THE INDUSTRIAL REVOLUTION
AND ENGLISH ECONOMY IN THE
18TH CENTURY

—AN ESSAY ON THE CAUSE OF
THE INDUSTRIAL REVOLUTION—

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I Problem

The Industrial Revolution was started in the mid-eighteenth century in England. This fact is without a shadow of doubt. With regard to the various theories as to the cause of the Industrial Revolution in the eighteenth century, it seems that the real arguments have only emerged in recent times.

Generally, this subject tends not to be discussed and attention has only been drawn as to which social class, the entrepreneurs of the Industrial Revolution period, came from. The new entrepreneurs emerged from the "yeoman" and small craftsman class. It is known that these entrepreneurs were mainly Quakers and Methodists, who were in a religious minority in English society. This is an important factor and we should bear in mind as central cause to the Industrial Revolution. Based on the background of this study, the Industrial Revolution in England was started by the invention of various new machines in the textile industry. For example, there are the inventions of the Flying Shuttle by John Kay in 1833, the Spinning Jenny by James Hargreaves in 1765, the Water Frame Spinning Machine using hydraulic power by Richard Arkwright in 1769 and the Spinning Mule by Samuel Crompton in 1779.

These various new machines and their implementation gave rise to increased productivity, and indeed resulted in an overproduction of yarn. As a result of this increased efficiency, the process of weaving was also stimulated. Other factors, such as the Power Loom Machine invented by Edmund Cartwright in 1785, led to further productivity. This machine was rather
crude and needed to be refined and was in use from around 1800. The study of these mechanisation and the various developments is inquired into more deeply in examining the Industrial Revolution particularly in relation to the history of technology.

However, what we should emphasize at this moment is why many new machines were invented and why they should first appear in the textile industry in the eighteenth century. The Wealth of Nations by Adam Smith was published in 1776 when the Industrial Revolution was in its infancy. It is now necessary to examine Smith's The Wealth of Nations in closer detail to find how much influence this had on the Industrial Revolution.

II The Age of "The Wealth of Nations" — Mercantilism

Adam Smith was born in 1723 and died in 1790. He was essentially a man of the eighteenth century. An economic policy of "mercantilism" was put into force in England at that time. At the beginning of the eighteenth century, English economy was deemed to suffer from all kinds of contradiction. In the introduction of chapter 4 of The Wealth of Nations, Adam Smith asserted that the economic policy of mercantilism was a modern doctrine and policy already well-known in England. Most people automatically think that Adam Smith is the father of economics of Laissez-faire and a proposer of "the division of labour". But I think that Adam Smith must be seen as a current critic of the English economy to find contradiction and solution on every aspect of the eighteenth century's commerce, and he finally suggested the best way forward for the future. Adam Smith was opposed to the idea that a stock piling reserves of gold and silver, and the other treasures is central to a successful government economic policy. In other words, he criticized the mercantilist's idea that the wealth of nation consists of gold and silver, or the material of money. He thought that the people could not make their living by only money itself, or that the national wealth was what the people produced. He therefore insisted that the wealth of nation is not just gold and silver themselves but "annual products" which the people produced.

The word "annual" shows that he had noticed how important a concept of reproduction was. That is, a cycle of productivity was necessary for economic success. So if gold and silver were not the wealth of nation, a balance of trade theory also must be then reviewed critically. A balance of trade theory is the idea that the English manufactured goods should be exported in great quantities in exchange for gold and silver, and it should be brought into the country. From this theory, trade itself is considered as a very important national economic strategy and emphasizing the importance of foreign markets.
According to Adam Smith, these series of policies had become objects of criticism. The mercantile system inevitably had to protect its own manufactures because they were exporting their own products to collect gold and silver but not in exchange for foreign products. That is called “Protectionism”. It had given the drawbacks and bounties for exportation, the restriction for imported manufactures and for imported manufactures and the reduction and exemption of imported tariff for raw materials, as examples of this (See Adam Smith, The Wealth of Nations, volume one, Every Library, pp. 396~7).

Adam Smith writes in his The Wealth of Nations that these devices “tend either to increase or diminish the value of this annual produce, they must evidently tend either to increase or diminish the real wealth and revenue of the country” (ibid., p. 397), and he continues that the drawbacks “are useful only in those cases in which the goods for the exportation of which they are given are really exported to some foreign country; and not clandestinely reimported into our own. That some drawbacks, particularly those upon tobacco, have frequently been abused in this manner, and have given occasion to many frauds equally hurtful both to the revenue and to the fair trader is well known” (ibid., volume two, p. 6). Adam Smith writes too, of the bounties. “Bounties upon the exportation of any home-made commodity are liable to that general objection which may be made to all the different expedients of the mercantile system; the objection of forcing some part of the industry of the country into a channel less advantageous than that in which it would run of its own accord” (ibid., p. 16), and he asserts “what is called a bounty is sometimes no more than a drawback” (ibid., p. 22). Additional details of mercantilism were a treaty of commerce and navigation and a colonial policy. There were discussed and criticized by Adam Smith individually and in detail (see The Wealth of Nations, chapter VI, VII in book IV). We therefore see him as a critic of contemporary economy. However, several policies that were criticized by Adam Smith had proved to be popular and profitable to merchants and manufactures in the period of mercantilism.

III The Putting-out system and Early capital

The manufacturing industry in those days was mainly the woollen industry which was in effect the national industry. The woollen industry was divided into several manufacturing processes such as washing, spinning, weaving, finishing and so forth, and merchants had ruled over each of these processes by a form of putting-out, namely, “The Putting-out System” which was a system of delegation. These merchants had carried out commercial activities (as a function of merchant capital), and had participated in each process of manufactures (as a function of manufacturing capital). Therefore, they had earned their profits as merchants through their activities and their
"Surplus Value" through their manufacturing role.

Capitals in the putting-out system had had a dual character. Those complicated form of capitals were called Early Capital. Landowners, merchants and manufacturers then had complicated roles and shared interests that were common to all three parties. The policy of mercantilism, or early capital was aimed to protect their interests in those days. It is little doubt that Adam Smith criticized merchants and manufacturers individually although he had criticized the policy of mercantilism overall. In conclusion, he had not criticized the personalities involved at all.

IV Mercantilism and manufactured industry

"Mercantilism" is not simply to respect trade. However, mercantilism as mentioned above had a great relation to manufacturing industries especially the woollen industry as a part of early capital, because it had managed each productive process as a part of the putting-out system. Under this system, they had a great difficulty in increasing labour productivity because the fact that they had not made use of any machine. Agriculture in those days had not been modernized, so that a number of poor peasants had inefficiently engaged in agriculture on an allotment (small acre of land) and were also engaged in spinning and weaving simultaneously as a subsidiary business in order to supplement their income.

They owned and occupied an allotment. They received raw materials from putters-out and processed it. They were quite satisfied with the small amount of reward for their labour under these circumstances. There were abundant labour and its price was very cheap through the period of the mercantilism. Subsequently, it had not been necessary for putters-out as manufacturers to invest their money in expensive machinery. It was possible for putters-out to use machineries in those days because they already had been invented in the Renaissance period. For instance, Leonard Da Vinci had already invented the spinning and weaving machines.

Therefore the policy of mercantilism was in fact dependent entirely upon a system of very low wages. The merchants had managed to maintain a strategy which kept wages low. Examples of this strategy were the Statute of apprenticeship and maximum wage system. Home demands for products in England was extremely small due to wages being low. Merchandise could not be sold domestically so they tried to sell them abroad.

So exportation was very important in the period of mercantilism due to the imbalance between home production and its consumption. Increasing exportation was beneficial for Britain's balance of trade especially in terms of bullion payments. This way to think was the same in thought that bullion represented the wealth of nations and gave us the impression as if the policy
of mercantilism was actually one of well-balanced and sophisticated thought.

V The contradiction against mercantilism

Mercantilism would not keep for long time, because there had not been an imbalance between home production and its consumption. The woollen industry was developed under early capital. If they had expanded their business, they should have increased the number of labourers and therefore production. It had been impossible to improve labour productivity in those days. Increasing demand for labour with the growth of early capital had inevitably brought to high wages. As a result, increasing wages added to the productive price so that sale price rose naturally.

The policy of mercantilism was started in France after 1730. They had exported inexpensive textile products, mainly thin and luster silk goods. It was obvious that products made in France would defeat those made in England, so that the manufacturing industry in England was now facing critical situation. This critical situation had not been caused by the policy in foreign countries such as in France but the policy itself in England. The English had continued to disregard their own home market and had depended solely upon export trade. On the other hand, from the French point of view, they had not allowed this destructive situation to emerge in their own manufacturing industry. This is so-called "Trade barrier" in a modern time. They could not convert their economic structure immediately in England.

The English had protected their home industry as a concrete measure. That is so-called "Protectionism". This was a policy to decrease actual wages, but they were unable to control it as a policy any longer. The policy of mercantilism had been supported by low wages. The more the policy of mercantilism was strengthened, the more the contradictions against the policy intensified because the premise in mercantilism had been destroyed as a result of itself. The balance of trade in England now showed a deficit and bullion reserves had to be released to rectify this situation as a concrete phenomenon.

VI Getting over the contradiction of mercantilism

—— introduction of machine

We have already mentioned that Adam Smith was a critic of contemporary economy in England. The English economy studied by him then, faced a very critical situation, and the conversion of a view of value, or the conversion of policy and economic structure were urgently needed. First of all, a policy of increasing wages and rationalization of labour were required urgently in those days. The division of labour claimed by Adam Smith was
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aimed to achieve the two above-mentioned subjects.

As a matter of fact, mechanisation had been introduced for labour saving purpose. Mechanisation was necessary at that time. If there were plenty of labour and lower wages, mechanisation was not needed. Therefore, manufacturers had to learn to increase labour productivity against increasing wages. As in France in those days the wages was low, so the mechanisation was not needed. The different machines that had been invented in the eighteenth century had proved these facts as mentioned above. In short, they depended upon the introduction of machines to solve the contradiction of mercantilism.

A textile industry was a labour-intensive one which needed many hands. This was called the “national industry” in England, so that the above mentioned economic crisis would be really serious. This conjecture is apparently proved by entire descriptions in The Wealth of Nations. We also can understand how important textiles were as the main industry in the Industrial Revolution. Textiles had become a most difficult industry because increased wages meant that more work was expected.

A necessity of converting a view of value and economic structure, as a result of increasing labour wages, would become the next problem. Adam Smith had studied this matter very carefully. That is a conversion into a higher wage economic system. According to him, the wealth of nation was not bullion but annual products. A nation’s wealth would not be realized, if annual products as the wealth of nation were exported to foreign countries. This idea is opposit from mercantilism. He advocated that the more wealthy the people became the more wealthy a nation became. It is necessary to make people wealth to build a system which can consume as much of its annual products as possible. Determining whether they could become rich or not, is based on how many annual products they could consume (see ibid., chap. I in book I).

He has already advocated on a concept of mass consumer society by developing his theories. This is a concept whose purpose is to balance the home production and its consumption. Adam Smith proposed the conversion of a view of value and economic structure against mercantilism. As mentioned above, he had not criticized merchants and manufacturers at all, but tried his best to help the manufacturing industry in its critical position. He had tried to observe the situation from the standpoint of the merchants and manufacturers in the mid-eighteenth century. However, this standpoint had always been entirely different from that of the obsolete landowners, merchants and manufacturers who were completely based upon the mercantilism.

Though he had not proposed the introduction of mechanisation directly, he had proposed the division of labour that was aimed to develop the labour
productivity. This was obviously done to promote the "Industrial Revolution" theoretically. In conclusion, Adam Smith was a man of thought who intended to promote the English Industrial Revolution in the eighteenth century.

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