

Consumption Externalities*

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1 Definition

In the present context, consumption externalities are the (unpaid) social costs imposed on others through conspicuous consumption of goods, when these impacts have their effect purely through information about the choice and ability to consume, rather than from (material) side effects or byproducts of consumption. That is, consumption externalities reflect the intrinsically social nature of the psychological benefits people derive through consumption.

See the Discussion for the broader context surrounding this term.

2 Description

In economics, consumption externalities exist when the consumption of others matters explicitly and directly in the utility function of individuals — that is, when people care intrinsically or are affected directly by knowledge about others' consumption. This is a natural expectation if our behavior has a status-seeking component or if our expectations, aspirations, or standards are set in part by what we see as normal or achievable. Nevertheless, such social interdependence is often assumed away in economic models of behavior and welfare, so the treatment of it arises as a special subject.

In the literature, the terms interdependent preferences, Veblen preferences, competitive consumption, and keeping (or catching) up with the Joneses have all been used to refer to consumption externalities of this kind, although the cross-citations between these terms are not always complete. This general idea has captured the imagination of economic theorists for many decades — indeed, it has always.

Classically, early thinkers in economics recognized the social context of and motivations for consumption as well as the effects on others incurred by conspicuous consumption.

The concept appears to be steadily “rediscovered” by economists, presumably on account of being omitted (knowingly) in elementary textbooks by Marshall and then Samuelson, whose influence dominated in the first and second halves of the twentieth century, respectively. Already in 1950, Leibenstein laments that Reder (1947) has overlooked treatments of consumption externalities

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by many classical economists, maybe most notably by Pigou in 1892 (Leibenstein, 1950). Reder's conception was:

“... there is another type of external repercussion which is rarely, if ever, recognized in discussions of welfare economics. It occurs where the utility function of one individual contains, as variables, the quantities of goods consumed by other persons.”

Sociologists Rae (1834) and, garnering greater attention, Veblen (1899) expounded on the subject but even Rae attributes ideas concerning conspicuous consumption to much older texts. Indeed, earlier thinkers took such human motivations and desires as given; for instance, Adam Smith, Karl Marx, and John Stuart Mill all took status and relative aspirations to be *primary* motives for economic consumption.

2.1 Theoretical Treatment of Consumption Externalities

Introspection is sufficient to invent a number of plausible forms of interdependence in preferences, and several categories have been discussed, modeled, and investigated econometrically.

Bandwagon, Snob, and Veblen Goods

Leibenstein (1950) outlined three classes of socially mediated components of demand for a good which do not relate to the function of the good itself. “Bandwagon effects” are positive consumption externalities in which a good becomes more valuable as a result of greater conspicuous consumption by others. “Snob effects” are the opposite, in which a good becomes less valuable as more others consume it. “Veblen effects” (after Veblen (1899)) originally referred to goods for which high(er) prices are an intrinsically attractive feature (because conspicuously displaying the good can convey the price paid to others who recognize it); however in the more recent literature “Veblen goods” and “Veblen effects” have come to refer to consumption reference levels and relativities much more generally.

Jealousy, Admiration, the Joneses, and Upwards and Downwards Regard

Another categorization, articulated and investigated by Dupor and Liu (2003), formalizes “jealousy” as preferences in which an individual is worse off when others' consumption is higher, “admiration” as the opposite, and “keeping [sometimes ‘catching’] up with the Joneses” as the specific case in which an increase in others' consumption results in a substitution of allocated time from leisure towards labor (Bowles and Park, 2005). This idea reflects one of two features of the original allusion, the other being that preoccupation with the Joneses is evidence of an “upward-looking” reference level, in which consumption reference groups tend to be composed of the upper end of the consumption distribution. An alternative possibility is a “downward-looking” reference level, in which consuming above a low level is more important than attaining a high one. Empirical estimates of these kinds of asymmetries in the composition of reference groups have produced mixed results.

It is worth noting that consumption externalities need not be based on such competitive or cognitive motives as are framed by the concepts defined above. If human behavior and/or human

satisfaction are merely sensitive to norm-setting and adjustable expectations, most of the above effects may obtain as emulation (i.e., doing or expecting to do whatever others do) rather than invidiousness (i.e., striving to attain or beat some standard or status).

Cardinal *vs.* Ordinal Effects

Theoretical studies of relative consumption effects typically must, in order to make analytic progress, make assumptions about the functional form in which others' consumption appears in the individual's utility, whether that describes a well-being function or a decision making objective.

Some natural cases are those in which (1) the consumption reference level matters explicitly, for instance as a mean or median consumption level appearing in a difference or ratio with own consumption, and those in which (2) only pure status or rank position are of concern, without any further relationship to the cardinal difference between own and reference consumption.

In the latter case, several theoretical implications for the relationship between distributions of income, wealth, and well-being have been characterized, in particular by Ed Hopkins and Tatiana Kornienko (e.g., Hopkins and Kornienko, 2010, and references therein). For example, in the presence of negative consumption externalities society is generally made better off by larger disparities in endowments and by smaller disparities in rewards to effort. Theoretical models of economies populated by individuals concerned instead with the absolute difference or ratio of their consumption as compared with a mean consumption level have produced some similar, but generally less sophisticated, findings. Both literatures emphasize the overall decline in well-being that can accompany increases in wealth or technological productivity, as everyone allocates more time to production and less to leisure (e.g., Eaton and Eswaran, 2009).

Related Insights

Evolutionary game theoretic arguments have been devised to explain the existence of both positive and negative consumption externalities in group and individual settings.

Also, some distinct insights in the literature relate to the existence of conspicuous leisure as well as conspicuous consumption (Frijters and Leigh, 2008; Veblen, 1899). Oxoby (2004) points out that consumption and leisure are just two amongst a number of market-related domains that can confer status in non-market interactions.

Most of the discussion so far has related to consumption externalities which bear on others than the initial consumer, but it is reasonable to include also effects on the future self. That is, consumption reference levels may be set by past experience, as well as by the behavior of one's contemporaries. There is considerable evidence for such "adaptation" and there are various efforts to unpack it from status effects; a review can be found in Clark et al. (2008). Theoretically, this idea is related to habit formation, which has similarly been invoked to explain macroeconomic consumption and savings patterns.

2.2 Empirical Studies

Consumption externalities were first invoked to reconcile anomalies (from the point of view of "classical" predictions, i.e. without interdependent preferences) in consumption and savings behavior

(Duesenberry, 1949). More recently, the anomalies have expanded to include, along with other macroeconomic parameters, measurements of subjective well-being (Easterlin, 1974). Indeed, the issue of consumption externalities has come to pose a major challenge for a fundamental premise in the discipline of economics — that increasing consumption choices increases welfare. This property does not scale simply from the individual to the social level if consumption externalities are in play and sufficiently strong, yet around the world economic growth has become a primary objective of public policies.

Meanwhile, the explosion of research as well as popular interest in the “Science of Happiness” or “Economics of Happiness” that has grown around the measurement of subjective reports of life quality also provides for the first time a measurable analogue to the welfare interpretation of utility in economic theory. The quantitative importance of consumption externalities in neutralizing any well-being gains from economic growth has therefore become an answerable empirical question.

Numerous studies find that increases in income produce increases in life satisfaction and happiness in individuals, as anticipated by standard economic theory. Moreover, cross-sectional differences in individual purchasing power across countries are remarkably powerful in accounting for differences subjective well-being. In light of the cross-sectional findings, the Easterlin paradox is the (contested) observation that as countries increase in per capita income over time, they are not becoming happier (Easterlin, 1974).

Clark et al. (2008) review the large and rapidly growing body of studies using longitudinal and cross-sectional subjective well-being data which assess, primarily within individual countries, the strength of relative income effects. Typically, findings are consistent with the hypothesis that negative consumption externalities (where consumption is usually proxied by income) at the local or regional level within a country, possibly combined with adaptation effects over time, are sufficient to fully negate the individual benefits of income increases.

Other empirical strategies include experimental investigation of choice, aspirations, and subjective well-being when subjects are faced with different comparison standards.

2.3 Formation and Adaptation of Reference Groups: Who, Where, and How Determined?

Most of the empirical work on how people actively choose their comparison standards or reference groups has been done by psychologists. These studies find that people can change both the strength and the target of their cognitive comparisons for reasons of strategic self-enhancement, goal-setting, or as part of a coping process. There has been limited economic modeling of these kinds of strategic choices (Falk and Knell, 2004; Barrington-Leigh, 2008). However, it appears that *projection bias* may limit the realism of models in which decision makers are sophisticated in understanding the nature of consumption externalities. That is, experiments show there is evidence for people underestimating the effects of a change in their comparison group, even when they have a choice in the matter (Loewenstein et al., 2003).

3 Discussion

In economics, externalities may be classified as acting through either consumption or production. In principle, an externality is any result of one individual's productive or consumptive actions which imposes uncompensated costs or benefits on another individual. In the discussion here, *consumption externalities* are effects which in theoretical models act directly on others' utility functions, which is to say that they affect others' well-being in a deep or intrinsic way. A central example of this kind of impact is the standard-setting effect, in which conspicuous consumption of a good (for instance, an expensive car) may shift others' aspirations or consumption reference level and thereby affect their well-being by changing the psychological benefit they receive from their own consumption of a related good (for instance, a less expensive car that was previously considered high status). In the economist's conceptual description, this externality acts directly in the utility function because it is in human nature to care explicitly about what others are consuming.

However, consumption may affect others' well-being through more circuitous pathways, and this has led to some confusion surrounding the term consumption externalities. Consuming cigarettes, which hurts others' health through second hand smoke, or consuming an education, which helps others through productivity increases, are more usefully understood as *production externalities*. It is the second hand smoke and the knowledge spillovers, respectively, which benefit others; it is not the choice, *per se*, of the original consumer that matters. Most environmental externalities are choices which fall into this category.

On the other hand, there are certain coordination problems (sometimes referred to as network externalities) which might be properly classified as consumption externalities because the effect is more tightly bound to the choice itself. For instance, selection of telecommunications systems or computer software may affect others by enabling coordination and communication through particular means. The choice by a doctor to prescribe a particular drug may send information to others about quality, acceptability, and the risk of malpractice suits of prescribing the same one. The implications for trade, taxation, and so on of these sorts of externalities may be well modeled by placing others' consumption for such goods right into the utility function. Just like the relative consumption effects of primary interest in this article, therefore, they sometimes appear in the literature also under the moniker of consumption externalities (e.g., Diamond and Mirrlees, 1973).

Instrumental Status Concerns

An alternate theory to the formulations described in this article deserves mention. To some degree humans' apparent interest in status and attention to relative consumption may be motivated, or could be modeled, by an *instrumental* concern rather than a direct or intrinsic one. That is, various non-positional goods with direct benefits may be allocated outside of the market in accordance with signals generated through (market) consumption. In such a description, people's interest in a fancy electronic device or exclusive watch may reflect only the extra, direct consumptive benefits that it will earn through achieving status, such as a better match in the marriage market or a higher paying job or increased bargaining power. For a discussion of this kind of investment in the

context of relative consumption effects, see Postlewaite (1998).

Other Rat Races

There are also production externalities which produce a similar sort of “rat race” to the hedonic treadmills of consumption externalities; see Akerlof (1976).

Related/synonymous terms for this entry

Catching up with the Joneses
Competitive consumption
Positional externality
Easterlin paradox
External (dis)economies Hedonic treadmill
Interdependent preferences
Invidious expenditure (or consumption)
Keeping up with the Joneses
Rat race
Status seeking
Social costs
Veblen preferences
Veblen effects

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