

Online Retail in Australia 2007-2011

Submission to the Productivity Commission's inquiry into the economic structure and performance of the Australian retail industry

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Introduction

This submission presents findings from three surveys of the Australian component of the World Internet Project (WIP). This is a project of the ARC Centre of Excellence for Creative Industries and Innovation located at the Institute for Social Research, Swinburne University of Technology.

WIP is a collaborative survey-based project looking at the social, political and economic impact of the Internet and other new technologies.

Founded by the UCLA Center for the Digital Future in the United States in 1999 (now based at the USC Annenberg Center), the WIP now has over 30 partners in countries and regions all over the world, including Singapore, Italy, China, Japan, Hong Kong, Macao, Korea, Philippines, Sweden, Germany, Great Britain, Spain, Hungary, Canada, Chile and Argentina.

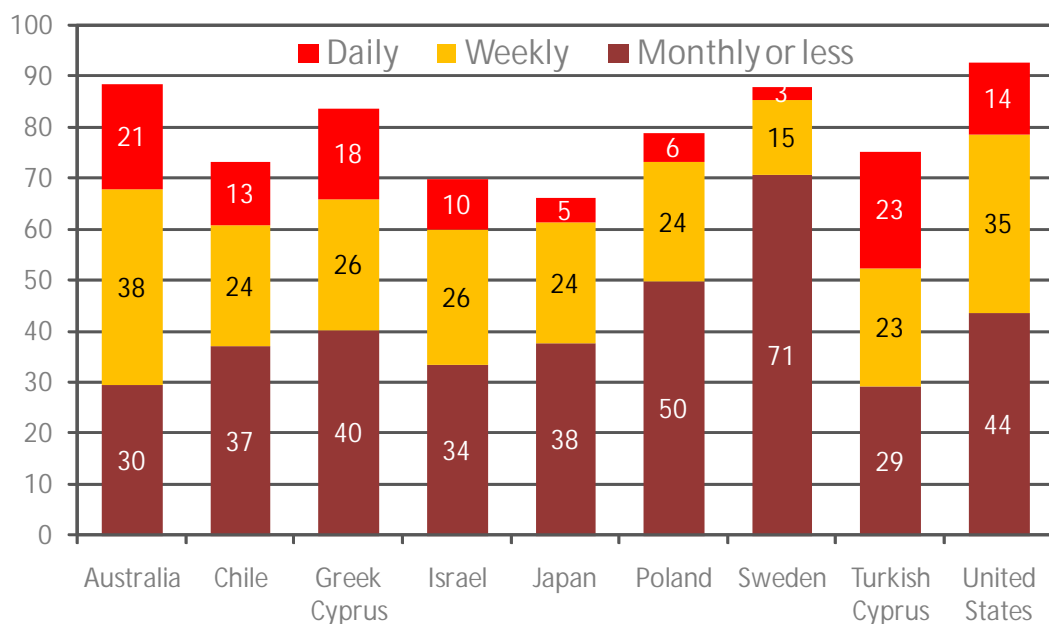
Surveys of 1000 Australians aged eighteen years or over were conducted in 2007, 2009 and 2011. The sample was a stratified random sample with three quota requirements – age (5 groups) x gender x location (capital city / balance), resulting in 20 quota groups. This year's survey was undertaken between 8th June and 6th July 2011.

This submission is made to provide the Commission with data from our survey work. We are happy for the data to be used with attribution in any way the Commission sees fit and are happy to discuss the data or provide additional data if that is useful.

International Context

One of the strengths of the WIP is the ability it affords to compare results with different countries. Figure 1 presents data for the question ‘how often do you look for product information online?’ The data for Australia is 2011 and that for the comparator countries 2010. Overall Australia is around where you would expect with similar rates of looking for product information as the United States and Sweden. Over one in five Australians was looking for product information daily with a further 38% looking weekly.

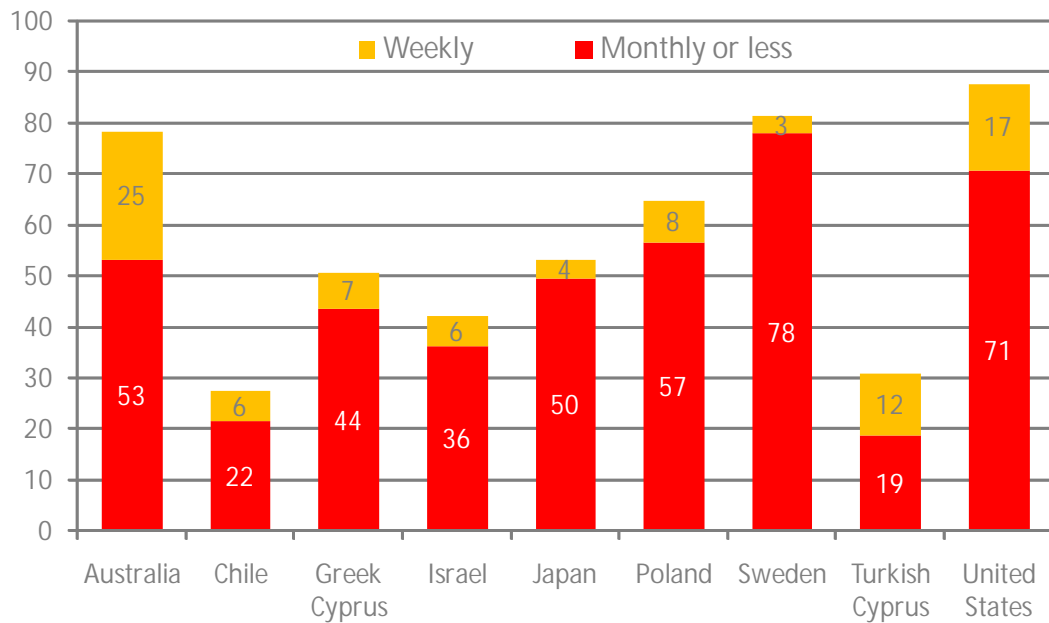
Figure 1: How often do you look for product information online? selected countries 2010 and 2011*



* Australian data is 2011, other countries are 2010

Figure 2 shows Australians to be relatively frequent online shoppers. While the proportion of the online population who shop online is ten percentage points less than the United States (78% to 88%), a quarter of our online population were shopping weekly (US 17%).

Figure 2: How often do you purchase goods online? selected countries 2010 and 2011*



* Australian data is 2011, other countries are 2010

Initial analysis

This section presents the initial analysis of online retail data from the three surveys to examine the pattern of growth in key activities. In these tables two measures are used. Firstly the proportion of internet users in each year engaging in purchasing online and looking for product information online. This shows how popular these activities are amongst those people able to engage in them due to their involvement in the online world. It also helps us to estimate patterns of online consumption when (or if), online connectivity approaches a hundred per cent.

In addition, those engaged in the various activities are presented as a proportion of the entire population (users and non-users) to provide a better indication of the growth of online retail over the period. Tracking the growth in the proportion of users does not fully reflect the growth overall when the proportion of users in the population is itself growing strongly. Our estimates of the proportion of the Australian public that were online in 2007 were 72.6%, which grew to 80.6% in 2009 and to 86.8% in 2011.

To demonstrate the implications of this, if the proportion of those internet users who shopped online remained constant over this period, there would still have been growth of 20% in the total number of those shopping online due to the growth in the number of Australians who were online. In the following analysis it is important to keep in the mind these two sources of growth in online retail.

Table 1 presents the results for the question on how often respondents were looking for product information online. This shows that by 2007 the vast majority of internet users (82.9%) were using the internet to look for product information and 43% were doing so at least weekly. The proportion looking online grew between 2007 and 2009 (88% overall and 55.3% weekly) and grew at a lesser rate between 2009 and 2011, the proportion of those participating did not change while those looking weekly grew by 6.7% to 59%.

When we examine the data as a proportion of the population we see the impact of growth in internet users on the overall pattern. While in 2007 only 17.1% of users never looked for product information online, this translated into 39.8% of the total population. In 2009 when only 12% of users never looked for production information online, the figure for the whole population was 29.1%. Although the proportion of internet users who never looked for product information did not change appreciably between 2009 and 2011, the proportion of the population who never looked had fallen to 23.2%.

The two key findings from this information that will be largely borne out by much of the analysis that follows is that the biggest change in online activity happened between 2007 and 2009 and that the change in the total proportion of the population engaging in online retail between 2009 and

2011 was almost entirely due to the effect of the increase in the internet population over that period, not changes in behaviour of that population.

Table 1: How often do you look for product information online, 2007, 2009 and 2011?

	Proportion of internet users			Proportion of population		
	2007	2009	2011	2007	2009	2011
Never	17.1	12.0	11.4	39.8	29.1	23.2
Less than monthly	16.3	11.3	11.1	11.8	9.1	9.6
Monthly	23.6	21.4	18.5	17.1	17.2	16.0
Weekly	31.0	38.9	38.4	22.5	31.3	33.3
Daily	12.0	16.4	20.6	8.7	13.2	17.9
Total	725	805	865	999	999	997

Looking now at actually buying online, Table 2 presents data that shows a similar pattern to that for looking for product information in Table 1. In 2007, online purchasing was barely a majority activity amongst internet users with 57% purchasing online. By 2009 this had increased to almost three-quarters (73.5%) while in 2009 78.4% purchased online. The proportion of internet users purchasing at least weekly was 10.4% in 2007, 18.8% in 2009 and exactly a quarter in 2011 (25.0%).

Looking now at the proportion of the total population, in 2007 most Australians did not shop online (58.7%). This fell to four in ten in 2009 (40.7%) and to a third in 2011 (32%). In 2007, 7.5% of Australians were shopping online at least weekly. This proportion more than doubled to 15.2% in 2009 and increased by a further 42.5% in 2011 to reach 21.7% of the total population.

For this indicator there was extraordinary growth from 2007 to 2009 and then very strong growth 2009 to 2011. Unlike 'looking online' growth between 2009 and 2011 was related both to changes in behaviour of the online population and the growth of that population.

Table 2: How often do you purchase products online, 2007, 2009 and 2011?

	Proportion of internet users			Proportion of population		
	2007	2009	2011	2007	2009	2011
Never	43.0	26.5	21.6	58.7	40.7	32.0
Less than monthly	19.6	21.2	20.3	14.2	17.1	17.6
Monthly	27.0	33.4	33.1	19.6	26.9	28.8
Weekly	9.4	17.1	22.6	6.8	13.8	19.6
Daily	1.0	1.7	2.4	0.7	1.4	2.1
Total	725	805	869	999	999	1001

Source: CCI World Internet Project data

As Table 3 demonstrates, making travel reservations is a popular online activity although it is one that is treated inconsistently by those measuring online retail. The ABS does not include travel bookings as part of their measure of retail trade and this convention is followed by many of those estimating online retail, although a few, notably estimates made by Forrester Consulting in conjunction with ebay do include such bookings.

By 2006, two thirds of internet users were making travel bookings online. There was strong growth in use between 2007 and 2009, with more than three quarter of users booking online in 2009. There was however a slight drop in online booking between 2009 and 2011 although the increase in the online community saw this effect slightly reversed for the population as a whole.

Table 3: How often do you make travel bookings online, 2007, 2009 and 2011?

	Proportion of internet users			Proportion of population		
	2007	2009	2011	2007	2009	2011
Never	32.6	23.9	26.8	51.1	38.7	36.4
Less than monthly	48.6	44.4	44.2	35.3	35.8	38.3
Monthly	16.1	26.1	24.2	11.7	21.0	21.0
Weekly	1.8	4.3	3.8	1.3	3.5	3.3
Daily	0.8	1.2	1.0	0.6	1.0	0.9
Total	726	806	867	1000	1000	999

Source: CCI World Internet Project data

In 2007 around six in ten internet users paid bills online (Table 4). By 2009 this had grown to seven in ten (70.6%) and by 2011 it was almost three quarters of users (74%). As would be expected frequency of paying bills online has not changed markedly over the three periods.

Looking across the population as a whole, a clear majority of Australians were not paying bills online in 2007 (57%), but by 2011 just over a third was not (35.8%). Again growth between 2009 and 2011 was almost entirely due to the increase in the online population.

Table 4: How often do you pay bills online, 2007, 2009 and 2011?

	Proportion of internet users			Proportion of population		
	2007	2009	2011	2007	2009	2011
Never	40.8	29.4	26.0	57.0	43.1	35.8
Less than monthly	5.1	5.0	5.2	3.7	4.0	4.5
Monthly	19.4	25.6	25.3	14.1	20.6	21.9
Weekly	30.0	35.5	37.2	21.8	28.6	32.3
Daily	4.7	4.5	6.4	3.4	3.6	5.5
Total	726	805	866	1000	999	998

Source: CCI World Internet Project data

Using the internet to purchase stock and bonds is still very much a minority activity, growing slowly but steadily over the period of analysis. As with a number of our other indicators there was a slight (statistically insignificant) decrease in the proportion of those online investing through the internet between 2009 and 2011. In 2011 18.6 % of internet users were purchasing stocks and shares online, which represented 16.2% of the overall population.

Table 5: How often do you invest in stocks and bonds online, 2007, 2009 and 2011?

	Proportion of internet users			Proportion of population		
	2007	2009	2011	2007	2009	2011
Never	85.5	81.2	81.4	89.5	84.9	83.8
Less than monthly	5.2	7.5	8.6	3.8	6.0	7.5
Monthly	5.1	5.1	6.0	3.7	4.1	5.2
Weekly	2.3	3.2	2.3	1.7	2.6	2.0
Daily	1.8	3.0	1.7	1.3	2.4	1.5
Total	726	805	869	1000	999	1001

Source: CCI World Internet Project data

Event tickets are one of those items that are excluded by the ABS from retail trade measures but are included in a number of the estimates of online retail made by private forecasters. As Table 6 indicates it is a popular activity that grew strongly between 2007 and 2009 and only grew (slightly) in 2011 due to greater online participation.

In 2007 just under a half of internet users were purchasing event tickets online, which grew to 63.4% in 2009, falling slightly two years later to 61.6%. Across the population as a whole, by 2011 53.5% of adult Australians were buying event tickets online, with 20.6% doing so at least monthly.

Table 6: How often do you purchase event tickets online, 2007, 2009 and 2011?

	Proportion of internet users			Proportion of population		
	2007	2009	2011	2007	2009	2011
Never	50.6	36.6	38.4	64.1	48.9	46.5
Less than monthly	34.2	37.8	37.9	24.8	30.5	32.9
Monthly	14.0	23.0	21.8	10.2	18.5	18.9
Weekly	1.2	2.0	2.0	0.9	1.6	1.7
Daily	0.0	0.6	0.0	0.0	0.5	0.0
Total	726	806	868	1000	1000	1000

Source: CCI World Internet Project data

One of the most interesting aspects of online retail is the interaction between online and offline shopping. Traditional retailers have become very wary of being treated as a free fitting service for online retailers. Some shoe retailers for example, have started charging a non-refundable fee for trying on shoes to discourage those who are simply trying to find the right size to enable online purchase.

Table 7 sets out how often respondents looked online for product information but when it came time to buy they purchased from a traditional 'bricks and mortar' store. In 2007, around two thirds of our sample of users had done this with a quarter doing so 'often'. This changed slightly over the subsequent two periods but this pattern remained fairly stable. When we add in non-users, there is growth- in 2007 over half the population did not look online and buy offline, whereas by 2011 around six in ten did (60.8%).

Table 7: How often do you look online and buy at store, 2007, 2009 and 2011?

	Proportion of internet users			Proportion of population		
	2007	2009	2011	2007	2009	2011
Never	34.3	26.9	29.9	52.4	41.1	39.2
Sometimes	40.1	42.9	44.1	29.1	34.6	38.2
Often	25.6	30.2	26.0	18.6	24.3	22.5
Total	723	804	862	997	998	994

Source: CCI World Internet Project data

Table 8 presents data on the reverse situation, and more talked about case, of where people look in store and then when it comes to purchasing go online. Surprisingly this is much less popular; in 2007 three quarters of users never did this and by 2011 still a majority of users reported that they did not engage in this behaviour (51.7%). There is however a strikingly different pattern in this indicator from all previous with substantial growth amongst internet users between 2009 and 2011 (41% to 48.4%).

When we look across the population as a whole, as expected the proportions taking part decrease and the growth in participation increases. By 2011 over four in ten of the population are looking in traditional shops before purchasing online (41.9%) while nearly one in ten (9.4%) report doing so often. Assuming that the propensity to engage in this behaviour is not distributed evenly across the population, this issue will be much more important in certain consumer sub-markets which we will investigate later in this analysis.

Table 8: How often do you look in store and buy online, 2007, 2009 and 2011?

	Proportion of internet users			Proportion of population		
	2007	2009	2011	2007	2009	2011
Never	75.4	59.0	51.7	82.1	67.0	58.1
Sometimes	19.8	33.4	37.5	14.3	26.9	32.5
Often	4.8	7.6	10.9	3.5	6.1	9.4
Total	723	805	865	997	999	997

Source: CCI World Internet Project data

Conclusion

This initial analysis of online shopping behaviour has found that across most of the activities there was strong growth between 2007 and 2009 amongst internet users that translated into even larger growth across the whole population due to the increase in the internet population between the two periods. With the notable exception of looking in store and buying online and to a lesser extent purchasing online itself, there was little change amongst internet users propensity to engage in online commerce between 2009 and 2011, although the still significant growth in the proportion of the population that is online meant that there was growth in the population as a whole. In the next section we will analyse a series of new questions on peoples' attitudes to online shopping.

Attitudes to online shopping

For 2011 we asked a number of questions about respondents' attitudes to online shopping to deepen our understanding of motivators of, and inhibitors to, online retail.

Few users (17.3%) or non-users (13.3%) disagree that it is difficult to return or exchange goods purchased online (Table 9). Understandably a majority of non-users said they didn't know if this was the case (62.9%) although 20.3% of users also 'didn't know'. It should be noted that 21.6%

of users did not purchase online (Table 2) and many who have purchased would not have needed to return or exchange goods. Still users were much more likely to agree with this statement (45.2%) than disagree indicating that this is a concern for actual and potential online consumers.

Table 9: It's difficult to return or exchange goods ordered on the internet, 2011

	Users	Non-users
Strongly disagree	3.3	4.5
Disagree	14.0	6.8
Neither agree nor disagree	17.1	8.3
Agree	32.0	9.1
Strongly agree	13.2	8.3
Don't Know	20.3	62.9
Total	869	132

Source: CCI World Internet Project data

When it comes to assessing product quality online a clear majority of internet users agree that it is difficult (69.3%). Only one in ten dispute this contention. This is a striking result and has clear implications for the types of goods that people will be prepared to purchase online and the importance that consumers will attach to reputable brands online and the importance of trusting the online retailer. Non-users were even less likely to disagree that this was a problem although again there was a high level of 'don't know' responses (47%).

Table 10: It's difficult to assess product quality on the internet, 2011

	User	Non-user
Strongly disagree	1.3	4.5
Disagree	8.6	0.0
Neither agree nor disagree	14.2	6.1
Agree	50.3	27.3
Strongly agree	19.0	15.2
Don't Know	6.7	47.0
Total	869	132

Source: CCI World Internet Project data

Australian consumers express a great preference for shopping with Australian websites. Two thirds of internet users would rather shop with Australian websites, while only 12.2% disagree with the statement. Non-users either 'didn't know' (42.4%) or would prefer to shop with Australian websites (47%).

Table 11: I would prefer to shop with Australian websites, 2011

	User	Non-user
Strongly disagree	2.8	3.0
Disagree	9.4	4.5
Neither agree nor disagree	13.3	3.0
Agree	44.0	27.3
Strongly agree	24.2	19.7
Don't Know	6.3	42.4
Total	869	132

Source: CCI World Internet Project data

Table 12 sets out the results from two questions that were posed as statements to which the respondents were asked to either agree or disagree. The first statement was that 'I buy things online because they are cheaper' and the second was that 'I buy things online because I can't find them in stores'. As the questions were framed in terms of why they engaged in online shopping it was only asked of internet users (non-users were asked if they thought that shopping was cheaper online and whether they thought there was more variety online).

When this data was first analysed there was a high level of 'don't know' responses which with further investigation was found to relate largely to those internet users who did not shop online (Table 2). For this reason those respondents who told us that they did not shop online were excluded from this analysis and those that answered 'don't know' were also excluded. The resultant number of responses was then 670.

Overall the results for the two factors were remarkably similar. The overwhelming majority of online shoppers agree that they shop online because it is cheaper (70.0%) and that they find things online that they can't find in stores (69.8%). There was a slight (but not statistically significant) difference in intensity of agreement with 23.7% of shoppers agreeing strongly that price was a motivator compared to 20.4% for variety.

Table 12: I buy things online because they are cheaper and I buy things online because I can't find them in stores, 2011

	Price	Variety
Strongly disagree	2.1	2.7
Disagree	9.3	12.0
Neither agree nor disagree	18.7	15.6
Agree	46.3	49.4
Strongly agree	23.7	20.4
Total	670	668

Source: CCI World Internet Project data

Table 13 indicates that a large proportion of Australians' online shopping is conducted with Australian sites. Nearly four in ten online shoppers say that it is 'most of it' with a further 8.8% saying 'all of it'. Less than five per cent (4.8%) report that none of their online shopping is recorded with Australian sites. Again these results were filtered to take out those who had answered that they never shopped online. These results appear consistent with estimates made by the Productivity Commission in their draft report that around a third of online purchases made by Australians are with overseas websites.

Table 13: What proportion of your online shopping is with Australian sites? 2011

None of it	4.8
Some of it	23.9
About half	18.5
Most of it	39.8
All of it	8.8
Don't Know	4.1
Total	681

Source: CCI World Internet Project data

There has not been a major change in online shopper's concerns about the security of their credit card information when making purchases over the period of analysis (Table 14). There has been a slight fall in those reporting 'not at all concerned' (19.4% to 16.2% to 14.1%). Given what is at stake it is not surprising that purchasers are exhibiting some level of concern although with 15.9% of shoppers in 2011 saying that they are 'extremely concerned' and a further 23.3% 'very concerned' it would appear that this is still a major issue for the online shopping industry.

Table 14: How concerned about the security of your credit card information would you be if you bought something online? 2007, 2009, 2011

	2007	2009	2011
Not at all concerned	19.4	16.2	14.1
Somewhat concerned	40.0	48.4	46.7
Very concerned	26.5	20.0	23.3
Extremely concerned	14.0	15.4	15.9
Total	407	591	679

Source: CCI World Internet Project data

Respondents' concerns about the privacy of their personal information such as name and address, phone number and purchasing habits (Table 15) are very similar to that for card security. Online shoppers concerns have not decreased over the period with a slightly lower proportion saying

they are ‘not at all concerned (20.6% to 18.9% to 16.2%) and slightly more saying they are extremely concerned (10.2% to 14.4% to 15.5%).

Table 15: How concerned about the privacy of your personal information would you be if you bought something online? 2007, 2009, 2011

	2007	2009	2011
Not at all concerned	20.6	18.9	16.2
Somewhat concerned	42.2	40.7	41.7
Very concerned	26.9	26.0	26.6
Extremely concerned	10.2	14.4	15.5
Total	412	592	677

Source: CCI World Internet Project data

Conclusion

While Australian shoppers have for the most part embraced online retail, they have not done so unreservedly. Overall, price and the variety of goods available are equal drivers of online retail for Australian consumers. Consumers recognise that there are limits to their ability to assess quality of products offered for sale and to a lesser extent that returning goods that are faulty or not fit for purpose can pose more difficulties online. They exhibit a strong preference for dealing with websites based in Australia and have concerns about credit card security and the security of their personal information when shopping online.

Comparing mean value of purchases and numbers of purchases

In our survey we asked respondents to estimate how much they spent on average each month on online purchases. While asking survey respondents to make such estimates based on their memory is fraught, it does provide a rough basis to understand activity.

Overall for our shoppers, the mean monthly expenditure in 2011 was \$206 that translates to \$2472 annually which is a number that does not seem

inconsistent with estimates made on the size of online e-commerce in Australia (this figure includes ‘non-retail’ elements such as event and travel bookings). There was no increase in monthly expenditure between 2009 and 2011 and a modest increase in the preceding period.

Table 16: Mean monthly online expenditure, 2007, 2009 and 2011

	2007	2009	2011
Value (\$)	179	205	206
Number	1.54	2.11	2.63
N	311	460	532

Source: CCI World Internet Project data

When we examine mean monthly expenditure by gender (Table 17) we see an unexpected pattern. Expenditure by males and females was almost identical in 2007 but in the next two periods a gap has been created. In 2009 men spent on average \$219 per month compared to just \$187 by women, a difference of 17%. This gap grew further in 2011. Expenditure by males grew to \$242 while mean expenditure by women actually fell to \$165, a difference between the two of 46%. This gender difference may be a fruitful angle for further analysis.

Table 17: Mean monthly online expenditure by gender, 2007, 2009 and 2011

	2007	2009	2011
Male	180	219	242
Female	179	187	165
N	311	460	532

Source: CCI World Internet Project data

Looking at mean number of purchases by gender (Table 18) shows a similar pattern as for value. Starting out at similar points in 2007, men’s and women’s purchasing patterns changed dramatically over the period. Men’s average purchases almost doubled between 2007 and 2011 while

women's increased by 41%. By 2011 men were purchasing 3.02 times per month on average compared to 2.24 times for women.

Table 18: Mean number of purchases online by gender, 2007, 2009 and 2011

	2007	2009	2011
Male	1.58	2.38	3.02
Female	1.50	1.85	2.24
Total	1.54	2.11	2.63

Source: CCI World Internet Project data

Looking at monthly expenditure by age group (Table 19), two age groups stand out. Firstly those aged 35-49 experience a 'blip' in 2009. Their mean expenditure rose from \$202 per month in 2007 to \$226 in 2009 and then fell back to \$199 in 2011. On the other hand, the next older age group, 50 to 64 year olds have experienced strong growth in each of the periods. Starting well below the overall mean in 2007 at \$157 per month, they increased to around the overall mean in 2009 (\$195) and to well above the total mean in 2011 (\$258).

In 2011 those aged 50-64 had clearly the highest expenditure per month while those aged 65 and over had the lowest with only \$135 per month.

Table 19: Mean monthly online expenditure by age, 2007, 2009 and 2011

	2007	2009	2011
18-24	193	193	182
25-34	169	207	209
35-49	202	226	199
50-64	157	195	258
65+	105	131	135

Source: CCI World Internet Project data

Mean monthly purchases (Table 20) show a more consistent pattern of increase across the period of analysis. While the value of purchases made by 18-24 olds remained steady, and in fact declined in 2011, the mean number of purchases made rose steadily and increased markedly

between 2009 and 2011 (1.95 to 3.15). The only age group to record a decrease in activity was 35-49 whose purchases fell slightly between 2009 and 2011 (2.63 down to 2.52).

Table 20: Mean monthly purchases by age, 2007, 2009 and 2011

	2007	2009	2011
18-24	1.20	1.95	3.15
25-34	1.72	2.53	3.57
35-49	1.96	2.63	2.52
50-64	1.37	1.58	2.34
65+	.36	.88	1.21
Total	1.54	2.11	2.63

Source: CCI World Internet Project data

Unsurprisingly, higher incomes are associated with higher online purchases per month. Interestingly, expenditure for both of the lower income groups dropped between 2009 and 2011. For the two higher income groups, expenditure grew steadily over the two periods. For those in households with income above \$100,000, expenditure grew from \$236 in 2007, to \$253 in 2009 and \$265 in 2011.

Table 21: Mean monthly online expenditure by income, 2007, 2009 and 2011

Income groups	2007	2009	2011
Less than \$30,000	85	147	124
\$30,000 to less than \$60,000	126	172	150
\$60,000 to less than \$100,000	150	188	202
\$100,000 and more	236	253	265

Source: CCI World Internet Project data

Table 22 presents mean monthly online expenditure broken down by respondents' attitudes to online shopping. This analysis seeks to discover whether certain attitudes to online shopping are associated with different patterns of expenditure.

Whether consumers agree or not that it is difficult to exchange goods purchased online does not appear to greatly affect their purchasing habits. Those that 'strongly agree' that this is the case do purchase \$20 less than than the overall average, although those that 'agree' spend on average \$20 more than the population average.

Attitudes to assessing quality online do have a more straightforward association with spending. Those that disagree with this contention spend much more on average than those that agree that this is a problem. Pleasingly from viewpoint of symmetry, those that neither agree nor disagree spend almost exactly the population average online.

Only a small number of people strongly disagreed that they shopped online because it's cheaper (n=13) but they spent appreciably less on average than the total sample. On the other hand, those that strongly agreed with this statement spent on average \$262- \$56 more than the total average.

Disagreeing that 'I buy things online because I can't find them in stores was associated with lower average spending (\$171 for strongly disagree and \$148 for disagree) but those that 'agreed' also spent slightly less than the overall average (\$193). However those that 'strongly agreed' with this statement spent more than \$60 a month more on average than the total sample (\$268).

Those that 'agreed' that they preferred to shop with Australian-based websites spent \$34 less on average per month than the overall mean but those that 'strongly agreed' spent \$33 more than the overall average. Those strongly disagreeing (n=13) spent \$135 more than the sample mean while those just 'disagreeing' spent \$42 more than the sample on average.

Table 22: Mean monthly online expenditure by attitudes to online shopping, 2007, 2009 and 2011

	Difficult to exchange	Difficult to assess quality	Shop online because its cheaper	Shop online due to variety	Prefer Aussie websites
Strongly disagree	219	260	87	171	341
Disagree	197	277	192	148	248
Neither agree nor disagree	227	205	224	206	201
Agree	220	199	175	193	172
Strongly agree	184	181	262	268	239

Source: CCI World Internet Project data

Numbers of purchases was more directly associated with attitudes to online shopping than was purchase amount (Table 23). Those that strongly agreed that it was difficult to exchange goods purchased online twice on average compared to 3.36 purchases for those that disagreed with the statement. A similar pattern was evident for responses to the statement that its 'difficult to assess quality online'. Disregarding the 11 responses that 'strongly disagreed', people who disagreed purchased on average 4.16 times a month compared to 3.29 for those that 'agreed' and 2.63 for those that 'strongly agreed'.

Responses for shopping online because its cheaper and due to finding things not in stores exhibited a very direct relationship with average monthly purchases. Those that strongly agreed about price being important were purchasing 4.47 times a month while those strongly agreeing about variety being important were buying 4.55 times a month. Conversely those disagreeing were buying 1.73 times and 1.87 times a month respectively.

Table 23: Mean monthly number of purchases by attitudes to online shopping, 2007, 2009 and 2011

	Difficult to exchange	Difficult to assess quality	Shop online because its cheaper	Shop online due to variety	Prefer Aussie websites
Strongly disagree	3.89	2.82	1.00	.80	2.35
Disagree	3.36	4.16	1.73	1.87	4.56
Neither agree nor disagree	2.98	3.29	2.21	2.41	3.40
Agree	3.23	2.63	2.88	2.91	2.30
Strongly agree	2.04	2.24	4.47	4.55	2.65

Source: CCI World Internet Project data

Ignoring the small number of people who said they bought none of their online purchases from Australian-based websites (n=25), there does appear to be a relationship between amount spent and purchasing from overseas-based websites (Table 24). Those that said that only some of their purchases were from Australian-based websites spent \$222 per month. This dropped to \$216 for those that said half of their expenditure was with Australian-based websites and fell below the overall average for those that answered 'most' or 'all' (\$196).

Table 24: Mean monthly online expenditure by proportion spent with Australian-based websites, 2007, 2009 and 2011

None of it	172
Some of it	222
About half	216
Most of it	194
All of it	194

Source: CCI World Internet Project data

Conclusion

Our data shows that there is an association between attitudes to online shopping and shopping behaviour. Overall attitudes are associated more strongly with frequency of shopping online rather than total value of online purchases.

Categorising online shoppers

Shopping frequency has increased over the period of analysis. In 2007 more than half of internet users did not make a purchase, with one in five making a purchase a month and a further one in five making two to five purchases. Both of these categories increased in 2009 (26.3% and 30.6%) and increased again in 2011 (27.9% and 34.1%). The proportion of those making more than 5 purchases per month was 5.9% in 2007, 8.3% in 2009 and 10.3% in 2011. It is important to remember when considering that mean expenditure online remained stable from 2009 to 2011 that the proportion of the population increased so that overall expenditure would also have increased.

Table 25: Numbers of purchases by group, 2007, 2009 and 2011

	2007	2009	2011
No purchases	53.8	34.8	27.6
One purchase	20.3	26.3	27.9
Two to five purchases	20.0	30.6	34.1
More than 5 purchases	5.9	8.3	10.3

Source: CCI World Internet Project data

Between 2007 and 2009 the main change in the value of purchases (Table 26) was a decrease in the proportion of shoppers who spent less than \$50 per month (39.9% down to 30.7%) and an increase in those spending between \$101 and \$200 (16.1% to 24.6%). There was very little change between 2009 and 2011.

Table 26: Value of purchases by group, 2007, 2009 and 2011

	2007	2009	2011
Less than \$50	39.9	30.7	31.2
\$51 to \$100	24.4	23.0	25.0
\$101 to \$200	16.1	24.6	20.9
More than \$200	19.6	21.7	22.9

Source: CCI World Internet Project data

Table 27 brings together the value of monthly purchases with the number of monthly purchases for each of the years under analysis. It would be possible using this cross-tabulation to begin developing a more sophisticated categorisation of internet shoppers along these two axes.

While there are a lot of data points here it is worth noting the changes at the extremes of the categories. The proportion of shoppers who purchase only once a month at an average value of less than \$50 fell for each period. In 2007 these shoppers were nearly a quarter of the whole (24.4%), just over a fifth in 2009 (20.8%) and just under a fifth in 2011 (19.3%).

At the other end of the spectrum those making more than 5 purchases a month of a total value in excess of \$200 rose from 6.1% in 2007 to 7.9% in 2009 and 9.5% in 2011.

Table 27: Value of purchases by number of purchases, 2007, 2009 and 2011

2007	One purchase	Two to five purchases	More than 5 purchases
Less than \$50	24.4	14.1	1.3
\$51 to \$100	11.6	10.6	2.3
\$101 to \$200	2.9	10.6	2.6
More than \$200	4.2	9.3	6.1
2009			
Less than \$50	20.8	8.8	1.1
\$51 to \$100	11.6	10.3	1.1
\$101 to \$200	5.0	16.2	3.3
More than \$200	2.4	11.6	7.9
2011			
Less than \$50	19.3	10.4	1.3
\$51 to \$100	11.6	12.7	0.9
\$101 to \$200	4.4	13.4	2.8
More than \$200	3.2	10.4	9.5

Source: CCI World Internet Project data

Paying for digital content

There has been no change in Australians' preparedness to pay for newspapers online between 2009 and 2011. The overwhelming majority of respondents would not consider paying (71.4% in 2009 and 69.8% in 2011). Those that would be prepared to pay distribute evenly over our categories. Less than one in ten (8.3% in 2011) would pay the offline cover price for a digital version.

Table 28: How much would you be prepared to pay for a digital version of a newspaper that cost \$1.50 in hard copy? 2009 and 2011

	2009	2011
\$1.50	7.2	8.3
\$1.00	5.8	6.0
50c	7.9	9.3
Less than .50c	7.7	6.6
Wouldn't consider it	71.4	69.8

Source: CCI World Internet Project data

Australians are only slightly more enthusiastic about paying for digital versions of music or video content. Again there was almost no change in the responses to this question over the three periods.

Table 29: How much would you be prepared to pay for a digital version of a DVD or CD that cost \$40 in hard copy? 2007, 2009 and 2011

	2007	2009	2011
\$10 or less	11.0	10.7	8.5
\$20 or less	18.7	17.0	18.1
\$30 or less	8.9	7.8	7.6
More than \$30	5.1	4.4	6.5
Wouldn't consider it	56.4	60.0	59.3

Source: CCI World Internet Project data

Concluding Remarks

The data and more particularly the analysis presented here is preliminary work that we will be developing over the next months. We are particularly interested in analysing further the 'gender gap' that we have identified as developing in online shopping patterns.

The main report for our 2011 survey will be released in mid-November.

This and other analysis from our study can be found at

<http://www.cci.edu.au/projects/digital-futures> .

Appendix 1: Background to the World Internet Project

The first report produced by what has become the World Internet Project was the work of a group of researchers based at the University of California at Los Angeles. The UCLA study team set out their guiding objective as follows:

Our goal is to explore how the Internet influences social, political, cultural, and economic behavior and ideas, as measured by the attitudes, values, and perceptions of both Internet users and non-users.

They went on to outline how they thought their work could contribute:

We hope our findings about the Internet will have broad implications for government policymaking, corporate planning, and social and cultural study. To begin this project now is critical if we hope to fully understand the Internet as it evolves. Had this type of research been conducted on the evolution of television as it emerged in the late 1940s, the information would have provided policy makers, the media, and ultimately historians with invaluable insights about how broadcasting has changed the world.

The first report produced by the US partners was concerned with a number of emerging questions around the social, economic, political and cultural dynamics of the Internet. Who was online, who was not, what were users doing online? How was the Net changing patterns of media consumption, consumer behaviour, and communication patterns? What social and psychological effects were apparent?

From its beginnings, the main research activity of the project has been a sample survey of internet users and non-users. The survey is administered in different ways by the different partners. Most partners undertake the survey by telephone with a significant minority opting for face to face interviews. Samples are collected on various bases, with some partners choosing cluster samples and some engaging in stratification to make sure that their sample reflects the population on key variables. Sample sizes range from 900 respondents to 4,000. In addition the minimum age of respondents varies from 12 up to 18 years.

Given the range of countries involved in the collaboration there are significant differences in the stage of internet development. There are large differences in internet penetration and the prevailing forms of access. For example in many countries public access points are becoming increasingly less important while in developing countries public access points are still the main means for people to access the internet.

A related issue is that of broadband take-up. This is becoming the key issue in many countries in which the internet is a 'mature' technology, but there is no consensus regarding what constitutes broadband and this definitional problem is exacerbated when looking across countries. Similarly the evolution of the internet has varied between countries in terms of technologies adopted.

Public policy framing of internet development also varies between the partner countries. Regulating the perceived negative effects of the internet is given more emphasis in some jurisdictions while others are more interested in the economic benefits of the net.

Just as importantly for a project such as this, there is great variation in the amount and type of research conducted on internet use and its impact in the various partner countries. In the US for example, the *Pew Internet and American Life* project, commenced in 1999, is a major ongoing survey-based project examining the internet and its impact on households and communities. In Australia, however, research on the social impact of the internet has been piecemeal at best. While there are many surveys that have been conducted on internet use and non-use in various countries, the World Internet Project is the only attempt to undertake coordinated survey work across countries. The combination of longitudinal data and international comparison makes this project extremely useful for identifying and tracking trends.

In the United States there has been a lot of survey research concentrating on the diffusion of new technologies. The Department of Commerce's *Falling Through the Net* project, begun in 1995 and then rebadged as *A Nation Online*, is the best example of this type of research. It began in response to concerns about the digital divide more generally and is now focused on the issue of broadband diffusion. The research includes some limited consideration of uses of the internet by individuals and households but does not investigate 'social impact' in any detailed way. In this research the positive effect of the internet is assumed.

The Pew Internet and American Life Project is a more ambitious and larger project that aims to 'explore the impact of the Internet on families, communities, work and home, daily life, education, health care, and civic and political life.' This project is a series of thematically linked investigations of the impact of the internet. Recent reports have included a study of bloggers and online banking. In contrast to the US World Internet Project this approach enables more detailed investigation of particular issues and uses but doesn't provide as clear an overview. The focused nature of these surveys doesn't facilitate the investigation of the relationship between various online (and off-line) activities and uses.

All partners in the WIP have their own funding source although the US partner in particular has played a key role in advising new partners and meeting with prospective funders. Another challenge to the development of the project has been in developing a consistent approach for partners with greatly varying funding arrangements both in terms of quantum and funding mix. This year will see the first international report published out of the project that will include data on a dozen countries.

Appendix 2: About CCI

The ARC Centre of Excellence for Creative Industries and Innovation (CCI) was established in 2005 to focus research and development on the contribution that the creative industries and their contributing disciplines can make to a more dynamic and inclusive innovation system.

Funded by the Australian Research Council from 2005-13, CCI is acknowledged as a global leader in this emerging field. It is a broadly-based, cross-disciplinary, internationally focused Centre embracing both fundamental theoretical and highly applied research in media, cultural and communication studies, law, education, economics and business and information technology, addressing key problems and opportunities arising for Australia, the Asian region, and for the wider world, from innovation in both the creative economy and the broader service economy. It addresses the nature of the field as rapidly-moving and internationally-focused, with extensive research links and international nodes established or planned in Britain, Singapore and China.

The Centre plays a significant role in theoretical and strategic debates with academic, policy, and industry interlocutors, as well as working extensively on new empirical and technical methodologies, including, for example, the creation of new statistical approaches to measuring the creative economy, new software solutions for creative enterprise, and ethnographic action research.

The Centre gratefully acknowledges the support of the Australian Research Council in providing core funding to establish the Centre, 2005-13. We acknowledge Queensland University of Technology, as the administering institution, for its substantial support for the Centre. The core collaborating partners are Swinburne University of Technology, Australasian CRC for Interaction Design, Australian Film Television and

Radio School, Edith Cowan University, University of Wollongong, Royal Melbourne Institute of Technology and University of New South Wales.

Appendix 3: The World Internet Project – International Contacts

Argentina

Institute of Applied Economics & Fundación de Investigaciones
Económicas Latinoamericanas
www.fiel.org.ar

Australia

ARC Centre of Excellence for Creative Industries and Innovation (CCi)
Institute for Social Research, Swinburne University of Technology
www.cci.edu.au/projects/digital-futures

Bolivia

Universidad NUR
www.nur.edu

Canada

Canada Internet Project (CIP)/Recherche Internet Canada (RIC)
www.cipiconline.ca

Chile

Pontificia Universidad Catolica de Chile: Schools of Communications
(head), Sociology, and Engineering /
Santiago Chamber of Commerce (CCS).
www.wipchile.cl

China

Chinese Academy of Social Sciences
www.wipchina.org/en

Colombia

Centro de Investigación de las Telecomunicaciones (CINTEL)

www.cintel.org.co

Cyprus

Cyprus University of Technology

Department of Communication and Internet Studies

www.cut.ac.cy

Czech Republic

Faculty of Social Studies, Masaryk University Brno

www.fss.muni.cz/ivdmr

France

Center for Political Research at Sciences-Po

www.cevipof.msh-paris.fr

Germany

Deutsches Digital Institut

www.deutsches-digital-institut.de

Hungary

ITHAKA -- Information Society and Network Research Center

www.ithaka.hu

Iran

University of Alzahra

www.Alzahra.ac.ir

Israel

The Research Center for Internet Psychology (CIP)

Sammy Ofer School of Communications, The Interdisciplinary Center

www.idc.ac.il/communications/cip/en

Italy

SDA Bocconi, Bocconi University

www.sdabocconi.it/home/it/

Japan

Toyo University

www.soc.toyo.ac.jp/~mikami/wip/en/index.html

Macao

University of Macau, ERS E-Research (Lab)

Macao Internet Project (MIP)

www.macaointernetproject.net

Mexico

Tecnológico de Monterrey, Proyecto Internet

www.wip.mx

New Zealand

Institute of Culture, Discourse and Communication, AUT University of

Technology

www.wipnz.aut.ac.nz

Poland

Gazeta.pl Research and Analyses Unit

<http://badania.gazeta.pl>

Portugal

Lisbon Internet and Networks International Research Programme (LINI)

<http://www.lini-research.org>

Russia

Analytical Center, Video International

www.vi.ru/index.aspx?lang=ENG

Singapore

Singapore Internet Research Centre (SiRC)

Nanyang Technological University

www.ntu.edu.sg/sci/sirc

South Korea

Yonsei University

www.yonsei.ac.kr

Spain

Internet Interdisciplinary Institute (IN3)

Open University of Catalonia (UOC)

www.uoc.edu/in3/pic/eng/communication.html

Sweden

World Internet Institute (WII)

www.wii.se

Taiwan

Taiwan e-Governance Research Center

Department of Public Administration, National Chengchi University

www.teg.org.tw

<http://pa.nccu.edu.tw/>

United Arab Emirates

American University of Sharjah, Department of Mass Communication

www.aus.edu

United Kingdom

Oxford Internet Institute

www.oii.ox.ac.uk/microsites/oxis

United States

Center for the Digital Future

USC Annenberg School for Communication & Journalism

www.digitalcenter.org