

**The Dutch Republic and Britain:  
The Making of Modern Society and a European World Economy:  
An Economic Perspective**

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Introduction:

Economic Growth and Exports:

Gross Domestic Product (GDP) is the most common measure of the overall performance of an economy. It is calculated by adding up the value of Consumer expenditure, Investment expenditure, Net Exports expenditure and Government expenditure, as per the following equation:

$$\text{GDP} = C + I + (X - M) + G$$

Consumer expenditure, Investment expenditure, Net Exports expenditure are measures of private spending, whereas Government expenditure is a measure of public expenditures on goods and services (minus transfer payments, where no good or service is produced in return for the spending). Net exports refer to exports minus imports, a positive number indicating a trade surplus.

The following figures, comparing a closed economy (the US) with a small open economy (Ireland) allow for a comparison of the relative weights of the different components of aggregate demand between the two economies.

$$\text{GDP} = C + I + (X - M) + G$$

USA            12,000 = 8,500 + 2,000 + (1,200 - 1,900) + 2,200 (US dollars, millions)

Ireland            134 = 63 + 32 + (113 - 91) + 19 (Euros, millions)

In the case of Ireland, exports constitute approximately 90% of GDP, and imports constitute approximately 68%. In the US, exports constitute approximately 10% of GDP, while imports constitute about 12%. The vast majority of economies in the world are open economies, and are thereby increasingly reliant on international trade as an engine of economic growth. In this sense, the US is an exception.

It is to be noted that the effects of any changes in the components of aggregate demand are subject to a multiplier effect. Thus, if exports change, GDP will change by a multiple of the amount that exports change by. Essentially, each dollar that is earned as income from exports will, in turn, generate further incomes and spending in the domestic economy, which in turn, will generate further incomes and spending. The specific size of that multiplier will rely on factors relating to the local economy, and need to be specifically calculated by local economists in order to estimate the effects of changes in economic policy. (See Appendix below entitled “The Multiplier Effect”)

It can also be inferred from the equation above that a positive trade balance (as in the case of Ireland’s) will have a positive effect on GDP, whereas a trade deficit (as in the case of the US) will have a ‘drag’ effect on GDP.

While it is increasingly difficult to arrive at specific estimates for the different components of GDP the further back in time one goes, it is evident that international trade has the potential to have a very significant impact on an economy such as the emerging Dutch and British economies.

The dominant economic philosophy of the early modern period was that of Mercantilism. Mercantilism consisted of two key ideas: first, that a nation’s wealth was determined by the amount of precious metals it had; second, that a nation needed to export more than it imported in order to accumulate more and more of the precious metals. In other words, permanent and growing trade surpluses were the order of the day.

It can be argued that in the context of the emerging Dutch and British economies, this policy of mercantilism made a lot of sense in economic terms given its assumption about the role of precious metals. A trade surplus will result in a net inflow of foreign wealth, which will boost GDP, assuming the economy is at less than full employment. (A trade surplus will result in inflation if the economy is already at full employment). Thus, to the economic thinking of the day, mercantilism was seen as a way to making a country richer. Mercantilism resulted in countries searching abroad for new raw materials so that they could be reprocessed at home for exports. The geo-political context also needs to be taken into account. Essentially, there was an oligopoly consisting of Portugal, Spain, France, Britain and the Dutch Republic. There was a battle for security, trade and empire. It was seen as a zero-sum game: one country’s gain was another country’s loss. Each country wished to become not just a monopolist (a single seller), but also a monopsonist (a single buyer). The Dutch succeeded in capturing the Asian market at the expense of the Portuguese. They briefly enjoyed a monopoly. However, the profits attracted other rivals (the British and the French) into the market. The increased competition drove prices down, and so profits fell.

It was not until 1776 when Adam Smith, in book IV of the *Wealth of Nations*, rejected the mercantilist view that a country’s wealth was based on gold and silver. Smith argued that a nation’s wealth was based on its assets, and he warned that an inflow of excess gold or silver would only drive its value down, as happened in Spain. Smith argued that a nation should export its surpluses, and to use its revenues from these exports to import whatever it needed. He argued that some countries have natural advantages in the

production of certain goods (such as England with its abundant natural resources) or even an acquired advantage due to a highly skilled workforce. Later on, in the early 19<sup>th</sup> century, David Ricardo developed his theory of comparative advantage, arguing that countries should specialize in producing those goods in which they have a lower opportunity cost, and then trade, resulting in mutual benefits.

### The Economy of the Dutch Republic

#### Factors of Production:

Most modern economics textbooks list four factors of production or resources. These are land (all natural resources); labor (the work force); capital (machinery, tools, buildings, as well as financial capital); and enterprise (ideas, initiative, risk-taking). We shall examine each resource separately, and then discuss how they interact with one another.

It can be argued that the most important factor of production is enterprise, for it is from this human resource that the other three resources are able to grow and develop. The evidence of the Dutch genius can be seen in the following:

Land: On a per capita basis, the Dutch were endowed with an ideal location with which to establish and maintain a global trade network. Their natural resources were not as good as Britain's, given the inferiority of peat to coal, nor did they have much in the way of metallic ores. However, they were able to increase the value of their land through drainage, and through the building of dykes and canals. They accomplished this through their use of capital, the machinery and tools, which they either created and developed themselves, or imported and adapted, such as ore from Sweden. One result was of this was the increase in land productivity which resulted in lower food prices, thereby increasing the real incomes of consumers. Thus, consumers were now able to purchase the industrial goods that were being produced.

#### Labor:

The increased productivity freed up workers from the land, thus increasing the supply of labor, which could be employed in the non-agricultural sectors of the economy. The supply of labor was relatively elastic, in that it shifted easily from agriculture to fishing, ocean shipping and urban industries. From 1570 to 1620, the non-agricultural labor force was increasing by 3% annually. By 1650, less than 40% of the labor force was employed in agriculture, yet the Dutch were almost net exporters of food. This factor of production, labor, in turn increased its productivity through training in the use of the tools and technologies and increased expenditures on education. There was a rise in literacy, a rise in the percentage of the labor force trained in formal apprenticeships, and a large (for its time) percentage of the population enrolled in universities. In this way, human capital was increased. De Vries and Woude estimate that agricultural output per worker increased by as much as 80% due to specialization and comparative advantage. Such increases in productivity resulted directly in high wages, and allowed for continued growth in population without the usual downward pressure on wages that an increase in

labor supply usually causes. Thus, the Dutch were able to avoid the Malthusian trap whereby high wages induce a higher birth rate, thus ultimately forcing wages back down. The fact that Dutch wages were relatively higher than wages in other European countries can be explained due the relatively higher productivity of their labor.

### Capital:

Technological improvements brought about increases in the quality of the physical capital available (viz. machinery and tools). Specific examples from before the Revolt included the cleaning and salting of herring while boats were still at sea. (Evidence of this may be seen in the museum at Enkhuizen). The shipping fleet increased its carrying capacity by 1% each year, and its productivity was improved by better ship designs. The building of dykes, drainage windmills and sluices increased vastly, which meant that agriculture became specialized in maritime areas. By 1620, the number of patents for technological innovations reached its peak. Demand for capital goods caused an increase in the derived demand for workers (for example, increased demand for saws caused an increase in demand for sawyers) causing their wages to rise. Financial capital became extremely important. Where did this capital come from? Rich merchants arriving in the Republic brought theirs with them, with homegrown financial capital arising from business profits. Furthermore, the need to manage this financial capital resulted in promoting of new ways of organizing credit such as Bills of Exchange, as well as new forms of business organization (such as partnerships), new ways of managing risk, and reduced forms of risk in trading bonds, equities, and commodities.

### Enterprise:

Enterprise, as mentioned above, refers to the willingness and ability of private individuals and private businesses to risk their capital in financing new businesses and technology in the pursuit of profit. The Dutch became experts at being middlemen. They imported goods, processed and packaged them, then distributed them around Europe. They made money from trade, transport, storage and distribution. Other services such as insurance, banking and credit became extremely important. Granted that it was a monopoly, the Dutch East Indies Company (VOC) grew from 6.4 million guilders in net assets in 1602 to a staggering 40 million in 1660, while distributing 62 million guilders to its shareholders. Dutch private businesses, working in a competitive international environment, increased their efficiency in banking, loans and shipping, with the result that transactions costs fell. In essence, the Dutch had highly developed markets not only in goods and services but also in the factors of production. To the concepts of ideas, risk-taking and initiative, we can add De Vries' words *imagination, daring, and energy* (page 676) to describe how the Dutch, a relatively small nation, achieved their extraordinary Golden Age, within their own sophisticated confederated polity.

With the growth of the international market, Dutch domestic supply was able to meet international demand. During the period of the Golden Age (1580-1621), the Dutch were

responsible for organizing trade routes, which linked the Iberian Peninsula, the Baltic Sea, the White Sea, Asia, Africa, and the Western Hemisphere. This, in essence, is globalization. However, after 1618, the European markets began to weaken, and growth began to be driven essentially by domestic demand.

### The Role of the State

The state provided a major role in creating a legal-institutional environment in which this incipient market economy could grow. Specifically, the state began to provide for property rights, and the freedom of movement and contract.

Furthermore, drainage problems and the threat of flooding lead to the establishment of *institutions in which private contractual agreements could be formed with relative ease and in which public goods could be provided in a rational manner.* (De Vries, page 666)

The eighteenth century saw the emergence of a new fiscal-financial complex, with a huge public debt being incurred. The opportunity cost of this huge debt was the productive areas that could have been financed but were not.

## The Emerging Economy of Britain

### Factors of Production:

#### Land:

England was endowed to begin with a variety of extremely good soils. It was also endowed with a great many other natural resources such as mineral ores, copper, iron, lead, tin, salt and coal. Of course, it took the human ingenuity of mostly private individuals, guided by the profit motive, to turn these natural resources into productive and profitable ones. Thus, farms were made bigger by the enclosure movements, and they became more and more market oriented, and less and less merely to provide subsistence levels of living. Furthermore, greater crop yields were developed due to new methods of crop rotation, new methods of drainage, nitrogen-fixing crops, and mixed husbandry. The result of the vastly increased productivity of the land was a larger and larger crop yield produced by a smaller and smaller number of people required to work the land. The surplus of food resulted in food prices going down, and therefore an increase in real incomes. The increase in the purchasing power of incomes allowed for the increased purchase of manufactures as well as of imports, and of course intensified the trend towards urbanization.

Of all minerals, perhaps coal was the single most important. Coal was used directly in brewing, dyeing, refining salt and sugar, boiling soap, making bricks and gas. It was also used in the smelting, casting and forging of metals. As energy, it released workers in agriculture, transport and construction, into manufacturing and commerce. Coal also had a direct effect on workers themselves: it kept them warm and dry in winter and therefore,

they required fewer calories per unit of work. Furthermore, hot meals meant better health, therefore less spread of diseases

Finally, property rights were made more secure after the Restoration

### Labor

England had a very large population to begin with. It consisted of free laborers, indentured servants, as well as slave labor. The labor force became highly skilled in manufacturing (especially textiles), and its productivity was such that it became capable of producing enough (a surplus) to make trade worthwhile. The increase in productivity allowed wages to become sufficient to allow the purchase of homemade manufactures, as well as imports. Productivity was also enhanced by specialization, as noted later on by Adam Smith in his famous pin factory example in the *Wealth of Nations* (1776, Book I, chapter 1,). As the labor force becoming industrialized, not as many workers were needed on the land as before, and thus urbanization began

### Capital

Capital is usually defined usually as machinery, tools, and buildings, and therefore investment consists of the purchase of capital goods. Machinery initially was simple, therefore relatively easy to purchase and use, and to add to later on. This allowed the massive increase in industrialization to take place. Interestingly, the Latin root of the word *manufacture* means to *make by hand*. Very significant investments also took place in navigable waterways, as well as ships and barges. Financial capital also became extremely important. In 1694, the Bank of England, a private corporation, was set up. The Bank of England began to manage government debt and to begin its role as a lender of last resort. From 1694-1713 there was a financial revolution. This period saw the development of national and imperial capital markets. Capital inflows began to increase, and the importance of credit to both the private sector and the government grew

### Enterprise

We defined *enterprise* above as those characteristics such as ideas, initiative and risk taking, that are crucial to the working of the private sector. One might characterize this human resource as the *brains* behind the success of any particular business enterprise. Being active in the new, competitive market place forced businesses to adapt in order to survive. The business environment, particularly overseas, was extremely risky. Business owners were forced to develop such business skills as anticipating or learning consumers' tastes (such as the demand for wool or tweed in certain climates). They learned to calculate risks, how to reduce risks by forming business partnerships, and how to use insurance. They learned how to manage and organize credit. They also learned how to diversify exports, moving away from an initial reliance on textiles, grain and coal and moving onto hardware and leather. The East India Company was a private corporation that in effect ruled an Asian empire. The Bank of England began to manage the government's debt, and a private market for credit emerged. Indeed, by second half of

the 18<sup>th</sup> century, credit became cheaper and more readily available. The private sector managed Britain's involvement in global trade, and in so doing they linked consumers and producers in Europe, Africa, Asia and the Americas and the empire became in effect one large 'free trade' zone. England became a 'nation of shopkeepers', meaning that a huge number of individuals were now making a living from the newly emerging market system, and as such, were independently self-supporting.

### ROLE OF GOVERNMENT

The private sector and the government went hand-in-glove in the emergence of the British Empire as the dominant force in what became, after 1815, a uni-polar world. Unlike the Dutch Republic, Britain, as it strode towards modernity, did not have to struggle for its political survival or independence. In fact, the state succeeded in keeping Britain safe from outside attack, and was able to enforce the Navigation Acts through its Royal Navy. It also succeeded in politically unifying the home market and it provided strong and effective support to the private sector.

It officially encouraged private enterprise abroad, and handed the East India Company a monopoly. It evolved into an effective fiscal state, successfully taxing and spending, and it learned to borrow money from the private sector, and to shift from short-term debt to long term. The State learned over time how to generate tax revenues (William Pitt 1799 introduced the progressive income tax), and it embarked on a gradual move to a sales tax by taxing 'luxuries' (thus, the tax was considered 'voluntary'). The State also moved to secure property rights after the Restoration, and had a direct role in the emergence of larger, more productive farms through the Enclosure Acts. The only serious financial blunder the British government made was in attempting to generate more tax revenues out of the American colonies.

### LAST WORD

We shall leave the last word to Adam Smith with regard to the role of the private sector in the economy. One might consider having one's students memorize these quotes.

*It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest. We address ourselves, not to their humanity, but to their self-love, and never talk to them of our own necessities but of their advantages. (Wealth of Nations, Book 1, chapter II)*

*...He intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention. Nor is it always the worse for the society that it was no part of it. By pursuing his own interest he frequently promotes that of the society more effectually than when he really intends to promote it. (Wealth of Nations, Book IV, chapter II)*

Bibliography:

Jan De Vries and Ad Van der Woude: *The First Modern Economy: Success, failure and perserverance of the Dutch economy, 1500-1815*

Patrick O'Brien: *Inseparable Connections: Trade, Economy, Fiscal State and the Expansion of Empire 1688-1815* (from: *The Oxford History of the British Empire: Volume II: The Eighteenth Century*)

Patrick O'Brien: *Mercantilism and Imperialism in the Rise and Decline of the Dutch and British Economies 1585-1815* (from *The Economist* 148, No. 4, 2000)

Adam Smith: *Wealth of Nations*