

Invisible hand

The **invisible hand** describes the unintended social benefits of an individual's self-interested actions. [Adam Smith](#) first introduced the concept in *The Theory of Moral Sentiments*, written in 1759, invoking it in reference to income distribution. In this work, however, the idea of the market is not discussed, and the word "[capitalism](#)" is never used.^[1]

By the time he wrote *The Wealth of Nations* in 1776, Smith had studied the economic models of the French [Physiocrats](#) for many years, and in this work the invisible hand is more directly linked to production, to the employment of [capital](#) in support of domestic industry. The only use of "invisible hand" found in *The Wealth of Nations* is in Book IV, Chapter II, "Of Restraints upon the Importation from foreign Countries of such Goods as can be produced at Home." The exact phrase is used just [three times](#) in [Smith's writings](#).

Smith may have come up with the two meanings of the phrase from [Richard Cantillon](#) who developed both economic applications in his model of the isolated estate.^[2]

The idea of trade and market exchange automatically channeling self-interest toward socially desirable ends is a central justification for the [laissez-faire](#) economic philosophy, which lies behind [neoclassical economics](#).^[3] In this sense, the central disagreement between economic ideologies can be viewed as a disagreement about how powerful the "invisible hand" is. In alternative models, forces which were nascent during Smith's lifetime, such as large-scale industry, [finance](#), and advertising, reduce its effectiveness.^[4]

Interpretations of the term have been generalized beyond the usage by Smith.

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Adam Smith

The Theory of Moral Sentiments

The first appearance of the invisible hand in Smith occurs in *The Theory of Moral Sentiments* (1759) in Part IV, Chapter 1, where he describes a selfish landlord as being led by an invisible hand to distribute his harvest to those who work for him:

The proud and unfeeling landlord views his extensive fields, and without a thought for the wants of his brethren, in imagination consumes himself the whole harvest ... [Yet] the capacity of his stomach bears no proportion to the immensity of his desires ... the rest he will be obliged to distribute among those, who prepare, in the nicest manner, that little which he himself makes use of, among those who fit up the palace in which this little is to be consumed, among those who provide and keep in order all the different baubles and trinkets which are employed in the economy of greatness; all of whom thus derive from his luxury and caprice, that share of the necessities of life, which they would in vain have expected from his humanity or his justice...The rich...are led by an **invisible hand** to make nearly the same distribution of the necessities of life, which would have been made, had the earth been divided into equal portions among all its inhabitants, and thus without intending it, without knowing it, advance the interest of the society, and afford means to the multiplication of the species. When Providence divided the earth among a few lordly masters, it neither forgot nor abandoned those who seemed to have been left out in the partition.

Elsewhere in *The Theory of Moral Sentiments*, Smith has described the desire of men to be respected by the members of the community in which they live, and the desire of men to feel that they are honorable beings.

The Wealth of Nations

Adam Smith uses the metaphor in Book IV, Chapter II, paragraph IX of *The Wealth of Nations*.

But the annual revenue of every society is always precisely equal to the exchangeable value of the whole annual produce of its industry, or rather is precisely the same thing with that exchangeable value. As every individual, therefore, endeavours as much as he can both to employ his capital in the support of domestic industry, and so to direct that industry that its produce may be of the greatest value, every individual necessarily labours to render the annual revenue of the society as great as he can. He generally, indeed, neither intends to promote the public interest, nor knows how much he is promoting it. By preferring the support of domestic to that of foreign industry, he intends only his own security; and by directing that industry in such a manner as its produce may be of the greatest value, he intends only his own gain, and he is in this, as in many other cases, led by an **invisible hand** to promote an end which was no part of his intention. Nor is it always the worse for the society that it was not part of it. By pursuing his own interest he frequently promotes that of the society more effectually than when he really intends to promote it. I have never known much good done by those who affected to trade for the public good. It is an affectation, indeed, not very common among merchants, and very few words need be employed in dissuading them from it.

Other uses of the phrase by Smith

Only in *The History of Astronomy* (written before 1758) Smith speaks of *the invisible hand*, to which ignorants refer to explain natural phenomena otherwise unexplainable:

Fire burns, and water refreshes; heavy bodies descend, and lighter substances fly upwards, by the necessity of their own nature; nor was the invisible hand of Jupiter ever apprehended to be employed in those matters.^[5]

In *The Theory of Moral Sentiments* (1759) and in *The Wealth of Nations* (1776) Adam Smith speaks of *an* invisible hand, never of *the* invisible hand. In *The Theory of Moral Sentiments* Smith uses the concept to sustain a "trickling down" theory, a concept also used in neoclassical development theory: The gluttony of the rich serves to feed the poor.

The rich ... consume little more than the poor, and in spite of their natural selfishness and rapacity, though they mean only their own conveniency, though the sole end which they propose from the labours of all the thousands whom they employ, be the gratification of their own vain and insatiable desires, they divide with the poor the produce of all their improvements. They are led by an *invisible hand* [emphasis added] to make nearly the same distribution of the necessaries of life, which would have been made, had the earth been divided into equal portions among all its inhabitants, and thus without intending it, without knowing it, advance the interest of the society, and afford means to the multiplication of the species. When Providence divided the earth among a few lordly masters, it neither forgot nor abandoned those who seemed to have been left out in the partition. These last too enjoy their share of all that it produces. In what constitutes the real happiness of human life, they are in no respect inferior to those who would seem so much above them. In ease of body and peace of mind, all the different ranks of life are nearly upon a level, and the beggar, who suns himself by the side of the highway, possesses that security which kings are fighting for.^[6]

Smith's visit to France and his acquaintance to the French *Économistes* (known as *Physiocrats*) changed his views from micro-economic optimisation to macro-economic growth as the end of Political Economy. So the landlord's gluttony in *The Theory of Moral Sentiments* is denounced in the *Wealth of Nations* as *unproductive labour*. Walker, the first president (1885 to 92) of the *American Economic Association*, concurred:

The domestic servant ... is not employed as a means to his master's profit. His master's income is not due in any part to his employment; on the contrary, that income is first acquired ... and in the amount of the income is determined whether the servant shall be employed or not, while to the full extent of that employment the income is diminished. As Adam Smith expresses it "a man grows rich by employing a multitude of manufacturers; he grows poor by maintaining a multitude of menial servants."^[7]

Smith's theoretical U-turn from a micro-economical to a macro-economical view is not reflected in *The Wealth of Nations*. Large parts of this book are retaken from Smith's lectures before his visit to France. So one must distinguish in *The Wealth of Nations* a micro-economical and a macro-economical Adam Smith. Whether Smith's quotation of *an invisible hand* in the middle of his work is a micro-economical statement or a macro-economical statement condemning monopolies and government interferences as in the case of tariffs and patents is debatable.

Economists' interpretation

The concept of the "invisible hand" is nearly always generalized beyond Smith's original uses. The phrase was not popular among economists before the twentieth century; Alfred Marshall never used it in his *Principles of Economics*^[8] textbook and neither does William Stanley Jevons in his *Theory of Political Economy*.^[9] Paul Samuelson cites it in his *Economics* textbook in 1948:

Even Adam Smith, the canny Scot whose monumental book, "The Wealth of Nations" (1776) , represents the beginning of modern economics or political economy-even he was so thrilled by the

recognition of an order in the economic system that he proclaimed the mystical principle of the "invisible hand": that each individual in pursuing his own selfish good was led, as if by an invisible hand, to achieve the best good of all, so that any interference with free competition by government was almost certain to be injurious. This unguarded conclusion has done almost as much harm as good in the past century and a half, especially since too often it is all that some of our leading citizens remember, 30 years later, of their college course in economics.^[10]

In this interpretation, the theory is that the Invisible Hand states that if each consumer is allowed to choose freely what to buy and each producer is allowed to choose freely what to sell and how to produce it, the market will settle on a product distribution and prices that are beneficial to all the individual members of a community, and hence to the community as a whole. The reason for this is that self-interest drives actors to beneficial behavior in a case of serendipity. Efficient methods of production are adopted to maximize profits. Low prices are charged to maximize revenue through gain in market share by undercutting competitors. Investors invest in those industries most urgently needed to maximize returns, and withdraw capital from those less efficient in creating value. All these effects take place dynamically and automatically.

Since Smith's time, this concept has been further incorporated into economic theory. Léon Walras developed a four-equation general equilibrium model that concludes that individual self-interest operating in a competitive market place produces the unique conditions under which a society's total utility is maximized. Vilfredo Pareto used an edgeworth box contact line to illustrate a similar social optimality.

Ludwig von Mises, in *Human Action* uses the expression "the invisible hand of Providence", referring to Marx's period, to mean evolutionary meliorism.^[11] He did not mean this as a criticism, since he held that secular reasoning leads to similar conclusions. Milton Friedman, a Nobel Memorial Prize winner in economics, called Smith's Invisible Hand "the possibility of cooperation without coercion."^[12] Kaushik Basu has called the First Welfare Theorem the Invisible Hand Theorem.^[13]

Some economists question the integrity of how the term "invisible hand" is currently used. Gavin Kennedy, Professor Emeritus at Heriot-Watt University in Edinburgh, Scotland, argues that its current use in modern economic thinking as a symbol of free market capitalism is not reconcilable with the rather modest and indeterminate manner in which it was employed by Smith.^[14] In response to Kennedy, Daniel Klein argues that reconciliation is legitimate. Moreover, even if Smith did not intend the term "invisible hand" to be used in the current manner, its serviceability as such should not be rendered ineffective.^[15] In conclusion of their exchange, Kennedy insists that Smith's intentions are of utmost importance to the current debate, which is one of Smith's association with the term "invisible hand". If the term is to be used as a symbol of liberty and economic coordination as it has been in the modern era, Kennedy argues that it should exist as a construct completely separate from Adam Smith since there is little evidence that Smith imputed any significance onto the term, much less the meanings given it at present.^[16]

The former Drummond Professor of Political Economy at Oxford, D. H. MacGregor, argued that:

The one case in which he referred to the 'invisible hand' was that in which private persons preferred the home trade to the foreign trade, and he held that such preference was in the national interest, since it replaced two domestic capitals while the foreign trade replaced only one. The argument of the two capitals was a bad one, since it is the amount of capital that matters, not its subdivision; but the invisible sanction was given to a Protectionist idea, not for defence but for employment. It is not surprising that Smith was often quoted in Parliament in support of

Protection. His background, like ours today, was private enterprise; but any dogma of non-intervention by government has to make heavy weather in *The Wealth of Nations*.^[17]

Harvard economist [Stephen Marglin](#) argues that while the "invisible hand" is the "most enduring phrase in Smith's entire work", it is "also the most misunderstood."

Economists have taken this passage to be the first step in the cumulative effort of mainstream economics to prove that a competitive economy provides the largest possible economic pie (the so-called first welfare theorem, which demonstrates the Pareto optimality of a competitive regime). But Smith, it is evident from the context, was making a much narrower argument, namely, that the interests of businessmen in the security of their capital would lead them to invest in the domestic economy even at the sacrifice of somewhat higher returns that might be obtainable from foreign investment. . . .

[David Ricardo](#) . . . echoed Smith . . . [but] Smith's argument is at best incomplete, for it leaves out the role of foreigners' investment in the domestic economy. It would have to be shown that the gain to the British capital stock from the preference of British investors for Britain is greater than the loss to Britain from the preference of Dutch investors for the Netherlands and French investors for France."^[18]

According to [Emma Rothschild](#), Smith was actually being ironic in his use of the term.^[19] [Warren Samuels](#) described it as "a means of relating modern high theory to Adam Smith and, as such, an interesting example in the development of language."^[20]

Understood as a metaphor

Smith uses the metaphor in the context of an argument against protectionism and government regulation of markets, but it is based on very broad principles developed by [Bernard Mandeville](#), [Bishop Butler](#), [Lord Shaftesbury](#), and [Francis Hutcheson](#). In general, the term "invisible hand" can apply to any individual action that has unplanned, unintended consequences, particularly those that arise from actions not orchestrated by a central command, and that have an observable, patterned effect on the community.

Bernard Mandeville argued that private vices are actually public benefits. In *The Fable of the Bees* (1714), he laments that the "bees of social virtue are buzzing in Man's bonnet": that civilized man has stigmatized his private appetites and the result is the retardation of the common good.

Bishop Butler argued that pursuing the public good was the best way of advancing one's own good since the two were necessarily identical.

Lord Shaftesbury turned the convergence of public and private good around, claiming that acting in accordance with one's self-interest produces socially beneficial results. An underlying unifying force that Shaftesbury called the "Will of Nature" maintains equilibrium, congruency, and harmony. This force, to operate freely, requires the individual pursuit of [rational self-interest](#), and the preservation and advancement of the self.

Francis Hutcheson also accepted this convergence between public and private interest, but he attributed the mechanism, not to rational self-interest, but to personal intuition, which he called a "moral sense." Smith developed his own version of this general principle in which six psychological motives combine in each individual to produce the common good. In *The Theory of Moral Sentiments*, vol. II, page 316, he says, "*By acting according to the dictates of our moral faculties, we necessarily pursue the most effective means for promoting the happiness of mankind.*"

Contrary to common misconceptions, Smith did not assert that all self-interested labour necessarily benefits society, or that all public goods are produced through self-interested labour. His proposal is merely that in a free market, people *usually* tend to produce goods desired by their neighbours. The tragedy of the commons is an example where self-interest tends to bring an unwanted result.

The invisible hand is traditionally understood as a concept in economics, but Robert Nozick argues in *Anarchy, State and Utopia* that substantively the same concept exists in a number of other areas of academic discourse under different names, notably Darwinian natural selection. In turn, Daniel Dennett argues in *Darwin's Dangerous Idea* that this represents a "universal acid" that may be applied to a number of seemingly disparate areas of philosophical inquiry (consciousness and free will in particular).

Tawney's interpretation

Christian socialist R. H. Tawney saw Smith as putting a name on an older idea:

If preachers have not yet overtly identified themselves with the view of the natural man, expressed by an eighteenth-century writer in the words, trade is one thing and religion is another, they imply a not very different conclusion by their silence as to the possibility of collisions between them. The characteristic doctrine was one, in fact, which left little room for religious teaching as to economic morality, because it anticipated the theory, later epitomized by Adam Smith in his famous reference to the invisible hand, which saw in economic self-interest the operation of a providential plan... The existing order, except insofar as the short-sighted enactments of Governments interfered with it, was the natural order, and the order established by nature was the order established by God. Most educated men, in the middle of the [eighteenth] century, would have found their philosophy expressed in the lines of Pope:

Thus God and Nature formed the general frame,
And bade self-love and social be the same.

Naturally, again, such an attitude precluded a critical examination of institutions, and left as the sphere of Christian charity only those parts of life that could be reserved for philanthropy, precisely because they fell outside that larger area of normal human relations, in which the promptings of self-interest provided an all-sufficient motive and rule of conduct. (*Religion and the Rise of Capitalism*, pp. 191–192.)

Criticisms

Joseph E. Stiglitz

The Nobel Prize-winning economist Joseph E. Stiglitz, says: "the reason that the invisible hand often seems invisible is that it is often not there."^{[21][22]} Stiglitz explains his position:

Adam Smith, the father of modern economics, is often cited as arguing for the "invisible hand" and free markets: firms, in the pursuit of profits, are led, as if by an invisible hand, to do what is best for the world. But unlike his followers, Adam Smith was aware of some of the limitations of free markets, and research since then has further clarified why free markets, by themselves, often do not lead to what is best. As I put it in my new book, *Making Globalization Work*, the reason that the invisible hand often seems invisible is that it is often not there. Whenever there are "externalities"—where the actions of an individual have impacts on others for which they do not pay, or for which they are not compensated—markets will not work well. Some of the important instances have long

understood environmental externalities. Markets, by themselves, produce too much pollution. Markets, by themselves, also produce too little basic research. (The government was responsible for financing most of the important scientific breakthroughs, including the internet and the first telegraph line, and many bio-tech advances.) But recent research has shown that these externalities are pervasive, whenever there is imperfect information or imperfect risk markets—that is always. Government plays an important role in banking and securities regulation, and a host of other areas: some regulation is required to make markets work. Government is needed, almost all would agree, at a minimum to enforce contracts and property rights. The real debate today is about finding the right balance between the market and government (and the third "sector" – governmental non-profit organizations.) Both are needed. They can each complement each other. This balance differs from time to time and place to place.^[22]

The preceding claim is based on Stiglitz's 1986 paper, "Externalities in Economies with Imperfect Information and Incomplete Markets",^[23] which describes a general methodology to deal with externalities and for calculating optimal corrective taxes in a general equilibrium context. In it he considers a model with households, firms and a government.

Households maximize a utility function $u^h(x^h, z^h)$, where x^h is the consumption vector and z^h are other variables affecting the utility of the household (ex:pollution). The budget constraint is given by $x_1^h + q \cdot \bar{x}^h \leq I^h + \sum a^{hf} \cdot \pi^f$, where q is a vector of prices, a^{hf} the fractional holding of household h in firm f , π^f the profit of firm f , I^h a lump sum government transfer to the household. The consumption vector can be split as $x^h = (x_1^h, \bar{x}^h)$.

Firms maximize a profit $\pi^f = y_1^f + p \cdot \bar{y}^f$, where y^f is a production vector and p is vector of producer prices, subject to $y_1^f - G^f(\bar{y}^f, z^f) \leq 0$, G^f a production function and z^f are other variables affecting the firm. The production vector can be split as $y^f = (y_1^f, \bar{y}^f)$.

The government receives a net income $R = t \cdot \bar{x} - \sum I^h$, where $t=(q-p)$ is a tax on the goods sold to households.

It can be shown that in general the resulting equilibrium is not efficient.

Proof

It is worth keeping in mind that an equilibrium for the model may not necessarily exist. If it exists and there are no taxes ($I^h=0, \forall h$), then demand equals supply, and the equilibrium is found by:

$$\sum \bar{x}^h(q, I, z) - \sum \bar{y}^f(p, z) = \bar{x}(q, I, z) - \sum \bar{y}^f(p, z) = 0$$

Let's use $\frac{\partial E^h}{\partial q} = E_q^h$ as a simplifying notation, where $E^h(q, z^h, u^h)$ is the expenditure function that allows the minimization of household expenditure for a certain level of utility. If there is a set of taxes, subsidies, and lump sum transfers that leaves household utilities unchanged and increase government revenues, then the above equilibrium is not Pareto optimal. On the other hand, if the above non taxed equilibrium is Pareto optimal, then the following maximization problem has a solution for $t=0$:

$$\begin{aligned} &\underset{t, I}{\text{maximize}} && R = t \cdot \bar{x} - \sum I^h \\ &\text{subject to} && I^h + \sum a^{hf} \pi^f = E^h(q, z^h; \bar{u}^h) \end{aligned}$$

This is a necessary condition for Pareto optimality. Taking the derivative of the constraint with respect to t yields:

$$\frac{dI^h}{dt} + \sum a^{hf} \left(\pi_z^f \frac{dz^f}{dt} + \pi_p^f \frac{dp}{dt} \right) = E_q^h \frac{dq}{dt} + E_z^h \frac{dz^h}{dt}$$

Where $\pi_z^f = \frac{\partial \pi^f}{\partial z^f}$ and $\pi^f(p, z^f)$ is the firm's maximum profit function. But since $q=t+p$, we have that $dq/dt=I_{N-1}+dp/dt$. Therefore, substituting dq/dt in the equation above and rearranging terms gives:

$$E_q^h + \left(E_q^h - \sum a^{hf} \pi_p^f \right) \frac{dp}{dt} = \frac{dI^h}{dt} + \left\{ \sum a^{hf} \pi_z^f \frac{dz^f}{dt} - E_z^h \frac{dz^h}{dt} \right\}$$

Summing over all households and keeping in mind that $\sum a^{hf} = 1$ yields:

$$\sum E_q^h + \left(\sum E_q^h - \sum \pi_p^f \right) \frac{dp}{dt} = \sum \frac{dI^h}{dt} + \left\{ \sum \pi_z^f \frac{dz^f}{dt} - \sum E_z^h \frac{dz^h}{dt} \right\}$$

By the envelope theorem we have:

$$\hat{x}_k^h(q, z^h, u^h) = \frac{\partial E^h}{\partial q} \Big|_{z^h, u^h}$$

$$\frac{\partial \pi^f}{\partial p_{k_1}} \Big|_{z^f} = y_k^f, \forall k$$

This allows the constraint to be rewritten as:

$$\bar{x} + (\bar{x} - \bar{y}) \frac{dp}{dt} = \sum \frac{dI^h}{dt} + \left(\sum \pi_z^f \frac{dz^f}{dt} - \sum E_z^h \frac{dz^h}{dt} \right)$$

Since $\bar{x} = \bar{y}$:

$$\sum \frac{dI^h}{dt} = \bar{x} - \left(\sum \pi_z^f \frac{dz^f}{dt} - \sum E_z^h \frac{dz^h}{dt} \right)$$

Differentiating the objective function of the maximization problem gives:

$$\frac{dR}{dt} = \bar{x} + \frac{d\bar{x}}{dt} \cdot t - \sum \frac{dI^h}{dt}$$

Substituting $\sum \frac{dI^h}{dt}$ from the former equation in to latter equation results in:

$$\frac{dR}{dt} = \frac{d\bar{x}}{dt} \cdot t + \left(\sum \pi_z^f \frac{dz^f}{dt} - \sum E_z^h \frac{dz^h}{dt} \right) = \frac{d\bar{x}}{dt} \cdot t + (\Pi^t - B^t)$$

Recall that for the maximization problem to have a solution a $t=0$:

$$\frac{dR}{dt} = (\Pi^t - B^t) = 0$$

In conclusion, for the equilibrium to be Pareto optimal dR/dt must be zero. Except for the special case where Π and B are equal, in general the equilibrium will not be Pareto optimal, therefore inefficient.

Noam Chomsky

Noam Chomsky suggests that Smith (and more specifically David Ricardo) sometimes used the phrase to refer to a "home bias" for investing domestically in opposition to offshore outsourcing production and neoliberalism.^[24]

Rather interestingly, these issues were foreseen by the great founders of modern economics, Adam Smith for example. He recognized and discussed what would happen to Britain if the masters adhered to the rules of sound economics – what's now called neoliberalism. He warned that if British manufacturers, merchants, and investors turned abroad, they might profit but England would suffer. However, he felt that this wouldn't happen because the masters would be guided by a home bias. So as if by an invisible hand England would be spared the ravages of

economic rationality. That passage is pretty hard to miss. It's the only occurrence of the famous phrase "invisible hand" in *Wealth of Nations*, namely in a critique of what we call neoliberalism.^[25]

Stephen LeRoy

Stephen LeRoy, professor emeritus at the University of California, Santa Barbara, and a visiting scholar at the Federal Reserve Bank of San Francisco, offered a critique of the Invisible Hand, writing that "[T]he single most important proposition in economic theory, first stated by Adam Smith, is that competitive markets do a good job allocating resources. (...) The financial crisis has spurred a debate about the proper balance between markets and government and prompted some scholars to question whether the conditions assumed by Smith...are accurate for modern economies.^[26]

See also

Books

- Essays on Philosophical Subjects* by Adam Smith
- I, Pencil* by Leonard Read
- The National Gain* by Anders Chydenius
- The Theory of Moral Sentiments* by Adam Smith
- The Visible Hand* by Alfred Chandler
- The Wealth of Nations* by Adam Smith

Articles

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- Vanishing Hand

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- Samuels, Warren J., ed. (2011). *Erasing the Invisible Hand: Essays on an Elusive and Misused Concept in Economics* (<https://books.google.com/books?id=-1Cil1skAbUC&pg=PR18>). Cambridge: Cambridge University Press. ISBN 978-0-521-51725-6.

Further reading

- *The Theory of Moral Sentiments* (full text) (<http://www.adamsmith.org/smith/tms/tms-index.htm>)
- *The Wealth of Nations* (<http://www.bibliomania.com/2/1/65/112/frameset.html>) (full text)

External links

- Oslington, Paul (2012). *God and the Market: Adam Smith's Invisible Hand* (https://www.jstor.org/stable/23259282?seq=1#page_scan_tab_contents) // JSTOR

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