

Neoclassical Theory and the Inconsistent Application of Subjectivism

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## Abstract

Despite claiming to do so, neoclassical economic theory does not consistently apply subjectivism in its treatment of opportunity cost. This paper examines two areas in which this inconsistency is manifested. The first is the issue of "market failure" resulting from the "monopoly problem," and the second is the issue of "market failure" resulting from the treatment of negative externalities as "external costs." Neoclassical theory justifies, in principle, i.e., subject only to a "cost-benefit" analysis, governmental intervention into virtually all markets in order to correct for the misallocation of resources that is alleged to occur in each of these cases. Subjectivist theory rejects the analysis leading to this conclusion.

## Neoclassical Theory and the Inconsistent Application of Subjectivism<sup>1</sup>

“And it is probably no exaggeration to say that every important advance in economic theory during the last hundred years was a further step in the consistent application of subjectivism.” - F. A. Hayek, *The Counter-Revolution of Science: Studies on the Abuse of Reason*, 2d ed., LibertyPress, Indianapolis, 1979, pp. 52-53.

### Introduction

Action consists in purposeful behavior by which A is preferred to B, C, etc. In order to act, the individual must order his perceived alternatives, and this ranking can only be ordinal (Barnett and Block). Because action necessarily involves choice, and choice necessitates (opportunity) cost in the form of the benefits foregone in not taking the best alternative course of action, and because only individuals can act, costs and benefits are subjective to the acting individual. Only the individual can know which alternative (to the action actually taken) he valued the most at the time he acted, which value is not quantifiable.

Revenues and expenses are objective and quantifiable;<sup>2</sup> they are measured in monetary units. Revenues will be measured similarly by different individuals, as will expenses.<sup>3</sup> Benefits and costs, however, are subjective and non-quantifiable. Moreover, just as costs and expenses are different phenomena, so also are benefits and revenues.

Unfortunately, although neoclassical economists pay lip service to these distinctions, in reality they treat them as “distinction(s) without a difference.” They continually compare revenues with what they refer to as “costs.” But, revenues and costs are incommensurables and cannot be compared; what they are really comparing are revenues and expenses.<sup>4</sup> Not infrequently, they also compare what they refer to as “benefits and costs,” both measured in monetary terms. In reality they are, again, comparing revenues and expenses.

For example, in the analysis of positive externalities, neoclassical economists frequently refer to the market demand curve (or average revenue curve) as the “marginal private benefit” curve. While average revenue can be measured quantitatively, say in dollars, marginal private benefits cannot be so measured, and thus the two are not the same. They then proceed to add a “marginal external benefit” curve to their marginal private benefit curve to construct the “marginal social benefit” curve, all three of which are measured with the monetary unit on the vertical axis. Then it is argued that a competitive market fails to produce an economically efficient (i.e., socially optimal) quantity of output since the marginal private benefit from the last unit produced is lower than the marginal social benefit for that unit. The failure to produce the economically efficient quantity introduces a deadweight loss that is measured by an area equal to some product of the monetary unit times quantity. All of this analysis purportedly measures benefits and costs to all market participants, when in fact what is being measured are revenues and expenses to sellers and an estimate of the marginal external benefit (in reality, the marginal external expense) to the whole of society made by one person (or a relatively small group of people) and this “benefit” is measured in monetary units. Thus two critical errors are made. One is that estimates of the marginal social benefit for all of society are being made by one person (or a few people). The other is that benefit is being measured in monetary units; i.e., it is being treated as objective, when, in fact, benefits are subjective. Only an individual can estimate the benefit (and cost) to himself of the activity in question, and since these subjective benefits (and costs) cannot be measured quantitatively, they cannot be summed over all members of society.

As a result, the whole analysis leading to the conclusion that government intervention to correct for positive externalities through, for example, subsidies is erroneous.

*Hereinafter, we use the term “cost(s)” to refer only to subjective opportunity costs; we use the term “expense(s)” to refer only to objective, quantifiable expense(s), measurable in monetary terms. Hereinafter, we use the term “benefit(s)” to refer only to subjective benefits; we use the term “revenue(s)” to refer only to objective, quantifiable receipts(s), measurable in monetary terms.*

Although the information generated by comparing revenues with expenses can aid in making choices, ultimately the decision maker must compare benefits with costs. And each individual will potentially weigh the benefits and costs of alternative courses of action differently.

This lack of consistency in the way neoclassical economists communicate introduces inconsistencies in positive economic analysis, which ultimately lead to poor policy recommendations.

This paper examines two areas, industrial organization and negative externalities, for manifestations of this inconsistency. By comparing neoclassical theory with a consistently subjectivist theory we show that, even on its own ground — comparative-statics analysis, rather than that of market-process analysis — the inconsistency of neoclassical theory can be shown to exist. And, as a consequence, governmental intervention into virtually every market or industry is, in principle, justified by neoclassical theory.

## **Industrial Organization**

Consider, first, the inconsistency as it arises in the theory of industrial organization. Neoclassical theory maintains that, for the firm, the socially-optimal allocation of resources occurs when price equals marginal expense ( $P = ME$ ),<sup>5</sup> whereas the privately-optimal<sup>6</sup> (profit-maximizing) allocation of resources occurs when marginal revenue equals marginal expense ( $MR = ME$ ) for the firm. Because a firm's demand curve slopes downward,<sup>7</sup> marginal revenue is less than price ( $MR < P$ ). (The divergence between  $MR$  and  $P$  is said to give rise to a “monopoly problem.”) Consequently, the profit-maximizing allocation of resources and the socially-optimal allocation of resources diverge. Firms are assumed to pursue profit maximization, thereby misallocating resources to some extent in virtually every market and industry. (The misallocation of resources is referred to as a “market failure,” resulting from the “monopoly” problem.) Therefore, from the point of view of neoclassical theory, this type of “market failure” is ubiquitous, and governmental intervention to remedy “market failure” is warranted in virtually every market and industry.

Whereas subjectivist theory does agree with neoclassical theory that for the firm,<sup>8</sup> the socially-optimal allocation of resources occurs when  $P = ME$ , it does not agree that the profit-maximizing allocation occurs when  $MR = ME$ , rather, it maintains that profit maximization occurs when  $P = ME$ . Therefore, in subjectivist theory, for the profit-maximizing firm there is no divergence between the private optimum and the social optimum because of downward sloping demand curves. Firms are assumed to pursue profit maximization and, to the extent they are successful, optimally allocate resources in virtually every market and industry.

The two theories differ on this matter because neoclassical theory fails to treat the revenue foregone when a firm must lower its price to sell a larger quantity as an implicit expense, but, rather, deducts it from the price in order to arrive at marginal revenue. This error, the subtraction of the foregone revenues from price to derive marginal revenue instead of adding them to marginal expenses, arises because of the failure of neoclassicists to apprise the decision situation from the subjective point of view of the seller, for whom foregone revenues are an expense. Rather, they take the “objective view point” that they (implicitly) assume some external observer would have.

This can be illustrated by comparing the neoclassical analysis of firm behavior and resource allocation with that of a consistently subjectivist analysis.

Let:  $Q$  = the quantity (units) of a good,  $W$ , (expected to be) sold;

$P(Q)$  = the price per unit of  $W$  as a function of  $Q$  (the inverse demand function); and,

$E(Q)$  = the neoclassical, total expense, explicit and implicit, of having  $Q$  units of  $W$  available for sale.

Then:  $Z = [P(Q) \cdot Q] - E(Q) =$  profits, and profit maximization requires that:

$dZ/dQ = 0$ , where:  $dZ/dQ = P + (Q \cdot dP/dQ) - dE/dQ = 0$ ; and,  $d^2Z/dQ^2 < 0$ .

The first-order condition may be written as follows.

- 1)  $P + (Q \cdot dP/dQ) = dE/dQ$ , which is the neoclassical way (Figure 1)
- 2)  $P = dE/dQ - (Q \cdot dP/dQ)$ , which is the subjectivist way (Figure 2)

Neoclassical analysis interprets the solution to the first-order condition in terms of marginal revenue and marginal expense, construing  $Q \cdot dP/dQ$  as a term to be deducted from price in order to arrive at marginal revenue<sup>9</sup>; i. e.  $MR = P + (Q \cdot dP/dQ)$ . Because the socially-optimal resource allocation requires that firms operate where  $P = ME$ ,  $Q \cdot dP/dQ$  is, or, rather, should be, irrelevant for resource allocation in neoclassical theory, **merely** representing an income transfer from sellers to buyers, which the sellers should not take into account. However, any and every time firms pursue profit maximization, and precisely because they are pursuing profit maximization, they **do not** ignore  $Q \cdot dP/dQ$ . Rather, they prefer to operate at  $P + (dQ \cdot dP/dQ) = ME$  rather than  $P = ME$ . Thus, from the perspective of neoclassical theory, profit-maximizing behavior is **always** socially-sub-optimal, effecting a misallocation of resources.

That the mathematical solution to 2) is identical to that of 1) is obvious and is illustrated by a comparison of Figures 1 and 2. Apparently because the mathematical solutions are identical neoclassical analysis does not even seem to notice that the alternative formulation; i. e., 2), exists. This is a mistake. There is a critical difference between 1) and 2), from the point of view of economics, having to do with the nature of costs and the interpretation of the equations, and their implications for policy.

A consistently subjectivist approach uses 2) and construes  $Q \cdot dP/dQ$  as an expenset, in the form of revenue foregone, that the seller must bear in order to sell additional units of  $W$ . That is, the seller expects that he must reduce the price by  $dP$  in order to sell  $dQ$  additional units.  $Q \cdot dP$  is the (total) revenue that the seller expects he would have to forego in order to sell the additional units of  $W$ , and  $Q \cdot dP/dQ$  is the expected revenue foregone per unit of expected additional sales.<sup>10</sup> Although subjectivist economics agrees with neoclassical economics that the social optimum requires that each firm operate at that level of sales where  $P = ME$ , it understands  $ME$  to be the marginal expense as perceived by the seller ( $SME$ ). And, the seller's  $SME$  is greater than the neoclassical  $NCME$ , because it includes the foregone revenues which the  $NCME$  excludes:  $SME = NCME - Q \cdot dP/dQ$ .

Figure 1  
Neoclassical Analysis

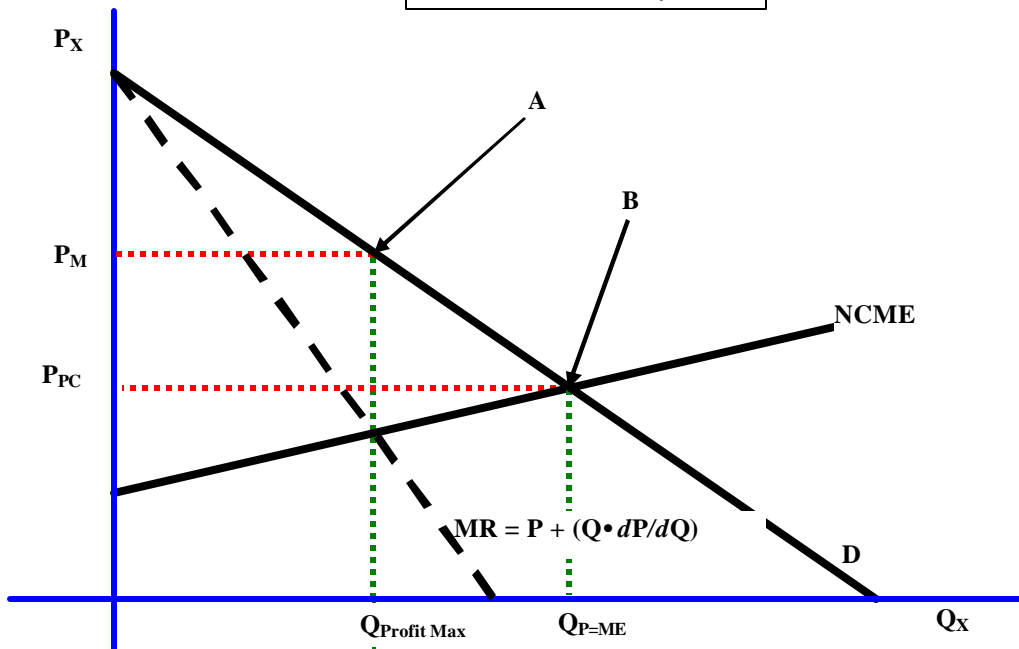
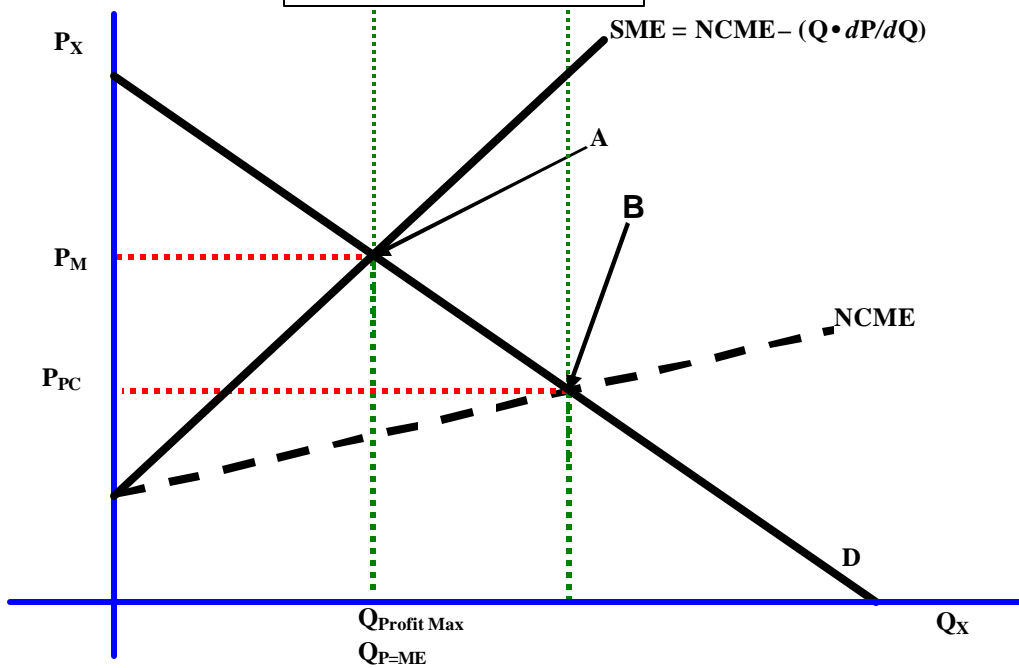


Figure 2  
Subjectivist Analysis



**NCME = neoclassical marginal expense      SME = subjectivist marginal expense**  
 $Q_{\text{Profit Max}}$  = profit maximizing quantity       $Q_{P=MC}$  = socially optimum quantity  
 $P_M$  = “monopoly” price       $P_{PC}$  = “perfect competition” price  
**A** = profit maximizing price-quantity point in both neoclassical analysis & subjectivist analyses, and the socially optimum point for subjectivist analysis  
**B** = socially-optimal point in neoclassical analysis, and a socially-sub-optimal point in subjectivist analysis ( $P < SME$ )

The difference, then, and this source of the inconsistency in neoclassical theory is its failure to consider the profit maximizing decisions from the perspective of the decision maker, a necessarily subjective perspective. Rather, it takes the “objective” perspective of an external observer. It does not recognize the revenue foregone as a result of a price decrease as part of the **expense to the seller** of selling additional units of the good. Nevertheless, such foregone revenues certainly are a real expense to the seller. In effect, it is as if the neoclassical analyst were some sort of objective, third-party observer who determined that such foregone revenues merely represent an income transfer from sellers to buyers and should not be considered as relevant for resource allocation decisions.

Neoclassical theory maintains, then, that downward sloping demand curves are the cause of the “monopoly problem” and consequent “market failure.” And, because all demand curves slope downward, it maintains that “market failure” is ubiquitous. Interestingly, these failures are all of the same type: in each case unregulated firms use less than the socially-optimal quantity of resources to produce less than the socially-optimal quantity of goods; and, these firms pay less than the socially-optimal prices for the resources and receive greater than the socially-optimal prices for the goods. Therefore, from the point of view of neoclassical theory, governmental intervention, in the form of anti-trust policies, is justified in virtually every market in order to correct misallocations of resources resulting from the “monopoly problem,” subject only to a prudential consideration of the costs (or expenses?) of intervention relative to the benefits (or revenues?) thereof.<sup>11</sup>

However, subjectivist theory refutes the theory that downward sloping demand curves cause a “monopoly problem” and consequent “market failures.” Therefore, subjectivist theory rejects governmental intervention to correct for non-existent “market failures” resulting from a non-existent “monopoly problem.” Rather it favors reliance on the competitive market process to pursue the well-being of society.

## **Negative Externalities**

Consider, next, the inconsistency as it arises in the theory of negative externalities.<sup>12</sup> A negative externality exists when an action adversely impacts a third-party.<sup>13</sup> Neoclassical theory treats negative externalities as “external” expenses and, therefore, at the margin, as marginal external expenses (MEE), which cause a firm’s marginal social expenses (MSE) to diverge from its marginal private expenses (MPE):  $MSE = MPE + MEE$ . Neoclassical theory maintains that the socially-optimal allocation of resources occurs when price equals marginal social expense ( $P = MSE$ ) for the firm. In the real world, negative externalities are pervasive; therefore, the profit-maximizing allocation of resources and the socially-optimal allocation of resources almost always diverge. Firms are assumed to pursue profit maximization thereby misallocating resources to some extent in almost every market and industry. (The misallocation of resources also is referred to as a “market failure” resulting from the problem of negative externalities.) Again, from the point of view of neoclassical theory, this type of “market failure” is ubiquitous, and governmental intervention to remedy “market failure” is warranted in virtually every market and industry.

Subjectivist theory agrees that the socially-optimal allocation of resources occurs when  $P = MSE$ . Contradictorily, the subjectivist theory maintains that such negative impacts on third-parties are not costs in the economic sense of the word “costs;” i. e., they are not opportunity costs to the actor. Therefore there are no MEE ( $MEE = 0$ ) to create a divergence between private and social expenses, and thus there is no divergence between profit maximization and the social

optimum because of negative externalities; i. e.,  $MSE = MPE$ . Firms are assumed to pursue profit maximization and, to the extent they are successful, optimally allocate resources in virtually every market and industry.

The two theories differ because neoclassical theory treat costs as if they are objective, not subjective. This can be clearly illustrated by comparing the neoclassical analysis of firm behavior and resource allocation with that of a consistently subjectivist analysis (Figure 3).

	<u>Profit Maximization</u>	<u>Social Optimum</u>
Neoclassical Theory	$P = MPE$	$P = NCMSE = MPE + MEE$
Subjectivist Theory	$P = MPE$	$P = SMSE = MPE + 0$

The difference between the two theories, then, and this source of the inconsistency in neoclassical theory is that, despite acknowledging that costs are subjective, it treats negative effects on third-parties as expenses, a necessarily objective concept of costs. And, again, it takes the position of the external observer by maintaining that these third-party expenses should be considered as expenses by the profit-maximizing decision maker. In effect, it is as if the neoclassical analyst were some sort of objective, third-party observer who determined that such negative effects **should** be taken into account by the acting party even though they do not affect him.

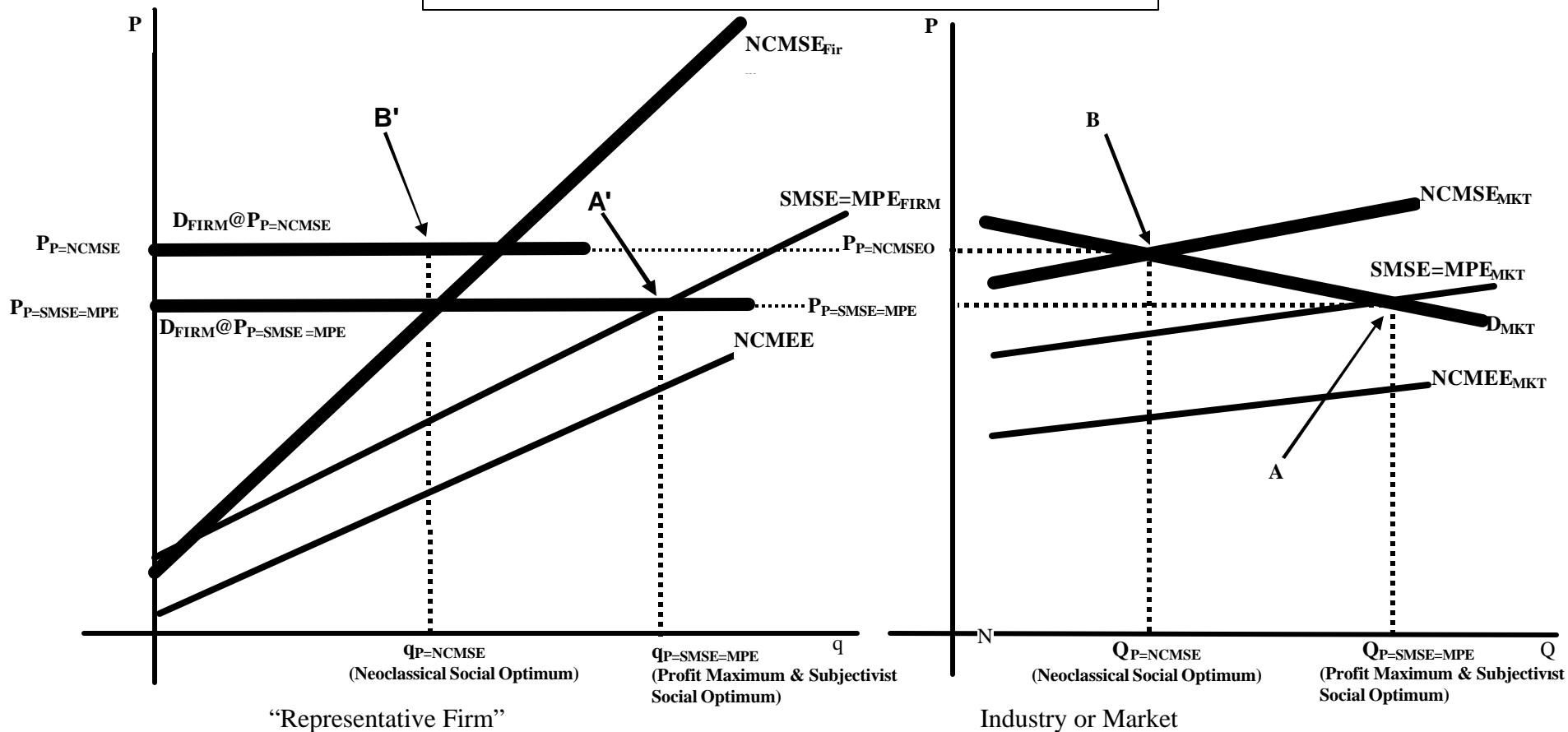
Neoclassical theory, then, maintains that negative externalities are “external” expenses that cause “market failure.” And, because negative externalities are pervasive, it maintains that “market failure” is pervasive. Interestingly, these failures are all of the same type: in each case unregulated firms use more than the socially-optimal quantity of resources to produce more than the socially-optimal quantity of goods; and, these firms pay more than the socially-optimal prices for the resources and receive less than the socially-optimal prices for the goods. Therefore, from the point of view of neoclassical theory, governmental intervention, in the form of taxes/fines, subsidies, and regulations, is justified in almost every market in order to correct misallocations of resources resulting from the “external expense problem”, subject only to a prudential consideration of the costs (expenses?) of intervention relative to the benefits (revenues?) thereof.

However, subjectivist theory refutes the theory that negative externalities cause an “external expense problem” and consequent “market failures.” Therefore, subjectivist theory rejects governmental intervention to correct for non-existent “market failures” resulting from a non-existent “external expense problem.” Rather it favors reliance on the competitive market process, based on a system of property rights, to pursue the well-being of society.<sup>14</sup>

This is not to say that subjectivist theory does not recognize the existence of negative externalities. Rather, subjectivist theory classifies the actions that give rise to negative externalities according to whether the actor has the right to engage in such actions. If the actor does not have the right to so act, then the problem is not one of “market failure,” but rather one of “governmental failure” - the failure of government to enforce the third-party’s(ies’) rights.

If, however, the actor has the right to so act, then there is no cause for governmental intervention. Rather, the third-party(ies) can engage in market activity either to mitigate the effects of the action or to induce the actor to act differently.

Figure 3  
 Negative Externalities: Neoclassical and Subjectivist Analyses



**MPE = neoclassical and subjectivist marginal, private expense**      **NCMEE = neoclassical marginal, external expense**  
**SMSE = subjectivist marginal social expense**      **NCMSE = neoclassical marginal, social expense**  
 **$q_{P=NCMSE}$  &  $Q_{P=NCMSE}$  = neoclassical, socially-optimal quantity for the firm and the market, respectively**  
 **$q_{P=SMSE=MPE}$  &  $Q_{P=SMSE=MPE}$  = profit-maximizing quantity for the firm and the market, respectively, and the subjectivist, socially-optimal quantity for the firm and the market, respectively**  
 **$P_{P=NCMSE}$  = neoclassical, socially-optimal price**  
 **$P_{P=SMSE=MPE}$  = profit-maximizing price & subjectivist, socially-optimal price**  
**A' & A = profit-maximizing, price-quantity point & subjectivist, socially-optimal, price-quantity point for the firm & the market, respectively**  
**B' & B = neoclassical, socially-optimal price-quantity point for the firm & the market respectively**

## Conclusions

Hayek's statement quoted at the beginning of this paper may be taken as an admonition to economists to apply subjectivism consistently. This paper has considered two areas – industrial organization and negative externalities – in which neoclassical economic theory has failed to be guided by Hayek's insight, and has not followed “the consistent application of subjectivism.” In both cases, the socially-optimal allocation of resources is found to diverge from the profit-maximizing (privately-optimal) allocation of resources.

Neoclassical theory leads to the conclusion that cases of “market failure” resulting from the “monopoly problem” are ubiquitous and, therefore, supports the appropriate use of anti-trust policies to remedy such “market failures.” Subjectivist theory rejects the analysis leading to this conclusion and, therefore, finds no justification in it for governmental intervention into markets, and therefore, rejects anti-trust policies as unwarranted. Rather, subjectivist theory supports a non-interventionist policy.

Neoclassical theory also leads to the conclusion that cases of “market failure” resulting from the “external expense problem” are ubiquitous and, therefore, supports the appropriate use of taxes/fines, subsidies, and regulations to remedy such “market failures.” Subjectivist theory rejects the analysis leading to this conclusion and, therefore, finds no justification in it for governmental intervention into markets. Subjectivist theory maintains that negative externalities can result from “governmental failure” to enforce property rights, in which case the appropriate remedy is to enforce property rights. If negative externalities arise from actions not in violation of property rights, remedies are to be sought in the market process.

## References

Barnett, W. II, and W. Block. (forthcoming) “The Modern Theory of Consumer Behavior: Ordinal or Cardinal?” *Quarterly Journal of Austrian Economics*.

O'Driscoll, G. P. Jr. 1982. “Monopoly in Theory and Practice.” In Kirzner, I. M., ed. 1982. *Method, Process, and Austrian Economics*. D. C. Heath & Co.

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<sup>1</sup> This paper is a further development of an idea in O'Driscoll (1982).

<sup>2</sup> It is true that expected revenues and expenses are subjective in the sense that different individuals have different expectations, but that is not relevant to the point at issue.

<sup>3</sup> It is true that implicit expenses are subjective in the sense that different individuals form different estimates of such expenses, but that is not relevant to the point at issue.

<sup>4</sup> For example, in most intermediate microeconomics textbooks, there is a chapter entitled “Costs of Production,” or something similar, which focuses almost entirely on expenses, not costs, and without even a single acknowledgement that there is a difference.

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<sup>5</sup> In order to focus on the inconsistency regarding industrial organization, we assume that there are no externalities, positive or negative. Subsequently, the assumption of no negative externalities is eliminated as we analyze the inconsistency specifically regarding negative externalities.

<sup>6</sup> The privately optimal allocation of resources is assumed to be the same as the profit maximizing allocation, though of course these might differ because a principal may be seeking non-pecuniary as well as pecuniary objectives or because an agent may be pursuing ends different from those of the principal.

<sup>7</sup> The only exceptions would be cases of perfect competition or upward sloping demand curves, if such exist in reality.

<sup>8</sup> This assumes that the object of the firms owner(s) is profit maximization.

<sup>9</sup> Because  $Q \cdot dP/dQ < 0$ , algebraically adding it to P results in:  $P + Q \cdot dP/dQ < P$ . Thus, we refer to it as a deduction from P.

<sup>10</sup> Let  $[Q_1, P_1]$  and  $[Q_0, P_0]$  represent two different points on a demand curve, with  $Q_1 > Q_0$  and  $P_1 < P_0$ ,  $?Q = Q_1 - Q_0$ , and  $?P = P_1 - P_0$ .

$$\begin{aligned} \text{Then: } P_1 \cdot Q_1 &= (P_0 + ?P) \cdot (Q_0 + ?Q) = P_0 \cdot Q_0 + P_0 \cdot ?Q + ?P \cdot Q_0 + ?P \cdot ?Q \\ &= P_0 \cdot Q_0 + ?P \cdot Q_0 + P_0 \cdot ?Q + ?P \cdot ?Q \\ &= P_0 \cdot Q_0 + ?P \cdot Q_0 + (P_0 + ?P) \cdot ?Q \\ &= P_0 \cdot Q_0 + ?P \cdot Q_0 + P_1 \cdot ?Q \end{aligned}$$

That is, the revenue at  $[Q_1, P_1]$  equals the revenue ( $P_0 \cdot Q_0$ ) at  $[Q_0, P_0]$ , plus the revenue ( $P_1 \cdot ?Q$ ) from selling the additional units,  $?Q$ , at the new price  $P_1$ , less the revenue foregone ( $?P \cdot Q_0$ ) from having to sell the  $Q_0$  units at a lower price,  $P_1$  in order to sell the additional units  $?Q$ . Per unit of additional sales, the foregone revenue is  $(?P \cdot Q_0)/?Q (= Q_0 \cdot ?P/?Q)$

<sup>11</sup> Thus, government should undertake, for each market and industry, an analysis to determine if intervention is warranted, refraining from intervening in those cases, and only those cases, for which the present (subjective or objective-pecuniary?) value of intervention is negative.

<sup>12</sup> At this point we eliminate the assumption of no negative externalities. The assumption of no positive externalities is maintained. However, in order to focus on the inconsistency re negative externalities, we assume that firms are perfectly competitive. Subsequently, we consider the consequences of simultaneously relaxing the assumptions of no negative externalities and of perfect competition.

<sup>13</sup> A correct understanding of the concept is that a negative externality exists anytime someone (a third-party) is displeased by the action of another. Negative externalities range from the trivial (I don't like the tie you're wearing) to the immensely important (the destruction of the tropical rain forests).

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<sup>14</sup> One thing not found in neoclassical literature is the offsetting nature of market failures of the type considered here. Thus, for neoclassical analysis, the consequences of market failure resulting from “monopolistic” behavior (operating at  $MR=ME$  when  $P>MR$ ) offset the consequences of market failure resulting from external expenses. Whether in any particular case the offset is partial, total, or excessive depends on whether the ratio of the marginal social expense (MSE) to the marginal private expense (MPE) is greater than, equal to, or less than, the degree of monopoly (measured, as per Stigler, as  $P/MPE$ ), where the  $MSE = MPE + MEE$ .