History of Economic Thought

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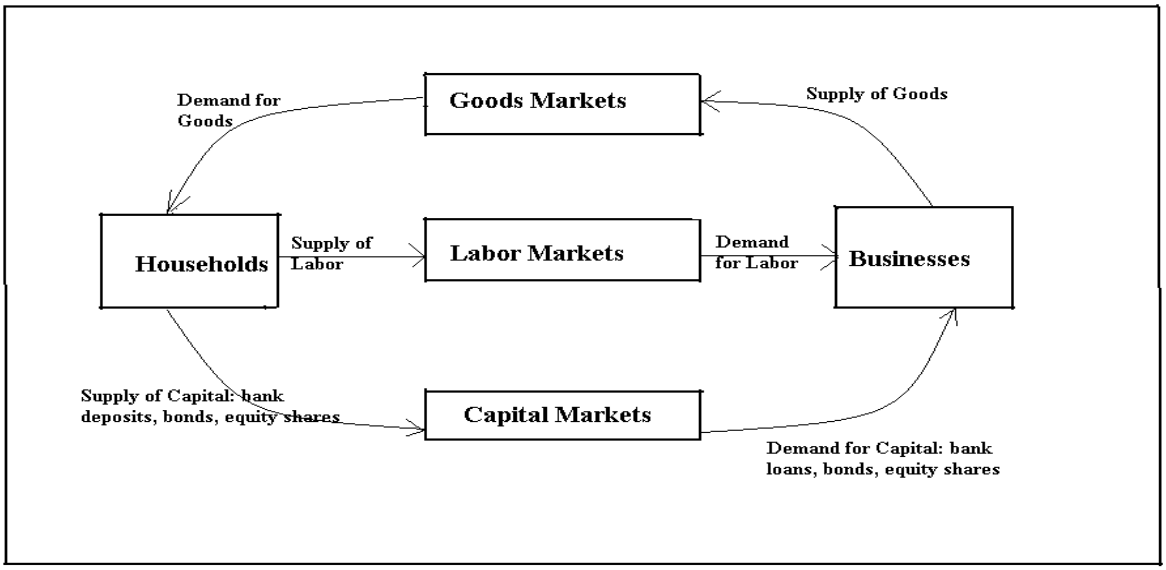
Throughout history, economists have been concerned with the workings of an economy. A typical representation of the workings of an economy would include three markets, goods markets, labor markets, and capital markets, as follows:



The concerns of economists over time included questions such as: What determines prices in these three markets (good prices, labor prices [wages], money price [interest rates])? What determines quantities in these three markets (goods produced/consumed, quantity of labor employment, investment levels)? What should be the organization of production (private sector, collective, government)? What should be the role of the government? How to maintain economic growth and stability?, etc.

These questions were addressed by different schools of economic though over time, by the following main schools of economic thought:

Ancient Greek Economists	(380 BC)
The Scholastics	(1200 AD)
Late Scholastic Period: The Salamanca School	(1536 AD)
The Mercantilists	(1568 AD)
The Physiocrats	(1768 AD)
The Classical School	(1776 AD)
The Neoclassical School	(1870 AD)
The Marxist School	(1848 AD)
The Keynesian School	(1936 AD)
The Neo-Keynesian School	(1937 AD)
The Post-Keynesian School	(1965 AD)
The New Monetarist Chicago School	(1970 AD)
The New Classical School	(1980s AD)
The Institutional School	(1900 AD)
The Economic Development Theories	(1930 AD)

Ancient Greek Economists (380 BC)

The study of Economics started with the ancient Greeks, principally **Aristotle** (380 BC). They looked at economics from an ethical and moral angle.

On the goods market:	What is a just or fair price in an exchange of money for goods?
In the labor market:	Is forced labor without wages (slavery) justified?
In the capital markets:	Is it fair to charge interest rates?

On the issue of "just prices" Aristotle ***(in his book Ethics)*** had said that the "just" exchange ratio of goods (i.e. their just price) should be in proportion to their "**intrinsic worth**" to men. Aristotle argued that people's needs were different and thus the degree of usefulness and intrinsic worth of a good varied for different people. This justified why goods should be allowed to exchange at different prices in different places and times. The cost of production was not considered a factor determining prices. It is notable that later on, Roman law was much more flexible: it considered a price "just" simply if it was agreed to by the contracting parties -- the notion of intrinsic usefulness or worth was not a consideration.

On forced labor, Aristotle felt that "Slavery" was an ordinance/law of nature and justified because it benefited both the master and the slave. It helped to create wealth. But tempered his acceptance by insisting that masters should not abuse their authority, since the interests of master and slave are the same.

On interest rates (or the value of money), Aristotle's idea (in his *Ethics*, not his *Politics*), was that money was merely a human social convention which yields no utility itself. Thus, the value of money was "imposed" by humans. Interest rates are just decided by people arbitrarily.

For centuries, Aristotle's ideas were the center of economic studies in Europe.

The Scholastics (1200 AD)

In the years 1250s and 1550s AD, a number of Christian writers (starting with the Dominican **Saint Thomas Aquinas in 1250 AD**) revived the Ancient Economic thinking and elaborated on economic matters also from a moral and ethical angle. These "Scholastics" theologians were particularly concerned with four themes: (i) justice in economic exchange (prices); (i) private property, (ii) entrepreneurship and profits, and (iv) money and usury (interest rates).

(i) **Prices**

The issue of "**justice in exchange**" was a complicated issue. In his ***Ethics,*** Aristotle had discussed this as an application of commutative justice. He said that the just exchange ratio of goods (i.e. their just price) should be in proportion to their "**intrinsic worth**" to men. The Thomists attempted to reconcile Aristotle's notion with the Bible. They originally interpreted this as the "intrinsic worth" of goods (*bonitas intrinseca*) in terms of the order of appearance of things in the book of Genesis. This led to some problems -- to take one popular example, rats are of higher Biblical order than wheat, but are they really worth more?

As such, the Scholastics (esp. Jean Buridan) came with the alternative idea that the intrinsic value of a good is more loosely connected to "**human needs**". Thus, he related prices and the value of goods to their "**usefulness**" to man. However, this seemed to undermine the idea that goods have "intrinsic worth". "**Usefulness" is not quite a characteristic of a good itself but rather lies in the relationship between goods and people**. Aristotle had argued that people's needs were different and thus the degree of usefulness varied and many of the Scholastics adopted this. This might justify why goods should be

allowed to exchange at different prices in different places and times. Also, it might explain why wheat should be worth less than flour, even though one is derived from the other.

Even if we hang the intrinsic value of a good on its "**usefulness**", the question still is: how does one estimate what the price ***should*** be. What is the "**just price**" (*justum pretium*) of a good? Following the Golden Rule ("Do unto others as you would have them do unto you"), the Scholastics decided that a person should not charge more for a good than what he would be willing to pay for it himself. This not only to make ethical sense but also seemed like a good way to estimate the "usefulness" of a good. If a bearskin is so useful to you that you would be willing to pay two deerskins for it, then if you own a bearskin you must sell it for two deerskins.

Duns Scotus, the Franciscan theologian and Thomas's great rival, was disturbed by the unwillingness of the Thomists to commit themselves to a precise idea of "intrinsic worth" and "just price". **He came down on the side that argued that the "just price" of an object was its "cost of production", i.e.** the labor and expenses of the provider of the good. However, Scotus realized that this might imply waste: it is not unlikely for expenses to be exaggerated beyond what is necessary to produce the good, thus the "just price" might be artificially inflated. Scotus struggled with these questions and went on to make some quite modern reflections about the necessity of **competition** to determine just price, and thus the immorality of monopoly.

A more disturbing question was posed by another Scotist, **Gabriel Biel**. If the rule of justice in exchange is followed so that only goods of equal worthiness are exchanged, then, in modern language, Golden Rule-guided exchange **is *not* utility-enhancing** for either party. But, suggested Biel, what if there were advantages to both parties in exchange? What is the just price then? This was not clarified by the Thomists, but it is evident that Biel's argument would undermine the concept of "just" price entirely.

The Salamanca School of Spain, later on around 1,540, resolved the problem by arguing that the estimation of usefulness varies from person to person. Consequently, the just price of a good is nothing other than the **natural, exchange-established price**. There is no need to go beyond that. **In a competitive market, they noted, buyers will not be able to pay less for a good than its usefulness to them and sellers will not be able sell that good for more than what it is useful to them**. In this manner, the Salamanca School was also able to resolve the *paradox of value*: diamonds, which are intrinsically useless, normally exchange at a much greater price than water, which has great usefulness. The Salamanca scholars concluded that as men are the best judges of what is "useful" to them, then diamonds must be useful in some mysterious way.

(ii) **Private Property**

The coexistence of **private property** with Christian teachings was never comfortable to the Christians. In the 5th Century, the early Church fathers (the "Patricians", e.g. St. Augustine) had struck down "communistic" Christian movements and the Church itself went on to accumulate enormous amounts of property.

In the 12th Century, St. Francis of Assisi began a movement (the "Franciscans"), which insisted on vows of poverty, "brotherhood" and deplored the accumulative tendencies of the Church. Against the Franciscans were arrayed St. Thomas Aquinas and the Dominicans, who dug out of Aristotle and the Bible the necessary arguments to put down their challenge. The Thomists took a practical stance**: they argued that private property was a "conventional" human arrangement with no moral implications, and furthermore, it had the nice side-effect of stimulating economic activity and thus general welfare.** The Thomists cautioned that this did not mean they blankly endorsed all private enterprise: the "love of lucre", they noted, was a serious sin. They stressed the fact that man only has "stewardship" of God's property and should make property available for communal use. They also claimed that theft in times of need was justifiable.

(iii) **Entrepreneurship and Profits**

Another question that arose was that of **entrepreneurship and profits**. Should a merchant be allowed to profit from differentials in prices? **The Scholastics replied with a qualified yes, provided the merchant is not motivated by pure gain and his profit is only just enough to cover his labor expenses (sacrifices) of the merchant.** They went on to argue that the trader, far from being a parasite, is performing a valuable service and increasing general welfare by meeting different needs. But why are needs different? Perhaps God wanted men across the world to engage in exchange and therefore get to know each other, so as to increase their sense of "brotherhood".

(iv) **Money and Interest Rates**

The charging of **usury**, or interest on money lent, came quickly under scrutiny. There is no clear basis for a ban on usury in Christian scriptures. The most famous injunction on interest emerges ambiguously as: "Upon a stranger thou mayest lend upon usury, but unto thy brother thou shalt not lend upon usury." (Deuteronomy, 23: 20). To early Church fathers, like St. Jerome, the Christian notion that "all men are brothers" necessarily implied that usury must be banned outright. Another patrician, St. Ambrose, decided that lending with interest to enemies in the course of a just war was permissible.

However, others noted that the Hebrew term for "usury" in the cited Biblical passage is closer to "bite", so perhaps it only seeks to prohibit "**excessive interest"** or interest levied upon the poor, but not ban it altogether. Other Biblical passages (e.g. Exodus 22:25) seemed consistent with this qualification. But that just throws up more questions: *what* is "excessive" and *who* is deemed "poor"?

Without clearer scriptural guidance, the proponents of the ban were driven by the "hunch" that lending at fixed interest was a rather "unholy" activity altogether -- a sentiment shared by many common people. The burden of proof, they argued, was on the defenders of interest. Could they prove that it was at least "socially" useful to permit the charging of interest? This was far from clear in feudal economies, where most lending was for consumption and not production. Social costs were more clearly discernable: the absurd mathematics of compound interest increased social inequality, reduced free men into indentured servitude and burdened civil authorities with enforcement while the only advantage it seemed to bring was to encourage consumption (a morally suspicious activity anyway). Thus, interest-bearing debt was not only unnatural, but also a morally repugnant and socially detrimental institution.

Although clerics had been prohibited from lending at interest at least since the 4th Century, the ban was not extended to laymen until much later. In 1139, the Second Lateran Council denied all sacraments to unrepentant usurers and, in an 1142 decree, condemned any payment greater than the capital that was lent. Jews and Moors (being "strangers" in Christian lands) were initially exempt from the ban, but the Fourth Lateran Council (1215) issued an admonition prohibiting non-Christians from charging "excessive" usury (thus implicitly condoning modest usury). In 1311, Pope Clement V at the Council of Vienna prohibited usury outright and condemned as "heretical" any secular legislation that tolerated it.

When Christian theologians, particularly St. Thomas Aquinas, finally came across Aristotle's work in the 13th century, they found ample support for the complete ban. The Thomists argued that as money was not in Genesis, then it had no "intrinsic worth". They appealed to Aristotle's idea that money was merely a human social convention which yields no utility itself, thus its value is "imposed" by humans. Loosely speaking, as money has no intrinsic worth, then a lender of money loses nothing of worth when lending it out. Thus, by the Golden Rule, he should not ask for compensation for doing so. Other forms of "earning without labor" (e.g. rent on land) were acceptable to the Thomists because there was indeed "intrinsic worth" in the object lent and thus it is "costly" to part with it.

The Thomists allowed two loopholes in their argument: interest is admissible if the lender of money **bears risk** (*dammum emergens*) or if, by lending, he is **foregoing an alternative, profitable**

opportunity (*lucrum cessans*). The former loophole was intended to distinguish between owners of debt with fixed interest earnings and investors in profit-sharing partnerships (*Commenda*). But as with *any* loan, there is *always* at least default risk, then, technically speaking, usury is always admissible. The second loophole was intended to allow the charging of interest in inflationary periods (when the creditor makes a clear loss), but the scope for ritual abuse is even more glaring -- one can *always* argue that there is an "alternative" profitable use of capital.

Of course, there were always ways around this. Delayment fees, *mohatra* contracts ("repurchase agreement"), the *contractum trinius*, etc. -- widely used throughout both the Christian and Muslim worlds -- effectively replicated interest-bearing contracts. The banning of usury complicated, but did not end, debt finance. The ban was eventually repealed, after the revision of the doctrine by the School of Salamanca and the gradual lifting of laws in Protestant countries in the mid-1600s.

The ban on usury brought up an interesting dilemma identified by Nicole de Oresme: the debasement of national currencies by their respective governments (a practice that accelerated notoriously in 14th Century France). Oresme accepted that governments are entitled to *some* amount of seignorage on account of their minting services, but it must not be forgotten that money is effectively a loan from people to government. Consequently, debasement, by lowering the value of money, is a way of extracting negative interest, and thus is a form of usury -- indeed, *worse* than usury since it was done without consent. Oresme followed Jean Buridan in endowing money with "intrinsic worth" by moving away from the Aristotlean "social convention" perspective to a "metallic" perspective.

Late Scholastic Period: The Salamanca School (1536 AD)

The University of Salamanca, one of the oldest universities in the world (founded 1218), was a prominent Dominican bastion in the ***late Scholastic*** period. It was one of the homes of the theology of St. Thomas Aquinas, even after his doctrines were disintegrating elsewhere in Europe first under the Scotist and Nominalist onslaughts, and then from the Reformation.

The "School of Salamanca" was initiated by **Francisco de Vitoria** around 1536 and counted Navarrus (Martin de Azpilcueta, 1493-1586) and Domingo de Soto (1494-1560) as its most prominent theoreticians. The Jesuit trio, Lessius (Leonard de Leys -1554-1623), Juan de Lugo (1583-1660) and the remarkable Luis Molina (1535-1600) adhered to and further developed the Salamanca position.

During the inflationary 1500's, theologians were appealed to repeatedly on economic affairs, particularly the status of contracts in those confusing economic times. In an effort to lay down guidelines for commercial practice and focusing on practical notions of the public good, they moved away from past dogma and approached their questions in the spirit of natural law philosophy. The result was reversal of centuries of Scholastic thinking on economic matters**. It was the Salamanca School that defined the *just price* as no more and no less than the naturally exchange-established price. Their analysis led them to trace a *scarcity* theory of value and employed supply-and-demand with dexterity.** They rejected Duns Scotus's "cost of production" conception of the just price, arguing that there was no objective way of determining price.

Before the Mercantilist Jean Bodin, the Salamanca School had independently uncovered the essential properties of the **Quantity Theory of Money**, which was used to explain the inflation of the 1500s arising from the influx of precious metals from Spanish America. They also provided a resounding defense of usury. Around the same time, Copernicus also enunciated the principles of the quantity theory of money.

The accomplishments of the Salamanca theorists have led scholars such as Friedrich von Hayek to note that, contrary to Max Weber's thesis, it is the religion of the Jesuits and not the Calvinists, that set the grounds for capitalism.

The Mercantilists (1568 AD)

Based on this Quantitative Theory of Money, in 1568, a major intellectual development took place with the emergence of a new economic philosophy (Mercantilism) adopted by merchants and statesmen. They did not try to judge economic matters from a moral or ethical angle, but just to recommend to Governments economic measures that would increase the wealth of the country. The main problem was how to increase resources to finance the military interest of the Kings.

This theory also tried to explain the inflation in those years. Between the years of 1480 and 1650, price levels rose steadily in Europe. This inflation phenomenon, sometimes referred to as the "Great Elizabethan Inflation", was puzzling to contemporaries. As the purchasing power of people was being eroded, many peasant revolts ensued - mostly directed against grain merchants. Many, including governments, thought it was due to the monopolies and collusive practices of **merchants.**

It was only in 1568 that the French mercantilist, **Jean Bodin**, drew attention to the most important economic development in this period: namely, great influx of gold and silver from the Americas into Spain and consequently the rest of Europe. **He took the Salamanca School concept that the value of gold and silver was related to their "scarcity"**. Thus, there was, he speculated, a direct relationship between the **quantity of gold and silver and the price level**. The large inflows of gold and silver from America just reduced its value. In terms of gold (money), the prices of other goods would increase. This was a further step into the development of the first **Quantitative Theory of Money**, which has survived in some form or another until today. Therefore, the pioneers of Mercantilism were the authors of the **Salamanca School** (Martín de Azpilicueta (1493-1586) y Tomás de Mercado (?-1575)).

In England, **John Locke** (1692) took this idea and "stated" the **Quantity Theory of Money** as a general rule: **if the supply of money is increased, the prices of all goods will rise**. Locke applied this immediately: if money supply fell and the prices of goods fell, then the prices of foreign goods would rise relative to domestic goods. He felt that "both of which will keep us poor" (Locke, 1692).

Thus, Locke argued the Mercantilist line of maintaining a favorable balance of trade to ensure an inflow of money and thus that the price level of English goods remained higher than that of foreign goods.

To some Mercantilists, Locke's theory was peculiar. Should not lower prices for English goods, they asked, increase exports to other countries and make us wealthier? Locke's idea of money increasing prices but not increasing output was also peculiar to them. The idea of money as a "veil" was, for them, almost an oxymoron.

For most Mercantilists, the world economy was seen as one in which the wealth of a country implies the poverty of another (zero sum game). Mercantilists believed that a nation's wealth came primarily from the accumulation of gold and silver. Nations without mines could obtain gold and silver only by selling more goods than they bought from abroad. Accordingly, the leaders of those nations intervened extensively in the market, imposing tariffs on foreign goods to restrict import trade, and granting subsidies to improve export prospects for domestic goods. Mercantilism represented the elevation of commercial interests to the level of national policy.

The policy levers -- bounties on exports and restrictions on imports -- together lead to an overvalued exchange rate (which made the country richer that its neighbors) and to a low commodity value of gold and silver within the territory (which made domestic goods more valuable). Many critics of the time however felt that an overvalued exchange rate would reduce exports.

In summary, the most distinctive feature of mercantilism was the state's preoccupation with accumulating national wealth in the form of gold and silver. Because most nations did not have a natural abundance of such precious metals, the best way to acquire them was through trade. This

meant striving for a favorable trade balance—that is, a surplus of exports over imports. Foreign states would then have to pay for imports in gold or silver. Mercantilist states also favored maintaining low wages, believing that this would discourage imports, contribute to the export surplus, and thus swell the influx of gold.

More sophisticated proponents of the mercantilist doctrine understood that the real wealth of a nation was not its hoard of precious metals, but its ability to produce. They correctly saw that the influx of gold and silver from a favorable trade balance would serve as a stimulus to economic activity generally, thus enabling the state to levy more taxes and gain more revenue. Only a few states that practiced mercantilism, however, understood this principle.

Nonetheless, Locke's idea that money affected prices was in fact adopted by many economic theorists since then - albeit, each with some difference. The questions that emerged were then "why" and "how" money affected prices without influencing output. Answers to this question had to wait for subsequent times with the response going in different directions. Four essential types of answer were given: (1) the original Quantity Theory (i.e., money is demanded only for transaction needs and not per se); (2) the Keynesian Cambridge Cash-Balance theory (i.e., money is demanded as a store of value and for precautionary process, and as such it is demanded per se – not only for transations; therefore demand for money depends on income, interest rates and prices) , (3) the Wicksellian theories; (4) the Walrasian theories -- all of which differ on several important concepts. Since then, economics has gone back and forth over whether money affects prices or output. We have also recurrently reversed the question and talked about how prices and output in turn affect the quantity of money - a theory that is much more recent reflecting the more contemporary phenomenon of considering bank-created deposits as "money".

Mercantilist preoccupation with precious metals inspired several domestic policies. It was vital for a nation to keep wages low and the population large and growing. A large, ill-paid population produced more goods to be sold at low prices to foreigners. Ordinary men and women were encouraged to work hard and avoid such extravagances as tea, gin, ribbons, ruffles, and silks. It also followed that the earlier that children began to work, the better it was for their country's prosperity. One mercantilist writer had a plan for children of the poor: “When these children are four years old, they shall be sent to the county workhouse and there taught to read two hours a day and be kept fully employed the rest of the time in any of the manufactures of the house which best suits their age, strength, and capacity.”

The Physiocrats (1758 AD)

A reaction against the Mercantilist control of imports and trade occurred in France in the 18th century (1758). Physiocracy was briefly in vogue in France during the second half of the 18th century as a reaction against the narrow and restrictive policies of mercantilism. The founder of the physiocratic school, **Francois Quesnay**, was a physician at the royal court of King Louis XV. His major work, the ***Tableau Economique****(1758),* was an attempt to trace the flows of money and goods through the economy. It crudely anticipated the 20th-century **national income** accounting.

The physiocrats formulated the first coherent scheme of the workings of an economic system. The postulated that wealth circulates among three social groups: (1) The productive class was made up of those engaged in agriculture, fishing, and mining, representing one-half of the population. (2) The proprietary class consisted of landed proprietors and those supported by them, which amounted to one-quarter of the population. (3) The artisans and merchants, or sterile, class, made up the rest of the population. **All wealth, in the doctrine of the physiocrats, originates in agriculture; through trade, wealth is distributed from farmers to other groups.**

Quesnay's *Tableau* is significant because it expressed the belief that only the agricultural classes are capable of producing a surplus or net product, out of which the state either could find the capital to support an expansion of the flow of goods and money or could levy taxes to meet its needs. Other activities, such as **manufacturing,** were regarded as essentially sterile, because they did not produce

new wealth but simply transformed or circulated the output of the productive class. It was this aspect of physiocratic thought that was turned against mercantilism. If industry did not create wealth, then it was futile for the state to try to enhance society's wealth by a detailed regulation and direction of economic activity.

The physiocrats believed that the Government should maintain the Natural Order through three rules: private property, economic freedom (Laissez Faire), and security of rights and liberties. In particular, the physiocrats maintained that the free movement of goods (free trade) was in accordance with the principles of natural liberty.

The Physiocrats opposed the Mercantilist policy of promoting exports at the expense of agriculture because they believed that agriculture was the sole source of wealth in an economy. They maintained that the revenue of the state should be raised by a single direct tax levied on the land. As a reaction against the Mercantilists' copious trade regulations, the Physiocrats advocated a policy of laissez-faire, which called for minimal government interference in the economy.

Physiocracy suggested the existence of a natural - physical- order in economics, one that does not require direction from the state for people to be prosperous. The physiocrats traced the flow of money and goods through the economy. Simply put, this flow was seen to be both circular and self-sustaining.

This development paved the way for the emergence of modern capitalism that took place in the latter half of the 18th century, thanks to the devastating impact that the ideas of Adam Smith had on the principles and practice of mercantilism.

Although the physiocratic ideas had little effect in France, they influenced the British economist Adam Smith, whose free trade theories contributed to the later development of trade policy in Great Britain. Adam Smith met the leading physiocrats and wrote—for the most part, favorably—of their doctrines

The Classical School (1776 AD)

The Classical School of economic theory began with the publication in 1776 of **Adam Smith**'s monumental work, **The Wealth of Nations**. The book identified land, labor, and capital as the three factors of production and the major contributors to a nation's wealth.

In Smith's view, the ideal economy is a self-regulating market system that automatically satisfies the economic needs of the populace. He described the market mechanism as an **"invisible hand"** that leads all individuals, in pursuit of their own self-interests, to produce the greatest benefit for society as a whole.

The two elements of the market are: (i) **self-interest**; and (ii) **competition**. Individual self-interest, in an environment of similarly motivated individuals, will result in competition. Self-interest and competition will result in the provision of those good that the society wants, in the quantity that society desires, and at the prices that society is prepared to pay. **Self-interest is the driving force and competition is the regulator of behavior. Without competition, profit-hunger individuals will exploit society.** The competitive free market is therefore a self-regulating mechanism for society's allocation of resources and orderly provisioning.

Smith incorporated some of the Physiocrats' ideas, including laissez-faire, into his own economic theories, but rejected the idea that only agriculture was productive.

The ideas of Adam Smith represented more than just the first systematic treatise on economics; they were a frontal attack on the doctrines of mercantilism. Like the physiocrats, Smith tried to show the existence of a "natural" economic order, one that would function most efficiently if the state played a

highly limited role. Unlike the physiocrats, however, Smith did not believe that industry was unproductive or that only the agricultural sector was capable of producing a surplus above the subsistence needs of society. Rather, Smith saw in the division of labor and the extension of markets almost limitless possibilities for society to expand its wealth through manufacture and trade.

Smith decisively refuted the protectionist conclusions of mercantilist thought. He pointed out that wealth consisted not in specie itself but in the material that specie could purchase. Governmental regulation of trade actually reduced the wealth of nations, because it prevented them from purchasing the maximum amount of commodities at the lowest possible price. With free trade, each nation could increase its wealth by exporting the goods it produced most cheaply and importing goods that were produced cheaper elsewhere.

Both the physiocrats and Smith contributed to the belief that the economic powers of governments should be limited and that there existed a natural order of liberty applicable to the economy. It was Smith, however, far more than the physiocrats, who opened the way for industrialization and the emergence of modern capitalism in the 19th century.

According to Smith, each country would specialize in the production and export of goods in which it had an ***absolute advantage***—that is, it could produce the goods more cheaply than any of its trading partners. The market's self-interest and competition would also induce increased gains in productivity, through specialization of labor and the use of machinery. The use of machinery would lead to a need to accumulate savings. Accumulation will also increase wages. All this will lead to increased welfare for the population. But for the market to work, it should not be tampered, since all links need to be closed in a chain of cause and effect. The theory of Adam Smith, therefore, leads to the doctrine of Laissez Faire: let the Markey alone, so that the laws of the market will bring society to its point of highest return. Smith was against the meddling of the Government with the market. He was against barriers to entry and restraints on imports. He was against government laws that shelter industry from competition. He was however, in favor of Governments action to promote education and to avoid monopolistic behaviors. In fact, The greatest enemy to Adam Smith's system is not so much government per se, as monopoly in any form, including government monopoly.

The ideas of Smith provided the ideological and intellectual background for **the Industrial Revolution and the Rise of Industrialization** —the material side of the sweeping transformations in society and the world that characterized the 19th century. No precise date can be given for this "revolution"; it is generally conceded to have begun in the late 18th century.

The fundamental characteristic of the industrialization process was the introduction of mechanical power (originally steam) to replace human and animal power in the production of goods and services. As the mechanization of production gained momentum in England and gradually spread to other parts of the world, several fundamental changes occurred. Production became more specialized and concentrated in larger units, called factories. The artisans and small shops of the 18th century did not disappear, but they were relegated to the periphery of economic activity in the leading nations, especially in England, the United States, and Germany. The modern working class began to emerge; workers no longer owned their tools, they had little property, and generally they had to exchange their labor for a money wage. The application of mechanical power to production brought with it a great increase in worker efficiency, which made goods abundant and cheap. Consequently, the real standard of living rose throughout much of the world during the 19th century.

The development of industrial capitalism had serious human costs. The early days of the Industrial Revolution were marred by appalling conditions for large numbers of workers, especially in England. Abusive child labor, long working hours, and dangerous and unhealthy workplaces were common.

Capitalism was also beset by cycles of "boom and bust," periods of expansion and prosperity followed by economic collapse and waves of unemployment. The classical economists who refined the ideas of Adam Smith had no ready explanation for the ups and downs of economic life, being content to view

such cycles as the inevitable price that society had to pay for the material progress experienced under capitalism.

Other Classical Economists

As a coherent economic theory, classical economics starts with Adam Smith (1723-1790), continues with the British economists **David Ricardo** (1772-1823) and **Thomas Robert Malthus (**1766-1834), and culminates in the synthesis of **John Stuart Mill** (1806-1873), who as a young man was a follower of Ricardo. Although differences of opinion were numerous among the classical economists in the three-quarters of a century between Smith's ***Wealth of Nations*** and Mill's ***Principles of Political Economy*** (1848), members of the group agreed on major principles. All believed in private property, free markets, and, in Mill's words, that "only through the principle of competition has political economy any pretension to the character of a science." They shared Smith's strong suspicion of government and his ardent confidence in the power of self-interest represented by his famous "invisible hand," which reconciled public benefit with individual pursuit of private gain.

David Ricardo

David Ricardo formulated the **law of diminishing returns**. It says that as more labor and capital were applied to land, yields steadily diminished, after "a certain and not very advanced stage in the progress of agriculture." As the economy expands and population grows, it will be necessary to move cultivation into less productive soils, as the more productive soils were already in use. As the less productive soils are put in use, the cost of grain production will rise. Therefore, there are diminishing returns on agricultural production.

David Ricardo further thought that as the cost of grain production rises, the selling price of grain will also rise. Landowner with the best soil (and lower production cost) will receive a windfall profit (rent) equal to the difference between his cost of production and the cost at the marginal lands. Not only his rent will rise, but wages will also rise since labor will have to be paid more to enable them to buy a more expensive grain and stay alive. As society grows, the increases in wages will affect the return of the capitalists in industry who are mainly responsible for the progress of society. Landlords, who did nothing but willed rents, will benefit as more marginal land is brought into production. Ricardo, therefore, fought for free imports of grain to keep their prices low. Nevertheless, the fears of David Ricardo did not materialize. Industrialization later on reduced food costs and raised productivity from land.

Based on the principle of diminishing returns, David Ricardo focused on the distribution of income among landowners, workers, and capitalists. While Adam Smith emphasized the production of income, Ricardo saw a conflict between landowners on the one hand and labor and capital on the other. He posited that the growth of population and capital, pressing against a fixed supply of land with diminishing returns, pushes up rents and holds down profits.

A second major contribution of David Ricardo was his extension of the analysis of absolute advantage to encompass the more general case of *comparative advantage*. Ricardo noted that some nations lack an absolute advantage in the production of any commodity. However, even these nations could gain from free trade if they concentrated on producing commodities in which they had the smallest disadvantage. This enables the nation to trade goods that are easiest to produce for goods that are more difficult to produce. When nations practice the principle of comparative advantage, more goods are produced between the trading countries, and the wealth of both countries increases. The principle of comparative advantage forms the theoretical basis of the argument for free trade.

Thomas Robert Malthus

Through Smith's emphasis on production – as opposed to mercantilism -- the scope of economics was considerably broadened. Smith was optimistic about the chances of improving general standards of

life. He called attention to the importance of permitting individuals to follow their self-interest as a means of promoting national prosperity.

Malthus, on the other hand, in his influential book ***An Essay on the Principle of Population*** **(1798),** imparted a tone of gloom to classical economics, arguing that hopes for prosperity were fated to founder on the rock of **excessive population growth**. **Food, he believed, would increase in arithmetic ratio (2-4-6-8-10 and so on), but population tended to double in each generation (2-4-8-16-32 and so on) unless that doubling was checked either by nature or human prudence.** According to Malthus, nature's check was "positive": "The power of population is so superior to the power of the earth to produce subsistence for man, that premature death must in some shape or other visit the human race." The shapes it took included war, epidemics, pestilence and plague, human vices, and famine, all combining to level the world's population with the world's food supply.

The only escape from population pressure and the horrors of the positive check was in voluntary limitation of population, not by contraception, rejected on religious grounds by Malthus, but by late marriage and, consequently, smaller families. To curb population growth, he also urged the abolition of poor relief and housing projects. These pessimistic doctrines of classical economists earned for economics the epithet of the "dismal science." In practice industrialization resulted in greater agricultural productivity and lower population growth.

Malthus also used the idea of diminishing returns to labor to explain the low living standards at that time. While population tended to increase geometrically, it outstrips the production of food, which increased arithmetically. The force of a rapidly growing population against a limited amount of land meant diminishing returns to labor. The result, he claimed, was chronically low wages, which prevented the standard of living for most of the population from rising above the subsistence level.

Malthus also questioned the automatic tendency of a market economy to produce full employment. He blamed unemployment upon the economy's tendency to limit its spending by saving too much, a theme that lay forgotten until John Maynard Keynes revived it in the 1930s.

John Stuart Mill

In 1848, John Stuart Mill published a book, ***Principles of Political Economics,*** which became the most important economics textbook of the mid-nineteenth century. It synthesized and elaborated on the main topics covered by the Classical economists. This textbook was used at Oxford University until 1919 (when it was replaced by Alfred Marshall's Principles of Economics).

Mill pointed out that the true subject of economic laws was production (with consumption taken for granted) and **not distribution of income**. The economic laws of production are firm and inviolable: There is nothing arbitrary about: (i) whether labor is more productive in one use versus another; (ii) poor land has lower economic returns than rich land; (iii) scarcities are real constraints, etc. Bit the laws of economics have nothing to do with income distribution. Once we have produced wealth, we can do with it as we liked. Once things are there, society can do with them as it pleased. Therefore, income distribution can be changed by society depending on its customs. The rules by which income distribution is determined are set by the ruling class and are different in different countries and ages.

If society does not like the "natural" result of its economic activities (depressed wages, excessive rents) society has only to change them. Society could tax, redistribute, expropriate, etc. But whatever it did, there was no "correct" distribution. There could be no appeals to "laws" to justify how society shares its fruits. The question of income distribution was not a question of economic laws, but a question of ethics and morality.

With these concepts, and coming at the end of the Classical tradition, John Stuart Mill parted company with the earlier classical economists on the inevitability of the distribution of income produced by the

market system. Mill pointed to a distinct difference between the market's two roles: allocation of resources and distribution of income. The market might be efficient in allocating resources but not in distributing income, he wrote, making it necessary for society to intervene.

John Stuart Mill also demonstrated that the gains from free trade depend on the strength of reciprocal demand for imports and exports. The stronger the demand for the exports of a country relative to its demand for imports, the greater its gain from free trade. The gain would be reflected in an improvement in the international terms of trade for the country, as expressed by the ratio of its export prices to its import prices.

Although Mill accepted the major theories of his classical predecessors, he held out more hope than did Ricardo and Malthus that the working class could be educated into rational limitation of their own numbers. Mill was also a reformer who was quite willing to tax inheritances heavily and even to allow government a larger role in protecting children and workers. He was far more critical than other classical economists of business behavior and favored worker ownership of factories. Mill thus represents a bridge between classical laissez-faire economics and an emerging welfare state.

Jean Baptiste Say

The classical economists also accepted Say's Law of Markets, the doctrine of the French economist Jean Baptiste Say (1767-1832). Say was also a proponent of competition and free trade, and put a clear emphasis on the importance of supply. Say's Law of Markets says that **"supply creates its own demand".** There will always be demand for any supply that may develop because of two factors: (i) the desire for commodities is almost infinite; and (ii) the ability to purchase commodities was guaranteed because the wages, rents and profits generated by the supply will end up as demand for commodities.

Say therefore held that the danger of general unemployment or "glut" in a competitive economy is negligible because supply tends to create its own matching demand up to the limit of human labor and the natural resources available for production. Each enlargement of output adds to the wages and other incomes that constitute the funds needed to purchase added output.

Ricardo accepted these principles as valid and believed that gluts (products without buyers) and recessions were not feasible unless pure perversity could prevail. Malthus was not convinced and wondered weather the act of savings could make demand for good too small for the supply. Ricardo disregarded this by saying that saving are put back into the economy and invested. (In modern times, Keynes demonstrated that the link between savings and investments is not automatic.)

The Neoclassical School (1870 AD)

Classical economics had emphasized the **supply side** of the market, proceeding from the assumption of scarcity of goods, to the law of diminishing returns and Malthusian excessive population beyond food supply. **Demand was taken from granted**. If something is produced, it will be consumed (Says Law). Dating from the 1870s, three leading economists independently launched the **neoclassical marginalist** school by giving **emphasis not only to limitations on supply but also to the demand side**, including **market equilibrium**, marginal utilities, interpretations of consumer choice in psychological terms. These leading economists came independently with similar views. They were:

> **William Stanley Jevons** in Great Britain. He outlined the principle of diminishing marginal utility and showed how it governed individual choice via the equi-marginal principle, introduced subjective utility into economics and introduced mathematical and logical methods into economics
>
> **Carl Menger** (founder of the Austrian School). He set out the concepts of marginalist value theory, namely using the concept of subjective value to underpin all of economics. Although he did not formally use the term "marginal", he did claim that people rank-

ordered their needs and applied successive units of goods to satisfying less and less urgent needs. The "value" of a good, Menger claimed, would be the equal to the least urgent use to which it was applied. Only later did a disciple of him apply the term "diminishing marginal utility" to Menger's scheme. Note that he did not conceive of "needs" being cardinally measurable, only that a good will be consumed to the point where the further consumption of a unit of that good will satisfy a less urgent need than the consumption of another good which he could have bought instead - in modern terms, until the marginal utility of two goods are equal relative to their price. Menger's theory of production was also simple enough: factors and intermediate goods ("goods of higher order") were demanded only because consumer goods ("goods of first order") were demanded. The subjective determination of consumption demands, Menger claimed, would, in turn, determine the demand for factors of production. The problem of "imputing" the value of factors from the subjective valuation of commodities (the exact reverse of Classical theory!) was to be a central concern of the Austrian school.

Leon Walras in France (founder of the Lausanne School). He developed the Theory of General Equilibrium in which not one, but multiple markets reach equilibrium.

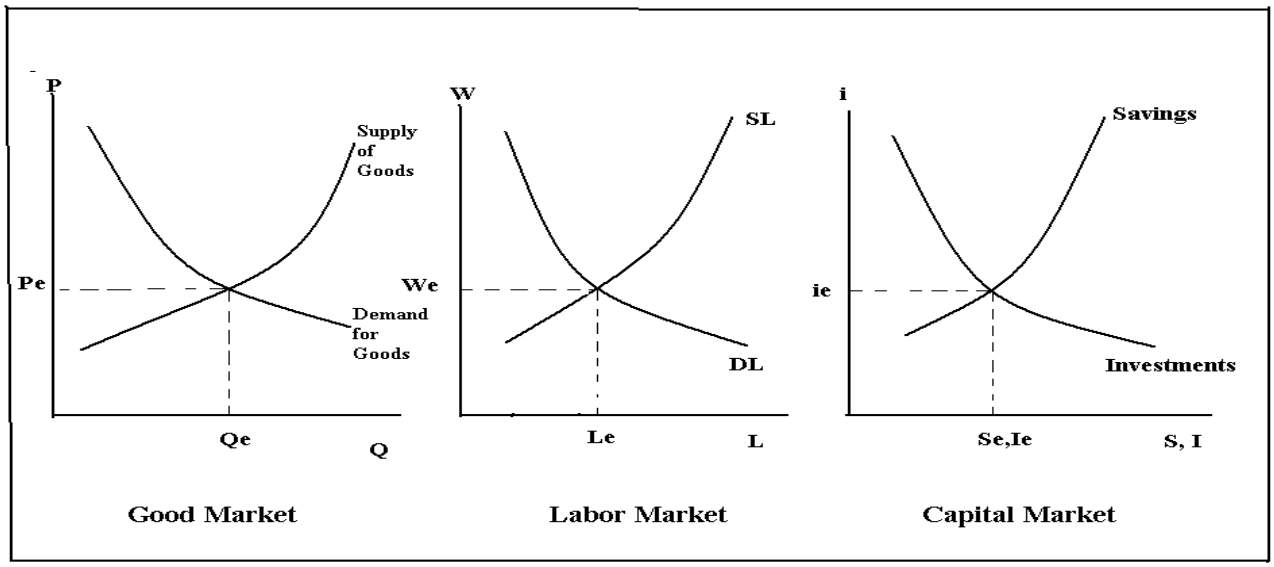
Vilfredo Pareto, the Italian economist, was *also* a member of the Neo-classical revolution. He succeeded Walras and further developed an alternative approach to general equilibrium theory. Instead of focusing in multiple equilibriums of demand and supply, he developed a general equilibrium on the basis of agent optimization in a price-taking, multi-market scenario. Thus, he put the emphasis on differentiability and efficiency. He abandoned demand and supply functions as tools of analysis, even as applied to individuals. The emphasis was entirely on the existence of some set of compatible optimizing choices. The problem *was* no longer conceived as that of proving that a certain set of equations has a solution. He reformulated it as one of proving that a number of maximizations of individual goals under interdependent restraints can be simultaneously carried out. Perhaps the greatest advantage of the Paretian system is its simple graphical intuition: indifference curves, Edgeworth-Bowley boxes, production possibilities frontiers, community indifference maps, etc. all come together in a simple way to illustrate the conditions for general equilibrium.
In the main Paretian model, all agents respond to prices parametically, i.e. they take prices as given, what Pareto (1906: p.115) calls "Type I" behavior. Edgeworth (1881) justified this assumption as a limiting case of a recontracting exchange process when there are an infinite number of agents. Pareto, on the other hand, justified it on the basis of the impossibility of manipulative behavior in a sufficiently complex economy; as he writes: "A farmer can easily calculate, at the market prices, whether it is more advantageous for him to use the power of a horse or that of a steam engine to run a pump; but neither he, nor anyone in the world, is capable of knowing either the effect the substitution of a steam engine for a horse will have on the prices of horses and steam engines, or the greater quantity of vegetables which will be consumed when consumers enjoy the savings resulting from that substitution." (V. Pareto, 1906: p.245). Households possess factor endowments and desire produced goods for consumption; firms possess nothing, but merely organize production by demanding factors from households and supplying produced goods. The rest of the Paretian system thus follows as in a Walrasian one: given a set of output and factor prices cried out by the "auctioneer", households choose their supplies of factors and demand for goods via a utility-maximization exercise whereas firms decide upon their demand for factors and supply of produced goods via a profit-maximization exercise (as noted, incorporating this last point was one of Pareto's main contributions to the Walrasian system). An equilibrium is then defined as a market-clearing set of prices in both output and factor markets.
Pareto-Optimality: The original constructors of the Paretian system were satisfied with the equality of the number of equations and unknowns to establish the existence of an equilibrium. Instead of pursuing this question more vigorously, their attention was turned

onto something else: namely, suppose such a set of prices did exist, is the resulting equilibrium allocation an "efficient" one? By "efficiency" they referred to the concept of "Pareto optimality": i.e. a situation is Pareto-optimal if by reallocation you cannot make someone better off without making someone else worse off. In Pareto's words: "We will say that the members of a collectivity enjoy *maximium ophelimity* in a certain position when it is impossible to find a way of moving from that position very slightly in such a manner that the ophelimity enjoyed by each of the individuals of that collectivity increases or decreases. That is to say, any small displacement in departing from that position necessarily has the effect of increasing the ophelimity which certain individuals enjoy, and decreasing that which others enjoy, of being agreeable to some, and disagreeable to others." A situation is *not* Pareto-optimal, then, if you can make someone better off without making anyone else worse off. Pareto-optimality is then the idea that a society is enjoying *maximum utility (ophelimity)* when no one can be made better off without making someone else worse off. In other words, a **Pareto**-optimal allocation of resources is achieved when it is not possible to make anyone better off without making someone else worse off. Pareto efficiency is an important criterion for evaluating economic systems and political policies. In particular, it can be shown that, under certain idealised conditions, a system of **free markets** will lead to a Pareto efficient outcome. This was first demonstrated mathematically by economists Kenneth Arrow and Gerard Debreu, although the result may not necessarily reflect the workings of real economies because of the restrictive assumptions necessary for the proof (markets exist for all possible goods, markets are perfectly competitive, and transaction costs are negligible). This is called the first welfare theorem.

Pareto in 1906, also made the famous observation that twenty percent of the population owned eighty percent of the property in Italy, later generalised into the so-called Pareto principle and generalised further to the concept of a Pareto distribution.

Concentrating on the **consumer satisfaction or utility** that was rendered by **the last or marginal unit purchased**, the neoclassicists explained market prices not by reference to the differing quantities of human labor and production cost needed to produce assorted items, as in the theories of Ricardo and Marx, but rather according **to the intensity of consumer preference for one "more" unit of any given commodity.** Their intellectual contributions included the concepts of opportunity cost, marginal cost, marginal utility, and general equilibrium which continue to be the main elements of modern economics. It is the join behavior of consumers and producers that are trying to maximize their utility or benefits that leads to general equilibrium.

The British economist **Alfred Marshall**, particularly in his masterly neoclassicist work ***Principles of Economics*** (1890) brought together these concepts into a unified theory. He explained **demand** by the **principle of marginal utility**, and **supply** by the rule of **marginal productivity** (the cost of producing the last item of a given quantity). In competitive markets, consumer preferences for low prices of goods and seller preferences for high prices were adjusted to some mutually agreeable level. At any actual price, then, buyers were willing to purchase precisely the quantity of goods that sellers were prepared to offer. The Neoclassical economists therefore emphasized the concept of "market equilibrium" of demand and supply which still dominates economic thinking. The Neoclassical economists provided modern macroeconomics with the basic analytic tools of demand and supply, consumer utility, and a mathematical framework for using those tools. It helped to understand the detailed workings of the self-adjusting mechanisms of the market that Adam Smith had called the "invisible hand".



As in the markets for goods, this same reconciliation between supply and demand occurred in markets for **human labor and for money**.

In **money markets**, the interest rate matched borrowers with lenders. The borrowers expected to use their loans to earn profits larger than the interest they had to pay. Savers, for their part, demanded a price for postponing the enjoyment of their own money. In accordance with the original Quantity Theory of Money, **Irving Fisher** (in 1911) elaborated the theory to demonstrate that over the long term, an exogenous change in money supply will affect prices, without affecting real variables (output and employment). Over the long term, the effect of money supply increases will disappear and only price levels will be higher. A second competing formulation of the Quantity Theory was advanced by **Knud Wicksell** (1907) of the Swedish school. He postulated that increases in money supply will reduce interest rates, which will make bonds less attractive and increase bank deposits; the increase in bank deposits in turn will increase prices, and nothing else. Both Quantity Theories accepted that money was neutral over the long term (without real effects). Both of them, however, accepted the notion (contradicted later on by the Rational Expectation Theory) that in the short term, changes in money supply may affect output (as well as prices).

A similar demand/supply accommodation had to be made by the Neoclassicals on wages paid for **human labor**. In competitive labor markets, wages actually paid represented at least the value to the employer of the output attributed to hours worked and at least acceptable compensation to the employee for the tedium and fatigue of the work.

The Neoclassical economists also showed that in a free market economy, the factors of production -- land, labor, and capital -- receive returns equal to their contributions to production. This principle was sometimes used to justify the existing distribution of income: that people earned exactly what they or their property contributed to production.

Marshall also pointed out the importance **of "time"** as a key element in the working out of the **equilibrium process**. Equilibrium has a different meaning depending on whether the adjustment process takes place in the short-term or in the long term. **In the short-term** (less than one year), the bargaining process in the market revolves around a fairly ***fixed quantity of goods***, given by what has been produced at that time – the existing production capacity. Therefore, it is the demand for goods (based in the utility of the good to consumers) which exercises the more immediate influence in their market price. If demand exceeds the fixed available supply, prices will increase until demand is reduced to match the existing supply. At that point prices are at the utility value of the product for that fixed amount. If demand is below the available supply, prices can go down until demand increases to

the available supply. However, over the **long-term**, the quantity of supply is not fixed (new factories could be opened, existing factories could be expanded, etc). Over **the long term,** as the level of supply is gradually adjusted to the level wanted by consumers, it is the total cost of production (supply) that exerts the primary influence in prices. **Neither supply cost nor consumer utility can be divorced from price determination.** Demand and supply are like the blades of scissors, and it is fruitless to ask whether supply or demand alone regulates prices, as to ask whether the upper or lower blade of the scissors does all the cutting. But while both blade cuts, one is active and the other is passive: (i) the utility-demand edge is the active one when the cutting takes place in the quick time span of a given market; (ii) the supply cost edge is the cutting one when the cutting extends over a longer period in which output levels are subject to change.

By implication, if not direct statement, the tendency of neoclassical doctrine has been politically conservative. Its advocates distinctly prefer competitive markets to government intervention and, at least until the Great Depression of the 1930s, insisted that the best public policies were echoes of Adam Smith: low taxes, thrift in public spending, and annually balanced budgets. Neoclassicists do not inquire into the origins of wealth. They explain disparities in income as well as wealth for the most part by parallel differences among human beings in talent, intelligence, energy, and ambition. Hence, men and women succeed or fail because of their individual attributes, not because they are either beneficiaries of special advantage or victims of special handicaps. In capitalist societies, neoclassical economics is the generally accepted textbook explanation of price and income determination.

In the late 19th century, especially in the United States, the modern corporation, with its limited liability and immense financial power, began to emerge as the dominant form of business organization. The tendency toward corporate control of manufacturing led to many attempts to create combines, monopolies, or trusts that could control an entire industry. Eventually, the public outcry against such practices was great enough in the U.S. to lead Congress to pass antitrust legislation. This legislation attempted to make the pursuit of monopoly by business illegal, using the power of the state to force at least a bare minimum of competition in industry and commerce. The antitrust laws never succeeded in restoring to industry the competition of many small businesses that Adam Smith had envisaged, but it did impede the worst tendencies toward creating monopolies and restraining trade.

Despite such difficulties, capitalism continued to expand and prosper almost without limit throughout the 19th century. It was successful because it demonstrated an enormous ability to create new wealth and to raise the real standard of living for nearly everyone touched by it. As the century closed, capitalism was the dominant economic and social system.

The Marxist School (1848-90 AD)

Opposition to the classical school of economics came first from early socialist writers such as the French social philosopher the Comte de Saint-Simon and the British reformer Robert Owen. It was **Karl Marx**, however, who provided the most important social theories.

Marx spent most of his mature years in London, supported by his friend and collaborator, the German revolutionist **Friedrich Engels**, and by the proceeds from occasional contributions to newspapers. He conducted his extensive research in the reading room of the British Museum. Marx's historical studies convinced him that profit and other property income are the proceeds from force and fraud inflicted by the strong businessmen on the weak laborers.

The history of land enclosure in England was used as an example of labor exploitation. In the 17th and 18th centuries, British landowners used their control of Parliament to rob their tenants of traditional rights to common lands. Taking these lands for their own use, they drove their victims reluctantly into cities and factories. Deprived both of tools and land, British men, women, and children had to work for wages. Thus, Marx's central conflict was between so-called capitalists who owned the means of production —factories and machines— and workers or proletarians who possessed nothing but their

bare hands. Exploitation of workers, the heart of Marxist doctrine, is measured by the capacity of capitalists to pay no more than subsistence wages to their employees and extract for themselves as profit (surplus value or plusvalia) the difference between the selling price of market commodities and these low wages. The capitalists and their judicial system ensure that this plusvalia is appropriated to the owners of the property.

To the classical vision of capitalism, Marxism was in large measure a sharp rebuttal, but to some extent it embodied variations of classical themes. Marx adopted, for example, a version of David Ricardo's labor theory of value. With a few qualifications, Ricardo had explained prices as the result of the different quantities of human labor needed to produce different finished products. Accordingly, if a shirt is priced at $12 and a pair of socks at $2, it is because six times as many hours of human labor entered into the making of the shirt as the socks. For Ricardo, this theory of value was an analytical convenience, a way of making sense of the multitude of different prices in shops. For Marx, the labor theory was a clue to the inner workings of capitalism, the master key to the inequities and exploitation of an unjust system.

An advocate of a labor theory of value, Marx believed that all production belongs to labor because workers produce all value within society. He believed that the market system allows capitalists, the owners of machinery and factories, to exploit workers by denying them a fair share of what they produce. Marx predicted that capitalism would produce growing misery for workers as competition for profit led capitalists to adopt labor-saving machinery, creating a "reserve army of the unemployed" who would eventually rise up and seize the means of production.

The poor condition of workers in those years led Karl Marx, who spent most of his adult life in England, to produce his massive indictment of the capitalistic system, ***Das Kapital*** (3 vol., 1867-94). Marx's work, which is the intellectual foundation for the kind of Communist economic systems used in the USSR and still in use in China, struck at the fundamental principle of capitalism—**private ownership of the means of production. Marx believed that land and capital should be owned collectively (that is, by society) and that the products of the system should be distributed according to need.**

Marxian criticisms, along with frequent depressions in the major capitalist nations, helped to establish vigorous trade-union movements that fought to raise wages, shorten working hours, and improve working conditions.

Although in the ***Communist Manifesto*** **(**1848) Marx and Engels paid grudging tribute to the material achievements of capitalism, they were convinced that these were transitory and that the internal contradictions within capitalism would as surely terminate its existence as earlier in history feudalism had faltered and disappeared. Karl Marx saw capitalism as an evolutionary phase in economic development. He believed that capitalism would ultimately destroy itself and be succeeded by a world without private property.

On this point Marx wrote not in the tradition of English classical economics but rather out of his training in the metaphysics of the German philosopher G. W. F. Hegel. Hegel interpreted the movement of human history and thought as a progression of triads: **thesis, antithesis, and synthesis.** For example, a thesis might be a set of economic arrangements such as capitalism (with its private technology). Its opposite or antithesis was, say, socialism (with its social public ownership) as opposed to capitalism. The clash between thesis and antithesis evolved into the higher stage of synthesis — in this case communism, which unites capitalist technology with social public ownership of factories and farms.

In the long run, Marx believed that capitalism was certain to falter because its tendency to concentrate income and wealth in ever fewer hands created more and more severe crises of excess output and

rising unemployment. For Marx, capitalism's fatal contradiction was between improving technological efficiency and the lack of purchasing power to buy what was produced in ever larger quantities.

According to Marx, the crises of capitalism were certain to manifest themselves in falling rates of profit, mounting hostility between workers and employers, and ever more severe depressions. The outcome of class warfare was fated to be revolution and progress toward, first, socialism and ultimately communism. In the first stage a strong state would still be required in order to eliminate the remnants of capitalist opposition. Each person's work would be rewarded according to the value of his or her contribution. Once communism was achieved, the state, whose central purpose was class domination, would wither away, and each individual would in the utopian future be compensated according to need.

The Keynesian School (1936 AD)

Reacting to the severity of the worldwide depression, **John Maynard Keynes** in 1936 broke from the Classical tradition with the publication of the ***General Theory of Employment, Interest, and Money***. The Classical view assumed that in a recession, wages and interest rates would decline, these declines would induce new production and restore full employment (lower wages would induce firms to hire more labor and low interest rates would induce firms to invest). Keynes held that the opposite was true. Falling wages, by depressing people's incomes, would prevent a revival of spending. Also, in a "liquidity trap", low interest rates may not influence new investments, a component of aggregate demand. Without increased spending, the economy would continue depressed. He insisted that direct government intervention was necessary to increase total spending.

John Maynard Keynes was a student of Alfred Marshall and an exponent of neoclassical economics until the 1930s. The Great Depression bewildered economists and politicians alike. Against mounting evidence to the contrary, the economists continued to hold that time and nature would restore prosperity if government refrained from manipulating the economy. Unfortunately, approved remedies simply did not work. In the U.S., Franklin D. Roosevelt's 1932 landslide presidential victory over Herbert Hoover attested to the political bankruptcy of laissez-faire policies.

New explanations and fresh policies were urgently required; this was precisely what Keynes supplied. In his enduring work The General Theory of Employment, Interest, and Money, the central message translates into two powerful propositions: (1) existing explanations of unemployment he declared to be nonsense: neither high/low wages nor high/low interest rates could explain persistent depression and mass unemployment; (2) instead, he proposed an alternative explanation of these phenomena focused on what he termed **aggregate demand — that is, the total spending of consumers, business investors, and governmental bodies (*Aggregate Demand = Consumption + Investment + Gov. Expenditures*). When aggregate demand is low, he theorized, sales and jobs suffer; when it is high, all is well and prosperous.**

From these generalities flowed a powerful and comprehensive view of economic behavior — the basis of contemporary **macroeconomics**. Because Consumption by consumers was limited by the amounts that they could spend (by the size of their incomes), they could not be the source of the ups and downs of the business cycle. It followed that the dynamic forces were business investors (Investment) and governments (Gov. Expenditures).

Before Keynes, Economists had assumed that the economy was self correcting as in a depression low wages and interest rates would encourage new production and restore growth. Furthermore, the classical/neoclassical economist postulated that it was unlikely that recessions could last long. It was felt that the supply side of the economy (Production) will generate income for workers and capitalists. This income would be either consumed or saved. And all savings would be invested. Therefore, the incomes from production would generate similar demand for goods. There could not be deficiencies in demand. But Keynes realized that "savings" decisions are made by individuals based on their income, whereas

investment decisions are made by entrepreneurs based on their expectations. There is no reason why savings and investments should coincide ex-ante. When the expectations of entrepreneurs are favorable, large amounts of investments cause an expansion of output. When their expectations are unfavorable, the corresponding reduction in investments (an element of aggregate demand), can cause a recession. The government can avoid a fall in aggregate demand by increasing its expenditures.

In a recession or depression, the proper thing to do was either to enlarge private investment or create public substitutes for the shortfalls in private investment. In mild economic contractions, easy credit and low interest rates (monetary policy) might stimulate business investments and restore aggregate demand to a figure consistent with full employment. More severe contractions required the sterner remedy of deliberate budget deficits either in the form of spending on public works or subsidies to afflicted groups.

Graphically, the Keynes' theory could be represented by Figure 1 below:

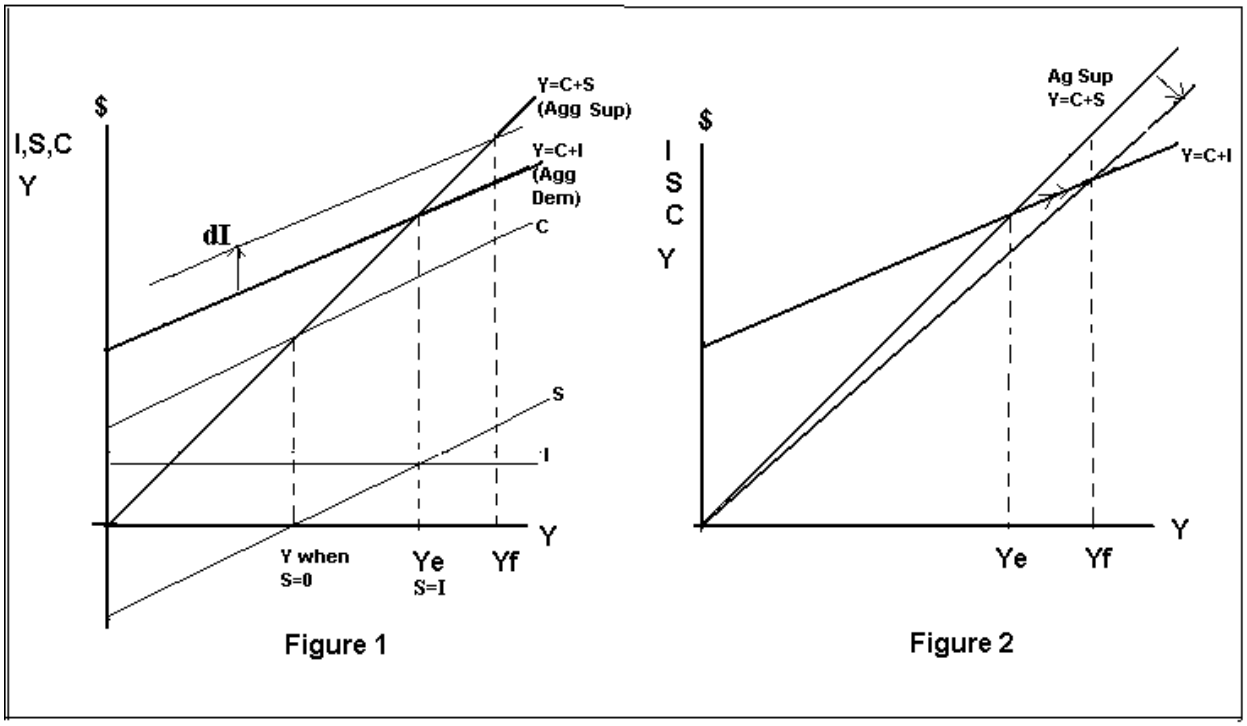


Figure 1 is build on the basis of the following equations (ignoring Government):

Y = C + I	(Income = Consumption + Investment = Aggregate Demand)
Y = C + S	(Income = Consumption + Saving = Aggregate Supply)
C = f (Y)	(Consumption = f (Income))
I = f (i, mec)	(Investment = F (interest rates, marginal efficiency of capital))
Y = f(Y) + I	Using equation 1
Y = f (I)	Income is a function of Investments

Y, C, I, S are schedules, expectations, not the ex-post realizations. Ex-post, there is only one point that can be observed, where Aggregate Demand equal Aggregate Supply and where realized Savings equal realized Investments. This is the equilibrium point (Ye). This stable equilibrium can happen at a point of income that is less than Full Employment (Yf). To reach Full Employment, there is a need to move upwards Aggregate Demand until a new equilibrium is reached at Yf. This increase in Aggregate

Demand can be achieved in the short term by an increase in Investment (dI,(private or government). The Government will need to intervene with an exogenous investment or expenditure to move Aggregate Demand upwards.

In the short-run, consumption is relatively stable. Therefore, it is fluctuations in Investment which accounts for fluctuations in Aggregate Demand, Income and Employment.

Figure 2 shows the Neo-classical School argument that recessions were self-correcting, as equilibrium will always entail full-employment. As long as there were unemployed people (when Ye<Yf) willing to work for wages corresponding to their productivity, then the Aggregate Supply schedule will move down (with lower wages there will be increased production and income), and move equilibrium gradually from Ye to Yf until full employment is reached. In other words, with recessions, unemployment will raise, wages will decline and they will induce new production and recovery. Keynes argued that the reduction in wages will just result in a corresponding reduction in aggregate demand (since wages are used to purchase goods). The impact would just be to bring equilibrium to Ye. Wage cuts can not be relied upon to bring full employment, particularly in the shot-term. The only mechanism is to change aggregate demand with an autonomous increase in investment or expenditures.

Keynes also applied the mechanisms underlying the Wicksellian theories of money, interest rates and prices, to explain how changes in money supply can produce changes in output as well as prices - thereby contradicting the strict precepts of the "Quantity Theory". Indeed, that was one of Keynes's main contributions in his ***General Theory*** (1936).

Enterpreneurship and Innovation: Joseph Schumpeter (1883-1950)

In the 1940's, as a Harvard Professor, Joseph Schumpeter criticized John Maynard Keynes for the "Ricardian vice." According to Schumpeter, Keynes and classical economists, reasoned in terms of abstract models, where they would freeze all but a few variables. Then they could argue that one caused the other in a simple monotonic fashion. This led to the belief that one could easily deduce policy conclusions directly from a highly abstract theoretical model. He argued that market equilibrium is not adequate to capture the key mechanisms of economic development.

Following neither Walras nor Keynes, Schumpeter starts in ***The Theory of Economic Development***[1] with a treatise of circular flow which, excluding any innovations and innovative activities, leads to a stationary state. The stationary state is, according to Schumpeter, described by Walrasian equilibrium. The hero of his story, though, is, the entrepreneur.

The entrepreneur disturbs this equilibrium and is the prime cause of economic development, which proceeds in cyclic fashion along several time scales. In fashioning this theory, he connected innovations, cycles, and development..

Initially, Schumpeter argued that **entrepreneurship** and "**innovations**" could only occur in small new firms, despite bureaucratic obstacles. He opposed large firms as inhibitors of innovation. However, by the 1940's he changed his views: he argued that "innovations" within the shells of large corporations, offers a more convenient access to the entrepreneurial function than existed in the world of owner-managed firms. But he added that new men founding new firms were also vital. Both small and large firms -- new firms and corporations - were the sources of innovation. Innovation was sparked by Capitalism which fostered entrepreneurs, the main drivers for innovation.

Innovations, through the mechanism of "Creative Destruction", allow capitalism to create the greatest growth in per-capita output. Capitalism produces an avalanche of consumer goods that improves the standard of living of the masses. He describes the process of creative destruction as follows: Innovations lead to the opening of new markets and better organization of factories. This created a process of industrial mutation that continuously revolutionizes economic structures from within,

destroying the old structures and creating new ones. This renovation process is the essential fact of capitalism.

Creative destruction constantly sweeps out old products, old processes, old enterprises and old organization forms, replacing them with new ones. Every piece of **business strategy** acquires its true significance only against the background of that process. Strategy must be seen in its role in this creative destruction. Schumpeter popularized the term business strategy.

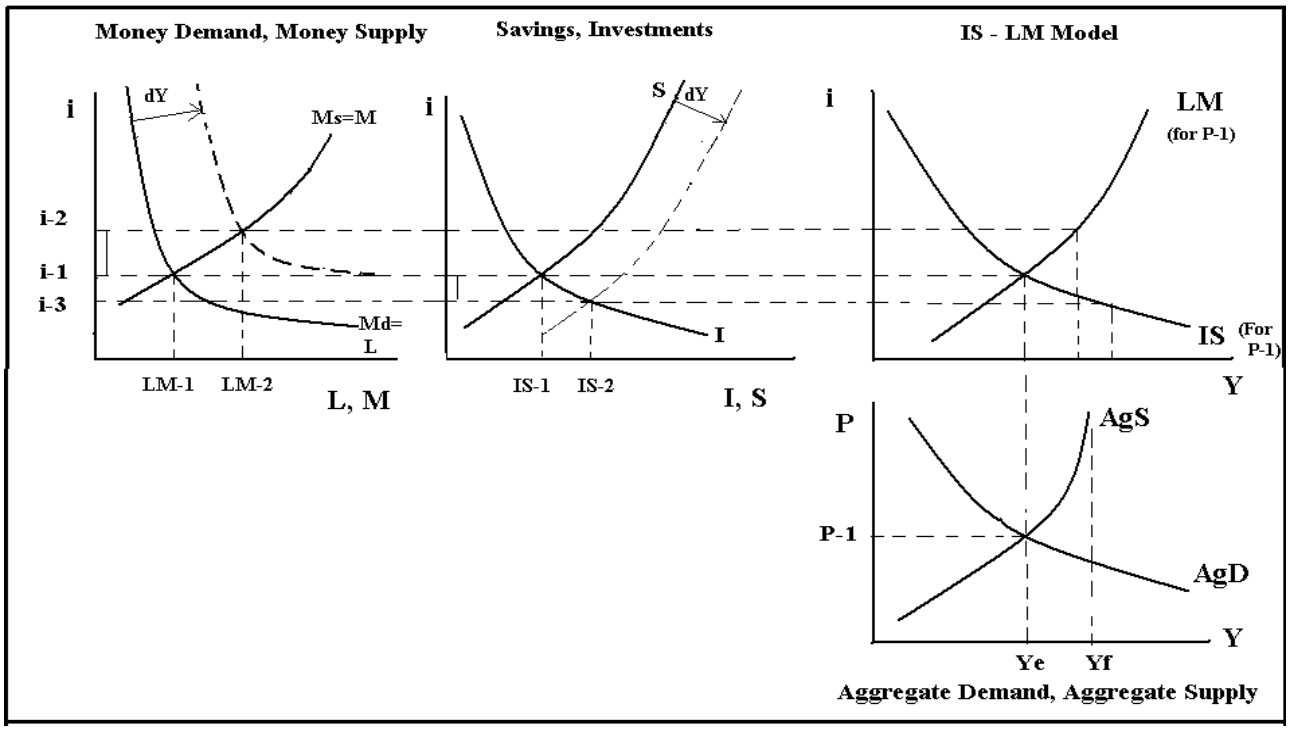
Since creative destruction is a process, the performance of capitalism must be judged over time, as it unfolds through decades or even centuries. You can not analyze the performance of the system at a single point in time.

But he also warned that the success capitalism in creating wealth will permit the formation of an intellectual class that will gain political power only with socialistic views that may destroy capitalism.

The Neo-Keynesian School

The Neo-Keynesian school carried out a theoretical synthesis of the various economic schools merging the neoclassical with the Keynesian schools. This was called the **Neoclassical-Keynesian School** or simply **Neo-Keynesian School**.

The centerpiece of the Neoclassical-Keynesian Synthesis (or the "Neo-Keynesian" system) was the famous IS-LM Model first introduced by John Hicks (1937) and then expanded upon by Franco Modigliani (1944). The IS-LM model purported to represent the gist of John Maynard Keynes's ***General Theory*** (1936) in the form of a system of simultaneous equations, represented by the charts below:



The Keynesians and Neo-Keynesians did not accept the Monetarists idea that money affected prices only, and not output. They felt that, principally in the short-term, changes in money supply will affect income and employment only. If there was underutilization of resources, in the short term, money supply would not affect prices. The question that emerged was then "why" and "how" money affected income. It was postulated that Money Supply affect income not directly, but through its effect on interest rates and therefore on investments (see the LM-IS chart above). The effect of money supply on

interest rates is based on the so called “Keynesian Cambridge Cash-Balance theory” which postulated that money is demanded not only for transactions (as was stated by the old Quantity Theory) but also as a store of value and for precautionary process -- there was a Liquidity Preference for Money. As such Money was demanded per se, with the demand for money depending on interest rates, income, and prices. In this formulation, the LM-IS charts shows that increases in money supply will change the equilibrium interest rate in the LM curve. The new interest rate equilibrium will affect investments and then output.

However, one of the startling results of the IS-LM model was that it was unable to obtain the Keynesian result of an "unemployment equilibrium". The model tended to yield the Neoclassical result of "full employment". In the short-run, there were not any price effects. In order to generate an "unemployment equilibrium" as a solution to this system of equations, the Neo-Keynesians appealed to interest-inelastic investment demand, income-inelastic money demand, rigid money wages, or some other imperfection to this system. Thus it is referred to as a "synthesis" of Neoclassical and Keynesian theory in that the conclusions of the model in the "long run" or in a "perfectly working" IS-LM system were Neoclassical (no unemployment), but in the "short-run" or "imperfectly working" IS-LM system, Keynesian conclusions held unemployment in equilibrium).

Later on, the Neo-Keynesians added the famous Phillips Curve (Phillips, 1958; Lipsey, 1960) to the system in order to enable them to account for inflation (changes in prices). The Phillips curve established an inverse relationship between inflation and unemployment: low inflation was historically statistically associated with high unemployment. The international sector was incorporated into an extended IS-LM system known as the Mundell-Fleming model (Mundell, 1962). Much work also went into providing "microfoundations" for the basic Keynesian relationships: the consumption function was formalized as a utility-maximizing problem by Franco Modigliani and Richard Brumberg (1953), the investment function was derived from profit-maximization by Dale W. Jorgensen (1963) and Robet Eisner and Robert H. Strotz (1963); the money demand function derived from utility-maximization by William J. Baumol (1952) and James Tobin (1956, 1958); the transmission mechanism (i.e. the impact of LM on IS) was expanded and given more detailed analysis by Lloyd Metzler (1951), James Tobin (1961, 1969) and many others.

The Neoclassical-Keynesian Synthesis was wildly successful and dominated macroeconomics in the post-war period. For a long time, the Neo-Keynesian system was synonymous with the "Keynesian Revolution" and was highly influential in both theoretical, applied and policy work. Abba Lerner (1944, 1951) was among the first to recognize the implications of the Keynesian system for government macroeconomic policy: by appropriate fiscal and monetary policies, a government could "steer" the economy away from extremes and thus smooth out the business cycle.

Based on this Neo-Keynesian thinking, the government of industrial countries began an active policy of economic interventions, increasing gradually their public expenditures and the size of the public sector. The school proposed a more regular intervention of the government to fine-tune the economies. These theories proved the modern rationale for the use of government spending and taxing to stabilize (fine-tune) the economy. Government would spend and decrease taxes when private spending was insufficient and threatened a recession; it would reduce spending and increase taxes when private spending was too great and threatened inflation. This analytic framework, focusing on the factors that determine total spending, remains the core of modern macroeconomic analysis.

This policy-effectiveness was given an enormous boost by the new econometric model-building techniques and optimal policy design criteria developed by Jan Tinbergen (1952), James E. Meade (1951), Lawrence Klein (1950), Robert Mundell (1962), Henri Theil (1964), William Poole (1970), Alan Blinder and Robert Solow (1973) which helped governments design and estimate the impact of various fiscal and monetary policies on employment and inflation.

Post-Keynesian School

The Neo-Keynesian system came under sustained attack in the late 1960s and early 1970s. Some economists felt that the Neo-Keynesians, with the merger of Keynes with the classics, had excessively deformed Keynes' ideas. The **Post-Keynesian School** felt that the original ideas of Keynes had still a lot to contribute to the understandings of the workings of an economy.

In fact, in a famous tome, Axel Leijonhufvud (1968) argued that the Neo-Keynesians had completely thwarted the meaning of J.M. Keynes's ***General Theory***. Following Clower (1965), Leijonhufvud suggested that instead of pursuing "unemployment equilibrium" in an imperfect system, they should be analyzing "prolonged disequilibrium" in a system without ***ad hoc*** rigidities. Their proposed "Walrasian-Keynesian" synthesis had long been suggested by earlier commentators such as Don Patinkin and Frank H. Hahn.

The Cambridge Keynesians -- Joan Robinson, Nicholas Kaldor, etc., to which one could add the Oxford economists Roy Harrod and John Hicks -- had taken ***their*** version of the Keynesian Revolution in a direction very much different from the Neo-Keynesians. They did not employ the IS-LM system but rather worked on extending the principal propositions of Keynes's *General Theory* to dynamic growth and business cycle models (it is perhaps not surprising to note that the Neo-Keynesians, who believed that Keynesian results were only "**short-run**", did not really venture in this direction, but simply borrowed entirely from Neoclassical theory to build their own growth models). The Cambridge Keynesians and their counterparts in the United States (the American Post Keynesians), considered the Neo-Keynesian construction as a horrendous betrayal of the Keynesian Revolution.

The New Monetarist School of Chicago

The Monetarist School of Chicago argued that the causes of recessions and the Great Depression must be sought elsewhere than in Neo-Keynesian savings-investment relationships. It felt that the emphasis of Neo-Keynesian economists on these investment-savings relationships has been misplaced, because a far more potent factor of economic instability, namely, erratic variation in the quantity of money, has been ignored. The School felt that the first and most important lesson that history teaches about what monetary policy can do -- and it is a lesson of the most profound importance -- is that monetary policy can prevent money itself from being a major source of economic disturbance.

At the heart of Monetarist economic policy recommendations was the use of ***monetary policy,*** which means the conduct of open market operations, discount window restrictions, etc. by the Central Bank in order to influence output and stabilize prices. In 1948, **Milton Friedman**, the leader of the Monetarist School of Chicago, recommended the use of a counter-cyclical monetary growth policy. Specifically, he proposed that the Federal Reserve set a policy of expanding the money supply during recessions and contracting it during booms in order to stabilize the price level in a "buffer stock" manner. In contrast, the Keynesians had tended to stress the role of fiscal policy (Government expenditures and investments) in stabilizing the macroeconomy.

Later on, however, in 1959, Milton Friedman reversed his policy stance, particularly in his famous *Program for Monetary Stability* (1959), where he dropped the countercyclical monetary policy rules of the Chicago Plan and opted in favor of a "constant money growth rule". The Chicago School re-emphasized the critical role of monetary growth in determining inflation. It condemned discretionarily of economic policies and the excessive size of the government.

However, the Neo-Keynesian system only came into serious trouble in the early 1970s, when a sudden, sustained bout of inflation ***and*** unemployment in the OECD countries did not seem to be compatible with the predictions of the Neo-Keynesian system -- and the traditional Keynesian policy-responses undertaken by various Western governments did not seem to alleviate the problem at all.

The Chicago School got wider acceptance during the crises of the 1970's, in which countries experienced both inflation and economic recession. This phenomenon had no explanation using Keynesian schemes. The Chicago School rejected the attempts to fine-tune the economy. These government interventions would just produce wider fluctuation and instability because these short-term maneuvers can not be precise enough, due to uncertain and variable time lags in their effect, unreliable forecasting, and political interference. Furthermore, the new "Rational Expectation" theory proposed that people can not be fooled by short-term fine-tuning maneuvers as they will incorporate these changes in their decisions. Since the late 1950s, the Monetarists had argued that the best policy was simply to keep money supply growing at a constant rate (say 3-5% pa), sufficient to match output growth, but not enough to produce price inflation. The government should just create a long term environment by stabilizing fiscal budgets.

The main features of Friedman's "Monetarism" can be listed as follows:

(1) ***money-to-income causality***: that movements in the money supply have been the primary cause of business fluctuations and that movements in aggregate demand for goods have relatively little impact.

(2) ***stability of money demand***: belief that, in practice, the demand for money is a **stable** function of wealth, prices, price changes and interest rates.

(3**)** ***monetarist transmission mechanism***: urging that economic agents dispose of excess money supply by purchasing goods rather than bonds.

(4) ***natural rate of unemployment hypothesis***: belief that there exists a unique rate of unemployment that is associated with non-accelerating inflation and that, in the long run, the economy will settle at such an unemployment rate.

(5) ***superiority of monetary policy rules***: assertion that monetary policy is much more effective than fiscal policy, recommendation that Central Banks target money aggregates rather than interest rates, and that following a steady money supply growth rule is, at least in the long run, better than a discretionary, counter-cyclical monetary policy.

There have been effectively two distinct stages of "New Monetarism" -- one surrounding the money-income causality debate that raged roughly within the 1960s and another stage surrounding the Phillips Curve (relationship between inflation and unemployment) and the acceleration hypothesis which was dominant in the 1970s. Both of them stem from two extraordinary pieces by Milton Friedman - one published in 1956, another in 1968. Although superficially distinct, both these contributions are intimately related within the research program of Monetarism.

Milton Friedman proposed a "natural rate of unemployment hypothesis" that did seem consistent with the OECD experience. Some unemployment level is unavoidable due to structural and frictional difficulties (changes in structure of jobs require pople to leave and train, and it takes time to get a new job). He postulated that attempting to reduce unemployment below the natural rate would only lead to accelerating inflation. He reminded everyone that there is an asymmetry in the converse policy. Government, he claimed, should not attempt to lower unemployment below the natural rate since it is costly to maintain and temporary anyway. However, government *can* attempt to lower inflation which is permanent and, his view, relatively costless in the long-run. In other words, he recommended that the government (the Central Bank in particular) operate a short-run employment-inflation trade-off *against* full employment in order to terminate inflation. If they aim for an unemployment level *higher* than natural rate, inflationary expectations would be reevaluated downwards - bringing actual inflation down permanently. In other words, the cure for inflation would be to deliberately cause a recession.

Friedman's "disinflation" suggestion was met with dismay. Economists immediately went on to calculate the "sacrifice" ratio, i.e. how much output would be foregone in an attempt to reduce inflation

by a single percentage point. Arthur Okun 1978) calculated that to get a 1% drop in inflation requires approximately a 3% rise in unemployment and a 9% contraction in GDP. Okun (1978, 1981) and many other economists, while agreeing that Friedman's proposition *would*, indeed, reduced inflation, nonetheless strongly recommended against it because it was far, far too costly.

Harking back to his 1951 work, Milton Friedman retorted that much of the output and unemployment costs to disinflation arise because collective bargaining arrangements tend to lock in a money wage and thus prevent quick price-side adjustment. In order to minimize the cost of disinflation, Friedman (1974) proposed the inclusion of "escalator clauses" in labor contracts that automatically corrected money wages for inflation. In this manner, he argued, the short-run Phillips Curve becomes "steeper" and thus the costs of disinflation (unemployment and output foregone) would be lower. Of course, the escalator clauses would not necessarily be a good thing in the case of aggregate demand expansion.

Despite much strenuous opposition, "Monetarist experiments" were conducted in the late 1970s and early 1980s in several Western countries - notoriously, the US and the UK. In 1979, soon after the ascendancy of Paul Volcker as chairman of the Federal Reserve in the United States and Margaret Thatcher as Prime Minister in Great Britain, interest rate targets were dropped in favor of money supply targets and "disinflation" was begun. The critics of Friedman's policy turned out to be correct: there was a long, painful recession with double-digit unemployment - by far the worse recession since the 1930s - and inflation seemed to survive. In the United States, the Federal Reserve "declared victory" in 1982, when inflation was still running at 4%, and abandoned the disinflation policy. By 1984, it abandoned money supply targets altogether. In Britain, the cost of the disinflation was even greater: output had shrunk in two years by 7.5 and a fifth of manufacturing output disappeared; unemployment soared to 10% while, surprisingly, inflation actually climbed from 10% to 22%. Faced with this result, Margaret Thatcher abandoned the disinflation attempt and, eventually, monetary targets, and laid the blame for the disasters of 1980-1 on what she publicly denounced as a misguided economic doctrine.

Many Monetarists explained the dismal results of the "Monetarist experiment" by accusing the Central Banks as not having been able to *effectively* control the money supply, in spite of their explicit targets -- "lack of nerve" on the part of Central Bankers was commonly cited. Keynesians, of course, had their own explanation for these results. The Keynesian argument was particularly lifted after Ronald Reagan's tax cuts and massive deficit-financed expansions in government spending in the early 1980s had a highly stimulative effect on the U.S. economy - just as textbook Keynesianism would predict.

New Classical School

The natural rate of unemployment hypothesis was further revised by Robert E. Lucas and used as the basis of a "**New Classical**" macroeconomic theory, which has risen since the 1970s to replace Monetarism and Neo-Keynesianism as the new macroeconomic orthodoxy. In the 1970s, Robert Lucas concluded that the natural rate of unemployment hypothesis assumed that people had adaptive expectations and that they would not learn from their experience. This was not rational. With rational expectations, monetary policy would have no effect on output.

The **Rational Expectations Theory** argued that the market's ability to anticipate government policy actions (rational expectations) limits the effectiveness of government policies. In particular, monetary policy is neutral in the sense that "**anticipated**" changes in money supply would be incorporated as risk premium and would have no impact on output and employment; only on inflation. This was proved statistically: over long periods of time increases in money supply (M2) are almost perfectly correlated to inflation, in both developed and developing countries. If there is a relation between money and growth, it is not because of causality, but just the result of association at a point of the business cycle. Also, there is also no negative relation between inflation and unemployment (no Phillips Curve); in fact, low inflation lead to higher growth and employment. **Unanticipated** changes in money supply, on the other hand, can stimulate production or recessions; but these unanticipated changes are unlikely.

The Rational Expectations Theory helped to decisively bury the Neo-Keynesian orthodoxy and inaugurated a new era of macroeconomics relying on the Neoclassical concept of **supply-determined equilibrium,** best exemplified in modern "Real Business Cycle" theory. This theory led to the **New Classical** or **Neo-Liberal School** -- the "modern" version of the Chicago School. It proposes that monetary policy should be used to maintain low inflation targets by "announcing" (forming expectations of low inflation) and maintaining it. As Lucas (1972, 1973), Sargent (1973) and Sargent and Wallace (1975, 1976) made clear, the policy implication, then, is that ***systematic monetary policy has no effect on output.*** Only policy "surprises" or aberrant shocks can influence output. In moving from Friedman's "**only money matters**" to the New Classicals' "**money does not matter**" (or rather, "only surprise money matters"), the debate turned in a considerably more radical direction.

Most Keynesians have accepted the conclusions of the Rational Expectations Theory at least partially (in 1977, Franco Modigliani in *his* presidential address to the A.E.A. finally accepted the natural rate hypothesis at least for the long-run.) Other Keynesians, however, such as James Tobin (e.g. 1980), have remained more irredentist. More recently, Joseph Stiglitz has made a case for the revival of Keynesian measures (see the Institutional School below).

Nevertheless, the Rational Expectations Theory provided a contemporary rationale for the pre-Keynesian tradition of limited government involvement in the economy, either though fiscal or monetary policies.

Another development of the Chicago School was the **Supply-side Economics (Arthur Laffer, Jude Wanniski.)** It recalls the Classical School's concern with economic growth as a fundamental prerequisite for improving society's material well-being. It emphasizes the need for incentives to save and invest if the nation's economy is to grow. It emphasizes that the main source of a country's economic growth is constant improvement in the efficiency with which resources are allocated for production. While the policy recommendations of the rival Keynesian school tended to focus almost entirely on what government can do to stimulate or restrain aggregate demand in the short-run so as to even out the business cycle, supply-side policy analysts focus on barriers to higher productivity -- identifying ways in which the government can promote faster economic growth over the long haul by removing impediments to the supply of, and efficient use of, the factors of production. Supply-siders believe that unwise provisions of the tax laws (and especially high marginal rates of personal and corporate income taxation) produce very damaging incentives that lead people to work less and to invest less (and to do both less efficiently) than they otherwise would. Supply-side policy recommendations typically include deregulation of heavily regulated industries, promotion of greater competition through lowering protectionist barriers to international trade, and measures to repeal special subsidies and tax loopholes targeting particular industries in favor of lower and more uniform tax rates across the board. Supply-side economics became particularly well-known to the general public during the 1980s because of its advocacy by one influential faction of economic policy-makers in the Reagan administration, leading to the use of the term "Reaganomics" to denote many of the ideas of the supply-siders. Supply-siders played a much smaller role in economic policy-making under the Bush administration, as the focus of attention shifted toward controlling the size of the budget deficit and away from the earlier "Reaganomics" preoccupation with accelerating the country's rate of economic growth.

The Institutional and Neo-institutional Schools.

At the beginning of the 1900's, a group of American economists developed an analytical methodology known as the Institutional School. Institutionalist economists regarded individual economic behavior as part of a larger social pattern, influenced by current ways of living and modes of thought. This school - led by **T. Veblen**- highlighted the role that the habits and customs of the community have in social institutions and the economic system. They rejected the narrow Classical view that people are primarily motivated by economic self-interest. Opposing the laissez-faire attitude towards government's role in the economy, the Institutionalists called for government controls and social reform to bring about a more

equal distribution of income, at the levels desired by the community. They also rejected the central planning ideas of Marx. Three institutionalists, Wesley Mitchell Arthur Burns, and Simon Kuznets put emphasis to the study of business cycles. Institutionalists stressed the importance of historical, social and institutional factors which make so-called economic "laws", contingent on these factors. The analysis of business cycles permitted the interpretation of new facts in terms of accredited precedents.

Although for many years, it was though that this school had disappeared, its influenced continued and has revived recently. Today, it is called the Neoinstututuionalist School. But all of them call for greater Government intervention in the economy. It has focused on various economic areas, including:

> The Theory of "**Public Choice**" – The demand and supply of Public Goods will not follows free competitive market rules; there is the problem of the free rider; differences between public versus individual decisions; influence of vested interest groups in Govt. decision-making on taxes, public debt, etc; rules for collective choice; etc. (James Buchanan, George Mason University).
>
> The "**Theory of Transaction Costs**" – Reviews the effects and distortions caused by Transaction Costs in general equilibrium. Major cause of Externalities. Agency problems.
>
> The "**Theory of Asymmetric Information**" – **Joseph Stigler** --Imperfect information by either buyer or seller lead to a price that would include a significant risk premium or discount for the party that lacks the information (example to the sale of a used car in which the buyer will require a lower price due to the uncertainties on the condition of the car).

Economic Development Theories

For many people, economic development - by which we mean the analysis of the economic progress of nations - is what economics as a whole is designed to address. Indeed, what but to find the "nature and causes" of economic development was Adam Smith's purpose? For modern economists, however, the status of economic development is somewhat more uncomfortable: it has always been the maverick field, lurking somewhere in the background but not really considered "real economics" but rather an amalgam of sociology, anthropology, history, politics and, all-too- often, ideology.

"Economic development", as it is now understood, really only started in the 1930s when, prompted by Colin Clark's 1939 quantitative study, economists began realizing that most of humankind did not live in an advanced capitalist economic system. However, the great early concern was still Europe: namely, postwar European reconstruction and the industrialization of its eastern fringes - as exemplified by the pioneering 1943 article of Paul Rosenstein-Rodan and Kurt Mandelbaum's 1947 tome. It was only some time after the war that economists really began turning their concerns towards Asia, Africa and Latin America.

To this end, decolonization was an important catalyst. Faced with a new plethora of nations whose standards of living and institutions were so different from the European, modern development theory, by which we mean the analysis not only of growth but also of the institutions which could induce, sustain and accelerate growth, began in earnest. Early development theorists - such as Bert Hoselitz, Simon Kuznets, W. Arthur Lewis, Hla Myint were among the first economists to begin analyzing economic development as a distinct subject.

Early economic development theory was but merely an extension of conventional economic theory which equated "development" with growth and industrialization. As a result, Latin American, Asian and African countries were seen mostly as "underdeveloped" countries, i.e. "primitive" versions of European nations that could, with time, "develop" the institutions and standards of living of Europe and North America.

As a result, "**the stage theory**" mentality of economic development dominated discussions of economic development. As later made famous by Alexander Gerschenkron (1953, 1962) and, more crudely, Walt W. Rostow (1960), the stages theories argued that all countries passed through the same historical stages of economic development and that current underdeveloped countries were merely at an earlier stage in this linear historical progress while First World (European and North American) nations were at a later stage. "Linear stages" theories had been developed earlier by German Historicists, thus it ought not be surprising to find historians, such as Gerschenkron and Rostow, among its main adherents.

More enlightened attempts to arrive at an empirical definition of the concept of "underdevelopment" -- as exemplified by the work of Hollis Chenery, Simon Kuznets and Irma Adelman -- led to the general conclusion that while there were not explicit "linear stages", countries tended nonetheless to exhibit ***similar*** patterns of development, although some differences could and did persist. The task of the development economist, in this light, was to suggest "**short-cuts**" by which underdeveloped countries might "catch up" with the developed and leap over a few stages.

By equating development with output growth, early development theorists, prompted by Ragnar Nurkse (1952), identified **capital formation** as the crucial component to accelerate development. The celebrated early work on the "dual economy" by Sir W. Arthur Lewis (1954, 1955) precisely stressed the role of **savings** in development. Early Keynesians, such as Kaldor and Robinson, attempted to call attention to the issue of income distribution as a determinant of savings and growth. Even modern Marxians such as Maurice Dobb (1951, 1960) focused on the issue of savings-formation.

Of course, **savings could themselves be manipulated by government intervention** - as Lewis had intimated and the Keynesians insisted. Indeed, earlier, Rosenstein-Rodan (1943) had argued that increasing returns to scale made **government-directed industrialization** feasible. The notion of turning "vicious circles" of low savings and low growth into "virtuous circles" of high savings and high growth by government intervention was reiterated by Hans W. Singer in his doctrine of "**balanced growth**" and Gunnar Myrdal in his theory of "**cumulative causation**". Thus, government involvement - whether by planning, socio-economic engineering or effective demand management - was regarded as a critical tool of economic development.

Other economists turned to **international trade** as the great catalyst to growth. Already Hla Myint, Gottfried Haberler and Jacob Viner had stressed this avenue - arguing along lines similar to the classical doctrine of Adam Smith that trade and specialization can increase the "extent of the market". However, earlier in the 1930s, D.H. Robertson had expressed his doubts on this account - and these were later reiterated by Ragnar Nurkse, H.W. Singer and Raul Prebisch.

Although capital-formation never really left the field, the meaning of the term mutated somewhat over time. T.W. Schultz, drawing upon his famous Chicago School thesis, turned away from physical capital accumulation to emphasize the need for "**human capital formation**". This led to an emphasis on **education and training** as pre-requisites of growth and the identification of the problem of the "**brain drain**" from the Developing Countries to the Developed Countries (and, as would later be stressed, from the private sector to government bureaucracies). W. Arthur Lewis and Hans W. Singer extended Schultz's thesis by arguing that social development as a whole - **notably education, health, fertility, etc. - by improving human capital, were also necessary pre-requisites for growth**. In this view, industrialization, if it came at the cost of social development, could never be self-sustaining.

In 1969 Dudley Seers' work changed the emphasis of development theory away from growth, an action that had both positive and negative outcomes. Development, he argued, was a social phenomenon that involved more than increasing per capita output. Development meant, in Seers's opinion, **eliminating poverty, unemployment and inequality** as well. Singer, Myrdal and Adelman were among the first old hands to acknowledge the validity of Seers's views. Many younger economists, such as Mahbub ul Haq, were galvanized by Seers's call to redefine economic development. Thus, structural issues such as dualism, population growth, inequality, urbanization, agricultural

transformation, education, health, unemployment,etc. all began to be reviewed on their own merits, and not merely as appendages to an underlying growth thesis.

Also emergent, in this period, was a debate on the very desirability of growth. E.F. Schumacher, in a famously provocative popular book, ***Small is Beautiful*** (1973), argued against the desirability of industrialization and extolled the merits of handicrafts economies. As the world environmental crisis became clearer in the 1980s, this debate took a new twist as the very sustainability of economic development was questioned. It became clear that the very desirability of development needed to be reconsidered.

Before Seers's complaint on growth, many economists had already felt extraordinarily uncomfortable with early development theory and the implicit assumptions behind "stages" reasoning. A new (or perhaps old) idea began to germinate - what may be loosely termed "**structuralism"**. The "structuralist" thesis, succinctly, called attention to the ***distinct*** structural problems of Developing Countries: developing countries, they argued, were not merely "primitive versions" of developed countries, rather they had distinctive features of their own. As mentioned, Chenery had argued a similar thesis, but nonetheless focused on the similarities of experience. The newer structuralists, in contrast, sought to bring attention to the differences. Albert O. Hirschmann (1958) was one of the early few who stressed the **need for country-specific analysis of development - as was stressed later by Dudley Seers.**

One of these distinctive features was that, unlike European industrialization, Third World industrialization was supposed to occur while these countries existed alongside already- industrialized Western countries and were tied to them by trade. This, speculated a few, could give rise to distinct structural problems for development.

Coincidental with H.W. Singer, the Argentinean economist, Raul Prebisch, formulated the famous "**dependency**" theory of economic development, wherein he argued that the world had developed into a "**center-periphery**" relationship among nations, where the Developing Countries were regressing into becoming the producer of raw materials for manufacturers of Developed Countries and were thus condemned to a peripheral and dependent role in the world economy. Thus, Prebisch concluded, some degree of **protectionism** in trade was necessary if these countries were to enter a self-sustaining development path. “Infant Industries” in developing countries had to be protected while they grew and became internationally competitive. Import-substitution, enabled by protection and government policy, rather than trade and export-orientation, was the preferred strategy. Historical examples of government-directed industrialization, such as Meiji Japan and Soviet Russia, were held up as proof that there was not only one path to development, as had been implied by the cruder "stages" theories.

The Prebisch-Singer thesis resounded with particularly with Marxian thinkers - who identified elements of Rosa Luxemburg's and V.I. Lenin's arguments on imperialism in it. Breaking with savings-obsessed orthodox Marxian thinkers such as Dobb, Neo-Marxians such as Paul Baran, Paul Sweezy, A.G. Frank and Samir Amin took the Prebisch-Singer thesis, merged it the Luxemburg thesis, and drew it into the modern era. Many Developing Country governments adopted the language and policies of the structuralists and/or the Neo-Marxians in the 1960s and 1970s, and indeed, the movement seemed to have been eminently influential. "Neo-Colonialism", "core-periphery" and "dependency" were the catch-words of the day.

However, as time moved on, these protectionist policies failed to yield their promised fruit. Infant industries never grew, continued to be inefficient and under the umbrella of protection, and just misallocated resources in the country.

Given the failure of these policies, a New Neoclassical (or, more accurately, Neo-Liberal) countermovement initiated by the economists such as P.T. Bauer, I.M.D. Little, Deepak Lal, Bela Balassa, Anne Krueger and Harry G. Johnson began to gain more adherents. **Their thesis was simple:**

government intervention did not only not improve development, it in fact thwarted it. The emergence of huge bureaucracies and state regulations, they argued, **suffocated private investment and distorted prices** making developing economies extraordinarily inefficient. In their view, the ills of unbalanced growth, dependency, etc. were all ascribed to too much government ***dirigisme***, not too little.

In recent years, the Neoclassical thesis has gained greater adherence, with a better identification of the measures that can be taken to help countries to develop faster. The Bleyzer Initiative has highlighted the proposition that the key variables to improve living standards in developing countries are indeed better incomes, better health and education and protection of the poor. But the success in achieving all these objectives depend on the rate of economic growth of these countries. Only through higher economic growth the developing countries will have the resources to finance health, education, poverty protection, environment, etc, all key variables for development as identifies by the "non-growth" development economists. And economic growth is dependent on the level of investments in the economy. Therefore, the key role of the Government is to create a favorable business environment to permit private businesses to invest and flourish. In particular, statistical studies have shown that significant increases in investments and growth could be achieved by a limited number of economic actions that the Governments of developing countries could take.

The Bleyzer Initiative concluded that "first generation" reforms —macroeconomic stabilization, achieved through sound fiscal and monetary policies— were essential pre-conditions to creating a favorable business climate and attracting investments. But they alone are not sufficient to improve the business environment and ensure increases in investments, both domestic and foreign. Within this macroeconomic framework, a number of "second generation" reforms are needed. Benchmarking, statistical analyses and business surveys indicated that a significant portion of the variations in foreign direct investments in a large group of developing countries can be explained by nine economic policy drivers. Furthermore, studies showed that whereas there was a high correlation between the nine policy drivers and the flows of FDI, there was also a low correlation between FDI flows and the "natural characteristics" of a country (e.g., geographical location, country size, population, etc.) These key investment drivers were the following, in order of priority:

(i) ***Macroeconomic Stability***, that included fiscal and monetary policies and actions to ensure sustainable internal and external stability over the medium term.

(ii) ***Business liberalization and de-regulation policies*** to permit firms to operate freely in a competitive environment by removing barriers to market entry, barriers to operations and barriers to exit.

(iii) Policies to create a ***stable and predictable legal environment*** with well-defined "rules of the game" for all businesses, without discrimination or preferential treatment and with capacity to enforce business contracts.

(iv) Policies to develop sound ***Corporate and Public Governance*** that would protect ownership rights and shareholders, and avoid excesses of power by Government agencies.

(v) Policies to ***liberalize foreign trade and international capital movements*** to facilitate the exports and imports of goods and the transfer of capital internationally.

(vi) Policies to ***create a healthy financial sector*** capable of meeting the financing needs of growing businesses.

(vii) Actions to ***minimize corruption*** and protect businesses from abuse of power by government officials.

(viii) Actions to minimize the effects of ***political uncertainties*** on business activities.

(ix) Actions to ***promote and inform investors*** about business opportunities in the country

Summary

General Eras in Economic Thought

Scholastic (1200 - 1600): Principal problem-- Provide a rationale for economic activities of the time and the actions of the church. Policy levers --

Mercantilist (1550 - 1750): Principal problem-- increase of resources available for military/financial mobilization by the nascent nation state. Policy levers -- bounties on exports and restrictions on imports that together lead to an overvalued exchange rate and a low commodity value of gold and silver within the territory. A nation is "wealthy" if it can quickly get it hands on enough precious metals to pay for an army abroad.

Classical (1750 - 1850): Principal problem -- maintaining and enhancing the prosperity of the bourgeoisie. Policy levers -- Free trade and Laissez Faire, elimination of monopolies; perhaps a low price of grain (as in Ricardo's "Essay on Profits." Concern with equilibrium level of prices; identification of equilibrium with nature. A nation is "wealthy" if its economy is growing, if the property of its bourgeoisie is secure, and if government policies that explicitly hinder enterprise or tax commerce to support an archaic military nobility are eliminated.

Neoclassical (1850-1940): Principal problem-- Same as the classical plus harnessing invention and technological progress to increase production. Policy levers - greater government involvement to set antitrust policy to try to restrict the monopolies that come about because of the exploitation of economies-of-scale that arise under modern machine technologies. Concern with the regulation of "natural" monopoly; with the government's role in providing "infrastructure"; and with the taming of union and socialist movements. Fear that powerful industrialists -- John D. Rockefeller and Andrew Carnegie -- will push prices well above average costs using monopoly power. A nation is wealth if plutocrats' power is restricted and if government provides the transportation and public service infrastructure necessary for industrial cities.

Keynesian and Neo-Keynesians (1940-1980): Principal problem-- keeping fluctuations of investment generated by the business cycle from creating mass unemployment. Policy levers -- fiscal and monetary policies to maintain aggregate demand; some degree of investment planning; incomes policy to improve output-inflation tradeoff; "natural" rate of unemployment. A nation is "wealthy" if unemployment can be kept low enough so that it does not swing elections.

Post-Keynesian (1975-present): Principal problems -- inconsistency between an economic system that assumes price can and should equal marginal cost with the approaching dominance of knowledge and communication industries where marginal cost is effectively zero, and thus some degree of exercise of monopoly power is omnipresent; upgrading educational level of labor force fast enough to stop massive deterioration in the distribution of income. Policy levers -- active labor market policies; attempts to establish an appropriate regime of intellectual property rights; government support of education and research establishment. A nation is "wealthy" if its high-technology sectors are dynamic and growing.

New Monetary School of Chicago (1970-present): Principal problems -- sustained spells of inflation *and* unemployment in the OECD countries did not seem to be compatible with the predictions of the Neo-Keynesian system -- and the traditional Keynesian policy-- and responses undertaken by various Western governments did not seem to alleviate the problem at all. Policy levers -- rejection of attempts to fine-tune the economy (due to unknown time lags, political interference, unreliable forecasting, people are not fooled by short-term fine-tuning. Government intervention is just likely to produce wider fluctuation and instability . The best policy is to keep money supply growing at a constant rate (say 3-5% pa), sufficient to match output growth, but not enough to produce price inflation. The government should just create a long term environment by stabilizing fiscal budgets.

Economic Development (1930 - present): Principal problems -- Complete the transition for developing countries into modern competitive free market economies. Policy levers -- implement economic reform measures aimed at improving the investment climate of these countries.