Consumer X-inefficiency and the problem of market regulation

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1 INTRODUCTION

Most scholars regard Harvey Leibenstein’s main contribution to consumer theory to be his 1950 article that reconciled Veblen’s institutionalist theory of fashion with the axiomatic neoclassical microeconomics. This chapter, by contrast, argues that it is perhaps his work on X-efficiency that will be more relevant to consumer theory of the future, even though that work was set out in the context of the firm, not the consumer. The chapter’s basic proposition is very straightforward: whereas X-inefficient firms achieve lower productivity than they might have been able to achieve, X-inefficient consumers pay more to meet their goals, or to obtain particular bundles of consumption characteristics, than they needed to do, or they fail to meet goals they could have achieved had they used their resources differently. In both cases, the extent of X-inefficiency may be affected by competitive pressures and by the regulatory context in which decisions are taken. In extending Leibenstein’s X-inefficiency work to the context of consumption, his (1950) analysis is not forgotten, for in this context both bandwagon effects and competitive struggles between consumers over status have significant roles to play in shaping how far wellbeing falls short of what might be possible.

The rest of the paper is structured as follows. Section 2 argues that the sources of consumption X-inefficiency are analogous to those that Leibenstein (1976) posited as causes of X-inefficiency in organizations. Section 3 examines in general terms the kinds of markets in which consumption X-inefficiency is likely to be rife and explores regulatory policies that might reduce it. By way of showing in detail how the context of consumption can affect wellbeing, Section 4 offers a case study analysis of the market for housing renovation products and services. Section 5 is concerned with some of the distributional issues that arise from attempts to reduce X-inefficiency, while Section 6 offers some concluding reflections.

2 SOURCES OF X-INEFFICIENCY IN CONSUMPTION

Leibenstein (1976, p. 45) argues that X-inefficiency in production has four main causes:

(i) The production function is imperfectly known.
(ii) Employment contracts are imperfectly specified, allowing workers discretion in the amount and quality of the work they provide.

(iii) The market for factors of production is imperfect, particularly that for managerial knowledge. Hence managers who might be best suited for reorganizing production methods and motivating workers in a particular context may be working in other contexts that fit their capabilities less well.

(iv) In the face of uncertainty and competitive interdependence, firms tend to imitate each other, cooperating tacitly rather than competing aggressively and thereby pushing each other to search for better ways of doing things.

In the context of consumer behaviour, unexploited opportunities for improving wellbeing may exist for an analogous set of reasons:

(i) **Consumers have limited knowledge about the set of consumption possibilities and about how goods may be combined to best effect as elements in their household production systems.**

To obtain relevant knowledge, consumers need either to be able to pick it up passively and retain it during the course of everyday life, for example via social interaction, the media or from advertisements, or they need actively to seek it as a means of solving particular consumption problems. Though the Internet offers many sites that can help consumers resolve puzzles about what to buy and where to buy it, the severity of the knowledge problem faced by boundedly rational consumers still needs to be emphasized, since:

- The range of products on offer at any time is enormous: a typical supermarket illustrates the problem by offering upwards of 10,000 product lines (is it more efficient to shop at Aldi, a German-based chain, which only carries about 700 lines?), but even this seems restricted compared with the millions of book titles and other products that one can source via Amazon.com.
- The set of available products is constantly changing due to technological change and the rise and fall of firms operating as suppliers in any particular market. As Lancaster (1966b) reminds us, new products do not necessitate forming new preferences if preferences are for characteristics offered by goods and new products essentially offer new combinations of characteristics, i.e. new ways of meeting established goals or solving familiar kinds of problems. However, the new goods must first be discovered and their characteristics identified. Thus, for example, a home theatre system may be a new way of dealing with the problem of how to reconcile watching movies and bringing up young children: instead of paying for baby-sitting whilst out at a cinema, one can internalise both the child supervision and the movie viewing facilities, gaining flexibility at the cost of making a major fixed investment and some delay in access to latest movies. The trouble is, there are many possibilities for a home theatre system—different wall-projection technologies, projector televisions, or large-screen plasma or LCD products—of uncertain reliability and with differences in picture quality and likelihood of falling in price.
Modern consumers are dealing with goods that are far more complex than they were when economics began: products are often multi-function devices based upon multiple technologies, so the appreciation of which high-level characteristics they deliver or which wants and needs they serve may require considerable expertise. Their effective use, too, requires skills: perhaps nothing symbolizes this better this better than the blinking, unset clock on many people’s VCRs. Much of what we know about what our possessions have to offer comes after we have purchased them and many features we may simply never discover or use due to a failure to allocate enough time to read all the instructions or inability to commit them to memory. Features that manufacturers build into their products in attempting to offer superior ‘surprise and delight’ may not be noticed or be ‘too clever by half’.

Whereas mainstream consumer theory emphasizes substitution between products, the behavioural approach emphasizes the complementarity between products, the full exploitation of which requires knowledge of how they interact as systems within the higher-level system that is the consumer’s lifestyle (Earl, 1986). For example, cars may differ in their suitability for towing boats, shopping at IKEA, their fit with our garages (not just in terms of length, but also height if we are choosing an SUV, or width if some have long doors) or the images we are trying to present, and so on. Similarly, choosing clothing offers major potential for strategic choices of items that will enable new outfits to be created in combination with items of clothing we already have, but it also offer major potential for showing our lack of sense of style.

To obtain knowledge efficiently, one needs to know what questions are worth asking when shopping. Unfortunately, in many markets, consumers are active very infrequently so their knowledge is harder to update than where they purchase items often and can see trends at work from which they can derive a sense of the questions they need to ask to update their knowledge incrementally.

Some kinds of infrequently consumed products need to be purchased at short notice, which limits scope for gathering information about rival suppliers’ offerings. Obvious examples here are services of plumbers if one has a burst pipe or blocked drains, funeral services, or tourism products purchased by consumers who are staying only a limited time at a particular tourism centre. However, many purchases made by people who have just relocated to a new country and are trying to get themselves established domestically in the midst of starting new jobs will be made under the same time pressures.

The durable nature of many consumer products complicates the task of knowing which ones to buy. This is not merely because it leaves scope for choosing the timing of replacements in the light of guesses about the pace of technological change and lower prices that may be available if consumers opt to delay upgrading and continue to use existing products. It also introduces the need for knowledge about likely repair and depreciation costs, which may differ substantially between rival brands.
(ii) The terms under which consumers purchase goods and service involve incomplete specifications of what is to be delivered, which leaves scope for opportunistic behaviour by suppliers who may choose to act deviously and exploit to their advantage what has actually been spelt out in the deal.

Quite apart from the problem of gathering and retaining information, consumers in the real world of bounded rationality may be unable to spell out precisely what they expect from supplier (this is an example of the ‘tacit knowledge’ problem discussed by Nelson and Winter, 1982) or unable to verify what they actually received. There may be good reasons for leaving specifications rather vague: contracts with lots of fine print are costly to draw up, time-consuming to evaluate, leave less scope for changing what is supplied to match unexpected contingencies that arise after the deal has been done and, besides, the supplier may be suffering from the tacit knowledge problem, too, despite greater experience in the area. However, contractual vagueness combined with a situation of asymmetric information (or, in the terms of Williamson, 1985, ‘information impactedness’) puts the consumer at risk of exploitation. This risk is increased if the consumer does not engage in due diligence because, despite the incompleteness of the contract, there is enough fine print to make it seem overwhelming. (For example, how many jet-lagged consumers really do read the fine print of their rental car contracts before signing, especially when they have a queue behind them?)

The issue of what information the consumer has about what is being supplied needs to be seen in relation to the consumer’s knowledge of the significance of what is being said and unsaid in the contract. Consider car safety, for example. This is an area where it is intrinsically hard to spell out the extent of protection a vehicle affords, as this depends both on its ability to avoid accidents, reduce the speed of impact and mitigate the consequences of impact. If consumers cannot see the underlying structure of a car, they may take lists of safety features as proxies for safety. Some features (for example, ‘side airbags are fitted as standard’) may be cheap to incorporate in re-skinned, modern-looking products that do not embody state-of-the-art structural engineering and may give the illusion that the product is more than a match for newer designs with superior structural integrity.

(iii) Consumers’ decision making capabilities in general fall well short of what is required for optimal choices but in any case are by no means guaranteed to match the problem solving tasks that their positions of income and wealth present.

Much recent work in behavioural economics has been following up research by writers such as Nisbett and Ross (1980), Hogarth (1980), Thaler (1980) and Kahneman et al. (eds) (1982) on tendencies of consumers to use decision-making heuristics and suffer from cognitive biases that result in choices at odds with normative mainstream microeconomics (see Thaler, 1992, Camerer et al. (eds), 2004). It focuses on widespread human tendencies to make errors, such as a general susceptibility to engage in ‘framing’ or a failure to treat sunk costs as sunk. The literature includes easy-to-read self-help books that may play a useful role in reducing consumption X-inefficiency (for example, Belsky and Gilovich, 1999, Gigerenzer, 1999). However, it rather tends to distract attention from the capacity of many decision makers to develop ‘fast and frugal’ decision heuristics (Gigerenzer et al., 2002) for coping with the kinds of knowledge problems we have been considering. Hence behavioural economists such as myself, who work from an
evolutionary standpoint, wish to raise the issue of the match between specific decision heuristics that individuals use and their decision-making contexts.

Suppose, for example, we are looking at the welfare of households in poverty. Some may behave trouble meeting basic needs because they use decision rules that lead them to find it difficult to obtain or keep a job, or make them prone to fritter away much of their income on addictive products. Others may be short of income because they made a bad choice of partner and have been left as single parents. The latter may caught in a poverty trap with costs of childcare and transport, and income tax, making it impossible to raise their purchasing power by working or investing in their human capital via education. Yet, within their limited means, the latter may be shrewd jugglers of resources, skilled at getting by on what little they have. The former suffer from consumption X-inefficiency: they would make poor use of additional welfare handouts and need to be trained to be better decision makers—put in more psychological terms, they need therapy to overcome their pathological tendencies—if they are to improve their well-being in the long term. The latter, by contrast, would thrive if given a way of breaking out of the poverty trap.

Different kinds of decision-making competence issues arise further up the income and wealth ladder, including other kinds of consumption pathologies (such as Imelda Marcos-like tendencies to accumulate dozens of designer-brand shoes). Whereas mainstream consumer theory assumes complete preference orderings, reality may be that when we are promoted into a bigger feasible consumption space we have rather limited ideas about what we are getting into and what we should expect to be able to achieve. If armed with decision rules developed for coping in ‘down-market’ segments, the consumer may be prone to make sub-optimal choice on ‘arriving’ in a more affluent part of society. Several problems may be noted here:

• Such consumers are likely to be easily impressed by products that are so much better than what they are used to even if the ones they have so far seen are by no means the best of what it available within their new budget range. Search may thus stop too soon because aspiration levels have not yet risen enough.
• Consumers may lack capacity for choosing status symbols that demonstrate they have cracked the social codes of entry into the group that they seek to join. We might call this the ‘nouveau riche problem’, where consumers show they have ‘made it’ by spending on large houses and cars, ostentatious jewellery, gold bath taps, etc. All of this may show a lack of appreciation of style and quality and a failure to realize that understated consumption, where ‘less is more’, can show both one’s wealth and one’s good taste (see Parsons, 1967).
• If the rich are too busy making money to have time to shop, they are likely to fall prey to established ‘designer brands’ that achieve brand equity through bandwagon effects and snobbery rather than because of offering correspondingly higher value for money.
• Newly elevated consumers may be prone to buy products with specifications vastly in excess of what they actually require for meeting their goals, because they copy the choices of others in their new social reference groups. The latter may have done exactly the same in the past, with very few consumers actually possessing the insight or capabilities to extract from their choices the value
inherent in them. Such choices represent a cause for concern in terms of overall welfare, for three reasons: they may generate envy on the part of those who know how to enjoy such products more fully in functional terms but do not have the money to purchase them; financial risks may have been incurred to obtain them; and higher environmental costs may be associated with their production and use.

These social considerations take us straight to the consumer X-inefficiency analogue of Leibenstein’s fourth source of X-inefficiency on the production side.

(iv) In the face of uncertainty, consumers tend to copy each other’s behaviour and follow conventions, and ostracize those who use their superior knowledge as a tool of aggressive social competition.

Social interaction plays a major role in reducing consumption X-inefficiency as it enables consumers to specialize in the areas in which they acquire expertise and then trade that expertise with each other by processes of social barter (Earl and Potts, 2004). However, as with social interaction between lemmings, borrowing decision rules from others can sometimes be costly. The development of well-functioning decision rules is likely to be enhanced by diversity in the rules that are socially popular at any time, but processes of social competition work against this. Those whose choices flout conventions (cf. Choi, 1993) will be called upon to justify their deviant behaviour since it poses a challenge to the norm. Hence would-be deviants may opt for the quiet life of conformity rather than looking for a better way or following it should they discover it. (This is especially likely in a market such as that for cars, where a deviant choice carries the cost not merely of social inquisition but also much more rapid depreciation.) Whilst deviant actions may be problematic enough in some social circles even if undertaken quietly and based on sound knowledge, it definitely is not the ‘done thing’ to go about professing one’s superior knowledge actively. Unless conducted with great tactfulness, such behaviour is likely to result in charges that one is a ‘know it all’, an epithet normally carries pejorative connotations.

Consumers who have ‘done their homework’ may thus face a dilemma when moving in, or into, social circles where there is considerable consumption X-inefficiency: buying the best value product (for example, a Skoda Octavia, which is essentially the same product under the skin as a much higher-status Audi A3) may be seen as a social faux pas. If most consumers were well informed about what they were buying, it is doubtful that a firm such as the Volkswagen-Audi Group could continue to engage in price discrimination by offering brands of differently perceived levels of status for correspondingly different prices.

The social transmission of decision rules amongst consumers has potential to be problematic even where there is receptivity to rules promulgated by experts. Just as information can be degraded on transmission between people, or messages get completely distorted as they are passed from person to person in the playground game ‘Chinese whispers’, so, in a ‘decision rule cascade’ (Earl, Peng and Potts, 2005), complex rules are likely to suffer loss of definition as they are passed between boundedly rational consumers. This phenomenon is redolent of technology transfer problems associated with tacit knowledge gaps between firms and their subsidiaries or licensees, that result in the
latter not being able to match the productivity of the former (cf. Nelson and Winter, 1983, p. 119).

3 REGULATION AND THE PROMOTION OF EFFICIENT CONSUMER CHOICE

Before we consider ways of using regulatory policy to try to ensure consumers get better value from the money they spend, it is important to recognize that just as firms may pay for the services of management consultants to try to reduce X-inefficiency, so consumers who are alert to the scale of the task they face when making a complex choice and who are open to their own fallibility may provide a ready market for suppliers of advice on what to buy to solve a particular problem and where to buy it most cheaply (or even negotiate on their behalf, as with car brokers). Such consumers still have a problem, that of knowing which advice to purchase and/or take seriously. The need to be a canny shopper is also reduced the presence of market institutions such as trade associations that set and police standards of conduct on behalf of their members. More generally, we might say that the more demanding is the population at large, then the smaller the risk that a minority of naïve or lazy shoppers will end up doing needlessly poorly when they shop. Consumer X-inefficiency is also likely to be less the more that members of a country’s population are able to travel widely and see what people in other cultures are able to obtain by being more diligent and assertive as shoppers. Demands for better value via such demonstration effects may be manifest not merely when shopping but also via the ballot box, with consumers voting for politician that promise to open up their economies to the winds of global competition. (A case in point is New Zealand, after cheap air travel allowed increasing numbers of its population to see the larger range of choice and better value for money enjoyed by their counterparts in less protected economies: see James, 1992.)

A useful starting point for analysing the need to regulate consumer markets is the classification of products into three categories: search goods, experience goods and credence goods (Nelson, 1970). From the standpoint of mainstream economics, search goods do not present a problem in need of a regulatory solution, for these are products where, in principle, characteristics of rival brands can be discovered prior to purchase. From the behavioural standpoint, however, regulatory policy can reduce risks that consumers will make errors due to inefficient search and problems in evaluating information. Requiring automakers to publish star-rating standards for their cars’ performances in independent crash-testing programmes greatly simplifies the consumer’s task of finding out about safety. Likewise, having local content requirements in music broadcasting is a way of ensuring that consumers in small economies are exposed to local artists whom they might not otherwise have discovered in the midst of record stores after being bombarded by the music of heavily promoted international stars. We might also note that it may be inadequate merely to require firms to list ingredients on food and cosmetics products, given the difficulties consumers have in remembering what may be hazardous even if they are aware they may need to be careful about certain ingredients. (For example, how dangerous is it to buy shampoo containing sodium laurel sulphate?)
Mainstream economists may also be rather sceptical of the need for regulation in the case of experience goods, where buyers can only discover some product characteristic after purchase. Suppliers have an incentive to mitigate quality uncertainty problems by offering warranties or by presenting hostages (such as investments in international brands that could be ruined by individual incidents involving bad publicity: see Klein and Leffler, 1981) and because they run the risk that disgruntled buyers will vent their bitter experiences on the Internet, as with Ebay and Amazon.com satisfaction ratings. From the behavioural standpoint, however, we would note that getting redress requires assertiveness while lay consumers may not think in terms of the ‘hostage’ logic and scope for publicizing disappointing products may be limited. Some examples of problematic experience goods that could be candidates for regulation include:

- Local tourism services consumed by non-local tourists, such as taxis and guided tours (but not international brands of motel networks). Such consumes lack local knowledge and may find it difficult to voice their displeasure for reasons of language, or feel disinclined to do so because they intend never to visit the destination again.
- Products with an embarrassment factor, such as dating agencies.
- Phone services, where there may be changes of prices and services after contract has been signed (Colton, 1993), and switching costs.

Credence goods are products whose consumption payoffs remain unclear to purchasers even after they have been consumers, such dietary supplements, some kinds of car maintenance work, or some financial, medical and legal services. Some products that appear to be credence goods might be reducible to search goods if the regulatory authorities can expose the truth about whether they work or not, or at least can publicize what expert opinion says about them. With hard-core cases of credence goods, however, it may be intrinsically difficult for the consumer to judge whether a service has been performed, or if it has been performed in a way that has actually made the consumer's wellbeing different from what it otherwise would have been. If so, the market discipline mechanisms may fail: they cannot know whether to complain and/or warn others in their social networks about being under- or over-serviced.

In the absence of regulations and government monitoring, the quality of deals obtained by purchasers of credence goods may to some degree be assured via the certification of suppliers by professional bodies that establish codes of conduct and may be able to audit members’ behaviour. However, policing processes may fail if debarring of members would put entire group under suspicion. In some cases, suppliers can try to eliminate principal-agent problems by specializing only in providing recommendations or in carrying out work that has been recommended by another agent. Otherwise, buyers at best must get by via using whatever rules they use to judge trustworthiness, such as how long the supplier has been in business.

A broader analysis of whether there is a need to regulate some markets sees the issue in terms of whether policy-makers need to protect themselves from their own lack of industrious as shoppers, versus whether they need to be protected against the attempts of firms to engage in market manipulation. Waterson (2003) exemplifies the former view, whereas the latter is the subject of major papers by lawyers Hanson and Kysar (1999a,
who hypothesize that the tighter that competition becomes between firms, the more they will find it necessary to try to manipulate consumer behaviour in order to win viable numbers of customers from rivals.

Waterson’s recognition that economists have been over-estimating the caniness of consumers was triggered partly by his analysis of the limited extent to which consumers have responded to the increased ranges of choice following deregulation of markets such as those for public utilities. He had also noticed that the willingness of consumers to switch suppliers is a key determinant of profitability in financial services: in vehicle insurance, switching is frequent and profit margins are very low, whereas in banking switching is infrequent and profit margins are high. Partly this reflects differences in time and/or hassle costs of switching, while benefits of switching banks are unclear due to the long-term/relationship basis of the services they provide. Even so, the reluctance of bank customers to switch to get a better deal appears to imply very high rate of discounting of benefits of switching insofar as benefits are known. The implication that the context of choice might affect the extent to which people are willing to shop around and switch suppliers is further evident in Waterson’s paper when he discusses how competition has changed in markets for products such as condoms, whose purchase may be a rather furtive activity. The way that firms compete in the condom market has changed with changes in public attitudes that have occurred in tandem with a shift from ‘over the counter’ to ‘self-service’ retailing that allows price comparisons to be done by the consumer without the need to ask embarrassing questions of the retailer.

Surprisingly, however, Waterson seems virtually oblivious of the behavioural economics literature on consumer choice and comments that economists have not ‘looked much into how or what advertising works on some consumers, or why consumers engage in more search for some goods than others’ (Waterson, 2003, p. 146). (The implied very high rates of discount in many of his examples of inefficient consumer behaviour will come as no surprise to economists familiar with Ainslie’s (1992) book *Picoeconomics*, which focuses on the common tendency to discount hyperbolically rather than exponentially.) Hanson and Kysar, by contrast, make extensive use of behavioural research in their attempt to demonstrate that firms can, and do, use insights from it to influence choices. Ploys include the following:

- Fear appeals.
- Diversion of attention from hazards of thrill-seeking products.
- Shaping perceptions of product safety.
- Misrepresenting the environmentally friendliness of products.
- One-sided use of ‘expert’ (but partial) opinion.
- Strategic use of framing effects (for example, presenting food products as 75 per cent fat-free, not as 25 per cent fat!).
- Exploitation of psychological thresholds (just noticeable differences).
- Misrepresenting products as ‘New’, ‘Special’, etc.
- Careful management of the ‘atmosphere’ of purchasing environment.

The analyses of Waterson and of Hanson and Kysar differ sharply in their policy implications. Waterson’s key conclusion is that if search costs are significant, policies aimed at increasing the number of suppliers may not be effective at pushing prices down
towards costs. Instead, regulators should try to simplify search tasks by imposing standards of quality and making pricing transparent; or they may increase incentive to search by reducing switching costs. Likewise, if consumers are prone to suffer harmful consequences of choice because they are insufficiently diligent/cannot obtain adequate information, then the policy role is to improve information availability/incentives for consumers to be diligent. However, if they are prey to attempts of firms systematically trying to shape their behaviour, then policymakers need to regulate practices of firms or give firm incentives not to misrepresent their products (such as full legal liability for firms to compensate consumers for harm suffered when using the products, even if this would discourage diligence on the part of consumers).

Policies implied by the behavioural literature to promote search by consumers include the following:

- Consumers might be legally required to seek multiple quotations before they can undertake certain kinds of transactions. Whether or not they had done so would be relatively easy to monitor nowadays using Internet-accessible electronic databases to which quotation numbers might be logged, with electronic bars on expediting orders unless the requisite number of quotations had been logged.
- Require that suppliers of ongoing services can only contract for finite periods before a fresh contract has to be offered (i.e. following the example of motor vehicle insurance, in contrast to current account banking services).
- Require suppliers to compare their products with best- and worst-practice performances of rival products in key areas in any promotion material.

Policies to promote consumption X-efficiency by reducing search costs could include:

- Provide websites at which customers can post their ratings/reviews of suppliers, and which offer summary scores (cf. Ebay and Amazon.com), with audio versions available via phone numbers listed in the Yellow pages for the computer-shy.
- Provide accreditation/monitoring of licensed brokers.
- Require comparison-based advertisements.

Of course, from the market manipulation perspective, we should expect that firms would retaliate against policies aimed at reducing search costs by requiring information to be freely available. Waterson (2003, p. 148) is concerned about this, too, and predicts that firms may increase differentiation (offering a bewildering product range as a counter to the commoditization of the product), increase product complexity (e.g. putting more fine print in contracts), and increase switching costs. Policies to reduce switching costs may incite similar retaliation.

Policies may also be designed to reduce evaluation errors and promote pre-choice reflection, such as:

- Require ‘cooling off’ periods before customers are allowed to sign final purchase contracts (as opposed to periods within which they can pull out of contracts).
- Require that suppliers give ‘worked examples’ of costs of different plans that are being offered.
• Require ‘bottom line’ prices, to include all ‘fees and charges’.
• Provide precise (ideally brand-specific) risk information to preclude optimistic bias.
• Engage in shocking counter-advertising against manipulative corporate advertisements, rather than restricting them (for example, about risk of running into debt; cf. Jolls, Sunstein and Thaler, 2000).
• Sponsor media coverage of work by behavioural economists, to generate awareness of the traps into which decision makers can unwittingly fall.

4 CASE STUDY OF A PROBLEM MARKET: HOME RENOVATION PRODUCT AND SERVICES

As a more detailed example of the complexities of real world markets in which consumer X-inefficiency is likely to be significant, consider the case of home renovation products and services. The context of choice here typically the following characteristics:

• A chain of experience goods/services.
• High stress/emotional involvement, that is not conducive to reflective decision-making.
• Misleading impressions of how easy the process may be for first-time renovators, given by ‘makeover’ TV programmes.
• Access to multiple capabilities is required but skilled trades-people are in short supply. This leads to high costs of getting a range of estimates and pressures to accept conditions.
• A house with an incomplete renovation project may be even less desirable than if would have been if the renovation had not been started (for example, once an existing bathroom has been ripped out, there is no going back, and no bathroom until the new one is finished).

Consumers face choices between do-it-yourself and outsourcing of some or all of the activities, and can seek to reduce transaction costs by outsourcing to firms that offer package-deal project management services.

Renovators may be aware of their own limited capabilities and hence prefer to avoid do-it-yourself, but have reason also to be nervous about the prospect of things going wrong if they get contractors in to do some or all of the work. From the standpoint of Williamson’s (1985) transaction cost analysis of internalisation and outsourcing choices, decision makers will be nervous about doing deals with contractors in situations of (a) complexity/bounded rationality, (b) opportunism, (c) small numbers of potential suppliers or customers, and (d) asset specificity. Although he suggests market contracts should work unless all four of these features are present, in context of housing renovations the first three may be sufficient to cause problems. First, note that here complexity is likely to lead to contractual incompleteness due to: difficulty in articulating what is required/to be delivered; failure to foresee possible eventualities (such as the discovery of rotting timbers); and ambiguity about what has been delivered relative to what was specified. These are likely to result in opposing interpretations of ‘state of the
world’ while work is being done. Scope for disputes might be reduced via the use of standard contracts, delegation to professional project managers (but can they be trusted?), and if the authorities have building inspection requirements at various points in the course of a project.

Contractual incompleteness presents opportunities for contractors to engage in the guileful pursuit of self-interest. They will be in a powerful position to threaten to delay completion in order to extort better terms, because of the great dislocation costs imposed by many such projects. They may need to impose delays because they have deliberate over-committed in case some contracts are cancelled, and they are in a good position to exploit their customers’ lack of expertise and inability to monitor them full-time. Regulations requiring building inspections and warranties may safeguard consumers against under-servicing and tardy completion but at the cost of increasing project lengths if projects cannot proceed to their next stage until an inspector has signed off work that will be covered up by work that follows.

At first sight, the great number of potential suppliers of renovation services in the Yellow Pages of a major city may appear to imply there is no ‘small numbers’ problem. Moreover, supplies can seek to signal quality via their membership of trade associations and testimonials from previous customers, whilst renovators can also use their social networks to try to find reliable contractors. Things get difficult, however, when there are shortages of skilled trades-people relative to the total demand for their services, as this limits the ability of house owner to find replacement contractors at short-notice if they want to fire existing ones mid-task. Once hired, a contractor can therefore strategically weigh up the benefits of acting with opportunism versus the damage this might do to his or her reputation: chances of being fired are rather slim and having some disgruntled customers who pass negative comments to their social networks may not prevent further business from being picked up in the sellers’ market if at other times the job is done well and an up-to-date stock of testimonials is maintained.

Asset specificity is an issue that normally puts much of the risk of a transaction on to the supplier’s side. Its significance is limited in the renovation context as far as investments in tools by contractors are concerned, and payment by instalments as work proceeds largely eliminates the potential risk associated with the immobility of the work that has been done. However, instalment payments limit customer leverage over contractors who fail to finish their tasks because more lucrative contracts have become available elsewhere.

Aside from the general problem renovators have doing trouble-free deals with contractors at prices that do not entail excessive profit margins, the context of renovation makes it ripe for renovators to over-capitalize, i.e. to end up spending far more on projects than the value the completed work will add to their properties. In terms of behavioural economics, such projects seem to have enormous potential for escalation of commitment and spending blowouts rather similar to those observed with public works projects. One aspect of this is where the decision to go ahead with the project is based on a rough estimate of its overall costs but where it actually consists of a series of sub-projects, the costs of which are only worked out with some care when their time for implementation arrives. Another issue is that renovation projects often impose major disruptions to life in already-occupied properties. If problems are encountered, renovators may tend to want completion ‘at all costs’ just to get their lives back to normal as soon as
possible. (This tendency will be increased to the extent that decision makers engage in hyperbolic discounting rather than exponential discounting.) Not only may renovators put pressure on them to agree to ‘necessary’ work that initially had not been specified (which perhaps the contractor had been ‘holding up his or her sleeve’ at the time of doing the estimate) but there may also be scope for the contractor to push the case for less ‘essential’ additional work on the basis of the costs delaying it to another time. Under pressure for a quick decision to avoid delays and disruptions, the quality of choice is unlikely to be good, since:

- Increments to cost appear smaller due to framing effects in terms of money so far spent.
- There will be a ‘sunk cost bias’ against trying to achieve a ‘cut and shut’ end to project where costs start to escalate.
- Cognitive dissonance reduction processes are likely to result in the renovator padding estimates of payoffs (or emphasize more distant returns) in line with cost escalations.
- Shopping around for alternative quotations for the additional work may greatly lengthen the time to completion and cause chaos with contractors’ work schedules for other projects, so the pressure to accept and hope one is not being ‘ripped off’ is acute. The trouble is, trades-persons may recognize this and be prone to succumb to the conflict of interest they face if they both recommend what needs to be done and get paid for doing it.

On top of tendencies to be willing to let costs escalate, there is the increasingly common ability to do so without having to ask hard financial questions in cases where renovators are drawing against substantial unused credit lines on home-equity credit-line mortgages.

To reduce these risks of over-capitalization, the authorities might develop websites and/or pamphlets warning consumer of why they might end up spending far too much. They might also publish guidelines for what it is wise to spend on particular kinds of renovations in particular property price ranges—though, in doing so, they run the risk that these will become quotation norms. A more radical policy would be to make renovation contractors liable for all ‘unforeseen’ work that is needed to complete project, as an incentive toward due diligence when preparing estimates and to refrain from keeping quiet about additional work they suspected might be necessary.

5 WHOSE WELFARE IS IMPROVED BY A REDUCTION IN X-INEFFICIENCY?

The fact that this extension of Leibenstein’s work has not already become a standard part of economic thinking might indicate a degree of X-inefficiency amongst economists. As long ago as 1958, Cairncross challenged the tendency of economists to keep production and consumption in separate mental boxes and a few years later, around the time that Leibenstein (1966) first proposed the X-inefficiency concept, there indeed began to emerge despite a literature that views households in terms of production theory (for example, Becker, 1965; Lancaster, 1966a, Muth, 1966). The separation has persisted in
welfare economics despite the problem that increases in productivity that result in falling prices and increased output do not necessarily imply increases in social wellbeing, for the extra output may have come at the cost of some workers having to work harder (Martin, 1978, p. 282) or under greater stress, or having to suffer dislocation costs as their employers downsized and forced them to find jobs elsewhere.

The fact that many consumer are also involved in production poses similar complications when we view X-inefficiency from the consumer’s side of the market: if people become more canny shoppers, they will impose bigger pressures on managers to find ways of reducing X-inefficiency in production, which may entail tougher work environments or dislocation costs. For such downsides to be avoided, all organizations must be able to react to tightened competitive conditions in parallel by ‘thinking smarter, not working harder’. If suppliers are not able to improve productivity, then the only way they will be able to deal with more aggressive consumers and maintain their profit margins—aside from market manipulation ploys of the kind that concern Hanson and Kysar—is to engage in cross-subsidization by pushing up the prices they charge the more X-inefficient shoppers, such as those who do not bother to haggle with appliance retailers for discounts against marked prices.

Potential for reductions in consumer X-inefficiency to have adverse overall consequences for welfare are evident in Tim Hazledine’s (1998, pp. 102-103) discussion of how market liberalization affected the economy of his home country, New Zealand. Prior to the liberalization process, it was uncommon for New Zealand’s consumers to try to bargain with retailers and Hazledine reports being bemused when his friends encouraged him to do so, and to get extra leverage by buying all his new appliances from a single store, when he returned after years overseas and needed to equip his house. Clearly, the cross-subsidization issue might have major equity implications if the poor end up paying more because they have less buying clout and perhaps are less assertive and less skilled in bargaining. Hazledine also raises concerns about what the presence of aggressive bargaining does to the general efficiency of markets. For him, the world of bargaining looked like a retrograde step that made New Zealand’s newly liberalized consumer markets look more like bazaars in poor countries. Quite apart from the effort, time and stress involved in haggling, its spread meant that ‘list prices’ signal increasingly little about relative ‘real’ exchange values. If prices were non-negotiable, boundedly rational consumers would have a clearer idea about the value for money offered by rival products because they could focus on non-price aspects. Firms would have a bigger incentive to charge similar prices to their rivals and differentiate themselves genuinely in terms of non-price features rather than spuriously in terms of unreal ‘list prices’. We might also note that because of the cognitive limitations that consumers face, discounts for buying a bundle of goods probably also do not promote evaluations as careful as might be the case if each product were bought separately, especially if a trader ‘throws in’ an additional item for free to clinch a detail: as Hazledine (1998, p. 103) ruefully comments, ‘[B]y doing all my buying in one store in order to maximise my buying clout, I missed out on the range of products that were available if I had looked around. My “free” toaster, for example, works terribly—I’d have been better off paying proper money for a good toaster at a specialty store’.

A final question to consider is what happens to wellbeing in societies where social competition increases and status-seeking consumers find themselves under greater
pressure to obtain status symbols and display their skills in avoiding being fashion victims and in knowing where and how to get the best value for money. (As in, ‘What? You didn’t even try to find it on Ebay?’) To those concerned with environmental issues, there is something unsavoury about the sight of consumers ‘spending money they haven’t earned to buy things they don’t want, to impress people they don’t like’ (these words are variously attributed to Ken Blanchard or Will Rogers at numerous Internet sites). On this view, people might feel better off if they learnt how to enjoy consuming less and worried less about their social status. An X-efficiency perspective offers a more positive slant. Just as competitive pressure forces firms to try to innovate and develop ways of increasing their productivity, so market dynamics can also stimulating the development of consumer capabilities. Social competition may add stresses to life but it can also have beneficial consequences for personal development insofar as it puts pressure on consumers to experiment with new kinds of choices rather than letting their lives turn into a kind of ‘Groundhog Day’-style equilibrium in which they cease to develop as people.

6 CONCLUSION

Choice is an unfolding process of coping with the complexities of everyday life in a changing world, not the selection of an optimal set of activities at a point in time. When Leibenstein introduced the concept of X-efficiency he only addressed implications of this in terms of choices within organizations. He sought to show that calculations of welfare losses due to imperfectly competitive markets might be prone to under-estimation because, relative to given demand curves, costs might be higher than they needed to be due to X-inefficiency arising as a result of limited competitive pressure. What he failed to address was the possibility that positions of demand curves could be wrong, too, with consumers being more willing to pay for some products than they needed to be, because of shortcomings in the ways that they sought to cope with the problem of choice. If consumers develop better ways of capturing consumer surplus, they put firms under greater pressure to innovate and find ways of reducing X-inefficiency in their existing activities. Regulatory policies aimed at increasing consumers’ purchasing capabilities may thus have an important role to play in promoting industrial dynamism. However, they need to be carefully designed to ensure that firms cannot retaliate by stepping up their attempts to capture consumer surplus via market manipulation ploys aimed at moving their demand curves back towards the right. Behavioural economics has much to offer attempts to understand sources of consumption X-inefficiency, how market manipulation works and what may be done to counteract both phenomena.

REFERENCES


