

# Credence attributes:

Making honesty the best policy



***Credence Attributes: Making honesty the best policy*** is a discussion paper, approved by the Director of Consumer Affairs Victoria, on the role of government in increasing economic benefits from credence-attribute markets.

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## Executive summary

Organic, free-range, fair trade and kosher are just a few examples of 'credence attributes'. Consumer interest in products with such attributes is growing, but it is often difficult for consumers to check the honesty of these claims.

This paper explores the role of government in increasing the economic benefits from credence-attribute markets.

Essentially, producers have information about these products that consumers do not. This creates opportunities to mislead or cheat.

Consumers can protect themselves by not paying for such attributes. This can stop a market emerging for products with a particular attribute. But if producers convince enough consumers that their claim is true, a market may be established. Providing consumers with enough information to create and maintain a market can be costly for producers, and consumers also face costs in finding information on credence attributes.

Such information problems can cause credence-attribute markets to be inefficient or stifled. Governments can intervene to reduce the costs of information problems.

General economy-wide measures will provide the best balance of consumer protection, consumer choice and industry opportunities. This approach avoids governments 'picking winners' by getting involved in standards or certification for some attributes. Rather, government fair trading agencies assist markets to emerge by using an integrated compliance model. This model links various initiatives aimed at producers and consumers.

Government fair trading agencies could consider improving enforcement by:

- increasing proactive credence-attribute monitoring and targeted credence-attribute inspections
- increasing fines to ensure it is generally unprofitable to cheat
- publicising enforcement outcomes to increase impacts on reputation and deter others.

These agencies could also reduce supplier costs and improve consumer access to information by:

- directing consumers to consumer organisations and other sources for objective, reliable information
- assuring consumers that there is overall market efficiency, based on the evidence from a broad credence enforcement program
- encouraging industries to develop self-funded voluntary standards
- funding metrics and methodologies for testing and verifying claims.

Further research is required into:

- whether consumers use supermarkets as a filter for honest claims about products, and to what extent. Do consumers believe supermarkets have reputations to protect, so would ensure suppliers were honest about product claims?
- experimental economics as a tool for simulating decision-making environments to evaluate how much consumers value labelling in practice
- credence attributes in service industries.

# 1. Introduction

Consumers are often 'information poor' when buying goods with attributes that align with popular contemporary issues. These include goods marketed as having:

- environmental benefits
- animal welfare benefits
- social welfare extras
- special health benefits.

There are many more, and interest in such attributes is likely to grow.

Scepticism about claims is evident from terms such as 'greenwashing'<sup>1</sup>. There are regular media reports of cage-laid eggs sold as free-range, conventional products as organic, and other examples. Some dubious claims are highlighted in Appendix 1.

Consumers (and businesses) want to be able to buy these products with confidence. It is in the interests of economic prosperity in Victoria that markets flourish.

This paper identifies the most efficient ways Australian governments (through their fair trading agencies) can reduce information problems, so consumers can buy with confidence.

This is consumer policy; quite distinct from environmental, animal welfare or social welfare policy.

The research presented in this paper aims to inform current debates, such as the national review of food labelling announced in October 2009.

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<sup>1</sup> Greenwashing is the practice of companies disingenuously spinning their products and policies as environmentally friendly (<http://en.wikipedia.org/wiki/Greenwash>).

# 2. Background

In Australia, governments set minimum standards and other policies to protect our environment, animal welfare and social justice. When purchasing food and other items, consumers can presume all products will meet certain minimum requirements.

Some consumers are keen to buy products with extra (above the minimum) environmental, animal welfare or other public good attributes. However, they can have trouble sorting honest claims about extra attributes from dishonest claims.

Examples of 'public good' credence attributes include:

- the environment – sustainable fishing and forestry, organic, biodynamic, virtual water<sup>2</sup>, food miles, carbon footprint, eco-tourism, recycled, green power, slow food, Sustainability Indices for Biobased Products (OECD 2009), vegetarian, 'green purchasing' lists of suppliers
- animal welfare – free-range, dolphin-friendly, vegetarian, pigs with toys for entertainment<sup>3</sup>
- social welfare – locally grown, fair trade, country of origin.

Credence attributes are not all 'public goods'. Consumers can also have trouble establishing the credibility of claims they are interested in to benefit themselves as individuals<sup>4</sup>.

Examples include:

- health – organic, genetic modification, free of antibiotics, pesticides and other chemicals in production, free-range

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<sup>2</sup> Virtual (or embodied) water is a measure of the total water used in production of a good or service (Frontier Economics 2008).

<sup>3</sup> [www.timesonline.co.uk/tol/news/uk/article857710.ece](http://www.timesonline.co.uk/tol/news/uk/article857710.ece).

<sup>4</sup> It can be argued that some credence claims (for example, those associated with nutrition) involve a combination of public and private benefits but this separation is not central to the arguments presented in this paper.

- nutrition – glycemic index, fat content, energy content, salt content
- religious – halal, kosher.

Trouble establishing credibility of such claims tends to prompt calls for more government intervention in setting standards, endorsing eco-labels, mandatory labelling and more. This is not only by consumers and their representatives, but also by producers and certification organisations that might benefit.

The source of the problem is that producers have more information about production than consumers, and the information is costly for consumers to gather because of its 'credence' nature (see Box 1). Although there are many possible ways to address this problem, some will

be better than others. This paper discusses the most efficient ways governments can intervene to address information problems when there are credence attributes. This is distinct from environmental policy and other public policy.

## Box 1

### Classification of product characteristics

- **Search:** characteristics can be checked by looking at, feeling, smelling or otherwise searching the product before purchase. For an orange, this might be the required size and colour.
- **Experience:** characteristics can be checked after the good is consumed or 'experienced'. For an orange, this could be the taste.
- **Credence:** claims about characteristics cannot reasonably be checked by consumers at all, even after the item has been used or consumed. For example, it is difficult (costly) to detect whether an orange has low pesticide residues, before or after purchase.



Note: the line between experience and credence qualities of a good may not be always sharp, particularly if the quality will be discerned in use, but only after considerable time (Darby and Karni 1973).

## 3. Economics of asymmetric information

Economics can explain the origins of information problems and identify the most worthwhile roles for government.

### 3.1 Problems arising from asymmetric information

Asymmetric information arises when some parties know some relevant information, but others do not. In markets for credence attributes, this imbalance exists even after a consumer has bought, eaten or used a product because the cost of verifying the claim is too high for an individual. For example, farmers know how they produce food, but it usually costs too much for a consumer to confirm what they are told about the production process. This is a problem because the informed producer can exploit the less-informed buyer. One ramification of this is economic loss.<sup>5</sup>

Services can also be credence attributes and this can create incentives for fraudulent behaviour by sellers. Sometimes sellers not only provide the service; they act as experts determining the requirements of consumers. Examples are repair, medical, legal and financial advice services. Consumers may never discover whether the advice they acted on was optimal, or even effective. Fraud and over-servicing are more likely when:

- diagnosis and follow-up occurs jointly, and
- verifying quality of the end result is difficult or costly, because suppliers think the probability of detection is low (Darby and Karni 1973).

Expert services are not considered further in this report, being the subject of other research by Consumer Affairs Victoria (CAV).

Credence attributes and market responses have been described in:

- Golan et al (2000)
- an earlier Consumer Affairs Victoria research paper (CAV 2006b)
- earlier papers by the authors of this work (Cole and Harris 2003, 2004, 2005).

The main points are summarised below.

Consider a type of good with different brands claiming different qualities offered for sale at different prices. If consumers cannot discover whether they are receiving low or high quality, then producers can falsely claim their product is high quality when it is not. Consumers are aware of their inability to verify quality. They protect themselves by assuming that all products are of low quality, so there is no market for the high quality goods and no price premiums (Akerlof, 1974). This means bad products drive good ones out of the market; a process called 'adverse selection'. For an example, refer to Box 2.

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<sup>5</sup> Most of the document assumes the less informed purchasers are consumers. However, sometimes it is other businesses who are the less informed purchasers.

## Box 2

### A market for grass-finished beef in the United States?

Markets for grass-finished beef are just starting to emerge in the United States (US), based on health and other benefits relative to the regular grain-finished beef (Umberger, Boxall and Lacy, 2009). It is difficult for consumers to verify the health and other benefits based on appearance or taste, so it is a credence attribute. It costs more to produce grass-finished than grain-finished beef in the US, and the article suggests that the price would be at least 10 per cent higher than that for regular beef.

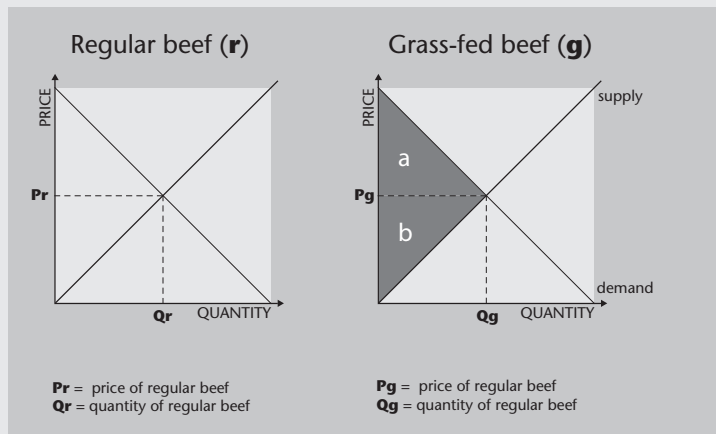


The first diagram illustrates a market for regular beef.

The second diagram shows a market for grass-finished beef. If some consumers are willing to pay at least  $P_g$  for the grass-finished beef, and some producers willing to accept a price as low as  $P_g$ , then this market will emerge. The economic surplus, or value to the economy, is the sum of the amounts some consumers would have been willing to pay above that price (consumer surplus, area 'a') and the amounts that producers would have been willing to accept below that price (producer surplus, area 'b').

If a consumer believed regular beef was falsely sold as grass-finished beef, he or she would not have the confidence to pay any more than the price for regular beef. The market for grass-finished beef would not emerge.

The loss to the economy would be 'a' plus 'b' minus the consumer and producer surplus of the next-best alternative. The actual economic loss would depend on the demand and supply characteristics of the specific product and attributes being considered.<sup>6</sup>



<sup>6</sup> This is a highly simplified illustration, and the markets would actually be linked. This is complex to illustrate in a diagram. Using some strict assumptions, the linkages between the markets are illustrated in Perloff (2001, p 643).



In summary, asymmetries can prevent markets for higher-quality attributes emerging. When this happens, society forgoes some credence attributes and ends up with an 'adverse selection' of products or attributes relative to the full-information situation. CAV (2006a) indicates that insufficient information may affect three different aspects of efficiency.

### 1. Technical efficiency

- Full information – suppliers strive to improve quality and lower prices to attract consumers, by offering the quality consumers want at the lowest possible price.
- Poor information – suppliers are under less pressure to improve quality and reduce costs because consumers cannot clearly identify the best suppliers.

### 2. Dynamic efficiency

- Full information – suppliers respond to changes in consumers' needs and preferences by offering new products and discontinuing unwanted lines.
- Poor information – the signals to suppliers about changes in consumer needs and preferences are not clear, so suppliers do not respond as quickly.

### 3. Allocative efficiency

- Full information – consumers buy from suppliers providing the best options at the lowest possible prices. The most efficient suppliers use the economy's resources (people, capital, materials) to produce what consumers value most.
- Poor information – demand declines as some consumers decide not to buy, because it is too costly to get enough information to make a good choice. This happens even though

there may be products that the consumers would be willing to buy, if they could identify them easily. As a result, the industry uses too few of the economy's resources. At the same time, consumers are unable to choose easily between good and poor quality suppliers. Some use the poor suppliers by mistake, and resources in the industry do not flow effectively to good quality suppliers.

## 3.2 Addressing the information problem

Without government intervention, producers have some incentives to supply information and consumers have some incentives to find information. However, as explained in this section, the overall number of credence markets emerging from this process will be less than optimal for the economy.

### Signals by producers to increase credibility

Producers want to highlight the positive attributes of their products. They might even compete by informing customers that their product does not have the negative attribute of some of their competitors.

When producers want consumers to know about a credence attribute, they can use signals to bolster the credibility of their claims. There are three broad types of signals, as shown in Box 3. Signalling can increase consumer confidence and willingness to pay, increasing the likelihood of markets for some credence attributes emerging.

## Box 3

### Producer signals

There are three broad types of producer signals.<sup>7</sup>

**Third party certification** can signal the truth of a claim to customers. This will usually include standards, testing, certification and enforcement (Golan et al, 2000). This is particularly attractive if companies think consumers are pessimistic about quality (McClusky and Loureiro, 2005). For example, the 'Good Environmental Choice' label, managed by the Australian Environmental Labelling Association (AELA) has a certified products register, and a green procurement database ([www.geca.org.au/](http://www.geca.org.au/)).

'**Renting the reputation of a retailer**' is when a supplier sells through a retail chain whose brand would be harmed by false claims (Chu and Chu, 1994). Often, the retailer will impose certain assurance systems on its suppliers, so there may be mutual benefit. An example is Coles brand organic fresh produce.

**Investments** can be used as signals by producers who label goods with their own self-declared claims. Credibility can be signalled by making an investment that would be lost if cheating was discovered. For example Banrock Station winery advertises investment in biodiversity conservation that visitors can check; Bembridge Free Range Egg Farm has 'visitors welcome' on its label; and organic shops rather than market stalls indicate proprietors want repeat custom and are not 'fly-by-night' operations.



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<sup>7</sup> International standards exist for various types of ecolabels, under the ISO 14020 series. In the box, the first is called a 'type I ecolabel'; the second and third would be classed as a 'type II ecolabel'. Type III ecolabels are report-cards or quantified data that consumers can compare themselves; not usually initiated by producers.

The types of producer signals described in Box 3 only work for some producers in some circumstances. Three variables will interact to determine whether a market for a higher quality attribute will emerge (Macho-Stadler and Perez-Castrillo, 1997). These are the:

- signal cost
- additional cost of producing the credence attribute (or high quality product)
- marginal benefit to consumers (the extra price they are prepared to pay for high quality).

If enough consumers are willing to pay the cost of producing the high quality good plus the cost of the signal, there will be two markets – one for high quality, and one for low. This is called a ‘separating equilibrium’. However, the high quality market will be smaller than the full information case because some consumers do not buy the attribute due to the additional signal cost. Also, those who do buy pay more than they would have in the full information case, where the signal cost would not have been necessary.

Otherwise, the high quality market fails to emerge. This is called a ‘pooling equilibrium’.<sup>8</sup> Some consumers will switch to lower quality, and some will leave the market altogether. This is still the best outcome given the information asymmetry, as the asymmetry is too costly for producers to overcome.

There are real-world situations where false claims persist for some years. Does it take a long time to reach equilibrium, or are consumers aware of a potentially false claim yet still willing to pay? See appendix 2 for a case study of free-range egg labelling.

If governments can reduce the cost of overcoming information problems, then more credence-attribute markets can exist. In other words, there

will be more separating equilibria. Government will often aim to increase the number of separating equilibria without being involved in defining the attributes. When government does become involved by assisting with signals such as standards or certification, it is ‘picking winners’. This can create distortions, or allocative inefficiencies, in the distribution of resources between different uses in an economy. Instead of acting to improve market efficiency, inappropriate government interventions can have the opposite effect.

Some circumstances warrant government involvement in setting standards; when there is a public benefit and a full cost-benefit analysis, including comparisons with alternative methods of achieving the policy objective (see section 4 and appendix 3).

### Consumer screening

In some cases, consumers can obtain reliable information about quality from other sources, and use this to screen out low quality (Perloff, 2001). However, this comes at a cost and can stop a market emerging.

Consumers can buy information about some types of goods from experts who have no incentive to provide misleading information. Examples include RACV pre-purchase car inspections, and Archicentre pre-purchase house inspections.

Positive information about specific labelling schemes, retailers or product brands builds consumers’ trust. For ‘experience’ goods, the positive information comes when consumers discover the actual quality of their purchase. For credence attributes, this positive information might come from the media, fair trading agencies and other sources.

Reputation is important for repeat purchases of goods, when consumers discover the quality of their purchase (‘experience’ goods). For

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<sup>8</sup> There may also be instances where both pooling and separating equilibria are possible (Perloff, 2001).

reputation to work as a signal for credence attributes, companies need to make conspicuous investments that will be lost if they are caught cheating (see examples in Box 3). Consumers might believe big supermarket chains would work hard to avoid any dishonest claims reflecting on their reputations.

Consumer organisations carry out a range of activities, such as advocacy and providing independent comparisons of brands or claims, on behalf of many consumers. To earn consumer trust, consumer organisations usually do not accept any payments from industry and generate funds by selling reports and memberships.<sup>9</sup> For example, Choice provides this sort of information for specific products and brands in Australia. This is discussed further in section 4.2.

Finally, consumers know companies have incentives to highlight all positive attributes, so the absence of a claim about a product or service can imply something negative.

### 3.3 Economic outcomes

**‘Information costs are as real as production costs’ – Shapiro (1983).**

The outcome of signalling and screening is the emergence of some markets for credence attributes, even in the presence of information asymmetries. But signals are costly and imperfect, and consumers incur costs in identifying and interpreting many signals. Therefore, some attributes, which would be profitable with full information, are not produced. This might be because conditions are not right for a separating equilibrium as discussed in section 3.2, or there are no private incentives to promote a particular credence attribute that consumers want. This can happen when:

- the information has a public good aspect and all companies would benefit from one company’s claim; for example, oats improve heart health
- there is no competitive disclosure of negative attributes; for example, there are no ‘cholesterol-free’ eggs, so consumers are not alerted to the cholesterol content of eggs.

Governments should aim to reduce information costs in the economy. This would increase the efficiency of existing credence markets and the number of emerging credence-attribute markets (that is, the number of separating equilibria).

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<sup>9</sup> Perloff (2001) lists this as a separate way of avoiding adverse selection. Screening is more of an individual action, whereas third party comparisons are a collective screen available to all consumers, for claims that extend beyond an individual item, to a brand or class of good.

## 4. Policies to reduce impacts of information asymmetry

**'Do not cheat if: Expected cost of cheating > Expected profit from cheating'**

In an environment rich in trust and information, more credence-attribute markets will emerge and operate efficiently.

This section goes into more detail about appropriate roles for government discussed in section 3. It highlights the importance of general interventions, such as enforcement and educating consumers, and discusses when more specific or direct interventions may be warranted. Three types of intervention are discussed (Golan et al 2000, Perloff 2001, PC 2008):

- creation and enforcement of fair trading rules
- actions that reduce the signalling cost and increase consumer access to information
- direct intervention in credence-attributes markets.

The goal is to reduce information asymmetry so consumers can make their own well-informed choices. As discussed, this will mean more of these markets will emerge, and those that do exist will operate more efficiently, to benefit consumers and producers. Again, this is not about changing consumer preferences to achieve improved outcomes for animal welfare or the environment, although this may be a side effect of better consumer protection policy.

Proposed government interventions should be evaluated using a rigorous framework. Government should only pursue policies that address market failure without unwanted side effects, and deliver more net benefits than alternatives. Policies introduced without this

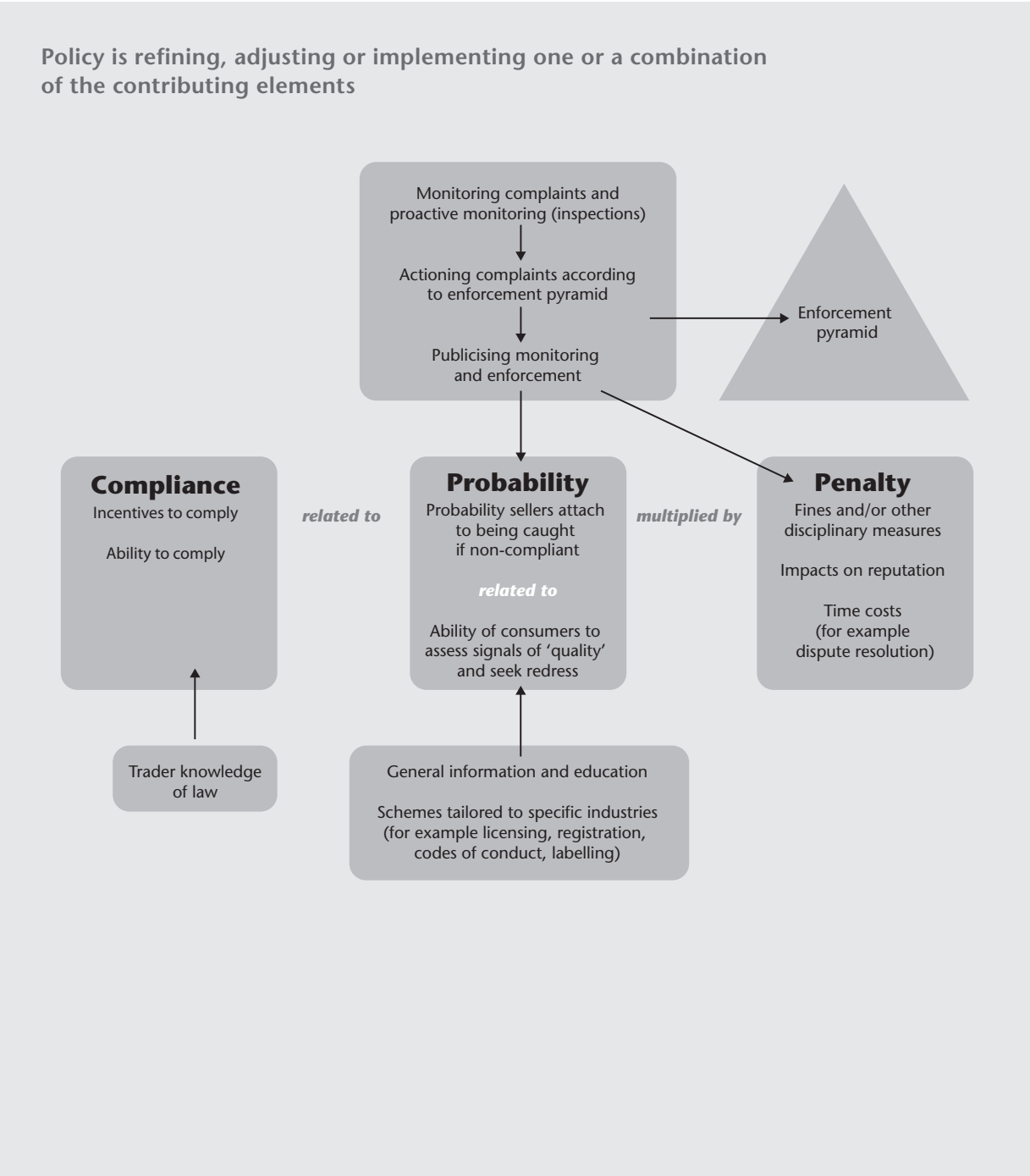
rigour can cause problems with implementation, compliance, regulatory burden and unnecessary costs to consumers and taxpayers.

In response to concerns about poor policy-making, the Victorian Competition and Efficiency Commission (VCEC) recommended Victoria advocate for a national food labelling review to establish a better policy-making framework (VCEC (2007)). VCEC was particularly concerned about how decisions were made to mandate country-of-origin labelling and fortification of bread with folic acid. On 23 October 2009, it was announced that Dr Neal Blewett will chair a national food labelling review (see [www.foodstandards.gov.au](http://www.foodstandards.gov.au)).

Diagram 1 represents an integrated compliance model for achieving good policy outcomes. The various parts of this diagram are discussed in the remainder of this section.

# Diagram 1

## Integrated model of compliance with law



## 4.1 Fair trading rules

### Legislation

Victoria's *Fair Trading Act 1999* (and similar legislation in other jurisdictions) help offset the consumer disadvantage that can result from unequal access to the information or bargaining power needed to deal equally with suppliers. Section 9(i) of the Act states: 'A person must not, in trade or commerce, engage in conduct that is misleading or deceptive or is likely to mislead or deceive'<sup>10</sup>. This is the law referred to in the integrated compliance model (diagram 1).

There is pressure to broaden regulation beyond false and misleading claims, to 'address other forms of environmental marketing messages such as being vague or making claims that do not provide the full picture' (Choice, 2009b). While Choice focuses on regulatory enforcement, other approaches discussed in sections 4.2 and 4.3, such as helping consumers read signals, might also achieve this broader goal.

There can be subtle differences in policy goals that would influence government actions. For example, Consumer Affairs Victoria 'protects and promotes the interests of consumers', which is quite broad. The Productivity Commission (PC, 2008) proposed that the goal of consumer policy should be 'to improve consumer wellbeing by fostering effective competition and enabling the confident participation of consumers in markets in which both consumers and suppliers trade fairly and in good faith'. The commission's recommendations are now being translated into a uniform Australian Consumer Law.

The US Federal Trade Commission (US FTC) says it aims to ensure environmental claims are 'truthful, substantiated, and not confusing to consumers' (Kohm, 2009). The explicit statement about not confusing consumers might lead to a broader range of government actions.

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<sup>10</sup> Sections 10 to 12 elaborate on this. Mirror legislation exists in other Australian jurisdictions.

### Level of enforcement

The level of enforcement chosen by regulators can influence the number of separate credence-attribute markets that emerge (Anania and Nistico 2003).<sup>11</sup> As stated in CAV (2006b), any increase in enforcement should motivate producers to be more truthful and consumers more confident that what is for sale is truthful. Publicising enforcement builds confidence and balances media reports about discoveries of individual false claims.

There have been calls for tougher enforcement of the false, misleading and deceptive claims legislation, particularly for environmental claims, in Australia and internationally (Choice 2008). The US FTC is likely to increase its enforcement after nearly a decade of no prosecutions in the green claims area (Rosch 2008). The Australian national review of food labelling includes 'appropriate and consistent enforcement' in its terms of reference.

Fair trading agencies have a range of compliance and enforcement options at their disposal. Numerous education and information activities encourage voluntary compliance by sellers (see section 4.2). These are backed up with a range of less-frequently-used escalating enforcement options, including civil, administrative and criminal enforcement remedies (that is, an 'enforcement pyramid' – diagram 1). Enforcement actions are on the public record, and are an important way of deterring similar behaviour by other companies.

Generally, fair trading legislation depends on consumer complaints to trigger investigations (CAV, 2009).<sup>12</sup> This is not an effective trigger for investigating credence claims, because if consumers do not know that they have been cheated they will not seek redress. Educating

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<sup>11</sup> Note that it does not have to. A high quality market could emerge without any enforcement; or it might not emerge even with 100 per cent enforcement. The outcomes depend on the demand, supply and signalling characteristics set out in section 3.

<sup>12</sup> CAV (2009) says 'To a significant extent, it is difficult to enforce the law if consumers do not seek redress when a transaction is unsatisfactory.'



consumers about exercising their rights must be combined with other approaches for effective enforcement.

One way to increase enforcement effectiveness is to undertake *proactive monitoring* to increase the probability of cheaters being inspected (see diagram 1). Consumer Affairs Victoria conducted more than 5000 trade measurement inspections in 2008-09 (*Consumer Affairs Victoria Annual Report, 2009*)<sup>13</sup>. Nearly 21,000 instruments were tested and nearly 45,000 pre-packaged articles inspected. The trade measurement program ensures consumers receive the amounts they pay for and builds consumer confidence. They like to know the monitoring is occurring in the background because they often do not have the time or inclination to check and make complaints about weights and measures. Consumer Affairs Victoria did investigate 492 complaints in this area but most activity occurred through the proactive trade measurement program. Audits, inspections and investigations 'help identify breaches of consumer protection laws, help identify areas where traders need more education and help deter traders from doing the wrong thing. During an investigation, we gather evidence, decide the extent of potential consumer detriment and determine what enforcement action is most appropriate' CAV (2009).

This model of proactive monitoring could extend to other credence claims, providing incentives to producers as well as confidence to consumers. Guidelines could be developed to identify areas at higher risk of false credence claims, such as companies that produce both high and low quality on one site, and industries with more 'fly-by-night' operators. The guidelines might also encourage the use of other inspection triggers, such as:

- media reports

- market research to elicit information about consumer suspicions
- producer complaints. Companies have an incentive to reduce cheating by others, and might sometimes discover relevant information<sup>14</sup>
- consumer organisation complaints; for example, Choice initiated a complaint to the Australian Competition and Consumer Commission (ACCC) on Coopers Beer green claims that were not substantiated (Choice, 2008).

As businesses are unlikely to be inspected and caught for false credence claims, fines should be set very high to discourage cheating. Damage to reputation may or may not be the side effect of enforcement action (diagram 1), depending on market characteristics.

### Enforceability

Any enforcement of credence claims in a proactive monitoring program, in response to a complaint or in any other context, must have a method for testing and evaluating the claims.

Investment in developing testing methods could be a legitimate role for government because the methods would be 'public goods', available to everyone once produced (Jahn, Schramm and Spiller, 2005). An example is the method developed for checking the label accuracy in barn and free-range eggs (Gregory, Gepp and Bapidge 2005). Eggs are inspected under an ultra-violet lamp for distinctive parallel lines indicating contact with cages. A mathematical formula is provided for the number of eggs in a batch of 90 that must show lines before the batch can be classified as cage-laid or not, at the 99 per cent level of probability.

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13 From 1 July 2010, the Commonwealth will assume responsibility for legislation and administration of trade measurement through the National Measurement Institute.

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14 Of course, companies also have an incentive to reduce the profits of competitors, so this would need to be considered carefully. Also, when there is more at stake, and more specific detail about illegal behaviour, companies can sue each other for false advertising under the Trade Practices Act (for example, Duracell and Eveready).

Standards can help provide a benchmark against which to test, as illustrated in the olive oil market. Oil can be tested to establish whether it is made from olives or other plants but testing claims about specific production processes is more complex. The problem is that the final product cannot be tested to verify the claim, such as whether it is from the first pressing of the olives (extra-virgin olive oil) or a later pressing.

Industries can develop standards against which products can be tested, or regulators can use internationally accepted standards (for example, olive oil, see Box 4). Industries (or at least, the bulk of honest producers) sometimes have incentives to develop standards, to catch out the cheaters. However they also have incentives to lobby governments to develop standards, because standard development is costly. Standards are discussed in section 4.2 as a means of helping producers signal credence claims.

## Box 4

### Examples of enforcement activities by consumer regulators

Under Consumer Affairs Victoria's trade measurement program, enforceable undertakings were issued in 2008-09 against businesses serving alcohol under the capacity consumers paid for; and selling packages marked with incorrect weights.



The ACCC has taken action against companies about the accuracy of their green marketing claims. For example, the Federal Court found that GM Holden significantly overstated the environmental benefits of the measures it was undertaking to offset the carbon emissions from its Saab vehicles (Kell 2009).

In 2007, the ACCC found that an egg packer and supplier had substituted and sold non-organically produced eggs as organic eggs over a two-year period. The company (G.O. Drew) undertook to provide a total of \$270,000 to organisations to help develop and certify organic produce.

In October 2009, the ACCC tested extra-virgin olive oils against the International Olive Council's trade standard for olive oil, which sets criteria for purity and quality of extra-virgin olive oil. It found three samples were not extra-virgin olive oil, and relevant importers and distributors have made enforceable undertakings to get their suppliers to test and report against this international standard. Each company along the supply chain can be held to account for false, misleading and deceptive conduct, so the ACCC has suggested retailers also seek assurance about what they are purchasing. ([www.accc.gov.au](http://www.accc.gov.au), 2 October 2009).

In an example of a novel claim, the US FTC is investigating paint that is claimed to have an insulating quality that will decrease energy losses 40-60 per cent (Tushnet 2009).

The US FTC has charged Kmart Corp., Tender Corp., and Dyna-E International with making false and unsubstantiated claims that their paper products were "biodegradable". The US FTC states that with the recent growth in 'green' advertising and product lines, the agency will continue its efforts to ensure that environmental marketing is truthful, substantiated, and not confusing to consumers ([www.ftc.gov/opa/2009/06/kmart.shtm](http://www.ftc.gov/opa/2009/06/kmart.shtm), accessed 7 Oct 2009).

## 4.2 Reducing signalling cost and increasing consumer access to information

Even with market incentives (section 3.2) and legislation (section 4.1) there may still be partial disclosure and innuendo in markets, and this erodes their efficiency. Referring back to the integrated compliance model (diagram 1) there may be opportunities to make signals easier and cheaper for producers, and help consumers distinguish honest and meaningful claims from those that are not.

### Education about general measurement systems

Better-informed consumers make better decisions, which ultimately lead to stronger competition and improved economic benefit. Consumers need to know what specific claims mean, and producers need to know how to measure and convey them. The aim is to avoid bad claims, not to deter legitimate claims.

Most fair trading agencies now provide general guidance about how to assess some popular claims where there is consumer confusion, especially environmental claims. Such information might refer to internationally recognised methods, such as life-cycle analysis or life-cycle assessment<sup>15</sup>. For example, the ACCC has recently produced 'Green Marketing and the Trade Practices Act' (ACCC, 2008b). The US FTC issued its 'Green Guides' in 1992, and is reviewing these.

### Creating new systems of measurement

It is difficult for producers to make a new type of credence claim when there are no rules or conventions about how to define or measure what is being exchanged. New systems of measurement

might help new credence markets emerge.

Sometimes, companies are large enough to develop their own systems of measurement. For example, in July 2009, Walmart announced plans to develop a worldwide sustainable product index. Walmart believes a research-driven approach involving universities, retailers, suppliers and non-government organisations can accelerate and broaden this effort. Their label is yet to be developed ([walmartstores.com/download/3879.pdf](http://walmartstores.com/download/3879.pdf)).

Where governments develop metrics for use in the context of public goods, or for other reasons, it might be desirable for them to provide public access to these. For example, there were no private markets for biodiversity until the Victorian Government created metrics for adding and ordering various elements of biodiversity (Parkes et al. 2003). It is possible that producers or third party certification schemes might want to use this metric to substantiate biodiversity labels. Government funding of similar metrics might be worthwhile.

There is considerable debate at present about whether governments should invest in systems for measuring 'carbon footprints'. Hogan and Thorpe (2009) believe carbon labelling may have a role in complementing other government initiatives to address climate change and that this merits further investigation. They contrast this proposition with the concept of 'food miles' which, while perhaps being intuitively appealing, results in less informed choices and potentially distorts international trade outcomes to Australia's disadvantage (see appendix 1). Keogh (2009) summarises a collection of papers about carbon labelling and its implications for the agricultural sector. He concludes that because there is uncertainty and confusion about methodologies for counting emissions, the resulting information may be of limited value to consumers. He also points out that carbon labelling could override

<sup>15</sup> A 'Life Cycle Assessment' ('LCA', also known as 'life cycle analysis', 'ecobalance', and 'cradle-to-grave analysis') is the investigation and evaluation of the environmental impacts of a given product or service caused or necessitated by its existence ([http://en.wikipedia.org/wiki/Life\\_cycle\\_assessment](http://en.wikipedia.org/wiki/Life_cycle_assessment)).

other impacts that a production system may have had on the environment, creating distorted information for consumers.

Whether government has a role in this area depends on broader policy decisions about climate change. Most crucially, it depends on whether emissions trading (if implemented) is augmented with systems to count individual efforts to reduce greenhouse gases and add these to emission reductions. It is difficult at this stage to know enough about possible future global climate change policy, to determine if governments have any efficient role in developing carbon-labelling schemes.

### Setting standards

Standards are one of the key requirements for successful labelling, and can help consumers compare, buy and use products more confidently. Standards set out specifications and procedures and establish a common language, which defines quality and other criteria. They can be Australian Standards, codes, guidelines and other documents ([www.standards.org.au](http://www.standards.org.au)). A standard can indicate the level of an attribute actually achieved (for example, percentage fat content) or that a product reaches a threshold (for example, the heart foundation tick). Standards do not preclude the use of additional claims (for example, organic plus 'grass-fed') (Consumer Reports, 2006).

Legislated minimum standards are in place to protect public goods such as safety, biodiversity and animal welfare. For example, there are minimum cage sizes for hens, laws ensuring food safety, and laws governing chemical use. Choice is calling for the Federal Government to mandate compliance with Australian standards for environmental labelling for the most 'greenwashed' product categories, starting with paper and tissue products and household cleaners. This would not mandate labelling, but would assure consumers that when such a claim is made, the standard is reached.

Many industry bodies and non-government organisations develop voluntary standards against which companies can be accredited. To help producers 'signal' claims to consumers (see Box 3), these standards are usually accompanied by some certification, testing and enforcement. Voluntary standards can efficiently inform consumers about quality, and often complement legislation (for example, the new organics standard – Box 5). Standards Australia provides a mechanism for industries to reach national agreement and uses a net benefit test: '*having an overall positive impact on relevant communities*' ([www.standards.org.au/](http://www.standards.org.au/)). Standards Australia is not a government organisation – it is independent – but government recognises it as Australia's peak standards body.

Voluntary standards can be developed for a variety of reasons. While most are to help consumers (for example, standardising thread sizes for screws), sometimes these are about reducing calls for mandatory standards. For example, the Environmental Claims in Advertising and Marketing Code (AANA 2009) is an attempt at self-regulation by the advertising and marketing industry. There are also standards about environmental labelling in general, such as the ISO14020 series (and Australian counterparts). Choice (2008) wants the government to update the Australian Standard for making environmental claims, so the standard encompasses claims such as 'sustainable', 'carbon neutral' and 'greywater safe'.

Often, industries seek funding or legislative underpinning for a standard. However, where the benefits are confined to the producers and consumers of particular products, these producers and consumers should incur the costs of standard development and certification procedures (for example, extra-virgin olive oil, halal meat, organic). This is because these are 'optional extras', above the minimum standards that all products must comply with. Using taxpayer funds to define attributes marketed above minimum standards, by producers trying to differentiate their products in

competitive markets, is often not justifiable (see Box 5 which illustrates this point using standards for 'organics' as an example).

As well as providing consumers with information, standards may also make it easier for fair trading agencies to establish whether claims are misleading or deceptive (see section 4.1). Choice often reports the proportion of products that comply with voluntary standards, which is valuable to consumers, regulators and industries.

Where a standard provides a net benefit that is widespread throughout the community, governments might consider mandatory standards for some credence attributes. Examples include a requirement to label genetically modified ingredients and the requirement to indicate the energy efficiency of electrical appliances (using energy-efficiency star-ratings). CAV (2006) looks at questions to consider when designing ratings schemes and emphasises the need for a case-by-case approach, to ensure the benefits of any scheme would exceed costs. Adhering to a case-by-case approach counteracts tendencies to assume that because a scheme (for example, a star-rating scheme) works well in one market, it should be extended to others.

## Box 5

### Standards for 'organics' – contrasting experiences in Australia and the United States of America

Australia's voluntary national organic standard (AS6000) was finalised in 2009. It was funded and developed by organic certification bodies through Standards Australia (a non-government institution), to increase consumer confidence in organic claims and to reduce confusion about the eight different organic standards. It is also expected to provide guidance for misleading or deceptive organic claims cases.



The Australian Government did not fund the development of the standard, as the benefits would be accrued by producers and consumers of organic products. However, there are calls to make it mandatory.

In the United States (US) in 1990, the government embarked on a process to develop national organic standards. Ten years elapsed between passing of the Organic Foods Production Act as part of the 1990 Farm Bill and announcement of astonishingly detailed regulations. This was due to the number of stakeholder opinions submitted – 'one of the largest in the history of federal government' (Baum 2000). Ippolito (2003) suggests the length and costliness of the US organic standard development process can be attributed to the government running it.

With rapidly advancing technology and new issues cropping up all the time, it is challenging to have a 'standard' definition that producers will be happy to use. This is especially so given producers of 'niche' or premium products aim to attract consumers by offering something above 'standard'. It is questionable whether the cost of tying up government resources for long periods, to try to keep 'nailing down' a definition, is a sensible use of taxpayer funds.



### Helping consumers 'read the signal': evaluation of labels

Consumers generally know when they are at an information disadvantage, and attempt to reduce this. As individuals, they:

- read imperfect producer signals (Box 3)
- rely on the media
- observe the decisions of others
- sometimes can use the individual screening methods discussed in section 3.2.

This all takes time and money, and is imperfect. Collectively, through consumer organisations, consumers can also access independent, objective assessments of many products and claims, including environmental, health, animal welfare and other credence claims and brands.

For example, Choice investigates some types of credence claims (such as organic meat), and provides advice on how to confidently make greener decisions and minimise the risk of being 'greenwashed' (Choice 2008). In comparison, Consumers Union's 'Eco-labels Center' (United States) assesses a large number of ecological, animal welfare and fair trade labels. Consumers can search for information about product labels by certifier, product category or label ([www.greenerchoices.org/eco-labels](http://www.greenerchoices.org/eco-labels)). For example, see their report card for animal welfare claims in Appendix 4.

There might be a role for government to provide funds for an eco-label evaluation program. This is because information is a public good, so consumer organisations (even those as large as the Consumers Union) are unlikely to be able fund such a program to the socially optimal level (Perloff 2001).<sup>16</sup> As consumer organisations raise some funds for activities that benefit

many consumers, it might be most efficient for the government to co-fund a label evaluation program delivered by a consumer organisation. Another option is for government to provide and fund the program, as sought by Choice (2008). However, a government needs to avoid even the impression that it is favouring one type of business over another (for example, free-range versus cage laid eggs), when the latter is legal and many consumers rely on buying the cheapest goods possible. Misleading and deceptive conduct is the government's target, not promoting consumption of 'premium' goods. This point is reiterated throughout this paper because it is often missed.

Program design would also need to be considered. For example, the program could compare all eco-labels (like Eco-Labels Center) or endorse only those meeting a specific standard (as recommended by Choice 2008). Funding, delivery and design options would require economic evaluation. Fair trading agencies could commission a specific economic study of the different options, and a detailed recommendation for funding and implementation. Aspects to consider include:

- credibility with consumers
- speed in evaluating new labels
- avoiding conflicts of interest
- ability to reach many consumers.

### Helping businesses read supplier signals

Some businesses also want to buy goods and services that are environmentally superior (green procurement). There are some market incentives and mechanisms to support this, and private initiatives seem to be generating databases of such service businesses. The Australian Ecolabel Association (AELA, a non-government organisation), provides a free green procurement database of products. Industry associations could also provide lists of suppliers who meet certain environmental or other standards, akin to the role

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<sup>16</sup> The information is 'non-rivalrous' (an economic term meaning one person's use does not diminish its value to others), and 'non-excludable' (an economic term meaning people cannot be excluded from using it) when the information is provided for free on websites.



consumer organisations play (although, as with consumer organisations, once the information is publicly available ‘free-riding’ becomes a problem).

Measures identified elsewhere in this report address inefficiency at the consumer (or final product) end of the market. Nonetheless, programs in other policy areas might generate useful information for businesses. For example, Victorian Government-funded ‘EcoBuy’ provides a directory of green suppliers. It takes an ‘endorsement’ approach rather than rating or comparing all green supplier claims, which could affect perceptions of independence.

### 4.3 Government labels to address information asymmetry

This paper has considered legislation to prevent misleading and deceptive claims (section 4.1), and government policies that reduce the cost of overcoming information asymmetries (section 4.2). This section canvasses direct government intervention in markets for credence attributes through labelling. This is sometimes called ‘disclosure policy’ because government requires mandatory disclosure of certain information.

Evaluation is important. It can be difficult to conduct economic studies when markets do not exist. Experimental economics enables economists to test various theories or programs in a laboratory, as discussed in appendix 3.

This section considers the cases of:

- a voluntary government environmental labelling (eco-labelling) scheme
- mandatory labels to reduce confusion and increase consistency
- mandatory labels for other information reasons
- labelling for a combination of policy reasons.

### A voluntary government eco-labelling scheme

Cole and Harris (2003) provided the following discussion of a broad, voluntary government eco-labelling scheme.

*Consumers do not necessarily consider governments to be more credible than other independent organisations. A government ecolabel scheme might also be slower or less innovative in responding to consumer demands for new credence attributes, and slower to develop and amend standards. A government ecolabel would compete with existing private ecolabels that are in their infancy. In addition, government should not fund activities where all of the benefits accrue to identifiable industries or firms—as is likely to be the case with the creation and implementation of any geographic or industry-specific ecolabel. (Cole and Harris, 2003)*

These comments are still relevant and a voluntary, broad government environmental labelling scheme is unlikely to be warranted for the sole purpose of overcoming asymmetric information. Many countries have taken steps to introduce eco-labelling schemes and details can be found at the Blue Angel’s website: [//www.blauer-engel.de/en/blauer\\_engel/whats\\_behind\\_it/national\\_eco-labels\\_worldwide.php](http://www.blauer-engel.de/en/blauer_engel/whats_behind_it/national_eco-labels_worldwide.php)

### Mandatory labels to reduce confusion and increase consistency

Producers compete for customers and make numerous claims about product attributes. This can increase consumer transaction costs and reduce consumer attention to the point where claims are ignored and consumers cannot meet their own preferences. Bundling of attributes – local, natural, green – contributes to consumer confusion, overload and complexity and can send conflicting signals. Consumer preferences can be similar (most consumers would prefer more

energy-efficient appliances) or very different (for example, 'locally grown' or 'food miles' as opposed to 'fair trade', because the latter often involves long distance travel).

In some cases, a mandatory labelling scheme might generate net benefits to society and might be a worthwhile complement to, or substitute for, other policy options. The impetus for this can come from consumers, producers or government. Energy star ratings are one example. The National Energy Efficiency Strategy (2009) might include fuel-efficiency labelling for cars, energy efficiency labelling for more appliances, such as TVs, and energy-efficiency labelling for buildings.<sup>17</sup> Another example is nutrition claims (see Box 6).

However, 'the more standards the better' is certainly not true because many costs and benefits need to be analysed. Costs and benefits of 'reducing consumer confusion' and 'increasing consistency' need to be estimated, which is not straightforward. Experimental economics can assist in evaluation (appendix 3).

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<sup>17</sup> The US FTC requires disclosure of a broader range of information to help consumers compare products: energy ratings for appliances, lighting, plumbing and in the future, televisions and other consumer electronics; and fuel ratings for cars (FTC, June 2009).

## Box 6

### Nutrition claims and labelling: health and consumer policy

Nutrition panels are mandatory on Australian packaged goods. There is now debate, both here and overseas, about the merits of additional 'front-of-pack' interpretational aids, such as 'traffic light' labelling, for various reasons including:

- health and safety is a public good, nutrition is a key contributor to health, and concerns about obesity continue to increase. Providing more nutrition information might help consumers make healthier choices
- individual consumers might have different nutrition preferences, yet they cannot easily discover the nutritional characteristics of various foods. Requiring nutrition information in a standardised format can help consumers meet their own preferences
- interpretational aids (for example, traffic lights) might save time for consumers if they reduce confusion, encouraging consumers to use the information in more decisions.



In Australia, the food industry has developed a standard for reporting summary nutrition information on the front of packs of foods such as cereals: percentage of daily requirement of various nutrients (often called the 'recommended daily amounts' or guideline daily amounts). There are problems with this type of measure though (see for example Lobstein, Landon and Lincoln 2007), including the fact that for ingredients such as saturated fat there is no recommended daily intake – the less the better. The 'percentage of daily intake' reported on packs might therefore confuse or even mislead consumers. Portion sizes and variations between adult and child requirements can also be confusing in the context of guideline daily amounts reported on packs.

There are many questions about the influence of nutrition labelling, on back and front of packs, on health (for a literature review see Grunert and Wills 2007). These are still being researched and Australia is watching developments overseas. The UK Food Standards Agency (government) has developed a voluntary traffic-light system to provide key food nutrition information. It has had strong take-up. The US FDA recently concluded (FDA 2009) that 'the existing consumer research suggests that consumers like front-of-pack labelling, find it to be a time-saver. Consumers do not fully trust it, however, and find the plethora of front-of-pack labels confusing'.

The national review of food labelling in Australia, announced in October 2009, will further examine nutritional labelling as part of its terms of reference.

### **Mandatory labels for other information reasons**

Industry-wide positive attributes have some public good characteristics, and in some cases markets for these might not emerge (Golan et al, 2000). For example, if oats reduce heart disease, there is no advantage for any one producer to promote this as it benefits all producers. The problem is not consumers being cheated by false claims, but the complete absence of claims that consumers might value. Mandatory labelling is unlikely to be the best policy option to address this information problem. The problem could partly be addressed with public health and other education campaigns. It might also be addressed through mandatory labelling designed to achieve some other primary goal (such as health and nutrition labelling), subject to evaluation.

Competition between companies may not always reveal industry-wide negative attributes (Golan et al. 2000). However, incentives to provide less of something consumers dislike are strong. For example, markets have emerged for clean coal technology and lollies with no food colouring. There are examples of mandatory government labelling on safety grounds, such as cigarette warnings, and these have well-established benefits. In that case, the warnings are not just to help consumers meet their preferences, but are a leading component of health policy (see labelling for a combination of reasons below). Also, sometimes consumer demand reflects changing community standards, in which case the best policy might be to change minimum standards (see section 4.2).

### **Labelling for a combination of policy reasons**

Calls for labelling schemes often arise, not from a desire to address information problems for consumers, but to address other issues such as the environment and public health. Some labelling schemes, such as country of origin

labelling, appear to address consumer information asymmetries but also benefit domestic industry.

Beyond the well-known mandatory food and appliance labels, there are other voluntary government labelling schemes. Examples include:

- Greenhouse Friendly™ – [www.greenhouse.gov.au/greenhousefriendly](http://www.greenhouse.gov.au/greenhousefriendly)
- NSW Greenhouse Gas Reduction Scheme (GGAS) – [www.greenhousegas.nsw.gov.au](http://www.greenhousegas.nsw.gov.au)
- GreenPower – [www.greenpower.com.au](http://www.greenpower.com.au)

Governments need to be careful about the levels of any threshold standards, as private labelling initiatives might set a more profitable threshold (Roe and Sheldon 2007). They might displace private labelling schemes and not address consumer confusion at all. While having the appearance of addressing public goods, voluntary labelling schemes can cost a lot with little achievement of the primary goal (for example, environmental improvement).

There may be better uses of government funds. There are many policy options to achieve environmental, health and other public goods, including market-based instruments, taxes, charges, legislation, education and information. Careful evaluation and coordination is required to ensure governments steer a path that generates maximum benefits for the community across all consumer policy and other initiatives.

The United Kingdom's Department for Business, Innovation and Skills is the lead department for coordinating product-labelling policy and provides a secretariat for an Interdepartmental Group on Product Labelling. The group has produced policy guidelines on issues to be taken into account when the government considers support for new product-labelling proposals ([www.berr.gov.uk](http://www.berr.gov.uk)). This approach might be warranted in Australia, with oversight by fair trading agencies at the national level to avoid 'information overload', confusion and dilution of important messages.

## 5. Potential areas of action for fair trading agencies

This paper has explained in detail why some potential government actions are likely to be more efficient and effective than others in overcoming information problems in markets with credence attributes. The following summarises the actions fair trading agencies may wish to further consider.

### Expanding aims of legislation by looking at:

- including 'reducing consumer confusion' as a goal
- broadening enforcement beyond 'false and misleading', to encompass claims that are vague or not the full picture.

### Improving enforcement by:

- increasing proactive credence-attribute monitoring and targeted credence-attribute inspections using a wider range of triggers (such as media, market research, producer complaints, consumer organisation complaints)
- identifying and encouraging more cost-effective investigation technologies
- increasing fines to ensure it is generally unprofitable to cheat
- publicising enforcement outcomes to increase impacts on reputation and deter others.

### Reducing signalling costs and improving consumer access to information by:

- directing consumers to consumer organisations and other sources for objective, reliable information

- assuring consumers that there is overall market efficiency, based on the evidence from a broad credence enforcement program
- encouraging industries to develop self-funded voluntary standards
- funding metrics and methodologies for testing and verifying claims.

### Researching:

- whether consumers use supermarkets as a filter for honest claims about products, and to what extent. Do consumers believe supermarkets have reputations to protect, so would ensure suppliers were honest about product claims?
- experimental economics as a tool for simulating decision-making environments to evaluate how much consumers value labelling in practice
- credence attributes in service industries.

## 6. Broader roles for government

**Improving the quality of objective information about labels by:**

- commissioning a specific economic study of the different options to deliver label evaluations to consumers, that includes a detailed recommendation for funding and implementation.

**Ensuring that when government labelling schemes are proposed, that there is:**

- rigorous evaluation of labelling as a policy option to achieve any policy goals
- a mechanism for considering national consistency and coordination of evaluation and design of government labelling schemes, to avoid confusing consumers and diluting more important labels.

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# Appendix 1

## Contentious and dubious claims

Some marketing terms can confuse or mislead consumers. Words can be borrowed from everyday language and used in ways that imply some special benefit or advantage to the environment, the person, or an animal. Sometimes, words of scientific origin are used to bolster credibility. They give an impression of some favourable attribute, but unless they are measurable against some standard, they are meaningless.

The ACCC recognises that some claims are accepted by consumers as 'mere puffery', but there are many that purport to be serious. Some examples of dubious claims are:

- green
- food miles
- biocompatible
- friendly
- ecological footprint
- cruelty-free
- natural
- carbon footprint
- eco-safe
- local
- virtual water
- non-biotoxic.

Even if a term is measurable, the concept may not convey anything meaningful to a consumer. An example is virtual water, which measures the water embodied in a food or other product. There are serious flaws in the virtual water concept, and Frontier Economics (2008) found that 'these flaws render the virtual water concept meaningless and cast serious doubts on the wisdom of applying the concept of virtual water to draw conclusions regarding the desirability or otherwise of alternative production activities'.

Some terms, such as local, natural and food miles, represent a bundle of attributes. They do not necessarily have a consistent meaning from one product to the next, and contribute to consumer confusion, overload, complexity, and can send conflicting signals. 'Food miles' refers to the distance travelled by food between production and consumption. 'Fewer food miles' is intended to convey reduced greenhouse gases from transport, and more support to regional producers. However, it is an inadequate and potentially misleading measure of the environmental and economic impact of food (Rama and Lawrence, 2008). It also distorts international trade outcomes, potentially reducing market access for Australia's exports (Hogan and Thorpe, 2009).

Any policy or consumer response based on food miles would be inappropriate and inaccurate, even as a partial measure to address climate change. Besides, the intention of an emissions trading scheme is to remove the need for government to judge the best combination of partial policies, letting the market instead adjust via the price mechanism. If people wish to buy goods from far-away destinations (and, as previously stated, some who support 'fair trade' think this objective to be important) then they can still do so.

## Appendix 2

### Case study: falsely labelled free-range eggs

'A Sun-Herald analysis found the total of free-range layer hens in the country were incapable of producing the total of free-range eggs sold each year, and as many as one in six eggs labelled free range on retail shelves were cage or barn-laid' (Burke, 2009).

This was widely publicised. Yet still, there are two distinct components in the egg market – cage eggs and higher-hen-welfare eggs (barn-laid, free-range, organic). This appears to be a separating equilibrium. How can this occur when there is known 'cheating'? There are two possible scenarios.

#### Scenario 1

Most consumers interpret the free-range label to mean five in six eggs will be free range, and one in six will not be. The market price reflects the marginal cost of producing five free-range eggs, one cage egg and the free-range signal. In this scenario, consumers get what they have paid for and producers get paid for what they produce – which would be 'efficient' in some ways.

This separating equilibrium relies on word of mouth to inform consumers of cheating, and leads to an increase in producers who cheat just to remain competitive. It also implies a tacit acceptance by regulators of this behaviour. It is clearly not the long term goal for society (and fair trading agencies).

#### Scenario 2

Alternatively, most consumers are not aware that up to one in six free-range eggs is falsely labelled. The price reflects the marginal cost of the honest producers (six free-range eggs plus free-range signal) and consumers who are willing to pay that price will buy. Consumers whose marginal benefit exceeds the marginal cost of producing five free-range eggs, one cage egg plus signal, but is less than the price of six plus signal, do not buy free-range eggs – they either buy other types of eggs, or do not buy eggs at all. Also, some producers profit from cheating. There is a loss of economic surplus.<sup>18</sup>

Removing false claims would enable these consumers to satisfy their demand for free-range eggs.

#### Discussion

In the past, it has been expensive to check free-range egg claims as this requires investigation and monitoring of production processes and supply chains. Perhaps these costs have outweighed the benefits (increase in economic surplus). However, the mechanism described earlier (Gregory, Gepp and Bapidge 2005) is cheap to employ regularly, once the equipment is purchased. A fair trading agency could spot-check a sample of eggs (90 required – about \$40) and even have an 'egg watch' column on its website and/or newspaper, for instance, each week.

These two scenarios illustrate two extremes in the egg market. Further exploration of consumer information and producer behaviour might provide more insight into the nature of the separating equilibrium, and how to increase economic surplus.

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<sup>18</sup> The measurement of the loss will depend on supply as well as demand conditions.

## Appendix 3

### Evaluation of policy

This paper has made a strong case for general government interventions to increase the efficiency of credence-attribute markets, rather than industry-specific or market-specific interventions. These general interventions are by definition at a more aggregate level, with broad benefits and costs.

This report also discussed some industry-specific and market-specific interventions, particularly mandatory labelling. The Productivity Commission (2008) provide three steps for evaluation:

1. Is it effective? Does the policy address the problem?
2. Does it provide a net benefit? (Taking into account the likely reduction in consumer detriment and the costs of intervention, including competition and incentive effects; compliance and administration costs).
3. Does it provide a higher net benefit than alternatives (for example, existing or emerging market-based solutions; other policy interventions)?

This is a summarised version of a government policy decision-making process published by the Department of Treasury and Finance (2007), which includes details about when and where Business Impact and Regulatory Impact Statements must be undertaken in Victoria.

In the case of specific credence-attribute markets, mandatory labelling imposes significant costs on industry. However the benefits are often difficult to measure. There is often heated debate about such labelling, as seen prior to introduction of the genetic modification labelling laws, and country-of origin labelling laws. See CAV (2006b, 2008) for attempts to measure consumer detriment.

Experimental economics can assist in steps two and three. This approach recruits people to participate in economic experiments, with incentives provided by small monetary or other rewards. In this way, economists can create conditions for a hypothetical market, and then change variables one at a time to discover how people behave (for example, how much extra are they prepared to pay for a credence attribute label?). Consumer Affairs Victoria is conducting further research on this topic.

# Appendix 4

## A Consumers Union report card

The Eco-labels Center website allows consumers to search for information about product labels by certifier, product category or label. Consumers Union does not inspect producers or labelling organisations; rather, they have developed criteria to evaluate labels and logos.

Generally, the best eco-labels are seals or logos indicating that an independent organisation has verified a product meets a set of meaningful and






consistent standards for environmental protection and/or social justice. Criteria for a good eco-label are:

- meaningful and verifiable
- consistent and clear
- transparent
- independent and protected from conflict of interest
- opportunities for public comment.

Source: [www.greenerchoices.org/eco-labels](http://www.greenerchoices.org/eco-labels) (as at 12 October 2009).

Eco-labels Center provides report cards, such as the one shown below for the animal welfare product category.

### LABEL REPORT CARD | LABEL CATEGORY SEARCH: Animal Welfare

Label	Logo	How meaningful is the label?	Is the label verified?	Is the meaning of the label consistent?	Are the label standards publicly available?	Is information about the organization publicly available?	Is the organization free from conflict of interest?	Was the label developed with broad public and industry input?
Certified Humane Raised and Handled		Highly Meaningful	Yes	Yes	Yes	Yes	Yes	Yes
Certified Vegan		Somewhat Meaningful <sup>1</sup>	Yes <sup>2</sup>	Yes <sup>3</sup>	Yes <sup>4</sup>	Yes	Yes	No
Cruelty Free		Not	No	No	No	No <sup>5</sup>	No <sup>6</sup>	No
Food Alliance (FA)		Highly	Yes	Yes	Yes	Yes	Yes	No
Leaping Bunny (Corporate Standard for Compassion for Animals)		Highly	Yes	Yes <sup>7</sup>	Yes	Yes	Yes	No
Maine Quality Trademark Seal		Highly	Yes	Yes	Yes	Yes	Yes	Yes

1. The meaning depends on the honesty and accuracy of signed written statements by the manufacturer, since no testing/monitoring is performed. Also, the source of an ingredient could be changed to a non-vegan source after certification and before annual re-certification without Vegan Action being notified.
2. Signed written statements from the company are used; no testing or monitoring is performed.
3. Assuming statements by companies are accurate.
4. However, Vegan Action does not provide a publicly available list of which ingredients are vegan; generally the book *A Consumers Dictionary of Cosmetic Ingredients* by Ruth Winter is used, although other publicly available sources may be used as well.
5. There is no organization that has established standards for this label.
6. The producer or manufacturer decides whether to use the claim and is not free from its own self-interest.
7. However, the length of time that the company can claim that it and its suppliers have not conducted or commissioned animal tests can vary between products from different companies. Ingredients may also have been tested on animals in the past, before the manufacturer adopted the label. Also, companies authorized to use the logo may in some cases produce products other than cosmetics, personal care products, or household products for which they conduct or commission animal testing.

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