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Sent: Tuesday, 26 June 2018 12:09 AM
To: Merrin Thompson >
Subject: RE: Fresh food pricing inquiry - Hearing confirmation

Dear Merrin,

Thank you for the opportunity to present to the fresh food pricing inquiry last Friday.

Given the questions the politicians had, this article on the potential public health impact of lack of competition in the grocery sector in Australia may be of interest (it is a little old, we are currently updating it).

It was referenced in our submission, but they may be interested in the full article.

Based on the questions, I have also asked our members to prepare a list of successful school initiatives already occurring in Australia, which I will forward when I receive them.

If there are any more questions or details, we are more than happy to provide them.

Many thanks

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Is lack of retail competition in the grocery sector a public health issue?

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Australia has one of the highest market concentrations of grocery retailers in the world. Coles and Woolworths combined retain nearly 80% of the total Australian retail market and nearly half of the fresh produce market.¹ In comparison, American market leader Wal-Mart has only 19% of that market while Kroger – America's second largest retailer – has less than 5%.² In the UK, an Office of Fair Trading report found that having five retailers controlling 80% of the market had adverse effects on competition in the retail grocery sector.³ While these levels of retail concentration have caused concern overseas, the Australian Competition and Consumer Commission (ACCC) has expressed little concern with the markedly higher levels of concentration in the Australian grocery retail sector.

Although the ACCC acknowledged a large number of submissions highlighting the increases in prices of healthy foods compared to unhealthy foods, the report stated that while the ACCC "had to regard all information that indicates rising prices for standard groceries, the report does not comment or make recommendations on policies to the encouragement of healthy eating".¹ The issue of reduced competition in the retail grocery sector is seen predominantly as one of only economic consequence. However, the effects of reduced levels of retailer competition on the affordability, access, choice and quality of foods available

to consumers may have very real effects on public health. It is not the place of this article to investigate or comment on the economic effects of reduced and restricted competition in the grocery sector. However, what this article does set out to do is outline the possible public health ramifications that this situation presents in Australia.

Background

Increasing fruit and vegetable consumption to the desired baseline level of 600 g has the potential to reduce total burden of disease by 1.8%.⁴ In Queensland alone the disease burden associated with poor nutrition is thought to be over 16%, accounting for approximately 14% of the State hospital budget and implicated in 56% of deaths.⁵ Australian Burden of Disease Studies have suggested that inadequate fruit and vegetable consumption is directly responsible for between 2% and 3% of Australia's total disease burden, including approximately 11% of all cancer deaths.^{6,7} The reasons for this are easy to identify: the 2005 *Victorian Population Health Survey* showed that 9 in 10 (90.1%) people in that state did not eat enough vegetables to meet healthy eating guidelines.⁸

This is not an issue isolated to Australia. In New Zealand it was suggested that inadequate fruit and vegetable intake contributes to 6% of all deaths, and within a decade positive population health impacts could be seen

Abstract

Objectives: The economic implications of a lack of competition in the grocery retail sector are hotly contested. However, there are also significant health implications of such anti-competitive practices that seldom receive attention. This paper hopes to draw attention to the potential public health issues that arise as a result of lack of competition in the grocery retail sector.

Method: Relevant supporting literature was reviewed to explore the possible effects of market concentration on various health outcomes.

Results: High retailer concentration may adversely affect affordability, accessibility, quality, and choice of healthy food options to consumers. In turn this has significant implications for public health.

Implications: Unless these upstream factors are addressed through the development of healthy competition, policy public health programs aimed purely at encouraging the public to consume higher quantities of healthful foods may be rendered ineffective.

Key words: Food, health, policy, retail, competition.

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with even modest increases in consumption.⁹ The World Health Organization estimates that the costs of poor nutrition, obesity and low physical exercise in Europe may account for 9.7% of all disability-adjusted life years lost in that population – compared to 9% lost due to smoking.¹⁰

However, the true burden of disease associated with poor nutritional access and choices in developed nations is thought to be greatly underestimated.¹¹ British treasury estimates suggest that the National Health Service would spend £30 billion less annually if the population ate better, was less obese, increased physical activity and smoked less.¹² It is clear that access to healthy foods has an impact on the health of the broad population. One issue that may affect access in Australia is lack of retail competition in the grocery sector and the subsequent affordability, choice and quality of food.

Effects of food costs on dietary habits

Any factors that increase the price of healthy food choices will have immediate impacts on nutritional status of populations. Food costs are the highest expenditure item in the average Australian budget, representing an average of 17.3% of total household expenditure.¹³ The figure is higher in lower socio-economic groups. The Illawarra Healthy Food Price index Study found that a nutritious basket of food to feed a family of five costs 32% of average weekly earnings.¹⁴ This already high proportional cost is concerning considering that expenditures on food are often the first reduced when other household expenditures increase.¹⁵

Data from the US shows a positive relationship between increasing costs of fresh fruits and vegetables and the development of obesity in children.¹⁶ Data from the US has also shown that decreasing healthy food costs can be effective in increasing the consumption of healthy foods.¹⁷

However, rises in fresh food prices may particularly affect lower-income groups already at risk of poor food security. While fruit and vegetables are often considered affordable in the amounts these consumers habitually buy, any increase in consumption is often seen as prohibitively expensive.¹⁸ This poses problems for programs aimed at increasing fruit and vegetable consumption across the broad population. Decreased competition may result in less affordability, further limiting the accessibility of nutritious foods. This may render programs aimed at increasing healthy food consumption ineffective unless measures are taken to improve affordability of these foodstuffs.

Effects of decreased competition on food prices

The market dominance of Australia's major retailers allows them to set what the ACCC terms 'a number of tough dealings' upon suppliers. It is suppliers, not retailers, who pay for discounted promotions in the aisles even when they are initiated at the retailer's discretion. A raft of other rebates and fees imposed by the retailers – representing as much as 30% of retailers' turnover¹ – create a situation whereby it is hard for new retailers or producers to even enter the marketplace, let alone compete.

Consumers may appear at first to benefit from the low prices attributed to a strong supermarket sector. However, this represents a false economy. While major supermarket chains may offer lower prices on a number of items relative to competitors, they may increase retail prices overall. Major retailers impose vast and complicated arrays of rebates and fees on manufacturers and suppliers and these costs are inevitably passed on to the customer. Moreover, the waterbed effect (where major supermarket chains dictate lower prices to their suppliers forcing them to recoup costs by charging higher prices to the rest of the market) pushes prices higher for smaller retailers, artificially raising retail prices and further limiting consumer choice in the marketplace.¹⁹

Supermarket retail prices have met or outpaced inflation in recent years, while prices paid to producers have either stagnated or declined over the same period.²⁰ In the "Examination of the prices paid to farmers for livestock and the prices paid by Australian consumers for red meat" the ACCC acknowledged that the gap between retail prices and those paid to producers has substantially increased.²¹ Overseas studies have also shown an association between increased retail concentration and widening gaps between producer payments and retail prices. For example two separate US studies showed that retail milk prices in Western and Northeast United States rose despite the prices paid to producers decreasing.^{22,23} The authors found this related to decreasing competition in both wholesale and retail markets. Recent Finnish data has also demonstrated increased grocery prices for consumers when retail sectors become more concentrated.²⁴ Although this link has not been directly studied in Australia, it is known average farm gate prices have not kept pace with inflation or the average retail price of milk since deregulation of the dairy industry.²⁵

The prices of prepared and non-perishable food items may also be affected by reduced competition. For example, while major retailers attribute a price increase of 70 cents per loaf of bread over the past 12 months to higher wheat prices, increases in farm-gate grain price only account for 10.7 cents of this increase.²⁰ However, since 2002 rebates and fees paid by producers and manufacturers to the major retailers have increased in most instances.¹ A study by PriceWaterhouseCoopers traces the increasing rate of food price increases to a higher concentration of the retail grocery market and vertical integration of food supplies.²⁶ These increases were found to be highest in fresh produce, meat and dairy.

The ACCC report suggests an industry-wide margin of between 35% and 45% on fruit and vegetables and that many supermarket chains – specifically the independent chains – may use perishable sales to inflate margins and make up for lower profits on packaged goods.¹ While this artificial inflation may not be a primary reason for the profitability of the major supermarket chains – in fact their dried goods remain their most profitable – their market dominance has left them immune from the significant cost increases associated with food production borne by many of their suppliers and their competitors by enabling them to push costs, risks and responsibilities back down the supply chain.

Both wholesale purchases and retail sales in the Australian grocery sector are dominated by few players – effectively creating

a combined duopsony and duopoly. This may result in both lower prices paid to producers and higher prices for consumers.²⁷ In fact, it is often higher retail prices rather than efficiency that are primary sources of profitability for retailers in concentrated markets.²⁸ The 2006/07 Woolworths annual report boasts a 24.2% increase in earnings based on a 9.0% increase in sales in Woolworths' Australian supermarkets division.²⁹ Figures such as these further suggest a disparity between wholesale and retail price growth.

Effects on food quality and choice

Studies show that it is not just the level of consumption of healthy foods but the level of variety of these foods that positively affect health outcomes.³⁰⁻³² Such studies also suggest that increasing consumption of healthy foods has a more beneficial effect than decreasing consumption of unhealthy foods.³² However, decreased competition can limit consumer access to healthy foods for a number of reasons.

Consumers may lose out in a concentrated retail sector due to effects on product innovation, choice and quality.³³ Product quality may be sacrificed to offer the prices demanded by major supermarket chains. Consumer choice may be further hampered by the removal of product lines from suppliers who cannot meet demands of the large retailers, or who are forced to compete with an expanded range of more profitable in-house products – often sold at lower prices as they are not required to factor rebates or fees into their pricing schedules.^{34,35} Some manufacturers may be forced to use inferior raw materials such as extenders or cheaper raw product to meet large retailer discounting demands. This further diminishes the consumer's ability to make an informed nutritional choice, and potentially decreases food quality. Several examples of these situations can be observed on the ACCC's retail sector inquiry public submission site.³⁶

Improved distribution and supply networks may increase profitability for larger retailers, but they may have adverse effects on nutritional quality of foods offered to the consumer. The nutritional and healthiness of fresh foods is affected by a number of factors – including storage, harvesting techniques, transportation and time between harvesting or processing and sale to the consumer.³⁷

Smaller, independent grocers may be able to provide a larger variety of fresh, seasonal and often local produce – often procured on a daily process from wholesale markets, whereas larger retailers are dependent on their nationwide distribution networks that may result in requiring longer travel times or complex long-storage techniques for fresh produce. As a result a possibility exists that the food has been nutritionally compromised by the time it reaches the consumer.³⁷

Generally, fresh produce is also cheaper when purchased from independent and specialised retailers such as butchers and greengrocers.^{38,39} Although these savings may be modest some informal surveys have suggested that smaller, independent retailers may offer prices several dollars a kilogram less than larger retailers for fresh produce.⁴⁰

Studies often use supermarket access as a proxy measure of healthy food accessibility.⁴¹⁻⁴³ Improving access to supermarkets through measures such as urban planning or other legislative requirements is often suggested as a means to improve access to nutrition.^{44,45} However, British research has shown that large scale food retailing does not positively affect fruit and vegetable consumption and may actually restrict food choices.^{46,47} Data from Brisbane have demonstrated that unlike overseas experiences no difference seems to exist between access to major food retailers in different socio-economic areas in Australia. However, small differences do exist in access to smaller specialised retailers such as greengrocers, with slightly lower access in more disadvantaged areas.⁴⁸

Smaller scale retailers such as butchers, bakers, greengrocers and even open markets may increase the availability, affordability, freshness, quality and choice of foods for consumers.⁴⁹ Therefore policy directions that encourage small-scale retail competitiveness may play a vital role in improving public nutrition.

Competition policy as a public health tool

Other nations have various mechanisms to counteract the development of monopolies or oligopolies in the retail sector. There is no equivalent in Australian legislation, for example, to the American Robertson-Patman Act, which prohibits price discrimination on the sale of goods to equally situated distributors when the effect of such sales is to reduce competition.⁵⁰ This act does not aim to reduce discounting to retailers based on volume, but rather cease discounting received due to purchasing power that would enable dominant retailers to drive all others out of business. Australian retail giants do seem to have this level of purchasing power.

Current and recent approaches to improving community nutrition may not succeed until the above issues are addressed. Well-meaning initiatives such as the Federal Government's former GroceryChoice website may have further exacerbate issues of access to healthy foods by focusing attention on larger retailers. For example, the methodology section of the website states clearly that stores under 1,000 square metres or specialty stores such as greengrocers and butchers were not eligible for evaluation. This left only the major supermarket chains and the larger independents such as Franklins, IGA or Aldi. This lack of representation of a valuable sector amounted to free advertising for the major supermarket chains and may have further compounded declining competition. This was particularly unrepresentative considering smaller independent operators may offer lower prices and better quality than larger retailers.

Some may argue that this dominance is the result of consumers making concerted choices to shop at major supermarket chains. However, a CHOICE survey found that while consumers think that there is not enough competition in the retail grocery sector, 78% of respondents shopped at Coles or Woolworths because they felt they had few other options available to them.⁵¹ The consumer loyalty to major supermarket chains may have as much to do with lack of choice as it does with active consumer choice.

Conclusion

To some extent retailers have a gatekeeper role in the provision of nutrition to the public by virtue of their ability to control access to supermarket shelves. Evidence suggests that most retailers do little to make positive use of this role.⁵² This is compounded in Australia by the market dominance of a few players. The national focus of these large players may also make it difficult for health policy to utilise this role to achieve locally focused outcomes.⁵³ Anti-competitive practices such as slotting or listing fees and unjustifiable discounts forced on suppliers may abuse this power and further reduce the ability of the population to make real choices in relation to food and nutrition.

To our knowledge this is the first time that decreased competition in the grocery retail sector has been specifically identified as an ongoing public health issue. The public health implications of Australia's highly concentrated retail grocery sector in the event of national crisis or pandemic has previously been identified,⁵⁴ but the health implications exert their influence even in the absence of such radical events.

Given the dramatic effects on health measures, lowered accessibility of healthy food choices borne from an uncompetitive grocery sector should be considered a matter of public health concern as much as it an economic one. Unless healthy foods are made more accessible through the development of a competitive retail grocery sector the numerous public health programs aimed at increasing consumption of these foods may be doomed from the start.

It should be noted that the health implications of competition are not within the mandate of the ACCC and its report. It is our view that mandate expansion, to include health implications, should be considered in future ACCC reports. In any case, ensuring healthy competition policy may also prove sound health policy.

References

1. Australian Competition and Consumer Commission. *Report of the ACCC Inquiry into the Competitiveness of Retail Prices for Standard Groceries* [report on the Internet]. Canberra (AUST): Commonwealth of Australia; 2008 [cited 2008 Sept 22]. Available from: <http://www.accc.gov.au/content/index.phtml?itemId=838251>
2. Supermarket News [homepage on the Internet]. New York (NY): Penton Media; 2008 [cited 2008 Sept 22]. *2007's Top 75 North American Food Retailers*. Available from: <http://supermarketnews.com/profiles/top75/>
3. Office of Fair Trading. *The Grocery Market: The OFT's Reason for Making a Reference to the Competition Commission* [report on the Internet]. London (UK): Office of Fair Trading; 2006 [cited 2008 Sept 22]. Available from: http://www.offt.gov.uk/shared_offt/reports/comp_policy/oft845.pdf
4. Lock K, Pomerleau J, Causer L, Altmann D, McKee M. The global burden of disease attributable to low consumption of fruit and vegetables: implications for the global strategy on diet. *Bull World Health Organ*. 2005;83:100-8.
5. Queensland Health. *The Health of Queenslanders 2006: Report of the Chief Health Officer* [report on the Internet]. Brisbane (AUST): Queensland Health; 2006 [cited 2008 Sept 22]. Available from: http://www.health.qld.gov.au/cho_report/documents/32048.pdf
6. Mathers C, Vos T, Stevenson C. *The Burden of Disease and Injury in Australia* [report on the Internet]. Canberra (AUST): Australian Institute of Health and Welfare; 1999 [cited 2008 Sept 22]. Available from: <http://www.aihw.gov.au/publications/hwe/bodaiia03/bodaiia03.pdf>
7. Begg S, Vos T, Barker B, Stevenson C, Stanley L, Lopez A. *The Burden of Disease and Injury in Australia 2003* [report on the Internet]. Canberra (AUST): Australian Institute of Health and Welfare; 2007 [cited 2008 Sept]. Available from: <http://www.aihw.gov.au/publications/hwe/bodaiia03/bodaiia03.pdf>
8. Department of Human Services [homepage on the Internet]. Melbourne (AUST): State Government of Victoria; 2005 [cited 2008 Sept 22]. *Victorian Population Health Survey*. Available from: <http://www.health.vic.gov.au/healthstatus/downloads/vphs/vphs2005.pdf>
9. Tobias M, Turley M, Stefanogiannis N, Vander Hoorn S, Lawes C, Ni Mhurchu C, et al. Vegetable and fruit intake and mortality from chronic disease in New Zealand. *Aust N Z J Public Health*. 2006;30:26-31.
10. World Health Organization. *The Impact of Food and Nutrition on Public Health. Case for a Food and Nutrition Policy and Action Plan for the WHO European Region 2000-2005*. Copenhagen (DNK): WHO Regional Office for Europe and Food and Nutrition Policy Unit; 2000.
11. Pomerleau J, McKee M, Lobstein T, Knai C. The burden of disease attributable to nutrition in Europe. *Public Health Nutr*. 2003;6:453-61.
12. Wanless D. *Securing our Future Health: Taking a Long-term View* [report on the Internet]. London (UK): Her Majesty's Treasury; 2002 [cited 2008 Sept 22]. Available from: http://www.hm-treasury.gov.uk/consult_wanless_final.htm
13. Australian Bureau of Statistics [homepage on the Internet]. Canberra (AUST): ABS; 2005 [cited 2008 Sept 22]. *Household Expenditure Survey, Summary of Results, Australia, 2003-04*. Available from: <http://www.ausstats.abs.gov.au/>
14. Williams P, James Y, Kwan J. The Illawarra Healthy Food Price Index 2. Pricing methods and index trends from 2000-2003. *Nutrition & Dietetics*. 2004;61:208-14.
15. Bhattacharya J, DeLeire T, Haider S, Currie J. Heat or Eat? Cold-Weather Shocks and Nutrition in Poor American Families. *Am J Public Health*. 2003;93(7):1149-54.
16. Sturm R, Datar A. Body mass index in elementary school children, metropolitan area food prices and food outlet density. *Public Health Nutr*. 2005;119:1059-68.
17. French S. Public health strategies for dietary change: schools and workplaces. *J Nutr*. 2005;135:910-12.
18. Dibsall L, Lambert N, Bobbin R, Frewer L. Low-income consumers' attitudes and behaviour towards access, availability and motivation to eat fruit and vegetables. *Public Health Nutr*. 2003;6:159-68.
19. Mills G. Buyer Power of Supermarkets. *Agenda*. 2003;10:145-62.
20. National Farmers' Federation [homepage on the Internet]. Canberra (AUST): NFF; 2008 [cited 2008 Sept 22]. *ACCC Inquiry Into the Competitiveness of Retail Prices for Standard Groceries: NFF Submission*. Available from: <http://www.accc.gov.au/>
21. Australian Competition & Consumer Commission [homepage on the Internet]. Canberra (AUST): Commonwealth of Australia; 2007 [cited 2008 Sept 22]. *Examination of the Prices Paid to Farmers for Livestock and the Prices Paid by Australian Consumers for Red Meat*. Available from: <http://www.accc.gov.au/>
22. Carman H, Sexton R. Supermarket fluid milk pricing practices in the Western United States. *Agribusiness*. 2005;21:509-30.
23. Chidmi B, Lopez R, Cotterill R. Retail oligopoly power, dairy compact, and Boston milk prices. *Agribusiness*. 2005;21:477-91.
24. Aalto-Setälä V. The effect of concentration and market power on food prices: evidence from Finland. *Journal of Retailing*. 2002;78:207-16.
25. Margetts D. National Competition Policy and the Australian Dairy Industry. *Journal of Australian Political Economy*. 2008;60:98-129.
26. PriceWaterhouseCoopers [homepage on the Internet]. Sydney (AUST): National Association of Retail Grocers of Australia; 2007 [cited 2008 Sept 22]. *The Economic Contribution of Small to Medium-sized Grocery Retailers to the Australian Economy, with Particular Focus on Western Australia in 2007*. Available from: http://www.narga.net.au/documents/2007/Economic_contribution_%20SMEs_NARGA.pdf
27. Griffith G. Policy Forum: Competition Issues in the Australian Grocery Industry – The Impact of Supermarkets on Farm Suppliers. *The Australian Economic Review*. 2004;37:329-36.
28. Cotterill R. Antitrust analysis of supermarkets: global concerns playing out in local markets. *The Australian Journal of Agricultural and Resource Economics*. 2006;50:17-32.
29. Woolworths Limited. *Annual Report* [report on the Internet]. Sydney (AUST): Woolworths Limited; 2007 [cited 2008 Sept 22]. Available from: http://library.corporate-ir.net/library/14/144/144044/items/268152/wol137+ar07_fa_r.pdf
30. Kaluza J, Håkansson N, Brzozowska A, Wolk A. Diet quality and mortality: a population-based prospective study of men. *Eur J Clin Nutr*. 2009;63(4):451-7.
31. Kant A, Schatzkin A, Graubard B, Schairer C. A prospective study of diet quality and mortality in women. *JAMA*. 2000;283:2109-15.
32. Michels K, Wolk A. A prospective study of variety of healthy foods and mortality in women. *Int J Epidemiol*. 2002;31:847-54.
33. Smith R. The Australian grocery industry: a competition perspective. *The Australian Journal of Agricultural and Resource Economics*. 2006;50:33-50.
34. Miranda M, Joshi M. Australian retailers need to engage with private labels to achieve competitive difference. *Asia Pacific Journal of Marketing Logistics*. 2003;15(3):34-47.

35. Carson V. Less choice as Coles cuts its product lines. *The Sydney Morning Herald*. 2008;Oct 15:8.
36. Australian Competition & Consumer Commission [homepage on the Internet]. Canberra (AUST): Commonwealth of Australia; 2008 [cited 2008 Sept 22.] *Grocery Inquiry: ACCC Inquiry into the Competitiveness of Retail Prices for Standard Groceries*. Available from: <http://www.accc.gov.au/content/index.phtml/itemId/809228>
37. Bengtsson G, Matfors A, Hagen A. Storage and handling of fruits and vegetables for optimal health-related quality. In: Tomás-Barberán F, Gil M, editors. *Improving the Health-promoting Properties of Fruit and Vegetable Products*. Boca Raton (FL): CRC Press; 2008. p. 592.
38. Williams P, Reid M, Shaw K. The Illawarra Healthy Food Price Index 1. Development of the food basket. *Nutrition & Dietetics*. 2004;61:200-7.
39. Block D, Kouba J. A comparison of the availability and affordability of a market basket in two communities in the Chicago area. *Public Health Nutr*. 2006;9:837-45.
40. Pountney M. Grocer pick of crop over supermarkets. *Herald Sun*. 2008;Aug 26:11.
41. Cummins S, Macintyre S. A systematic study of an urban foodscape: the price and availability of food in Greater Glasgow. *Urban Stud*. 2002;39:2115-30.
42. Morland K, Wing S, Diez Roux A. The contextual effect of the local food environment on residents' diets: the atherosclerosis risk in communities study. *Am J Public Health*. 2002;92:1761-7.
43. Zenk S, Schulz A, Israel B, James S, Bao S, Wilson M. Neighborhood Racial Composition, Neighborhood Poverty, and the Spatial Accessibility of Supermarkets in Metropolitan Detroit. *Am J Public Health*. 2005;95:660-7.
44. Burns C, Inglis A. Measuring food access in Melbourne: Access to healthy and fast foods by car, bus and foot in an urban municipality in Melbourne. *Health Place*. 2007;13:877-85.
45. Guy C. Neighbourhood retailing and food poverty: a case study in Cardiff. *International Journal of Retail & Distribution Management*. 2004;32:577-81.
46. Guy C, Clarke G, Eyre H. Food retail change and the growth of food deserts: a case study of Cardiff. *International Journal of Retail & Distribution Management*. 2004;32:72-88.
47. Cummins S, Petticrew M, Higgins C, Findlay A, Sparks L. Large scale food retailing as an intervention for diet and health: a quasi-experimental evaluation of a natural experiment. *J Epidemiol Community Health*. 2005;59:1035-40.
48. Winkler E, Turrell G, Patterson C. Does living in a disadvantaged area mean fewer opportunities to purchase fresh fruit and vegetables in the area? Findings from the Brisbane food study. *Health Place*. 2006;12:306-19.
49. Pettinger C, Holdsworth M, Gerber M. 'All under one roof?' differences in food availability and shopping patterns in Southern France and Central England. *Eur J Public Health*. 2008;18:109-14.
50. Dutilh N. *Dealing with Dominance: The Experience of National Competition Authorities*. Hague (NED): Kluwer Law; 2004. p. 310.
51. Australian Consumer Association [homepage on the Internet]. Sydney (AUST): ACA; 2008 March [cited 2008 Sept 22]. *Survey Highlights Shopper Concern*. Available from: <http://www.choice.com.au/viewArticle.aspx?id=106275&catId=100570&tid=100011>
52. Lang T, Rayner G, Kaelin E. *The Food Industry, Diet, Physical Activity and Health: A Review of Reported Commitments and Practice of 25 of the World's Largest Food Companies* [report on the Internet]. London (UK): City University; 2006 [cited 2008 Sept 22]. Available from: <http://www1.city.ac.uk/cms/marcoms/press/The%20Food%20Industry%20Diet%20Physical%20Activity%20and%20Health.pdf>
53. Miller M, Pollard C. Health working with industry to promote fruit and vegetables: a case study of the Western Australian Fruit and Vegetable Campaign with reflection on effectiveness of inter-sectoral action. *Aust N Z J Public Health*. 2008;29:176-82.
54. Haug A, Brand-Miller J, Christophersen O, McArthur J, Fayet F, Truswell S. A food "lifeboat": food and nutrition considerations in the event of a pandemic or other catastrophe. *Med J Aust*. 2007;187:674-6.