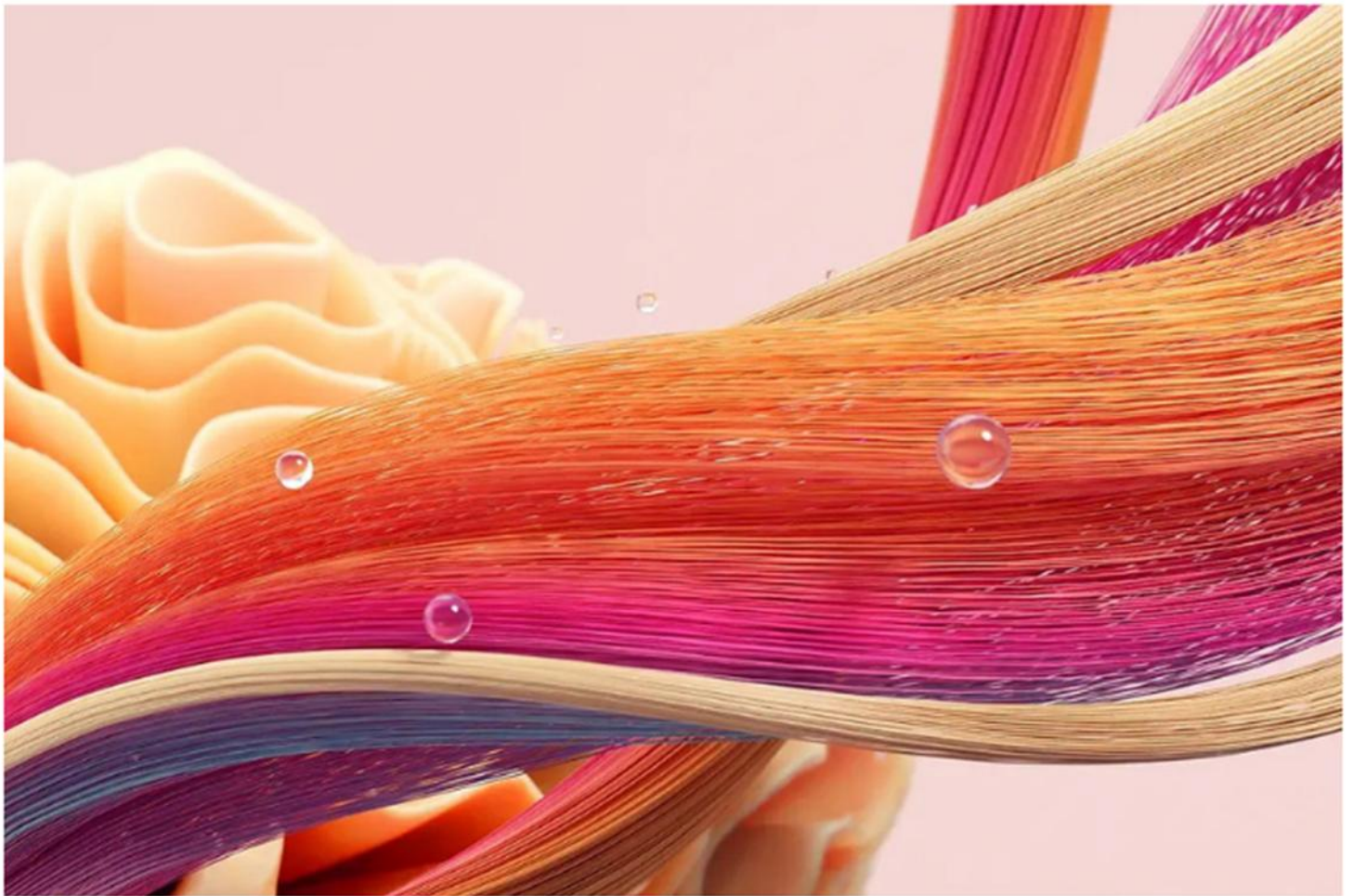


Final Report

# Unbox Henkel

Designing Promotions That Sell Smarter



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**Henkel NZ**

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## Executive Summary

This project evaluates Henkel NZ's promotional effectiveness during Woolworths' 2024 Spring and Summer Cleaning campaigns across detergent, toilet care, and dishwash categories. Drawing on descriptive analysis and fixed effects panel regression at the SKU-week level, the analysis identifies three key drivers of promotional success: mailer visibility, pack size alignment with campaign objectives, and loyalty activation via the Everyday Rewards Boost programme.

### 1. Prioritise High-Impact Mailer Positions

Mailer inclusion consistently delivered substantial sales uplift across all three categories, reaffirming its role in enhancing visibility and engagement. Among positions, Slot 7 (centre-right) produced the highest positive directional effect, while Slot 8 showed a statistically significant negative impact. These findings support prioritising premium mailer placements for eco-friendly, new, or high-margin SKUs to drive performance.

### 2. Align Pack Size with Campaign Objectives

Promotional success varied by pack format and campaign intent. In Summer Cleaning, larger detergent and toilet care packs performed strongly, reflecting shoppers' focus on value and restocking. In contrast, dishwash SKUs performed best in mid-sized formats, balancing practicality with price sensitivity. Aligning pack rank with shopper missions enhances promotional relevance and optimises sales response.

### 3. Leverage Boost Offers to Build Repeat Engagement

Woolworths' Everyday Rewards Boost programme offers an opportunity to convert a one-time trial into a repeat purchase. When a Boost is activated and redeemed, it increases the likelihood of future targeting through personalised offers. For sustainability-led brands like Earthwise, pairing Boosts with mailer features can extend campaign impact, improve loyalty, and reinforce brand presence in a competitive market.

These insights offer a practical, data-driven framework to optimise Henkel's future campaign design. Combining mailer strategy, format tailoring, and loyalty integration, Henkel can improve promotional ROI, deepen shopper engagement, and strengthen its portfolio performance in New Zealand's FMCG landscape.



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## 1. Introduction Evaluating Promotional Effectiveness in a Competitive FMCG Landscape

Henkel Consumer Brands NZ, a pioneer at heart, is known for delivering innovative and sustainable solutions that improve everyday life. With brands such as Cold Power, Dynamo, Fab, Sard, Earthwise, and Bref, Henkel maintains a strong position in New Zealand's home and laundry care market (Henkel, n.d).

In 2024, Henkel participated in Woolworths NZ's two flagship promotional campaigns: Summer Cleaning (12–18 February) and Spring Cleaning (23 September–6 October). These seasonal campaigns boosted shopper engagement: Summer Cleaning promoted value-led restocking via large-pack formats. Spring Cleaning focused on attracting new customers through smaller SKUs emphasising fragrance and seasonal relevance. Both campaigns featured promotional pricing and inclusion in Woolworths' digital mailer, a key touchpoint for shopper visibility in a competitive FMCG environment.

However, visibility alone does not guarantee success. Promotional effectiveness depends on strategic design: which SKUs are selected, how they are priced, where they appear on the mailer, and whether product attributes align with shopper expectations. Henkel's key business challenge is to assess the effectiveness of these activations and identify which product-level and promotional factors drive performance. This includes examining which SKUs and pack formats perform best and whether features like mailer visibility, fragrance, or eco-positioning influence sales outcomes. The goal is to turn historical campaign data into more intelligent decisions for future promo planning across current and adjacent product categories.

While understanding what drives promotional success is essential, it is equally important to recognise the potential trade-offs. Promotions can lift sales volumes in the short term, but excessive discounting may trigger stockpiling (Blattberg, Briesch, & Fox, 1995), post-campaign sales declines (Neslin, 2002), and dilution of brand equity (Bogomolova, Szabo, & Kennedy, 2017). These risks are particularly relevant for premium or environmentally positioned products, where long-term brand value could be undermined.

This report begins by outlining the business context and datasets used, followed by a descriptive analysis of promotional performance at the promo group level. SKU-level fixed effects regression modelling was then used to quantify the impact of variables such as pack rank, fragrance, environmental claims, and mailer position. These insights are translated into group-level recommendations, where promotion decisions are typically made. The final section provides



strategic recommendations to enhance campaign planning, optimising mailer visibility, aligning pack formats to campaign intent, and reinforcing long-term brand value. Additionally, we highlight opportunities to leverage Woolworths' Everyday Rewards Boost system to foster repeat engagement.



## 2. Project Background

Promotional campaigns are not just a part but a crucial cornerstone of Henkel Consumer Brands NZ's growth strategy across laundry and home care. With a portfolio spanning laundry detergent, toilet care, dishwashing, laundry additives, and fabric softeners, Henkel engages in major retail-led to strengthen in-store presence, attract new shoppers, and reinforce brand loyalty.

In 2024, Henkel strategically participated in Woolworths NZ's two flagship events: Spring Cleaning and Summer Cleaning. These seasonal campaigns, crucial in Henkel's promotional strategy, provided a platform for brands to benefit from promotional pricing and elevated visibility through Woolworths' digital mailer. Across both events, Henkel featured four key promo groups: Dynamo 1.8–2L and Earthwise 4L, Bref Spa 2×50g, and Earthwise Dishwash Tablets (See Appendix A, Figure 1).

Each campaign was aligned to a distinct shopper mission. Spring Cleaning focused on trial and fragrance-led purchases through compact or sensory products, while Summer Cleaning encouraged value-driven restocking with larger formats. These differing formats provided an opportunity to evaluate how product size, attribute positioning, and mailer visibility influence outcomes.

While Henkel's full dataset spans five categories, the analysis focuses on the three participating segments: laundry detergent, toilet care, and dishwash. These segments, particularly laundry detergent and toilet care, represent Henkel's strongest categories in the New Zealand market and serve as strategic benchmarks. Validated insights from these categories can later be applied to fabric softeners and laundry additives to ensure consistency and scalability.

Henkel provided weekly point-of-sale (POS) data from October 2023 to October 2024 to support this evaluation. The dataset captures unit sales, pricing, promotional weeks, pack size, and product attributes, with additional manual tagging of mailer participation and grid-based position. Although in-store display data was unavailable, the granularity of SKU–retailer–week observations enables robust comparative and regression-based analysis.

The analysis addresses key questions around promotional effectiveness, focusing on:

- Sales uplift of featured promotion groups during campaign vs. non-campaign weeks
- The influence of mailer inclusion and position on performance
- The role of pack size tiers, fragrance variants (in detergent and toilet care), and environmental labels (in detergent only)



The findings from this project aim to help Henkel identify the non-price drivers that most influence promotional success. These findings will provide a practical foundation for designing more innovative, scalable campaign strategies within and beyond participating categories, enhancing Henkel's future promotional effectiveness.





### 3. Methodology & Analysis

#### 3.1 Analytical Scope and Category Focus

To evaluate Henkel's promotional effectiveness and identify sales drivers beyond price, this analysis focuses on three categories where Henkel was active during Woolworths' 2024 Spring and Summer Cleaning campaigns: laundry detergent, toilet care, and dishwash. While five product categories were available across all manufacturers, Henkel's promotional participation was concentrated in these three, forming the basis for descriptive and regression-based analysis.

As shown in Figure 2 (See Appendix A), Unilever led the category during the campaign period, capturing 43.1% of total sales and 50.9% of units sold. This reflects strong performance across both premium and high-volume SKUs. Henkel ranked third, contributing 9.4% of total sales but only 6.5% of unit volume. This gap suggests that Henkel's promoted products are priced higher or sold in larger packs, generating more revenue per unit. While this premium positioning can support substantial value contribution, it also signals an opportunity to expand reach by introducing more competitively priced or smaller-format options to attract new shoppers during promotional events.

The descriptive analysis assesses performance at the promo group level, focusing on sales uplift, price dynamics, and early indicators of shopper response. These findings then inform the fixed effects panel regression modelling, conducted at the SKU level to control for unobserved heterogeneity and isolate the impact of key promotional levers such as mailer presence, pack rank, and product attributes.

These methods provide a structured view of what drives promotional success and where Henkel can refine its future campaign strategy.



### 3.2 Baseline and Uplift Calculation

To consistently evaluate promotional performance across SKUs, **baseline uplift** was calculated using the following formula:

*Figure 1 Calculation of Baseline Sales*

$$\text{Uplift (\%)} = \left( \frac{\text{Promo Week Sales} - \text{Baseline Sales}}{\text{Baseline Sales}} \right) \times 100$$

where:

- **Promo Week Sales** = Total sales of the SKU during the campaign week
- **Baseline Sales** = Average weekly sales of the SKU during non-promotional weeks (typically calculated over 51 weeks)

This standardised approach enabled consistent comparison of promotional effectiveness across categories, brands, and formats.

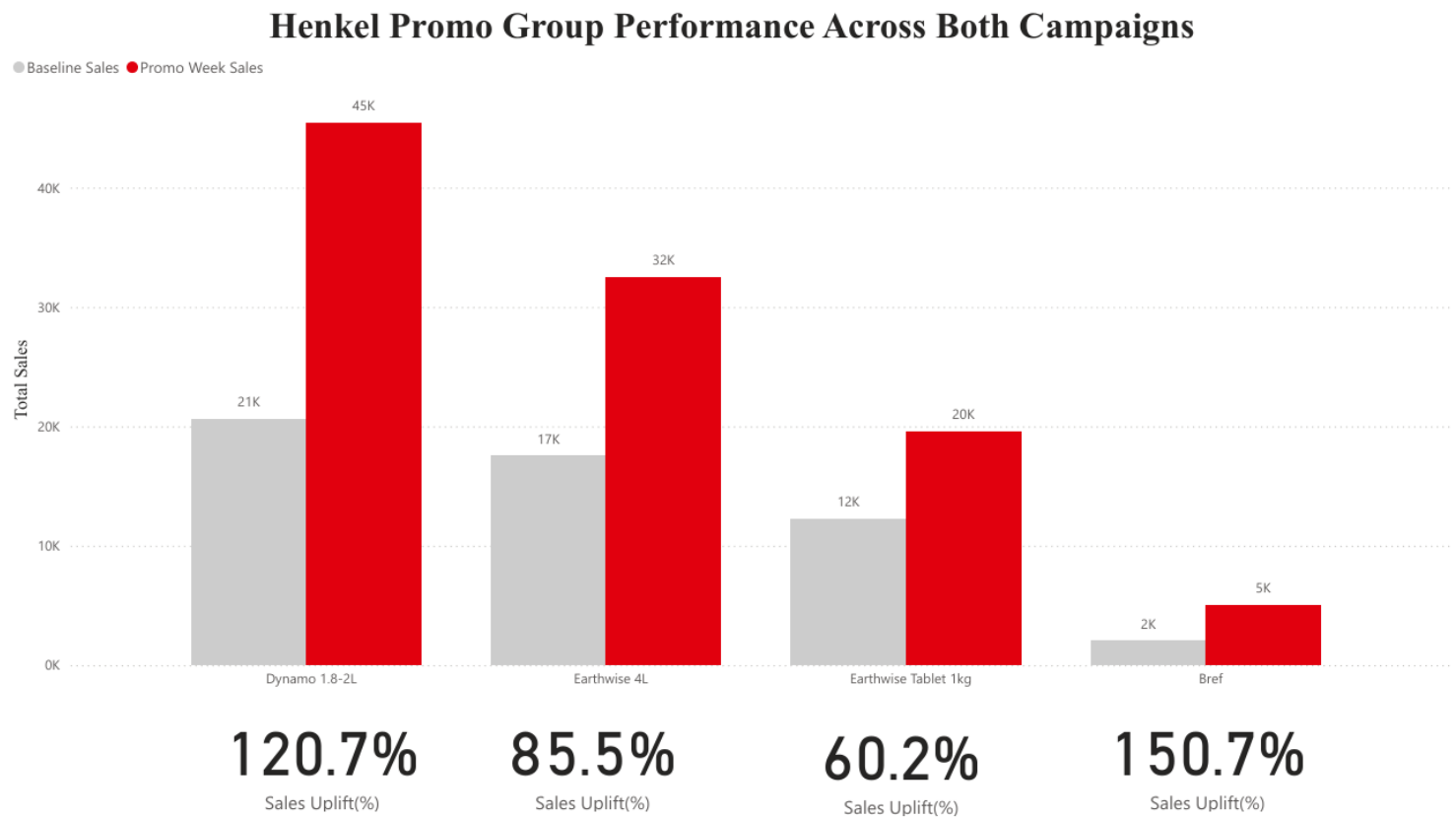


3.3 Descriptive Analysis

3.3.1 Promotion Performance Overview

Figure 2 highlights the promotional performance of key Henkel product groups featured in Woolworths' February and September 2024 campaigns. Across laundry and toilet care categories, all four groups demonstrated strong responsiveness to promotional activity, with sales uplift ranging from +60% to over +150% compared to their 52-week baseline. These results validate the strategic value of mailer-based promotions for value-driven and premium-positioned SKUs, reassuring us about our current strategies' effectiveness (See Appendix A, Table 1 for complete market share data.).

Figure 2 Henkel Promo Sales Uplift – Spring & Summer 2024 Campaigns

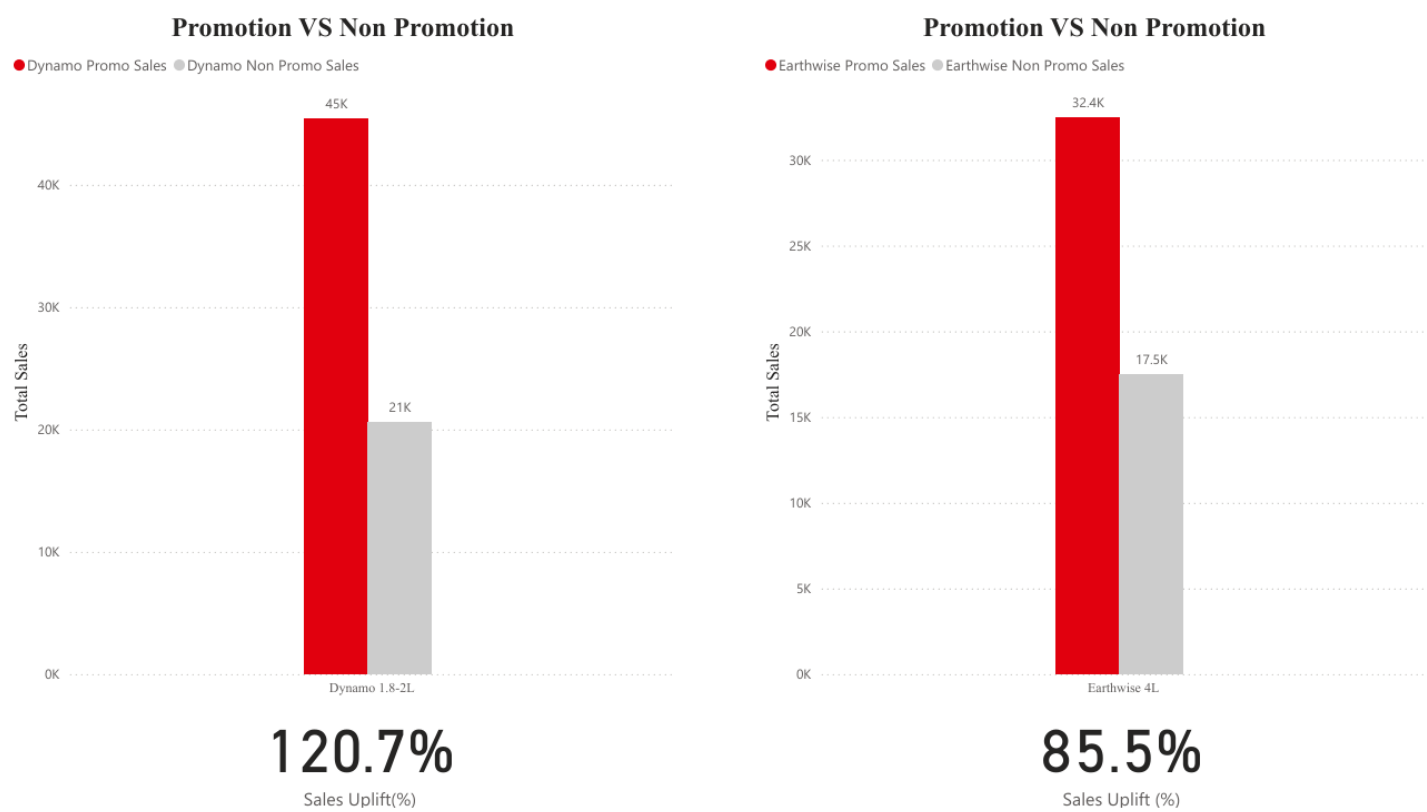


The following sections provide a category-level breakdown of promotional performance.

3.3.2 Laundry Detergent

Henkel’s Laundry Detergent promo groups Dynamo 1.8L–2L and Earthwise 4L were both featured in the 2024 Summer Cleaning campaign. Figure 3 presented Dynamo 2L, which, promoted at \$13.00, achieved a +120.7% uplift, highlighting strong price sensitivity in the mid-range liquid segment. Earthwise, priced at \$18.50, delivered a +85.5% uplift, reinforcing that eco-conscious shoppers respond well to value-positioned, sustainable formats when supported by mailer visibility (See Appendix A, Table 2 for competitors’ data).

Figure 3 Sales uplift of Laundry detergent promo groups feature on the mailer.



Pack size analysis reveals clear behavioural trends. More miniature packs (Rank 3) generated the highest promotional unit sales (270,000), suggesting a strong shopper preference for affordable trial options during campaigns. Mid-sized packs (Rank 2) dominated full-year sales, generating \$22.1M in revenue at \$14.10/unit, reflecting their role as a volume-driving core. Bulk packs (Rank 1) underperformed across all timeframes, indicating that higher total prices remain a barrier even when discounted. (See Appendix B, Table 1 for pack size rank definitions.)



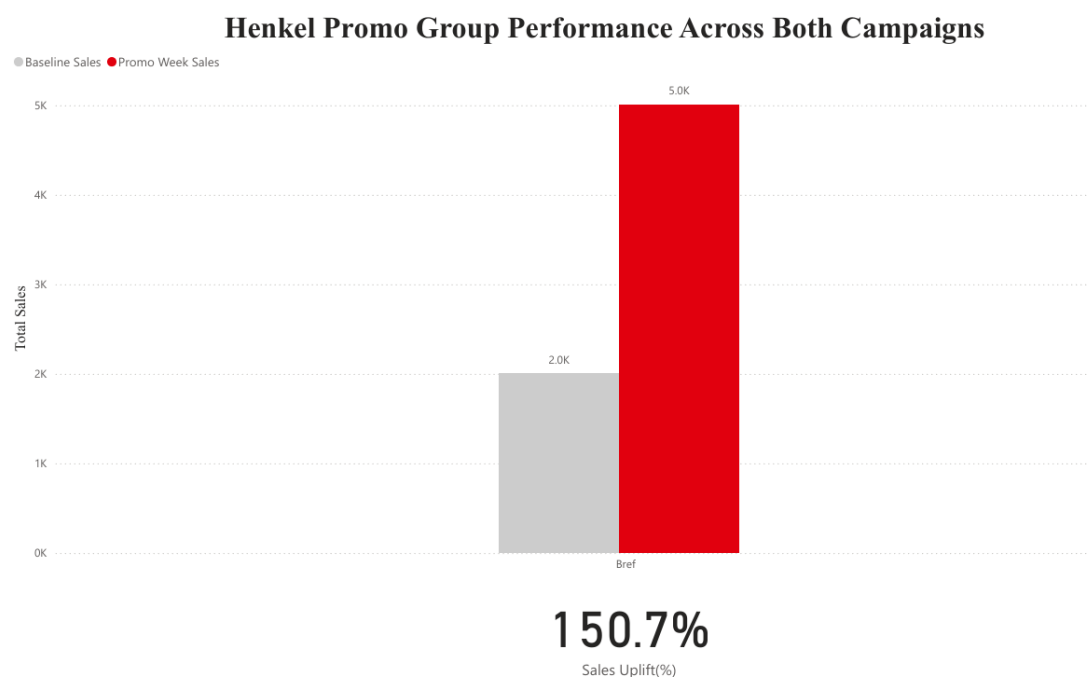
For comparison, Surf 1kg (Unilever) achieved a +102.5% uplift at a sharp \$4.50 price, outperforming in uplift but serving a lower-value segment. This confirms that Henkel’s strong results in the mid-to-premium tier are achievable when pricing and promotional alignment are well executed.

These findings highlight the need to balance price accessibility with product positioning and reinforce why Pack Rank, Price/Unit, and onMailer status are key inputs in the modelling phase to isolate better what drives promotional effectiveness.

3.3.3 Toilet Care

Henkel promoted four SKUs in the Toilet Care category: Bref Spa 2x50g, Harpic Toilet Stickers, Harpic Toilet Fresh 2x39g, and Janola 700ml. Each group exhibited varied responsiveness, reflecting shopper differences in price sensitivity and format preference.

Figure 4 Sales uplift for Bref Spa 2x50g



As Figure 4 shows, Bref Spa 2x50g, promoted at \$6.00, achieved a +150.6% uplift, its most decisive sales week of the year. This supports the effectiveness of price-led promotions for compact, scent-driven formats. Harpic Toilet Stickers delivered the highest uplift at +277% (Spring Week 1 at \$5.50), with sustained sales even after a price drop suggesting a post-campaign recall effect. Harpic Toilet Fresh 2x39g, offered at \$5.00, recorded a +29.7% uplift, indicating consistent demand with moderate promotional impact (See Appendix A, Table 3 for other competitor data).



In contrast, Janola 700ml, despite a low \$4.00 promo price, showed no significant uplift ( $-0.06\%$ ), suggesting it functions as a habitual purchase with minimal promotional responsiveness.

Pack size analysis confirms shopper preference for compact formats. Rank 4 SKUs (0–50ml) like Bref Spa delivered the most substantial uplift despite higher unit prices, reinforcing demand for convenience and fragrance. Larger packs like Janola (Rank 1: 501–1000ml) underperformed, likely due to their everyday utility and strong base familiarity (See Appendix B, Table 2 for rank definitions.).

These insights highlight the value of format-specific strategies. Compact, fragrance-led products benefit most from mailer exposure, while baseline-reliant SKUs may not merit aggressive promotion. These findings inform our modelling approach, including Pack Rank, Price per Unit, and onMailer as explanatory factors.



3.3.4 Dishwash

Henkel promoted one SKU in the Dishwash category: Earthwise Dish Tablets 1kg, a Rank 1 pack of 50 tablets. While the product aligns with Henkel’s sustainability positioning, its promotional performance was modest compared to that of the other key competitors.

Figure 5 Sales Uplift for Earthwise Dishwash Tablet 1kg

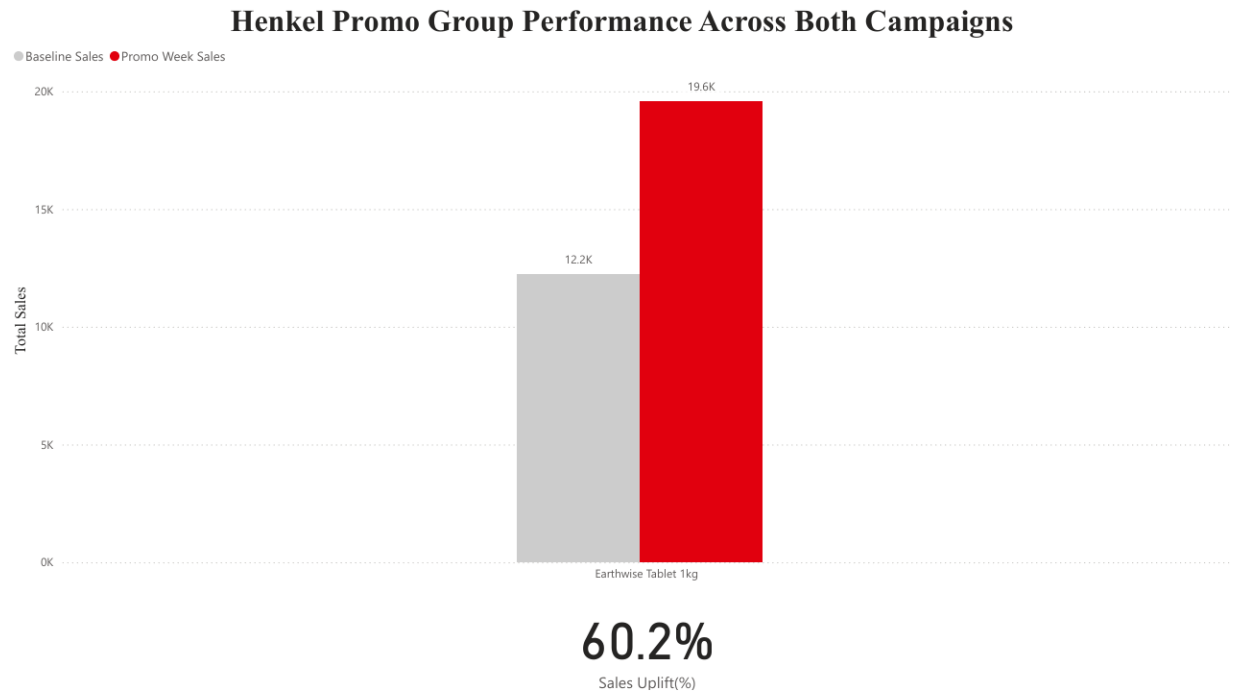


Figure 5 shows that Earthwise Dish Tablets 1kg, priced at \$18.50, achieved a +60.2% uplift, with \$19,573.83 in promotional week sales from a \$12,220.84 baseline. While this represents solid engagement for a sustainability-focused format, Earthwise underperformed relative to similarly sized competitors. Competing Rank 1 SKUs such as Finish Ultimate Tablets 510g and Fairy Platinum Plus 630g recorded higher sales volumes and uplifts exceeding +126% despite offering smaller pack sizes (See Appendix A, Table 4 for competitor-level data).

Pack size analysis further reveals that Rank 2 SKUs (20–40 tablet packs) outperformed other sizes during promotions, generating the highest total sales (\$2.82M) at a lower average price of \$7.50/unit. While Rank 1 formats led annual sales, their price point (\$11.40/unit) may have limited responsiveness under promotion. Earthwise’s low uplift, despite being Rank 1, suggests that format alone is insufficient to drive promo success (See Appendix B, Table 3 for rank definitions).

These insights emphasise the need for value-led strategies in Dishwash. Mid-sized SKUs with strong brand equity and competitive pricing saw a more substantial lift. To strengthen performance, Henkel

could enhance mailer visibility, revisit Earthwise's price point, and explore bundling with complementary SKUs to increase relevance and promotional impact.



### 3.4 Cross-Category Insights

Descriptive analysis across Henkel's three actively promoted categories, laundry detergent, toilet care, and dishwash, have revealed meaningful patterns in sales uplift, shopper behaviour, and promotional responsiveness. Products featured in Woolworths' Spring and Summer campaigns consistently outperformed their baselines, with uplift influenced by price, mailer visibility, and product characteristics such as pack size, format, fragrance, and eco-positioning.

Smaller pack formats frequently generated stronger campaign performance, suggesting shoppers are more responsive to low-entry-price options during promotional periods. Eco-branded SKUs like Earthwise tablets also showed solid engagement when priced accessibly, though performance lagged competitors with deeper discounts or more substantial brand equity. These findings are consistent with prior research by Kamwendo and Maharaj (2022), which identified product form and effectiveness as the most influential factors in detergent choice, followed by price, scent, and size, highlighting that shopper decisions are driven by more than price alone.

While promotions offer short-term gains, they may carry longer-term trade-offs. Deep discounts can drive inventory stockpiling, reduce repeat purchase incentives, or weaken brand health, particularly for premium or sustainable products. Understanding these dynamics requires more than descriptive trends.



## 4. Modelling & Evaluation

### 4.1 Modelling Framework and Variable Construction

To quantify the effectiveness of Henkel’s promotional design choices, we developed a series of fixed effects panel regression models across the Laundry Detergent, Toilet Care, and Dishwash categories. The modelling aimed to isolate the impact of key promotional levers, including unit price, pack size, mailer inclusion, fragrance type, and eco-positioning, on weekly unit sales. To enable this, several structured variables were created (see Appendix C, Table 1). These include a Promo Week flag to distinguish promotional periods, a Pack Rank variable to control for size-based preference, and Campaign Participation indicators to track SKU-level involvement across different time-bound events. By controlling for unobserved SKU characteristics and week-specific variations, this approach provides a robust understanding of which factors most significantly drive consumer response during promotions—the following sections detail each category's modelling framework, variable selection, and key results.

### 4.2 Modelling Objective and Approach

Building on the descriptive findings, we applied fixed effects panel regression at the SKU-week level to identify which promotional levers most strongly affect unit sales. This approach isolates the effect of time-varying factors such as price, mailer inclusion, and campaign timing while controlling for unobserved SKU-specific characteristics like brand equity, habitual purchasing behaviour, or format preferences.

By incorporating SKU and week-fixed effects, the model controls for both product-level and time-level heterogeneity. This ensures that the estimated impact of each promotional design element reflects its unique contribution, independent of underlying SKU traits or seasonality.

Three core business questions guided the modelling:

1. Do product attributes such as fragrance or eco-positioning influence promotional sales?
2. How does pack size rank shape consumer response across categories?
3. Does mailer visibility, including inclusion and placement, impact sales uplift?

The dependent variable is weekly units sold, enabling direct interpretation of promotional effectiveness. Key independent variables include OnMailer, Mailer Position, Pack Rank, Price per Unit, Fragrance, Environmental Tags, and Campaign Labels (Spring or Summer), as summarised in Appendix C, Table 2.





### 4.3 Hausman Test on Model Selection

Hausman tests conducted separately for Laundry Detergent ( $\chi^2 = 13.83$ ,  $df = 6$ ,  $p = 0.0316$ ) and Toilet Care ( $\chi^2 = 114.02$ ,  $df = 5$ ,  $p < 2.2e-16$ ) confirmed fixed effects as the more appropriate choice (see Appendix C, Figures 1 and 2) as unobserved SKU-level characteristics are correlated with key promotional variables consistent with econometric best practice, which recommends fixed effects when the p-value is below 0.05 to ensure consistent estimation (Greene, 2019).

### 4.4 Regression Results: Product Attributes and Pack Size Effects

#### 4.4.1. Laundry Detergent

The Laundry Detergent model achieved an  $R^2$  of 0.32, indicating a reasonable level of explanatory power for understanding consumer response within this category. The regression results highlight that pack size is critical in unit sales. Compared to the most miniature format (Pack Rank 3, reference), large packs (Pack Rank 1) drive a significant increase in sales (+448 units,  $p < 0.001$ ), while mid-sized packs (Pack Rank 2) show a negative impact (−212 units,  $p < 0.001$ ). This suggests a polarised preference for either bulk-value formats or small trial-friendly options, with mid-sized SKUs failing to differentiate.

Among product attributes, eco-labelled SKUs significantly negatively affect sales (−762 units,  $p < 0.001$ ), implying that despite sustainability messaging, these products may face consumer hesitation due to price or perceived performance. Most fragrance types perform below the “no fragrance” benchmark, except Tropical, which shows a positive effect (+127 units,  $p = 0.03$ ), indicating selective scent appeal. (See Appendix C, Table 3 for complete model coefficients.)

#### 4.4.2. Toilet Care

The Toilet Care model achieved an  $R^2$  of 0.41, indicating strong alignment between pack size, fragrance attributes, and consumer sales response. In contrast to laundry detergent, toilet care exhibits a U-shaped pack size pattern. The largest format (Pack Rank 1) delivers a positive effect (+52.3 units,  $p < 0.001$ ), while smaller compact formats (Ranks 4 and 5) also outperform mid-sized options, which show negative impacts. This reflects a shopper preference for either bulk value or convenience-driven sizes.

Fragrance effects also vary. Using “Other Fragrances” as the reference group, Blue leads with a substantial positive effect (+77.9 units,  $p < 0.001$ ). Meanwhile, more common scents are Apple (−36.8), Citrus (−31.6), and Floral (−21.2), which show negative coefficients. These results imply



that distinct or less conventional fragrances are more effective in capturing consumer attention and driving promotional lift. (See Appendix C, Table 4 for detailed regression results.)

#### 4.4.3. Dishwash

The Dishwash model yielded an  $R^2$  of 0.22. While this is lower than in other categories, it still provides meaningful directional insight, particularly given the limited number of Henkel SKUs and higher variability in format performance. In marketing and consumer behaviour studies,  $R^2$  values between 0.2 and 0.4 are commonly considered acceptable due to real-world consumer decisions' complex, multi-factor nature (Gupta & George, 2022).

The regression results reveal a distinct pattern: Mid-sized packs (Pack Rank 2) generate the most substantial uplift (+330 units,  $p < 0.001$ ), followed by larger packs (Pack Rank 1: +213 units,  $p < 0.001$ ). This contrasts with laundry and toilet care, aligning more with the functional nature of dishwashing products: frequent use, small portions, and limited storage.

Additionally, mailer inclusion has a strong positive effect (+1,068 units,  $p < 0.001$ ), underscoring the importance of visibility and mailer strategy in driving campaign performance. (See Appendix C, Table 5 for complete model coefficients.)

#### 4.5 Engineering and Modelling Mailer Position

Following the confirmation that mailer inclusion significantly increases sales, we investigated whether an SKU's placement within the mailer further influences performance. Woolworths' digital mailers follow a consistent 3×4 grid layout with 12 featured products. Each SKU was manually assigned a position from 1 (top-left) to 12 (bottom-right) to reflect the typical scanning behaviour of online shoppers (See Appendix D, Figure 1).

In the regression model, Position 1 was treated as the reference category. Dummy variables were created for Positions 2–12 to evaluate whether visibility varied by slot. This enabled systematic comparison across all placements.

#### 4.6 Interpretation of Mailer Position Results

Although most mailer positions did not reach statistical significance, likely due to the limited number of observed campaigns, the regression results reveal clear directional trends. Position 8 (bottom-right-centre) was the only statistically significant slot ( $p = 0.015$ ), associated with a substantial –6,130 unit drop in sales compared to the reference position (Position 1: top-left). This suggests that SKUs in this region may suffer from reduced visibility or visual clutter, diminishing their promotional impact.



Position 7 (middle-right) showed the highest positive coefficient (+2,533 units), though not statistically significant ( $p = 0.326$ ). Other positions, such as Slot 5 (middle-left), Slot 9 (bottom-left), and Slot 11 (bottom-centre-left), also exhibited notable negative effects. These patterns reinforce that mailer layout can influence shopper engagement, even if individual position effects are not statistically conclusive.

The strong overall model fit ( $R^2 = 0.6645$ ) confirms that the mailer position meaningfully contributes to unit sales variation. Moreover, the observed directional trends align with behavioural literature on visual attention and shopper scanning habits, which indicates that central and eye-level placements tend to attract higher engagement (Chandon et al., 2009; Clement et al., 2016). This alignment strengthens the practical value of these findings and supports the continued use of position-aware strategies in future campaign planning, even when constrained by limited campaign samples.

Future activations should further test position layouts and expand annotated datasets to validate position effects across broader campaign scenarios (see Appendix D, Table 1).

.



## 5. Findings and Discussion

### 5.1 Mailer Inclusion as a Promotional Lever

The regression analysis confirmed that being featured in Woolworths' digital mailer significantly enhances campaign performance. Across detergent, toilet care, and dishwash, Henkel SKUs included in the mailer recorded higher sales uplift than those excluded. This aligns with the broader literature on retail marketing, which shows that catalogues and mailers can increase mental availability, stimulate purchase intent, and improve promotional recall (Pauwels & Vanhuele, 2019).

Mailer inclusion also acts as a cue for value and relevance. It reinforces the perception that a product is timely, credible, and worth trial, essential for unfamiliar, eco-branded, or premium-positioned SKUs. The mailer helps bridge the gap between awareness and action, encouraging initial purchases without relying solely on deep discounting (Karmarkar et al., 2019).

Given these findings, Henkel should prioritise inclusion for high-opportunity SKUs. This is particularly relevant when introducing new formats, promoting sustainable products like Earthwise, or driving trials of niche scent variants. While inclusion alone does not guarantee success, it creates the foundational visibility upon which more targeted strategies, such as optimal positioning, can build.

### 5.2 Mailer Position and Sales Performance

While mailer inclusion delivers baseline visibility, the position within the mailer can further amplify or diminish that impact. As detailed in Section 4.6, the fixed effects regression results showed that Position 8 (bottom-right-centre) had a statistically significant negative effect (−6,423 units;  $p = 0.0146$ ), while Position 7 (middle-right) recorded the highest positive directional coefficient (+2,533 units), though not statistically significant.

Building on these quantitative findings, this section explores mailer layout's behavioural and strategic implications. Visual marketing literature supports these patterns. Research by Chandon et al. (2009) and Clement et al. (2016) demonstrates that shoppers tend to focus on central and eye-level placements, which attract greater visual attention and stronger purchase intent.

Henkel's campaign experience reinforces this. For instance, Bref Spa 2×50g, featured in Position 7 during the Spring campaign, achieved a 150% sales uplift, highlighting how strategic placement can significantly enhance performance, particularly for sensory-driven SKUs.

Mailer positions should not be treated equally across the promo group to maximise effectiveness. Henkel should select SKUs within each group more deliberately, prioritising those with high



potential—such as new formats, eco claims, or popular fragrances—for premium mailer slots like Position 7. Conversely, SKUs with limited differentiation or baseline-driven sales patterns may be deprioritised or placed in less prominent slots.

By combining statistical insights with shopper psychology, Henkel can refine the composition of promo groups and the placement of their key SKUs. This targeted approach strengthens mailer performance at the group level and supports more effective, insight-led promotional planning.

### 5.3 Aligning Promo Groups with Campaign Objectives

Promotional effectiveness depends on the presence in the campaign or pricing mechanics and on how well-featured products align with the strategic purpose of the event. In Woolworths' Spring and Summer Cleaning campaigns, Henkel's performance demonstrates that tailoring the product mix to fit seasonal shopper intent can meaningfully influence promotional outcomes.

Each campaign targets a distinct behavioural mission. The summer campaign, which was held in February, is targeted at stock-up shoppers who seek value through more significant volumes of essential household items. In contrast, the Spring campaign, launched in September, is more exploratory and encourages shoppers to try new, sensory, or niche products. This behavioural segmentation aligns with existing research. Consumers prefer bulk packs during high-consumption periods for perceived value (Zhao & Deng, 2023), while smaller-format innovations reduce purchase risk and increase consumer willingness to trial (Huang & Sarstedt, 2021).

Henkel's data supports this segmentation. High-volume products like Dynamo 2L and Earthwise 4L performed strongly during the Summer campaign, reflecting shopper appetite for restocking. Meanwhile, Bref Spa 2×50g compact and fragrance-driven achieved a 150% sales uplift in the Spring campaign, aligning with consumers' interest in freshness and discovery.

To optimise future campaigns, Henkel should adopt a seasonally structured promo group strategy:

- **Summer Cleaning:** Prioritise bulk-pack essentials such as detergents and dish tablets to meet value-driven restocking needs.
- **Spring Cleaning:** Promote trial-friendly SKUs with distinctive scents, new eco-positioning, or premium positioning to encourage experimentation.

This shopper-aligned approach boosts conversion by meeting expectations with the right product at the right time. As Grewal et al. (2017) mentioned, aligning promotional tactics with shopper expectations improves campaign engagement and mitigates fatigue. Wang and Doan (2023) further





emphasise that adapting promotional mechanics to seasonal missions, such as trial in Spring and stock-up in Summer, amplifies campaign efficiency and shopper satisfaction.

#### 5.4 Pack Size and Fragrance Preferences as Category-Specific Drivers

Across detergent, toilet care, and dishwash categories, two product attributes, pack size and fragrance, have consistently emerged as key drivers of campaign performance.

##### 5.4.1 Pack Size: Matching Format to Shopper Missions

Pack size has an evident influence on uplift. In detergent and toilet care, rank 1 SKUs representing the most prominent formats consistently outperformed smaller alternatives. These results align with consumer behaviour studies showing that shoppers favour large packs during restocking due to better value and lower repurchase frequency (Chintagunta et al., 2003; Wang & Doan, 2023). Toilet care formats like multi-pack blocks and 1L+ liquids appeal to shoppers seeking durability and hygiene efficiency (Sheehan & Jin, 2022).

In contrast, dishwashing products performed best in mid-sized formats (Rank 2), typically 20–40 tablet SKUs or 375–600ml liquids. These sizes are seen as practical, affordable, and easy to store, making them suitable for routine use. Allenby and Rossi (1991) describe this as the “intermediate value proposition,” where shoppers optimise between unit cost and usability.

#### 5.5 Fragrance: Enhancing Purchase Through Sensory Appeal

The fragrance also had a statistically significant impact across detergent and toilet care models. Tropical and Floral variants correlated with higher sales in detergent, while Apple and Lemon were associated with weaker performance. In toilet care, the Blue fragrance emerged as the top performer, outperforming more familiar scents like Lavender or Citrus.

These results reflect consumer preferences for scents communicating cleanliness, freshness, and comfort. Studies by Clement et al. (2016) confirm that sensory congruence improves perception and purchasing outcomes when a product’s fragrance reinforces its functional purpose. Similarly, Grewal et al. (2017) indicated that atmospheric elements like scent can influence attention and decision-making in home care categories, particularly when the product’s scent aligns with its intended use.

#### 5.6 Promotion Strategic Recommendations by Category

- **Detergent:** Focus promotions on **large-pack SKUs** with popular scents like **Tropical** or **Floral**, particularly for summer campaigns when shoppers prioritise restocking.



- **Toilet Care:** Blue is strongly associated with cleanliness, freshness, and purity qualities that align with shopper expectations in this category. Its visual contrast reinforces perceived effectiveness, making it a compelling sensory cue at the point of purchase (Mitchell, 2024).
- **Dishwash:** Continue promoting **mid-sized packs** that offer an accessible entry point for trial. Pairing these with Boost offers may further support uptake, especially for eco-focused products like Earthwise.

Optimising pack size and scent selections based on category insights allows Henkel to deliver more targeted and relevant promotions. These features are more than product differentiators since they actively influence shopper decision-making and drive more substantial results when aligned with campaign objectives.



## 6. Recommendations

The modelling results highlight several key levers influencing promotional effectiveness: mailer inclusion and position, pack size, fragrance, and alignment with shopper intent across seasonal campaigns. Building on these findings, this section outlines strategic recommendations to help Henkel translate insights into practical actions since both are within Woolworths and across broader retail channels. The aim is to move from reactive promotion to a structured, insight-driven strategy that balances immediate uplift with long-term brand building.

### 6.1 Continue Campaign Participation to Strengthen Brand Presence

Henkel should actively participate in Woolworths' key seasonal campaigns, particularly Spring and Summer Cleaning. Promotional engagement across detergent, toilet care, and dishwash categories has consistently demonstrated strong results, with promo groups featured in the mailer achieving significantly higher sales uplift. These campaigns provide critical touchpoints for driving product trials, reinforcing brand visibility, and building consumer recall within a highly competitive FMCG landscape.

Seasonal promotions such as discounts, displays, and bundled offers can significantly influence consumer purchase decisions and drive incremental sales in the FMCG sector (Sutha & Kumar, 2019). Mailer campaigns effectively enhance message retention and brand salience, as physical or visual marketing formats tend to generate stronger emotional responses and longer-lasting recall than digital-only formats (United States Postal Service, 2019). This aligns with evidence that timely, well-positioned promotions optimise product visibility and stimulate purchase behaviour across retail categories (Shrestha, 2022).

To maximise impact, Henkel should carefully construct promo groups and deliberately select which SKUs are included in the mailer. Priority should be given to SKUs with strong promotional responsiveness—those with favourable pack sizes, sensory appeal, or unique positioning claims. These high-potential SKUs should be allocated to premium mailer positions to maximise shopper attention and engagement. SKUs with stable baseline performance can still contribute to the group but may be activated through in-store displays, bundling, or secondary tactics.

By refining SKU selection and placement at the promo group level, Henkel can enhance campaign ROI, deepen shopper relevance, and deliver more structured, insight-driven promotional execution.

### 6.2 Combine Mailer and Boost Offers to Drive Repeat Engagement

While these campaigns provide critical touchpoints for driving immediate sales uplift, their impact often ends with the campaign period. Henkel should integrate Woolworths' Everyday Rewards Boost programme into its promotional strategy to sustain engagement and build repeat purchase behaviour. When a shopper activates a Boost and completes a qualifying purchase, Woolworths' system captures this behaviour and is more likely to feature the product in personalised offers or future campaigns. This creates a feedback loop that reinforces brand recall and drives ongoing purchase frequency



(Everyday Rewards, n.d.). Research indicates that well-designed loyalty programmes significantly improve customer retention by increasing satisfaction and fostering repeat purchases (Kaur, 2024). Moreover, loyalty programmes have been found to positively impact repeat purchase behaviour, with studies showing that such programmes can alter standard market patterns and generate 'excess loyalty' for brands (Sharp & Sharp, 1997). Henkel should pair selected promo groups, particularly those included in the mailer, with Boost offers to extend campaign visibility across multiple touchpoints. This is especially effective for eco-friendly or premium-positioned groups, such as Earthwise detergent or dish tablets, which often appeal to loyalty-focused shoppers. These consumers are typically motivated by added value and lifestyle incentives rather than discounts. Tangible rewards like Air New Zealand Airpoints elevate the perceived value of everyday purchases, encouraging shoppers to build relationships with the brand while earning meaningful benefits.

### **6.3 Broaden Strategy to Adjacent Product Categories**

While this project focused on detergent, dishwash, and toilet care, the same promotional strategy can be applied to fabric softeners and laundry additives. Both categories are part of Henkel's existing portfolio and present opportunities for uplift when aligned with proven success drivers—such as larger pack sizes, strong fragrance cues, and eco-positioning.

Fabric softeners are ideal for fragrance-led Spring campaigns, while performance-focused additives (e.g., stain removers) can be bundled with detergents during Summer promotions. By selecting the right SKUs, securing mailer inclusion, and pairing with Boost offers, Henkel can enhance visibility, expand basket size, and deliver a more consistent shopper experience across categories.

### **6.4 Implement Promotional Approach Across Retail Partners**

While this project focused on Woolworths, Henkel should apply the same promotional approach across other key New Zealand retailers such as New World and Pak'nSave. These retailers use similar tools: catalogue promotions, digital offers, and loyalty systems like New World Clubcard, which can support the same strategic objectives (New World, n.d.).

Henkel should adjust the campaign format to fit each retailer's systems. However, keep the same core strategy: match promo groups to shopper needs, aim for visible catalogue placement, and use loyalty rewards to build repeat purchases. This approach helps Henkel scale its strategy while adapting to different retail environments.



## 6.5 Track Campaign Results with Internal Data Reviews

Henkel should build a routine process to review results to get the most out of each campaign. While the regression models used in this project were for analysis only, they offer valuable insights into what drives sales, for instance, mailer position, pack size, and Boost impact.

Henkel's internal team should run a post-campaign review after each promotion. Key metrics could include sales uplift by promo group, impact of mailer placement, Boost redemption, and repeat purchase behaviour. Quarterly reviews should include these findings to help guide future promotional planning and budget decisions.

Using data to evaluate what worked and what cannot help Henkel stay agile and ensures that each campaign delivers immediate sales and long-term brand value.

## 7. Conclusion

Henkel NZ's continued participation in Woolworths-led campaigns is commercially viable and strategically advantageous. To maximise impact, Henkel should prioritise securing high-visibility mailer positions, align campaign design with shopper intent and category dynamics, and combine promotional pricing with Boost offers to enhance recall and engagement.

In the long term, Henkel should focus on building enduring relationships with shoppers by embedding its products into Woolworths' digital ecosystem. Through app-based targeting, loyalty incentives, and sustained exposure, Henkel can transition from transactional promotions to deeper, value-driven brand engagement.

This strategic framework should also be extended to other retailers like New World and Pak'nSave, enabling Henkel to execute consistent, scalable, and customer-centric campaigns across the competitive FMCG landscape. By integrating campaign insights into long-term planning and shopper activation strategies, Henkel can enhance short-term ROI and long-term brand loyalty in New Zealand's retail market.





## Appendices

### Appendix A – Descriptive Analysis Figures & Tables

#### Campaign Participation Overview

Figure 1 Henkel NZ's Participating Promo Groups in Woolworths 2024 Summer and Spring Cleaning Campaigns



## Overall Market Share

Figure 2 Market Share by Value and Volume During Woolworths' 2024 Cleaning Campaigns

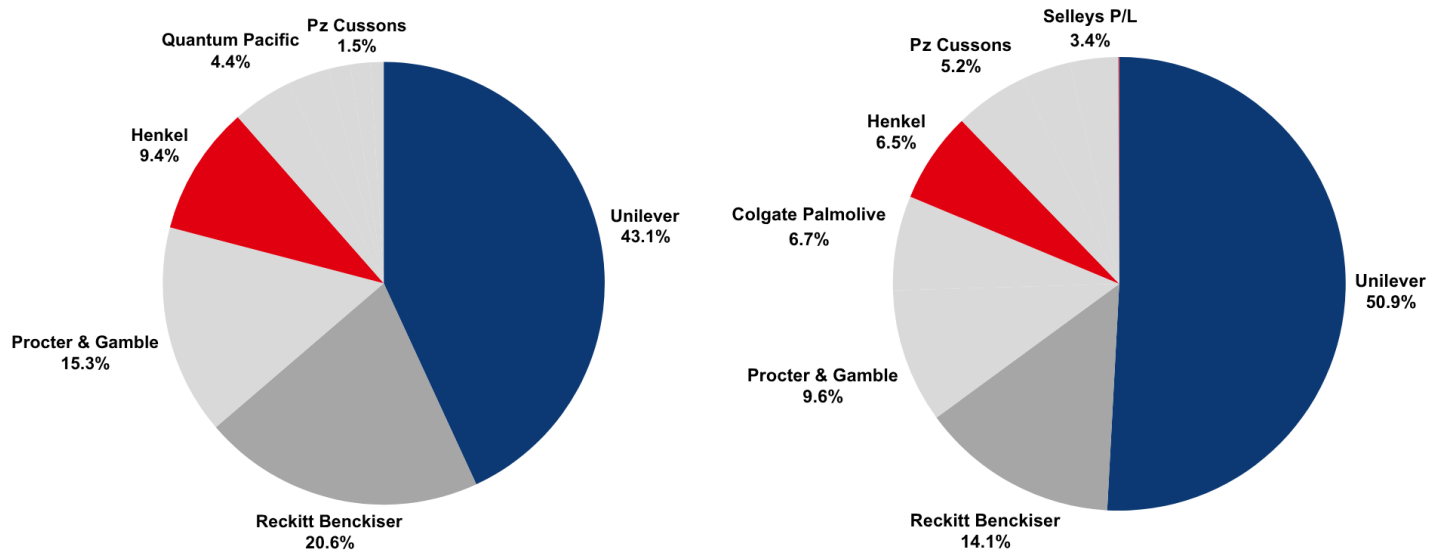


Figure 3 Key Performance Metrics from Mailer-Featured SKUs – Spring and Summer Campaigns 2024

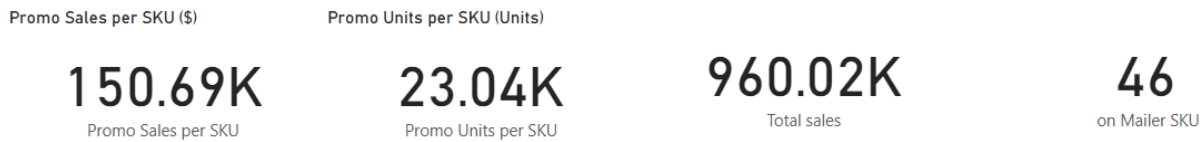


Table 1 Manufacturer-Level Promotion Metrics – Woolworths 2024 Campaign

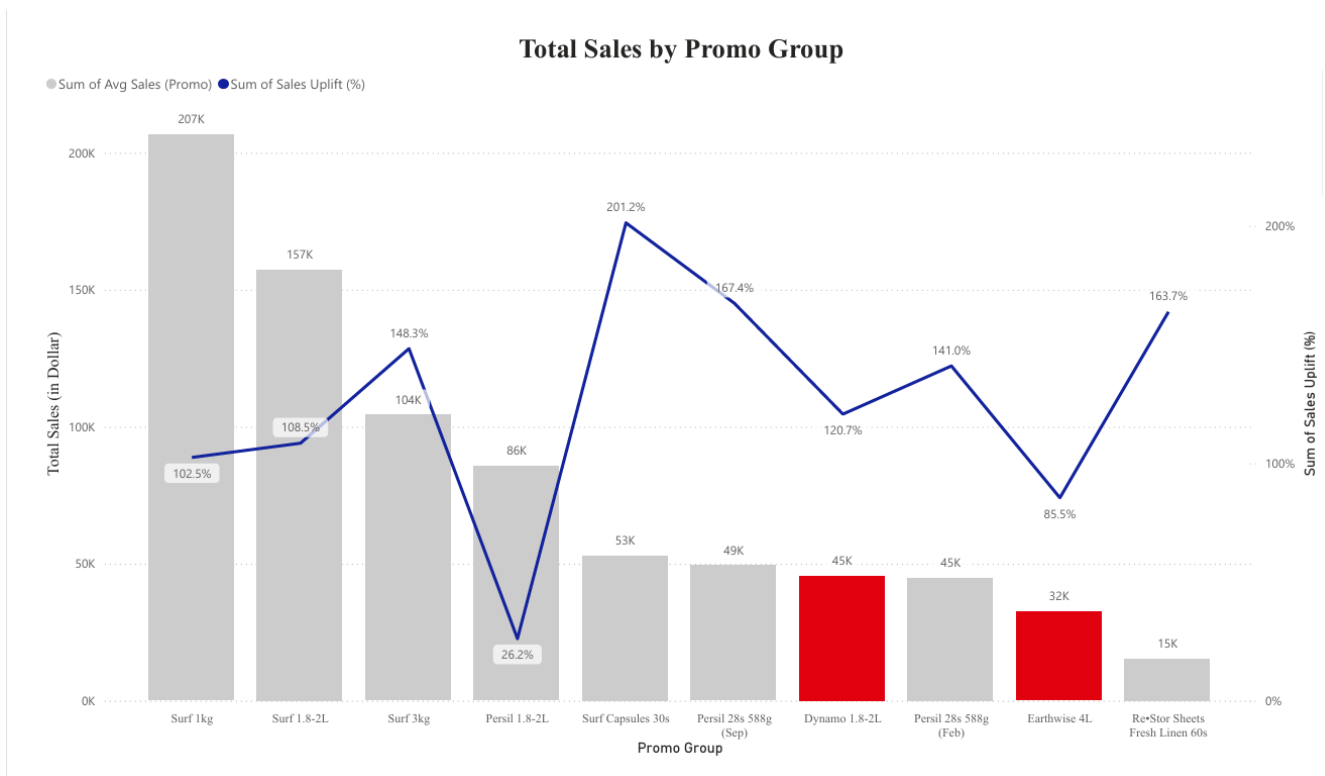
| Manufacturer      | Sum of Units  | Sum of Dollars    | Promo Sales per SKU | Promo Units per SKU | Mailer SKU Count |
|-------------------|---------------|-------------------|---------------------|---------------------|------------------|
| Unilever          | 55927         | 413,930.15        | 45,992.24           | 6,214.11            | 9                |
| Reckitt Benckiser | 15512         | 197,816.10        | 21,979.57           | 1,723.56            | 9                |
| Henkel            | 7125          | 90,709.85         | 15,118.31           | 1,187.50            | 6                |
| Colgate Palmolive | 7421          | 29,609.79         | 14,804.89           | 3,710.50            | 2                |
| Pz Cussons        | 5687          | 14,089.19         | 14,089.19           | 5,687.00            | 1                |
| Procter & Gamble  | 10536         | 147,303.31        | 13,391.21           | 957.82              | 11               |
| Other Mfrs        | 891           | 9,336.70          | 9,336.70            | 891.00              | 1                |
| Quantum Pacific   | 3899          | 42,118.37         | 8,423.67            | 779.80              | 5                |
| Selleys P/L       | 3785          | 15,102.69         | 7,551.35            | 1,892.50            | 2                |
| <b>Total</b>      | <b>110783</b> | <b>960,016.15</b> |                     |                     | <b>46</b>        |

## Laundry Detergent Sales Uplift

Table 2 Sales Uplift of Henkel and Competitor Promo Groups in Laundry Detergent – 2024 Campaigns

| Promo Group                    | Avg Sales (Non-Promo) | Avg Sales (Promo) | Sales Uplift (%) |
|--------------------------------|-----------------------|-------------------|------------------|
| Surf 1kg                       | 102010.77             | 206544.14         | 102.47           |
| Persil 28s 588g (Feb)          | 18539.12              | 44675.64          | 140.98           |
| Earthwise 4L                   | 17493.88              | 32449.04          | 85.49            |
| Dynamo 1.8-2L                  | 20585.83              | 45433.38          | 120.7            |
| Persil 28s 588g (Sep)          | 18448.05              | 49320.23          | 167.35           |
| Persil 1.8-2L                  | 67795.49              | 85536.9           | 26.17            |
| Surf 3kg                       | 42001.7               | 104283.4          | 148.28           |
| Surf 1.8-2L                    | 75450.04              | 157285.26         | 108.46           |
| Surf Capsules 30s              | 17557.78              | 52889.51          | 201.23           |
| Re Stor Sheets Fresh Linen 60s | 5799.17               | 15293.14          | 163.71           |

Figure 4 Total Sales for all Promo Groups in the Laundry Detergent category during the Promotion

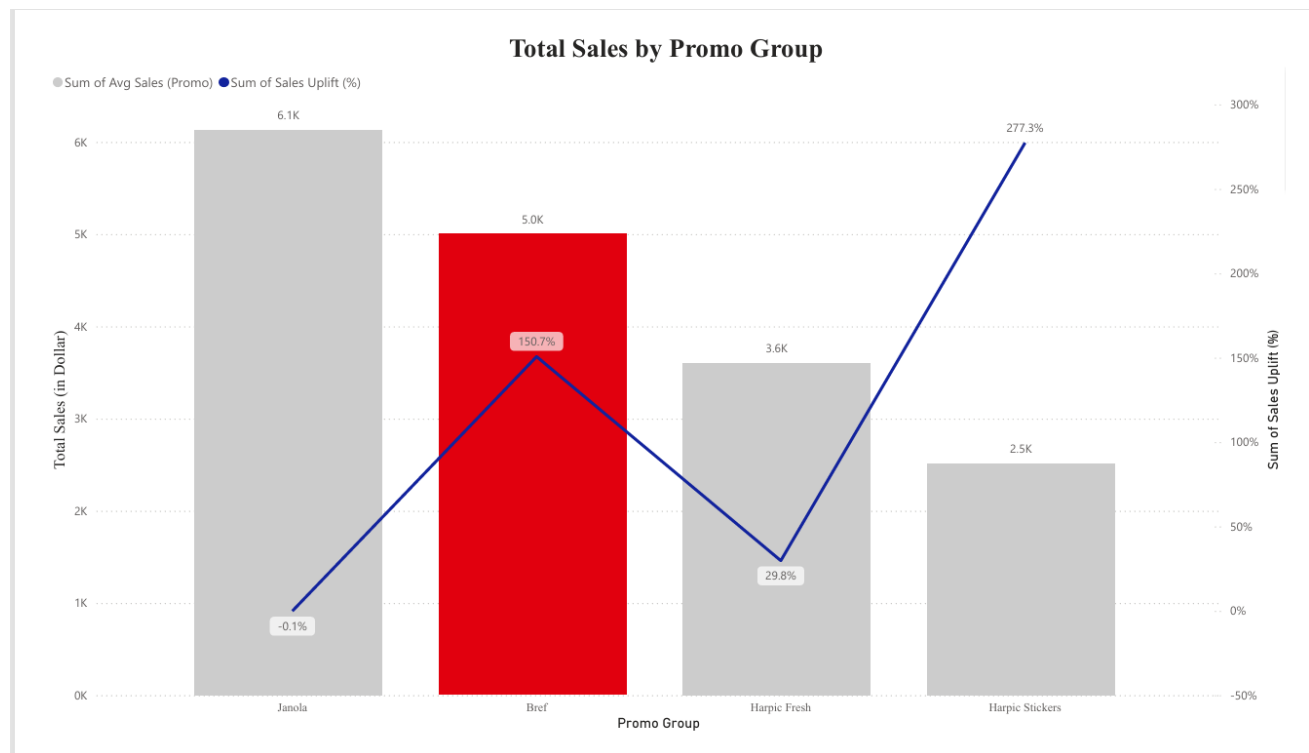


## Toilet Care Sales Uplift

Table 3 Sales uplift of Toilet Care promo groups feature on the mailer

| Promo Group     | Avg Sales (Non-Promo) | Avg Sales (Promo) | Sales Uplift (%) |
|-----------------|-----------------------|-------------------|------------------|
| Harpic Stickers | 660                   | 2510              | 277.31           |
| Harpic Fresh    | 2800                  | 3600              | 29.78            |
| Janola          | 6133                  | 6129              | -0.06            |
| Bref            | 2000                  | 5000              | 150.66           |

Figure 5 Total Sales for all Promo Groups in the Toilet Care category during the Promotion

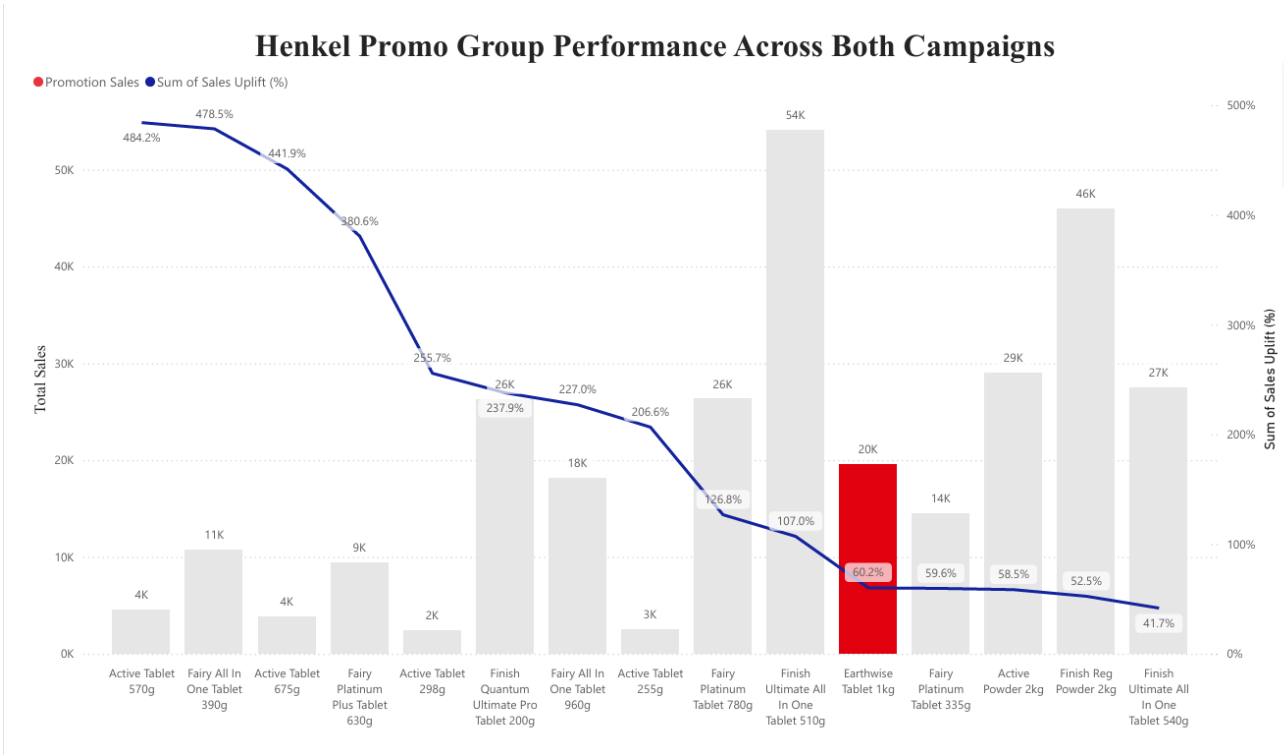


Dishwash Sales Uplift

Table 4 Average Sales and Uplift for Featured Dishwash SKUs – Woolworths Spring and Summer Campaigns 2024

| Promo Group                             | Avg Sales (Non-Promo) | Avg Sales (Promo) | Sales Uplift (%) |
|---|-----------------------|-------------------|------------------|
| Active Powder 2kg                       | 18275.38436           | 28964.36914       | 58.49            |
| Active Tablet 255g                      | 822.7700195           | 2522.780029       | 206.62           |
| Active Tablet 298g                      | 661.6266683           | 2353.300049       | 255.68           |
| Active Tablet 570g                      | 767.8266684           | 4485.439941       | 484.17           |
| Active Tablet 675g                      | 699.8400269           | 3792.47998        | 441.91           |
| Earthwise Tablet 1kg                    | 12220.83607           | 19573.83008       | 60.17            |
| Fairy All In One Tablet 390g            | 1853.2225             | 10720.58008       | 478.48           |
| Fairy All In One Tablet 960g            | 5546.987312           | 18136.61914       | 226.96           |
| Fairy Platinum Plus Tablet 630g         | 1964.118369           | 9439.049805       | 380.57           |
| Fairy Platinum Tablet 335g              | 9052.591783           | 14450.16016       | 59.62            |
| Fairy Platinum Tablet 780g              | 11599.69848           | 26305.75977       | 126.78           |
| Finish Quantum Ultimate Pro Tablet 200g | 7761.77128            | 26228.71094       | 237.92           |
| Finish Reg Powder 2kg                   | 30147.61414           | 45964.80859       | 52.47            |
| Finish Ultimate All In One Tablet 510g  | 26125.69938           | 54085.81934       | 107.02           |
| Finish Ultimate All In One Tablet 540g  | 19388.55811           | 27469.2207        | 41.68            |
| Morning Fresh Reg Liquid 400ml          | 18215.19373           | 33820.6709        | 85.67            |
| Palmolive Ultra Liquid 750ml            | 8154.243965           | 29609.78906       | 263.12           |

Figure 6 Henkel Dishwash Promo Group Performance Across Both Campaigns



Fabric Softener Sales Uplift

Figure 7 and Table 5 below illustrate the sales performance of Downy Beads (162g and 422g) across both 2024 campaigns. Both pack sizes achieved notable uplifts, with the 422g format increasing sales by **192.3%** and the 162g format by **83.8%** compared to their respective non-promo weekly averages. Despite being promoted only once, the more significant 422g SKU generated over 15.5K in promo week sales, outperforming the smaller format. These results highlight strong price responsiveness within the fabric softener category, suggesting that well-priced premium SKUs can significantly boost volume when featured in promotional mailers.

Figure 7 Sales Uplift for Downy Beads

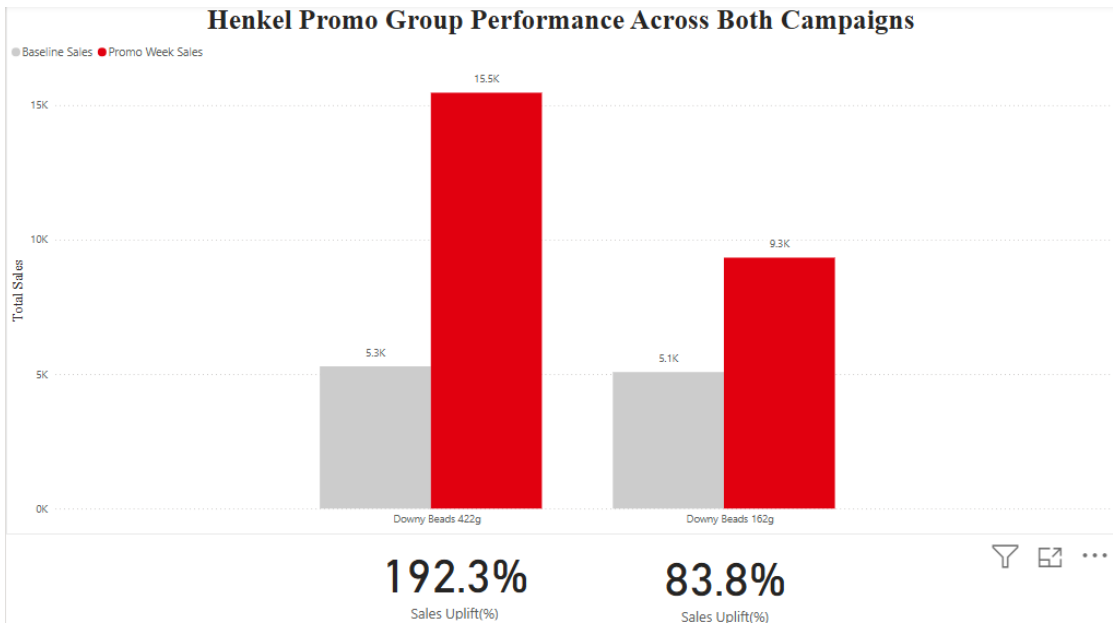


Table 5 Sales Uplift for Downy Beads

| Promo Group      | Avg Sales (Non-Promo) | Avg Sales (Promo) | Sales Uplift (%) |
|------------------|-----------------------|-------------------|------------------|
| Downy Beads 162g | 5077.18               | 9330.92           | 83.78            |
| Downy Beads 422g | 5289.74               | 15463.74          | 192.33           |



Laundry Additive Sales Uplift

Figure 8 and Table 6 below summarise the promotional performance of Henkel’s Vanish Gold SKUs across both 2024 campaigns. The 2kg bundle demonstrated a substantial uplift of **87.3%**, increasing from an average weekly baseline of 7.3K to 13.7K in promo sales. In contrast, the 1kg bundle underperformed, with promo sales (8.1K) falling below its non-promo average (10.6K), resulting in a **-24.0% sales uplift**. These results indicate that shoppers responded better to larger pack formats, possibly due to more substantial perceived value or promotional price positioning. The underperformance of the 1kg SKU suggests that simply featuring a product in a campaign does not guarantee uplift. Pack size, discount depth, and format relevance all influence outcomes. Future campaign participation should prioritise high-performing formats like the 2kg bundle and revisit pricing strategy for underperforming SKUs to maximise impact.

Figure 8 Vanish Gold Performance in Laundry Additives – Sales Uplift Across Both Campaigns

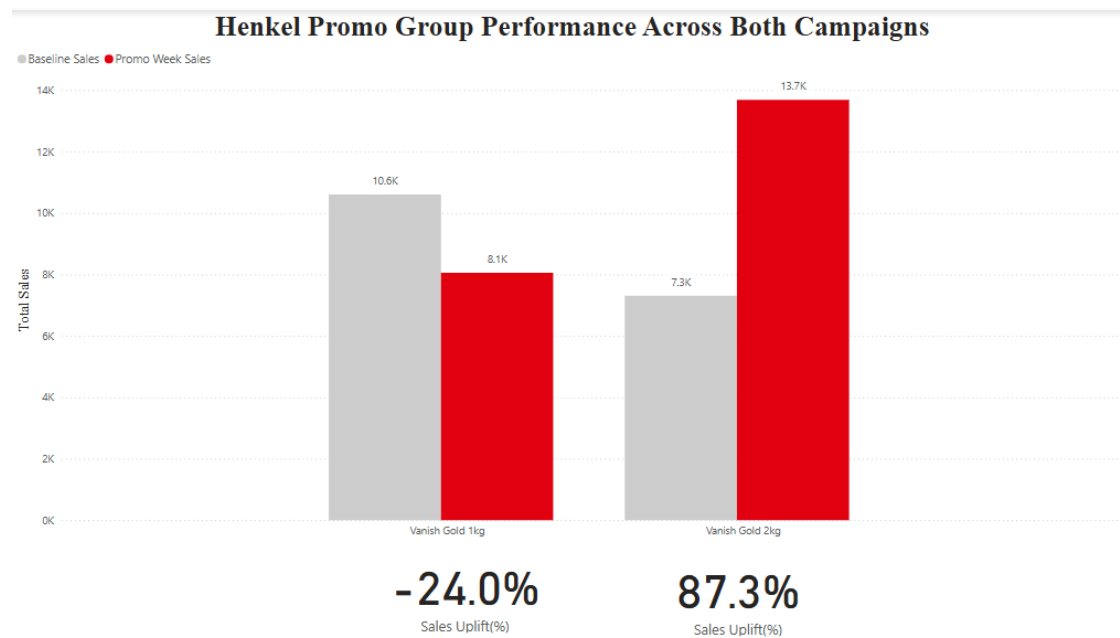


Table 6 Vanish Gold Performance in Laundry Additives – Sales Uplift Across Both Campaigns

| Promo Group     | Avg Sales (Non-Promo) | Avg Sales (Promo) | Sales Uplift (%) |
|-----------------|-----------------------|-------------------|------------------|
| Vanish Gold 2kg | 7307.87               | 13684.45          | 87.26            |
| Vanish Gold 1kg | 10604.58              | 8055.38           | -24.04           |

## Appendix B – Pack Size Rank Definitions by Category

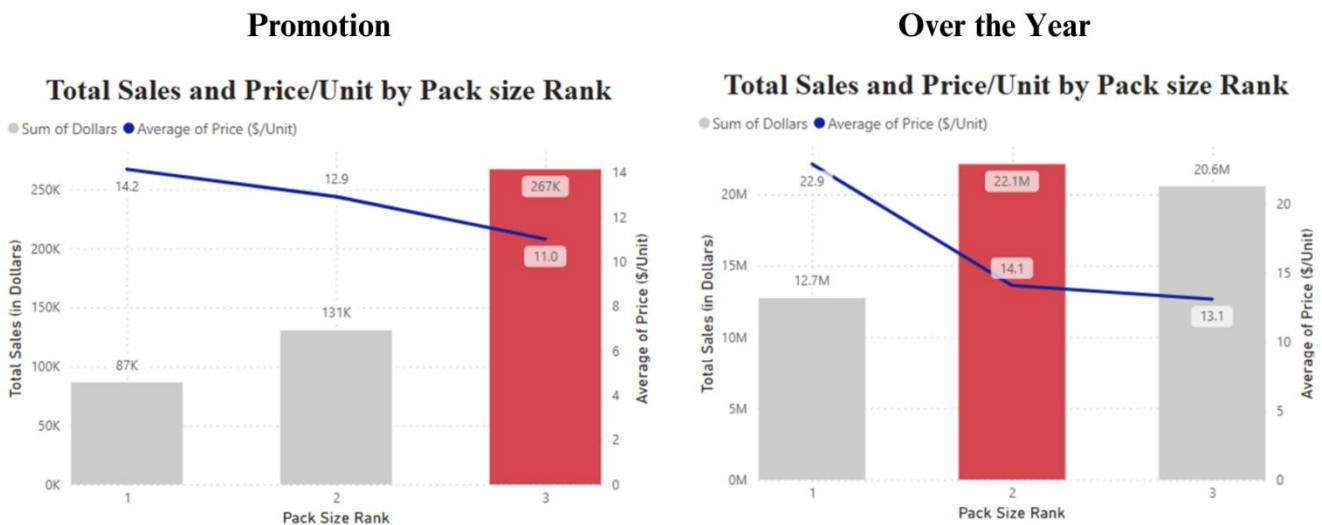
Products were grouped by pack size rank based on form and volume thresholds to enable consistent cross-SKU analysis and modelling.

### Laundry Detergent Pack Size Analysis

Table 1 Pack Rank of Laundry detergent

| Rank   | Form   | Pack Size Criteria  | Examples / Formats                |
|--------|--------|---------------------|-----------------------------------|
| Rank 1 | Liquid | $\geq 3.0\text{L}$  | Earthwise 4L Liquid               |
|        | Powder | $\geq 3.0\text{kg}$ | Surf 3kg Powder                   |
|        | Tabs   | $> 40$ units        | Bulk-format tablets               |
| Rank 2 | Liquid | 1.7–2.9L            | Dynamo 2L Liquid                  |
|        | Powder | 1.1–2.9kg           | Mid-size washing powder           |
|        | Tabs   | 20–40 units         | Standard tab packs                |
| Rank 3 | Liquid | $< 1.7\text{L}$     | Small bottle liquid detergent     |
|        | Powder | $\leq 1.0\text{kg}$ | Compact powder                    |
|        | Tabs   | $\leq 19$ units     | Trial-size tablets                |
|        | Sheets | —                   | Re•Stor Sheets, strips, bar soaps |

Figure 1 Comparison between Total Sales and Price/Unit for all Pack Size Ranks during the year and promotion period

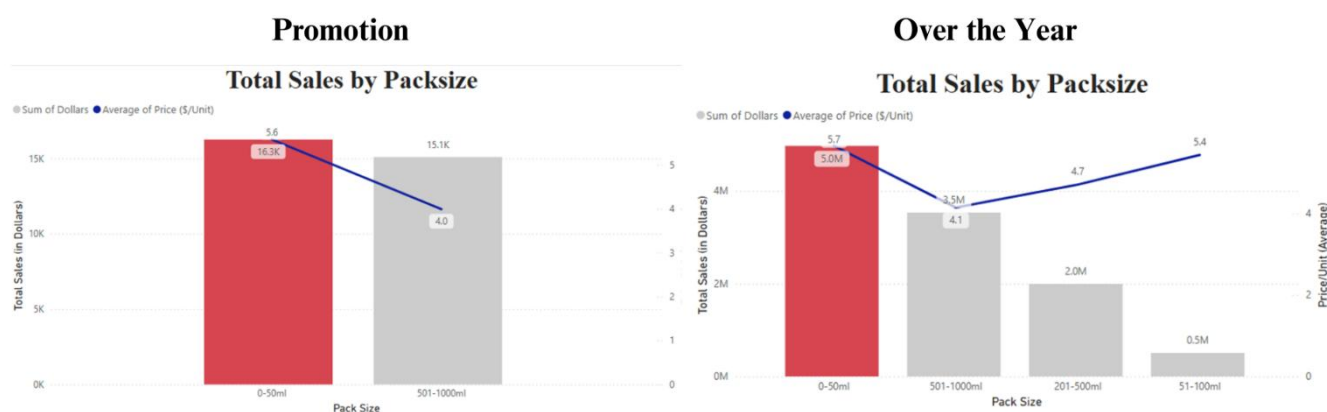


## Toilet Care Pack Size Analysis

Table 2 Pack Rank of Toilet care

| Rank   | Form         | Pack Size Criteria  | Examples / Formats       |
|--------|--------------|---------------------|--------------------------|
| Rank 1 | Liquid       | $\geq 1.0\text{L}$  | Janola Toilet Gel        |
|        | Gel          | $\geq 400\text{ml}$ | Large gel-based cleaners |
|        | Tablet/Block | 100–300g            | Jumbo rim blocks         |
|        | Spray        | $\geq 500\text{ml}$ | Full-size spray          |
| Rank 2 | Liquid       | 500–1000ml          | Bref multi-pack cleaner  |
|        | Tablet/Block | 50–100g             | Mid-size rim blocks      |
|        | Spray        | $\geq 50\text{ml}$  | Compact spray bottles    |
| Rank 3 | Liquid       | 200–500ml           | Earthwise Toilet Cleaner |
|        | Gel          | $< 50\text{ml}$     | Mini gel formats         |
|        | Tablet/Block | $< 50\text{g}$      | Trial-size blocks        |
| Rank 4 | Liquid       | 100–200ml           | Small bottle cleaner     |
| Rank 5 | Liquid       | 50–100ml            | Bref Duo-Active          |
| Rank 6 | Liquid       | 0–50ml              | Duck Fresh Discs         |

Figure 2 Comparison between Total Sales and Price/Unit for all Pack Size Ranks during the year and promotion period

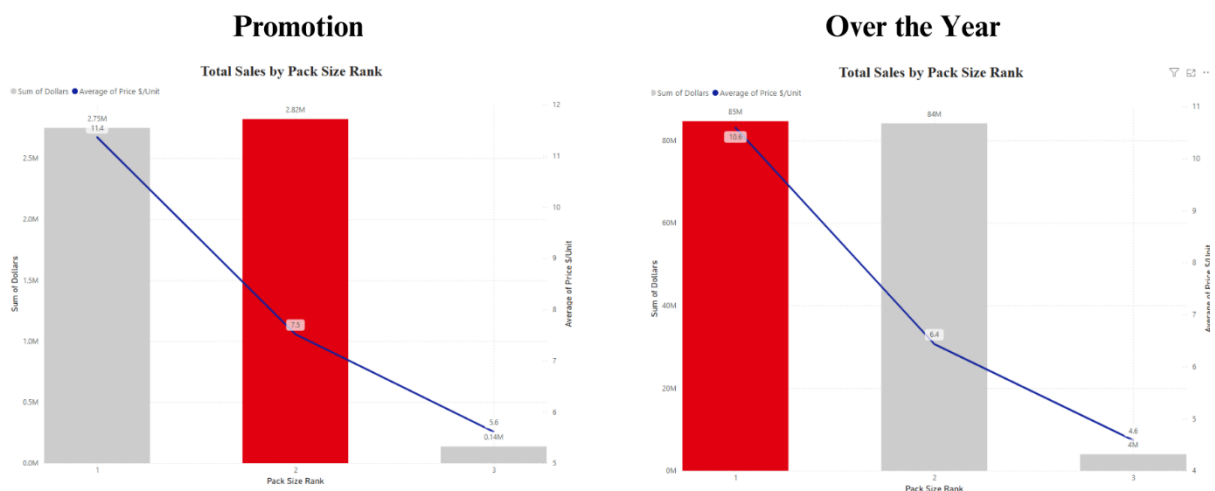


## Dishwash Pack Size Analysis

Table 3 Pack Rank of Dishwash

| Rank          | Form    | Pack Size Criteria | Examples / Formats            |
|---------------|---------|--------------------|-------------------------------|
| <b>Rank 1</b> | Tablets | $\geq 40$ units    | Earthwise Dish Tablets (50s)  |
|               | Liquid  | 751–2000ml         | Large bottle dish liquids     |
|               | Powder  | $> 2.0\text{kg}$   | Bulk powder detergents        |
| <b>Rank 2</b> | Tablets | 20–40 units        | Standard-size tab packs       |
|               | Liquid  | 376–750ml          | Earthwise Dish Liquid (600ml) |
|               | Powder  | 1.001–2.0kg        | Medium dish powders           |
| <b>Rank 3</b> | Tablets | 1–19 units         | Small tab or trial pack       |
|               | Liquid  | 0–375ml            | Rinse aids, mini dish liquids |

Figure 3 Total Sales and Price per Unit by Pack Size Rank – Promotion Period vs Full Year



## Appendix C – Modelling Results of Three Main Categories

### Variable Selection

Table 1 Create New Variables for Modelling

| Column Name                         | Description   | Values                                 | Purpose  |
|-------------------------------------|---|--|--|
| <b>Is Promo Week</b>                | Indicates whether the SKU-week falls within a Henkel promotion period (Summer or Spring 2024).            | 0 = Not promo week<br>1 = Promo week   | Used to isolate sales during promotional periods for uplift comparison.                    |
| <b>On Mailer</b>                    | Identifies if the SKU was featured on Woolworths' digital mailer during a given week.                     | 0 = Not on mailer<br>1 = On mailer     | Helps evaluate the effect of mailer visibility on sales performance.                       |
| <b>Pack Rank</b>                    | Ranks product sizes within each category. Rank 1 = largest pack size, higher numbers = smaller sizes.     | 1 (largest), 2, 3 (smallest), etc.     | Assesses the influence of pack size preference on sales during promotions.                 |
| <b>Promo Group</b>                  | Groups SKUs with similar promotional characteristics. Imputed using Brand, Form, and Volume when missing. | Text label (e.g., "Dynamo 1.8-2L")     | Enables analysis by product clusters that share promotional tactics or traits.             |
| <b>Campaign Participation Flags</b> | Binary flags indicating if a SKU was part of a specific campaign: Summer, Spring1, or Spring2.            | 0 = Not in campaign<br>1 = In campaign | Allows comparisons across multiple time-bound campaigns and tracking of SKU participation. |

Table 2 Variables Included in the Main Regression Model Across Product Categories

| Variable Name                  | Description  | Applied To                     |
|--------------------------------|--|--------------------------------|
| <b>Price per Unit</b>          | Average price per unit during promotion                              | All Categories                 |
| <b>Distribution Weighted %</b> | Share of value-weighted distribution across retail stores            | All Categories                 |
| <b>Pack Rank</b>               | Categorical rank of product size format (e.g., small, medium, large) | All Categories                 |
| <b>Fragrance</b>               | Indicates if the product is fragranced                               | Laundry Detergent, Toilet Care |
| <b>Campaign Label</b>          | Type of promotional campaign (e.g., Summer, Spring Cleaning)         | All Categories                 |
| <b>OnMailer</b>                | Whether the product was featured in the digital mailer               | All Categories                 |
| <b>Environmental Tag</b>       | Indicates whether the product includes sustainability claims         | Laundry Detergent only         |
| <b>Promo Week</b>              | Binary variable marking the promotion period                         | All Categories                 |

## Hausman Test

Figure 1 Hausman's Test for Detergent in R

```
data: Units ~ price.per.unit + dist.pct + onMailer + isPromoweeK + ...
chisq = 13.827, df = 6, p-value = 0.03162
alternative hypothesis: one model is inconsistent
```

Figure 2 Hausman's Test for Toilet Care in R

```
data: Units ~ price.per.unit + dist.pct + onMailer + isPromoweeK + ...
chisq = 114.02, df = 5, p-value < 2.2e-16
alternative hypothesis: one model is inconsistent
```

## Laundry Detergent Regression Result

Table 3 Fixed Effects Regression – Drivers of Promotional Sales in Laundry Detergent

| Variable                 | Interpretation                      | Coefficient | Significance (p-value) |
|--------------------------|-------------------------------------|-------------|------------------------|
| Price per Unit           | Higher price reduces units sold     | -97.36      | < 0.001                |
| Distribution (%)         | Better distribution increases sales | 26.97       | < 0.001                |
| Summer Campaign          | Slight sales drop during summer     | -90.54      | 0.145                  |
| Spring Week 1            | No significant spring effect        | -20.7       | 0.901                  |
| On Mailer                | Strongest driver of sales uplift    | 3273.7      | < 0.001                |
| Promo Week               | Not statistically significant       | -17.68      | 0.8826                 |
| Pack Size Tier 1         | Small pack performs best            | 448.02      | < 0.001                |
| Pack Size Tier 2         | Medium pack underperforms large     | -212.02     | < 0.001                |
| Fragrance_Apple          | Strong underperformance             | -1041.1     | < 0.001                |
| Fragrance_Eucalyptus     | Slight underperformance             | -281.87     | < 0.001                |
| Fragrance_Floral         | Not significant                     | 32.66       | 0.5901                 |
| Fragrance_FreshOutdoor   | No clear effect                     | 17.62       | 0.2545                 |
| Fragrance_Lavender       | Statistically insignificant         | 121.91      | 0.254                  |
| Fragrance_Lemon          | Significant underperformance        | -158.3      | < 0.001                |
| Fragrance_Tropical       | Performs slightly better            | 127.09      | 0.0298                 |
| Fragrance_OtherFragrance | Strong underperformance             | -304.35     | < 0.001                |
| Environmental            | Eco label lowers units sold         | -762.02     | < 0.001                |



## Toilet Care Regression Result

Table 4 Fixed Effects Regression – Drivers of Promotional Sales in Toilet Care

| Variable             | Interpretation                          | Coefficient | Significance (p-value) |
|----------------------|---|-------------|------------------------|
| Price per Unit       | Higher price lowers sales               | -20.54      | < 0.001                |
| Distribution (%)     | Better distribution drives sales        | 6.44        | < 0.001                |
| Summer Campaign      | Summer boosts toilet care sales         | 21.96       | 0.018                  |
| Spring Week 1        | No clear seasonal impact                | 9.94        | 0.255                  |
| On Mailer            | Increases product visibility and demand | 491.33      | < 0.001                |
| Promo Week           | Weak standalone impact                  | 8.89        | 0.1799                 |
| Pack Size Tier 1     | Small pack performs poorly              | -31.81      | < 0.001                |
| Pack Size Tier 2     | Moderate pack, not significant          | 21.06       | 0.591                  |
| Pack Size Tier 3     | Underperforms large size                | -15.78      | 0.024                  |
| Pack Size Tier 4     | Less preferred by shoppers              | -13.78      | 0.023                  |
| Pack Size Tier 5     | Performs worst overall                  | -73.97      | < 0.001                |
| Fragrance_Apple      | Less preferred scent                    | -36.8       | 0.0006                 |
| Fragrance_Blue       | Highly preferred fragrance              | 77.06       | < 0.001                |
| Fragrance_Citrus     | Performs poorly                         | -31.63      | < 0.001                |
| Fragrance_Eucalyptus | Slight underperformance                 | -24.99      | < 0.001                |
| Fragrance_Fruity     | Weak impact on sales                    | -19.98      | < 0.001                |
| Fragrance_Floral     | Underperforms vs. baseline              | -21.16      | < 0.001                |
| Fragrance_Marine     | Neutral effect                          | -2.54       | 0.40                   |
| Fragrance_Lavender   | Not significantly different             | -1.13       | 0.64                   |
| Fragrance_Mint       | No strong effect                        | -2.13       | 0.12                   |
| Fragrance_Pine       | Neutral effect                          | 0.89        | 0.82                   |

## Dishwash Regression Result

Table 5 Fixed Effects Regression – Drivers of Promotional Sales in Dishwash

| Variable         | Interpretation                  | Coefficient | Significance (p-value) |
|------------------|---------------------------------|-------------|------------------------|
| Price per Unit   | Price-sensitive category        | -36.15      | < 0.001                |
| Distribution (%) | Better distribution lifts units | 13.74       | < 0.001                |
| Summer Campaign  | No major seasonal effect        | 38.49       | 0.521                  |
| Spring Week 1    | Minor spring uplift             | 2.33        | 0.969                  |
| On Mailer        | Significant uplift from mailer  | 1068.7      | < 0.001                |
| Promo Week       | No clear impact                 | -37.59      | 0.3824                 |
| Pack Size Tier 1 | Small packs strong performer    | 213.37      | < 0.001                |
| Pack Size Tier 2 | Medium size preferred           | 329.88      | < 0.001                |

# Appendix D – Mailer Position Label & Modelling Regression Result

## Mailer Position Labelling

Figure 1 Labelled Woolworths Summer Cleaning Mailer – SKU Reference for Campaign Analysis

**SUMMER CLEANING**

|   |  |   |  |
|---|--|---|--|
| <b>\$3<sup>80</sup></b><br><b>SAVE \$1.69</b><br>Ajax Spray N Wipe Cleaner Trigger 475/500ml Excludes Glass Cleaner<br><b>1</b> | <b>\$25<sup>pk</sup></b><br><b>SAVE \$11</b><br>Finish Dishwasher Tablets 45,46,48,50 Pack<br><b>2</b>   | <b>\$10<sup>ea</sup></b><br><b>SAVE \$4.90</b><br>Active Dishwasher Powder 2kg<br><b>3</b>  | <b>\$4<sup>50</sup></b><br><b>SAVE \$1</b><br>Jif Cream Cleanser 500ml<br><b>4</b>                       |
| <b>\$9<sup>90</sup></b><br><b>SAVE \$4.10</b><br>Downy Fresh Protect April Fresh 162g Downy Unstoppables Lush 162g<br><b>5</b>  | <b>\$5<sup>ea</sup></b><br><b>SAVE FROM \$1.50</b> <b>Up to 35% Off</b><br>Air Wick Pure Aromat 150g or Harpic In Bowl Toilet Cleaner 2 Pack<br><b>6</b> | <b>\$4<sup>50</sup></b><br><b>SAVE \$1.99</b><br>Surf Laundry Powder 8g<br><b>7</b>   | <b>\$16<sup>ea</sup></b><br><b>SAVE \$8.49</b><br>Persil Active 3 in 1 Laundry Capsules 28s<br><b>8</b>  |
| <b>\$13<sup>ea</sup></b><br><b>SAVE \$9</b><br>Dynamo Oxi-Plus or Dynamo Odour Eliminator 2L<br><b>9</b>                        | <b>\$7<sup>pk</sup></b><br><b>SAVE \$2.99</b><br>Dettol Protect 24 Wipes 90 Pack<br><b>10</b>  | <b>\$18<sup>50</sup></b><br><b>SAVE FROM \$3.49</b><br>Earthwise Laundry Liquid Fragrance Free 4L or Dishwasher Tablets Lemon 50<br><b>11</b> | <b>\$2<sup>50</sup></b><br><b>SAVE \$1.50</b><br>Morning Fresh Dishwashing Liquid 350/400ml<br><b>12</b> |

## Mailer Position Regression

*Table 1 Fixed Effects Regression – Impact of Mailer Position on Promotional Sales*

| Position           | Coefficient    | P-value      | Interpretation                                      |
|--------------------|----------------|--------------|---|
| <b>Position 2</b>  | −1121.0        | 0.727        | Slight negative, inconclusive                       |
| <b>Position 3</b>  | −3141.1        | 0.325        | Negative trend                                      |
| <b>Position 5</b>  | −4823.6        | 0.165        | Significant negatives may indicate lower visibility |
| <b>Position 6</b>  | −464.2         | 0.984        | No effect   |
| <b>Position 7</b>  | 2533.5         | 0.326        | Highest positive directionally                      |
| <b>Position 8</b>  | <b>−6130.5</b> | <b>0.015</b> | <b>Statistically significant negative effect</b>    |
| <b>Position 9</b>  | −3153.7        | 0.124        | Directionally negative                              |
| <b>Position 10</b> | −1597.5        | 0.593        | Small negative                                      |
| <b>Position 11</b> | −3334.0        | 0.136        | Large negative, borderline                          |
| <b>SpringW1</b>    | −1473.5        | 0.373        | Campaign effect unclear                             |
| <b>Summer</b>      | 1997.9         | 0.052        | Directionally positive, but borderline              |

## Appendix E – Model Performance Evaluation

In behavioural modelling,  $R^2$  values between 0.2 and 0.4 are commonly considered acceptable, as consumer choices are shaped by numerous unobservable psychological, social, and contextual influences that are difficult to fully capture in quantitative models (Gupta & George, 2022). In this analysis, four fixed effects panel regression models were constructed to assess the key promotional drivers across categories. The Mailer Position Model demonstrated the highest explanatory power ( $R^2 = 0.66$ ), underscoring the importance of mailer layout in shaping shopper engagement. The Toilet Care Model followed with a solid fit ( $R^2 = 0.41$ ), reflecting consistent sales patterns linked to pack size and campaign participation. The Laundry Detergent Model displayed moderate performance ( $R^2 = 0.32$ ), while the Dishwash Model had the lowest fit ( $R^2 = 0.22$ ), likely due to limited SKU representation and brand visibility. These results highlight the value of tailoring promotional design and mailer strategy to maximise campaign effectiveness.

*Table 1 Model Performance Summary*

| Model Name              | Category               | Key Focus  | R-squared (Overall) |
|-------------------------|------------------------|--|---------------------|
| Laundry Detergent Model | Laundry Detergent      | Pack size tiers and campaign effect                | <b>0.32</b>         |
| Toilet Care Model       | Toilet Care            | Pack size tiers and campaign effect                | <b>0.41</b>         |
| Dishwash Model          | Dishwash               | Pack size tiers and Earthwise promotional response | <b>0.22</b>         |
| Mailer Position Model   | Cross-category (Mixed) | Effect of mailer position on sales                 | <b>0.66</b>         |

## **Appendix F – Utilisation of AI Tools**

Artificial intelligence tools (e.g., ChatGPT) were used to support the written communication of this report. Specifically, AI was employed to:

- Refine sentence structure and grammar
- Organise content for improved logical flow and coherence
- Enhance the clarity and tone of business writing

Our project group conducted all data analysis, modelling, and interpretation independently. AI was used solely to express insights more effectively and ensure the report met high professional communication standards. AI-generated no analytical outputs or results.



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