of both client inquiries and their own reading. The ANF
usually proceeds by taking the current, considered view of
the scientific community on a topic and producing an
information resource. In topics where the scientific
consensus is unclear and scientific knowledge is changing
rapidly, the ANF is unable to proceed this way. However,
seminars and background papers for use by the health
professional which detail the latest scientific knowledge in
certain areas may be appropriate options to consider in
servicing this important membership sector.

The use of different communication formats for
providing the ANF membership and the wider national and
international community with nutrition information was
evident in the results. The ANF will continue its presence
on the Internet as a source of reliable nutrition information
which can be accessed nationally and internationally. The ANF
management feels that this is particularly important to
regions and sectors which do not have the resources
themselves to produce printed information for their clients
and consumers. The ANF however, will continue to provide
printed resources for its membership and others in line with
membership preferences.

This is an immense period of change for the ANF and
other similar organisations. Nutrition and food sciences are
advancing rapidly together with greater technological
changes particularly in the informatics area, which have
national and international implications. In these respects,
and as a general characteristic of an organisation with
scientific educational responsibilities, it must be able to live
with, and encourage the community to live with, uncertainty2.
The ANF is an organisation committed to remaining relevant
and to progressing change in its continuing role of educating the public about nutrition and
healthy food choices.

The future for the Australian Nutrition Foundation: A survey assessing members’ nutrition information needs
Natalie E Beaumont-Smith and Mark L Wahlqvist

A simple and quick method to evaluate the influence of food price policy on population-based nutrition status and related nutrition intervention
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Food Safety Control and Inspection Institute, Tianjin, China

Food price policies have a major influence on population food choice and nutritional status, especially for low
income families. Therefore, simple and quick methods to evaluate their influence is desirable. Consistent with
nutritional rationality and economical feasibility, a mathematical model was developed by Linear Programming to
approximate the influence and rationality of the subsidization of egg and pork in Tianjin, using the data about food
varieties and their prices in Tianjin in 1999. It was found that food subsidy to influence choice was not rational for
income improvement in nutritional status of low-income families. The concept of “food choice space” was
introduced, and its implications for nutrition intervention explored. The model developed can be used to judge the nutritional
effect of food price policies and provide baseline data for nutrition intervention.

Key words: Food price policy, nutrition status, linear programming

Introduction
Population nutritional status is related to food selection1,2. Factors
which influence food choice include: 1) socio-cultural, life style; 2)
organoleptic (taste and smell); 3) demographic factors (age, sex,
income and education); 4) food availability, cost, quality; 5)
psychological factors (cognitive); 6) health status; and 7)
nutrition status3. All the factors mentioned can be classified into
two categories: “personal factors” and the “nutrition environment”.
The nutrition environment embodies the variety, price and quality
of foods which a market provides. Food price policies influence
population food choice by way of affecting the nutrition environment.
Then they affect a population’s nutrition status. Therefore,
monitoring and evaluating change in the nutrition environment can
be used to predict change in population nutrition status. In other words, nutritional outcomes of food price policies
can be assessed by analysing the constituents of the nutrition
environment and how it operates.

Methodology
Conceptualisation. Even if food price policy influence on population food choice can be analysed through the link with
the nutrition environment, the environment itself cannot simply
carry over influence on people’s food selection and nutrition status,
for it could lead to least of affected food varieties and prices.
A mathematical model is required to untangle the environment and
give it meaning and shape. Linear programming serves the purpose. Linear programming is based on the mathematical
technique which assists in finding an optimum solution to a
problem when there is a constraint, alternatives, and an (objective
(g RDA) that needs to be minimised or maximised.

Mathematical model. The matrices C and X represent the
prices and the amounts of foods in a market, respectively, with CX
representing total food expenditure. The matrices B1 and B2 stand
for RDA (Recommended Dietary Allowance) levels and the
upper limits for safe intake of nutrients (this is for future use)
respectively. Matrix A is food composition and Matrix Bji signifies
the largest valued amount of food kinds with subsidies in form of
coupons.

The fringe values of, vitamin A, thiamin, niacin and vitamin C were
zero and are not listed in the table.

Table 1. The fringe costs of calcium and riboflavin in Tianjin in
1999 (IBM: Food 91 RDAs)

<table>
<thead>
<tr>
<th>Subsidization</th>
<th>Unsubsidization</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal Calcium Riboflavin</td>
<td>Calcium Riboflavin</td>
<td>Calcium Riboflavin protein</td>
</tr>
<tr>
<td>14g</td>
<td>4.224 0.044</td>
<td>4.210 0.040</td>
</tr>
<tr>
<td>18g</td>
<td>4.224 0.044</td>
<td>4.210 0.040</td>
</tr>
<tr>
<td>22g</td>
<td>4.064 0.038</td>
<td>4.010 0.040</td>
</tr>
<tr>
<td>26g</td>
<td>4.064 0.038</td>
<td>4.010 0.040</td>
</tr>
<tr>
<td>30g</td>
<td>4.064 0.038</td>
<td>4.010 0.047</td>
</tr>
<tr>
<td>34g</td>
<td>4.064 0.038</td>
<td>4.010 0.047</td>
</tr>
</tbody>
</table>

Plenary Lecture presented at an APCNS Satellite Meeting of the Asian Congress of Nutrition on “Nutrition, Body Composition and Ethnicity’ in Tianjin, China on 5th October 1995.

References
5. Wallace L. Two approaches to health promotion in the mass media. World Health Forum 1990; 11.
用一個簡便快速的方法來評價食物價格政策對以人群為基礎的營養和相關的營養干預的影響

食物價格政策對人民的食物選擇和人群營養狀態的影響很大，特別是對於低收入家庭。這樣就很需要一種簡便快速的方法，用來評価這種影響。為了使營養的合理性與經濟條件的可達性達到一致，天津的LINEAR項目採用1990年天津各種食物的價格資料，提出了評價天津鷄蛋和豬肉價格對營養合理性的影響的數學模型，研究發現補貼對促進低收入家庭的營養狀態並不合理。該研究還提出了食物選擇空間的概觀，並就它們與營養干預的關係進行了討論。結論是：這種方法可以用來評價食物價格政策對營養的影響，並能為營養干預提供基準資料。

References