zero since there are heavy seasonal needs for labour and because many in agriculture do other things as well

- ii. Unless suppressed by the government, wages in the modern sector since 1900 have tended to rise far more than predicted by the model
- iii. Often profits in the modern sector are not re-invested but can go to consumption.

Evaluating the Gerschenkron Model

1. The most basic prediction of the Model that the more backward the economy at the time that industrialization begins has been more or less confirmed for major European countries -- Germany, France, Russia and Italy – but is less obviously applicable to even later industrializers like Spain or Austria-Hungary. Generally the lower GDP per cap at the time of industrialization and the larger the % of the labour force in agriculture, the faster growth occurred if it did occur. However certain kinds of backwardness may be highly detrimental to growth rather than allowing growth through substitutes.
2. The prediction that there will be more emphasis on capital goods also seems to work in the sense that later starters tend to have a higher proportion of their economies in such industries. So if we arrange France, Germany, Russian and Italy as being in order of backwardness, we get the following estimates of the share of capital goods in total industrial output at the beginning of industrialization: France – 11% in 1829, Germany 7% in 1850, Russia –28% in 1884 and Italy – 35% in 1895. However this does not mean that the countries with the more backward economies had a faster growth in the capital goods industries since Germany’s growth was 4.5% annually while Italy and Russia were closer to 1.5% annually. So it may be easier to start with a larger capital goods base, but harder to continue with it.

3. The predicted growth spurts of the theory seem not to be confirmed by recent attempts at reconstructing historical national income accounts

4. Gerschenkron probably under-rated the possible negative features of extreme backwardness (as opposed to moderate backwardness found in countries like Germany or France). Like all theories based on a limited sub-set of examples, it has its limitations. Gerschenkron was a specialist in Russian history and his model works fairly well as descriptions of Germany and Russia although as a more backward country, Russia has had less long-run success in its economy than Germany. Countries who attempt to industrialize on the Soviet model with heavy government intervention and an emphasis on capital goods have had rather limited success. Most of the current success stories in East Asia have followed a rather different path with a heavy emphasis on human capital formation (education) and frequently beginning with simple consumer goods before moving towards more technologically-sophisticated items. The amount of government involvement has varied from Korea with a good deal to Hong Kong and Singapore with relatively little.
Countries in Latin America and India which attempted a Soviet-style economic program have met with relatively little success. Of course, a market-style economy does not guarantee success but it has generally worked better than the heavily-centralized models.