# Ch. 11 Industry

Key Issue 1: Where did industry originate?

*Industrial Revolution- the period betwixt 1750 and 1950 in which the transformation of manufacturing, productivity, and sociopolitical systems occurred. It was the collective invention of hundreds of mechanical devices.*

The term is somewhat misleading because the “revolution” happened over several centuries, not overnight. The I.R. diffused from EnglandW. Europe N. America Japan  E. Europe, South Asia, South Pacific, various other locations.

*Cottage industry- the home-based manufacturing that preceded the I.R.*

Key inventions of the I.R. were:

-Steam engine 1769 James Watt

-Iron forge 1783 Henry Cort

-Coke (high-quality purified carbon made from coal) Abraham Darby

-Canals 1759 James Brindley

-THE RAILWAY more than anything, represents the I.R. because of its diffusive potential. It was not designed by an individual but by teams of people.

As a result of the diffusion of the I.R. into the realm of *textiles* (*woven fabrics)*, such as new machines to spin, weave, thread, and make clothing, clothing production skyrocketed. In order to clean the abundant new clothes the chemical industry emerged with new chemicals and compounds.

Due to the increased number and complexity of machines, the field of engineering was born.

The diffusion of the principles of the I.R. was severely inhibited in Europe due to the instability of the region and continuous railroads were prevented because of war. Although the I.R. spread to N. America after it did to Europe, it was adopted more quickly because of the unity of the people.

Because the new industries required certain materials like iron, coal, flowing water, etc.

the density of industries grew far more compact and concentrated around known resources.

Key Issue 2: Where is industry distributed?

Approx ¾ of global industrial production is clustered in eastern N. America, northwestern Europe, E. Europe, and E. Asia. Less than 1% of Earth’s land surface is devoted to industry.

North America

-Concentrated in northeast. The region comprises only 5% of land area but 1/3 pop. and 2/3 manufacturing output.

-Other industrial areas in N. America are:

-New England- textiles originally; now skilled labor

-Middle Atlantic- seaports

-Mohawk Valley-aluminum, paper, steel

-Pittsburgh-Lake Eire- steel

-Western Great Lakes- transportation

-St. Lawrence Valley-Ontario Peninsula- steel, cars

-The U.S. south is dominated by *right-to-work states- states that prevent employers from making employees join a union before being hired.*

Western Europe

-Rhine-Ruhr Valley-iron, steel, coal, most important industrial area

-Mid-Rhine- skilled labor

-U.K.- high tech industry

-Northern Italy- textiles, hydroelectric power from the Alps

Eastern Europe

-Central Industrial District- In Russia; ¼ industrial output

-St. Petersburg- In Russia; ports, railways, food-processing

-Eastern Ukraine- coal, iron, steel

-Volga- In Russia; oil, natural gas

-Ural Mountains- In Russia; over 1,000 types of minerals

-Kuznetsk- In Russia; coal, iron

-Silesia- steel production, coal

East Asia

-Japan- electronics, cars, stereos, TVs, etc.

-Tokyo

-Osaka-Kobe-Kyoto

-China- cheap labor, textiles

-Hong Kong; Yangtze River valley; and Gulf of Bo Hai

Key Issue 3: Why do industries have different distributions?

*Break-of-bulk points- the locations where transfer among transportation modes is possible.*

*Situation factors- involve transporting materials to and from a factory; seeks to minimize transport costs.*

*-Bulk-reducing industry- an economic activity in which the final product weighs less than its inputs.* These are typically concentrated near the input sources to decrease the transport cost of bulky input.

*-Bulk-gaining industry- an economic activity in which the final product weighs more or consumes more volume than its inputs.* These are typically located near the market to minimize the transport costs of shipping bulky or large products.

*-*Single market manufacturers also located near the market, because they sell their products primarily to one location.

*-*Perishable items located near the market for obvious reasons.

*Site factors- land, labor, and capital are the three production factors that site encompasses.*

-Land- modern factories are more likely to locate in areas where land is cheap, either in the suburbs or in other countries entirely. Industries also look for land that is well powered, and has some amenities.

-Labor- *labor intensive industry- an industry in which labor cost is a high percentage of expense.* The unskilled industries, like textiles and clothing for instance, are more likely to search for the cheapest labor pool possible. Highly skilled labor tend to be concentrated in MDC’s in cities with a high number of colleges or college graduates.

-Capital- industries need funds. Therefore, they will only settle where they have the ability to borrow more money. A good example is Silicon Valley in the U.S, where nearly ¼ of all U.S. capital is spent. The banks there are willing to provide loans to risky business ventures, thus explaining the large number of techno-industries concentrated there.

Obstacles to prime industrial location, as determined by situation and site factors, can be

personal preferences of the CEO, historical locations, nostalgic attachment to a specific community, or simply the desire not to participate in the timeconsuming and costly search for optimal location.

Key Issue 4: Why do industries face problems?

*Trading blocs- international economic coalitions designed to boost the economic wellbeing of its members. The three major blocs in the world are: the Western Hemisphere, Western Europe, and East Asia.*

On a global scale, many industries face a stagnant demand for products. Many people are simply trading in older models of an appliance, rather than purchasing one for the first time. The other major problem is the increased capacity of industries all

over the world to produce. Due to the high efficiency of modern manufacturing, the markets have been saturated with products. The supply is plentiful, the demand is not.

In MDC’s, trading blocs stand in the way of industry. While they promote economic cooperation w/in a bloc, the three blocs seemingly do everything in their power to compete with the other blocs. Also, disparities exist w/in trading blocs.

LDC’s face the same industrial problems that the MDC’s faced ½ century ago; distance from markets and inadequate infrastructure. In addition, they face new problems. As more and more countries industrialize, fewer are left to sell goods to. Thus, more countries are competing for fewer markets. LDC’s also face increasing exploitation at the hands of the MDC multinational corporations taking advantage of cheap labor.

*New international division of labor- the selective transfer of unskilled jobs to LDC’s while retaining the highly skilled and managerial positions in the MDC’s.*