STRATEGIC AND COMMERCIAL INTELLIGENCE

Trial of a Government and Industry charge on plastic bags

Report of findings

Final – 20 October 2008

ADVISORY

AUDIT ▪ TAX ▪ ADVISORY

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Private & Confidential
20 October 2008

The CEO
Australian National Retailers Association
8/16 Bougainville Street
Manuka, ACT 2603

For the attention of Margy Osmond

Dear Margy

Advisory Assistance – Trial of a Government and Industry charge on plastic bags

Background

We have been engaged by Australian National Retailers Association ('ANRA', 'you') to provide advisory assistance in connection with the trial of a Government and Industry charge on plastic bags ('Plastic bag charge trial').

Scope of work

Our work has been performed in accordance with the detailed terms of reference outlined in Appendix 2 of our engagement letter dated 12 August 2008 and was directed towards developing a report to summarise the findings from the plastic bag charge trial which was conducted in the four week period from 18 August 2008 to 14 September 2008.

The quantitative and qualitative data we collected focussed on testing five hypotheses

- Hypothesis 1: A 10 cent levy for plastic bags at supermarket checkouts reduces bag consumption by 80%;
- Hypothesis 2: A 10 cent levy does not change customer shopping habits, i.e. encourage customers to shop elsewhere;
- Hypothesis 3: The 10 cent levy is likely to cause a long term change in customer behaviour with regard to shopping bag usage;
- Hypothesis 4: customers use checkout bags as bin liners and a reduction in use will stimulate demand for bin liners; and
- Hypothesis 5: customers and checkout staff are not aggrieved by the introduction of a levy.

Our work commenced on 13 August 2008 and our fieldwork was completed on 7 October 2008. We have not undertaken to update this report for events or circumstances arising after that date.

We have completed the terms of reference set out in Appendix 2 to our engagement letter dated 12 August 2008.

Information

In undertaking our work, we conducted surveys with 300 customers and 72 staff at each participating retailer store over the four trial period. Participating retailers also provided quantitative data including volumes of plastic bag usage, volumes of green bag sales and sales movements pre trial and during the 4 week trial period.

We have indicated in this report the sources of the information presented.

A draft of this report has not been read by the participating retailers, and they have not confirmed to us in writing that its contents are factually correct.

Limitations

The responsibility for determining the adequacy or otherwise of our terms of reference is that of ANRA.

Our terms of reference comprise an advisory engagement which is not subject to Australian, or any other, auditing or assurance standards and consequently no conclusions intended to convey assurance are expressed.

Had we performed additional procedures, or an audit or review, other matters might have come to our attention that would have been included in this report.

The information presented in this report is based on that made available to us in the course of our work. We have not, however, sought to establish the reliability of the information by reference to other evidence.

We have not compiled, examined or applied other procedures to any prospective financial information in accordance with Australian, or any other, auditing or assurance standards. Accordingly, this report does not constitute an expression of opinion as to whether any forecast or projection of ANRA will be achieved, or whether assumptions underlying any forecast or projection of ANRA are reasonable. We do not warrant or guarantee any statement in this report as to the future prospects of ANRA.

There will usually be differences between forecast or projected and actual results, because events and circumstances frequently do not occur as expected or predicted, and those differences may be material.

Our findings set out in this report do not constitute recommendations to ANRA as to whether ANRA should proceed with a permanent charge on plastic checkout bags.

Distribution

This report is solely to assist ANRA in connection with understanding the findings from the plastic bag charge trial, and for ANRA's information. This report is not to be used for any other purpose or distributed in whole or part to any other person, except as set out in our engagement letter, or as otherwise agreed by us in writing.

Yours faithfully

George Svinos
Director
KPMG Transaction Services (Australia) Pty Limited

Glossary of terms

The following terms are used throughout our report

ACCC	Australian Competition and Consumer Commission
ANRA	Australian National Retailers Association
DSE	Department of Sustainability and Environment
EPA	Environment Protection Authority
EPHC	Environment Protection Heritage Council
Green bags	Reusable bags (usually green in color) sold at the supermarket by retailers for the purpose of transporting groceries to replace plastic checkout bags
HDPE	High density polyethylene – generally single use plastic bags used at supermarket checkouts
n	Number of survey responses
Own bags	Bags that the customer has brought with them to the supermarket
Plastic bag charge trial	Trial of a Government and Industry charge on plastic bags
Plastic checkout bags	Lightweight HDPE plastic bags provided by the supermarket at the checkout, designed for single use
Qualitative Data	Data received through conducting surveys with customers and staff
Quantitative Data	Data received from participating stores on volume of plastic bag usage, volume of green bag sales and sales movements pre trial and during the four weeks of the trial

Source: Decision regulatory impact statement , Investigation of options to reduce the impacts of plastic bags April 2008

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The Trial

In 2007, Australians used approximately 2.96[1] billion lightweight single use high density polyethylene (HDPE) bags from supermarkets

The Australian National Retailers Association ('ANRA') in partnership with the Victorian Government wanted to conduct a trial project involving major supermarkets placing a voluntary charge on plastic bags at selected sites around Victoria to "create a system that is achievable and effective in reducing plastic bag use"

KPMG worked with ANRA to form 5 hypothesis that were tested during the trial using quantitative and qualitative data

The trial ran for a four week period from 18 August 2008 to 14 September 2008

STORE PARTICIPANTS

coles PROUDLY AUSTRALIAN SINCE 1914

'The Fresh Food People' SAFEWAY

Local Heroes IGA

KEY STAKEHOLDERS

- Victorian Government
- Australian National Retailers Association ('ANRA')
- Coles, Woolworths, IGA
- Australian Competition and Consumer Commission ('ACCC')
- Environmental groups ('EPHC', 'EPA', 'DSE')
- General public
- Sustainability Victoria

HYPOTHESES

1. A 10 cent charge for plastic checkout bags reduces consumption by 80%
2. A 10 cent charge does not change customer shopping habits
3. The 10 cent charge is likely to cause a long term change in customer behaviour
4. Customers use checkout bags as bin liners and a reduction in use will stimulate demand for bin liners
5. Customers and checkout staff are not aggrieved by the introduction of a charge

The trial ran for a four week period from 18 August 2008 to 14 September 2008

Reduction in plastic checkout bags

All profits made from the trial will go to local environmental projects at trial locations

LOCATIONS

- Three locations were selected for the trial: Fountain Gate area, Warrnambool and Wangaratta
- The locations were selected to include rural and metropolitan Melbourne and to offer a sufficiently large and representative sample of the Victorian community to enable reasonable findings to be drawn from the data collected
- The trial ran at the same time at each location

MEDIA INTEREST

- The plastic bag trial was heavily advertised on TV, radio, local newspapers and promoted at each participating store
- Media releases were sent by ANRA and the Minister for Environment and Climate Change, Gavin Jennings to inform the public of the trial
- A pre-trial launch was held on at Fountain Gate shopping centre on 17 August 2008 with representatives from local Government, ANRA and DSE

DATA

- Quantitative
  - Retailer information on volume of checkout bags used, volume of reusable bags sold at each participating store and sales movements over the trial period compared to pre-trial
- Qualitative
  - 300 customer and 72 staff surveys were conducted during the four week period to provide qualitative information

Source: [1] Decision regulatory impact statement (April 2008), ANRA submission accompanying application for the authorisation of arrangements for a trial of plastic bag charges (June 2008)

Headlines

- The headline statements below relate to the results of the 4 week trial compared to the July baseline used

Plastic bag reduction	**There has been a reduction in the use of plastic bags during the trial of a 10 cent charge on plastic bags, with an average overall decrease of approximately 79%** ● This decrease was consistent across all 3 trial regions, with Fountain Gate, Wangaratta and Warrnambool experiencing reductions in usage of 79%, 77% and 79% respectively ● The observed reduction in plastic bag consumption is supported by other key data – Green Bag sales rates increased by more than 15 times in week 1, then declined over the 4 week period as customers began to reuse their green bags purchased in week 1 – 86% of customers surveyed supported initiatives to reduce plastic bag use – 60% of customers surveyed were happy to be part of the trial ● The trial has shown that plastic bag demand is highly elastic with a 10 cent charge making customers re-evaluate their desire to use plastic bags – customers are re-evaluating their decision based on environmental concerns or based on the availability of substitute products such as bin liners ● The 79% reduction in plastic bag usage does not necessarily equate to 79% fewer customers using plastic bags – some customers and staff observed that more items were being packed into each bag, so fewer bags were being used for the same amount of groceries ● Staff feedback did highlight that there are some issues to work through such as hygiene, size and types of bags, packing and lifting
Customer shopping habits	**It remains unclear whether customers changed their shopping habits in response to the trial** ● Some trial stores experienced an increase in sales during the trial period when compared to non trial stores of the same chain across Victoria, whilst others experienced a decrease – In the Fountain Gate area, a higher percentage of stores experienced a decrease – In Wangaratta, a higher percentage of stores experienced an increase ● Warrnambool sales were excluded from the analysis as sales data was not comparable ● 3% of customers were prepared to shop elsewhere and 9% purchased fewer items to avoid the charge ● Staff noted during the trial that customers were requesting more items be packed into each plastic bag
Long term change in customer behaviour	**The 10 cent charge is likely to contribute to a long term change in customer behaviour** ● Of the customers surveyed, 91% responded that they have tried to use reusable bags with 70% of these claiming they were able to maintain this ● 87% of customers indicated they would use reusable bags if the 10 cent charge became permanent

Headlines (cont.)

Demand for bin liners	**The majority of customers surveyed reused plastic checkout bags as bin liners and the plastic bag charge may stimulate demand for bin liners** • 61% of customers surveyed commented they previously reused their plastic bags as bin liners • Of the customers who reused their bags as bin liners, 57% expected to buy more bin liners as a result of the charge
Impact on customers and staff	**Customers were less concerned than staff about hygiene or checkout delay issues associated with reusable bags** • 61% of staff compared to 22% of customers were concerned about hygiene issues around reusable bags • 68% of staff compared to 14% of customers indicated checking out took longer because of the charge • Staff stated that 18% of customers complained frequently, 39% occasionally, 21% rarely and 22% not at all about the plastic bag charge • The majority of staff commented that they packed more items into each bag and were presented with bags that in their opinion were too difficult to handle (due to size of bags and lifting) • The above responses highlight a difference in perception of the trial between customers and staff. Staff may be experiencing more pressure than customers as a result of the trial • If a charge were to be introduced, then alternatives and associated costs may need to be considered to deal with these issues such as additional training or development of standards to address customer and staff concerns
The value placed on checkout bags	**Presenting customers with a 10 cent charge made them consider the value they place on a bag** • For around 10 cents a customer can buy a properly designed bin liner • The reduction in plastic bag usage during the trial and the approximate 10 cent price point of a bin liner suggests that customers value the checkout plastic bag at less than 10 cents
Ban on plastic bags	**There was strong customer support for a plastic bag ban** • 45% of customers surveyed stated they would support a ban • 25% of customers surveyed do not want a ban on plastic bags • 30% of customers were indifferent

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Hypothesis 1 – Plastic bag reduction

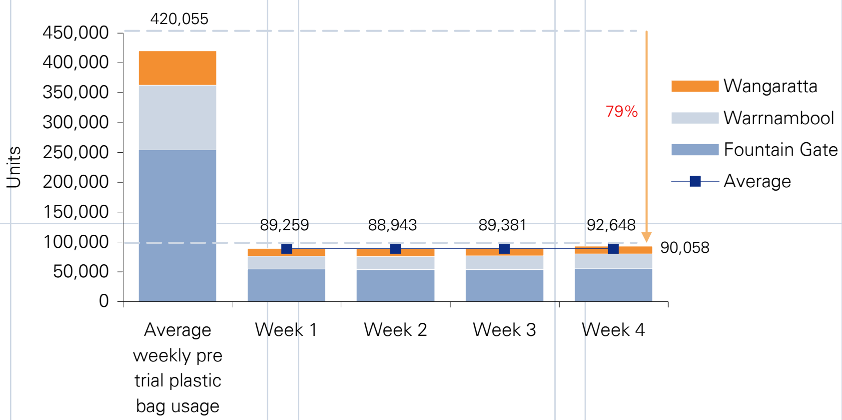
The trial of a 10 cent charge for plastic bags at supermarket checkouts reduces bag consumption by approximately 79%

The significant reduction in plastic bag consumption was experienced consistently across all 3 regions

The reduction in plastic bag consumption is supported by the qualitative data

The 10 cent charge on plastic bags made customers re-evaluate their desire to use plastic bags

Plastic bag consumption - by region



Note: Plastic bag consumption has been normalised for sale volume in each participating store. Coles Lava St data has not been normalised

Source: Data from participating retailers

- Green Bag sales rates increased by more than 15 times in week 1, then declined over the 4 week period as customers began to reuse their green bags purchased in week 1
- 60% of customers surveyed were happy to be part of the trial
- 86% of customers surveyed supported initiatives to reduce plastic bag use
- Few customers were aggrieved by the plastic bag charge

There has been a reduction in the use of plastic bags during the trial of a 10 cent charge, with an average overall decrease of 79%

- The reduction was consistent across all three regions
  - Fountain Gate had an average reduction of 79%
  - Wangaratta had an average reduction of 77%
  - Warrnambool had a average reduction of 79%
- Average plastic bag consumption increased slightly from week one to week four of the trial. It is possible that this is due to customers forgetting to bring their green/reusable bags to the store and not wanting to purchase additional green bags

The trial is subject to the following limitations of the data presented

- Plastic bag consumption has only been collected for the 4 week trial period
- No data was collected post trial, it is therefore difficult to assess whether this response rate will continue post trial to determine changes to long term behaviour
- Only 3 regions in Victoria were tested
- Customers in the metropolitan areas can avoid the charge by shopping in neighbouring suburbs where the charge is not imposed
- Customers were well aware of the charge prior to the trial period and therefore came prepared in week 1 of the trial
- Consideration should be given to staff concerns around hygiene issues associated with reusable bags, checkout delays and packing and lifting of bags presented to them

The charge on plastic bags made customers re-evaluate their desire to use plastic bags

- 52% of customers surveyed commented they primarily used reusable bags because they were concerned about the environment
- However, it has taken a 10 cent charge to change their behaviour
- Reusable bags brought from home increased from 69% in week 1 of the trial to 88% by week 4

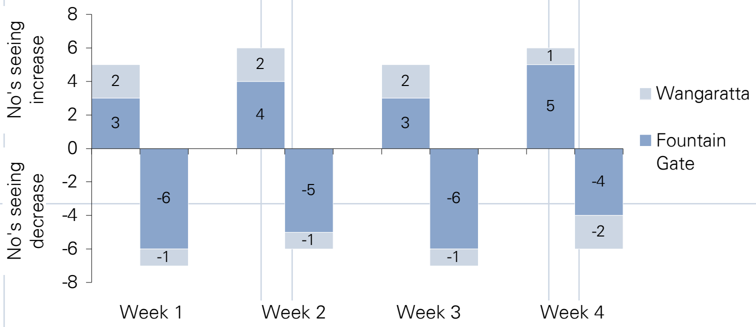
Hypothesis 2 – Customer shopping habits

It is unclear whether customers changed their shopping habits as a result of the trial

Sales in trial stores saw both increases and decreases when compared with non trial stores of the same chain across Victoria

The majority of people said they continued to buy the same amount of items

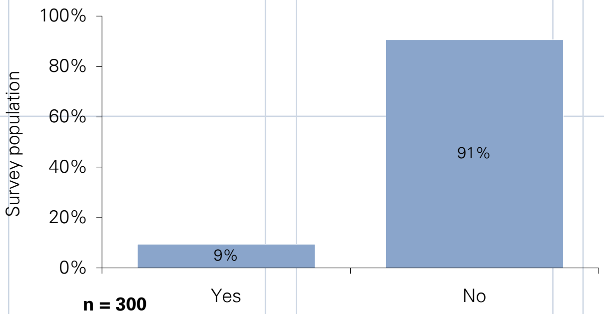
Trial stores experiencing sales increase/decrease compared to Victorian non trial stores



Source: Data from participating retailers

Warrnambool stores and IGA stores have been excluded as data provided is not comparable

"Did you buy fewer items than you would normally?"



n = 300

Some trial stores experienced an increase in sales during the trial period when compared to non trial stores of the same chain across Victoria, others experienced a decrease

- In the Fountain Gate area, a higher percentage of stores experienced a decline as compared to Wangaratta
- In response to the question "what arrangements will you make next time you go shopping", 3% of customers indicated that they were prepared to change shopping location to avoid the charge
- Sales for Warrnambool were not included in this analysis as data was not comparable. A new Coles store opened 2 weeks prior to the trial commencement and impacted sales results for the trial period

The 10 cent charge did not encourage the majority customers to buy fewer items

- 9% of customers purchased fewer items than they would normally to avoid the charge
- This response was consistent across the trial period

The greatest change in behaviour was the efficiency of plastic bag use with staff noting that more items were being packed into each bag

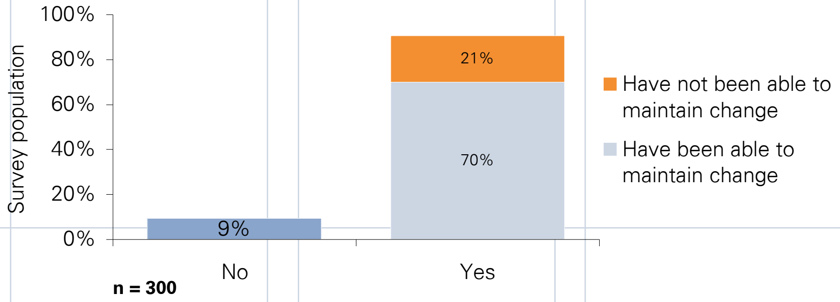
- 79% of staff surveyed commented they packed more into each bag
- 46% of customers thought they were now using fewer bags to take their shopping home
- 81% of staff surveyed noted that customers asked them to pack more into each bag

Hypothesis 3 – Long term change in customer behaviour

The 10 cent charge may contribute a long term change in customer behaviour in metropolitan and regional areas

The majority of customers are bringing reusable bags and say they will continue to do so

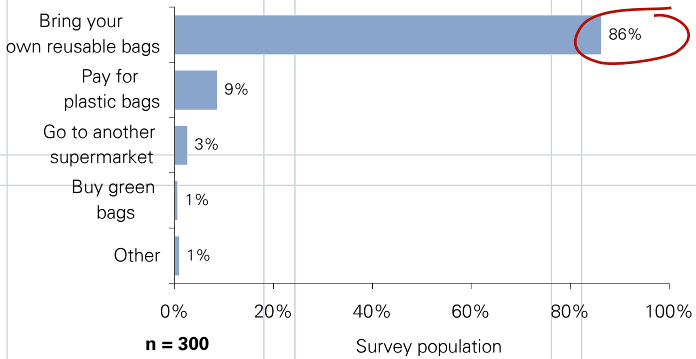
"Have you tried to use reusable bags? If yes, have you been able to maintain this"



Of the customers surveyed, 91% responded that they have tried to use reusable bags

- Of the 91% customers who have tried to use reusable bags, 70% claim to have been able to maintain this
- However, it is unclear the timeframe they are referring to when making this claim (i.e. 2 days, 1 week, 1 month, 1 year)
- 45% of customers surveyed stated that it required a low effort to maintain using reusable bags, 28% stated medium effort was required and 27% stated a high level of effort was required

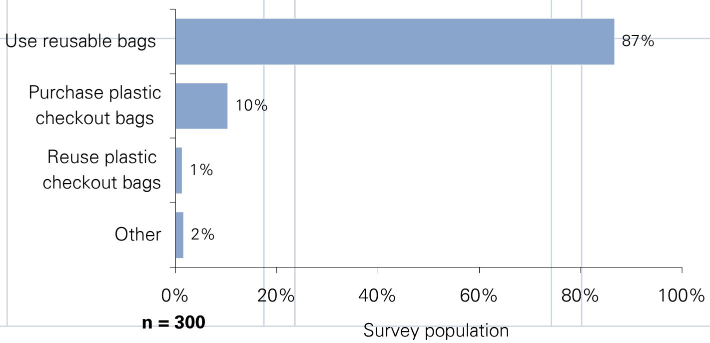
"What arrangement will you make next time you go to the supermarket?"



The majority of customers surveyed indicated that they would bring their own reusable bags next time they went shopping

- 86% of customers indicated they would bring their own reusable bags next time they came shopping
- This is supported by qualitative data that showed reusable bags bought in from home increased from 69% in week 1 to 88% by week 4 of the trial period

"What would you use for bags if the 10 cent charge became permanent?"



A significant number of customers surveyed (87%) indicated that they would use reusable bags if the 10 cent charge became permanent

- This response coupled with the decline in plastic bag consumption and increase in green bag sales in the trial period suggests a long term change in customer behaviour may occur if the 10 cent charge was made permanent
  - however, plastic bag use would not be eliminated given that 10% of customers responded that they would continue to purchase plastic checkout bags
- Only 1% of customers said that they would reuse plastic checkout bags at the supermarket if the charge became permanent. This suggests that while plastic checkout bags are reused by customers they are rarely reused at the supermarket

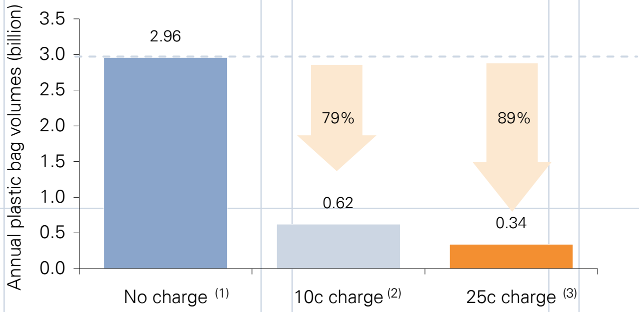
Hypothesis 3 – Long term change in customer behaviour (cont.)

If behaviour seen in the trial is reflected across Australia, survey data suggests this may result in checkout bag consumption reducing by 79% if the 10 cent charge was made permanent

Consumption may reduce further by 89% if the charge was 25 cents

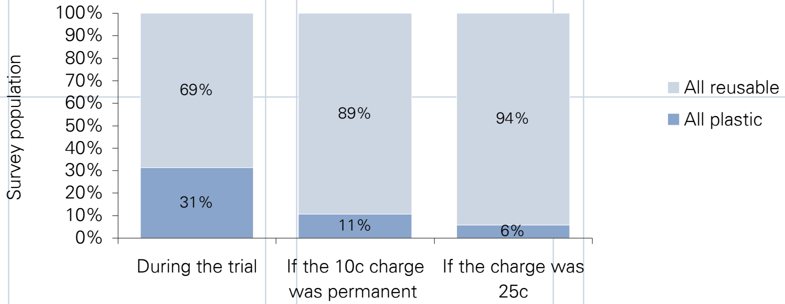
This analysis is based on several key assumptions

Estimated Australian bag consumption in supermarkets under 'no charge,' '10c charge,' and '25c charge'



Source (1) *'Decision regulatory impact statement – investigation of options to reduce the impacts of plastic bags' (April 2008)*
(2) *Extrapolation of trial data*
(3) *Estimate based on customer survey*

Estimated proportion of customers using all plastic bags/all reusable bags 'in the trial', under 'permanent 10c charge', under 'permanent 25c charge'



n = 287

Source (1) *'Decision regulatory impact statement – investigation of options to reduce the impacts of plastic bags' (April 2008)*

If the results of the trial were reflected across Australia, survey data suggests a 10 cent charge may reduce plastic bag consumption by 2.34 billion

- In 2007, an estimated 2.96 billion bags were issued at supermarket checkouts[1]
- The 79% reduction seen in the trial if replicated could reduce consumption to 0.62 billion if the 10 cent charge was to be made permanent

The results of the customer surveys suggest the reduction could be 89% if the charge was 25 cents

- For the customers surveyed who continued to use plastic bags at 10 cents, 55% of these people said they would continue to use plastic bags at 25 cents
- 45% of those surveyed who continued to use plastic bags said that they would convert to reusable bags if the charge was 25 cents
- If the results of the survey were reflected across Australia, the additional reduction predicted under a 25 cent charge could reduce consumption further to 0.34 billion

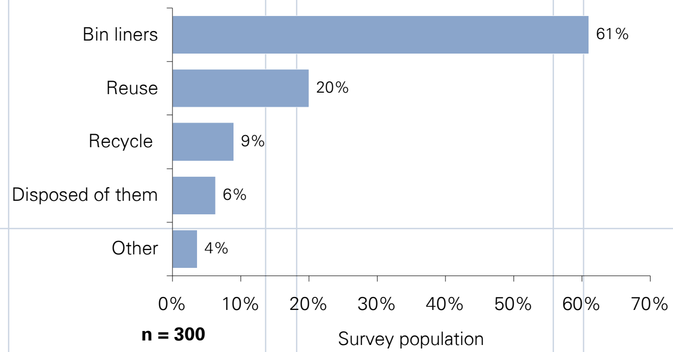
The above analysis is based on several key assumptions

- The survey of 300 customers during the trial is representative of all customers in the trial area
- The rest of Australia will behave in accordance with trial areas
- The results of the trial are consistent over a full 12 month period

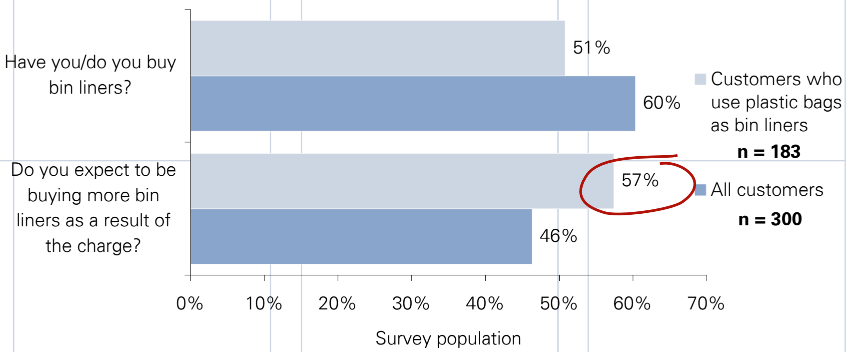
Hypothesis 4 – Demand for bin liners

The majority of customers use checkout bags as bin liners and a plastic bag charge may stimulate bin liner purchases

"What have you previously done with your plastic bags?"



Bin liner buying habits



The majority of customers surveyed reused plastic checkout bags as bin liners

- Supermarket checkout bags are reused post point of sale for a variety of reasons, the most common usage being bin liners
- Of the customers surveyed, 61% commented that they previously reused their plastic bags as bin liners

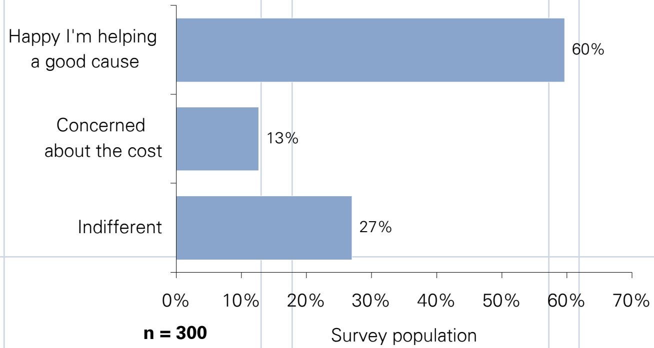
Charging customers for plastic checkout bags is likely to lead to an increase in sales of bin liners

- For around 10 cents (the same cost as the charge on plastic bags), a customer can buy a properly designed bin liner
- Without being prompted as to what the cost of a bin liner was, 46% of all customers commented they expect to buy more bin liners as a result of the charge
- Customers currently using plastic bags as bin liners are driving this demand, with 57% of such customers anticipating they will buy more bin liners

Hypothesis 5 – Staff and customer concerns

There was a difference in perception of the trial, customers showed strong support for the trial whilst staff commented that the majority of customers complained

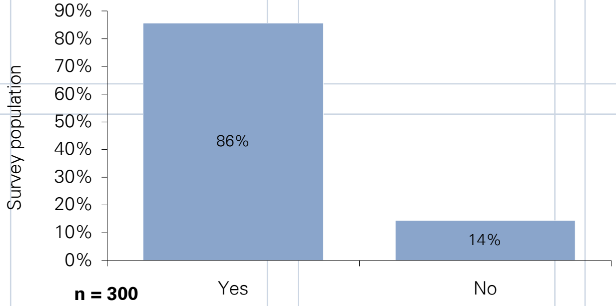
Customer: "How do you feel about being a part of this trial?"



A large number of customers surveyed were positive about being a part of the trial

- 60% of customers were happy to be helping a good cause
- However, a notable 13% percentage of customers were concerned about the cost

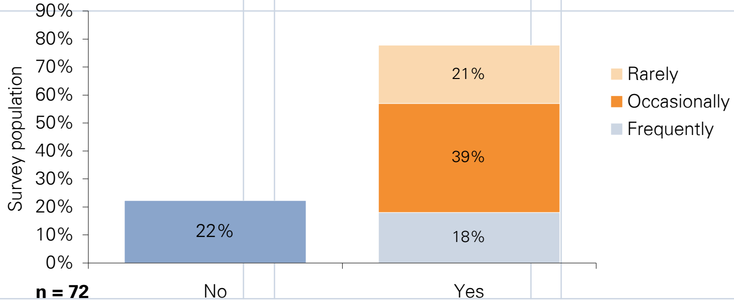
Customer: "Do you support action being taken to reduce plastic bag usage?"



Most customers support action being taken to reduce the number of plastic bags

- 86% of customers supported action of some kind to reduce the consumption of plastic bags

Staff: "Have customers been complaining?"



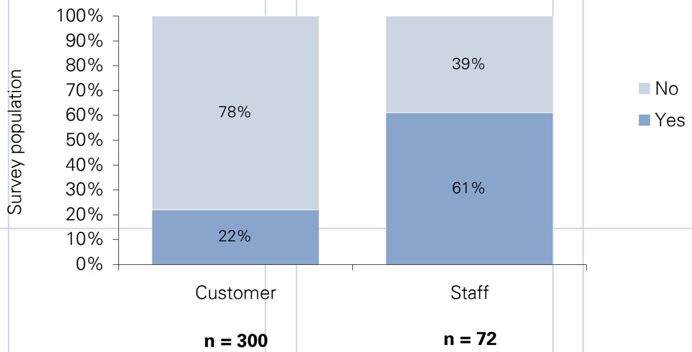
Most staff were conscious of customer complaints

- 78% of staff noted customer complaints throughout the trial period, with 18% of these being described as frequent

Hypothesis 5 – Staff and customer concerns (cont.)

Staff were more concerned with hygiene issues and increase in time taken to checkout bags

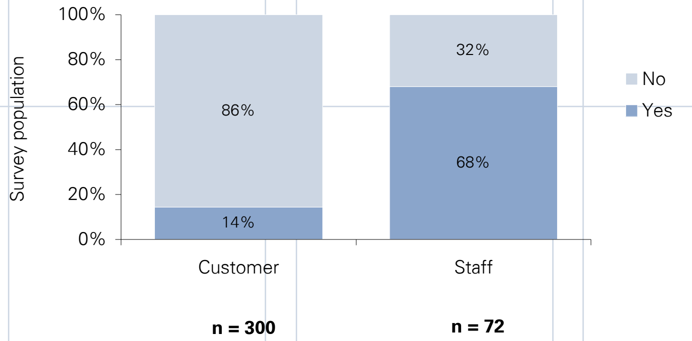
"Are you concerned about the hygiene issues around reusable bags?"



Staff were more concerned about hygiene issues than customers

- 61% of staff were concerned about hygiene issues compared with only 22% of customers
- This is likely due to people being generally more comfortable with the hygiene of their own bags which is not applicable to staff

"Did checking out take longer?"



More staff than customers commented that checkout took longer because of the trial

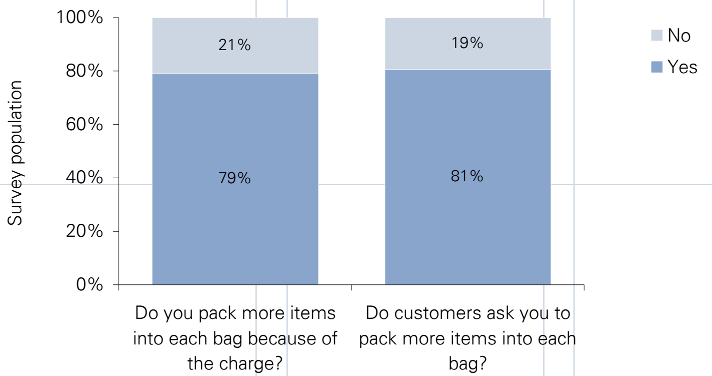
- 68% of staff stated that the "checking out" process took longer because of the trial as compared with only 14% of customers
- The most common reason given by staff as to why the checking out process took longer were:
  - it took longer to pack green and reusable bags than plastic bags
  - arranging the green/reusable bag on the bag hangers at the checkout took longer than using the plastic bags already there

Hypothesis 5 – Staff and customer concerns (cont.)

Staff were concerned about health and safety issues surrounding the packing and lifting of reusable bags presented to them by customers

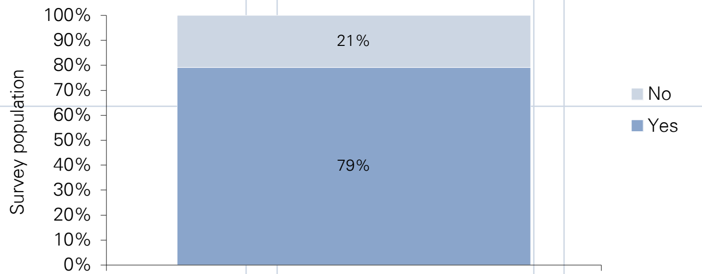
Alternatives and associated costs may need to be considered to deal with the staff issues surrounding the introduction of a permanent charge

Staff: "Have you been packing more items into each bag because of the charge on plastic bags?"



n = 72

Staff: "Are you presented with bags that are too difficult to handle?"



n = 72

A significant number of staff were concerned about packing and lifting an increased number of reusable bags

- 81% of staff surveyed were asked by customers to pack more items into each bag
- 79% of staff were presented with bags that were difficult to handle

Alternatives and associated costs may need to be considered to deal with the staff issues surrounding the introduction of a permanent charge

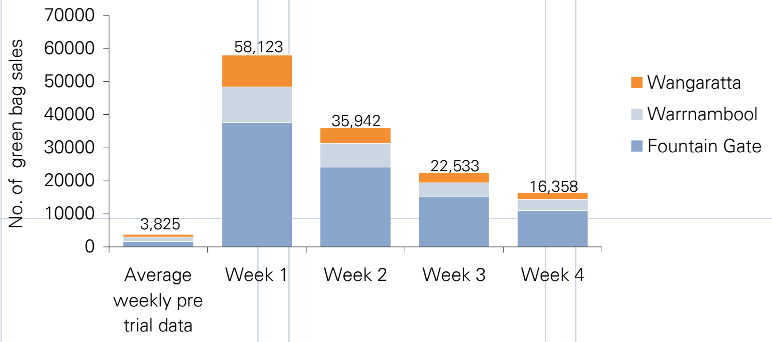
- If a charge were to be introduced, then additional training may be required around packing of bags
- In addition, customers may need to be educated on the standards of bags they can bring into the store (e.g. cleanliness and size)

Green bags sales

The 10 cent charge encouraged customers to buy green bags and as the trial progressed people brought reusable bags to the supermarket

Reusable shopping bags were supplied by the Victorian Government to low income earners in the trial areas

Green bag sales – by region



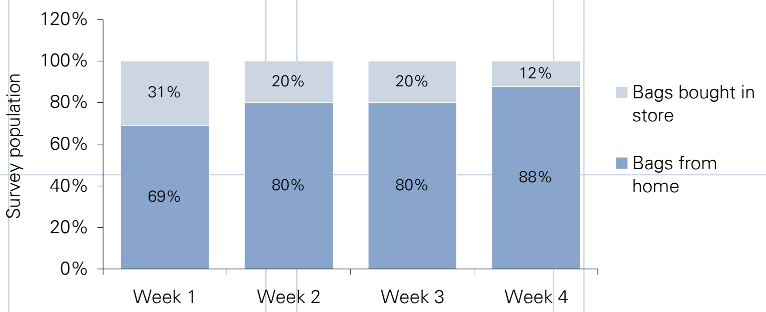
Green bag sales increased more than 15 times in the first week of the trial compared to the July average

- There was a significant increase in green bag sales in the first week of the trial across all 3 regions
- Sales of green bags declined over the four week period as customers began to reuse their green bags purchased in week 1
- The increase in green bag sales was consistent across all regions

Close to 9,000 reusable shopping bags were supplied by the Victorian Government to low income earners in the trial areas [1]

- Bags were distributed through VicRelief and FoodBank to social welfare organisations in the trial areas, and also to disabled people through DHS's disability services

Reusable bags brought into store over the trial period



n = 300

Customers increased their use of reusable bags at the supermarkets as the trial progressed

- The proportion of customers bringing reusable bags to the supermarket increased over the trial period from 69% in week 1 to 88% in week 4
- The charge triggered a change in behaviour that was reinforced through the trial
- Most customers already own reusable bags
  - 24% said they own 1-5 bags
  - 37% said they own 5-10 bags
  - 37% said they own more than 10 bags
  - 2% said they did not own any
- 56% of customers commented that they had been using reusable bags for more than a year

Source: (1) Department of Sustainability and Environment

Cost of bin liners

The reduction in plastic bag usage during the trial and the approximate 10 cent price point of a bin liner suggests that customers value the checkout plastic bag at less than 10 cents

PRODUCT	PRODUCT COST [1]	COST PER UNIT
	Multix Bags Kitchen Tidy With Handles Medium 100% Degradable 30pack $3.11	10 cents
	Glad Bag Kitchen Tidy Wavetop Tie Medium 40 pack $4.29	11 cents
	Hercules Bag Kitchen Tidy Draw Tape Large 25 pack $2.75	11 cents
	Homebrand Bag Tidy Kitchen Roll Large 30 pack $2.36	8 cents

Source: (1) Woolworths home shopping website, prices as at 26 Sept 2008

Whilst the majority of customers reuse plastic bags, they do not appear to place a value of 10 cents on them

- 81% of customers surveyed previously reused their plastic bags whether as bin liners or for other purposes
  - when presented with a 10 cent charge more than 3/5ths of the 81% opted for reusable bags
  - the 10 cent charge has made these customers question the value of the checkout plastic bag
- Customers have not had the opportunity to make a fully informed judgement as they have been accustomed to plastic bags being free of charge for many years

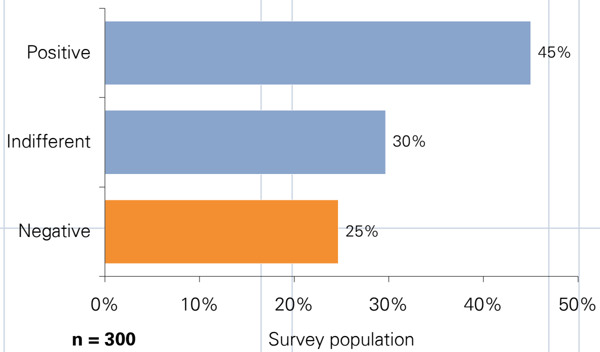
For around 10 cents, a customer can buy a properly designed bin liner

- The table opposite compares the cost of various brands of kitchen tidy bags which are similar in size to that of checkout bags
- As opposed to plastic checkout bags which are designed for single use, bin liners are designed to be functional
- We did not discuss the price of bin liners with customers surveyed

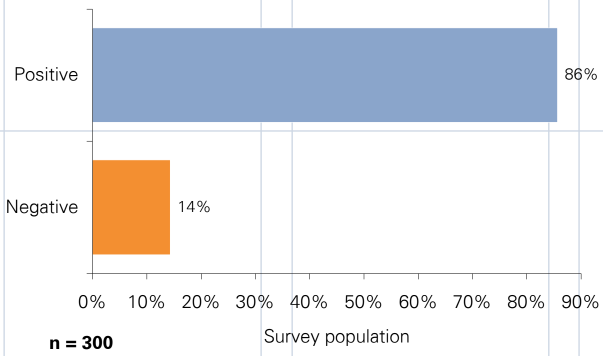
Banning plastic bag usage

There was strong customer support for a total ban

"How would you feel if plastic bags were banned overall?"



"Do you support action to reduce plastic bag use?"



Of the customers surveyed, 45% said that they would support a ban

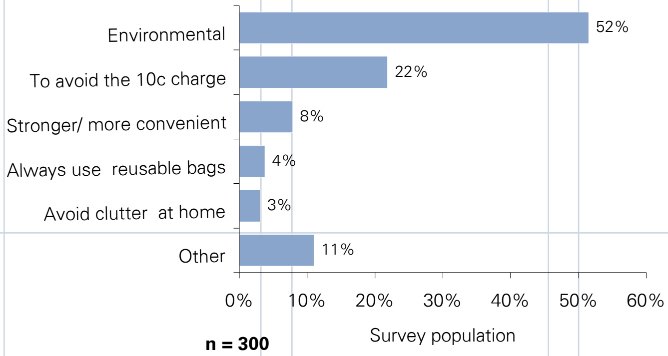
- 25% of customers do not want a ban
- 30% of customers were indifferent
- This compares to the 86% of customers who positively supported action to reduce plastic bag consumption

Additional findings
Environmental issues

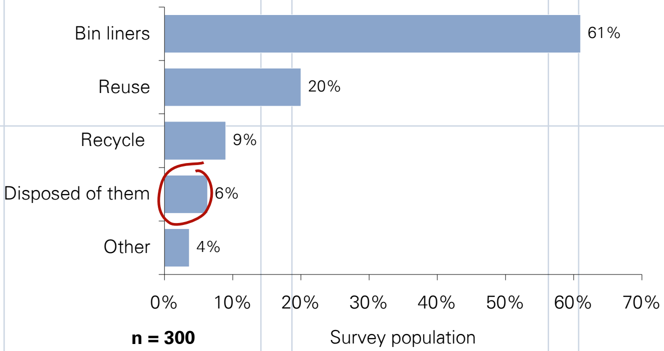
Most customers stated that the environment was the main reason behind their decision to use reusable bags

However, it has taken the 10 cent charge to trigger the behaviour change

"What is the main reason you use reusable bags?"



"What have you previously done with your plastic bags?"



Most people responded that the main reason for using reusable bags related to concern about the environment

- Whilst 52% of customers responded that they primarily used reusable bags because they were concerned about the environment, it has taken a 10 cent charge to change their behaviour

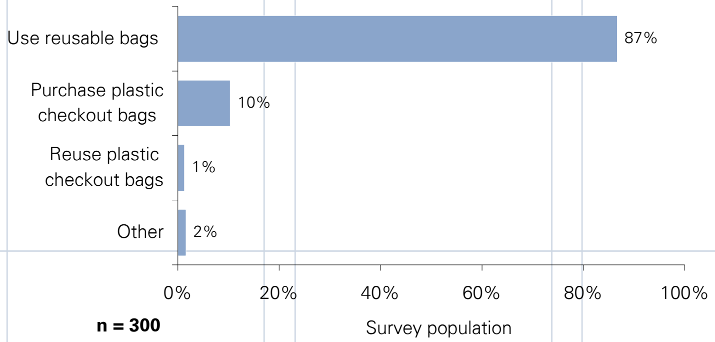
6% of plastic bags are disposed of immediately

- If the effect of the trial was experienced across Australia, this equates to 178 million plastic bags a year that are only used once before being disposed of
- Of the 18 customers who stated that they previously disposed of their plastic bags, over half had converted to reusable bags during the trial
  - while the sample size is low, if translated to Australia as a whole, the results suggest that around 119 million fewer bags would be used once, then disposed of if the charge was nationwide and permanent

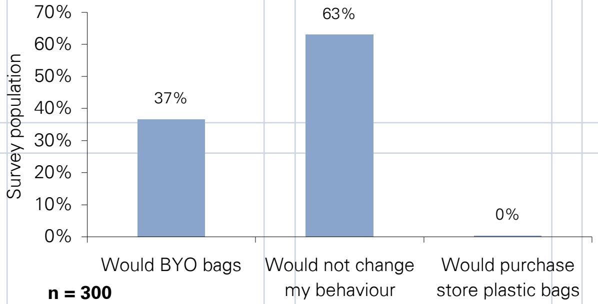
Sensitivity to the value of the charge

The number of customers continuing to use only plastic bags would fall further if the charge was 25 cents, however a hard core of approximately 17% of customers would remain

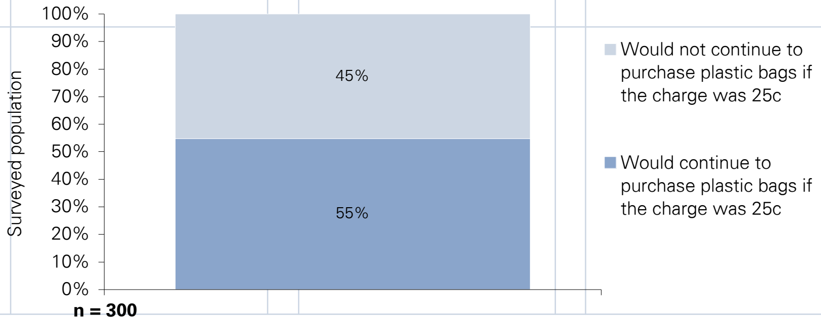
"What will you do if the 10c charge becomes permanent?"



"How would you feel if the charge was 25c?"



For the population of people that continued to use plastic bags during the trial, what portion of these people would continue to use plastic bags at 25 cents



10% of the customers surveyed would continue to purchase plastic checkout bags if the 10 cent charge became permanent

- However, this number would fall by 45% if the charge was 25 cents

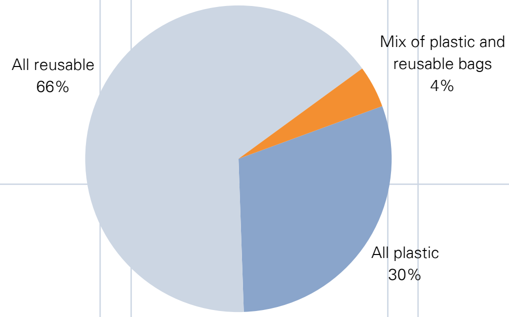
Of the 30% of customers who currently use all plastic bags, 55% commented they would continue to use plastic bags under a 25 cent charge

- A core of approximately 17% of customers would remain who would continue to use plastic bags even under a 25 cent charge

The 'all plastic bag' users

The habitual plastic bag users are predominantly those aged under 34 who visit supermarkets less frequently than every week, and who spent less than the average shopper

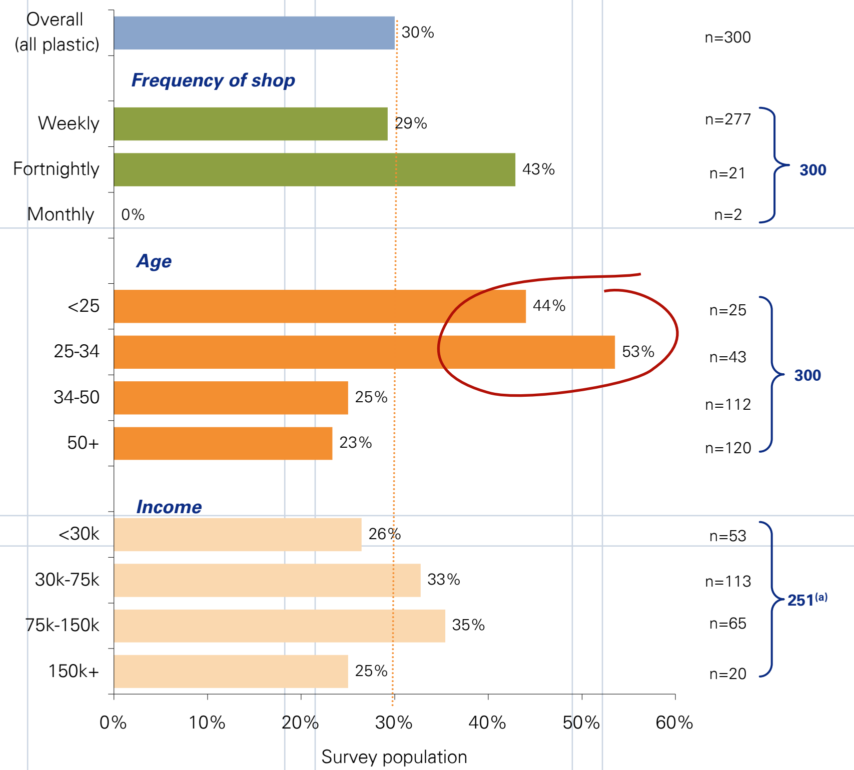
Type of bags being used by customers



All plastic bag users on average spend less than those using some reusable bags

- Average customers we interviewed who were using all plastic bags had spent $46 for that shopping trip
- Those using all reusable had spent on average $66 and those using a mix of bags had spent $94

Profile people using all plastic bags



Note: (a) 49 did not disclose their income

The habitual plastic bag users are those aged under 34 who shop less frequently than every week

- 44% of the under 25 age group and 53% of the 25-34 age group used all plastic bags
- 43% of those who shop fortnightly used all plastic bags
- Income does not appear to be a significant driver of plastic bag use
- Gender was not a driver of plastic bag use

Customer support of the trial

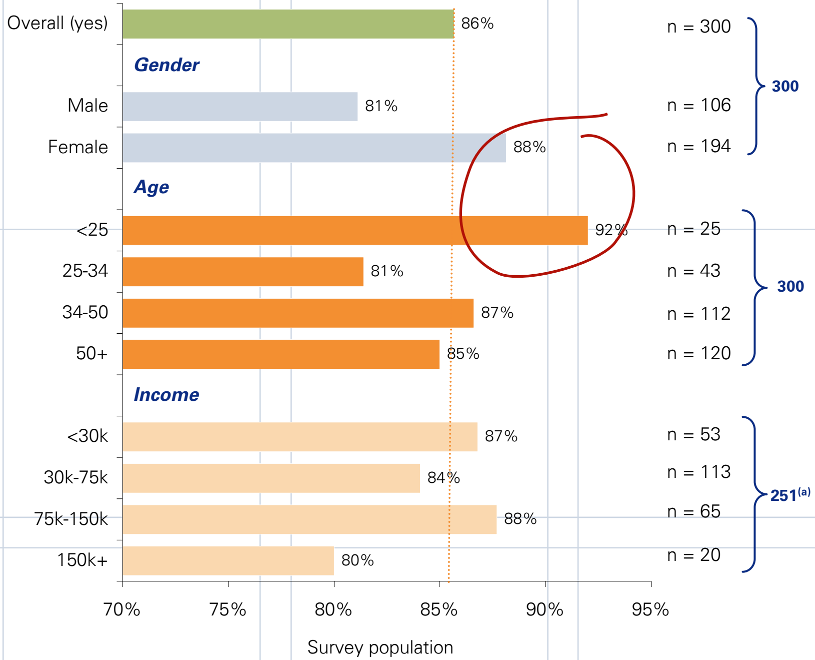
86% of customers supported action to reduce plastic bags and placed a level of importance to this issue

Particular support is seen from females and the under 25 age bracket

However, whilst support is shown by the under 25 age bracket, they are also the habitual plastic bag users

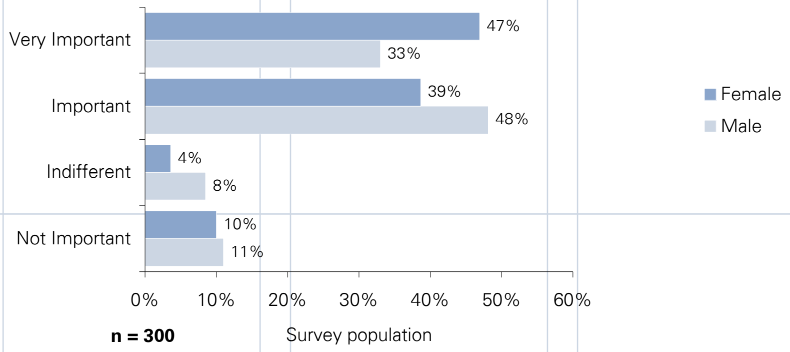
There is no clear indication that support for action to reduce plastic bags is greater or lower for different income levels

"Do you support action to reduce plastic bags?"



Note: (a) 49 did not disclose their income

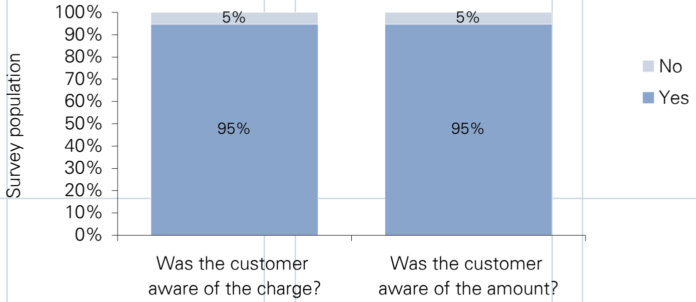
"How important is the issue of reducing plastic bags to you?"



Trial awareness

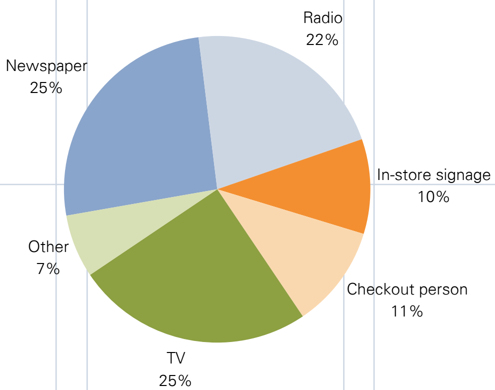
Customers were well informed of the trial by the media campaign and in-store signage at the 17 stores

Customer awareness of the charge



n = 300

How did customers become informed about the trial?



n = 300

Customers were well informed of the change

- 95% of customers were aware of the trial before arriving at the supermarket
- 95% of customers were aware that the charge was 10 cents

The trial was well advertised in the media

- Based on customer responses, the most effective medium for promoting the trial was by TV and newspaper
- Radio and in-store signage were also effective ways to inform customers of the trial

Customer concerns

Throughout the trial customers provided feedback on issues that concerned them about the trial and its impact

There remains some misunderstanding of the environmental motivations for charging for bags and concerns that alternatives have not been thought through

We recommend that any future media releases attempt to tackle these misunderstandings

CUSTOMER CONCERNS ABOUT THE TRIAL

Theme	Customer responses collected during surveys and via DSE customer feedback line	KPMG comment
Other packaging	• "The 10 cent charge on plastic bags is not the best way to achieve environment goals. A more effective way of approaching the issue of plastics in the environment would be to reduce the amount of plastic used in product wrapping"(2) • "What about all the bags we use to put our fruit and vegetables in? Can't we be provided with other options"(2) • "I am not happy being charged this fee whilst the supermarkets persist in pre packaging green grocery items in plastic"(1)	• Customers maybe more likely to support plastic bag reduction if it is seen as part of wider ranging efforts to reduce all forms of packaging • It should also be reiterated that the objective of the trial was to minimise the amount of plastic bags in the litter stream rather than reducing plastic packaging in general
Biodegradable bags	• "I don't understand why we cant use biodegradable bags. Why don't supermarkets provide them?"(1) • "I shop here (IGA) because the bags are biodegradable. Why should I have to pay for these"(2) • "Only people using non-biodegradable bags should be charged"(2)	• We also noted some confusion about the definition and issues regarding degradable and biodegradable plastic and recommend that future media campaigns seek to inform the public on this subject
Reducing plastic bags usage	• "Why can't we use – paper bags – boxes – shopping trolleys to transport goods"(2) • "Customers should return plastic bags to supermarkets for recycling and get rewarded for it"(2)	• Many of the alternative suggestions given will have a practical and environmental impact of their own. These impacts should be explored before consideration is given to them as a viable, permanent alternative to plastic bags • Consideration should also be given as to the merit of using plastic bags for food safety and hygiene reasons
Trial format	• "I find this fee frustrating. Now we have to buy the bags to put our rubbish in and the environment is no better off"(1) • "Is it not a form of discrimination charging 10c per plastic bag in this area, when the rest of Melbourne does not have to pay? Why is it not in a greater area to get a greater sample"(1)	• Although the trial is over, there is an opportunity to gain more support when the results are announced by repeating the rational for the trial and the choice of location

Source: (1) DSE customer feedback line
(2) Customer survey

Contents

Appendix 1

Scope of work

SCOPE OF WORK	COMPLETED
The data we collected allowed five main hypotheses to be tested	
Hypothesis 1 - "A 10 CENT LEVY FOR PLASTIC BAGS AT SUPERMARKET CHECKOUTS REDUCES BAG CONSUMPTION BY 80 % "	✓
● Key indicators will be 'bags used' and 'green bags sold'; supplementary indicator will be proportion of transactions for which a plastic bag is not sold – Bag volume usage need to be normalised for sales to minimise any effects of promotions or customers switching stores during the trial – Data averages from July 2008 will be used to baseline bag usage for the trial period	
● Qualitative surveying of customers would supplement quantitative data	
Hypothesis 2 - "A 10 CENT LEVY DOES NOT CHANGE CUSTOMER SHOPPING HABITS "	✓
● Relative change in sales in trial stores compared to Victoria will be monitored	
● Hypothesis 2 seeks to further test customer sensitivity to the introduction of the levy	
● Qualitative surveying of customers would supplement quantitative data	
Hypothesis 3 - "THE 10 CENT LEVY IS LIKELY TO CAUSE A LONG TERM CHANGE IN CUSTOMER BEHAVIOUR"	✓
● Primary quantitative indicator will be 'bags used' and "green bags sold"; supplementary indicator will be proportion of transactions for which a plastic bag is not sold	
● Particular attention will be paid to evolution of customer habits over the trial period	
● Qualitative surveying of customers would supplement quantitative data	
Hypothesis 4 - " CUSTOMERS USE CHECKOUT BAGS AS BIN LINERS AND A REDUCTION IN USE WILL STIMULATE DEMAND FOR BIN LINERS "	✓
● This hypothesis will be primarily tested through the qualitative survey	
● The trial duration is presumably too short to test this hypothesis from a quantitative point of view as many individuals own "stocks" of checkout bags	
Hypothesis 5 - "CUSTOMERS AND CHECKOUT STAFF ARE NOT AGGRIEVED BY THE INTRODUCTION OF A LEVY"	✓
● Qualitative survey of customers would test attitudes to the policy's impact on convenience, overall grocery bill, speed of checkout operation, hygiene, etc	
● Qualitative survey of checkout operators would test attitudes to the policy's impact on occupational health and safety, speed of checkout operation, working environment, customer rage, etc	
● The elements of focus would be determined through the advice of the project's media team, so as to provide evidence to refute or support assertions made in the media or by unions	
● In addition to this survey, weekly customer feedback received will be provided by the retailers	

Basis of preparation and related studies

KPMG has used data provided by the retailers who participated in the trial, carried out surveys of customers and staff in trial stores, and considered reports previously written on the subject

Plastic bag consumption

- The following information was provided by each participating store:
  - pre-trial data consisting of average weekly plastic bag consumption for July 2008
  - daily plastic bag consumption units during the trial period
- The movement in plastic bag consumption was derived by comparing average weekly plastic bag consumption units from the pre-trial "control period" to average weekly consumption during the trial period
- Plastic bag consumption was normalised for sales movements during the trial period (refer to sales movements below)
- This analysis was prepared for each region

Sales movements – trial and non trial

- The following information was provided by each of the 17 participating stores listed in Appendix 3:
  - using a base index of 100 representing average weekly July 2008 sales
  - average weekly sales for trial stores during the trial period compared to base 100
- In addition, of the participating retailers provided the following:
  - using a base index of 100 representing average weekly July 2008 sales
  - average weekly sales for all non-trial stores in Victoria during the trial period compared to base 100
- The movement in sales for trial stores as compared to non-trial stores was derived by comparing average weekly sales for trial stores during the trial period to average weekly sales for non-trial stores during the trial period
- This analysis was prepared for each region

Green bag sales

- The following information was provided by each participating store:
  - number of weekly reusable bag units sold for June 2008 and July 2008
  - number of daily reusable bag units sold during the trial period
  - the green bag sales movement was derived by comparing average weekly green bag sales from the pre-trial "control period" to average weekly green bag sales during the trial period
  - this analysis was prepared for each region

Customer and staff surveys

- 300 customer and 72 staff surveys were conducted throughout the trial period, refer to Appendices 4 to 7 for further details

Other plastic bag studies

- A number of related studies have been conducted in recent years around plastic bags:
  - "Plastic Shopping Bags – Analysis of Levies and Environment Impacts" (December 2002), Nolan-ITU
    - Nolan-ITU in association with RMIT Centre for Design and Eunomia Research and Consulting were commissioned by Environment Australia to conduct an evaluation to explore the options and their associated potential environmental and economic impacts to inform policy and decision making
    - the study summarises approaches in other countries such as the plastic bag levy imposed in 2001 in Ireland which reportedly resulted in reduction of 90-95%
  - "Comparison of existing life cycle analysis of shopping bag alternatives" (18 April 2007), Sustainability Victoria
    - the objective of this study was to draw together existing life cycle assessment data to compare the environmental impacts of shopping bag alternatives for carrying goods in Australia
  - "Plastic Retail Carry Bag Use – 2006-2007 Consumption" (February 2008), Environment Protection and Heritage Council, Hyder Consulting
    - Estimated plastic bag use in Australia between 2002 and 2007 by retail sector and bag type
  - "Decision Regulatory Impact Statement – Investigation of options to reduce the impacts of plastic bags – (April 2008)", Environmental and Protection Heritage Council
    - this study investigated options for the Environmental Protection and Heritage Council (EPHC) to reduce the environmental impacts of plastic bags

17 stores participated in the trial

PARTICIPATING STORES	STORE LOCATION
Fountain Gate	
• Coles	Fountain Gate Shopping Centre – Cnr Princess Highway and Magid Dr, Narre Warren
• Bi-Lo (Coles)	Fountain Gate Shopping Centre – Cnr Princess Highway and Magid Dr, Narre Warren
• Safeway (Woolworths)	Fountain Gate Shopping Centre – Cnr Princess Highway and Magid Dr, Narre Warren
• Supa IGA	4-14 Webb Street, Narre Warren
• Coles	215-225 Parkhill Dve, North Berwick
• Safeway (Woolworths)	1-9 Lyall Rd, Berwick
• Supa IGA	Shop 1, 2 Richardson Grove, Berwick
• Coles	Hallam Rd, Hampton Park
• Safeway (Woolworths)	55 Hallam Rd, Hampton Park
Wangaratta	
• Coles	Cnr Ryley St and Greta Rd, Wangaratta
• Safeway (Woolworths)	Ovens St, Wangaratta
• Supa IGA	Docker St, Wangaratta
Warrnambool	
• Coles	Warrnambool Gateway Plaza, 150 Raglan Pde, Warrnambool
• Coles	Lava St, Warrnambool – note this store opened two weeks prior to the trial
• Coles	27 Hopkins Hwy, North Warrnambool
• Safeway (Woolworths)	763 Raglan Pde, Warrnambool
• Supa IGA	221 Timor St, Warrnambool

Appendix 4

Sample size of customer survey

Sample size of customer surveys

	Week 1			Week 2			Week 3						Week 4			
	Weekday			Weekend			Weekday			Weekend			Weekday			
Trial period	**Morning**	**Afternoon**	**Evening**	**Morning**	**Afternoon**	**Evening**	**Morning**	**Afternoon**	**Evening**	**Morning**	**Afternoon**	**Evening**	**Morning**	**Afternoon**	**Evening**	**Total**
Fountain Gate																
BiLo Fountain Gate	4	-	-	-	4	-	-	4	-	-	-	-	-	-	4	16
Coles Fountain Gate	4	-	-	-	4	-	-	4	-	-	-	-	-	-	4	16
Safeway Fountain Gate	4	-	-	-	4	-	-	4	-	-	-	-	-	-	4	16
Supa IGA Narre Warren	4	-	-	-	4	-	-	4	-	-	-	-	-	-	4	16
Coles North Berwick	4	-	-	-	4	-	-	4	-	-	-	-	-	-	4	16
Safeway Hampton Park	-	4	-	4	-	4	4	-	-	-	-	-	-	4	-	20
Coles Hampton Park	-	4	-	4	-	4	4	-	-	-	-	-	-	4	-	20
Safeway Berwick	-	4	-	4	-	4	4	-	-	-	-	-	-	4	-	20
Supa IGA Berwick	-	4	-	4	-	4	4	-	-	-	-	-	-	4	-	20
Subtotal	20	16	-	16	20	16	16	20	-	-	-	-	-	16	20	160
Wangaratta																
Coles Wangaratta	5	-	-	-	-	-	-	-	5	5	-	-	-	5	-	20
Safeway Wangaratta	5	-	-	-	-	-	-	-	6	5	-	-	-	5	-	21
Supa IGA Wangaratta	5	-	-	-	-	-	-	-	4	5	-	-	-	5	-	19
Subtotal	15	-	-	-	-	-	-	-	15	15	-	-	-	15	-	60
Warrnambool																
Coles Warrnambool	5	-	-	-	-	-	-	-	4	4	-	-	-	4	-	17
Coles Nth Warrnambool	5	-	-	-	-	-	-	-	4	4	-	-	-	4	-	17
Coles Lava St	-	-	-	-	-	-	-	-	4	4	-	-	-	4	-	12
Safeway Warrnambool	5	-	-	-	-	-	-	-	4	4	-	-	-	4	-	17
Supa IGA Warrnambool	5	-	-	-	-	-	-	-	4	4	-	-	-	4	-	17
Subtotal	20	-	-	-	-	-	-	-	20	20	-	-	-	20	-	80
Total	**55**	**16**	**0**	**16**	**20**	**16**	**16**	**20**	**35**	**35**	**0**	**0**	**0**	**51**	**20**	**300**

Note: Morning (9am-12pm), Afternoon (12pm-5pm), Evening (5pm-8pm)

- We surveyed customers in all participating stores throughout the trial period including weekdays and weekends during morning, afternoon and evening periods

Appendix 5

Sample size of staff survey

Sample size of staff surveys

Trial period	Week 1 Weekday Morning	Week 1 Weekday Afternoon	Week 1 Weekday Evening	Week 2 Weekend Morning	Week 2 Weekend Afternoon	Week 2 Weekend Evening	Week 3 Weekday Morning	Week 3 Weekday Afternoon	Week 3 Weekday Evening	Week 3 Weekend Morning	Week 3 Weekend Afternoon	Week 3 Weekend Evening	Week 4 Weekday Morning	Week 4 Weekday Afternoon	Week 4 Weekday Evening	Total
Fountain Gate																
BiLo Fountain Gate	1	-	-	-	1	-	-	1	-	-	-	-	-	-	1	4
Coles Fountain Gate	1	-	-	-	1	-	-	1	-	-	-	-	-	-	-	3
Safeway Fountain Gate	1	-	-	-	1	-	-	-	-	-	-	-	-	-	1	3
Supa IGA Narre Warren	1	-	-	-	1	-	-	1	-	-	-	-	-	-	1	4
Coles North Berwick	-	-	-	-	1	-	-	1	-	-	-	-	-	-	1	3
Safeway Hampton Park	-	1	-	1	-	1	1	-	-	-	-	-	-	1	-	5
Coles Hampton Park	-	1	-	1	-	1	1	-	-	-	-	-	-	1	-	5
Safeway Berwick	-	1	-	1	-	1	1	-	-	-	-	-	-	1	-	5
Supa IGA Berwick	-	1	-	1	-	1	1	-	-	-	-	-	-	1	-	5
Subtotal	4	4	-	4	5	4	4	4	-	-	-	-	-	4	4	37
Wangaratta																
Coles Wangaratta	2	-	-	-	-	-	-	-	1	1	-	-	-	2	-	6
Safeway Wangaratta	1	-	-	-	-	-	-	-	1	1	-	-	-	1	-	4
Supa IGA Wangaratta	1	-	-	-	-	-	-	-	2	2	-	-	-	1	-	6
Subtotal	4	-	-	-	-	-	-	-	4	4	-	-	-	4	-	16
Warrnambool																
Coles Warrnambool	1	-	-	-	-	-	-	-	1	1	-	-	-	1	-	4
Coles Nth Warrnambool	1	-	-	-	-	-	-	-	1	1	-	-	-	1	-	4
Coles Lava St	-	-	-	-	-	-	-	-	1	1	-	-	-	1	-	3
Safeway Warrnambool	1	-	-	-	-	-	-	-	1	1	-	-	-	1	-	4
Supa IGA Warrnambool	1	-	-	-	-	-	-	-	1	1	-	-	-	1	-	4
Subtotal	4	-	-	-	-	-	-	-	5	5	-	-	-	5	-	19
Total	**12**	**4**	**0**	**4**	**5**	**4**	**4**	**4**	**9**	**9**	**-**	**-**	**-**	**13**	**4**	**72**

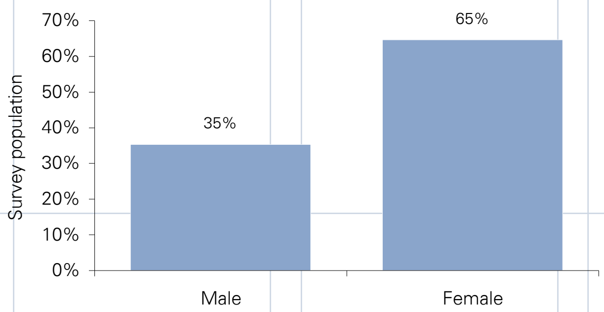
Note: Morning (9am-12pm), Afternoon (12pm-5pm), Evening (5pm-8pm)

- We surveyed staff in all participating stores throughout the trial period including weekdays and weekends during morning, afternoon and evening periods

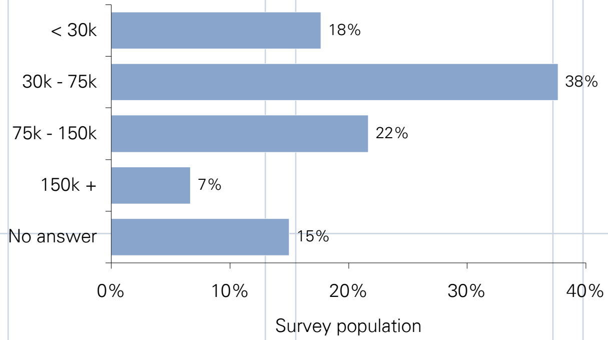
Appendix 6
Profile of customers surveyed

A total 300 customers were surveyed at random at each of the participating stores throughout the trial period

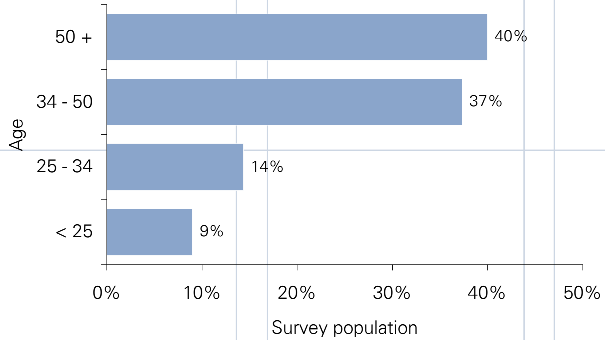
Gender



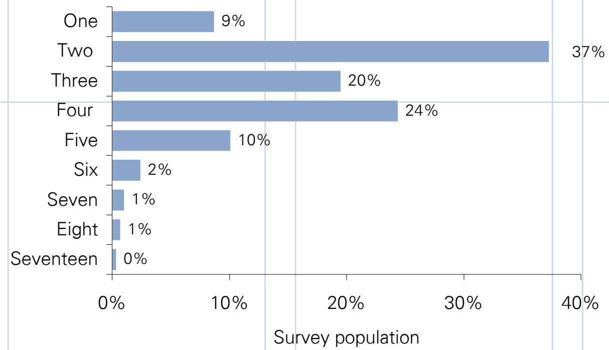
Household income



Age



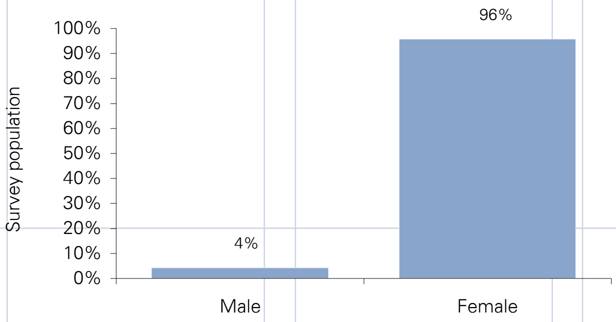
Number of people in household



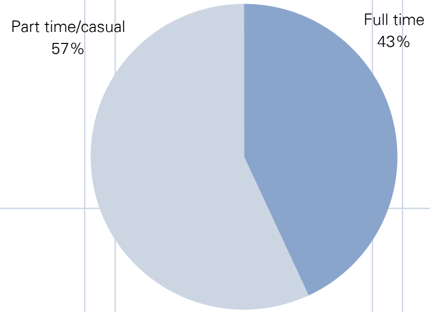
Appendix 7
Profile of staff surveyed

A total 72 staff from each of the participating stores were surveyed at random throughout the trial period

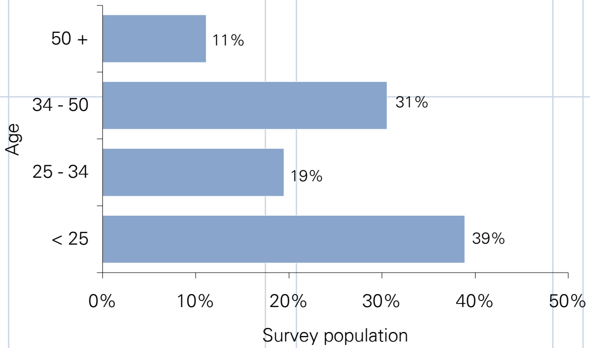
Gender



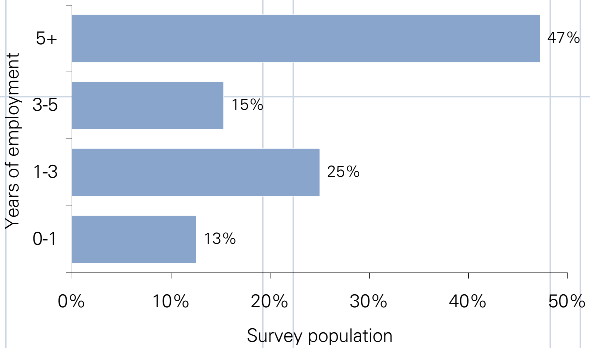
Employment type



Age



Length of employment

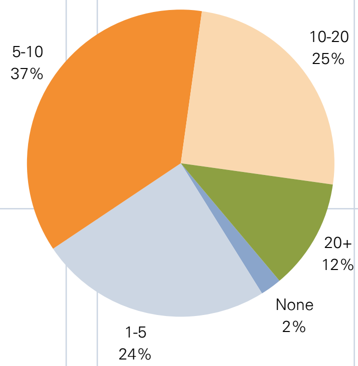


Appendix 8

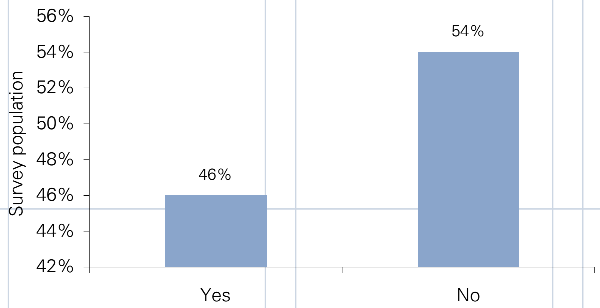
Other information collected – customers

We also collected other survey data which is shown here for completeness

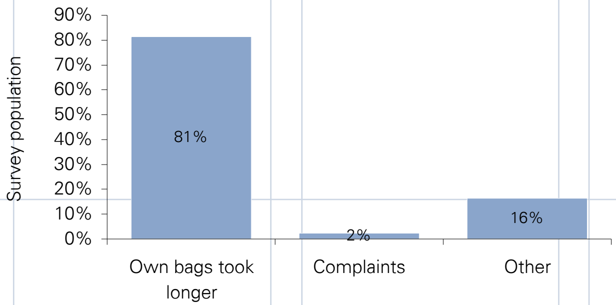
How many reusable bags to customers own?



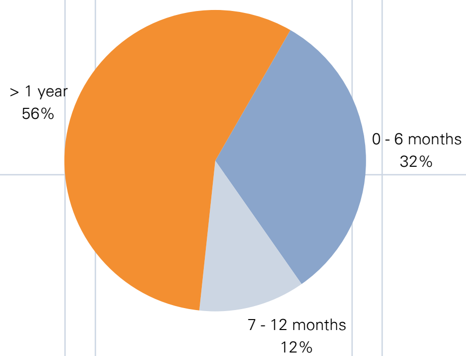
Do you think you are using fewer bags?



Why did checking out take longer?

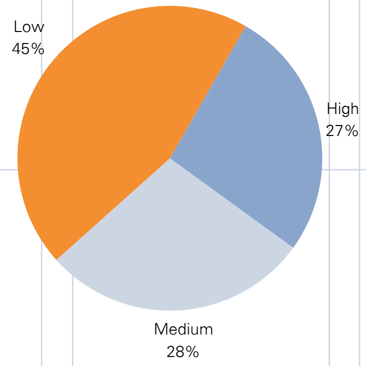


How long have you been using reusable bags?

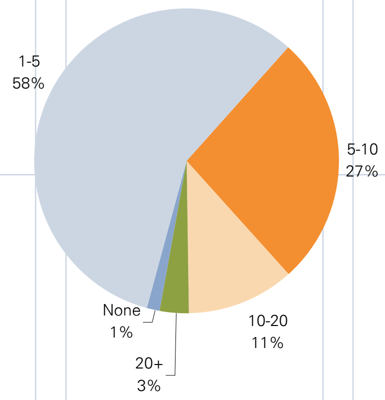


Other information collected – customers (cont.)

What level of effort is required to maintain using reusable bags?

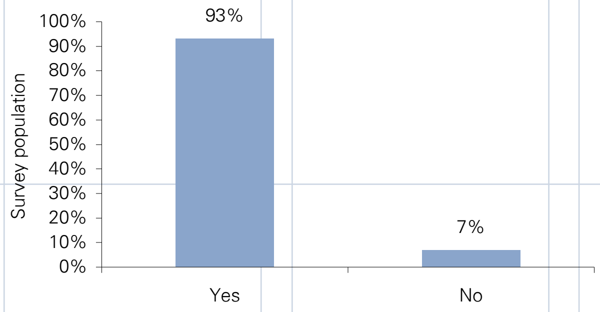


How many plastic bags do you bring home per week?

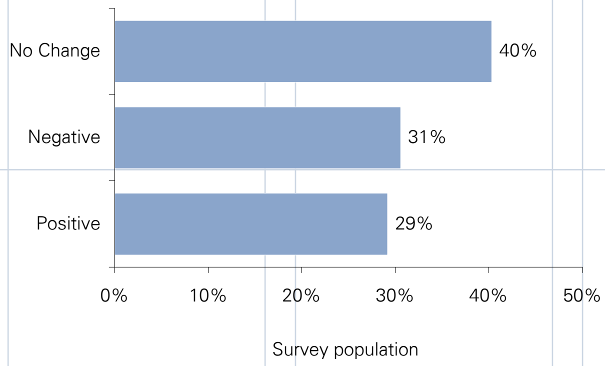


Other information collected – staff

Do you advise customers of the charge prior to the sale?



Impact on you if the change becomes permanent?



Have you seen the Victorian Government Blue bags been used?