



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

SCANDINAVIAN FOREST ECONOMICS
No. 41, 2006



Proceedings
of the Biennial Meeting of the
Scandinavian Society of Forest Economics
Uppsala, Sweden, 8th-11th May, 2006

Lars Lönnstedt and Björn Rosenquist (eds.)

Uppsala

Buying certification: pigs in pokes, warm glows, and unexploded bombs

Colin Price

Abstract

Creating markets is becoming a popular way of treating forest products that were once routinely regarded as externalities. Following this philosophy, a certification premium might be regarded as a valuation of the environmental (and possibly social) benefits of growing timber sustainably and in an environmentally friendly manner. However, the free-rider problem, the multiplicity of interpretations of sustainability, and profound ignorance of the relationship between certified products bought and environmental benefits achieved, all make it unlikely that the premium (if it exists) reflects anything other than a degree of moral satisfaction achieved by purchasing certified timber. Whether even this is to be regarded as an addition to welfare is debatable. However, a certification premium might be paid as a way of “acting rightly”. This justifies a proper and direct evaluation of the externalities, and of the costs required to avoid them.

Introduction: markets, quasi-markets, and non-markets

A market has been defined as: “a collection of sellers and buyers of a product in contact and exchange with each other”. One of the great advances in economics during the twentieth century was a realisation and acceptance that markets did not regulate all the important effects of economic activity: in particular, the generation of externalities, by definition, lay outside the scope of markets (Pigou, 1929). One response was to evaluate the externalities in monetary equivalents, by a range of methods, and to incorporate them in cost–benefit analysis (Price, 1989). By the beginning of the third millennium, however, an alternative approach was gaining ground: to create a market or quasi-market for the previous externalities, by changing the structure of property rights, increasing the capability to exclude non-payers, and attaching a premium price to products which (it is asserted) have been created with due regard to externalities (Mantau *et al.*, 2001; Pagiola *et al.*, 2002).

During this period, certification of timber has become a popular topic of research. Investigations have tended to focus on institutional aspects (Rametsteiner, 2002; O’Brien & Teisl, 2004; Cashore *et al.*, 2005). Some have regarded certification simply as a means of oversight and regulation. But others have considered the premium attached to certified timber as a way of evaluating the environmental and social externalities of timber production – ideally, such that costly and controversial evaluation of these effects in the field is made unnecessary. Thus certification appears to create a quasi-market for what was previously non-marketed.

However, this interpretation depends on the product offered by the sellers being the same as that desired by the buyers. Assisted by a pilot survey, this paper discusses the product that people may believe themselves to be buying when they purchase certified timber; the plausibility of the view that respondents offer of their motives; and the implausibility of the notion that certification creates a well-defined market in which both sellers and buyers are clear about what might be the basis of a premium price. For brevity, we will take it that the product is something called “timber grown under a system of sustainable forest management (SFM timber)”. In practice what this requires, or is envisaged to embrace, will vary from producer to producer, consumer to consumer, and between producers and consumers.

The survey sample size was small, and was not drawn from a representative cross-section of the population. It was intended to do no more than highlight some possible interpretations and difficulties. Percentages are sometimes quoted below for clarity, but they should not be taken to indicate precision.

An unlikely story

The following sections discuss what it is, in theory, that consumers *might* pay for, when they buy certified timber. They evaluate the plausibility of the possibilities, the perceptions and reasons that consumers explicitly espouse, and what, if anything, may be deduced about the relationship between the product offered and the product desired.

All respondents had either bought timber known to be certified, at a premium price, or expressed an hypothetical willingness to do so, if it was available. In general the acceptable percentage premium lay in the range 10%–25% of sale price, although there was one outlier at 400%.

Several hypotheses may be advanced about what it is that consumers are actually obtaining, when they purchase certified timber. This is not necessarily the same as what they *think* they are obtaining, nor what they *say* they are seeking to obtain.

A few respondents indicated that they would purchase certified timber for the benefit of themselves or their descendants or both. However, out of all the direct benefit from certified production, the actual proportion which accrues to one individual and descendants is vanishingly small. The self-interested consumer can be a free-rider, obtaining benefit from the certifiable forest management which results from all other consumers' purchase of certified products.

If the stated willingness to pay really did represent the incremental benefit *of* the individual's purchase *to* the individual's direct well-being, it would have to be scaled up enormously to represent the global environmental benefit of SFM timber. Suppose that the individual puts a value of 1 euro on the direct benefit *that accrues to him or herself* as a result of growing 1 cubic metre of SFM timber. If that individual is a typical world citizen, world citizens in total receive 1 euro \times 6 500 000 000 of benefit from the growing of that one cubic metre. The total volume of timber entering world markets is approximately 10 000 000 000 cubic metres per year. If half of this was SFM timber, the implied global value of the certified component of SFM would be 32 500 000 000 000 000 euros, which is an implausibly large multiple of gross world product [what multiple?]. It can be concluded that individual benefit is not be a realistic motivation for paying a premium.

Seventeen percent of respondents answered that their motive was "for the good of the world in general". Such an altruistic motivation has been used as a basis for models of markets for certified timber (Ibanez, 2001). However, doubt has been cast on the likelihood of pure altruism's existing. Why should someone do something which is not in their own interest? Answer: either because they feel good about the well-being of others, or they would feel bad if they did not take account of others' interests. This is indirect self-interest, but it is self-interest nonetheless.

Pig in pokes

There is no one unique form of sustainable forest management. Many intensities of forest activity may be sustainable; many different products may be produced in different proportions; many levels of environmental values of different kinds may be maintained. Thus certification could potentially assure many things. Equally, there is no very clear baseline which is the absolute minimum required for sustainability of any kind.

The two main certification agencies, Programme for the Endorsement of Forest Certification Schemes (PEFC), and Forest Stewardship Council (FSC) state their objectives

in rather general terms. PEFC “provides an assurance mechanism to purchasers of wood and paper products that they are promoting the sustainable management of forests” (Programme for the Endorsement of Forest Certification, 2006). Its approach to sustainability embraces the following:

“Sustainability

Benefits the biodiversity of nature and the environment.

Promotes the economically viable, environmentally appropriate and socially beneficial management of forests. ...” (Programme for the Endorsement of Forest Certification, 2006).

FSC’s mission states that it “shall promote environmentally appropriate, socially beneficial and economically viable management of the world’s forests” (Forest Stewardship Council, 2003). The following explanations are given.

“Environmentally appropriate forest management ensures that the harvest of timber and non-timber products maintains the forest’s biodiversity, productivity and ecological processes.

Socially beneficial forest management helps both local people and society at large to enjoy long term benefits and also provides strong incentives to local people to sustain the forest resources and adhere to long-term management plans.

Economically viable forest management means that forest operations are structured and managed so as to be sufficiently profitable, without generating financial profit at the expense of the forest resources, the ecosystem or affected communities. ...”

Sustainability means “capable of carrying on as it is”. But it is overwhelmingly probable that many purchasers of timber do not know the existing situation, and, if they did, would desire an improvement on it, in a variety of ways. In a well-functioning and differentiated market, it would be expected that different potential niches for improved performance would be explored, and a certification system would develop in which consumers would be offered a wide range of packages that achieved whatever is perceived to be the minimum baseline for sustainability, and rose above it in different ways and to different degrees.

However, in reality there is only a small number of certifying bodies. They tend to compete on delivery to the producers of what *they* want: which is a large potential market and a low cost per hectare certified, rather than assuring different aspects or intensities of SFM. From governments’ point of view, it is easier to regulate a small number of “respected” agencies, rather than allow a free-for-all of small bodies, each delivering to a particular market segment (Rametsteiner, 2002). Differences between agencies lie in field methods of supplying certification, rather than in the kind of production process certified.

This would be of little consequence if the product all consumers wanted had the same mix of components. But consumers clearly desire different things. Table 1 shows responses to a question concerning what it was that they would want to pay for, when they bought certified timber. Of all the possibilities, only “ecological sustainability” was identified by all respondents as a component. (But does ecological sustainability forbid only deterioration of ecosystem functions? Technically it does not require “whatever improvement is possible”, even though that might be what people would like, all else being equal.) At least one respondent deemed each of the other characteristics not essential. Many respondents desired a mix of features, in which case the maximum percentage of the premium allocated to a feature is recorded.

Table 1. The desired product of certification

What do you feel you would be paying for?	Number	Maximum % of premium
Ecological sustainability	18	70
Economic sustainability	12	50
Social sustainability	11	30
Friendliness of production process to environment	9	33
Friendliness of production process to people	8	25
Assurance that logging had been done legally	14	50
Fair trade	1	–
Conscience money	1	20

Plainly one standard of certification will not meet the best desires of all purchasers, except in the unlikely case that one form of SFM maximises all these features.

Not only did all consumers want a different package of products. Also, few of them even *claimed* to know how a wood product that they purchased would relate to the area of forest affected: yet forest area (rather than, say, timber volume) is the basis for most of the ecological and social effects which interested consumers. Twenty-eight percent thought they would consider the conversion factor between the product they would buy and the volume of timber required to make it. Seventeen percent would consider how many cubic metres would stand on a hectare of the relevant forest type. Thirty-three percent would consider how long it would take to grow the timber. Only one respondent claimed that all these things would be considered. Only by this respondent was it claimed that the product could be related to how much forest was affected, over what period. Significantly, one respondent, who had spent many years in timber marketing and trade, was realistic enough *not* to attempt quantification of any of these relationships.

Approaching the linkage from a different angle, one respondent thought he/she had “a rather vague idea of the link between what I would pay and the good thereby achieved for the world in general”. Two claimed to have a clear idea of the link. No others could relate their payment to an expected outcome.

In summary, then, people are willing to pay a price for certification, that may in practice represent a way of managing a hectare of forest that doubtfully conforms with their most desired configuration of objectives. Few would consider the whole chain of relationships that translates the piece purchased into impact on the forest of origin, and it is likely that even fewer would, as a result of their consideration, form an accurate picture of what their purchase would imply for the actual forest. Yet most were prepared to pay some premium for the scarcely-specified consequences of their purchase, and most would consider the size of the price differential, in deciding whether to purchase certified timber at all. Furthermore, suppose that I *am* actually altruistic. Then, in making my purchase and in some tiny way changing the state of the world, I am buying a pig in a poke as a present for friends – the population of the earth – whose desires for the elements of SFM timber production are quite unlikely to resemble my own.

It seems rather probable that my willingness to pay is, in any event, for a symbolic gesture, rather than for a well-defined physical outcome.

Warm glows

By contrast with an altruism that imparts no personal reward, it is very plausible that people should be prepared to pay something for the warm glow imparted by behaving in a way that is felt to be good for the planet, for its people (and possibly for other sentient creatures). Two respondents were explicit that purchasing certified timber would make them feel good about themselves; four others said that “It would avoid my feeling bad about myself, which would be the case if I knowingly bought uncertified timber, when certified timber was available.” Five accepted the view of buying certified timber as a gesture: “That was all that was on offer, as a way of expressing concern about environmental, social justice and sustainability issues in timber production.”

The theoretical arguments that make warm glows credible are as follows.

Warm glows are genuinely for sale in a clearly defined market transaction – much clearer, for example, than by the “purchase of moral satisfaction” (Kahneman & Knetsch, 1992) in contingent valuation exercises. Consumers seek a warm glow. It is available for purchase at the price of the premium. If the premium is not paid, the warm glow cannot be felt, but rather a self-reproaching cold sweat is risked. It is a private good, from which consumers can be excluded (by non-purchase) and which (because of the demands placed by certification) has a marginal cost in resources required. Yet it has potential (largely through certification) to be produced jointly with the more evidently public good of SFM.

The effects are entirely experienced by the consumers making the purchase, so no judgements need be made of what characteristic of SFM it is, that other consumers value.

The effects are known and precisely so, because they can be, and have been, repeatedly experienced: we can hardly know what the results of our purchasing certified timber are for the forest that produced it, but we can know what were the results for ourselves, when we purchased certified timber, or failed to do so.

Warm glows are symbolic, attracting a willingness to pay for what certification stands for, rather than for what it actually achieves. Thus the unknown constitution of the mix, and the relationship between pieces bought and sustainability achieved do not matter. The purchaser accepts the certifying agency’s assurance that the product is “sustainably produced”. Oliver (2006) reports that “end users are not at all interested in the detail of certification schemes, and just need an assurance that they are recognised by a credible body” Such a gesture of support for SFM is something whose value is probably more constant across consumers, than their valuation of actual effects in the forest. On the other hand, some surmise has to be made about the actual effects, in order that “permissive altruism” legitimises a warm glow. One respondent in the end did not fill in the questionnaire, and would refuse to pay a premium for certified timber because of the uncertain effects: mistrust – not just failure – of certification can undermine warm glows, because warm glows arise from perception, not reality.

None of this is to deny, cynically, that consumers might value the actual well-being of others. Rather, it is to suggest that such valuation enters their own sense of well-being. This interdependence of well-being is, perhaps, a more reliable basis for a functioning community, than one which requires a cold and rational altruism, of which personal well-being is *not* a product.

There is, potentially, a problem of “glow-out” (Price, in review). There are many ways of acting rightly, and many of these require expenditure of money. It is possible that, by spending extra money on certified timber, consumers reduce their ability or willingness to pay for other worthwhile things, or to donate to other worthwhile causes. In this sense, the availability of certified timber would not increase the global total of warm glows experienced. In fact, of those who guessed what they might do with money *not* spent on certified timber, only 18% expected to “spend it on some other cause that I feel good about.”

The indication is, that mental accounts are not generally compartmentalised in a way that allocates a budget to things one might feel good about.

Unexploded bombs

A purchase of certified timber does not guarantee that on the whole the world changes for the better. There may be malign ripple effects, intended or not, conscious or not, resulting from the attempt to achieve whatever it is that is assured by certification.

Unless and until all timber production is certified, it is possible that purchase of certified timber by one concerned agent may withhold that timber from another agent, who (being less aware or concerned) instead buys uncertified timber. Only 11% of respondents would have considered the possibility of such leakage, which would, in effect, mean paying for nothing to change. The great majority would continue to buy certified timber in the face of 20% and 50% possibility of such leakage. However, an 80% possibility would cause 28% to stop buying certified timber.

Similarly, the operation of the market can cause such neutralising, from the supply side. Certification and preservation of the environment in one's own local woodland may mean transfer of demand, and the felling of someone else's local woodland; one nation's conservation policy may undermine conservation in another nation (Sedjo, 1996).

In practice, no substantial premium may be paid for certified timber from the forest, which may remain the case through the supply chain. If so, certification imposes the burden of extra costs on the producer, without any compensation from extra revenue. Healey *et al.*, (2000) and Price *et al.*, (2001) indicate that a carbon offset agreement in East Malaysia made no allowance for the extra operational costs of reduced impact logging. Longer operational time per cubic metre produced, with a piecework rate for the workers, implies reduced income as well as reduced impact. Environmental damage may be replaced by social injustice. Many respondents to the questionnaire were concerned about environment but not about social justice. But this is an inadequate ethical basis for ignoring social justice.

If a price differential exists, it may result from uncertified timber's price being depressed, rather than from a premium on certified timber. In this case, producers have the options of reduced revenue from uncertified production, or increased costs from certified production. In either case, reduction in income to low-paid workers may result.

Finally, more stringent standards for managing existing forest areas may reduce the permitted volume of removals per hectare. In consequence, the area of forest exploited may increase, to meet a particular level of demand or requirement for revenue earning. Even if extraction from the newly exploited area meets certifiable standards, there may nonetheless be a decline in environmental quality compared with the pristine state. This extension of extraction is a further possible consequence of reduced impact logging.

Conclusions

What can we rightly conclude from willingness to pay a premium for certified timber, where such a premium exists?

It tells us about the ethical structures of the purchaser, but not much about the value of physical consequences for forests or their people: paying a premium is not buying a package of goods and services, for self, or descendants, or the world, but *conforming with a personally adopted constraint*. Table 2 shows accepted motivations which imply that buying certification is a way of complying with a code of right conduct.

Table 2. Motivations of a generally ethical nature

Motive for buying certified timber	Number of responses
That was all that was on offer, as a way of expressing concern about environmental, social justice and sustainability issues in timber production.	5
I have a general commitment to doing what I think is right.	10
I believe I should pay the full economic, environmental and social cost of what I buy.	6
One or more of the above	14
All respondents	18

On the other hand, that personal code does not seem to provide an absolute constraint: the majority of those expressing a “general ethical” motivation were nonetheless prepared to buy uncertified timber, if certified timber was not available, or if its premium was above the rather modest 20% average willingness to pay. About that level of premium can be regarded as the value of conforming with a general ethical constraint of acting rightly.

At best, the existence of a certification premium can be interpreted as a referendum on the desirability of including environment, social issues and sustainability in evaluations of, and actions in timber-producing forests: it does not replace the need for explicit and local evaluations, nor does it provide an adequate motivation for forest owners and managers to apply these evaluations in decision making. Nor does it provide plausible assurance to thinking purchasers, that all is well in the world of timber production, and that they themselves have played an adequate part in keeping things that way. Paradoxically, a consumer who knows that the purchased product is a warm glow, is less likely to feel a warm glow.

Hence, perhaps, the real meaning of “acting rightly” is commitment to accepting the results of cost–benefit analyses – or other trusted evaluation protocols – which take actual effects into account. The consumer does not need to know what these actual effects are, but does need to know that those effects *are known*, and are properly costed in setting a premium. Certification and full evaluation are in this sense complementary, rather than competing, instruments of achieving an ethically desirable management of forests. Premia generated by consumer demand are not themselves an adequate substitute for actual measurement and valuation of effects. There may be a market, but it is not for the benefits that actually accrue from environmentally and socially “responsible” management of forests, nor for the sustainability of such management.

Acknowledgements

I am grateful to Roger Cooper and Eleanor Price for their helpful comments on early drafts of the questionnaire, and to staff and students of my home institution, who might reasonably have expected that they were walking into a trap by responding to one of my questionnaires.

References

- Cashore, B, van Kooten, G.C., Vertinsky, I., Auld, G. & Affolderbach, J. 2005. Private or self-regulation? A comparative study of forest certification choices in Canada, the United States and Germany. *Forest Policy and Economics* 7, 53-69.
- Forest Stewardship Council 2003. *What is FSC?* http://www.fsc.org/en/about/about_fsc/mission
- Healey, J.R., Price, C. & Tay, J., 2000. The cost of carbon retention by reduced impact logging. *Forest Ecology and Management* 139, 237-55.
- Kahneman, D. & Knetsch, J.L. 1992. Valuing public goods: the purchase of moral satisfaction. *Journal of Environmental Economics and Management* 22, 57-70.

- Ibanez, L., 2001. Competition and environmental labelling. *Scandinavian Forest Economics* 37, 179-207.
- Mantau, U., Merlo, M., Sekot, W. & Welcker, B. 2001. Recreational and Environmental Markets for Forest Enterprises: a New Approach towards Marketability of Public Goods. CAB International, Wallingford. 558 pp.
- O'Brien, K.A. & Teisl, M.F. 2004. Eco-information and its effect on consumer values for environmentally certified forest products. *Journal of Forest Economics* 10, 75-96.
- Oliver, R. 2006. *Price Premiums for Verified Legal and Sustainable Timber*. Report to Timber Trade Federation and Department for International Development, London. 12 pp.
- Pagiola, S., Bishop, J. & Landell-Mills, N. (eds) 2002. *Selling Forest Environmental Services: Market-based Mechanisms for Conservation and Development*. Earthscan, London. 299 pp.
- Pigou, A.C. 1929. *The Economics of Welfare*. Macmillan, London.
- Price, C. 1989. *The Theory and Application of Forest Economics*. Blackwell, Oxford. 402 pp.
- Price, C., Tay, J. & Healey, J.R. 2001. Reduced impact logging and the economic cost of carbon retention. *Scandinavian Forest Economics* 37, 227-37.
- Price, C. in review. Sustainable forest management, pecuniary externalities and invisible stakeholders. With *Forest Policy and Economics*.
- Programme for the Endorsement of Forest Certification 2006. *Sustainable Forest Management*. <http://www.pefc.co.uk/cgi-bin/user/pefc/artman/exec/search.cgi>
- Rametsteiner, E. 2002. The role of governments in forest certification – a normative analysis based on new institutional economics theories. *Forest Policy and Economics* 4, 163-73.
- Sedjo, R.A. 1996. Local timber production and global trade: the environmental implications of forestry trade. In: Adamowicz, W.L., Boxall, P.C., Luckert, M.K., Phillips, W.E. & White, W.A. (eds), *Forestry, Economics and the Environment*. CAB International, Wallingford, pp.49-67.