

Understanding incentives

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Abstract

In economics, an incentive is a potential gain; in public policy, it is a method for changing behaviour. A veneer of pseudo-economics has been used as the pretext for some questionable values, including the moral desirability of punishment, ideological criticisms of public action and the assertion of psychological hedonism. Incentives have to be understood as motivating factors for action where there are eligible choices, and discernable marginal effects. This paper outlines a way of viewing incentives in terms of the balance of costs and benefits.

“Incentives” are an important method in public policy, used to promote and encourage particular patterns of behaviour. Incentives are not the only means of promoting and encouraging behaviour - other measures include exhortation, education, advertising, the creation of opportunities and the removal of obstacles - but they fit with a general approach in which the role of government is seen as planning, persuading and guiding people, rather than coercing or controlling them. However, the nature of an “incentive” is often vague, and the term is used in different ways. Partly because the term is part of common language, and partly because the relationship between motivation and personal benefit tends to be taken for granted, the idea tends to be used rather loosely. In this paper, I want to identify the implications of the concept more clearly. Although I am concerned principally with the use of the term in public policy, the discussion has a wider application than to those circumstances alone.

Understanding incentives

There are three core elements in the way that the idea of incentives is used. First, incentives are about potential *gains*, rewards, pay-offs, or desired outcomes. When there are incentives, people get something different from their choices than they would if there was no incentive: they receive money, they get social status, they get better health, or the like. Changes in circumstances before a decision is made can also affect the choices people make, but they change the basis of decisions rather than the outcome. Parenthood, bereavement and divorce lead to people acting differently from the way they did before, but they are not incentives. Good weather can encourage people going to tourist destinations, and a change in labour market conditions can encourage people to go into higher education, but these are not “incentives” either. For the same reason, it is not usually thought of as an incentive to remove an obstacle to action - for example, making discrimination illegal, or providing child care for someone who has not been able to work otherwise. These actions make choices possible, rather than changing the outcome of the choice. (This point is not universally accepted - EU documents identify child care as an “incentive” (Council of the European Union 2004), but I think that is because they treat

“incentive and support structures” as a single issue.)

Second, incentives are marginal approaches. They are about *potential* gains - about what will happen (or at least, what is expected to happen) if people behave differently. The idea of “gain” is still important - a marginal change which alters the patterns of consumption (such as repositioning a product in the market) is not an incentive - but a potential gain which is not marginal does not have an incentive effect, either. . An incentive implies the introduction of a motivating factor - that is, something different, or something new. Because incentives are about future prospects, they depend crucially on information and expectations; a reward that is unexpectedly introduced after the event is not an incentive. When a firm offers to sell a service, that is not an “incentive” to buy; but when it lowers its price to draw in custom, it is. Price is a simple signal, but it is not the only consideration. The idea of 'elasticity' refers to the propensity of an aggregate population to respond to different conditions. Elasticity can, in some cases, be zero. No financial inducement is going to get people to chop their heads off or eat their grandmothers. Economics may be a dismal science, but it is not as cynical as some people seem to assume. There is no necessary assumption that people must respond directly to financial stimuli. Whether or not a measure has an incentive effect must, then, depend on the context in which the incentive is applied.

Third, incentives are about *motivation*. It is implicit in the idea that incentives influence action, that the actions are capable of being influenced, and that the choices are eligible, or capable of being chosen. An inducement to do something that people cannot do is not an incentive. We do not usually talk about incentives in fields where patterns of behaviour are settled beyond thinking; the availability of free medical care is not an incentive to have a tracheotomy, and the cost of residential care is not an incentive to murder your aged parents. Beyond the question of feasibility, motivation necessarily depends on a range of conflicting and competing considerations, including personal preference, conflicting and competing incentives and the context in which an incentive is instituted.

For an action to be an incentive, then, there are three criteria which ought to be met. These are:

- *potential gain* - that the supposed incentive implies a desired change in outcomes;
- *marginal effect* - that the factor has a marginal influence in the context where it is applied; and
- *influence on motivation* - that people have a choice, that the incentive is capable of being chosen, and so that the incentive is capable of influencing action.

All three elements are necessary to the concept; a measure which does not meet any of one of these criteria is not an incentive.

Incentives in theory

In public policy, incentives are primarily a method of operation. This reflects the use of the term in ordinary language, where an incentive is a way of stimulating and encouraging someone to do something - like a competition prize, a reward for good behaviour, or a carrot for a donkey. The popular sense of the term “incentive” is based in the intention which guides the offer; a prize is offered as an “incentive” even if no-one enters the competition. Incentives make a contribution to motivation, rather than being the only reason, and the effectiveness of incentives depends on the relative contribution they make. In economics, by contrast, incentives can be any potential gain, or any marginal factor influencing choices through altering outcomes. The economic approach encompasses the ordinary use of the term, but because the term is used so generally it goes well beyond it. The language of incentives in economics treats incentives as effects rather than as intended actions: wages, prices, taxes and profits are commonly construed as offering incentives or disincentives, even if no-one intended them to be used that way. The economic approach can include a wide range of factors which influence behaviour, including personal situation, circumstances, and calculations of likely benefit.

The idea of incentives in economics is used in two main senses. The primary use relates to the analysis of aggregate behaviour. Changes in the behaviour of an aggregate group of people happen throughout the process of economic interaction. Supply and demand curves generally represent aggregate preferences, rather than individual action. Because the idea of incentives is used so widely in economics, the kinds of function which are described in this way are many and varied. On one hand, many incentive functions are concerned with supply functions. Samuelson and Nordhaus suggest that incentives typically “denote adequate returns to working, saving and entrepreneurship.” (Samuelson, Nordhaus, 1995, p 617) On the other hand, incentive analysis can also be used to refer to prices and consumption. When prices go up, demand typically falls; when prices fall, demand increases. It makes perfectly good sense to say that lower prices act as an incentive to buy the item, and that higher prices act as a disincentive. We might say, for example, that an increase in petrol prices acts as an incentive to leave the car at home and take public transport instead. It is always possible to qualify statements of this sort - there are commodities where higher prices act as an incentive to buy - but the broad statement is well-founded: price is generally understood as a motivating factor. When governments in the UK decided to deter smoking, they did it by a combination of public education (which shifts the demand curve downward) and increasing prices through taxation. Education is a direct appeal to motivation, rather than an incentive in itself; the increase in prices is the introduction of a factor intended to influence that motivation, which has had a strong disincentive effect.

The way that people behave is shaped by many factors, and changes in any of them can affect the way that people respond. Ordinarily, aggregate functions (like demand and supply curves) depend on the contribution of a range of influencing factors. The composition, and the responsiveness, of aggregate behaviour to change depends on the issue and the conditions where it occurs. Changes in the contributory factors affect the shape and the position of the curve. Equally, the responsiveness of such functions - or “elasticity” - depends on the context and the thing which is demanded.

The assumption that an increase in tax or benefits is likely to have a disincentive effect should not be taken as self-evident. Where a function is inelastic, even a large change might have little effect.

Changing the behaviour of people in aggregate, or on average, is not the same as changing the behaviour of every individual. An incentive might not affect many people; it only has to affect some. When prices change, the key decisions are made by people at the margins, the people whose decisions are likely to be altered. A prize competition can be used to promote cultural activity, but relatively few people will enter. Incentives, in this sense, fit with a general approach which is concerned to shift people in a desired direction, rather than to alter the behaviour of each and every person.

The other main economic use of the term “incentives” is, by contrast, strongly expressed in individualistic terms. Statements made about “individuals” are based, not on individual psychology, but on the behaviour of an “average” individual, “homo economicus”. Both analytical welfare economics and “rational choice” models attempt to analyse issues like preference, cooperation and relationships to groups in terms of the “rational” utility-maximising individual. “Incentive theory” is concerned with issues like competing incentives and conflicts between principals and agents; assessments of potential gains are modelled to determine the effect of rewards and punishments in influencing negotiations. I have not referred to this literature directly in this paper, because despite its name it has very little direct application to the issues in public policy I am concerned with. The existence of rewards and payoffs is not sufficient to understand incentive motivation, which is marginal and depends on context; there are logical problems in moving from the analysis of individual behaviour and motivation to group behaviour, or vice-versa; and the use of rewards and punishments by government is rarely done solely with the intention of producing incentive effects. It is in the nature of the analysis, then, that it leaves out important dimensions in the understanding of policy.

Although both rational choice and game theory are capable of incorporating pre-existing motivation and social norms, the concept of the self-interested individual tends to be taken *ceteris paribus*, which means that the existence of an inducement is taken as sufficient reason for action. In the process, some of the reservations attached to aggregate analysis - in particular, the importance of elasticity of response - are likely to be lost. This is the core problem with the analysis used by Charles Murray in *Losing Ground*, which attempts to explain the behaviour of welfare recipients. He writes:

1. People respond to incentives and disincentives. Sticks and carrots work.
2. People are not inherently hard working or moral. In the absence of countervailing influences, people will avoid work and be amoral.
3. People must be held responsible for their actions. ...” (Murray, 1984)

I have no problem about the statement that people are not inherently hard working or moral; I am not sure that people are “inherently” anything. But I cannot imagine in

what circumstances people can exist “in the absence of countervailing influences.” In Murray’s world, it is not just true that people respond to incentives and disincentives; they seem to respond to nothing else. The people in question seem to have no opinions about work, unless it is that work is undesirable. They have no parents, no schooling and no socialisation. Murray’s ideal couple, “Harold” and “Phyllis”, do not seem to be affected by the social, economic or cultural issues that affect everyone else.

The abuse of the term

The shift from understanding aggregate behaviour to “rational choice” is behind some fairly questionable propositions about incentives. Once it has been assumed that a rational individual acts to respond to incentives, qualifications about elasticity or the context in which choices are made seem to fly out of the window. I have suggested that three conditions - potential gain, marginal effect and influence on motivation - are required for an action to be an incentive. These conditions are not especially demanding, but they are widely disregarded. Here are three examples.

The first is based in an attack on the work of international organizations. US Republicans have criticised the IMF for creating an incentive for governments to take risks.(US House of Representatives 1998). *The Economist* writes, in a similar vein:

“The World Bank’s willingness to pump money into struggling countries creates a potential moral hazard, in which politicians may have little incentive to govern well because they believe that, if they do a bad job, the World Bank will come to the rescue.” (*Economist.com*, 2005).

There may be an argument to say that international organizations shore up bad governments, but that is not the case that is being made. This is presented in terms which assume a potential gain in bad government. Politicians are taken to be indifferent otherwise as to whether they govern badly or well; bad government seems to be as much a desired outcome as good government. This is implausible. It assumes choice - that politicians in developing countries have enough influence over their economy to be able to decide whether they want to cripple it. This is not inconceivable, but in circumstances where many governments are not able to direct the outcomes of economic activity, it is not clear what the options might be. The third assumption is that the prospect of being “rescued” by the World Bank has an effect on motivation - that it will actually influence politicians in their decision to behave badly. It may conceivably have an effect on the willingness to take risks, but that is not equivalent to bad government. The most generous construction I can put on this argument is that it refers, not to bad government, but to personal corruption. The first two propositions become more tenable: the fruits of corruption are desirable to some, and they have the choice whether or not to accept them. The last, however, is still implausible; someone who is willing to act corruptly is not obviously likely to be persuaded to be more corrupt because the World Bank is likely to intervene.

The next example comes from the Adam Smith Institute, writing about the UK

National Health Service.

“With nearly all other goods and services, people face paying a price for what they buy So they look at the value which different goods and services might provide for them, against the cost of acquiring them. But in health... there is no incentive for people to make the same value-for-money calculation. Instead, their every incentive is to get as much service as possible, no matter how marginal the benefit, since there is no price barrier against demanding more and more. Likewise, there is no incentive for people to look after their health. In a private insurance system, people who smoke or drink heavily, or who overeat, or who take no exercise, or are drug abusers, for example, might pay higher premiums than those who take more care of their health. But in the NHS, everyone pays on the same (tax) scale, so there is no incentive for personal responsibility.” (Adam Smith Institute, 2005)

The term “incentive” appears in this passage four times. The first point could be made about any public provision; there is no potential gain for users to be had in making value-for-money calculations in a non-market system. Indeed, given the complaint made in the article’s title - that the NHS is “a dysfunctional insurer” - the same could be said about the principle of insurance in general. People behave differently when they are covered by insurance and when they are not covered, because the calculation they are making about “value for money” is necessarily different. The fourth example, at the end of the passage, suggests that there is nothing in the system which offers any potential gain from exercising personal responsibility. This is debatable, because lack of personal responsibility is penalised in other ways, but it is at least defensible - any incentives which exist are not introduced by the NHS. The main problem rests in the other two claims: that there is every incentive to claim service, and none to preserve health. If people have “no incentive ... to look after their health”, why do they buy health-related products, pharmaceuticals and products offering “healthy living”? If people have “every incentive to get as much service as possible”, why aren’t they all lining up for catheters? Even allowing for political hyperbole, this is unmitigated drivel. People have strong preferences for the maintenance of health. Securing and maintaining health is a major potential gain; becoming ill is a major potential loss. Beyond this, there are also substantial costs associated with using health services, in time, trouble, pain and distress, which is an important reason why people often fail to approach services when they need them. If there is a criticism to make of the NHS, it is not that it leads artificially to the stimulation of demand, but that, by comparison with market-based systems, it may be suppressing it.

The third example comes from Michel Camdessus, speaking as Director of the International Monetary Fund. He states:

“Welfare systems, based on the best possible motivation of ameliorating hardship and improving human welfare, have come to represent an enormous drain on the resources and the efficiency of many of the so-called welfare states. ... The tax burdens (i.e., the share of taxes in national income) have

increased enormously throughout this century reaching levels of around 45 percent of GDP in France and in Italy and even higher levels in several other European countries. Surely, taxes at these levels must affect incentives and individuals' decisions." (Camdessus, 1998)

We have heard similar arguments before, but it is perhaps worth reiterating that there is not much evidence of a crisis in welfare states (see Pierson, 1998) - with the possible exception of the destabilisation which has resulted from attempts to retrench them (Atkinson, 1999) - and that there is no negative association between expenditure on welfare and economic performance. (Atkinson, 1995) The particular point to focus on here is that assertion that high taxes "must" have an effect on incentives. There is no "must" about it. Incentives are marginal effects, and whether or not there is an incentive effect depends on the difference that taxes make. Both levels of remuneration and levels of taxation are conventional: over time, what people earn takes into account the amount they will have to pay in tax. If high taxation is associated with high net income and both are stable over time, there is no reason to suppose any incentive effect. Another condition for incentive effects is that the factor should make a discernable contribution to motivation overall. There is not much evidence that taxes do make such a contribution; across the labour market, men in general have a low elasticity, or responsiveness, to price changes, and although women are more responsive, this is conditioned by lower incomes and different household circumstances. (Brown, 1983) It is possible that the effect on those people who are deterred by a diminishing rate of return is balanced by the attempt of others to redouble their efforts to achieve a desired net income (Brown, Dawson, 1969), but it might just be that such "incentives" actually make little difference to people in real life.

The idea of "incentives" is used carelessly, sloppily, and on some occasions nonsensically. Part of the explanation is that incentives are being identified with any reduction of cost or payoff, irrespective of the conditions that it is applied in, and the influence on motivation is assumed to follow. But part rests in a cluster of concealed assumptions. The idea of "incentives" serves other purposes, which have little to do with its ostensible meaning.

The hidden meanings of incentives

One of the reasons why the arguments for incentives are often given with such passion is that they are underlain by a much deeper, moralistic view of motivation. Reward and punishment are basic to some moral systems. There is a common moral view that we should reward people for good or desired behaviour, and punish them for bad. Incentives often contain a moral message: they reward or punish certain types of behaviour. Charles Murray's assertion that "people must be held responsible for their actions" is not, on the face of the matter, about incentive motivation at all. Moral arguments lie behind several positions which, on the face of it, appear to be about incentives. An example is the condemnation of "disincentives" for people on high incomes who pay high taxation. As noted, the evidence that there is a disincentive effect is very limited. The reason why such "disincentives" are

condemned is not because they change behaviour; it is because people think they are morally wrong. A similar example, from a different political perspective, is condemnation of the “poverty trap”, the imposition of high effective marginal tax rates of people with low incomes (see Piachaud 1973; Whyne 1993; Parker 1995). Very few people seem to be affected in practice, but that does not seem to diminish the moral force of the argument; penalising people more at lower income levels is inequitable.

Another example of this kind of moral position can be seen in the condemnation of the means-testing of pensions as a “disincentive to save”. This argument is based on the concern that people who have made a partial pension provision, which is insufficient to lift them above the minimum income guarantee, will lose the benefit of their occupational pension. There are reasons to doubt that there is an incentive effect. Arrangements for small scale occupational pensions are rarely made by individuals; historically, most have been part of income remuneration arranged through employment, and the schemes are not sensitive to the choices of individuals. The arrangements which are made by individuals tend, in their nature, to be both long term, because they are selected by the people who have no alternative arrangements, they tend to be relatively substantial. It also matters that pension arrangements are typically made some twenty or thirty years before receipt of benefit. The combination of discounting future benefit and uncertainty about the disposition of future policy makes the calculation of future benefit exceedingly difficult. Why, then, are there claims about incentives? The answer has little to do with incentives in themselves. The issue is, rather, that people feel it is unreasonable, or unfair, that the organisation of state benefits should extinguish returns from small scale occupational pensions.

“Pension Credit is an innovative approach to a familiar problem - the tension between the need to ensure there is a floor below which pensioner incomes do not fall, and the need to ensure that people are rewarded for saving. ... Under the old arrangements pensioners faced a 100 per cent withdrawal rate. Their means-tested benefits were withdrawn penny for penny to take account of any modest provision they had made. This resulted in an intolerable situation where people who had been thrifty and made some modest provision for their retirement were little or no better off than those who had never saved at all. The Government thinks that is a real disincentive to save. Pension Credit sends the message that for most people most of the time, it pays to have saved: virtually all are better off for having saved.” (UK Parliament 2004, para 11.45)

This statement from the UK government illustrates the conflation of principles rather well. At one at the same time, it justifies the position in terms of avoiding disincentives, rewarding people for good conduct, and communication of a “message”.

The next set of issues is ideological. For the last thirty years or so, the language of incentives has been colonised by the “new right” to stand for an uneasy combination of quasi-market analysis, including public choice theory, support for minimal

intervention, and a condemnation of the failures of state intervention (King, 1987). Both public choice and minimal intervention are used to condemn state provision, and that explains the link between the three positions. However, there are also conflicts between these elements. Some aspects of the condemnation of state activity are based in conservative moralism rather than liberalism. (Barry, 1987) Public choice inherently favours instrumental intervention - doing what has an effect - rather than libertarianism, which calls on governments to do as little as possible. Writing about incentive effects in the field of social welfare has mainly been the province of the political right. By contrast, writing about the problems of deterrence, stigma, barriers to access and non-takeup (e.g. Titmuss, 1968; Townsend, 1976) - which could also be framed in terms of incentive and disincentive effects, but tend not to be - are mainly the province of the political left. The politicisation of the debate muddies the waters.

Besides the moral and ideological positions, there is another view of incentives, based in a reductionist view of motivation. It goes under the name of “psychological hedonism”. “Nature has placed mankind”, Jeremy Bentham wrote, “under the governance of two sovereign masters, pain and pleasure.” (Bentham, 1789, ch 1 para 1.) Bentham’s view was profoundly influential in its day: it was the core principle behind the idea of the penitentiary, and it has been seen as the founding principle of the reformed Poor Law, and the decision to make the condition of paupers “less eligible” than the position of the independent labourer. The view means, in a nutshell, that if you want people to do things, you make it pleasant; if you want them not to do it, you make it unpleasant. The belief that people will do whatever is pleasant, and avoid what is unpleasant, is at odds with reality. People clearly do not seek pleasure and avoid pain, which has led economists to substitute the general idea of “utility”. There is no evidence that individuals do, either individually or on in aggregate, maximise utility, but if they do, it is because the idea is circular: “utility” is identified as the quality of what people have actually chosen.

The Benthamite view has come down into several common economic saws: that people will maximise utility; that they will always prefer to increase their material welfare; that people will respond to inducements by pursuing them, and that they will respond to negative effects by avoiding them. Murray’s assertion that “sticks and carrots work” is based in the same philosophy. If people were built like Skinner’s pigeons, responding automatically to predetermined stimuli, this might be true. If we accept that people do respond to stimuli, which is uncertain, we do still not know that they will respond in the particular circumstances where the incentives and disincentives are applied. We do not know that other things are equal: we do not know the alternatives, the costs, or the constraints. But even if other things are equal, we cannot tell from the knowledge that people stand to gain from a change in conditions what their response will be. Sticks and carrots might work, but they might not.

Recasting incentives

If incentives are analysed as a form of aggregate behaviour, there is no need to make any assumption about the behaviour of the “average” individual. Each person is faced with an individual choice, that can be represented in terms of a balance sheet. Subsequent calculations can be aggregated or disaggregated to represent the position of different groups and categories of people.

Figure 1: Costs and benefits

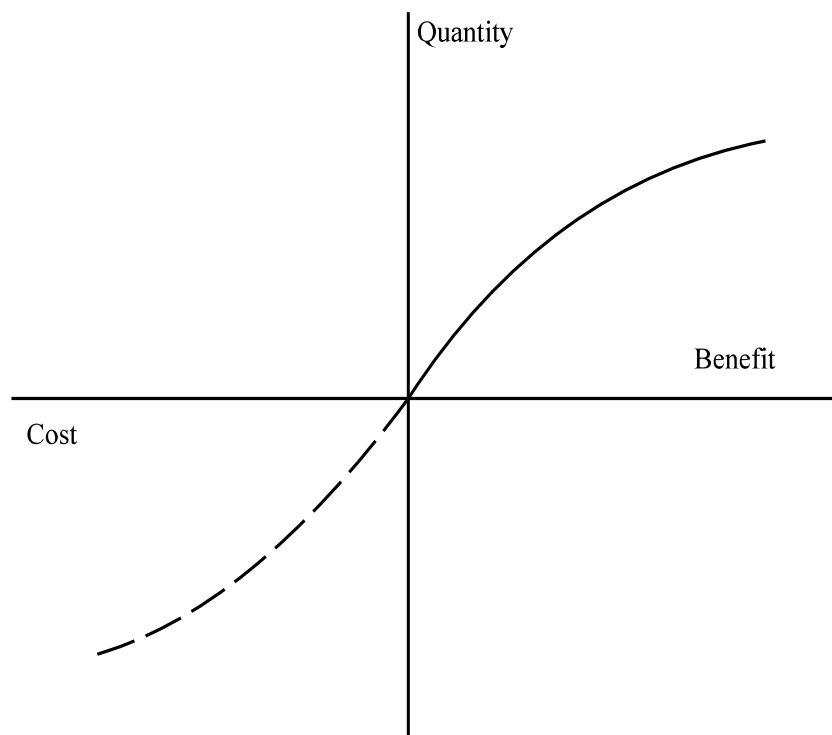


Figure 1 shows a simple graphical representation of this function. The horizontal axis shows the balance between costs and benefits. As the surplus of benefit over cost increases, so does quantity: the function is curved because of diminishing marginal returns. Conversely, an excess of costs over benefits (the dotted line) will lead to a reduction in quantity demanded or supplied. Incentives increase the balance of benefits over costs; disincentives increase the balance of costs over benefits.

As with any generalisation, this representation embodies some assumptions. The first is that, *ceteris paribus*, people respond to benefits by doing more rather than less. This is tenable, but it is not necessarily true: for example, some people may respond to increased rewards by relaxing their efforts (implying that the right-hand part of the curve dips downward). The actual shape of the function depends on the context,

norms and circumstances it is being applied to. The second assumption is that costs and benefits can be set directly against each other. There may however be circumstances where the values of cost and benefit are interdependent; according to the psychology of “cognitive dissonance”, people’s perception of benefit depends on the number and intensity of costs, and vice-versa (Festinger, 1957). Third, the function has been assumed to be continuous: this is more likely to be true in aggregate than it may be at individual level, where there may be discontinuities. There is some evidence, too, to suggest that responses to economic stimuli may be delayed by initial inertia, reflecting the time, trouble and effort of gathering information, making judgments and making alternative arrangements (Madrian, Shea, 2001). Fourth, the function describes marginal change; from an initial equilibrium, the origin would represent the *status quo ante*. If the origin represented zero instead - that is, the position which each person took when costs and benefits were equal - the function could in principle pass through a number of points on the positive axis.

The graphical representation also prompts two further observations. One is that it is also possible to increase or decrease quantity demanded or supplied by shifting or altering the shape of the function, which other forms of persuasion or dissuasion may do. The other point is that, as the function is drawn, the functions of individuals do not necessarily cease to apply when their personal consumption reaches zero: there may be circumstances in which people are determined, not just that they should not do something (like smoking) but that other people should not do it either.

From the opening section, certain conditions ought to be satisfied if a measure or change in circumstances is to be held to have an incentive effect. Explaining behaviour in terms of costs and benefits meets all the criteria.

1. *Potential gain*. The desired change in outcome is identifiable in terms of the balance of costs and benefits.
2. *Motivation*. The contribution made by the incentive in the context of the individual calculation depends on the other factors which are taken into account.
3. *Marginal effect*. Incentives and disincentives are marginal factors, not determinants; they have the potential to tip the balance, but they will not do so in every case.

An illustration of how a cost-benefit approach can be applied might be arguments about incentives to work. When we read that unemployment benefits are a disincentive to work, we are being told that being unemployed is a desirable outcome; that people choose to be unemployed; that unemployment benefit has a discernable effect on motivation; and that the influence of unemployment benefit outweighs other factors. Each of these propositions, as it stands, is questionable.

- (1) *Being unemployed is a desirable outcome*. This view dismisses issues of stigma, boredom, lack of direction, and the consequences of unemployment for ill health, exclusion and poverty (Gallie, 1999). There is some evidence of detachment from the labour market for a minority of older men, and within

that group, some people - mainly more affluent people choosing to take early retirement - do consider not working desirable. Most, however, do not. (Alcock et al, 2003) Overall, a very substantial majority of people do choose to work, and the vast majority of people who experience unemployment subsequently return to work. Unemployment is not desirable or desired, and the suggestion that people prefer “being paid for doing nothing” is at odds with experience.

(2) *Unemployment benefits have a discernable effect on the motivation to work.* Unemployment benefits tend to be limited both in financial terms and through a series of conditions imposed on receipt (for example, suspension of benefit on leaving work without “good cause” or on refusal of employment opportunities: Atkinson, 1995). Systems are designed to limit their relative attractiveness, and if there is a potential to tip the balance, it has not been realised in practice. In relation to long-term unemployed people, “the level of unemployment benefit has no explanatory value in considering the labour market behaviour of the long-term unemployed.” (L Dawes, 1993, cited Alcock et al, 2003, p 13.) The main evidence in the UK suggesting any effect on decisions whether to work is the position of low-paid wives of husbands who are in receipt of benefits (Davies et al, 1994).

(3) *The influence of unemployment benefit outweighs other factors.* Unemployment is structured and conditioned by a range of economic factors. Some unemployment may be voluntary, but much is not. The forms of non-voluntary unemployment include, amongst others, frictional, seasonal, casual, demand-deficient, structural and exclusionary unemployment. Where people are able to make decisions about work, there are many other factors besides benefits that influence decisions - typically financial rewards in employment, social status, social pressure and the desirability of roles related to work.

Understanding incentives in terms of costs and benefits makes it possible to identify the main issues. Incentives to work are not a simple choice between working and not working, but a calculation of the costs and benefits of working and not working. The costs of working are principally the opportunity cost of time, the loss of unemployment assistance and the associated costs of work, including e.g. travel and child care. The benefits of working are financial, in terms of earnings, social, in terms of social inclusion, status, and personal, in terms of self-actualisation. The costs of not working, which are equally benefits of working, are not only financial; they include stigma, degradation, isolation, boredom, the denial of opportunities and social exclusion. Since the benefits of working are large, the benefits of being unemployed are small, and costs of unemployment are considerable, the balance which leads overwhelmingly to people working is easily identified, predictable and unsurprising. This does not mean that unemployment assistance will have no incentive effects, but the conditions in which that may apply are relatively restricted, and tend to be confined to the limited cases where unemployment is voluntary, work is for very low income and financial decisions outweigh social ones. The calculation implies that such effects would be small - which is consistent with the empirical evidence. (Atkinson, Mogensen, 1993)

The value of this kind of cost-benefit approach is intuitively clear, and it is disappointing that the literature has little to say about it - more so when there are so many examples of CBA from the perspective of people who are offering the incentives. My main source for the approach, though the connection with incentives may seem indirect, was a paper by Burton Weisbrod on the problems of getting people to claim social security benefits. (Weisbrod, 1970) In stark contrast to the blithe assumption that people are falling over themselves to get to the pot of money, the general experience of social assistance systems is that people who are entitled often fail to claim and that attempts to persuade them to do so are very limited in their effectiveness. (Van Oorschot, 1995) Weisbrod suggested that the demand for services should be seen in terms of an assessment of the costs and benefits of receiving payments. The costs included the costs of information, the time and trouble of claiming, and the cost of shame and humiliation. The benefits of claiming have to be judged against the level of payment, but more importantly (because claimants are often very unclear about how much money they might gain) against their perception of the needs they hope to meet.

The limitations of the model

There are some important conceptual limitations in the approach. I have argued that three criteria - potential gain, motivation and marginal effect - are central to understanding incentives. There are reservations to make from the perspective of each.

Potential gain. The evaluation of potential gain strictly in terms of costs and benefits may be misleading; there may be a hedonic difference in utility which is not directly revealed by cost-benefit analysis. Norms and pre-existing influences may affect motivation. Kreps argues that extrinsic incentives may at times conflict with norms and other intrinsic motivation, leading perversely to the effect that incentive schemes may have the opposite effect from that intended. (Kreps, 1997)

Motivation. Motivation is complex, and establishing that the balance of costs and benefits lies in a particular direction does not establish that people will be motivated to take action. Bonner and Sprinkle identify four principal theories of motivation. These are:

expectancy theory - people act to maximise expected satisfaction;
agency theory - people act rationally to maximise their welfare or utility;
goal-setting theory - people act to meet personal goals, even if the specific action has negative consequences; and
social-cognitive theory - people's effort relates to their perceptions of self-efficacy in task performance. (Bonner, Sprinkle, 2002)

The main dimensions which determine how employees respond to tasks are based in personal characteristics, developed skills, the nature of the task to be undertaken and the environment they are functioning in. Monetary incentives are particularly poorly associated with people's responses. (Bonner, Sprinkle, p 310)

Marginal effect. Sometimes people have to take not one action, but several. If people have to make, not one, but many decisions, the calculation of costs and benefits is liable to be erratic. Scott Kerr, examining patterns of claiming social security benefits, proposed an influential “threshold” model (Kerr, 1983), which dominated much of the research on take-up done in the 1980s. (see Craig, 1991) Kerr suggested that people had to go through several steps before claiming, and each one had to be passed before they would go on to the next. The steps were

- *perceived need:* people had to feel there was a need;
- they had to have enough *basic knowledge* to know where to go;
- *perceived eligibility:* they had to think they might be eligible;
- *perceived utility:* they had to think it worthwhile;
- *beliefs and feelings:* claiming had to be acceptable, despite stigma or personal beliefs;
- *perceived stability or circumstances:* they had to think their condition would last long enough to make it worthwhile; and
- *claiming:* they had to go through the process of applying.

Kerr’s model has been useful, because it led to research which looked at a series of influences, but it has a conceptual defect: the steps are neither sequential nor distinct. What people know about benefits is not distinct from what they think about them; some people suppose that benefits are not for people like them, and some do not want to know. This does not, however, vitiate the main point, which is that dealing with complex, progressive decisions does not lend itself to a simple static representation in terms of costs and benefits.

People do not respond immediately and directly to stimuli; for many, there are delays, hesitations and doubts before they act. Some of the circumstances in which concepts of “incentives” are applied are concepts of that kind - for example, on the putative effect of unemployment benefits on the speed of return to work. (Nickell, 1979) In so far as this is predictable, it could possibly be represented in terms of the shape of the cost benefit function in figure 1 - implying relatively inelasticity near the origin - but if responses are not immediate, there is also the risk that assessments of costs and benefits may give a misleading view of the nature of the calculation being undertaken.

All this implies that, even if an incentive is capable of being analysed in terms of costs and benefits, the balance may not be enough to establish the effects. The assessment of costs and benefits performs a more limited role, but it can be argued to serve some useful purposes. First, identifying costs and benefits is a useful step in operationalising empirical research problems in order to examine the influence of different factors on patterns of behaviour. The incentive effects of different factors within the calculation can be identified, and where the balance of costs and benefits can be established, it provides a summary figure against which preferences and utility can be weighted. Second, the balance of costs and benefits yields useful information for policy, relating to both the direction and the strength of incentives in context. Third, the balance of costs and benefits is potentially important for many of the other issues that discourses about incentives are concerned with - issues like fairness, morality or the distribution of rewards. A further ancillary purpose might be to rein in some of the nonsense that is talked about incentives, but perhaps that is asking too

much.

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