

## **Commodities in Economics: A Brief History**

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A review of economic thought in Western Europe since the 15<sup>th</sup> century reveals two streams of economic thought: interventionist and laissez faire. The mercantilists saw commodities as complex entities with multiple attributes, some of which are more growth-enhancing than others. Governments intervene to promote commodities with the strongest growth-enhancing attributes. Of necessity, the classical economists built their case for laissez faire by stripping commodities of their complexity so that no commodity could be preferred over another for its growth-enhancing attributes. The neoclassical economists completed this evisceration of commodities in their core competitive paradigm. Almost from the start, however, this evisceration of commodities was challenged by economists from lagging countries eager to catch up with the advanced countries. In the post-War era, the development economists revived the more complex view of commodities to make their case for government intervention in support of economic development in the poorest countries. This period also witnessed a reaction within the neoclassical camp itself against the streamlined view of the economy in the competitive paradigm.

*M. Shahid Alam*

Department of Economics  
Northeastern University  
Boston, MA 02115

*Comments welcome: send them to email below*

[m.alam@neu.edu](mailto:m.alam@neu.edu)

*“Since the downfall of the Roman empire,  
the policy of Europe has been more favorable to arts,  
manufactures, and commerce, the industry of towns;  
than to agriculture, the industry of the country.”*

Adam Smith, 1776<sup>1</sup>

This paper explores a question that has received little systematic attention from economists in recent times: the manner in which commodities have been incorporated into different system of economic thought.<sup>2</sup>

On the surface, this lack of interest is puzzling.<sup>3</sup> In the real world, commodities are complex entities with multiple attributes that may vary greatly across commodities. It follows that the manner in which commodities enter any theory of markets, the economy or international trade must be a matter of great importance. The markets for durables and perishables do not operate on exactly the same principles; we may expect similar differences in the markets for commodities that are produced under constant, decreasing or increasing returns to scale. Some of the specialties that have developed within economics – such as agricultural economics, the economics of real estate, and financial economics – study specific markets because the behavior of these markets is closely tied to the attributes of the commodities in which they deal. In a similar manner, industrial organization recognizes the connections between market structures and the attributes of commodities.

Students of economic methodology have compared different ap-

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<sup>1</sup> In another passage, Adam Smith emphasizes the contrast in the policies of Europe and Asia: “As the political economy of the nations of modern Europe has been more favorable to manufactures and foreign trade, the industry of the towns, than to agriculture, the industry of the country; so that of other nations has followed a different plan, and has been more favorable to agriculture than to manufactures and foreign trade.” Adam Smith, *An enquiry into the nature and causes of the wealth of nations* (New York: The Modern Library, 1776/1965): lix, 644.

<sup>2</sup> Commodities include all goods and services that are produced for sale.

<sup>3</sup> At various times, economists have engaged in spirited discussions about the nature of capital, land and labor, but commodities *per se* have failed to excite the interest of economists.

proaches to economic thought with a near exclusive focus on the assumptions they make regarding the behavior of economic agents, the information that is available to them, or the institutional constraints that affect their behavior. Yet, there has been no interest in studying how different theories of markets incorporate commodities. Of necessity, theories do not offer thick descriptions of real world phenomena; they abstract from some of this complexity in order to identify the central features of any set of complex phenomena. There generally exist multiple ways of abstracting from any complex phenomena: and as the complexity of the phenomena increases so do the number of possible abstractions that can be imposed upon them. Our real-world commodities too possess multiple attributes in the spheres of production, consumption, storability and tradability. What then are the trends and patterns we observe in the ways that different systems of economic thought have defined commodities since the fifteenth century?

Our survey of the different systems of economic discourse since the fifteenth century establishes five principal results. First, we discover that the two major streams of economic thought – the interventionist and laissez fairist – take opposite views on the complexity of commodities: the first incorporates much of this complexity while the latter strips them of nearly all of their complexity. Second, as a result, we observe a progressive evisceration of the attributes of commodities in different schools of laissez faire economics, along a line running from the physiocrats and classical economists to neoclassical economists. Third, even as this evisceration unfolded, it was simultaneously being challenged by economists in the late-industrializing countries. Fourth, as a second and third wave of countries in Latin America, Asia and Africa launched their own industrial programs, this was supported by new critical discourses that took a more complex view of commodities to challenge neoclassical economics. Finally, even as neoclassical economics was establishing mathematically the conditions that must be fulfilled for an ‘efficient’ allocation of

resources, other economists from within this tradition resurrected some of the real-world characteristics of commodities that had been discarded in the quest for various ideological goals.

### *Commodities In the Real World*

*“Some tender monie to me..Some offer me Commodities to buy.”*

Shakespeare<sup>4</sup>

Commodities in the real world are complex entities, each possessing a bundle of attributes relating to their production, consumption, storability and tradability. These attributes may vary across commodities.

Consider some of the production attributes of real-world commodities. They may differ in the ratios in which they combine inputs; in the ease with which they may be substituted for one another; the nature of returns to scale; the demands they make on infrastructure and institutions; and the manner in which their production is affected by climate and weather. In turn, the value that any commodity contributes to the economy will vary with the use of capital, skills and knowledge (especially new knowledge) relative to land and labor. Commodities vary in the degree to which their production (and consumption) confers benefits or causes injury to third parties; the forward and backward linkages they generate in the economy; their potential for generating new products and new technology; and the distribution of income among various classes. It would not be too difficult to think of other ways in which the production of commodities may differ from one another.

Variations in the consumption attributes of real-world commodities too are a legion. Some are necessary to life, others are used as luxuries or for ostentation; some provide the energy that sustains work, others provide warmth; some repair our health, others undermine it; some fog our minds, others clear it; some augment our skills, others give pleasure; some are addictive, others are given up more easily; some are more responsive than others to changes in own-price, the price of substitutes,

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<sup>4</sup> *Comedy of Errors*, IV. iii. 6.

and incomes; some can be consumed by only one person, others by more than one person but not at the same time, still others can be used at the same time by more than one person; some help to preserve a nation's values and culture, others undermine it; etc.<sup>5</sup>

Similar variations exist across commodities in their tradability: this depends on transportation costs by weight and volume, their value relative to weight and volume, their perishability which also affects their storability, and most importantly on whether they are goods or services. Inventions over the past two centuries have changed – often radically – the various determinant of storability. The steam engine, internal combustion engine and airplane have dramatically cut transportation costs since the nineteenth century. Refrigeration allows us to preserve perishables. More recently, computers, innovations in audio and video technology, digitization and the internet have dramatically shifted the boundaries between tradables and non-tradables.

### ***Mercantilism***

*“[Manufacturing] is a mine more fruitful of gain, riches, and plenty, than those of Potosi.”*

Geronimo Uztaryz, 1724<sup>6</sup>

*“Central to the mercantilist views of development was the opposition of arts to nature and the belief in the unlimited possibilities of the development of arts.”*

Lars Herlitz<sup>7</sup>

It may be useful to start with a brief discussion about the origins of mer-

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<sup>5</sup> The market structures that develop to support the production of these commodities may also differ across commodities, but this paper will generally abstract from the complications that arise from variations in the last mentioned features of an economy.

<sup>6</sup> Erik S. Reinert and Sophus Reinert, “Mercantilism and economic development: Schumpeterian dynamics, institution building, and international benchmarking,” *OIKOS* 10, 1 (2011): 8.

<sup>7</sup> Lars Herlitz, “Conceptions of history and society in mercantilism, 1650-1730,” In Lars Magnusson, ed., *Mercantilist economics* (Boston: Kluwer Academic Publishers, 1993): 118.

cantilist thought and the distortions it has suffered at the hands of its chief adversaries, the classical and neoclassical economists, since the nineteenth century.

Mercantilism was a system of statecraft and complementary economic doctrines – ascendant for at least three centuries starting in the mid-fifteenth century – whose principal aim was to support nation and state-building in Western Europe by promoting the growth of manufactures and commerce. Unlike their scholastic predecessors as well as their more academic successors, the French physiocrats and the English classical economists, the mercantilists were mostly practical men. The leading mercantilist writers during the seventeenth and eighteenth centuries were businessmen, but their ranks also included public officials, journalists and scientists. Josiah Child and Thomas Munn, two of the leading English mercantilist writers, held important positions with the East India Company.<sup>8</sup>

Mercantilism has suffered from a bad press since Adam Smith's critique of dirigisme in his *Wealth of Nations*. Our understanding of mercantilism derives mostly from the tendentious writings of their adversaries, the classical economists, who sought to discredit their ideas by setting up straw men. The classical economists accused the mercantilists of bullionism – equating a country's wealth with its bullion – and holding a static view of the world in which one country's wealth only comes at the expense of another country. Adam Smith claimed that mercantilism was a conspiracy of traders and manufacturers to get rich at the expense of all

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<sup>8</sup> Henry William Spiegel, *The growth of economic thought* (Durham, NC: Duke University Press, 1983): 94-95. Many of the leading classical economists held academic appointments; this set includes Adam Smith, Robert Malthus, John Elliot Cairnes, Nassau Senior, J. R. McCulloch and Jean-Baptiste Say. David Ricardo and Robert Torrens were the notable exceptions: the former converted his earnings on the stock market to landholdings and became a member of the British parliament; the latter served in the Royal Marines. David Hume, James Mill and John Stuart Mill also made important contributions to economics but they were better known as philosophers. Dennis P. O'Brien, *The classical economists* (Oxford: Clarendon Press, 1975): 9.

other classes in society.<sup>9</sup> In turn, the neoclassical economists appropriated and perpetuated the prejudices of their intellectual forebears, the classical economists.

Several studies of mercantilism since the late nineteenth century have shown these charges to be baseless. Gustav Schmoller led in these efforts with the publication in 1884 of *The Mercantilist System in Germany*.<sup>10</sup> He argued that mercantilism was a viable system of state-craft which sought to advance a country's economic and political standing by promoting manufactures, shipping and commercial services. Taking the cue from Schmoller, William Cunningham in his history of English industry and commerce showed how mercantilist policies had advanced England from the fringes of the European economy in the mid-fifteenth century to its center by the middle of the eighteenth century.<sup>11</sup> In 1931 the Swedish economist, Eli Heckscher, produced an erudite two-volume study of mercantilists which strenuously challenged the notion that the economic ideas of the mercantilists were either naïve or confused.<sup>12</sup>

John Maynard Keynes in his *General Theory of Employment, Interest and Money*, published in 1936, also helped to debunk the prejudicial views about the mercantilists. He argued that the mercantilist's espousal of a trade surplus was not based on a crude equation of wealth with bullion. On the contrary, this reflected an intuitive understanding of how additions to the supply of money could stimulate consumption and investments by lowering the rate of interest and, hence, create employment for

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<sup>9</sup> Lars Magnusson, "Introduction," in: Lars Magnusson, ed., *Mercantilist economics*: 1; Walter E. Minchinton, "Introduction," in: Walter E. Minchinton, ed., *Mercantilism: System or expediency?* (Lexington, MA: D. C. Heath and Company, 1969): ix.

<sup>10</sup> Gustav Schmoller, *The mercantile system and its historical significance* (New York: Augustus M. Kelly, 1884/1967).

<sup>11</sup> William Cunningham, *Growth of English industry and commerce*, I (Cambridge: Cambridge University Press, 1905).

<sup>12</sup> Eli Heckscher, *Mercantilism*, translated by Mendel Shapiro (London: Allen and Unwin Ltd., 1935).

the large reserves of underutilized labor.<sup>13</sup> In other words, the mercantilists valued a trade surplus because they believed that an expansion of the monetary base could stimulate both growth and employment, two of the chief desiderata of that era.<sup>14</sup> Monetization of the economy also increased tax collections. Most importantly, however, bullion was indispensable in paying for imports when foreigners would not accept paper or extend credit at a time when arrangements for settling multilateral exchanges were not well-developed.<sup>15</sup> In such circumstances, a country's reserves of bullion served as insurance against famines or, in times of war, as a reliable way of paying for mercenaries, soldiers, ships, and other provisions of war. Should war and famine strike together, the vital importance of bullion could scarcely be overstated. However, mercantilists did not push their quest for bullion without limit. C. H. Wilson reminds us, "[Thomas] Mun was alive to the operation of what we should call quantity theory."<sup>16</sup>

In the same vein, Cosimo Perrotta writes that mercantilists were "obsessed by the strengthening of domestic production," an object they pur-

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<sup>13</sup> John Maynard Keynes, "Notes on mercantilism, the usury laws, stamped money and the theories of underconsumption," in: *General theory of employment, interest and money* (Orlando, FL: First Harvest/Harcourt, 1964): 335-6.

<sup>14</sup> Richard Cantillon (d. 1734) estimated underemployment in France (including soldiers and domestic servants) at one-half its labor force. Lars Herlitz, "Conceptions of history and society in mercantilism, 1650-1750," in: Lars Magnusson, ed., *Mercantilist economics*: 117.

<sup>15</sup> "The Europe that was only in places beginning to free itself from the methods of barter in international trade was not yet fully equipped with those methods of payment and credit which some later writers seem to have assumed." C. H. Wilson, "Trade, society and the state:" 513.

<sup>16</sup> Commenting on the *Discourse* by Thomas Mun, Wilson writes, "Here is no simple-minded bullionism confusing wealth and money: if there is emphasis on treasure it is for practical reasons embedded in the conditions of the day." They better prepare a country to wage wars and protect against famines. C. H. Wilson, "Trade, society and the state," in E. E. Rich and C. H. Wilson, eds., *The economy of expanding Europe in the sixteenth and seventeenth centuries* (Cambridge, UK: Cambridge University Press, 1967): 506-, 511.

sued through export promotion and import substitution. In other words, the mercantilists “were anything but advocates of chrysohedonism [equating wealth with money].” Indeed, Perrotta argues that mercantilism was a reaction to Spain’s failure to grow rich from a massive influx of gold. In 1558, Luis Ortiz, an early Spanish mercantilist, urged the government to keep gold in Spain since this would finance the conversion of raw materials into manufactures. “Real wealth,” according to another Spanish author writing in 1687, “is that of man: and this is our greatest need.”<sup>17</sup>

The differences in the policy prescriptions of mercantilists and classical economists did not stem from any great divergence in their goals. Both sought to augment the wealth of their own countries, although the mercantilists were more emphatic about the dependence of state power on national wealth, especially on wealth that flowed from manufactures and commerce. Like the mercantilists, Adam Smith also regarded political economy to be “a branch of the science of a statesman or legislator,” and that it “proposes to enrich both the people and the sovereign.” Adam Smith is clear too about the connection between wealth and power. “The riches, and so far as the power depends upon riches, the power of every country, must always be in proportion to the value of its annual produce, the fund from which all taxes must ultimately be paid.” It therefore follows that the “great object of the political economy of every country, is to increase the riches and power of that country.”<sup>18</sup> If the mercantilists and the classical economists, then, stood for different economic policies that is not because they espoused different goals. They had different notions about the nature of the commodities: the mercantilists attached higher growth coefficients to some commodities than others; the classical economists did not recognize any differences in the

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<sup>17</sup> Cosimo Perrotta, “Early Spanish mercantilism: the first analysis of underdevelopment,” in: Lars Magnusson, ed., *Mercantilist economics*: 19, 22-23.

<sup>18</sup> Adam Smith, *An enquiry into the nature and causes of the wealth of nations* (New York: The Modern Library, 1776/1965): 397, 352.

growth coefficients of different commodities.<sup>19</sup> As a result, the mercantilists proposed a vigorous and comprehensive industrial policy as a means of catching up with wealthier and more powerful countries, whereas the classical economists showed no partiality for one economic activity over another.

Mercantilist advocacy of government interventions in the economy rested on one overarching premise and several specific ones. First and foremost, they recognized that powerful synergies linked the wealth of a society with the strength of different branches of government.<sup>20</sup> A strong state can only be built on the foundations of a large and prosperous population. In mercantilist thinking, the state can play a decisive role in building these foundations: since it possesses the power to push the economy towards high valued-added activities. Taking a global view of markets, they encouraged the state to manipulate its trade flows, shipping, the structure of the economy and the skill composition of its labor force to capture for itself the highest fraction of domestic and global markets for high value-added activities. Thus stated, we can scarcely fail to recognize that all great powers – regardless of the economic principles they may espouse formally – have always been wary of the loss of domestic markets for high value-added goods and services to foreigners. They have been equally zealous about using their power to help their own enterprises to capture the greatest share of high value-added activities in global markets. The extent of state presence in the economy has varied inversely with the ability of domestic capital to preserve and increase its share of high-value added activities domestically and globally. At least since the fifteenth century, sovereign countries in western Europe have

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<sup>19</sup> We may think of the growth coefficient of a commodity as some multiple  $k$  (most likely  $>1$ ) by which a dollar investment in the production of that commodity might, in the long run, translate into additions to output in the economy.

<sup>20</sup> Indeed, they often embraced a broader conception of the synergies that linked and united the various components of a society: the output structure of its economy, its knowledge and skill base, national cohesion, the strength of its state and military, and its civilizational accomplishments.

always acted upon the knowledge that their prosperity depends on concentrating high-value added activities in their own territory or in the hands of their own nationals operating internationally.

At least since the early sixteenth century, the rank-ordering of different activities occupied a central place in the thinking of nearly all mercantilist writers. When evaluating the contributions that different productive activities make to economic growth, cultural efflorescence and state power, the mercantilists placed manufacturing at the top, followed by commercial activities and shipping; agriculture placed at the bottom. This rank-ordering was based on historical evidence: traders, public officials and diverse thinkers had long noticed the correlation between the most prosperous Italian city states – and later the Low Countries – and their leadership in high-valued added manufactures, shipping, banking, trade and ship-building. In 1589, Giovanni Botero, in his *Reason of State*, wrote that when a country exports its raw materials this is tantamount to exporting “the crafts connected with them and the livelihood of many thousands of men who are dependent upon them.” In consequence, he recommended that the sovereign must “take every possible measure to ensure that the natural products of his country are used and wrought, according to their nature, by his subjects, and then sold outside the country. For in this way more people will make their living by them, and their public and private utility will be greater.”<sup>21</sup>

Mercantilist advocacy of manufacturing was rooted in a fundamental dichotomy between agriculture and manufacturing: the former was primarily the product of nature while the latter was the work of man’s activity, his art, artifice and inventions. Manufacturing labor was seen as “more productive, or at least capable of becoming more productive” than agricultural labor.<sup>22</sup> Since the early seventeenth century, Sophus Reinart reminds us, mercantilists have argued that “there was something revolu-

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<sup>21</sup> Giovanni Botero, *Della ragion de stato* (Venice: Gioliti, 1589): 160, translated and quoted in Antonio Serra, *A short treatise on the wealth and poverty of nations* (London: Anthem Press, 2011): 43.

<sup>22</sup> Lars Herlitz, “Conceptions of history and society in mercantilism:” 92-93.

tionary about the manufacturing process, and that one should specialize in competitively importing raw materials and exporting finished goods.”<sup>23</sup> What distinguished a ‘rude’ from a civilized society was not so much their agriculture but their manufactures. European writers had long observed that urban life, the state, civil society and civilization were founded on the ‘artifice’ of the towns not the products of agriculture. These observations were inspired by the examples of Venice, Genoa, Florence, Milan, Naples, Pisa and the Netherlands

Why is manufacturing a ‘revolutionary’ activity and not agriculture? There are several reasons for this, but chiefly manufacturing derives its dynamism from its increasing returns to scale. On the other hand, once land is fully utilized, capital and labor face diminishing returns in agriculture. Perhaps the clearest statement of this fundamental distinction is to be found in the work of Antonio Serra, the Italian writer of the early seventeenth century. In manufacturing, he writes, “it is possible to achieve a multiplication of products, and therefore of earnings. The same cannot be done with agricultural produce, which is not subject to multiplication. If a given piece of land is only large enough to sow a hundred *tomoli* of wheat, it is impossible to sow a hundred and fifty there. In manufacturing, by contrast, production can be multiplied not merely twofold but a hundredfold, and *at a proportionately lower cost* (emphasis added).”<sup>24</sup> An Italian philosopher of the eighteenth century, Ferdinando Galiani, paraphrased Antonio Serra’s insight in these words: “And *voila* the great difference between manufactures and agriculture. Manufactures increase with the number of arms you put in, while agriculture decreases.”<sup>25</sup>

Antonio Serra listed other advantages that manufacturing enjoys over agriculture. Unlike agriculture, manufacturing is not hostage to the

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<sup>23</sup> Sophus A. Reinert, “Introduction,” in: Antonio Serra, *A short treatise on the wealth and poverty of nations*: translated by Jonathan Hunt and edited by Sophus A. Reinert (London: Anthem Press, 1613/2011): 3.

<sup>24</sup> Antonio Serra, *A short treatise on the wealth and poverty of nations*: 121.

<sup>25</sup> Sophus A. Reinert, “Introduction:” 5.

weather; as a result, earnings from manufacturing remain more steady over time. Manufacturing goods are more storable than agricultural goods: hence, they are easier to export to distant places. Manufacturing goods also “yield much higher earnings than agricultural produce.” “This can be seen,” he writes, “especially in the production of woolens, especially the finer fabrics, in the production of linen, silk, weapons, paintings, sculptures, books, and all the medicinal drugs, *as well as an infinity of other things* (emphasis added).”<sup>26</sup> Implicitly, he is claiming that the finer manufactures provide higher wages to its workers because they have more skills than workers employed in the coarser manufactures. Manufactures derive yet another advantage from the great variety of its products. Variety in manufactures provides a measure of protection against shifts in demand: a decline in demand for some manufactures is more likely to be offset by rising demand for others.

The English mercantilists were equally convinced of the superiority of manufactures over agriculture. In his *England's Treasure by Foreign Trade*, Thomas Mun writes that “we must endeavor to make the most we can of our own, whether it be natural or artificial,” but the latter is to be favored since it supports more employment and also yields greater income. Support for this claim can be found in the Italian cities: they “employ a greater number of people, and get more money by their industry and manufactures of the raw silks of the kingdom of Sicilia, than the king of Spain and his subjects have by the revenue of this rich commodity.” The “natural wares” of England too do not yield as much profit as its manufactures. “For iron ore in the mines,” he emphasizes, “is of no great worth, when it is compared with the employment and advantage it yields being digged, tried, transported, bought, sold, cast into ordnance, muskets, and many other instruments of war for offense and defense, wrought into anchors, bolts, spikes, nails and the like for the use of ships, houses, carts, coaches, plows and other instruments for tillage.”<sup>27</sup>

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<sup>26</sup> Antonio Serra, *A short treatise on the wealth and poverty of nations*: 121.

<sup>27</sup> Thomas Mun, *England's treasure by foreign trade: or the balance of our foreign trade is the rule of our treasure* (Glasgow: R. and A. Foulis, 1755): 18-19.

In other words, when iron ore is processed domestically not only does it support a great number of workers but its processing involves diverse activities that support many different skills.

In explaining the riches of Venice, Antonio Serra offered one of the earliest statements of the principle of cumulative causation connecting trade and the “multiplicity of manufacturing activities.” Venice owes its prosperity, he writes, to “a combination of two accidents, each of which lends force to the other.” The two accidents are the multiplicity of its manufactures and its extensive trade with other parts of Italy as well as with Asia and the rest of Europe. The number of people attracted to Venice by “its extensive trade and its geographical location is increased still further by the number of businesses, and the number of businesses is increased by the extensive trade, which is itself increased by the number of people who come to the city.”<sup>28</sup> Since “multiplicity of manufacturing activities” is just another way of describing division of labor, this anticipates by more than a century and a half Adam Smith’s famous statement about the dependence of the division of labor on the extent of the market.

Similarly, the mercantilists knew of multiple feedbacks connecting manufactures and commerce (including shipping) to the power of the state. The former supplied the state with bullion and, hence, generalized purchasing power over mercenaries, ships and other provisions of war. Manufacturing and commerce contributed to the growth of state power through three other channels. In as much as they stimulated economic growth, they expanded the country’s tax base and, therefore, the state’s capacity to secure advantages for its own nationals through military power. A large and diverse manufacturing sector could supply most of the state’s needs for arms, munitions, and clothing. Finally, if the nationals of a country commanded a large fleet of ships and – an advantage nur-

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<sup>28</sup> Antonio Serra, *A short treatise on the wealth and poverty of nations*: 127.

tured by navigation laws that encouraged domestic shipping – in times of war these ships and sailors (already armed) could be easily diverted when necessary to fighting wars.

### *Physiocrats*

*“Quesnay and his followers “were spokesman...of the monarchy... Quesnay’s great aim was to increase the source of public revenue, which was to come out of the landlord’s rent, enlarged by agricultural prosperity.”*

Henry Spiegel<sup>29</sup>

The physiocrat’s doctrine of laissez faire and a single tax on land rent – based on the premise that agriculture alone produced a surplus – was a reaction to the mercantilist policies favoring manufacturing that had dominated France during the reign of Louis XIV.<sup>30</sup> It was also part of a larger movement in the social and natural sciences which sought inspiration from the order and harmony to be found in nature.<sup>31</sup>

This new doctrine nearly placed mercantilism on its head. In opposition to the mercantilist emphasis on economic growth the physiocrats worked out their policies in terms of an economy that only reproduces itself: it is an economy in equilibrium where the three classes of artisans, tenant-farmers and landowners maintain their respective economic and social positions in the social order over time. Following this shift in emphasis from a dynamic to a static economy, the physiocrats are quite happy to ignore all but one difference between agriculture and manufacturing. There is no discussion in their writings of division of labor, increasing returns to scale, the link between division of labor and the size of markets, variations in the skills demanded in different economic activ-

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<sup>29</sup> Henry William Spiegel, *The growth of economic thought*:197.

<sup>30</sup> Mark Blaug writes, “Physiocracy, as Adam Smith suggested, should be understood as a reaction to the mercantilist policies of Colbert during the reign of Louis XIV.” Mark Blaug, *Economy theory in retrospect* (Cambridge University Press, 1985): 24.

<sup>31</sup> Henry William Spiegel, *The growth of economic thought*: 185.

ities, concern with the military or revenue advantages that a state may derive from a growing share of manufactures and shipping in the economy, or the impetus that manufactures confer on urban life, education, sciences and the fine arts. The physiocrats recognized only one difference between agriculture and manufacturing: only the former produced a surplus after paying for the labor and capital it employed. On this account, the physiocrats regarded agriculture as the productive sector, whereas the artisans were a “sterile” class because they did not produce any surplus. Although small in comparison to the rent from agricultural land, this clearly ignored urban rents as a factor in the costs of manufacturing. In addition, the physiocrats did not permit the artisans to earn rent in the form of monopoly profits since they assumed both equilibrium and perfect competition in all markets.

In opposition to the interventionism of the mercantilists the physiocrats espoused the principle of *laissez faire*. Francois Quesnay and Robert Jacques Turgot were strong proponents of individualism. The former “insisted that the individual is the best judge of his interest, and to Quesnay the secret of the well-ordered society was that everyone works for others in the belief that he is working for himself.”<sup>32</sup> Joseph Schumpeter describes the latter as the Maximum doctrine of Perfect Competition. Quesnay, one of the earliest proponents of this doctrine “held that the maximum satisfaction of wants for all members of society, taken together will result if, conditions of perfect competition prevailing, everyone be allowed to act freely upon his own individual interest.”<sup>33</sup> However, Quesnay made no effort to prove this doctrine; this task would be initiated by Adam Smith who reformulated it as the principle of the “invisible hand’ and it was carried – so the neoclassical economists allege – to its conclusion in the 1950s by Kenneth Arrow and Gerard Debreu

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<sup>32</sup> Spiegel, *The growth of economic thought*: 186.

<sup>33</sup> Joseph Schumpeter, *History of economic analysis*, edited by Elizabeth Boody Schumpeter with a new introduction by Mark Perlman (New York: Oxford University Press, 1954/1994): 253.

among others.<sup>34</sup> As we will show in the succeeding sections, it is the mainstream economists' obsession with the invisible hand – or alternatively the doctrine of laissez faire – that was the chief driving force behind the evisceration of commodities as well as markets.

### *Classical Economics*

*“The very nature of economics is rooted in nationalism.”*

Joan Robinson, 1962.<sup>35</sup>

Although the classical economists recognized some of the complexity of commodities in their discussions of growth, they discarded this complexity when making the case for free markets and free trade.

Several classical economists made much of the distinction between ‘productive’ and ‘unproductive’ activities. The former produced value that was fixed in tangible goods and hence could be stored; the latter produced intangible services that could not be stored or traded.<sup>36</sup> At the same time, Adam Smith makes it clear that unproductive labor “has its value, and deserves its reward” as much as productive labor.<sup>37</sup> Later

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<sup>34</sup> The neoclassical economists regard the mathematical restatement by Kenneth Arrow and Gerard Debreu of the general equilibrium theory first formulated by Leon Walras as the capstone of their theoretical edifice establishing that competitive markets are efficient. There now exists a growing literature that challenges this claim. See Frank Ackerman and Alejandro Nadal, *The flawed foundations of general equilibrium: Critical essays on economic theory* (London and New York: Routledge, 2004).

<sup>35</sup> Joan Robinson, *Economic Philosophy* (London: C. A. Watts, 1962): 124.

<sup>36</sup> In turn, the productive activities are split into four segments ordered by productivity of capital in these segments: first comes agriculture (where capital and labor work with nature), manufacturing, domestic trade, and transport and foreign trade. Adam Smith, *An enquiry into the nature and causes of the wealth of nations*: 293-306.

<sup>37</sup> Unproductive labor is a broad and mixed category. It includes “some both of the gravest and most important, and some of the most frivolous professions; churchmen, lawyers, physicians, men of letters of all kinds; players, buffoons, musicians, opera-singers, opera-dancers, &c.” Adam Smith is claiming that these services, of the ‘gravest’ and ‘most frivolous’ professions, are unproductive because they perish

economists have argued incorrectly that this distinction between productive and unproductive labor is quite empty. In as much as productive labor fixes itself in tangible and storable goods – such as food, raw materials or manufactures – this could be used as working capital and hence contribute in a later period to the output of the economy. David Hume points out that productive activities had another advantage; they store up labor in granaries of corn, bales of cloth and arms that will be available to the state during wars or famines.<sup>38</sup> Generally, this possibility does not exist for the services of ‘unproductive’ labor since this does not fix itself in a tangible good.<sup>39</sup> Thus defined, unproductive uses of labor may reduce its capacity to mobilize working capital and hence its potential for economic growth. On this ground, Adam Smith concludes that the standard of living in any economy will depend on “the proportion between the number of those who are employed in useful labor, and that of those who are not so employed.”<sup>40</sup> Mark Blaug points out that despite much criticism, “Smith’s distinction was retained by all the leading clas-

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in the very instant they produced. Some of us might object that, on a broader view of the economy, all these services are productive. Indeed, they are forms of replacement investment that repair the wear and tear of the body and spirit, both necessary for them to continue to function as productive members of the labor force. Adam Smith, *An enquiry into the nature and causes of the wealth of nations*: 270, 314-15.

<sup>38</sup> E. A. J. Johnson, *Predecessors of Adam Smith: The growth of British economic thought* (New York: Prentice Hall, 1937): 177,

<sup>39</sup> Adam Smith, *An enquiry into the nature and causes of the wealth of nations*: 270.

<sup>40</sup> The dependence of living standards on ‘productive’ activities can only be true in a dynamic context. Unless ‘unproductive’ services are excluded from GDP, the latter, in any given time period, will not change if we change the proportion of the first to the second type of activities. In Adam Smith’s thinking, since savings can only occur in the ‘productive’ sector, a higher proportion of this sector in the economy can only affect the GDP in the long run: not in the short run that excludes growth.

sical economists (although Say, McCulloch, and other minor writers in the period abandoned it).<sup>41</sup>

Similarly, the classical analysis of the economy was built on two vital differences between agriculture and manufacturing. Production in agriculture required both labor and land; and since the land available to the economy was assumed to be fixed in quantity, this produced a tendency towards diminishing returns to labor in agriculture. On the other hand, production in manufacturing relied only on labor; the use of capital was ignored since equipment and tools employed in most manufacturing activities still accounted for a relatively small part of the costs of production. This division of the economy into two sectors with different production characteristics – together with a population that rose and fell with wages – produced an economy that always returned to equilibrium at subsistence wages. As wages rose or fell in response to exogenous shocks, the population adjusts to restore the economy to a new equilibrium at the old subsistence wage.<sup>42</sup>

Among the classical economists, Adam Smith made much of another fundamental asymmetry between manufacturing and agriculture: the former was more amenable to the division of labor than the latter. John Stuart Mill also makes the same point. “The division of labor is also limited, in many cases,” he writes, “by the nature of employment. Agriculture, for example, is not susceptible of so great a division of occupations as many branches of manufactures, because its different operations cannot possibly be simultaneous.” He adds that this asymmetry exists between all extractive industries (not only agriculture) and manufactur-

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<sup>41</sup> Mark Blaug, *Economic theory in retrospect* (Cambridge: Cambridge University Press, 1985): 55.

<sup>42</sup> Gregory Clark, *Farewell to alms: A brief economic history of the world* (Princeton, NJ: Princeton University Press, 2007): chapter one.

ing.<sup>43</sup> This distinction was vital to Adam Smith's theory of economic growth: in his *Wealth of Nations* he made this the chief source of productivity gains in the economy.<sup>44</sup> Within manufacturing too, the extent of division of labor differs from one branch to another. "There are perhaps no manufacturers," writes Adam Smith, "in which the division of labor can be carried further, or in which the machinery employed admits of a greater variety of improvements, than those of which the materials are the coarser metals [iron and steel]."<sup>45</sup>

This complex understanding of commodities, however, raised problems for the classical theory of trade and the doctrine of *laissez faire*. Due to the positive feedback between division of labor and the size of markets, Adam Smith had correctly argued that the countries that enter international trade with an initial advantage in manufactures would continue to deepen this advantage and extend it to other related lines of manufacturing - even in the face of rising wages.<sup>46</sup> Coupled with the limited scope for division of labor in the primary sector and, hence, its lagging productivity, this was likely to turn the terms of trade against the country that exported manufactures and transfer some of the productivity gains in manufacturing to the primary producers.<sup>47</sup> Economists in the

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<sup>43</sup> John Stuart Mill, *Principles of political economy*, abridged and edited by J. Laurence Laughlin (New York: D. Appleton and Company, 1885): 124, 557. < <http://www.gutenberg.org/files/30107/30107-pdf.pdf> >

<sup>44</sup> Adam Smith opens chapter 1, Book One of his classic with a crisp statement connecting productivity of labor to division of labor: "The greatest improvements in the productive powers of labor, and the greater part of the skill, dexterity, and judgment, with which it is anywhere directed, or applied, seem to have been the effects of the division of labor." Adam Smith, *An enquiry into the nature and causes of the wealth of nations*: 10.

<sup>45</sup> Adam Smith, *An enquiry into the nature and causes of the wealth of nations*: 207.

<sup>46</sup> David Hume, however, argued that as wages in the rich country rose it would lose its comparative advantage in those manufactures that made more intensive use of labor. M. Shahid Alam, *Poverty from the wealth of nations* (Houndmills, England: Macmillan Press, 2000): 51-52.

<sup>47</sup> The division of gains between countries exporting manufactures and those exporting primary goods depends on several additional factors. For instance, if the loss of

industrializing countries occasionally worried about this.<sup>48</sup> But their worry stemmed from a simplistic reading of the Smithian dynamics of trade between primary producing and industrializing countries.<sup>49</sup>

The Smithian theory of trade based on the asymmetric application of division of labor in the primary and manufacturing sectors could not make the case for free trade. While Smith argued that the gains from division of labor – and their dependence on the size of markets – constituted an ironclad case for free trade, he made no effort to reconcile this claim against the historical fact (acknowledge by him in several instances) that official policy in Western Europe had favored commerce and manufactures over the previous centuries. More specifically, the most advanced country in Europe – Britain – had practiced strong mercantilist policies over the two previous centuries.<sup>50</sup> As Britain gained the lead in manufactures, its economic and political interests were best served by a theory that promoted the advantages of free trade. Adam Smith's dynamic theory of trade simply could not make the case against protection of manufactures. Adam Smith's dynamic theory of trade was an embar-

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manufactures in a country was attended by an irreversible loss of capital and skills, this would tend to make it worse off. In other words, it was uncertain how, in the presence of division of labor, the benefits from trade would be shared between the countries into trading relationships.

<sup>48</sup> The thesis that the prices of agricultural products rise over time while the prices of manufactured goods decline was advanced by Adam Smith: it flows directly from his assumption in his dynamic analysis that manufacturing yields increasing returns while agriculture is subject to diminishing returns. Mark Blaug, *Economic theory in retrospect*: 53.

<sup>49</sup> Alam (2000: 74-79) has shown that these worries were misplaced. They would disappear once we incorporate the technology spillovers from manufacturing in the advanced countries to their agriculture; the invention of artificial substitutes for raw materials; population growth in the poor primary-producing countries; and the dependence of wages in these countries to their productivity in food-producing sector.

<sup>50</sup> M. Shahid Alam, *Poverty from the wealth of nations: Integration and polarization since 1760*: 52-53; Ha-Joon Chang, *Kicking away the ladder: Development strategy in historical perspective* (London: Anthem Press, 2003): 19-24.

rassment. It had to be remedied.

In time, the successors to Adam Smith took up this challenge by recasting their case for free trade in terms within a static framework. When David Ricardo formulated his theory of comparative advantage, he made no references to the complications arising from division of labor. The goods entering international trade – the wine and cloth in his famous example – were now produced under conditions of constant unit labor costs. It did not matter that David Ricardo's theory of growth and distribution was built on the law of diminishing returns to labor in agriculture arising from a fixed supply of land, so that the unit labor cost of wine (a product of agriculture) would rise with output. Wine and cloth – proxies for agriculture and manufacturing – now became symmetric products; they required only labor for their production under conditions of constant returns to scale. On the production side, commodities in this Ricardian world are completely defined by a single number: their unit labor costs.

This redefinition of commodities – with constant labor costs – allowed Ricardo to cast the theory of trade in a 'static' framework: it examined a one-time impact of the *opening* of trade on the allocation of labor and welfare in each country. In Ricardo's model, trade produced complete specialization: it also improved welfare in both countries. Quite conveniently, then, through an extreme evisceration of commodities, David Ricardo had avoided dealing with all the big questions about trade regarding its impact on tastes, technology, income distribution, savings, capital formation, class conflicts, national sovereignty and population growth. On this valiant disappearing act was founded perhaps the most venerable result in the entire canon of economics.

It should be noted that the assumption of constant costs had already been introduced into the theory of price determination by Adam Smith. "If we look carefully at Smith's examples of price determination, we notice that he always assumes implicitly that the 'natural price' of a commodity does not vary with its rate of output. In other words, he assumes that the industry in question produces under conditions of constant

costs...; cost per unit remains constant regardless of the level of output.”<sup>51</sup> The neoclassical habit of making the assumptions that support desired conclusions originated with Adam Smith. If the theory of price determination required markets to be in equilibrium, and such an equilibrium could not exist without constant costs, this assumption becomes a requisite of the theory of price determination. Adam Smith led the neoclassical economists in this venerable tradition.

### *Neoclassical Economics*

*“With the triumph of formalism, the economists’ community began ever more to resemble the community of mathematicians: finding an elegant generalization of an established result, or a new application of a well-known concept, became the only desiderata of young aspirants in the subject...”*

Mark Blaug<sup>52</sup>

The evisceration of commodities that began with Adam Smith and David Ricardo was carried to its logical conclusion in the competitive paradigm of neoclassical economics.

The marginalist revolution provided the definitive impetus for carrying the evisceration of commodities to its logical conclusion. The economists who launched the marginalist revolution turned their backs definitely on questions of growth. Instead, they focused their attention exclusively on the study of the purely allocative functions of markets, that is, the problem of allocating scarce resources that have alternative uses to the satisfaction of ends that are given as datum to the markets. Thus, for Stanley Jevons, the task of economists was to determine – in the presence of a fixed labor, needs and technology – “the mode of employing their labor which will maximize the utility of the produce.”<sup>53</sup> The goal

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<sup>51</sup> Mark Blaug, *Economic theory in retrospect*: 41.

<sup>52</sup> Mark Blaug, “The formalist revolution of the 1950s,” in Warren B. Samuels, Jeff E. Biddle and John B. Davis, eds., *A companion to the history of economic thought* (Blackwell Publishing, ): 408.

<sup>53</sup> Mark Blaug, *Economic theory in retrospect*: 295.

now was to determine how markets would attain the optimal allocation of resources: and this necessarily directed the attention of marginalists to markets in equilibrium. Moreover, in order to establish the efficiency of markets, this equilibrium would have to be unique. It is not hard to see that in the presence of increasing returns to scale – even in some industries – the markets could attain multiple equilibria: and this would greatly complicate the task of determining the properties of these equilibria and much less how the markets arrived at these equilibria. Only the assumption of constant returns to scale offered the chance (though not the certainty) of ruling out multiple equilibrium.<sup>54</sup>

More than a hundred years later, when the neoclassical synthesis was being developed – integrating the utilitarian framework with the classical emphasis on production costs – land was merged with capital to create a world with two factors of production. Once land was dropped from the production function, this eliminated the difference between primary activities and manufactures; with the elimination of a fixed amount of land from the former, both were now subject to constant returns to scale. It was now possible to reduce differences between any two goods to one dimension: they could only differ in the ratio in which they combined capital and labor. Moreover, capital was taken to be fully malleable so that as the textile industry declines, machinery and buildings in this industry can be converted into blast furnaces for use in the expanding steel industry.

The marginalists had one more axe to grind. They were quick to realize that their marginalist analysis offered tools for demonstrating the fairness of market outcomes. It was not too difficult to show that firms eager to maximize profits will pay each worker a wage that equals his

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<sup>54</sup> Alam (2013) has shown that the market equilibrium described by the competitive paradigm is inconsistent with CRS. M. Shahid Alam, “Constant returns to scale: Can the market economy exist?” (March 10, 2013) <<http://ssrn.com/abstract=2231247>>

marginal product; the same principle applies to payments for the use of any other input. Certainly, this result depended on a battery of assumptions about the production function as well as the nature of capital and labor; but this has never stopped the marginalists from introducing clever assumptions if they produced the desired results. Phillip Wicksteed placed this marginal productivity theory of factor prices on more solid ground when he pointed out that if production functions are characterized by constant returns to scale – or mathematically stated, they are linear homogenous – payments to factors will fully exhaust the total product. With so much hanging in the balance, constant returns to scale became an indispensable ingredient in the theoretical armory of marginalist economists.<sup>55</sup>

Two Swedish economists, Eli Heckscher and Bertil Ohlin, applied this framework to reformulate Ricardo's theory of comparative advantage. They would explain comparative advantage in terms of differences between countries in their factor endowments: although they had a more elastic understanding of factors of production than the neoclassical economists.<sup>56</sup> In the early post-War years Paul Samuelson integrated the Heckscher-Ohlin theory within an explicitly neoclassical framework that only allowed for two factors of production, capital and labor; he also assumed that technology was a public good that was equally available to all countries in the world.<sup>57</sup> Within this formal neoclassical framework, free

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<sup>55</sup> For an excellent review of the place of constant returns to scale in the thinking of the leading classical and neoclassical economists, see John Hicks, "The assumption of constant returns to scale," *Cambridge Journal of Economics* (1989): 9-17.

<sup>56</sup> Eli Heckscher, "The effect of foreign trade on the distribution of income," *Ekonomisk Tidskrift* (1919): 497-512, translated as chapter 13 in American Economic Association, *Readings in the Theory of International Trade* (Philadelphia: Blakiston, 1949): 272-300; Bertil Ohlin, *Interregional and International Trade* (Cambridge, Mass.: Harvard University Press, 1933/1966).

<sup>57</sup> Paul Samuelson, "International trade and the equalization of factor prices," *Economic Journal* 58 (1948): 163-84; Paul Samuelson, "International factor-price equalization once again," *Economic Journal* 59 (1949): 181-97.

trade produced an extraordinary result: it equalized wages and the return to capital in all countries. This was the ultimate defense of free trade. It did not matter whether a country exported computer chips or potato chips; free trade would guarantee the same real wages in all countries.

There are those who argue that theoretical innovations in economics flow from the internal logic of the discipline: they succeed because they offer solutions to difficulties in existing theories. This approach ignores the growing unease over the labor theory of value since Karl Marx worked out its radical implications: and it became the basis of a theory of labor exploitation and the revolutionary overthrow of the capitalist class. The marginalists offered a paradigm that visualized markets as a self-contained space within which capitalists and workers – the latter as suppliers of labor services *and* consumers – were free to pursue actions that produced the best results for all participants on the market. In other words, the marginalists replaced the class conflicts that were integral to Ricardian and Marxian analysis with the harmonious interaction of free economic agents within the framework of markets that allowed each of them to pursue their best interests.

### *Challenging Laissez Faire Economics*

“...I have adopted in my theory merely the valuable parts of that much-decried system [mercantilism], whilst I have rejected what is false in it; that I have advocated those valuable parts on totally different grounds from those urged by the (so-called) mercantile school, namely on the grounds of history and of nature...”

Friedrich List (1841)<sup>58</sup>

The first challenge to the laissez faire economics of Adam Smith came in the 1790s from the United States but this doctrine would be opposed by economists in nearly every backward country that had ambitions of catching up with the advanced economies of their times.

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<sup>58</sup> Friedrich List, *The national system of political economy*, translated from German by Sampson S. Lloyd (Fairfield, NJ: Augustus M. Kelley, 1841/1991): xxx.

The challenges would be directed primarily at the classical economist's claim that a country's economic direction should be left to the markets: they alone can determine unerringly a country's areas of comparative advantage. Since the classical claim was established in a static framework that stripped commodities of their real-world complexity – thereby ignoring the manifold ways in which they impacted upon the economy and society – these challenges made their case for dirigisme by bringing back the real-world complexity of commodities into their discussion. In consequence, they also abandoned the static discussions of efficiency in favor of the contributions that different commodities make growth in productivity, investment, innovation, skill-formation, changes in tastes, growth of market, creation of new institutions and nation and state-building. In this broader and dynamic framework, manufactures made greater contributions to economic and social development than the production of primary goods.

The classical theory of free trade was primarily an ideological cover for the interests of advanced countries that had built a commanding lead in the new manufacturing technologies. Should the lagging countries open their economies, the free play of market forces were likely to produce unequal development; they would concentrate the production of manufactures and commerce in the advanced countries and of primary goods in the lagging countries. If the lagging countries opposed free trade, the advanced countries could use force against them and claim that force had been used for their own good. A little violence against the benighted countries could not hurt if the objective was to drag them into the charmed circle of free trade. Imperialism in the new industrial age would be lubricated by the doctrine of free trade.

As a result, the sovereign lagging countries nearly always defied the free trade doctrine: at least until they had developed competitive advantage in some manufacturing activities. At the same time, they had to respond theoretically to the ideological challenge of the free trade doctrine buttressed as it was by the intellectual prestige of Britain, the world's leading power. In the interest of economy, we will only examine

how the economists in one country – the USA – articulated their opposition to the doctrine of free trade. According to one source only six of the fifteen leading American economists during the half century from 1820 to 1870 threw their weight behind the promotion of manufactures.<sup>59</sup> Although outnumbered, it was the protectionists who carried the day. We will examine the ideas of two of these protectionist writers: Alexander Hamilton and Friedrich List.<sup>60</sup>

Unlike the mercantilist writers, the American protectionist writers constructed their case for protectionism primarily in economic terms. An economy that combines manufactures with agriculture, they argued, would produce greater prosperity than one which specializes in agriculture. They rejected the narrowly economic and static framework of the classical economists in favor of a dynamic conception of the economy. Like the mercantilists, the American protectionists were interested in promoting a better utilization of existing resources but their chief interest lay in emphasizing the stronger contributions that manufactures make to the growth of a country's productive powers. In other words, whereas the mainstream economists had homogenized commodities, the American protectionists took a leaf from the mercantilists and insisted on demonstrating the multifarious differences between manufacturing and agriculture.

Alexander Hamilton's *Report on Manufactures*, presented to the Congress in 1791, builds its case for protection primarily around the greater scope for division of labor in manufacturing. Adam Smith recognized improvements in skills, mechanization and savings in time lost in mov-

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<sup>59</sup> Frank A. Fetter, "The early history of political economy in the United States," *Proceedings of the American Philosophical Society* 87, 1 (July 1943): 53.

<sup>60</sup> Although the latter was a German, he spent nearly ten years in the United States from 1825 to 1830. It was here that List developed his views about the "productive powers" of an economy and the importance of manufactures in the development of these powers: the articles he published during his stay in the United States were published as *Outlines of American Political Economy*. See Friedrich List, 'Outlines of American political economy', in M. Hirst, *Life of Friedrich List and Selections from his Writings* (London: Smith, Elder & Co., 1909): 147-272.

ing between tasks as the three sources of gains in productivity from division of labor; to this Hamilton added a fourth. The greater range of activities in manufactures facilitates a better fit between the diverse talents of any population and the jobs available. In addition, Hamilton argued that manufacturing holds the better prospect of attracting immigrants, stimulating capital inflows, employing workers faced with a temporary slack in their regular work, creates work that is better suited than agricultural tasks to the capacities of women and children, and allows work to occur round the year and into the night. It benefits agriculture too by creating a more steady demand for its products as well as creating demand for new agricultural products.<sup>61</sup> On the whole, Hamilton's *Report* presents a more comprehensive statement of the advantages of division of labor than is to be found in Adams Smith's *Wealth of Nations*.

Friedrich List carries Hamilton's analysis to a deeper level. He focuses his discussion on the 'productive powers' of an economy or its 'powers of producing wealth.' List breaks down a country's productive powers into three components, its natural, material and mental capital. Natural capital is the equivalent of land in the writings of classical economists; material capital consists of machines, inventory and raw materials; and mental capital is comprehensive category that includes human, scientific, cultural, social, institutional, and political capital or the capital bound up with a country's governance. It is mental capital that possesses the greatest potential to propel an economy forward on all fronts. At the same time, List emphasizes the reciprocal relations among the three forms of capital in different economic activities.<sup>62</sup>

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<sup>61</sup> Alexander Hamilton, *Report on Manufactures: Communication to the House of Representatives, December 5, 1791* (Washington: 1913): 11-17.

<sup>62</sup> "The augmentation," writes List (1841: 228), "of the national material capital is dependent on the augmentation of the national mental capital, and *vice versa*." A similar reciprocity exists between 'material agricultural capital' and material manufacturing capital; and 'material commercial capital acts everywhere as an intermediary, helping and compensating between both.'" Friedrich List, *The national system of political economy*: 228.

In Friedrich List's system, the superiority of manufacturing over agriculture and commerce derives from its greater ability to generate mental capital. The classical economists, he writes did not comprehend "how greatly the nature of the agricultural productive power differs from the nature of the manufacturing productive power."<sup>63</sup> List was determined to rectify this fundamental error in classical economics in most exhaustive manner; he devotes nine of the seventeen theoretical chapters in his book to discussions of the powers of manufacturing to stimulate progressive changes in every department of the society and economy. "Manufactories and manufactures," he writes, "are the mothers *and children* of municipal liberty, of intelligence, of the arts and sciences, of internal and external commerce, of navigation and improvements in transport, of civilization and political power. They are the chief means of liberating agriculture from its chains, and of elevating it to a commercial character and to a degree of art and science, by which the rents, farming profits, and wages are increased and greater value is given to landed property." On the contrary, agriculture holds back a country's economic development. In a condition of "merely agricultural industry, caprice and slavery, superstition and ignorance, want of means of culture, of trade, of transport, poverty and political weakness exist."<sup>64</sup>

Although this was not a part of interventionist thinking, the neoclassical world view about commodities was challenged in the 1930s by two economic historians. David Ricardo had reduced differences between two commodities to their labor coefficients; and neoclassical economists had narrowed this difference down to capital-labor ratios. Two economic historians marshaled statistical data to present a very different view of the economy. In 1935 and 1940 respectively, Alan Fisher and Colin Clark published two books that divided the economy into three rather well-defined sectors - primary, secondary and tertiary - whose output and

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<sup>63</sup> Friedrich List, *The national system of political economy*: 148.

<sup>64</sup> Friedrich List, *The national system of political economy*: 141-142.

employment shares in the economy had followed rather different trajectories in countries that had experienced sustained increases in per capita income.<sup>65</sup> These different trajectories in the shares of the three sectors could be explained primarily by differences in the income elasticities of demand and rates of growth in labor productivity in the three sectors. While these differences across the three sectors of an economy were being explored by other economic historians, two neoclassical economists – Robert Solow (1956) and Trevor Swan (1956) – would develop theories of growth for an economy that produced one good under conditions of constant returns of scale.<sup>66</sup>

Starting in the 1950s, the eviscerated commodities of neoclassical economics faced a new theoretical challenge from development economics, a new branch of economics called forth by the challenges of economic growth in the lagging countries of Asia, Africa and Latin America. Encouraged by the Keynesian rejection of neoclassical economics, a small number of economists began to build their analysis of economic development on a complex view of commodities and markets. The early pioneers of development economists – chief among them Paul Rosenstein-Rodan, Ragnar Nurkse, Tibor Scitovsky, Hans Singer, Raul Prebisch, W. Arthur Lewis, Albert Hirschman and P. C. Mahalanobis – preferred to examine the problems of development under conditions that better approximated the real world.<sup>67</sup> Among other things, they observed significant differences across industries in their conditions of employment, the technologies they used, the demand conditions they faced, their ability to generate positive externalities, the rates at which they produce learning by doing, the pressures they create for savings and investments, the

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<sup>65</sup> Allan G. B. Fisher, *The clash of progress and security* (London: McMillan, 1935); and Colin Clark, *The conditions of economic progress* (London: McMillan, 1940).

<sup>66</sup> Robert M. Solow, “A Contribution to the Theory of Economic Growth,” *Quarterly Journal of Economics* **70**, 1 (1956): 65-94; Trevor W. Swan, “Economic Growth and Capital Accumulation,” *Economic Record* **32**, 2 (November 1956): 334-361

<sup>67</sup> Dudley Seers, ed., *Pioneers of development* (New York: Oxford University Press, 1984).

nature of forward and backward linkages they created, the indivisibilities in their operation, the pressures they produce for worker discipline, etc. In comparing the growth-producing attributes of manufactures and agriculture, these economists concluded that the development of manufactures carried by far the greater potential for injecting dynamism into their moribund economics that had long been trapped in primary production with traditional technologies. In other words, they turned the world of neoclassical economics on its head: they were closer in spirit and method to the mercantilists and the protectionist economists of the nineteenth century.

Upon this more realistic conception of commodities, the development economists supported an interventionist role for the government in the backward economies of the post-War era. It is doubtful however if the newly formed governments in the former colonies waited for the approval of economists in implementing their interventionist programs in support of economic development. These governments could not sit on the sidelines in the face of rising demands by vocal segments of their population for better paying jobs, education, industrialization, and the quick entry of indigenes into the ranks of professionals, managers, bankers and industrialists. For the most part, the development economists provided the rationale for what the governments in developing countries were doing or would have done on their own.

Starting in the late 1970, a few neoclassical economists – led by Paul Krugman, Elhanan Helpman and others – took upon themselves the task of explaining intra-industry trade flows that made up the bulk of trade between advanced countries.<sup>68</sup> The explanation was fairly straightforward once you jettisoned the assumption of constant returns to scale. In world of increasing returns to scale (IRS), a country's competitive advantage results from a variety of accidents. International trade then deepens these advantages. IRS also makes it unlikely that any country –

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<sup>68</sup> K. S. Jomo and Rudiger Von Arnim, "Trade theory status quo despite Krugman," *Economic and Political Weekly* (December 6-12, 2008): 29-31.

even a big country – will develop competitive advantage in all lines of manufacturing. Throw into this picture product branding and diversity of tastes in a population: and you have an explanation of intra-industry trade flows. Once these intuitive ideas were packaged in mathematical models a new trade theory was born. At last, neoclassical economists had embraced some elements of the complexity of commodities that were part of the repertoire of mercantilists and their descendants: it appears that modeling had made mercantilist ideas respectable in academia. It would now be difficult to argue against strategic trade policies. Strangely, however, the rise of the new trade theory was followed by the triumph of neoliberalism based on neoclassical orthodoxy. The great powers were not about to jettison their interests just because some MIT economists had made mercantilism mathematically respectable.

### *Concluding Remarks*

A review of economic ideas since the fifteenth century reveals two broad streams of economic thought. The older stream, dating back to the fifteenth century, was interventionist: it advocated government interventions in the economy in support of economic growth. The second stream of thought, with Adam Smith as its first systematic exponent, took the opposite position: it argued that government's role in the economy should be limited to providing public goods.

It is worth noting that the writers in the older dirigiste economics – later known as the mercantilists – were nearly always based in the backward countries of Western Europe: they were backward in manufacturing, commerce and shipping compared to the more advanced economies of their times.<sup>69</sup> Towards the end of the eighteenth century, one of these backward countries – Britain, a devoted practitioner of mercantilist policies for three centuries – had turned itself into the economic, political

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<sup>69</sup> Starting in the mid-twentieth century, several economists based in advanced countries took interventionist positions: but they were concerned with the problems of economic growth in backward countries and several of them were immigrants from backward countries.

and military leader of Europe. It is scarcely surprising that it was an economist based in this country – Adam Smith – who first offered a systematic statement of the laissez faire school of economic thought. Over time, this approach to economics was embraced by other countries in Western Europe and its overseas extensions as they too reached the frontiers of economic development. Dirigisme, however, did not die out with the rise of laissez faire economics. It migrated to countries that were being left behind in the race for economic growth – such as the United States, Germany and Eastern Europe – and that were now eager to catch up with Britain and other advanced economies of their times. The connection between interventionist economics and economic backwardness is nearly a constant in the economic history of Western Europe in modern times. Indeed, we can observe the same connection in nearly all sovereign countries that have been free to formulate their own economic policies.

These two approaches to economic policy – interventionist and laissez faire – are supported by two very different definitions of commodities. The interventionist approach emerges from an understanding of the complexity of commodities that arranges commodities in a hierarchy by their growth coefficients (GCs) and their rent-coefficients (RCs) or their capacity to earn rent. The high GCs and high RCs stem from a variety of sources, including increasing returns to scale, high ratios of capital to labor, skilled to unskilled labor and new knowledge to old knowledge, strong positive externalities, and economic and political institutions that support economic growth. Given these sources of competitive advantage in high-end commodities (with high GCs and high RCs), it becomes clear that late starters cannot become competitive in these commodities until they are allowed to establish the sources of competitive advantage. Hence, the interventionist stance of these economists. Lagging countries needed protection from advanced countries if they were to develop competitive advantage in commodities with high GCs and high RCs.

On the other hand, the interests of the advanced countries are best

serve by *official adherence* to a laissez faire approach.<sup>70</sup> These are countries with strong competitive advantage in a broad range of high-end commodities; their leading industries do not need protection and they possess the R&D capability to strike out in new directions. These countries have one overriding objective: to increase their share in global markets for high-end commodities. This demands that they gain access to the markets and resources of lagging countries: this lowers their costs via increasing returns to scale and access to cheap resources, increases the rents they earn, and reduces the chance that lagging countries can compete with them in high-end commodities. While they seek to exclude lagging countries from high-end commodities, the advanced countries are quite happy to open their own markets – with appropriate caveats – to their markets for low-end Heckscher-Ohlin goods. In other words, the advanced countries use laissez faire policies to arrange trade with the lagging countries on the most advantageous terms. They seek to monopolize industries with high GCs and high RCs: and exchange the products of these industries against Heckscher-Ohlin goods from the lagging countries.

If laissez faire brings the greatest gain to advanced countries precisely because commodities are complex – why don't they defend this policy on the basis of a theory that clearly identifies these gains? The answer to this is fairly obvious. A theory based on complex commodities would also demonstrate lagging that countries lose under laissez faire policies: in absolute or relative terms. In the real world with complex commodities, a policy of laissez faire produces very unequal gains from trade by concentrating production of low-end goods in the lagging countries and high-end goods in the advanced countries. Certainly, the policy makers in advanced countries know all this: too often, it is the economists who are the true believers in their simplistic theoretical constructs. The ideological challenge for the advanced countries is to obfuscate the unequal dis-

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<sup>70</sup> At the same time, they retain the prerogative (by virtue of the power they command in the global capitalist system) to nurture new high-end commodities or to slow down the decline of their Heckscher-Ohlin goods.

tribution of gains from trade produced under *laissez faire*. This is what neoclassical economics delivers with a world view that strips commodities of most of their real-world properties. With their intellectual prestige behind this fictional account of trade, the advanced countries seek to browbeat the lagging countries into adopting *laissez faire*.

However, *laissez faire* prevails not only because of the intellectual prestige of free-trade theories. The lagging countries open up their economies because the global system leaves them with no other option. The lack of options was obvious enough under the old colonial system. When this system ended in the 1950s the newly independent countries enjoyed for a while real sovereignty: and nearly all of them rejected the dictates of neoclassical economics. But this honeymoon with sovereignty was not going to last. Under the new imperialism that gained ascendancy during the 1980s, the lagging countries retained the trappings of independence but most of them lost control over their economic policies. The new imperialism ensures that the interests of the ruling classes in the lagging countries are tied to those of the advanced countries: so that they willingly serve their masters. When they deviate from this discipline, the imperialist powers are ready to punish them with political ostracism and financial and trade sanctions: and if these devices fail the CIA and the marines are sent to finish the job.