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COOL Revisited

Benefit cost analysis of Country of Origin Labelling

Prepared for Food Standards Australia New Zealand

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Preface

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Executive Summary

This report revises a previous analysis of benefits and costs of implementing proposal P292 on Country of Origin Labelling (CoOL) in light of revision of the options for implementation, and information gained from new submissions and consultations with affected parties. It has been commissioned by Food Standards Australia New Zealand (FSANZ) to inform a regulatory impact statement (RIS) for public consultation about different options for implementing CoOL. Currently CoOL is mandatory in Australia but not in New Zealand (except for wine and wine products), so there are differential impacts in applying joint food standards across the two countries.

The revised options defined by FSANZ have been narrowed down to two essential choices for decision-makers, to simplify the RIS. The revised options are:

1. Make the transitional standard a permanent standard in the Food Standards Code (effectively continuation of the status quo with broad CoOL provisions applying to Australia only and limited provisions for wine and wine products applying to New Zealand).

2. A new standard based on the country of origin provisions of the Australian ACCC and New Zealand CC - e.g. the "made in" and "product of" provisions - allowing firms to flexibly meet these provisions, and continuing limited regulation of the unpackaged foods (as listed in the transitional standard).

Benefits and costs of CoOL

A cost benefit analysis compares the gains and losses to society at large arising with and without a proposed course of action. The social benefits and costs of the current CoOL proposals rest on the value of information they provide, and any addition of resources used up in providing it. Reviewing the arguments in favour of CoOL in general against the specific characteristics of this proposal, the benefits can be summarised as follows:

- Health and safety benefit: there are no further benefits derived from CoOL additional to those delivered by other regulatory structures already in place;
- Fundamental food system value (e.g. easier product tracking and recall): there are no such benefits from CoOL, as there are other systems in place that already better achieve this (e.g. batch numbers and use-by dates);
- Consumer trust in the food system from information revelation: benefits of this are small to negligible, as if there was an appreciable benefit from CoOL, suppliers would be voluntarily applying it more than they do;

- Consumers' right to know CoO: there is some social value in information, but the extent is unknown and unlikely to be large, as food retailers and producers in both Australia and New Zealand report that enquiries from the public regarding origin of food are too small to register in their enquiry records, indicating there is no large latent demand for such information.

Similarly, the generic costs of CoOL applied to these proposals reduce to:

- Administrative cost for regulatory bodies: because CoOL is not a health and safety issue, food regulators are unlikely to divert significant resource into enforcing CoOL, so there is little additional administrative cost, and prosecutions for non-compliance are likely to primarily piggy-back on prosecutions for other infringements, with negligible additional cost.
- Compliance costs for food processors and retailers with responsibility for meeting labelling requirements. These are primarily:
  - Additional costs of changing label design to comply: a once only issue primarily for packaged food suppliers;
  - Enhanced quality assurance on labelling systems to avoid inadvertent non-compliance, with attendant costs of non-compliant product withdrawal and risk of prosecution: low additional cost;
  - Relabelling to comply: a recurring cost for retailers and importers who need to over-label packaged produce in foreign languages;
- Allocative costs from changes in established supply patterns: producers may move to "second choice" ingredient suppliers to avoid costs of CoOL, but this is most likely to affect importers of packaged foods;
- Consumer costs: suppliers will pass additional costs on to consumers in higher prices as much as they can, and there may be reduction in choices if suppliers remove foods from the market because CoOL reduces their profitability (e.g. imported foods, small specialty food lines).

There are other, less tangible costs associated with implementing CoOL. In particular, CoOL creates apparent contradiction with other areas of trade policy, and may adversely affect relations with trading partners and the outcomes of negotiations on international trade. The extent of these different costs and benefits varies with the options considered.

Option 1

Option 1 in the current CoOL proposals is essentially continuation of the current status quo. The transitional status currently applied in Australia would be made permanent there, while New Zealand would continue under its current arrangements with CoOL only applying to wine and wine products, retaining access to the Australian market under the Trans-Tasman Mutual Recognition Agreement.

There would be no additional costs in pursuing Option 1 over what is currently incurred, other than some administrative cost for regulators in formalising the standard and adjusting the standard to non-transitional status. Food suppliers in both countries would continue on as at present.

Similarly, there would be no additional benefit in pursuing Option 1, other than the avoidance of an apparently slight risk of legal challenge over the continuation of the standard's transitional status. The expected value of that risk (i.e. the product of the likely costs should it occur times the probability of its occurring) is likely to be very small. Option 1 could therefore be implemented at very low cost, but it would not alleviate other risks identified by FSANZ in continuation of the transitional standard.

Option 2

Pursuing Option 2 has wider ramifications, in that it affects both the Australian and New Zealand food supply and retailing sectors. The biggest imposition would be on New Zealand suppliers in moving from a position of only voluntary CoOL to one where CoOL is widely required, but there will also be adjustments required by suppliers in Australia.

For fresh and unpackaged produce the major impacts fall on the retail sector which will be required to provide more specific information about the countries of origin of whole foods than is currently the case. The main requirement will be on the provision of display materials, which is relatively small and readily accommodated within the tasks and duties of current staff in putting together displays. The additional cost of complying is likely to be small for individual outlets, but accumulates to an appreciable total across all outlets. While CoOL may require changes to record keeping, many businesses merchandising systems already capture the information required. There is a slight risk for retailers of increased fines for inadvertent errors in display being discovered, but this depends on the strictness of the enforcement regime. These apply equally to retailers in both countries.

Changes on the CoOL requirements for packaged food fall primarily on food processors, importers and packers. There is less change to the transitional requirement for packaged than for unpackaged food, but one currently compliant form of labelling would no longer comply. Option 2 is therefore most likely to affect foods produced in New Zealand without any CoOL, and foods produced in Australia with the non-compliant CoOL. The principal cost comes from the one-off redesign of labels to meet the new requirement. Once this is done, relabelling costs should be the same as at present, so there is no additional recurring cost for suppliers.

Some quantified estimates of the likely costs of CoOL are presented in this report. The first year cost estimates range from 0.06% of annual food turnover in the two countries to 0.3% of turnover. With the mid-range

assumptions, these costs amount to NZ$60 million (A$56m) in New Zealand (0.48% of food turnover) and NZ$67 million (A$62m) in Australia (0.12% of food turnover). Lower estimates result if it is assumed only minor labelling changes are needed to a low proportion of products, and higher estimates result if major changes are required for most products. The lowest, highest and mid-range results are summarised in the table below.

Summary of estimates from the report

	Low	Medium	High	Low	Medium	High
	NZ$m	*NZ$m*	*NZ$m*	*A$m*	*A$m*	*A$m*
Cost of CoOL in New Zealand	14	61	110	13	56	101
Cost of CoOL In Australia	26	67	105	24	62	97
Aus & NZ Combined Cost	40	127	215	36	118	197
Share of food turnover NZ	0.11%	0.48%	0.86%	0.11%	0.48%	0.86%
Share of food turnover Aus	0.04%	0.14%	0.18%	0.04%	0.14%	0.18%
Share of combined turnover	0.06%	0.18%	0.30%	0.06%	0.18%	0.30%

Source: NZIER

Impacts are relatively greater and widespread in New Zealand but can be larger in absolute terms in Australia, given the greater size of the country and the businesses affected. This is a measure of how big the consumer's "right to know" would need to be for proceeding with CoOL Option 2 to yield benefits greater than costs.

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1. Introduction

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2. A new standard based on the country of origin provisions of the Australian ACCC and New Zealand CC - e.g. the "made in" and "product of" provisions - allowing firms to flexibly meet these provisions, and continuing limited regulation of unpackaged foods as set out in the transitional standard.

FSANZ has also revised the objective of the proposal, as follows:

"The principal objective of this proposal is to ensure that adequate information is provided about the origin of food to enable consumers to make informed choices. This proposal will also take account of Ministerial Council guidance, and specifically:

- balance the benefit to consumers of origin labelling with the cost to industry and consumers of providing it; and
- ensure consistent treatment of domestic and imported foods with regard to country of origin requirements."

Option 2 resembles Option 4 in the previous cost benefit analysis in creating greater regulatory change for New Zealand than for Australia, but the scope of the option has been broadened to require specific country of origin labelling for whole unpackaged fish, fruit, vegetables and nuts (the identical list from the transitional standard). Foods of mixed origin, such as mixed salads or mixed nuts, will be allowed a less specific “qualified claim” e.g. “contains local and imported ingredients”. Another change from the

previous Option 4 is that providing origin information on unpackaged foods to consumers on request is now deemed unworkable and no longer complies with the proposed labelling regulation.

Two fundamental characteristics of the current proposals underpin this current analysis.

- The CoOL requirement applies to whole foods, not individual ingredients. Where foods contain a mix of ingredients, including some from different countries, the labeling requirement is less stringent and met by qualified statements that do not require identification of specific countries or specific quantities of the respective ingredients.
- The current proposals are acknowledged as not providing any direct health and safety benefit: the quality and safety of foods are covered by other regulatory structures which CoOL does not augment, so the benefits must be sought in other areas, such as the information conveyed to consumers.

1.1 What are current CoOL requirements?

The requirements for country of origin labelling in the current Transitional Standard are outlined in the P292 Initial Assessment Report. These requirements, which apply only to food for retail sale in Australia (excluding food sold through catering establishments and fresh meat) are broadly as follows.

All packaged foods require:

- A label attached to the package
- A statement identifying countries in which the food was made or produced; OR
- A statement identifying the country in which food was packed for retail sale; AND
- If any ingredients do not originate in the country of sale, a statement that food is made from local and imported ingredients.

The requirements for unpackaged foods (e.g. uncooked fish, vegetables, nuts and fresh fruit from outside Australia and New Zealand) are:

- A label on the food indicating the country of origin or that the food is imported; OR
- A label in connection with the display of the food indicating the country of origin, or that the food is imported.

For New Zealand CoOL requirements only apply to labelling of wine and wine products

Amendments to proposals made subsequent to the Initial Assessment Report are intended to increase flexibility in the application of the standard. These include requiring CoO Labelling either on display in connection with the display of food, or at point of sale, not on individual items for unpackaged foods. This is being removed in the proposed new standard, due to inconsistency with fair trading laws. Requirements are also being made less prescriptive for some packaged foods, such as orange and fruit juices, which are quite specific in the current transitional standard.

The Food Standards Code includes provision that, following any variation to the Code, goods that were compliant immediately before the variation will be deemed compliant for a further 12 months. This provides a grace period in which "stock-in-trade" can be cleared. The current transitional Standard will operate in parallel to the new Standard for a period of two years. This means manufacturers and retailers have up to three years to adjust to the new Standard after it comes into force, using up old label stocks and making necessary changes to their operations.

In addition to these requirements specific to CoOL, the International Codex General Standard for pre-packaged foods also requires:

- Country of Origin should be declared if its omission would mislead or deceive consumers.
- When food undergoes processing in a second country which changes its nature, the country in which processing is performed shall be considered the country of origin for labelling purposes.

The Australian Trade Practices Act (1974) does not require CoOL, but if labellers choose to include country of origin information, the Act requires that at least 50% of the production or manufacturing to have occurred in the country identified as the country of origin for it to be legitimately described as "made in" that country. "Produce of…" representations are allowed only where all significant ingredients and virtually all the production/manufacturing processes occurred in the country represented as country of origin. There is no requirement to identify the actual amount of content originating from any country (but also no prohibition of so doing). Although the New Zealand Fair Trading Act (1986) is modelled on the Australian Trade Practices Act, it does not require all products making claims to be labelled with country of origin, but any labels that appear must not be misleading or deceptive.

Some New Zealand food suppliers may already be using labels that comply with CoOL requirements, but to the extent that they do not, any move to require CoO Labelling will involve some change in practice in New Zealand, and some increase in cost (otherwise they would be complying already), which needs to be weighed against expected benefits.

1.2 Changes from current requirements

Principal changes from current requirements for Option 2 above are outlined in Figure 1 below. Option 2 applies to the same foods as currently prescribed in the transitional standard, and excludes meat other than pork, poultry and food products for export beyond Australia and New Zealand.

Figure 1 Summary of proposed changes (Option 2)

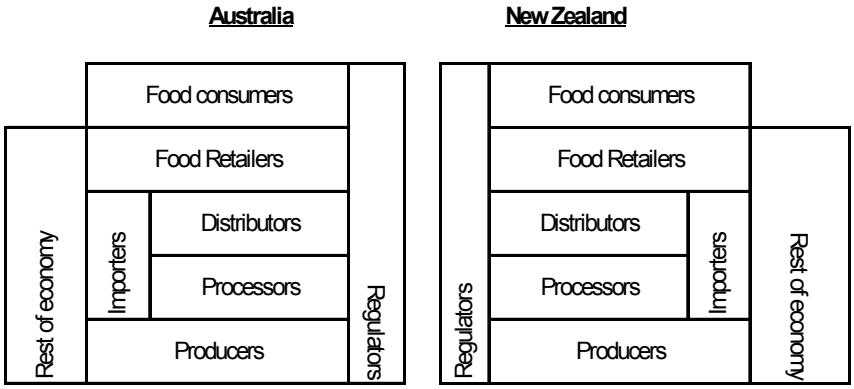
Food type	Current requirements	Proposed requirements
Fresh unpackaged	Statement on or near display indicating country of origin or that product is imported; applies to fish, fruit, vegetables & nuts	Statement on or near display indicating specific country of origin or a mix of local and imported produce; applies to fish, fruit, vegetables, nuts & pork
Fresh packaged	Statement on package that identifies country in which food was made or produced; or country in which packed for retail sale and if any ingredients imported; or statement that food contains imported ingredients	Statement on package indicating specific country of origin or a mix of local and imported produce
Processed unpackaged (e.g. dehydrated fruit)	No requirement for COOL	Statement on or near display indicating specific country of origin or a mix of local and imported produce
Packaged (including canned and frozen)	Statement on package that identifies country in which food was made or produced; or country in which packed for retail sale and if any ingredients imported; or qualified statement that food is made from imported ingredients	Statement on package that indentifies the country in which food was made or produced; OR a qualified statement that food is constituted from both local and imported ingredients
Labelling for unpackaged foods	Print on statement at least 9 mm type	Retains 9mm type for label on display and enhanced legibility requirement
Labelling for packaged foods	Legibility, in English and distinct contrast with background	Legibility expectations to be clarified in a COOL editorial note

Source: NZIER

The parties likely to be affected are illustrated in Figure 2. These are primarily food consumers and those involved in food supply, but there are also linkages to the wider economy in each country. These parties will be affected to varying degree by the different options for implementing CoOL.

There are different types of impacts on retailers (principally on fresh food display) and food producers/packers/importers (for packaged foods).

Figure 2 Parties who would be affected by P292



Source: NZIER

1.3 Purpose of this cost benefit analysis

The fundamental purpose of a standard for country of origin labelling is to improve the information available about characteristics of food products available on the local markets in Australia and New Zealand. This may be to improve the ability of consumers to make informed choices about what they buy, to improve aspects of the way the food system operates (e.g. in respect of reducing fraudulent claims) or to increase and transparency and trust in the integrity of the food system. All of these are based on the premise that the market will fail to disclose adequate information in the absence of regulation to set the required standard.

Market failure may justify government intervention to regulate market behaviour, but it still requires that social benefits should exceed social costs. Otherwise the intervention will be socially inefficient, and the community ends up worse off with the regulation than it would be without it. Hence the importance of trying to identify costs and benefits likely to arise from the regulatory change. The purpose of this analysis is to explore the arguments for both benefits and costs arising from the current CoOL proposals, and provide some assessment of the validity and likely scale of both types of impact should the new standard be adopted.

1.4 Outline of report

This report proceeds through a number of distinct sections:

- A review of evidence on country of origin labelling, including:
  - International literature on theoretical and empirical studies of the effects of CoOL on food supply and demand;

  - Previous submissions on the FSANZ CoOL proposals;
  - Results of consultations with interested parties in preparing the current analysis.
- Identification of costs and benefits likely to arise from the current proposed options.
- Quantification of costs and benefits to the extent feasible for a regulatory impact of this nature.
- Interpretation of the results.

2. Evidence from the literature

2.1 International insights

Much of the international literature on CoOL relates to its implementation in the USA, where CoOL was scheduled to become mandatory in September 2004 under the 2002 Farm Bill. It has since been postponed to 2006 and there are now moves afoot to make it voluntary.

Certain caveats attach to the applicability of the US literature with respect to CoOL in Australia and New Zealand. These include:

- Much of the discussion is on the basis that consumers view CoOL information as a proxy for food quality and safety, and a presumption that US-produced food is safer – although there is no objective evidence that this is the case, or that CoOL confers any safety benefit over and above existing import regulations;
- The safety focus is also clearly influenced by high profile events such as the incidents of BSE in the EU and Canada, which are more significant with respect to trade flows into the US than they are for Australia and New Zealand;
- An implicit premise in much of this literature appears to be that mandatory CoOL would increase consumption of domestic US produce, which is not necessarily the same as increasing the economic welfare derived from food consumption decisions.

Critical issues that emerge from this literature are:

- The extent to which new record-keeping practices would be needed for industry to comply with the standard;
- The scope of coverage of the new CoOL standard;
- The effects of CoOL on food prices and associated consumption responses.

Papers which are sceptical of the net benefits of requiring CoOL (including the USDA) stress that the benefits are nebulous and probably minimal, whereas the costs could be extensive.[1] These costs arise from both new record keeping of origins of inputs into food production, which extend through successive stages in the production chain, and some changes in firms' operational practices. They also arise from the breadth of coverage, going right back from retailers through to primary producers, including numerous individual ranchers and fishing companies. Benefits are not only

[1] See GS Becker (August 2004), "Country of Origin Labelling for Foods", Congressional Research Service, Library of Congress; Barry Krissoff and others (January 2004) "Country of origin labelling: theory and observation"; Electronic Outlook Report from the Economic Research Service, USDA; Colin Carter & Alix Zwane (2003) "Not so CoOL? Economic implications of mandatory country of origin labelling" ARE Update 6(5) University of California

difficult to quantify but also possibly covered in other legislation – e.g. to the extent that fair trading legislation covers deceptive and fraudulent claims, reducing such claims cannot be attributed as an additional benefit of mandatory CoOL.

Papers in favour of mandatory CoOL stress the limited impacts on compliance cost, both because tracing and record keeping should be minimal in addition to what firms already undertake for regulatory and stock management purposes, and because the scope of CoOL imposition would be narrower than the sceptic literature presumes (e.g. on a technical interpretation of the law, primary producers would be exempt).[2] They anticipate a positive demand response from improved labelling, either through producers receiving a higher price or from an increased quantity of domestic produce consumed as a result of improved labelling. They cite a number of consumer surveys in which consumers indicate CoOL is a desirable attribute of food, although most of these do not explicitly link this to willingness to pay for that additional information. One study which does estimates the price premium on beef with CoOL could be between 11% and 24% of current prices, but this needs to be viewed in light of the health scares associated with beef at the time, and the lack of supporting evidence that such premia are being realised in the market.[3]

One other contentious issue is the extent to which requiring CoOL may be viewed as a non-tariff trade barrier and subject to challenge or retaliation under the WTO rules. Enthusiasm for CoOL reflects different states' varying interests in opening up trade: CoOL may be more attractive to Florida growers than to Californian farmers who have more to gain from encouraging open trade.

There is great debate about the effectiveness of CoOL in increasing sales of domestically produced products. If CoOL was extremely effective, then firms producing domestically based products would ensure that all of their products are voluntarily labelled with CoOL markings. Economic models of voluntary disclosure indicate that mandatory labelling is not necessary to resolve asymmetric information between consumers and suppliers, if enough consumers attach value to the product characteristics, if producers have a credible method of conveying their product's attributes, and if consumers are sceptical of firms that do not label their products. Under such conditions suppliers "unravel" information about their products to improve its appeal to their customers. There is empirical evidence that mandatory nutrition labelling has had an impact on consumer food choices, but this also suggests it is more influential on choice when describing a negative

[2] See VanSickle JR and others (2003) "Country of origin labelling – a legal and economic analysis" Policy Brief Series, International Agricultural Trade Policy Centre, University of Florida.

[3] See Wendy Umberger and others (2003) "Country of origin labelling of beef products: US consumers' perceptions" Journal of Food Distribution Research 34(3)

characteristic (such as fat content) rather than a positive one.[4] CoOL does not appear to have widely held and strong positive associations, suggesting that it may be both a minor influence on consumer choice, and also less likely to be voluntarily supplied because there is little market advantage in doing so.

In view of the caveats outlined above, the US papers with their presumption of safety benefits are not directly applicable to the current CoOL proposals in Australia and New Zealand. But they are useful in identifying some of the critical unknown quantities, in particular what consumers understand by labelling terms, their likely demand responses, and operational requirements of compliance, on which any cost benefit analysis is likely to hinge.

2.2 Summary of submissions on initial assessment

Submissions on the Initial Assessment Report have raised a number of issues which can be divided into distinct headings. These are outlined here, along with commentary on economic implications for the arguments.

2.2.1 General issues

A feature of the submissions made on the Initial Assessment Report is the large number of high level assertions made without tangible evidence to support them. Some of these draw inferences from overseas experience of CoOL in circumstances different from those in the current proposals. Some of them also appear to reflect an ideological predisposition, which overseas opinion surveys have shown to be influential on attitudes to CoOL.[5]

Submissions both in favour and critical of mandatory CoOL discuss the importance of the "right to know" for political, religious, or ethical beliefs as a justification for regulation. Those in favour of mandatory CoOL tend to assume that absence of universal CoOL is evidence of a market failure. In economic terms, market failure occurs where suppliers are unable to capture the benefits from their actions to cover the costs of so doing (as in the case of public goods); where property rights are incompletely specified (as in the case of environmental externalities such as pollution); or in the case of market structure imperfections that permit exploitation (as in the case of market dominance and monopolistic behaviour).

"Information failure" is a specific case of market failure that occurs when information is not supplied because it is costly to supply and, once supplied, it can be used by anyone, regardless of whether they contribute to its supply costs. This however is not the same situation as that described by the failure to indicate country of origin: the critical information provided by CoOL is

[4] Mathios AD (2000) "The impact of mandatory disclosure laws on product choices: an analysis of the salad dressing market"; *Journal of Law and Economics*, XLIII, 651-677

[5] Umberger et al, *op.cit.*

not of such form that it can be expropriated by non-contributors to the cost of its supply, except to the extent that it may reinforce certain prejudices about foods from specific origins. The market failure argument for requiring CoOL is therefore tenuous on information grounds, and appears to rest more on questions of market structure: retailers and consumers have limited market power compared to suppliers and require the nudge of mandatory standards to obtain disclosure of origins of what is supplied. It is arguable however that market power is distributed in this way, and large retail chains appear to have considerable power in getting upstream suppliers to provide what they require, if they judge it to be valuable to them or their customers.

The "right to know" argument hinges critically on comparative assessment of the costs of providing that knowledge and the social value that it creates. The benefit of right to know may be undermined if suppliers change product composition specifically to minimise their costs of CoOL, for instance avoiding ingredients from lengthy supply chains whose origins are more difficult to verify, or those where origins change periodically requiring different labelling to comply with CoOL. This may have the effect of reducing the range of ingredients in use, and hence reducing choice in the market, which would be detrimental to at least those consumers who are indifferent to country of origin.

2.2.2 International trade policy considerations

A number of submissions, particularly from New Zealand, were wary of the potential of CoOL to damage trade negotiation positions. While very difficult to quantify, there are costs for trade policy flexibility associated with signing up to a CoOL regulation. In the multilateral trade policy environment, New Zealand does not set the international trade policy agenda, in effect it is a "trade policy taker" (see Nixon and Yeabsley, 2003). To have any influence on how the international trade policy agenda impacts on New Zealand, New Zealand's trade policy negotiators must be "useful to the process". This requires flexibility, that is, being seen to be impartial and coming up with innovative ideas and bringing parties together. By taking a strong stance on a trade policy issue, such as CoOL, New Zealand could well compromise its position as a policy entrepreneur. The flexibility of New Zealand negotiators could be reduced, lessening the chances that New Zealand negotiators have in influencing the trade policy implementation process, which is crucial to New Zealand's economic well being. Similar considerations apply to Australia's trade policy positioning, given its long interest in trade liberalisation as a member of the Cairns group of countries.

There is also an issue of trade policy consistency. New Zealand has opposed regulated CoOL in the USA where the New Zealand Government has perceived that it could harm exports of beef. Arguing against CoOL implementation in the US and then implementing it domestically means that our arguments carry less weight. Furthermore, this may mean that other

countries adopt CoOL regulations that have the potential to harm New Zealand exports – increasing uncertainty around future trade.

2.2.3 Trade considerations

CoOL can be seen as an attempt to support various industries. This is reinforced by a study of the submissions. Those industries that are most avidly pro CoOL face strong import competition, while those that do not support CoOL are focused on exporting.[6]

There may also be ramifications associated with multilateral trade process. Submitters point to Article 2.1 of the Technical Barriers to Trade (TBT) in the Uruguay Round Agreement, under which CoOL could be interpreted as being in breach of the agreement. Whether it is or not has not been fully tested properly, therefore it is difficult to say whether this is the case. There remains a risk that Australia or New Zealand could be challenged under these rules, the implications of which could be substantial. If there were to be a WTO challenge, this would result in direct costs to Government in defending the standard, and possibly further costs if the TBT Committee required that the standard be dismantled. Continuation of the current transitional standard, which was formulated prior to the signing of the TBT agreement, appears problematic and open to challenge. However, while there is a possibility of such challenges, the probability of them being made in light of limited precedents in the WTO appears rather low.

CoOL could be interpreted as opening the possibility of inconsistency with bilateral agreements between Australia and New Zealand, particularly Closer Economic Relations (CER) and the Trans Tasman Mutual Recognition Agreement (TTMRA) that sits under the umbrella of CER. This is because CER in general is a *mutual recognition* treaty, where each country can set its own tariffs and other protection measures for third country goods and services, and does not require *harmonisation*, which involves the alignment of tariffs and other protection measures so that third countries would face the same uniform measures of protection in both countries. This would be closer to a customs union than a free trade area (an EU rather than an EFTA), and would result in the application of common tariffs that would be disadvantageous to some industries in either or both countries because they are not customized to variations in conditions in those countries. While there is nothing to stop each country setting in place the same protection measures, in practice they have not generally done so, for social and political reasons.

The TTMRA is also intended to reduce transaction costs and increase employment opportunities by mutually recognising each other's standards

[6] This is mirrored in the US, with Florida, the State which faces competitive threats from South American food sources having introduced mandatory CoOL in 1980, while California, a major exporting State is very much against mandatory CoOL.

(in goods) and registered occupations (services). Harmonisation would have imposed a mandatory standard for goods and services. In both cases, harmonisation could potentially disadvantage one party because of the adjustment costs of complying with a new standard or protection regime and for efficiency reasons, i.e. the imposed rules may not describe the historical, political, cultural, and social context in which economic agents (people and businesses) interact.[7]

Because of the TTMRA, New Zealand produce is not barred from entry into the Australian market now that it has CoOL under the Transitional Standard. But New Zealand suppliers may choose to voluntarily comply with the standards prevailing in Australia if it provides them with a marketing advantage or if they believe it reduces the risk, however small, of their operations being interrupted by non-compliance.[8]

2.2.4 Consumer considerations

Two other issues are also potentially important:

- CoOL may reduce choice for consumers. If a company sources product from a number of different countries depending on supply difficulties, seasonality, or for any other reasons, the introduction of mandatory CoOL could mean a product is withdrawn because the costs of changing labels is prohibitive. This is more likely to impact on developing countries' export trade since they are less likely to have infrastructure required to trace the origin of commodities they produce. But it could also apply to small suppliers in Australia and New Zealand with less elaborate record systems than larger players.
- A potential exists to mislead the consumer on product quality. CoOL requirements are silent on product quality; these issues are appropriately handled by other legislation. However, in advertising material and other marketing information there is often a suggestion that buying domestically made products is better for your health, the environment, and for other reasons. CoOL can not substantiate these claims and is not aimed at proving these claims.

On the benefit side, CoOL could enhance the attributes of a particular region or country as a producer of a particular product. What those attributes are will depend on the unique selling points of the region or country. If these enhancements are translated into increased trade and export sales then this has the potential to increase profitability and employment.

[7] For a more completed study of these issues in the CER context, see Nixon and Yeabsley (2003) and for the TTMRA see Productivity Commission (2003)

[8] For instance, shopkeepers may be less willing to stock products that do not obviously comply with the standard, even if there is no legal reason for them to not do so.

2.2.5 Consistency with other legislation

Claims of inconsistency between CoOL and domestic legislation such as the Trade Practices Act in Australia and the Fair Trading Act in New Zealand can only be tested through the courts. The legal advice received by FSANZ is that the current standard presents potential inconsistencies, requiring changes to align it with applicable domestic laws.

2.2.6 Application of CoOL to whole food/individual ingredients

A number of submitters have suggested that CoOL should be extended to all foods (including the ingredients) rather than just whole foods. The main reason for this is the "right to know".

Those that support the required labelling of whole foods only (mainly from the supermarket trade) argue that applying it to all ingredients is overly restrictive, does not provide consumers with usable information, and adds unnecessary costs when ingredients need to be sourced from different countries.

2.2.7 Consistency within the code

One submitter argues that if some food items require mandatory labelling then all foods should require mandatory labelling.

2.3 Consultations for the revised analysis

In revisiting the cost-benefit analysis of the revised CoOL proposal, consultations were made with selected representatives of New Zealand regulatory and trade authorities, food processors and the retailing sector. This was to obtain further information that would be useful in preparing the cost benefit analysis, and ensure that there were no significant factors behind the strong opposition to CoOL requirement in New Zealand that needed to be factored into the analysis.

The New Zealand Ministry of Foreign Affairs and Trade does not support mandatory CoOL, believing it to be potentially viewed as trade restrictive and unhelpful to New Zealand's trade negotiation positions. It may even provoke challenges under World Trade Organisation rules. New Zealand's Ministry of Economic Development and Ministry of Consumer Affairs also do not support CoOL. This position is shared by the New Zealand Food Safety Authority, which also notes that because CoOL does not provide any food safety benefit it could not commit substantial resources to enforcement of CoOL compliance. The New Zealand Commerce Commission could pursue misrepresentation on labels, but not just relating to CoOL. The presence of food being imported into New Zealand in packages that are not even in English indicates that enforcing packaging standards is not a high priority for regulatory authorities at present.

Food industry organisations are opposed to CoOL because it adds further compliance costs to their production processes without conferring particular benefit that the majority of customers want to receive. Market research has revealed that brand and price are the principal determinants of purchasing decisions for New Zealand consumers, and there is no significant pressure from customers for CoO labelling on most classes of foods. Manufacturers have help lines for enquiries but are rarely asked about the country of origin of their supplies. The food industry has also noted that labels have become increasingly cluttered and confusing with successive regulatory changes regarding nutrition, health claims and other additional information.

Although voluntary adoption of CoOL for selected foods is not problematic, there are mixed views across the retail sectors in Australia and New Zealand towards requiring CoOL. It creates an additional regulatory requirement to comply with at a time when current labelling codes are not being rigorously enforced. Representatives from this sector note that CoOL serves no health and safety purpose, provides information that is not particularly meaningful for consumers, and runs the risk of being counter-productive to New Zealand's international trade position. Above all, it is providing information for which there is no widespread discernible demand, as is evident from the retail industry's analysis of inquiries made to it: one retailer in a submission noted that of 22,912 customer queries to its Customer Services Department in a year, only 23 related to labelling queries, and no staff had reported inquiries about country of origin.[9] This echoes similar comments from Australian supermarket operators.

Although CoOL primarily affects foods in the domestic market, some of those consulted raised concerns about CoOL restricting flexibility for exporters who sometimes need to redirect export consignments into the local market and could face additional costs in so doing under CoOL. Subsequent enquiries with a major fruit and vegetable organisation, however, revealed that they already encourage their exporters to brand their produce with a New Zealand label, so they foresaw no particular operational problem with CoOL being introduced into New Zealand.

A recurring theme from consultations is caution over the legal definition of "Product of" and "Made in" statements, and the difficulty in verifying the percentage contributions of value added when foods are sourced from different countries, with varying content at different times of year. While it may be argued that these issues exist anyway under existing laws, CoOL adds another regulatory hurdle that imposes additional effort to overcome.

[9] Progressive Enterprises Limited, Submission on FSANZ Proposal P292 (July 2004).

2.4 Overview considerations

Public objectives commonly identified for mandatory CoOL are to rectify failures in the market for information, prevent fraudulent labelling claims, and ensure sufficient records for speedy tracing in case of food-borne disease. The objectives that private sector suppliers have from product origin traceability are rather different, and likely to centre on differentiating their product in the market, assuring quality, and improving supply chain management.

CoOL is a "credence characteristic", not a sensory attribute of food. The value of CoOL as a marketing tool depends on suppliers associating the origin with some desirable attribute of the product (e.g. prestige, quality) and with establishing trust with their consumers. As is evident from the experience of country-based export marketing brands, this can be difficult to do when there are numerous producers under the same country label: the single-desk marketing of the New Zealand Dairy Board in the 1970s and 1980s was more successful in returning value to producers than the fractious marketing of New Zealand meat by different firms, with recurring episodes of "weak selling" undermining price premiums sought on export markets. So suppliers often gain more benefit by establishing their own distinctive brands than by pushing a more generic characteristic such as country of origin. Under such circumstances CoOL may not emerge without some government intervention to ensure reliability of the information.

To ensure that labels are accurate, origin information must be maintained and transferred along the supply chain. Some sectors already routinely do this in pursuit of a price premium (e.g. organic foods). The fact that other sectors do not indicates that suppliers do not see a realisable value gain for their customers that would justify the cost of providing precise origin information. If there is value in marketing a particular product attribute, profit seeking retailers, manufacturers and producers would voluntarily highlight that attribute. Competitive disclosure would result in explicit claims for all positive aspects of products, and allow consumers to make their own inferences about products without claims.

The frequency with which voluntary CoOL is observed therefore gives an indication of the market value of labelling food origins. Although it is difficult to identify how many food products do carry country of origin labelling, the fact that CoOL is being considered for a standard at all indicates that voluntary CoOL is not universal. There are various reasons why food suppliers may see no private advantage in labelling food origins:

- Consumers may not care where their food comes from, and accept that other regulations ensure equivalent safety of imported and domestic food;
- Consumers may prefer imported products in which case origin labelling is detrimental to domestic produce and not wanted by local suppliers;

- Consumers may prefer domestic products, but not enough to cover the extra costs such labelling requires;
- Consumers demand information and labelling, but the market fails to supply it.

Estimating benefits and costs from mandatory CoOL will be tentative as long as consumer demand for labelling and its costs are imprecisely measured. If CoOL does not change consumers' willingness to purchase particular products, CoOL affects consumers only through its impact on food prices, which in turn reflects any increases in costs of labelling, record-keeping and operating procedures that suppliers have already decided are not justified by any increase in demand. Higher prices may lead to fewer food purchases or substitution to foods less affected by CoOL (e.g. those with simpler supply chains and fewer ingredients).

Whether consumers are better off with CoOL depends on how much they value the label information compared to the cost of providing it. Even consumers who state they want information may not be willing to pay the increased price it entails.

Returning to the public policy objectives for requiring CoOL, the literature and submissions provide a mixed endorsement.

- Public right to know: this is a laudable public policy aim, but there is little evidence to suggest that the consuming public sees sufficient value in this to justify much additional cost.
- Rectify failures in the market for information: this is an economically respectable justification for regulatory intervention, but in the case of food labelling the issue is less about information failure than about asymmetries in information and market power among players in the food chain and the difficulties about specifying information disclosure where it may be perceived as costly to do.
- Prevention of fraudulent labelling claims: the contribution of CoOL to this end depends on the coverage and enforcement of other regulations, which are well developed in both Australia and New Zealand, so the incremental benefit of CoOL is unlikely to be large.
- Ensure sufficient records for speedy tracing in case of food-borne disease: the contribution of CoOL to this aim is discussed in the literature primarily in relation to livestock traceability in respect to meat safety incidents, and is possibly overstated because of the long delay between detection of incidents and the shipment of contaminated products. This international literature is largely irrelevant to the current consideration of CoOL, which does not cover fresh meat, and the contribution of the proposed labelling to traceability is negligible.

The strength of these arguments (and the costs and benefits) will depend upon how great the change is from the status quo. If the changes from the

current labelling regulations are relatively small, then the costs of moving will be correspondingly small.

Submissions indicate a fair degree of uncertainty and misconception about the CoOL requirement which may result in exaggeration of the likely impacts. This is not surprising given the focus on more stringent CoOL requirements in the international literature, but it does mean that the submissions provide limited information in assessing costs and benefits of the current proposals.

3. Comparing costs and benefits

A cost benefit analysis of a policy change or regulatory impact is concerned with how what is proposed changes societal well-being. This means quantifying and comparing the situation with the proposed policy change against what would have prevailed without it under the status quo. It also means looking at effects across all parties affected by the proposal, some of whom gain from the proposal and some of whom lose. Weighing up the gains and losses and balancing the effect on society at large is the primary function of a cost benefit analysis.

This section examines the likely benefits and costs of the current CoOL proposals from an economic perspective, as a precursor to quantifying some of the components in the analysis.

3.1 Benefits

In terms of an economic cost benefit analysis, the benefits of mandatory CoOL can be divided between:

- Direct customer value – realisable willingness to pay for information (as expressed in price).
- External value – societal willingness to pay for improved trust and reputation of the food system and claims made about it – stemming from the "right to know" which recurs through numerous submissions.
- Fundamental system value – value gained from improved operational characteristics of the system (such as from expeditious product recall).

The specific benefits of CoOL under P292 stem largely from the following arguments:

- Rectifying a market failure in consumer information by ensuring the "right to know";
- Allowing demand to shift closer to "real" consumer preferences by reducing the uncertainty over origins that may inhibit current consumption patterns;
- Improving the traceability of food products from particular origins in the event of product recall because of food related disease;
- Benefits to industry in improving certainty in the marketplace.

The likely importance of these benefits is considered below.

3.1.1 Improving consumer choices through information

The first two bullets derive from the value to consumers of improved information. In a functioning market, if there is value in providing more information, suppliers can be expected to provide it as long as the benefit

they receive covers the cost they incur – i.e. if consumers were willing to pay the cost of providing verifiable CoOL, products would carry this information as a "credence" attribute differentiating them in the market. While there are some products which carry a geographic identity and command a premium price – export New Zealand lamb, California oranges, French champagne etc – not all foods carry such labelling. The implication is that for many foods there is no realisable private value to be gained from such labelling.

This raises the question, is there a social value from CoOL over and above that which would be reflected in consumers' collective willingness to pay? Given that there is no appreciable safety benefit from CoOL, the fundamental question centres on the value of the right to know that allows demand to shift closer to real consumer preferences. The evidence here is mixed. Although the Initial Assessment Report identifies surveys that report consumer interest in CoOL, other attributes of food, such as appearance, taste and price are generally higher up the list of important attributes that consumers look for when making decisions about food. With few exceptions, interest in CoOL does not correspond to sufficient collective willingness to pay by consumers to justify the cost of providing it. As the information failure in the case of CoOL is not of the sort that can be defined as a classic market failure (see section 2.4 above), the argument for social value is not particularly strong.

As the evidence for a realisable price premium on CoOL is variable across products, requiring a standard across broad product types is likely to result in excessive information across a number of products – i.e. for at least some products the benefit is zero although the cost is not, which is not socially worthwhile unless offset by much larger net benefits realised elsewhere. As not every consumer demands or wants CoOL, requiring CoOL will have the effect of spreading additional costs across all consumers, including those who are indifferent to the information it provides.

Under such circumstances, it is difficult to convincingly demonstrate much direct net benefit to consumers in general from providing CoO information. If suppliers face additional costs, however small, prices for affected foods will tend to rise. If demand for food is not responsive to small changes in price, the main effect of price rises is to detract from consumers' wealth even among consumers who are indifferent to CoOL. If demand for food is price responsive, price increases will lead to contraction of demand for affected foods. Offsetting these negative impacts for consumers is the positive impact of more informed choices, which may increase demand for some foods. Consumer response is likely to vary widely across different products according to their individual and cross-price demand elasticities, but as these are not known for most foods the overall response is indeterminate. But given that CoOL may be uninformative as to specific country of origin (e.g. in the case of mixed ingredients), and given that only

a minority of consumers place high priority on CoOL in both countries it is unlikely that adoption of the proposed CoOL will result in appreciable outward shift in demand to offset the impact of price increases.

3.1.2 Improving the traceability of food products

The significance of the third bullet depends on the expected value of future costs avoided by more rapid response to any alarm caused by concerns about foods from particular origins. The expected value would be given by the present value cost avoided by more rapid tracing and removing of food from the particular origin, times the probability of such a recall occurring. Both these factors make the value of such a benefit likely to be rather small: the potential cost avoided is the difference between nationwide recall of particular foodstuffs in, say, two weeks or 10 weeks at some point in the future, which is diminished in present value terms. The probability of such recalls on past experience is also very low.

However, there are other processes apart from retail product labelling that can be used to trace food origins in emergency. When the BSE scare affecting UK beef product exports broke in the mid-1990s, Australia and New Zealand protected their imports by measures unrelated to country of origin labelling. In the case of packaged foods, manufacturers attempting to recall product from retailers and customers have more precise identifiers to use than origin labelling, such as brand, date stamp and batch number, and the vague "imported ingredient" statements on current foods are of little help in identifying foods from particular countries where disease risks have emerged. The case for product traceability is slightly stronger for unpackaged products, but is still weak given that labelling is only required on the display, not on individual food items. As shops have accounting records for tracing suppliers of particular stock, other systems are likely to be more decisive in effecting product recall, and the attribution of incremental benefit to mandatory CoOL from this cause should be small.

The product recall argument can largely be discounted in respect of the current CoOL proposals. So too can the corollary of potential negative spillover effects arising should a single product recall from an identified country lead to consumer reaction against other products from that country, because of the low default level of "imported ingredient" statements. There is always a possibility of recall from one country tarnishing the reputation of other products of that country, resulting in adverse consumer reaction, but to the extent that the labelling provided for in the current proposals does not identify specific countries of origin of major ingredients, the consumer reaction against other foods is likely to be muted.

3.1.3 Other possible benefits

The foregoing discussion indicates that there is very little evidence to suggest the direct customer value of mandatory CoOL – a realisable

willingness to pay for the additional information – is large or widespread across foods affected by P292. It also suggests that the value of fundamental changes to the food system – such as the value of more expeditious product recall outlined above, is also likely to be negligible. Are there any other sources of external value that justify regulatory intervention in the market?

Society may be willing to pay more for its food through regulation if this increases the trust, reputation and sense of security obtained from the food system and claims made about it. This might be a reason for incurring costs over and above what can be justified by tangible benefits received. The current CoOL proposal, however, is not one where this argument can be stretched very far. The basic proposal is relatively minor in terms of the information it conveys, and as indicated in the Initial Assessment Report, there is no objective safety issue at stake with CoOL. So the question of trust and security reduces to whether society in general would feel better off if food was labelled with the country of origin or imported ingredients.

The literature consulted indicates large gaps in understanding what motivates people when making their consumption decisions, but what evidence there is suggests the CoOL proposal is unlikely to add much increment of gain in trust in the food system. Unlike some other countries that have suffered repeated and widespread failures in food safety with potentially catastrophic impacts in the long-term (notably the UK), neither Australia nor New Zealand have yet to experience a shock that undermines the integrity of the food system. This is not to say that such shocks could not occur, or that the systems in the respective countries can be complacent. But society is likely to be willing to pay less for a precautionary approach before the event than it would after the event when the threat has materialised. Given the low default level of the requirements of CoOL, it is more in the nature of a palliative measure than an effective protection against risks to the integrity of the food system. The fundamental system value of CoOL in such circumstances is likely to be low, and would not justify incurring large costs in implementing the regulation.

There is a benefit to the food industry in removing anomalies or unevenness in regulations that create uncertainty in the market place. Uncertainty over the scope or coverage of regulations may cause risk averse companies to exercise excessive precaution, doing things to comply which they do not need to do, or desisting from doing things which they could legally do because they are unsure of whether it complies or not.

There is also an economic benefit from resolution of legal anomalies in the current standard. The risk attached to the status quo is that some aspect of the current standard could be challenged in national or international fora, requiring costs to be incurred in resolving that challenge. In the absence of a history of actual challenges being mounted, the expected value of this risk is probably low, but it is not zero.

3.2 Costs

The discussion that follows takes as its starting point moving from the status quo to Option 2. In terms of an economic cost benefit analysis, the costs of CoOL can be divided between:

- Compliance costs for firms subject to the new standard including:
  - One off adjustments in complying with the standard (e.g. reprinting labels to conform etc). These involve appreciable costs per food item line affected by the regulation, and depending on the pre-existing compliance level, could be substantial in aggregate.
  - On-going recording and operational practice changes – as indicated in the international literature, of crucial importance is whether this is incremental tweaking of existing recording systems, or establishment of new procedures in addition to the status quo. Given the limited nature of the CoOL proposals, it seems unlikely that there would be any significant additional recording or operational practice change required by the proposal.
- Regulatory administration costs, which are important both for:
  - Direct costs for the regulatory authorities in implementing and enforcing the new standard; and
  - Indirect effects arising from the effectiveness of the enforcement activity in changing the level of compliance with the new standard: if compliance is raised, there will be a negative cost (benefit) to offset against the direct costs of implementation;
  - In both cases, the more minor the change, the less the regulatory costs are likely to be, as food regulators are unlikely to divert many resources from other activities to enforce minor wording changes that have no practical implication for their major concern, food safety.
- Allocative shifts in resource use choices in the food industry e.g.:
  - If requiring CoOL is more onerous on domestically-sourced food than imports, the mix of imports and local produce in production processes may change.
  - Such shifts may detract from the traceability of food sources. In the case of CoOL, however, the traceability benefit is negligible.

Such categorisation of costs in principle covers all types of negative impacts from the new regulation, both quantifiable and less readily quantifiable impacts. For instance, there is some risk to trade policy in adopting a regulation that could be interpreted by other countries as a non-tariff barrier to trade. If this results in a legal challenge before the WTO, this would add to the regulatory administration cost borne by government bodies resulting

directly from the introduction of the regulation. If it results in retaliatory measures by other countries which reduce the value received for New Zealand products, there will be an allocative cost from lowered returns and changes in resource uses from what would have occurred without the regulation.

3.2.1 The current level of compliance

For Option 2, the costs likely to be incurred by adopting the CoOL standard in New Zealand depend on the level of compliance with the standard already being observed there. This is impossible to determine in the absence of a comprehensive survey of available product labelling, which is beyond the scope of this current report. However, an eyeball survey of products on the shelves of supermarkets in New Zealand suggests that compliance may already be relatively high, although this varies across the different product categories.

Current practice with respect to different categories appears to be:

- Fresh fruit and vegetables: not often origin marked, although there are exceptions, especially in identifying imports (e.g. Australian or Californian oranges). Customers would commonly assume that vegetables in particular are sourced within New Zealand.
- Fresh fruit juices: mixed practice, with some local brands and supermarket own brands having minimal labelling, whereas brands known to be exported carry the manufacturer's address.
- Dairy produce: mostly labelled with location of packing, but some exceptions even in well-known national brands. Consumers would probably assume that milk products are sourced in New Zealand, unless explicitly stated otherwise.
- Fresh and chilled meat in supermarket packs: has minimal labelling with no identification of source of meat, as it is not required by the current standard.
- Delicatessen meats and small goods: these carry the name and address of the company, but generally are not specific about the location of packing or origin of meat (except with explicitly imported produce).
- Cakes, biscuits: generally carry "manufactured and marketed by" statements with name and address of company, and sometimes "Product of… and "Made in…" labels.
- Confectionary: generally carry "manufactured and marketed by" with name and address of company, and "from local and imported ingredients" in the case of cocoa, nuts etc.
- Hot beverages: generally labelled with supplier's address, plus origin statement ("from imported coffee" etc).

- Canned vegetables and fruit: generally carry statement "manufactured by" plus the suppliers' address.
- Frozen vegetables, cakes etc: packing location generally marked, as well as whether sourced from local or imported produce.
- Fruit conserves and spreads: major brands carry origin information, but local specialty brands carry only the address of manufacturer, with no indication of where ingredients are sourced.
- Breads: most main brands of bread, and New Zealand branded flour products (corn flour, custard powder etc) are labelled only with the name of manufacturer, not with the location of manufacture or source of ingredients, even though New Zealand imports a substantial proportion of its wheat for baking. Specialty brands (e.g. pita bread) and supermarket bakery products commonly do not carry any marking as to source of principal ingredients.
- Beers, wines and spirits: mostly labelled with location of manufacture. CoOL already applies to wine and wine products in New Zealand.

This variable compliance pattern is explicable by the differences in marketing scope of different food lines. A large range of products in New Zealand are imported from Australia and likely to be compliant already (particularly in the area of sugar confectionary, cocoa preparations and cereal products). New Zealand product variants destined for the Australian market are also likely to comply. In either case suppliers are unlikely to have separate labels to meet the less stringent requirements of the smaller New Zealand market. Absence of origin labelling is primarily on products which are not intended for export in their current packaging, particularly loose fresh produce (vegetables and fruit) and specialty products from small local supply companies (delicatessen and conserves).

Apart from variation in the presence of origin labelling, there is also wide variation in the form of that labelling. Whereas some products carry conspicuous buy local campaign logos (kangaroo or kiwi), and others have prominent statements of "Product of…" or "Made in…", others only carry the name of the packing or manufacturing company in the small print with the nutrient information. This may comply with the letter of the regulation, but it is scarcely in the spirit of improving information for consumer choices if the information is only apparent under close scrutiny of the product. The current proposals to improve legibility of CoOL and to explicitly name countries of origin rather than use symbols, aim to improve the benefit of CoO under Option 2 compared to the status quo.

The common wording of "Made from local and imported ingredients" is not informative about specific sources, a point which limits the claimed benefit of improving product recall in the event of identified disease risk (see 3.1.2). Some products increase ambiguity by stating "local *and/or* imported ingredients". Even if this is compliant under the CoOL standard, the

information content is almost zero – it might warn xenophobic purchasers off certain products, but hardly helps discerning buyers to align their consumption with their preferences for different countries' produce. It does, however, enable producers to cover themselves for seasonal or market-induced variations in input supplies, without altering packaging.

Aside from wording ambiguity, it appears that a substantial proportion of New Zealand foods could be considered as complying with CoOL. Judging by the current weekly household expenditure on food in New Zealand, around 26% consists of ready-to-eat prepared foods, and 20% on meat and poultry to which CoOL would not apply. Around 15% of current household food expenditure is in categories that appear to be predominantly non-compliant (e.g. fruit, vegetables and fish) but would come under CoOL, and some proportion of the remaining 39% will also be packaged goods that do not currently comply but would need to under the new standard. This proportion can vary through the year and between years, depending on seasonal supply availability and constraints.

These proportions should not be regarded as precise, but rather as indicating rough orders of magnitude of the effects across New Zealand's food supply. They suggest that whatever the increase in prices of individual food items may be, those increases will affect a relatively small proportion of consumers' food budgets. The impact of extending CoOL to New Zealand under Option 2, at most will affect prices on only some food items, although consumers will pay more for a benefit towards which most of them are indifferent.

Table 1 Household Expenditure on Food in New Zealand

Average weekly expenditure per household YE June 2004

	NZ$	*%*
Fruit	9.10	*6.4%*
Vegetables	10.30	*7.2%*
Meat	14.80	*10.4%*
Poultry	4.80	*3.4%*
Fish	2.80	*2.0%*
Farm products, fats, oils	13.60	*9.6%*
Cereal products	16.40	*11.5%*
Sweet products, spreads, beverages	15.50	*10.9%*
Other foodstuffs	18.30	*12.9%*
Meals away from home, ready-to-eat	36.80	*25.8%*
Total Food Group	**142.40**	**100%**

(A$131.10)

Source: NZIER; from Household Economic Survey, Statistics New Zealand

4. Quantification for comparison of options

Quantifying the costs and benefits of the current proposals is made difficult by limited information about the current market behaviour and changes that will result from the new standard. Typically in cost-benefit analysis, the costs are more certain than the benefits which, as in the current case, may seem to defy quantification and monetary valuation because of the lack of close analogies from which to draw inferences of value. In such cases, CBA can proceed by quantifying what it can, and seeing how large the unquantifiable benefits would have to be to justify proceeding with the proposal. This is the approach adopted here.

4.1 Costs and benefits from specific CoOL proposals

Reviewing the arguments in favour of CoOL in general against the specific characteristics of the current proposals in Option 2, the benefits can be summarised as follows:

- Health and safety benefit: there are no further benefits derived from CoOL additional to those delivered by other regulatory structures already in place;
- Fundamental food system value (e.g. easier product tracking and recall): there are no such benefits from CoOL, as there are other systems in place that already better achieve this (e.g. batch numbers and use-by dates);
- Consumer trust in the food system from information revelation: benefits of this are small to negligible, as if there was an appreciable benefit from CoOL, suppliers would be voluntarily applying it more than they do;
- Consumers' right to know CoO: there is some social value in information, but the extent is unknown and unlikely to be large, as food retailers and producers in both Australia and New Zealand report that enquiries from the public regarding origin of food are too small to register in their enquiry records, indicating there is no large latent demand for such information.

Similarly, the generic costs of CoOL applied to these proposals reduce to:

- Administrative cost for regulatory bodies: because CoOL is not a health and safety issue, food regulators are unlikely to divert much resource into enforcing CoOL, so there is little additional administrative cost, and prosecutions for non-compliance are likely to primarily piggy-back on prosecutions for other infringements, with negligible additional cost. CoOL may, however, create some difficulties and resolution costs for trade policy negotiations by government agencies.
- Compliance costs for food processors and retailers with responsibility for meeting labelling requirements. These are primarily:
  - Additional costs of changing label design to comply: a once only issue primarily for packaged food suppliers;

  - Enhanced quality assurance on labelling systems to avoid inadvertent non-compliance, with attendant costs of non-compliant product withdrawal and risk of prosecution: very low additional cost to what is being done at present;
  - Relabelling to comply: a recurring cost for retailers and importers who need to over-label packaged produce in foreign languages;

- Allocative costs from changes in established supply patterns: producers may move to "second choice" ingredient suppliers to avoid costs of CoOL, but this is most likely to affect importers of packaged foods;
- Consumer costs: suppliers will pass additional costs on to consumers in higher prices as much as they can, and there may be reduction in choices if suppliers remove foods from the market because CoOL reduces their profitability (e.g. imported foods, small specialty food lines).

The extent of these different costs and benefits varies with the options considered.

4.1.1 Option 1

Option 1 in the current CoOL proposals is essentially continuation of the current status quo. The transitional status currently applied in Australia would be made permanent there, while New Zealand would continue under its current arrangements without CoOL (apart from wine and wine products), retaining access to the Australian market under the Trans-Tasman Mutual Recognition Agreement.

There would be no additional costs in pursuing Option 1 over what is currently incurred, other than some administrative cost for regulators in formalising the standard and adjusting the regulations to non-transitional status. Food suppliers in both countries would continue on as at present.

Similarly, there would be no additional benefit in pursuing Option 1, other than the avoidance of an apparently slight risk of legal challenge over the continuation of the standard's transitional status. The expected value of that risk (i.e. the product of the likely costs should it occur times the probability of its occurring) is likely to be very small. Option 1 could therefore be implemented at very low cost, but it would not alleviate other risks identified by FSANZ in continuation of the transitional standard.

4.1.2 Option 2

Pursuing Option 2 has wider ramifications, in that it affects both the Australian and New Zealand food supply and retailing sectors. The biggest imposition would be on New Zealand suppliers in moving from a position of only voluntary CoOL to one where CoOL is widely required, but there will also be adjustments required by suppliers in Australia.

For fresh and unpackaged produce the major impacts fall on the retail sector which will be required to provide more specific information about the countries of origin of whole foods than is currently the case. The main requirement will be on the provision of display materials, which is relatively small and readily accommodated within the tasks and duties of current staff in putting together displays. The additional cost of complying is likely to be small for individual outlets. No major changes to record keeping are expected from the CoOL requirement as this information is usually available from purchase records. There is a slight risk for retailers of increased fines for inadvertent errors in display being discovered, but this depends on the strictness of the enforcement regime. Retailers in both countries will face these changes.

Changes on the CoOL requirements for packaged food fall primarily on food processors, importers and packers. There is less change to the transitional requirement for packaged than for unpackaged food, but one currently compliant form of labelling would no longer comply (the "packed for retail sale" option). Option 2 is therefore most likely to affect foods produced in New Zealand without any CoOL, and foods produced in Australia with the non-compliant CoOL. The principal cost comes from the one-off redesign of labels to meet the new requirement. Once this is done, relabelling costs should be the same as at present, so there is no additional recurring cost for suppliers.

4.2 Costs of meeting the new standard

Enquiries with large retailers in New Zealand suggest they already identify country origins of some fresh unpackaged foods, in particular fruit, and the means for doing this already exists in their purchase records. But vegetables typically do not have country of origin indicated, and consumers would probably presume that they are sourced within New Zealand. Some changes would be required to conform to the proposed CoOL standard by both large and small retailers, and these would be recurring to the extent that displays need to be kept up to date.

4.2.1 Costs of changes in labelling

On the assumption that the proposed CoOL does not require introduction of new recording systems for the supply channel, the principal cost of compliance is likely to lie in changes to labelling. From information supplied by industry sources, this presents a number of distinct options.[10]

[10] Information on costs has been obtained from personal communication with three separate, independent observers on food retailing in New Zealand: Professor Ray Winger, Massey University (R.J.Winger@massey.ac.nz); Anny Dentener, Technical Director, ADECRON Ltd (anny.dentener@adecron.co.nz); Ron Geiger Alaron Ltd (ron.geiger@alaron.co.nz)

The best solution is to include the additional words on the labels or other packaging at the time of printing these materials. If this is to become the standard, then that is the ultimate goal.

The additional cost incurred depends on a number of factors, and the stage at which changes are made:

- At the time of design of new labels/packaging, or those that are being updated anyway - no significant additional cost;
- If change occurs when there is no need for re-design, then all costs of updating artwork, plates and so on could add significant additional cost;
- Addition of wording by means of interim overprinting at the time of batch/use by labelling - effective only where batch/use printing method allows other printing to occur at the same time. Some possible methods allow this to be done with no significant additional cost (e.g. hot foil transfer and high resolution ink jet), but it would not be possible with character set driven impact printing.
- Addition of wording by means of overstickers - significant additional cost.

Monitoring content and origin issues to ensure that the label description is accurate could be significant. In most cases where this occurs now it is more marketing driven than compliance driven, but given the low default level of CoOL requirements, it is unlikely there would be any incremental compliance cost from this activity.

Industry sources have suggested an indicative figure for a straight forward change in the label would be about NZ$5,000 (A$4,600) all up (design, marketing & technical inputs, new plates for printing, etc.). i.e. all costs associated with the change. This is the cost that would apply to an individual product variant (or stock keeping unit), i.e. the cost for a firm with 10 different product packages to update would be NZ$50,000 (A$46,000). The labels in the food industry now are very full -- so it might require some major moving of current information around the label, which would be more complex and potentially more expensive.

Figure 3 Previous estimates of re-labelling costs

Estimated costs of nutrient labelling and percentage labelling

Nutient labelling		**Percentage labelling**	
SKUs changed	105,000	SKUs changed	96,000
One-off	*A$m*	**One-off**	*A$m*
First year	272	First year	92
		Analysis	18
Systems	24	Systems	24
	296		116
Cost per SKU	$ 2,819	Cost per SKU	$ 1,208
Recurring	*A$m*	**Recurring**	*A$m*
Analysis	5	Analysis	4
QA	21	QA	32
	26		36
Cost per SKU	$ 248	Cost per SKU	$ 375
NZ$ (2000)	$ 3,592		$ 1,540
NZ$ (2004)	$ 3,737		$ 1,602

Source: KPMG 2000

The veracity of this $5,000 figure is critical to the estimate of aggregate labelling costs. In a previous study of costs of nutrient labelling and percentage labelling in 2000, cost estimates of between A$500 and A$2000 were used (NZ$660-NZ$2650 respectively[11]), depending on whether relabelling was minor or major, and up to A$20,000 (NZ$26,500) for some cases of complete package redesign.[12] The overall results are summarized in Figure 3, which shows the average costs per SKU (stock-keeping unit) for the different standards were A$1,208 and A$2,819 in 2000 dollar terms. Converting these to NZ$ terms and updating them with the Producer Price Index, suggests these average costs per SKU would be in the range NZ$1,600 to $3,717 (A$1472-A$3438[13]) as at the start of 2005. Clearly there are differences in the precise relabelling requirements in each of these regulatory changes, and the average will be affected by the number of non-compliant labels that require minor or major changes, but the previous study suggests NZ$5,000 may be towards the high side of a cost representative of most relabelling.

Another cost that industry could experience is the redundancy of existing label stocks. This depends upon the time allowed for changeover. Many companies have about 1-2 years' stock. For simple labels the cost could involve maybe NZ$5,000 (A$4,600) per product variant. For some

[11] These costs from year 2000 have been converted at the then-prevailing exchange rate of NZ$1=A$0.76.

[12] KPMG Consulting (2000) "Report on the costs of labelling foods to meet the requirements of The Australia New Zealand Food Authority's proposed standards 1.2.8 and 1.2.10"; Report to the Australian Food and Grocery Council.

[13] These contemporary costs have been converted at a prevailing exchange rate of NZ$1=A$0.92.

expensive labels (e.g. Tetrapak) the cost may be as high as NZ$20,000 to NZ$50,000 (A$18,400-A$46,000).

However, the CoOL proposal provides a 2-year transition period plus a further year to clear stock in trade, and it is unlikely that there will be many products holding label stocks that could not be cleared within that period. The KPMG report in 2000 indicated that up to 6 months stock could be tied up in the manufacturing process, but thereafter stocks are typically cleared within a year or so. Industry sources have suggested that, to achieve economies of scale, manufacturers may purchase label stocks for up to 2 years once a supply contact is secured, but these would also probably be cleared within a three year introductory period. However, low volume niche products with slow turnover may involve greater label purchases than can be cleared in three years. The volumes affected are small and indeterminate, so the costs of writing off label stocks are likely to be small in aggregate, although potentially serious for the individual small producers themselves.

With unpackaged foods the costs of compliance are likely to be considerably less, because point of sale labels often tend to be simpler in design and contain less detailed information on nutrition and food content.

Industry sources have suggested point of sale displays or ticketing could be accommodated within existing display arrangements. Confidential figures suggest that labour to update the displays would be the largest cost, accounting for around 75% of the total, and this may amount to only around 30 minutes per store per week. At current rates of around NZ$15/hour for shop floor work (A$13.80/hour), this would amount to around NZ$390 (A$359) per year per store, with perhaps another $150 (A$138) on additional labelling materials. There could be additional recurring costs in training staff with a high rate of churn in retail stores, and also possibly one-off capital costs if labelling machinery needs to be changed to accommodate new font size requirements. These costs will vary with the circumstances of each business, and there is no reliable average value representative across all stores.

Overall labelling costs could be substantial for suppliers of packaged foods, but tempered by the number of products that appear to be already compliant. CoOL's biggest impact on introduction to New Zealand is likely to be on smaller suppliers of product variants intended for the domestic market, of which some are currently non-compliant (e.g. specialty jams, breads, smallgoods etc) and may not have the volume of throughput to clear stocks of existing packaging.

4.3 The apparent costs of CoOL

If the principal costs of CoOL are likely to lie in changes in the labelling of packaged goods, this provides a way of estimating the aggregate costs of the

new CoOL regulation. This cannot be done with any precision in the absence of comprehensive records of the number of products that already do or do not comply. But some broad order of magnitude estimates can be made under varying assumptions of compliance and the resultant impact of the proposed CoOL standard.[14] The core of this approach is outlined in Figure 4.

Figure 4 Costs of Option 2 : Medium relabel costs

		New Zealand		Australia		Australia & New Zealand
Number of SKUs		50,000		100,000		150,000
Compliant or exempt		20,000		30,000		50,000
		30,000		70,000		100,000
Packaged		27,900		65,100		93,000
Unpackaged		2,100		4,900		7,000
Food Processors		*NZ$m*		*NZ$m*		*NZ$m*
Current compliance	25%	20,925	75%	16,275	40%	37,200
Average relabel cost	$2,650	55.5		43.1		98.6
Systems adjustment	$0	0.0		0.0		0.0
Recurring cost	$0	0.0		0.0		0.0
Food retailers						
Average relabel cost		0.0		0.0		0.0
Systems adjustment		0.0		0.0		0.0
Recurring cost		4.5		20.5		25.0
Regulators						
One off cost		0.0		0.0		0.0
Recurring cost		0.5		3.0		3.5
Total regulatory cost		60.5		66.7		127.1
	A$m	55.7	*A$m*	61.5	*A$m*	117.2
Annual food turnover	*NZ$m*	12,693	*NZ$m*	57,913	*NZ$m*	70,606
Share of food turnover		0.48%		0.12%		0.18%

For derivation of relabelling cost, refer Appendix C2.2.1; retailers' recurring costs C.2.2; regulatory costs C.2.3

Source: NZIER; ABARE Australian Food Statistics; Statistics New Zealand

Figure 4 uses KPMG figures as the number of SKUs, and makes an assumption of the number that are fully compliant or exempt from the coverage of CoOL (e.g. fresh meat products). The remaining SKUs are split between packaged and unpackaged in proportion to fresh produce sales as a proportion of total food sales. An assumption is then made about the current

[14] Further details of the assumptions made are provided in Appendix A2 of this report.

compliance rate in each country.[15] An average relabelling cost is then applied to the non-compliant SKUs to arrive at an aggregate cost in each country, which is then summed to provide the Australia and New Zealand wide total.

For food retailers the approach is a little different in that the costs are recurring and incurred at points of sale, rather than being incurred per SKU. The total number of retail establishments is divided between food and non-food according to share of retail turnover, and the number of food establishments is multiplied by the average cost per establishment.[16] For the regulatory costs it is assumed that each state provides around $0.5 million (A$0.46m) for regulatory compliance, although it is acknowledged that this may be on the high side for enforcing a CoOL with no health implications.

Figure 4 is based on mid-range assumptions and provides a starting point for considering how changes in the main assumptions would alter the estimated costs. By far the largest item in the table above is the one-off cost of adjusting labels for packaged foods, so it is instructive to look at how the results would alter with changes in the principal assumptions. These are summarised in Figure 5, which presents a range of results with varying average cost of relabelling, and also variation in the assumption of current product compliance. These results suggest that until the average relabelling cost gets very high, the impact on Australian producers may be as high as or higher than that in New Zealand, because of the larger number of SKUs and outlets potentially affected in Australia. It also gives costs as a percentage share against total food turnover to show how much the CoOL regulation could add to overall food bills in each country, as an indication of the social impact of the cost imposition. Under the most optimistic assumptions of high prior compliance (50% in New Zealand, 95% in Australia) and low relabelling cost (NZ$637/SKU, A$586/SKU) the cost of implementing CoOL amounts to around NZ$14 million (A$12.9m) in New Zealand and NZ$25 million (A$23m) in Australia, equivalent to 0.06% of the combined countries' food turnover.

[15] The assumed compliance rates for packaged foods are 25% for New Zealand and 75% in Australia (reflecting the proportion of SKUs bearing "packed for retail sale" labels which will not comply under the proposed CoOL).

[16] Further details of the estimation used, and the effect of alternative estimation approaches, are provided in Appendix C.2.2

Figure 5 Effect of changing assumptions

Packaged foods assumptions	*Lowest*			*Mid-Range*			*Highest*	
Current compliance NZ	50%	**50%**	25%	25%	**25%**	25%	**25%**	10%
Current compliance Aus	95%	**95%**	75%	75%	**75%**	75%	**75%**	50%
Average relabelling NZ$	2650	**637**	637	1600	**2650**	3737	**5000**	2650
Cost of CoOL in NZ $m	42.0	**13.9**	18.3	38.5	**60.5**	83.2	**109.6**	71.5
Cost of CoOL In Aus $m	32.2	**25.6**	33.9	49.5	**66.7**	84.4	**104.9**	109.8
Total Cost of CoOL $m	74.1	**39.5**	52.2	88.1	**127.1**	122.4	**214.5**	181.3
Share of food turnover NZ	0.33%	**0.11%**	0.14%	0.30%	**0.48%**	0.66%	**0.86%**	0.56%
Share of food turnover Aus	0.06%	**0.04%**	0.06%	0.09%	**0.14%**	0.15%	**0.18%**	0.19%
Share of combined turnover	0.10%	**0.06%**	0.06%	0.12%	**0.18%**	0.24%	**0.30%**	0.26%

Source: NZIER

These tables show the one year costs of implementing the Option 2 CoOL proposal. In practice the one-off package labelling costs may occur in any year in the transition period, depending on where the package design comes in the labelling cycle of particular products. In principle a cost benefit analysis would assign these costs to individual years, and combine these with an estimate of recurring benefits over a defined period to arrive at a net present value.

A cost benefit analysis would normally combine such cost stream with an estimate of benefits over future years to arrive at an overall figure of net present value (NPV). In this case, the costs are mostly felt in the near future; the benefits are small order and continue over many years. In such situations with uneven flow of costs and benefits over time, a quantified analysis needs reasonable certainty (narrow variance) over the estimated future flow of benefits. In this case it is difficult to provide this, as there are no readily available values to apply to such benefits as the "right to know". The analysis therefore concentrates on the costs which are more readily quantifiable, and uses these as a basis for estimating how big the benefits would have to be to justify incurring such costs and proceeding with the proposal.

The effect of discounting the cost estimates in Figure 4 is shown in Figure 6.

Figure 6 Present value of Figure 4 cost estimates discounted at 8% over 10 years

		New Zealand		Australia		Australia & New Zealand
Number of SKUs		50,000		100,000		150,000
Compliant or exempt		20,000		30,000		50,000
		30,000		70,000		100,000
Packaged		27,900		65,100		93,000
Unpackaged		2,100		4,900		7,000
Food Processors						
Current compliance	25%	20,925	75%	16,275	40%	37,200
		PVNZ$m		*PVNZ$m*		*PVNZ$m*
Average relabel cost	$2,650	55.5		43.1		98.6
Systems adjustment	$0	0.0		0.0		0.0
Recurring cost	$0	0.0		0.0		0.0
Food retailers						
Average relabel cost		0.0		0.0		0.0
Systems adjustment		0.0		0.0		0.0
Recurring cost		32.6		148.8		181.4
Regulators						
One off cost		0.0		0.0		0.0
Recurring cost		3.6		21.7		25.4
Total regulatory cost		91.7		213.7		305.3
	A$m	84.5	*A$m*	197.0	*A$m*	281.5
Annual food turnover	*NZ$m*	91,985	*NZ$m*	419,688	*NZ$m*	511,673
Share of food turnover		0.10%		0.05%		0.06%

Source: NZIER

Overall costs of CoOL become a smaller share of food turnover over a longer timeframe, but the results also show recurring costs becoming more important, particularly in Australia where small additional costs per outlet accumulate over a large number of retailers to a substantial total. Such recurring costs may be overstated: over time, operational changes for compliance will be subsumed into general industry practice and develop synergies with other activities, so it will become more difficult to attribute a distinct increment to CoOL compliance. But the general pattern remains with shorter time-frames. On the assumptions used in this analysis, after 4 years recurring costs would become the largest component in the cost of implementing CoOL, and have the largest absolute impact in Australia.

Discounting the analysis of the most optimistic scenario in Figure 5 (high prior compliance at 50% in New Zealand, 95% in Australia, and low relabelling cost at NZ$637/SKU, A$586/SKU) results in 10 year costs amounting to 0.05% of food spending in New Zealand and 0.04% in

Australia and across the combined countries. Recurring costs for retailers on displays of unpackaged foods dominate the result.

4.4 Interpretation

How should the numbers generated in this report be interpreted, given the uncertainty around some of the assumptions used? Compared to the earlier analysis of P292, the option specifications have changed, the assumptions of SKUs have changed, and a wider range of cost assumptions have been applied. The quantified results have also changed.

The worst results reported in Figure 5 see compliance rise to 0.86% of annual food turnover in New Zealand, and 0.3% across Australia and New Zealand as a whole. This could translate into appreciable price rises for packaged foods in New Zealand, with ramifications for the affordability of food in New Zealand and also for the competitiveness of food processors. It arises from a combination of a relatively large number of foodstuffs affected and a cost assumption that appears high in light of earlier studies in analogous cases. It may be considered a worse case scenario.

At the other extreme, assuming the lowest cost of relabelling and the highest rates of prior compliance in both countries, costs could be $1/6^{th}$ as low, in which case compliance costs would drop to 0.11% of food turnover in New Zealand, 0.06% across both countries. The mid-point estimate of our cost range presented in Figure 4, sees costs amount to around 0.5% of New Zealand's food turnover and 0.18% across the two countries.

Some caveats attach to these estimates. First, in the stock cycle we have assumed that the cost of modifying labels to comply with CoOL is an explicit cost for CoOL. Our industry contacts have pointed out that a proportion of products are likely to have a label makeover quite irrespective of any regulatory requirement being placed on them. We can not ascertain how many would receive such a makeover in the two year transitional period, but to the extent there are such products, the relabelling costs will be overstated.

A similar caveat attaches to new products or variants which arise in that period. Designing a label from scratch for a new product involves less cost in adding CoO information than juggling space on an existing label without destroying the familiarity of the appearance. To the extent that the SKU numbers used by KPMG were snapshots that include new products as well as those at the end of their product life cycle and likely to be withdrawn, the cost figures are likely to be overstated.

Conversely, cost estimates will be understated to the extent that they omit costs of writing off old label stocks. Enquiries with industry sources have suggested there are appreciable numbers of low volume turnover products

for which label stocks are typically purchased to last more than three years. Suppliers of such products will require relabelling to comply, and also face costs of writing off old stocks. As there is no reliable way of estimating such written off stocks across all products and suppliers, they have not been explicitly allowed for in the analysis.

Implementing CoOL is not likely to be costless. The question then is whether the benefits justify the costs of proceeding. The costs are not just those calculated, but also the less tangible effects on trading relations with the rest of the world. The benefits are primarily those of the consumers' "right to know", and also from improved trust in the food system. As discussed earlier, proceeding with CoOL is satisfying a minority interest in "right to know" as there does not appear to be a strong consumer demand for CoO information. There may also be some benefit in reducing the risk of legal challenge in moving from a transitional status CoOL. It could also benefit food suppliers if the new standard removes uncertainty in the market and reduces unnecessary precautionary behaviour - but a new standard can also have the opposite effect in increasing uncertainty over what complies and prompting excessive precaution, so the net effect is indeterminate and probably very small.

4.5 Distribution of likely impacts

This analysis has provided broad magnitude estimates of the aggregate impacts of changing CoOL requirements, rather than detailed distribution of impacts across different sectors. Nevertheless, some broad inferences can be drawn about the distribution of impacts.

Compliance costs with the new code are likely to be felt particularly heavily by smaller businesses and producers of specialist or niche food products. This is because they have lower turnover and greater likelihood of not being able to clear non-compliant labelling stock within the 3 years allowed for the introduction and stock-in-trade provisions of the new standard. They are also less likely to achieve economies of scale in label redesign work. Such businesses are also more likely to face financial constraints in making changes necessary for compliance, compared to larger concerns.

Redundancy of label stocks is not just an issue for small businesses, but also for any business with small product lines. Even large businesses with a wide range of foods face similar issues with their low volume items, although most will be better placed to bear such costs than small enterprises because of their larger and more diversified operations.

In the retail sector affected by display requirements on unpackaged products, smaller businesses will also be more heavily affected, because of their lesser ability to achieve economies of scale. However, changing display practices do not appear likely to be particularly onerous for

individual retail outlets, and the principal impacts are likely to be felt by small producers of packaged products, and importers from third countries faced with using over-stickers on existing packages.

While those in the supply industries will be affected to varying degree, the ultimate burden falls on consumers. Suppliers will pass on additional costs where they can, so prices of some food products will rise, with the result that consumers can either consume less from their available funds, switch to less preferred products, or pay more and divert funds from other activities. They get the benefit of being better informed about food origins, but current consumption patterns suggest there is not a strong or widely-held demand for this benefit.

This analysis suggests that moving from the status quo to adopt the requirements of Option 2 is likely to have a larger impact relative to overall food industry turnover in New Zealand, where there is currently no CoOL standard, than in Australia. However, because the Option 2 standard is more stringent than the Option 1 standard that currently applies in Australia, there will also be widespread changes required to meet the Option 2 standard in Australia, which will be larger in absolute terms than in New Zealand, because of the larger size of the Australian economy and food sectors.

5. Conclusions

This report has considered the costs and benefits of two options for implementing proposals for country of origin labelling of food. In light of an interpretation of the requirements of CoOL, it has examined some of the international literature on country of origin labelling, finding much of it applying to situations very different from those in which CoOL has arisen. Consequently much of the overseas evidence, although useful in describing impacts of stringent regulations, does not appear closely analogous to current proposals for CoOL in Australia and New Zealand.

The report examines the likely consequences of revised CoOL requirement against the counter-factual of the continuation of the *status quo*. Our conclusions on the benefits of CoOL are:

- Direct customer value – there is little evidence of *general* consumer value as expressed by willingness to pay for CoOL information, although there are plenty of examples of exceptional products where CoOL does aid the marketing of food.
- Fundamental system value – there could be social value in improved operational characteristics of the system (as in more expeditious product recalls) but the specifics of complying with the proposed CoOL do not particularly add to other systems and processes in this regard. The principal fundamental value is the reduction of risk of legal challenge to the current standard provided by moving to Option 2.
- External value – there may be social value in improved trust and reputation of the food system and claims made about it, but the information provided by complying with CoOL is not particularly informative or conducive to improving that trust and reputation.
- Social value in the "right to know" *per se* – this is the most significant area of benefit, but it is important to ascertain whether this benefit is commensurate with the costs that are incurred in providing information.

Costs of implementing CoOL fall largely under the following headings:

- Compliance costs for firms in meeting new standards – for CoOL with a 3 year transition period, these are primarily the once-only costs of changing labels, which may be very little or large for different products, and also some recurring costs in the area of fresh food display.
- Allocative shifts due to supply and demand changes in response to regulatory price increases – mostly small in the context of CoOL, but likely to increase if extended to a wider range of products (e.g. fresh meat).
- Regulatory administration costs – probably low incremental cost.

There are other, less tangible costs associated with CoOL. Uncertainty over the nature of the regulation may prompt inappropriate responses that add to

costs or result in products being needlessly changed or withdrawn from the market, detracting from consumer choices. The presence of CoOL regulations may affect negotiations with trading partners, with implications on wider aspects of trade. Benefits and costs are summarised in Figure 7.

Figure 7 Summary of benefits and costs

	Manifestation	Effect in the market	Expected size
Benefits			
Direct customer value	Private consumer value in improved knowledge	Some examples of COO price premia but not universal	Positive but probably very small
Social value of right to know	External value of improved knowledge	Public willingness to pay in general for higher food standards	Positive but no known valuation; not highest priority in food choice
Social value of trust in food system	Reduced uncertainty and associated costs in food transactions	Public willingness to pay in general for higher food standards	Positive but negligible with current COOL proposals
Fundamental system value	Improved operations and traceability	Expected value of future costs avoided	Positive but negligible with current COOL proposals
	Reduced risk of legal challenge to current standards	Expected value of future costs avoided	Positive but no known valuation
Costs			
Compliance activities by suppliers	One-off changes in labelling etc	Cost of re-labelling and clearing old stock	Small but not zero
	On-going operational practice changes	Cost of additional record-keeping	Negligible on the current COOL proposals
	Updating displays	Mainly retail labour cost	Small but accumulating
Regulatory administration	Direct regulatory agency cost	Cost of additional monitoring and enforcement	Small
	Indirect effects of improved compliance	"Negative cost" (benefit) from higher compliance achieved	Negligible
Allocative shifts in resource use	Switch to less preferred inputs, foods due to price changes	Cost of using less preferred ingredients, foods etc	Very small
	Excessive precaution from regulatory uncertainty	Cost of over-complying or withdrawing products from sale	Unquantifiable: could be either cost or benefit but probably very small
Potential costs to trade policy	Weakened international trade position	Negotiating difficulty causing less favourable agreements	Unquantifiable but possibly significant
	Risk to government	Cost of WTO challenge	Small
		Retaliatory measures resulting in reduced value of exports	Unquantifiable but possibly significant

Source: NZIER

The trade implications and other intangible costs are noted but not taken into account in this current analysis, because their quantification is extremely difficult and assuming values for them would not be informative. The principal items in the quantified analysis are the one-off costs of relabelling packaged foods to comply with CoOL, and recurring costs that arise for display of unpackaged produce for retailers. The principal benefits of the current CoOL proposals are the value of the right to know and of reduced risk of legal challenge. Whether these benefits are sufficient to justify the costs incurred, and the weight to be given to trade and other intangible considerations, are questions that require judgement calls by decision makers.

In conclusion, the requirements of CoOL do not appear particularly stringent and the costs are correspondingly low, compared to overall costs of food consumption. The corollary of this is that CoOL is also not particularly informative about food origin because of its low default level ("contains imported food" etc), so the benefits are also correspondingly low. There is also a risk that full potential benefits will not be realised, because CoOL is not a food safety issue, and food authorities in both countries will put insufficient resources into enforcing the standard and lifting compliance.

Two principal options for implementing CoOL were considered in this report. Option 1 is essentially continuation of the status quo, and entails very little cost. But it also confers no additional benefit, and does not remove anomalies with other legislation in the current standard. Option 2 is the preferred option of FSANZ, as it does address these anomalies. Because this option is less prescriptive on some foods than the current standard, some product variants could face lower costs and there are compliance savings to offset any increase in overall cost.

Costs can be expected to increase with widening coverage and complexity of the options, but benefits do not rise commensurately. For instance, extending CoOL across all unpackaged foods, including fresh meat and poultry which are outside the scope of current CoOL proposals, would increase the cost of CoOL while achieving diminishing marginal benefit (as very little meat is currently imported to Australia and New Zealand consumers can assume most meat in their shops is locally sourced).

There is very little hard data to apply to the likely costs and benefits of CoOL. Estimates of re-labelling costs are relatively well grounded from information provided by industry sources, but estimates of the share of non-complying products are rough and there is no information on price response, consumption effects and changes in market behaviour likely to arise from implementing CoOL. Particular uncertainty surrounds the adequacy of the 3 year transition period to allow suppliers to clear their stocks of old non-compliant labelling. Suppliers of low volume turnover products in particular could be faced with both redesigning labels to comply and writing off old

stock. Depending on circumstances the additional cost of re-labelling faced by suppliers may be zero or a substantial cost per product variant.

A summary of the comparison of options considered is provided in Figure 8.

Figure 8 Comparison of options

	Gains from right to know	**Legal risks avoided**	**Cost**	**Impacts location**
Option 1 Status quo: current transitional standard in Australia only	No	No	Nil	Nil
Option 2: Revised standard in both Australia and New Zealand to current food types	Yes	Yes	Up to 0.3% of food turnover in both countries	Mostly in New Zealand, but also in Australia

Source: NZIER

The analytical framework used here, however, could be used with better data, should it come to light. This would probably require more extensive survey of the food markets in both Australia and New Zealand than has been possible here.

Appendix A Reference list

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Appendix B Background to food supply in Australia and New Zealand

Australia and New Zealand are both food exporting countries, with some similarities but also complementarities in their respective food supplies. Australia's population is approximately 5 times that of New Zealand, and its GDP is 6.6 times as large, but Australia's total food exports are around 1.9 times those from New Zealand, and its total food imports 2.5 times as large. New Zealand exports 6 times as much food as it imports, compared to less than 5 times in the case of Australia. Food-related trade is proportionately more important in the New Zealand, with agriculture accounting for 4.8% of GDP in New Zealand, compared to 2.7% in Australia.[17]

New Zealand is Australia's 8th most important destination for food exports in value terms, and the largest source of food imports into Australia, accounting for 18% of total food imports.[18] In declining order of importance, New Zealand's principal food exports to Australia are seafoods, dairy produce, vegetables and tubers and fruit and nut products. Australia's largest food exports to New Zealand are cereals, sugars and confectionary, cereal products, cocoa preparations and meat. Australian exports to New Zealand have a high proportion going to intermediate consumption as inputs into New Zealand food processing, whereas New Zealand's food exports tend to be more into final consumption. In calendar year 2004 New Zealand ran a NZ$269m (A$247m) trade surplus in food with Australia.[19]

This brief snapshot indicates that the two countries' food systems are integrated to a large degree. In such circumstances, regulatory changes that impact more heavily on one country than on the other can be expected to affect the balance and pattern of trade between them, as well as affecting the mix of imports and domestic produce sales more generally.

Appendix C Assumptions on labelling costs

The cost assumptions for packaged food CoOL compliance in the report are based on the product of three principal components:

- Number of food variants (SKUs) affected by the regulation
- Proportion of food variants that incur CoOL costs
- Average cost of relabelling per product variant (SKU)

[17] Pacific Economic Co-operation Council (2002) Pacific Food Outlook

[18] ABARE (2002) Australian Food Statistics, Project 2698, Canberra

[19] Statistics New Zealand (2005) INFOS Overseas Trade Statistics, Wellington

C.1 Number of food variants affected

The costs across the country depend on the number of food variants affected by the proposed labelling requirements. The previous cost benefit analysis was based around a figure of 30-35,000 product variants in the typical full service supermarket (i.e. not budget or discount stores), with around 50-60% of those in the packaged and unpackaged food categories covered by the CoOL proposals. However, the KPMG report on nutrition labelling used a higher figure for New Zealand, of 50,000 SKUs after removing 30,000 SKUs common to Australia and New Zealand. While it is difficult to verify these figures, they can be reconciled to some degree.

The 30,000-35,000 figure is that of a typical supermarket. Take out the proportion of this which is "store-specific items" e.g. fresh meats, fruit and vegetable lines and non-food items, and what is left is national branded food SKUs that are common to all stores. Add this to the store item food SKUs from each of the store chains in the country – two main companies but trading under several separate store brands - and total SKUs could accumulate to a larger figure.

We expect the number of packaged food items affected by CoOL to be larger than the 15-20,000 variants assumed in the previous cost benefit analysis. Reasons for this include the possibility the earlier assumption was understated (relative to the KPMG figures), and the presence of around 3,300 private brand SKUs across the main supermarket outlets, which need to be added to the SKUs common to all stores as potentially affected by relabelling requirements.

The figures in Figure 4 subtract from KPMG's number of NZ only SKUs (50,000) an allowance for compliant or exempt items, dividing the remainder between packaged and unpackaged in proportion to the shares of fresh and other foods in total retail sales. From the packaged figure is deducted an assumed share of compliant items – 25% in the base model – to arrive at 20,925 SKUs requiring relabelling in New Zealand.

For Australia, the same classes of food are potentially affected, but a higher proportion is expected to be already compliant with the proposed CoOL. A similar process is used to derive a figure of 16,275 SKUs requiring relabelling in Australia, assuming 75% compliance rate. This may be considered a low compliance rate in view of the fact that CoOL is already compulsory in Australia: the assumption represents the number of items that use the "packed for retail sale" labelling which will become non-compliant with the proposals. This and all other assumptions can be amended if better information comes to light.

C.2 Proportion of food variants incurring CoOL costs

The proportion of food variants incurring CoOL costs in the analysis is predicated on a number of basic assumptions or expectations from consideration of consultations with various parties in the food industries.

- There are no recurring relabelling costs. Once a label has been modified or redesigned to conform to CoOL, the cost per label is the same as it would be under current arrangements, so the additional cost of CoOL is confined to those one-off design costs.
- There are unlikely to be large write-offs of labelling stock. We understand that in order to gain economies of scale in purchase, manufacturers may purchase labels for up to two years in advance, but usually for shorter periods. The two year introductory period, plus one year for clearing stock-in-trade, therefore allows for clearance of old labelling stock.

Apart from the labelling cycle, the product cycle may also impact on the aggregate impact of CoOL compliance. Even established products have their labels revamped periodically, during which period CoOL compliance could be introduced at very low additional cost to the redesign work already being undertaken. Similarly, for new products launched onto the market after the introduction of CoOL, compliance could be achieved at very low additional cost. The number of new products and revamped products on the market at the time of the introduction of CoOL therefore need to be deducted from the total of affected products when applying a representative cost of compliance. In the absence of firm information on which to base such deduction this has not been included in the analysis.

The proportion of non-compliant food variants is multiplied by the number of food variants and the cost per product variant in Figure 4. This is applied to New Zealand and Australia separately, then combined for both countries.

How much of the labelling cost is additional?

Enquiries with New Zealand industry sources involved in packaging and marketing of food products suggest that the proportion of food products that would accommodate CoOL relabelling costs in their normal relabelling cycle would not be high. Some large companies dealing with limited shelf-life foods (e.g. milk products) indicate that all labels get changed/refreshed typically once a year. Special promotions are done regularly with over-stickers or with totally new labels depending on packaging format. But many small companies would do it much less frequently, perhaps changing once every 4 or more years, so adjustment to CoOL could present a significant cost. They may reduce label adjustment costs by using generic stock packaging where the critical information is provided by thermally printed labels on the back, but they can still incur significant cost with the

introduction of substantial labeling changes (such as regulation of ingredient/nutrition labeling).

But the distinction between large and small companies is not hard and fast. One major food processing company and exporter stated that ideally, it would not change existing labels unless a regulatory change, a new export market or a consumer-driven need caused it to update the artwork, so it is feasible for individual labels to remain unaltered for 5 years or more. Special promotions, are normally communicated by other means e.g. stickers on lids, and even if promotions do involve relabelling, they return to the old labels after the promotion period, as labels are part of the product's branding. This same company replaces about 10% of its range with new items each year, and if it weren't compliant with the new proposals and needed to change all its labels, barely 25% of its range would be taken care of by natural attrition and promotion over a 2-year time-span, leaving 75% to incur costs purely for the sake of regulatory compliance.

Another company dealing with more niche food products and dietary supplements stated that labels are sometimes not redesigned for five years or even more; because to do so requires the expense of making new plates. Supplies of labels often last for "several" years, as it is not economic to print any less than 5,000 labels at a time. Re-prints occur more often with successful products, but once again, usually using existing plates. So, while it is true in many cases that more labels will be printed within a two year CoOL introductory period, this will not necessarily involve new artwork. Again, special promotions are usually achieved by some sort of over sticker, or additional sticker, to avoid new plate and label printing charges.

C.2.1 Cost of relabelling per product variant

The cost suggested by three independent observers for relabelling a product to comply with new wording was NZ$5,000 per product variant. The KPMG study, however, suggested a range of different values, depending on whether minor or major alterations or complete repackaging design would be required to accommodate the new information on the label. Converting these to New Zealand dollars at exchange rates current in 2000, and updating them in line with changes in the producer price index, gives a range of cost estimates per SKU, as set out in the table below.

Figure 9 Conversion and updating of cost estimates

	A$(2000)	*NZ$/A$*	*NZ$(2000)*	*PPI Change*	*NZ$(2004)*	*A$(2004)*
Minor	$ 500	0.785	$ 637	1.0403	$ 663	$ 610
Major	$ 2,000	0.785	$ 2,549	1.0403	$ 2,651	$ 2,439
Overhaul	$ 20,000	0.785	$ 25,486	1.0403	$ 26,512	$ 24,391

Converted from December 2000 values to December 2004

Source: NZIER, from KPMG (2000)

Similar conversion of the average cost per SKU for the percentage labelling results in a cost of NZ$1,601 (A$1,474) in December 2004 value dollar terms. There is apparently a discrepancy between the figures in the KPMG study and the views of current industry commentators on where the costs may lie. In the previous CoOL analysis we used a value of NZ$2,500 (A$2,300) to represent the average cost, it being the median value between $0 and $5,000 (A$4,600) across which repackaging costs were assumed to lie. In the current study we have chosen the nearest equivalent value from KPMG (NZ$2,651, A$2439), but also examined the effect of lower values as representative of the costs of compliance.

C.2.2 Costs for unpackaged foods

For unpackaged foods, the costs of CoOL compliance are likely to be felt more at the level of stores and outlets, rather than in relation to SKUs. Industry sources have suggested a cost of $540 (A$497) per store per year, comprising mainly labour (half an hour a week on updating displays) but also some additional materials. This is multiplied by an estimate of the number of shops in New Zealand selling unpackaged food (8367) to arrive at a New Zealand estimate of NZ$4.5 million (A$4.1m) per year. A figure for Australia is pro rated in proportion to the relative size of food turnover (i.e. New Zealand cost times Australian turnover divided by New Zealand turnover, as appears at the bottom of Figure 4).

Figure 10 Food Retail Outlets in Australia, 2002-03
ANZSIC Class, 4 Digit Level

ANZSIC Class	*Number*
5110 Supermarket and grocery stores	7,602
5121 Fresh meat, fish and poultry retailing	5,252
5122 Fruit and vegetable retailing	2,812
5123 Liquor retailing	1,900
5124 Bread and cake retailing	6,733
5125 Takeaway food retailing	20,763
5126 Milk vending	1,641
5129 Specialised food retailing n.e.c.	6,855
Total	53,558
Total without liquor, milk & take-away outlets	29,254

Source: NZIER; ABS, Experimental Estimates Cat. No. 8155.0

Since this report was prepared new information obtained on Australian retailing enables the costs of meeting the CoOL standard on unpackaged foods in Australia to be estimated directly in similar manner to New Zealand. The effect would be to lower Figure 4's cost of meeting the CoOL standard in Australia by between NZ$4.7 million and NZ$7.5 million (A$4.3m – A$6.9m), depending on how the figures are treated.

Figure 10 shows there were an estimated 29,254 food retail outlets in Australia in 2002-03, after taking out liquor, milk vending and take-away outlets that are not subject to the proposed CoOL. The meat, fish and poultry category is problematic, because although fish would be subject to the proposed CoOL standard, meat would not be (other than delicatessens) and there is no way of disaggregating these figures to distinguish outlets that would be subject to CoOL and those that would not be. On the assumption that virtually all other outlets do sell unpackaged and fresh food that would be subject to the standard, the cost of NZ$540 (A$497) per store can be applied to these figures to estimate the aggregate cost across Australia of meeting the standard with the meat category excluded, and with the meat category included. Results are summarised in Figure 11.

Figure 11 Alternative estimates of effect on retail outlets

	New Zealand	Australia	Combined	New Zealand	Australia	Combined
	NZ$m	*NZ$m*	*NZ$m*	*A$m*	*A$m*	*A$m*
Costs to food retailers						
Results from figure 4	4.5	20.5	25	4.1	18.9	23.0
Revised, excluding meat outlets	4.5	13.0	17.5	4.1	12.0	16.1
Revised, including meat outlets	4.9	15.8	20.7	4.5	14.5	19.0
Total regulatory cost						
Results from figure 4	60.5	66.7	127.1	55.7	61.4	116.9
Revised, excluding meat outlets	60.5	59.1	119.5	55.7	54.4	109.9
Revised, including meat outlets	60.9	61.9	122.8	56.0	56.9	113.0

Source: NZIER

Excluding retail outlets in the meat, fish and poultry category reduces the cost compared to Figure 4 by NZ$7.5 million (A$6.9m) across the combined countries. This understates the cost of meeting the CoOL standard, as those outlets that sell fish would be affected by the standard. Including outlets in the meat, fish and poultry category reduces the cost compared to Figure 4 by NZ$4.3 million (A$3.9m). Together these estimates imply that extending the standard to cover meat would involve little additional cost once other food outlets were already complying with the standard – around NZ$3.3 million (A$3.1m), assuming meat retailers would face similar costs in meeting the standard to other types of retailers.

So using these outlet figures as a basis of estimating costs would reduce the overall estimate of aggregate cost of meeting the standard compared to that in Figure 4 in the report, but does not change the overall picture by much. It reduces the impact of Australia's greater size on the costs it bears, as the figures imply that Australia has fewer food outlets per head of population

than New Zealand – a characteristic that is confirmed by independent trade sources.[20]

C.2.3 Regulatory costs

Regulatory costs have been entered at the assumed value of $0.5 million (A$0.46m) for New Zealand and $0.375 million (A$0.345m) for each state/territory jurisdiction in Australia. The actual figure could be substantially lower than this. From consultations made here, it is unlikely that food standard authorities will put extra effort into enforcing CoOL as it is not a safety issue, and most compliance will occur in association with other compliance activities, so the additional cost is virtually zero.

C.2.4 The central estimate for compliance cost of Option 2

Costs are combined and compared against annual food turnover in both countries, sourced from Statistics New Zealand Business Demographic statistic and ABARE's Australian Food Statistics. A central estimate of NZ$127 million (A$117m) cost in meeting the standard across the two countries is presented in Figure 4. This is a 10 fold increase on the results of the previous study. Reasons for this include it is based on almost double the number of packaged SKUs being affected (37,200), a higher unit cost per SKU (NZ$2650, A$2439), and not treating display costs or regulatory costs as zero values. It also reflects wider scope of the proposal with respect to unpackaged foods and explicit allowance for effects on Australian producers and retailers. A critical difference from the previous study is in considering how Australian suppliers may also be affected by the specific wording of the proposals, in particular:

- How many Australian suppliers of SKUs lose the compliance protection previous enjoyed by the "packed for retail sale" form of labelling?
- How Australian suppliers of unpackaged produce would be affected by the need for specific country labelling on their displays (rather than more generic "imported" labelling)?

These estimates are undoubtedly "incorrect" but they provide a rough benchmark of where the compliance costs are likely to lie. Particular industries may point to significantly different costs or non-compliance proportions, but these need not be representative of the sector as a whole, or significantly change the order of magnitude estimates provided here.

[20] World Retail Data and Statistics (2005), Euromonitor International

Appendix D Economics of Cost-Benefit Analysis

A cost benefit analysis proceeds by quantifying the benefits and costs of each proposed options for comparison with the current status quo. A critical initial question is how much compliance with the standard increases compared to some level of voluntary compliance in the status quo, and what the consequent benefits and costs are likely to be.

Cost benefit analysis of a policy change is concerned with resultant changes in societal welfare or well-being. Welfare in this sense represents the economic surpluses enjoyed by those in the affected jurisdictions, namely:

- Producers' surplus is the difference between market price and cost of supply of affected products, and is manifested as an economic rent, or super-normal profit, for infra-marginal suppliers;
- Consumers' surplus is the difference between market price and consumers' willingness to pay for affected products, and is manifested as a saving for infra-marginal consumers that they can apply to other desirable consumption.

Before considering in detail particular costs and benefits, we outline the general welfare impacts implied by the different options.

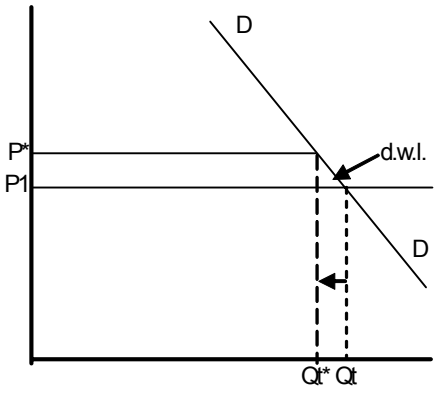
D.1.1 Basic welfare effects of CoOL

The simple welfare effects of a new regulation are illustrated in Figure 12 below. This shows a horizontal supply line for food intersecting an elastic demand curve (DD), resulting in a market price of P1 and quantity consumption of Qt. To the extent that regulation increases costs for suppliers that are passed on to consumers, price will rise to P*, and consumption will shift back up the demand curve to Q*. The net effect is that food consumption declines (Qt-Q*), and although suppliers recover their additional costs on remaining sales by capturing some of the consumer surplus that consumers previously enjoyed, there is a deadweight loss (d.w.l.) in welfare from the reduction in consumption at the margin.

The relative scale of these effects depends on the respective elasticities of supply and demand. The more inelastic the demand, the smaller the contraction in consumption and the corresponding deadweight loss. With perfectly inelastic demand, the entire cost is borne by reduction in the consumers' surplus. The more elastic the demand, the larger the contraction in consumption and the deadweight loss. The additional costs on remaining sales are borne entirely by reduction in consumers' surpluses, but producers

also face contraction in their sales at the margin which can impact on their overall profitability.

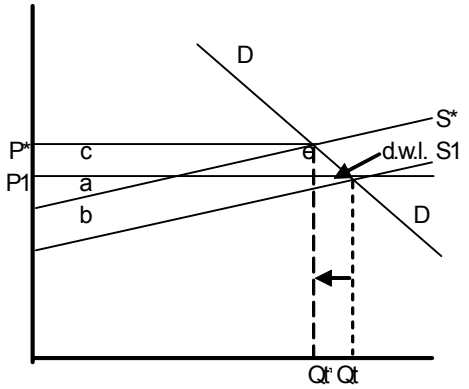
Figure 12 Simple welfare effects of a new regulation



Source: NZIER

When supply is also elastic to some degree, the supply curve slopes up towards the right (Figure 13). In this case the new regulatory costs raise the supply curve and increase price at the margin to P*, with the result that the deadweight loss comprises contractions in both consumers' surplus and producers' surplus. On their remaining sales (Qt*) producers recover their extra costs (b+e) and recover a producer surplus (a+c). Whether producers are better off after regulation depends on the respective sizes of their lost portion of producer surplus (area b) and their captured consumer surplus (area c). But producers at the margin where sales have contracted suffer deadweight loss and are worse off, as are consumers who face deadweight loss and the transfer of consumers' surplus (c+e) to producers.

Figure 13 Regulatory impacts with elastic supply



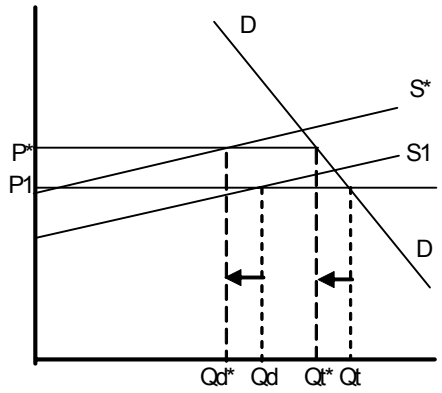
Source: NZIER

In Figure 13, the rise in price (P*-P1) is visibly less than the increase in the supply cost curves (S*-S1). This may give the impression that producers are not passing their costs onto consumers in full, but this is an illusion created

by the contraction of supply down the supply curve: at the new price the marginal unit supplied still faces the full additional cost of the regulation. Producers could only afford to not pass costs on if they were earning a surplus at the margin, which may be possible under some forms of monopoly behaviour but does not apply to a competitive market. The general expectation therefore is that the additional costs of regulation will be passed on in full to consumers, although they may appear not to be if there is contraction down a sloping supply curve.

Figure 14 shows the situation where local supply comprises a mix of domestic and imported produce. In this case, imports provide a backstop supply, such that the more elastic supply of domestic produce will enter the market up to the point where its price equals the price of imports. Thus at the internationally determined price of P1, out of a total supply of Qt domestic produce supplies Qd and the balance, (Qt-Qd), comprises imports.

Figure 14 Welfare effects of regulation with imports



Source: NZIER

If labelling regulation increases domestic costs but not those of imports (e.g. because imports are already compliant with the regulation) the domestic supply line will rise but price does not, so the domestic volume on the market will contract as imports increase to take their place. This is a result that looks likely under Option 2, which extends to New Zealand a regulation with which Australian food products already comply, increasing the competitive advantage of food imports into New Zealand, particularly those from Australian suppliers who already comply. How large this opportunity is depends on the level of additional cost for New Zealand suppliers, and in turn how many New Zealand food products already comply with the labelling regulation.

If the new regulation affects both imports and domestic foods alike, both the domestic costs and price of imports will increase. Overall consumption will contract up the demand curve to settle at the new import-determined

domestic price P*. Supply of domestic food contracts to Qd*, the point where the marginal cost on the new supply curve is P*. Imports change from Qt-Qd to Qt*-Qd*. Whether imports contract by more or less than domestic produce supply is an empirical question, dependent on the respective slopes of the domestic supply and demand curves.

The foregoing indicates that the distributional impacts of the different CoOL options are quite different. Moving from the status quo involves a bigger regulatory imposition on New Zealand producers than on Australian producers, and creates an opportunity for increased Australian exports into New Zealand. New Zealand consumers face reduction in consumers' surplus in every case. But moving to a tighter standard than that which already applies in Australia would reduce the advantage for Australian producers over New Zealand producers, as they too may face some additional compliance cost. New Zealand consumers would still lose some consumer surplus, as would Australian consumers if the tighter standard increased producers' costs which are passed on in full to consumers.

In addition to the comparative static changes outlined in figures 3-5, there will be dynamic economic impacts as a result of introduction of tighter CoOL standards, for instance those resulting from the loss of consumers' surplus having effects on other areas of consumption through the economy. How large these effects are depends on how significant CoOL costs are likely to be.