1 EXECUTIVE SUMMARY

1.1 INTRODUCTION

ERM was commissioned by the Economic Analysis and Business Facilitation Unit, Financial Secretary's Office, to undertake a Regulatory Impact Assessment (RIA) to consider options for a labelling scheme for nutrition information. The objective of the RIA was to assess the health and economic impacts of introducing a nutrition labelling scheme in Hong Kong.

1.2 KEY RECOMMENDATIONS

As a result of this assessment, ERM recommends that the Administration should initially proceed with a scheme that requires nutrition labelling for any pre-packaged food product that makes a nutrient-related claim on its packaging. Such nutrition labelling should meet the specified requirements and include information on the quantity of the nutrient being claimed as well as the energy, protein, available carbohydrate, fat, saturated fat and sodium content of the product. Such a scheme should be introduced with a two-year grace period.

The assessment undertaken indicates that, combined with an education programme and corresponding changes in consumer behaviour, this approach would have significant benefits to Hong Kong in terms of improved health and a reduction in associated health costs and productivity losses. Furthermore, this initial scheme is similar to that in place in a number of key trading partners. Indeed, the analysis suggests that such an approach would have a net economic benefit to Hong Kong, generating over two hundred million dollars of economic savings per year, while the costs imposed on the food sector are unlikely to exceed HK$ 40 million, which is only 0.2% of household expenditure on pre-packaged food products.

A statement of intent to introduce a more comprehensive nutrition-labelling scheme in the future should accompany the implementation of this initial scheme. It is recommended that this second phase of implementation should require all-prepackaged food to provide information on their nutrient content and that the number of nutrients requiring labelling should be increased. In addition to the labelling of energy, protein, available carbohydrate, fat, saturated fat and sodium, the second phase of implementation would require labelling of cholesterol, sugars, dietary fibre and calcium. Of the options examined, the assessment suggested that this option (eg, labelling energy plus nine nutrient categories) would have the highest benefits to Hong Kong in terms of improved health and a reduction in associated health costs and productivity losses as well as being the most cost-effective (eg, highest benefit to cost ratio).

The timing of implementation of this second phase should be subject to review. One key factor to be taken into consideration is the developments overseas. Hong Kong imports the vast majority of its products from overseas and the introduction of a comprehensive nutrition labelling scheme (such as that suggested for the second phase of implementation) in Hong Kong would require substantial action by food industries to ensure compliance. These compliance costs with regard to testing would be significantly reduced if the implementation of the scheme were timed to correspond with developments overseas [1]. ERM is therefore recommending that the timing of implementation of the second phase be reviewed three years after the legislative enactment. This will allow one full year of

[1] Compliance cost would be significantly reduced as less products would require testing exclusively for the Hong Kong scheme and relabelling efforts could be combined with those for overseas schemes.

implementation of Phase I to be taken into account in the review. If other significant trading partners have adopted similar comprehensive schemes then ERM recommends that the Administration announces the implementation of the second phase, allowing at least a two-year grace period for the trade to ensure compliance.

The background to these recommendations, the analysis undertaken during the RIA and the findings of such analysis, as well as possible supporting measures to this proposed approach are summarized in the subsequent sections. Further details can be found in the main study report.

1.3 BACKGROUND TO THE STUDY

Nutrition-related diseases are important public health problems in many parts of the world, including Hong Kong. Nutrition labelling is a valuable mechanism to help change eating behaviour. Existing legislation in Hong Kong does not include specific provision for standardised nutrition information on food labels. In addition, the data to support the nutrition claims displayed on food labels are often not available and nutrition claims on packages are sometimes misleading.

Codex [1] guidelines suggest the listing of energy value, amounts of protein, available carbohydrate (ie, carbohydrate excluding dietary fibre) and fat. The guidelines also recommend the inclusion of the amount of any other nutrient for which a nutrition claim is made and the amount of any other nutrient considered to be relevant for maintaining a good nutritional status, as required by national legislation.

Overseas, nutrition labelling either on general food types or specified foods is increasingly becoming mandatory. At least 27 countries have labelling schemes on nutrition claims and 18 countries have nutrition labelling schemes on certain foods with special dietary uses. Of particular note and relevance to Hong Kong, is the fact that Mainland China has drafted legislation requiring nutrition labelling and is currently considering implementation details (including timing).

Consistent with worldwide trends, the Administration is considering introducing a mandatory nutrition-labelling scheme in phases. The scheme is intended to enhance public health by:

- facilitating consumers in making healthy food choices;
- encouraging food manufacturers to apply sound nutrition principles in the formulation of foods which would benefit public health; and
- regulating misleading or deceptive nutrition labels and claims.

Table 1.1 illustrates the nutrition labelling requirements of nine countries / regions that represent important trading partners for food items in Hong Kong. All nine of them require the labelling of four core nutrients as specified in the Codex guidelines, while products meeting the requirements of six of these jurisdictions (Australia, New Zealand, Canada, the USA, the European Community and Thailand) would have the requisite nutrient information for the initial option recommended for implementation in Hong Kong (ie, Phase I requiring labelling of energy plus the three core nutrients specified in Codex, saturated fat and sodium when nutrition claims are made).

[1] The Codex Alimentarius Commission was created in 1963 to develop food standards, guidelines and related texts.

Table 1.1 International Labelling Requirements on Core Nutrients

Countries	Energy, Protein, Carbohydrate & Fat	Saturated Fat	Sodium	Sugar	Cholesterol	Fibre	Calcium	Other Nutrients	Total	Specified Nutrient Content Expression
Mandatory Labelling										
Australia / NZ	•	•	•	•					7	Per serving and per 100g (or 100 ml)
Canada[1]	•	•	•	•	•	•	•	•	14	Per serving
Malaysia[2]	•								4	Per 100g (or per 100 ml) or per package if the package contains only a single portion and per serving as quantified on the label
USA[3]	•	•	•	•	•	•	•	•	14	Per serving
Mandatory Labelling in some circumstances [4]										
EC[5]	•	•	•	•		•			8	Per 100 g (or per 100 ml). In addition, this information may be given per serving as quantified on the label or per portion, provided that the number of portions contained in the package is stated.
Japan[6]	•		•						5	Per 100g (or 100mL), or per serving, per package, or per other appropriate unit.
Singapore [7]	•	•	•		•	•			8	Per serving and Per 100g (or per 100mL)
Thailand[8]	•	•	•	•	•	•	•	•	15	Per serving. Per 100g (or per 100mL) shall be used if the serving size cannot be determined.

Further details of some of the schemes can be found in *Annex B* of the main report.

Notes:

(1) Canada published regulations making nutrition labelling mandatory on most food labels in 2003, which will commence implementation by the end of 2005.

(2) Mandatory labelling for the following foods: cereal food and bread; milk product; flour confection (eg pastry, cake, biscuit etc); canned meat, fish and vegetable; canned fruit and various fruit juices; salad dressing and mayonnaise, and; soft drinks.

(3) Transfat is required on the Nutrition Facts panel in the U.S. by January 1, 2006. This will take the total number of nutrients required to 15.

(4) A number of countries only require nutrition labelling when a nutrient-related claim is made on the packaging or where any nutrient-related information is included on the packaging.

(5) The EC Directive on nutrient labelling requires mandatory labelling when a nutrient-related claim is made. When any claim is made then nutrition labels should be provided for claim nutrient(s) as well as energy value and the amounts of protein, carbohydrate and fat. However if a nutrition claim is made for sugars, saturated fat, fibre or sodium then all eight nutrients should be labelled.

(6) Mandatory labelling in Japan for products with claims or existing labels. The listing of calories, protein, fat, carbohydrates, sodium and claimed nutrient(s) is required.

(7) Mandatory labelling in Singapore for products with claims requires the listing of energy, protein, carbohydrates, fat and the claimed nutrient(s). In addition, nutrition labelling voluntary guidelines includes the listing of the above 8 core nutrients. Voluntary guidelines currently under review, considering proceeding to a mandatory scheme.

(8) Mandatory labelling in Thailand for food with claims and food that use nutritional values in sales promotion; food specifically targeted at a group of consumers eg elderly people; and other foods as may be specified by the FDA. Label must include claimed nutrient(s) plus the required nutrients on the label.

1.4 OPTIONS EXAMINED DURING THE STUDY

Based on experience overseas and the consultation exercise initiated in November 2003, the Steering Group for the Study proposed eight possible implementation options for analysis by ERM (Option I to VIII). Each option provides for a two-phased approach, requires a number of different nutrients to be labelled in a specified nutrient content expression (specified requirements[1]) and includes exemptions. In addition, ERM examined the implication of delaying the second phase of implementation. The options are summarised in *Table 1.2*. It is noted that Option V is the scheme that was put forward in public consultation.

Table 1.2 Definition of Options

Options	Number of nutrients	Phase I Approach	Phase II Approach
I	Energy + 9 core nutrients	If packaging includes a nutrient-related claim then labelling is required to meet the specified requirements.	All products must be labelled and labelling must meet the specified requirements.
II	Energy + 7 core nutrients		
III	Energy + 5 core nutrients		
IV	Energy + 3 core nutrients		
V	Energy + 9 core nutrients	If packaging includes a nutrient-related claim **and/or an existing label** then labelling is required to meet the specified requirements.	
VI	Energy + 7 core nutrients		
VII	Energy + 5 core nutrients		
VIII	Energy + 3 core nutrients		

Phase I Approach

For each of the eight options, nutrition labelling meeting the specified requirements must be provided on any pre-packaged food product that includes a nutrient-related claim. For Options I to IV, prepackaged foods that do not include a nutrient-related claim can voluntarily provide nutrition labelling in any format. However, for Options V to VIII, nutrition labelling must meet specified requirements if it is provided on a pre-packaged food product.

Phase II Approach

In Phase II mandatory nutrition labelling is required for all prepackaged foods, except for those granted an exemption.

Number of Nutrients Requiring Labels

The Study examines four possible variations on the number of core nutrients requiring labels. These are as follows:

- Energy plus 9 core nutrients, including protein, available carbohydrate, fat, saturated fat, sodium, cholesterol, sugars, dietary fibre and calcium.
- Energy plus 7 core nutrients, including protein, available carbohydrate, fat, saturated fat, sodium, cholesterol and sugars.
- Energy plus 5 core nutrients, including protein, available carbohydrate, fat, saturated fat and sodium.

[1] Energy / nutrients have to be expressed in either of the following manner : (i) in absolute amount in kilocalories / metric unit per 100 g (or per 100 ml) of food; and / or (ii) if the package contains only a single portion, in absolute amount in kilocalories / metric unit per package. In addition, energy / nutrients may be expressed : (i) in absolute amount in kilocalories / metric unit per serving as quantified on the label; or (ii) in relative amount in terms of percentages of the local NRVs per 100 g (or per 100 ml) or per serving as quantified on the label.

- Energy plus 3 core nutrients, including protein, available carbohydrate and fat.

Exemptions

The exemptions, as proposed by the Administration, were based, in part, upon the current exemptions under the *Food and Drugs (Composition and Labelling) Regulations*.

1.5 BUSINESS STAKEHOLDER COMMENTS

While the scope of the study did not include undertaking a formal consultation on the proposed regulations, the Consultants contacted and sought the views of business stakeholders. A variety of views were expressed, a selection of which are summarised below.

- The HKSAR Government should introduce a simple nutrition labelling system with the minimum number of core nutrients (eg following the basic requirements of Codex). They can increase the number of nutrients later and in fact, due to the health consciousness of Hong Kong people, food producers will provide nutrition labelling voluntarily even without regulatory pressure.
- If overseas manufacturers / exporters know in advance (eg 3 years) that they have to re-label food products to adapt to the Hong Kong nutrition labelling requirements, the manufacturers / exporters are usually willing to comply.
- It is unlikely that the retailers will do relabelling themselves, they will simply not sell the products which do not meet the labelling standards.
- There should be exemptions for small and medium sized enterprises (SMEs) as large firms can bear the testing / relabelling cost but the small ones cannot. The cost of relabelling is very likely to be transferred to consumers due to the competitiveness of the food industry.
- Until there is an international consensus on nutritional labelling, there should not be mandatory nutritional labelling in Hong Kong on all prepackaged food items[1].
- There is no worldwide nutritional labelling scheme in place and many of Hong Kong 's key trading partners have different regulatory regimes. Yet Hong Kong imports 90% of its food from many different parts of the world and Hong Kong is a small volume market for overseas manufacturers. If Hong Kong has stricter or different nutritional labelling laws from its trading partners, this will lead to restricted choice of products in Hong Kong and an increase in the price of products resulting from the compliance costs or relabelling cost, etc.
- The number of nutrients required on labels should be the lowest common nutrients required in all other countries. The greatest impact would be on importers (not local manufacturers or retailers). There should be no problem for manufacturers whose products are specially packaged for the Hong Kong market.
- Discussions with laboratories and testing facilities in Hong Kong suggest that they have the know-how to perform the necessary testing for the Trade. Many of the laboratory and testing facilities present in Hong Kong are part of or associated with international companies and as such have access to a network of testing facilities.

[1] It is noted that the Hong Kong specified requirements are based on Codex guidelines regulating nutrition labels and claims, which were drawn up and endorsed by the member countries.

1.6 ANALYSIS OF BENEFITS AND COSTS

The Study included a cost-benefit analysis of the options. The approach taken and the results of this analysis are summarized below.

1.6.1 Benefits of Nutrition Labelling Options

An analysis undertaken by the Department of Community Medicine at the University of Hong Kong[1] identified a number of costs associated with nutrition-related diseases, as well as the likely reduction in these costs that could be achieved through education, nutrition labelling and corresponding changes in consumer behaviour. If consumers are sufficiently educated, the provision of nutrition labels allows for consumers to make healthy food choices, resulting in lower costs for nutrition-related diseases. The Department of Community Medicine has identified the likely reduction in disease burden achievable from each of the 8 options by considering:

- likely changes in nutrition labelling practices and consumer behaviour in Hong Kong (including consideration of the baseline);
- the proportion of food consumed that is likely to be pre-packaged;
- the percentage of the population who would benefit from the labelling of a particular nutrient (eg, the obese, diabetics, hypertensive etc.); and
- the likely health effect of reduced or increased nutrient intake.

The changes in health effects due to reduced or increased nutrient intake were quantified in dollar terms by valuing:

- savings from avoided public hospital admissions for each of the nutrient-related conditions;
- corresponding savings from General Practitioners (GP) visits and medicines associated with each of the nutrient-related conditions;
- savings from a reduction in lost productivity due to hospital admissions of people under aged 65 and due to deaths avoided in people under aged 75; and
- premature deaths avoided due to a reduction in nutrient-related diseases[2].

This analysis of the possible health benefits of a mandatory labelling scheme was focused on those benefits that are readily quantifiable from available data sets. This means that the quantifiable benefits associated with each option are limited to those associated with diseases for which reliable data sets are available. This limitation means that the analysis is likely to have undervalued the monetary and economic benefits attributable to each of the options. This is due to a number of gaps in the available data sets. For example:

[1] The report prepared by the Department of Community Medicine at The University of Hong Kong was reviewed by the following professors during its drafting and their comments were accounted for: Professor G. Guldan in the Department of Biochemistry at the Chinese University of Hong Kong, Professor C.M. Leung, School of Public Health, Faculty of Medicine, Chinese University of Hong Kong, and Professor S.F. Leung, Economics Department, Hong Kong University of Science and Technology.

[2] This quantification included a valuation of human life associated with premature death in those under 75 years of age. The dollar value used was taken as HK$ 10 million per premature death, irrespective of age at death. Placing an economic value on a life saved is a common practice in reviewing costs and benefits arising from health and safety policies and programmes and the value chosen was based on a review of such local and international values and studies (see main report for details). The main report also provides details of benefits attributable to each option without these mortality benefits.

- There are limited data sets on the health risk reductions available from altering intakes of some nutrients. For example, dietary fibre has been reported to decrease the risk of breast cancer, although the data are insufficient for the quantification of this impact.
- Valuing changes in quality of life is problematic. For example, fewer people suffering from diabetes, heart disease, strokes and other conditions could have a major impact on quality of life, although this benefit has not been quantified in the analysis.
- Only limited data are available on the costs of care and rehabilitation that takes place outside hospitals. While the analysis does include estimates for GP visits and medicines for some conditions, a number of other costs (such as those associated with home care) have not been included.

Further details of the approach to the benefits analysis can be found in the main report, while the numbers below represent the most likely estimate [1] of quantifiable benefits that could be accrued due to any of the options. The analysis assumes that these benefits would take 15 years to accrue upon full implementation (eg, Phase I and II).

Table 1.3 Possible Benefits Arising from Options (HK$ million)

Options	Phase I Maximum Annual Benefits	Phase II Maximum Annual Benefits	Total Maximum Annual Benefits
I	490	1,298	1,788
II	325	890	1,215
III	249	810	1,059
IV	31	121	152
V	1,040	748	1,788
VI	673	541	1,215
VII	510	549	1,059
VIII	53	98	152

Notes: The above costs are the mode of total achievable benefits arising from both Phase I and Phase II. For each option the analysis considered a range of possible outcomes where the upper and lower limits of the ranges were representative of the uncertainty surrounding the assumptions underpinning the benefits analysis. Furthermore the benefits attributable to Phase I and Phase II are assumed to take 15 years to accrue in full.

1.6.2 Compliance Costs Due to Nutrition Labelling

The introduction of a nutrition labelling scheme is likely to impose costs on importers, manufacturers and retailers in Hong Kong through, among other items, the need to undertake testing and relabelling of products. The Study examined these impacts and other impacts, through direct discussions and interviews with trade representatives, a market survey and a detailed analysis of the compliance costs. Given a combination of concerns expressed (particularly for, and by, SMEs) and the need to ensure that the financial and economic costs of implementing any scheme are fully considered, the Study has adopted a conservative approach to most aspects of estimating compliance costs. As a result of this exercise, the following costs were assumed to arise from any nutrition-labelling scheme and are included into the analysis:

- *Testing costs.* The analysis assumed that those products that do not currently have the necessary nutrient information would need to undergo laboratory analysis. The market survey undertaken by ERM identified the number of products that did not currently have a nutrition label and the analysis assumed that all of these products would have to undergo laboratory testing to meet the regulation.

[1] Modal value.

- *Re-labelling costs.* The analysis includes costs of having to attach additional labels onto products that are not specifically packaged for the Hong Kong market before local sale. Food products that are not exempted and have not been packaged with nutrition labelling meeting the proposed Hong Kong requirements are assumed to be relabelled before being put on the local shelves. The analysis assumes that importers, wholesalers or retailers are expected to incur the relabelling costs. The number of products requiring relabelling was identified through a market survey.
- *Economic costs due to lost products*. The introduction of a nutrition labelling scheme may lead to restrictions on the choice of imported products. The principal drivers of any decision to stop importing a product to Hong Kong are likely to be whether or not the costs of testing and labelling exceed the profit associated with that product and / or the ability of the market to absorb any price increases. Many of these products are likely therefore to be low volume, low profit products that are sold to consumers by niche retailers, both large and small. Due to the niche nature of these products, their loss is unlikely to be significant to the average consumer. However, the withdrawal of these products is expected to restrict the choices of some minority groups (eg, foreign domestic helpers) more than the average local consumer as these groups are more likely to purchase low volume and / or low profit products. For impacts on businesses, it is considered that while large niche retailers and importers / suppliers may be able to absorb these impacts, *significant* financial impacts are likely to be felt by any small retailers or importers who have to drop a notable proportion of their product range. The economic cost due to the loss of such products under each option / phase has been estimated by considering the value added [(1)] that such small importers and retailers provide to the economy.
- *Government enforcement costs.* The Administration provided an estimate of enforcement costs by making a number of assumptions on the level of resources required to enforce a nutrition labelling scheme. These costs included those associated with employing health inspectors, testing products in laboratories, handling prosecutions and complaints as well as nutrition labelling education and promotion.

It is acknowledged that these costs are not necessarily exhaustive. They do however represent the key costs likely to be incurred due to the implementation of a nutrition labelling scheme. A further discussion of the approach to the costs analysis, including a discussion of other costs not included in the analysis can be found in *Section 4* of the main report.

The key financial and economic costs arising from the implementation of the various options are summarised in *Table 1.4.*

[(1)] Value added represents the additional value to the economy that a business creates. For food retailers and importers it is equal to their sales and other receipts, interest payments and changes in stocks minus income from other sources, the value of the purchases of goods for sale and non-salary related operating expenses.

Table 1.4 Cost Impacts from the Options (HK$ million)

Options	Testing Costs (1)	Relabelling Costs(2)	Lost Product Costs(3)	Government Costs(4)	Total Costs (5)
Phase I					
I	28	31	28	4.4	91
II	22	31	27	4.2	84
III	15	23	23	4.1	65
IV	9	22	19	3.9	53
V	47	83	58	4.4	193
VI	36	82	56	4.2	178
VII	21	67	45	4.1	138
VIII	10	57	35	3.9	106
Phase II					
I	77	106	61	Incl. in Phase I	244
II	63	105	59	Incl. in Phase I	228
III	41	98	53	Incl. in Phase I	192
IV	22	89	47	Incl. in Phase I	158
V	60	54	31	Incl. in Phase I	144
VI	51	54	31	Incl. in Phase I	135
VII	35	54	31	Incl. in Phase I	119
VIII	21	54	31	Incl. in Phase I	105

Notes: The above costs are the modes of initial compliance costs assumed to be incurred during Phase I and Phase II. For each option the analysis considered a range of possible outcomes where the upper and lower limits of the ranges were representative of the uncertainty surrounding the assumptions underpinning the cost analysis (eg, market survey results, testing costs etc).

(1) Testing costs for products are one-off costs, although analysis includes a recurring testing costs associated with product turnover (eg, new products).

(2) Relabelling costs are recurring costs.

(3) Lost products costs are one-off economic costs. Recurring opportunity costs associated with being unable to introduce new products in the future are also included in the analysis.

(4) Government costs represent recurring enforcement and promotion expenses dedicated to nutrition labelling. Costs exclude ongoing efforts to promote a balanced diet in Hong Kong by various government departments.

(5) Total costs may not equal the sum of the other costs due to rounding.

1.7 FINDINGS AND RECOMMENDATIONS

The key findings of the cost-benefit analysis are summarised in *Table 1.5* and are discussed further below.

Table 1.5 Cost-Benefit Analysis of the Proposed Nutrition Labelling Scheme

Options	NPV of Trade Costs (HK$ million) (1)	NPV of Economic Costs (HK$ million)	NPV of Benefits (HK$ million)	NPV of Net Benefits (HK$ million) (2)	Benefit to Cost Ratio (3)	Year when Benefits Exceed Costs(4)	Max Annual Net Benefit (HK$ million)(5)
I	1,615	1,858	10,031	8,173	5.4	2013	1,620
II	1,563	1,798	6,798	5,000	3.8	2014	1,051
III	1,338	1,549	5,863	4,314	3.8	2014	916
IV	1,180	1,368	830	-538	0.6	-	24
V	1,757	2,013	11,077	9,064	5.5	2011	1,620
VI	1,697	1,944	7,461	5,516	3.8	2013	1,051
VII	1,451	1,671	6,360	4,688	3.8	2014	916
VIII	1,268	1,463	873	-590	0.6	-	24

Notes: The above results represent the most likely outcome of the various options. The main report provides details of the likely range of outcomes for each of the parameters. All Net Present Values are for a twenty-year period starting in 2008, discounted at a rate of 4% to 2005.

(1) This column shows trade compliance costs for the period 2008-2027 discounted at a rate of 4% to 2005.

(2) This column shows the stream of net economic benefits (benefits less costs) for the period 2008-2027 discounted at a rate of 4% to 2005.

(3) Benefit to cost ratio is the NPV of Benefits divided by the NPV of Economic Costs.

(4) This column shows the year in which the *cumulative* benefits of the scheme exceed the *cumulative* costs.

(5) This column shows the maximum annual net benefit once the scheme has achieved full benefits.

1.7.1 Impact on the Trade

The introduction of a nutrition labelling scheme is likely to impose costs on importers, manufacturers and retailers in Hong Kong.

The Study identified that nutrition labelling of pre-packaged food in Hong Kong is relatively common, with more than half of products having some form of nutrition label and more than a quarter carrying a nutrient-related claim. However, the majority of these products would not meet the requirements of the options, with nearly all products having to relabel, repackage and / or test to meet the more stringent options (Options I & V). The more nutrients requiring labelling, the higher the overall cost impact on the trade due to the increase in number of products requiring labelling and / or testing.

During Phase I period, between 20% to 58% of the pre-packaged food and drinks products in Hong Kong would require upgrade of nutrition labelling, eg, through repacking or relabelling. The difference in initial trade compliance costs due to the two alternative approaches during Phase I is significant. This is because the number of products requiring some action due to the existence of just nutrient claims (eg, under Options I to IV) is around half that of those requiring action due to both nutrient-claims and / or existing nutrition-labels (eg, under Option V to VIII). This suggests that if initial trade compliance costs were a concern then they could be significantly reduced if only products currently carrying nutrient-claims needed to meet the specified requirements during Phase I.

The analysis also suggested that the costs associated with implementing the options are likely to be significant for some small manufacturers, retailers and importers. In particular, retailers and importers of niche products are likely to be impacted significantly if they are selling goods that cannot easily be substituted for suitably labelled products. The analysis suggested that a number of such niche products with low sales revenue and profit could cease to be exported to Hong Kong. These might amount to between 5% and 10% of product variety on sale in Hong Kong (under the most stringent option). While the loss of these products is unlikely to be significant to the average consumer (as they are low volume niche products), they will nevertheless impose costs on the Hong Kong economy due to the

financial losses incurred by some small importers and retailers. For example, economic costs to society could arise due to the lower profitability of retailing and importing businesses and, in some extreme cases, job losses and business closure in these sectors.

Furthermore, due to the likely nature of the products lost (eg, niche and low volume, low profit), it is also worth noting that the withdrawal of these products by niche retailers and their suppliers could restrict current choices of minority groups, such as foreign domestic helpers. While the impacts on SMEs will for the most part be temporary, it may be significant for those SMEs with limited resources. Indeed, the analysis suggested that the cost to the economy, arising from these products losses, could be as much as HK$ 140 million as well as imposing recurrent opportunity costs (due to not being able to introduce other products in the future) of some HK$ 20 million per annum. For illustrative purposes, this cost could represent the closure of up to 191 small businesses (less than 1% of SMEs involved in the import and retail of food products).

1.7.2 Net Economic Impact to Hong Kong

The analysis suggests that only Options IV and VIII (eg, labelling of the energy value, amounts of protein, available carbohydrate and fat as suggested by Codex as a minimum requirement) do not appear to have net economic benefits under any of the scenarios evaluated. This is partly due to the fact that, as identified through the market survey, nearly 50% of current packaging with nutrient information already includes labels for the four nutrients required under these two options. Thus, the compliance costs associated with implementing these options are not justified by the benefits as the additional information provided to consumers, and hence benefits available, is limited. It is noted however that the analysis does not take into account the benefits that may be attainable from some of the existing labels being altered so that they meet the specified requirements [(1)]. However, examination of this issue suggests that even with the inclusion of benefits from such standardisation it is extremely unlikely that these two options would be cost-beneficial (further details are provided in the main report).

The other options were all identified as having a net economic benefit to Hong Kong. The analysis indicates that the benefits available, from reduced health care costs and lost productivity and avoidance of premature deaths, substantially outweigh the financial and economic costs of implementing such a scheme. Indeed the sensitivity analysis suggested that the ratio of these benefits to costs is at least 2 to 1 and could be as much as 10 to 1. Furthermore, the annual net economic benefit to Hong Kong, once full implementation of these options is achieved, could amount to between HK$ 900 million (for Options III and VII) to HK$ 1.6 billion (for Options I and V).

A significant component of these benefits are attributable to avoided premature deaths and HK$ 10 million used for the quantifying the value of a human life. While this approach to placing an economic value on a life saved is common practice both locally and overseas it is noted that the actual value to be used in the analysis is not without controversy. However, examination of alternative values suggests that even if this value was as low as HK$1.7

(1) Consumer surveys overseas have indicated that standardisation of nutrition labelling information, including claims, would allow consumers to accurately interpret labelling information and adjust their purchasing habits accordingly. Such benefits have not been quantified in this Study although an FEHD opinion survey in 2004 indicated that 94.5% of the general public supported standardisation of format of nutrition labels for easy reference by consumers and to avoid confusion. Furthermore, ERM's market survey indicated that the majority of existing nutrition labels in Hong Kong follow the specified nutrient content expression proposed by the Administration. For example, ERM's market survey indicated that of the 51% of products that carried a nutrition label, some 63% were either in the per 100 g / 100 ml or in the per package (if a single portion) format.

million per life, these six options would remain cost-beneficial. A review of local and international literature suggests that such a value is unreasonably low and thus the findings can be relied upon.

1.7.3 Recommended Approach

Given the above findings, and in particular concerns identified regarding impacts to the trade and SMEs, ERM recommends a measured approach to implementing a nutrition-labelling scheme in Hong Kong. As detailed at the beginning of this document this would initially involve only labelling products on which a nutrition-related claim is made. Such nutrition labelling should meet the specified requirements and include information on the quantity of the nutrient being claimed as well as the energy, protein, available carbohydrate, fat, saturated fat and sodium content of the product. The reasons for recommending this option (ie adopting Option III during the Phase I period), rather than other options can be summarised as:

- Significantly lower trade compliance costs during Phase I. Based upon current labelling practices, the imposition of Phase I could have significant cost implications. The analysis suggested that Option III's compliance costs during Phase I are significantly lower than those associated with Phase I of Options I, II, V, VI and VII; and,
- Net economic benefits to Hong Kong. The analysis suggests that proceeding with Options I to III and Options V to VII will have substantial net benefits to Hong Kong through savings in health care, avoided productivity losses and reduction of premature deaths. While adopting Options I and V during the Phase I period would likely have significantly higher net benefits to Hong Kong, Option III still has considerable net benefits, and a benefit to cost ratio that is comparable to Options II and notably higher than Options VI and VII [(1)].

Thus the scheme recommended balances the needs for minimising the cost implications to the Trade and ensuring a cost-effective approach for Hong Kong as a whole.

Furthermore, it is noted then when compared to the original proposal by the Administration put out for consultation in November 2003 (Option V) this initial approach has significant merits. For example, the impact on the trade during the initial phase is more than halved (both in terms of financial costs and the number of products impacted), while substantial economic benefits to Hong Kong are still likely to accrue. While the recommended approach is not as stringent as that originally proposed by the Administration, its implementation would have significantly lower impacts on the local food industry and provide an important first step in improving the provision of nutrition information to the public.

Once developments overseas have progressed, and this first phase has been successfully implemented, a more comprehensive scheme could be adopted (eg, Option I during the Phase II period). Furthermore, the approach recommended would provide at least five years, if not more, before the implementation of a mandatory nutrition labelling scheme for all pre-packaged food products, thus providing the trade, and in particularly SMEs, ample time to adapt to the more stringent scheme.

In addition, the following recommendations are provided for consideration:

(1) For Phase I only, the benefit to cost ratios of Options II, III, VI and VII were identified as 4.2, 4.2, 3.7 and 3.5 respectively.

- Keep the industry cost down, eg by allowing a sufficient grace period for the manufacturers who package their products specifically for the Hong Kong market to incorporate any design changes into their routine redesign of food packaging.
- Ensure adequate public education, information services, promotion and appropriate technical assistance to the industry and consumers. Without a substantial and effective education and promotion programme, benefits from the recommended scheme will be limited. Furthermore providing information and assistance to industry will ensure that compliance costs are minimised, thus ensuring the cost-effectiveness of any scheme.
- Develop a detailed monitoring and evaluation strategy, which provides quantitative and qualitative information about the impact of the scheme, how well the regulatory arrangements are working, and the level of monitoring and enforcement activity. This should incorporate a review mechanism for deciding when to upgrade the scheme to Phase II and / or increase the number of core nutrient requiring labelling.
- Consider measures to minimise the cost impact on SMEs to ensure both the continued diverse choice available in Hong Kong and to mitigate against any corresponding economic costs. In addition to the supporting measures suggested above, other measures could include exemptions for SMEs if such exemption did not threaten the objective of the proposed measures. In this regard guidelines for granting exemptions should be developed to allow individual exemption applications to be quickly and fairly considered.

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