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Executive Summary (Emily Wium)

Sollos is a home and giftware store which seeks to minimise waste wherever possible by sourcing locally and stocking ethical and environmentally friendly products. As environmentally orientated individuals, along with our community partner and founder of Sollos, Jason Pemberton, we undertook this research to assess how successful Sollos is at minimising waste in comparison to big box retailers. Our research question is, "By considering the entire life cycle of their products, can Sollos further minimise their waste and ecological footprint when considering consumer perceptions and behaviours?". Our chosen methodology came in the form of a survey as well as undertaking product comparisons. In order to determine if Sollos is currently minimising more

Introduction (Emily Wium)

This report assesses how successful Sollos, an artisan homewares store, is at minimising waste in comparison to big box retailers. It also discusses any practises that could be implemented by Sollos t

information in some areas, with the majority

that recycling is a significant factor in environmental preservation as it minimises other processes that come from having to deal with high amounts of waste. Secondly, when done correctly recycling is efficient and can lead to the minimisation of waste, however it has been demonstrated that people either simply do not recycle correctly or lack knowledge of how to. This was similarly talked about in other academic work that was reviewed, helping us come to the realisation that although stores such as Sollos have a strong focus on stocking products that minimise waste this may not be of benefit if consumers do not recycle correctly.

a large number of respondents were needed to get an accurate representation of data and to make valid conclusions. For research purposes, the two separate surveys will be labeled 'survey one' and 'survey two'

Figure 3. Count of Survey one data of how the packaging/ waste of a product affects whether it is purchased or not.

Figure 4. Count of Survey two data of how the packaging/ waste of a product affects whether it is purchased or not.

Figure 5. Count of Survey two data of the extent that Sollos attempts to provide ethically and sustainably sourced products. Ranked from 1 (lowest extent) to 5 (highest extent).

Figure 1 shows that 36 consumers said 'Yes' they are willing to pay more for products that are ethically and sustainably sourced, while 18 consumers said it 'Depends'. From Figure 2, we can see of the 18 consumers who said it 'Depends', 17 of them gave price related answers, while only 1 consumer said it depends on the 'perceived nature of ethical and sustainable'. Figure 3 and Figure 4 are different graphs of the same question. Figure 3 shows the results from survey one, that 28 consumers said the packaging/ waste that comes from a product 'a little' bit affects whether they purchase it or not. This corresponds to 51.9% of consumers that took survey one.

the products. This was done to narrow the scope of the research and allow for greater focus on these main areas.

Ingredients:

It was expected that the ingredients used by Sollos' suppliers would typically have a smaller ecological footprint. Literature was used to determine the different ecological footprints of ingredients. This is where the limited resources available had a large impact on the accuracy of our research. Despite these variations, our research showed that the products stocked by Sollos tended to have a smaller ecological footprint. This was important to confirm as ingredients can make a significant difference to ecological footprints (World Wildlife Fund, 2020). It is also a key area that Sollos can make an impact as changes in ingredients/ stocked products can be driven by the store rather than the consumer.

Packaging:

Packaging was another section that the expected results were received, as typically less packaging was used by Sollos' suppliers. However, there was a wide variety in information available which made it more difficult to truly know what packaging was involved in each product. Packaging is an important aspect of waste, thus any information around what suppliers use can provide clarity on how waste can be minimised or better managed. Any waste minimisation in this sector must consider that packaging exists to protect the product and act as a form of marketing (Kartick Samanta, Basak & Chattopadhyay, 2016). Thus, approaches to minimise waste must meet these requirements. However, the current tact of recycling is not the ideal way to reduce waste. The entire life cycle of a product must be considered when considering how to minimise packaging. This is because there are many stages involved in the production of goods, many of which require transport and thus packaging. Packaging of products is an area of waste minimisation where the onus to reduce waste is on the consumer (Sustainability Exchange, 2020). We believe, however, that this is an area of importance for Sollos. They should continue to source products that have minimal packaging and try use packaging that is reusable rather than recyclable.

Location/ Source:

Given that part of Sollos' ethos is sourcing from local small business' the results from our comparisons were, once more, expected. All of Sollos' products were made in Christchurch and the comparison products were made more generally in New Zealand. However, it was

unintentional that the comparison products were all from New Zealand companies. Local sourcing has a large impact on the environment and is often considered an important step when reducing environmental harm (Albrecht & Smithers (2017)). This is largely due to transport and associated energy uses. In New Zealand we pride ourselves on the use of renewable energy, thus there was an assumption that New Zealand factories would use less fossil fuel than international factories. New Zealand's transport system, however, still uses significant amounts of fossil fuel (Ministry of Transport, 2019). This would exasperate the differences between the carbon footprints of products produced in Christchurch and those produced in the North Island. Another issue that is highlighted with the lack of information available was the use of imported ingredients. It was occasionally unclear what ingredients were imported, and what sources they were imported from. Some products, such as cocoa, were expected to be imported from overseas, thus there was minimal assumed difference in ecological footprint. This information has reinforced that Sollos' actions are making a difference, and their enthusiasm for sourcing locally is correctly placed.

Customers/ Consumers:

Our research and literature review largely had the same findings, consumers are willing to act environmentally friendly if they are properly educated about the product and that it is still convenient for them. The factor of convenience was not significantly highlighted in our research, due to survey questions focusing more on price points and the end of life of products. Our research has shown that if the consumer is well educated, they are willing to purchase a product that is less convenient if it is better for the environment. However, an alternative product cannot be considered too inconvenient or expensive as it will not be perceived as advantageous to the consumer. If consumers are properly educated, they will process their waste correctly, thus it would be logical for Sollos to stock packaging that consumers regularly come across and know how to manage. This approach would still be flawed as research has clearly shown that reduction and reuse is the best way to minimise waste.

Our surveys showed that regardless of age consumers were willing to pay more for goods that they knew were ethically and environmentally sourced. This once more highlights the need for education and advertisement about Sollos' products. Consumer's want to be environmentally friendly and the perceived increase in costs is not always a barrier. The younger demographic was shown to be less willing to pay more for environmentally friendly products. This was likely due to the lower income of this group, as most that wouldn't necessarily pay significantly more

cited the need to pay rent as a priority. Whilst consumers were willing to pay more, the increased cost could not be significantly higher as it would push the product into a different price range. This information is useful to Sollos as it confirms that their highest selling products are in the 'sweet spot' of an increased price but not significantly more expensive than a more commercially available product.

Customers were generally not too concerned about the packaging involved in a product. This is

recycling station will hopefully decrease the amount of waste that leaves Sollos. Keeping waste internal means Sollos have more control over the after-life of any recyclable product waste.

The final recommendation that presented as an opportunity for significant social change is to utilise the space in Sollos to hold workshops on how to best deal with waste. According to an overseas study, minimisation behaviour is primarily impacted by the following two factors: education and skill in waste minimisation (Liu, Gong, Wang, Lai, & Zhu, 2019). Sollos could

we cannot be 100% confident when making our conclusions. A lot of information was not consistently available and there were also many factors that we did not include in the scope of the research, such as the energy used to create the goods and the environmental impacts of ethical sourcing. Not being able to survey our intended target audience also impacted the reliability of our survey and therefore our results considerably.

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