Kiwi Flavour meets Silver Favour? Understanding predictors of older German consumers' willingness to eat and pay a price premium for food produced in Aotearoa-New Zealand

Meike Rombach[1*], Meike Guenther[2], Paul Rutherford[2], David Dean[3]

1 Department of Land Management and Systems, Lincoln University, Lincoln, New Zealand

2 Department of Global Value Chain and Trade, Lincoln University, New Zealand

3 Department of Agribusiness and Markets, Lincoln University, Lincoln, New Zealand

Corresponding information

Meike Rombach (Corresponding Author)

Orcid: 0000-0003-4014-6875

Ross Building: Room 120

PO Box 85084, Lincoln University

Lincoln 7647, Christchurch, New Zealand

meike.rombach@lincoln.ac.nz

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Summary

On the background of the silver economy and the recently implemented Free Trade Agreement between the European Union and Aotearoa-New Zealand, the present study is dedicated to older German consumers, a consumer segment to which kiwi premium products are likely to appeal but has yet to be examined. This study employed an online consumer survey and explored key factors driving older German consumers' willingness to eat and pay a price premium for food produced in Aotearoa-New Zealand using descriptive statistics and partial least squares structural equation modelling. Results show the strongest predictors for both behaviours are Aotearoa-New Zealand's country image, food neophilia and extrinsic food attributes. Best practice recommendations for food exporters and marketers are provided.

Keywords: Consumer behaviour, Older Consumers, NZ food, Germany, PLS-SEM

Introduction

Over the past three decades, the population pyramid in Germany has steadily skewed towards older citizens (Hinrichs, 2021; Mashiah et al., 2025; Jorge et al., 2025). Germany is one of the oldest and wealthiest populations in Europe and is classified as one of the largest silver economies worldwide (European Commission, 2021; Niemczyk et al., 2023; Barković Bojanić et al., 2024). The estimated market size for the German silver economy is in the range of 400€–500€ billion annually. Consumers in the age bracket of 55-75 account for roughly 30-40% of consumption (BMFSFJ, 2020; European Commission, 2021; BMWK, 2022; DESTATIS, 2023). The term silver economy is defined as the economic activity by consumers in their fifties, sixties, and beyond, comprised of products and services covering their needs, desires and lifestyles (Bieszk-Stolorz et al., 2024; Sekuloska & Erceg, 2024).

Reportedly, these consumers spend approximately 47% of their consumption expenditure on food, beverages and value functionality (Topolska et al., 2021; European Commission, 2023). Older consumers favour food products that are healthy, easy to use and intuitive (European Commission, 2015; Ford et al., 2019; European Commission, 2023). They have a lifetime of consumption experience and often clear preferences for quality and premium foods over quantity (Meneely et al., 2009; European Commission, 2015; Makowska et al, 2024; Savelli et al., 2024). The preference for premium food constitutes a contrast to the average German consumer, who prefers quality but is rather price-conscious (Hempel, 2024; Richartz et al., 2025).

Aotearoa-New Zealand, as a premium food producer (Vatsa & Renwick, 2024), is not yet as widely known among German consumers, according to a recent consumer survey facilitated by New Zealand Trade & Enterprise (2024). However, those German consumers who have experienced NZ food and beverages place Aotearoa-New Zealand in the top 6 agrifood export nations (New Zealand Trade & Enterprise, 2024). A stronger presence of Aotearoa-New Zealand products within Germany's premium food segment may be facilitated through the Free Trade Agreement (FTA) between the European Union and Aotearoa-New Zealand, which was put into place in May 2024. While the FTA enables increasing market access, understanding consumer segments such as Germany's older consumers is a requirement to capitalise on trade

opportunities and ultimately determines New Zealand's success within the German food market. Since the behaviour of older German consumers and their preferences for NZ agrifood products are largely unexplored, the present study aims to fill this research gap and explores key factors driving consumers' willingness to eat and pay a price premium for food produced in Aotearoa-New Zealand. An understanding of both behavioural intentions is relevant for food exporters, retailers and marketers alike, as they represent relatively low involvement (willingness to eat) and high involvement (willingness to pay a price premium) of the consumers. Willingness to eat reflects the trial potential of Aotearoa-New Zealand foods amongst German consumers who may not be accustomed to their taste and other product attributes. Willingness to pay a price premium reflects German consumers' value perception beyond the product's basic function. Willingness to pay a price premium allows exporters to understand market value, but requires commitment from the consumer.

Consumers' importance on intrinsic and extrinsic food attributes, consumer association with Aotearoa-New Zealand as country of origin, and food neophilia (DEF openness to consuming novel foods), all thought to be relevant predictors for consumer behaviours and have been included in the conceptual framework of this study (see figure 1).

Conceptual model and hypothesis development

The present study is anchored in the food choice process model (Fuerst et al., 1996), which outlines how food choices are impacted by the life course of an individual. Eating patterns, including food choices, are subject to cultural, social and biological experiences. These experiences contribute to five categories, namely ideals, personal factors, resources, social factors and food context (Fuerst et al., 1996). Country of origin image aligning with ideals, specifically Aotearoa-New Zealand's 'clean and green image' (Henderson et al., 2025), alignment with older German consumers' ideals about sustainable high-quality food production, could result in favourable consumer behaviour. Similarly, the extrinsic food attributes related to social, environmental production, animal welfare, and traceability reinforce ideals as they signal alignment and serve as cues within the market (Fuerst et al., 1996). Therefore, the extrinsic attributes refer to ideals and the food context. The intrinsic food attributes are considered a personal factor, and older German consumers place value on these sensory elements that constitute the core function of the product. Another personal factor is the personality trait food neophilia, or openness to consuming novel foods, such as products from Aotearoa-New Zealand (Fuerst et al, 1996).

Fuerst et al (1996) outline social factors and resources as influences on older German consumers' food choices. Their absence within the present investigation does not reduce the value of the study. Studies applying the model show social factors (Connors et al., 2001; Bisogni et al, 2002) or resources (Chen & Antonelli, 2020) tend to be weaker or non-significant predictors, which are often overshadowed by personal or product-related factors (Sobal and Bisogni, 2009; Chen & Antonelli, 2020). In their recent review, Fernqvist et al. (2024) discuss that social norms and resources are contextual influences but not necessarily key factors driving food choices. Therefore, focusing solely on extrinsic and intrinsic food attributes, food neophilia and association with Aotearoa-New Zealand as a country as key factors delivers a robust conceptual framework to understanding older German consumers' willingness to eat and pay a price premium for products from Aotearoa-New Zealand.

Extrinsic food attributes

Extrinsic food attributes are the external, often non-physical characteristics of the product that relate to production and marketing, and ultimately influence consumers' value perceptions and

choices (Espejel et al, 2007) . Examples include packaging, brand, price, and labelling. Various studies show that older consumers favour products that are ethical, sustainable and from a specific country of origin (Szakos et al., 2020; Podgórniak-Krzykacz & Przywojska, 2025). Studies across different consumer age segments show that Baby Boomers placed greater importance on provenance (Makowska et al., 2024) than younger cohorts, confirming the findings of Sotiropoulos et al. (2009), who attribute this preference to tradition. German consumers favour local food, and older, wealthier German consumers tend to be even more loyal towards local food (Rueter et al, 2020; Knuck & Hess, 2023). Older consumers' preference for sustainable products and services is either rooted in generativity (Ma & Xing, 2024) or resulting from environmental knowledge and concerns (Podgórniak-Krzykacz & Przywojska, 2025). Caso & Vecchio (2022) outline that intrinsic characteristics such as taste, appearance, scent and texture are equally important to older consumers, and among the extrinsic characteristics, trustworthy packaging and labelling are valued. The importance of perceived risk reduction is intensified due to age-related changes, like the fading ability to solely rely on the sensory characteristics of the product (Alves et al., 2024). Due to sensory decline, extrinsic attributes are preferred to serve as heuristic cues within food choices (Fagerstrøm et al, 2021). Therefore, the following hypotheses are proposed:

Hypothesis (H1a): *The importance older German consumers dedicate to extrinsic food attributes is positively associated with their willingness to eat NZ food products.*

Hypothesis (H1b): *The importance older German consumers dedicate to extrinsic food attributes is positively associated with their willingness to pay more for NZ food products*.

Intrinsic food attributes

Intrinsic product attributes are inherent to foods such as dairy, meat, fruit and vegetables (Uribe et al., 2020; Ben Ali et al., 2022). When buying, preparing, or eating, consumers use their senses to evaluate attributes and products, often to estimate the quality of food items. As consumers age, changes occur in their sensory, perceptual, and cognitive functions, which not only impact the food they prefer but also their decision-making processes (Murphy& Vertrees, 2017). Compared to younger consumers, older consumers are more attentive to texture andfor appearance. Texture comfort allows for easy chewing and swallowing and constitutes a main contributor to food liking (Korčok et al., 2024). Indications related to flavours and texture on food labelling are helpful for older and other orally compromised consumers (Ross, 2023). It is reported that food and other products should avoid using phrasing indicating elderly or disability, but instead address older consumers' needs related to both extrinsic and intrinsic food attributes (European Commission, 2015). Overall, preferences for intrinsic attributes such as taste, appearance and texture vary across age groups and income; however, intrinsic attribute preferences linked to health are a commonality (Van der Zanden et al., 2014; Kamphuis et al., 2015; Cardona et al., 2023). Indications related to flavours and texture on food labelling are helpful for older and other orally compromised consumers.

Hypothesis (H2a): *The importance older German consumers dedicate to intrinsic food attributes is positively associated with their willingness to eat NZ food products.*

Hypothesis (H2b): *The importance older German consumers dedicate to intrinsic food attributes is positively associated with their willingness to pay more for NZ food products*

Food Neophilia

Food neophilia is a personality trait of consumers, allowing them to actively search and try new food items (Dimitrovski & Crespi-Vallbona, 2017; Badu Baiden et al., 2023; Zhang et al., 2025). A great majority of comparisons among consumers of different age groups report that older consumers tend to be less food neophilic than younger consumers. Reasons for this tendency are attributed to age-related sensory and physical changes impacting food consumption behaviours (Szakos et al., 2022; Cano-Ibáñez & Bueno-Cavanillas, 2024). Only one study was dedicated to older consumers and neophilia specifically. Wortmann et al. (2023)'s longitudinal study on food neophilia and dietary quality among older consumers found that consumers in the age range 50 to 84 showed that food neophilia was moderately stable over the course of 3 years. Grounded in the findings of Wortmann (2023), the following hypotheses are proposed:

Hypothesis (H3a): *The importance older German consumers dedicate to food neophilia is positively associated with their willingness to eat NZ food products.*

Hypothesis (H3b): *The importance older German consumers dedicate to food neophilia is positively associated with their willingness to pay more for NZ food products.*

Association with Aotearoa-New Zealand as a country of origin

In the absence of literature on German consumers' associations with Aotearoa-New Zealand as a country of origin for high-quality and premium food products, reports and studies from tourism serve as a proxy and are presented in this section. According to Tourism New Zealand (2024), older German consumers appreciate the country's image, German visitors value its nature, people, safety within the country, and enjoy contributing to Aotearoa-New Zealand's local economy (Oppermann, 1993; Becken & Goth, 2004). Studies dedicated to New Zealand branding and food export indicate appreciation for sustainable production of Aotearoa-New Zealand's wine and agricultural industry and their respective products (Hira & Benson-Rea, 2013; Brodie & Benson-Rea, 2016; McIntyre et al., 2025). In export markets, where trade relationships are established, the country is associated with quality and premium products (Caradus et al., 2022; Henderson et al., 2025). However, Saunders et al (2021) caution that in new markets, the success among international consumers also depends on the efforts of gatekeepers such as food importers. Based on Aotearoa-New Zealand's overall positive image in international export markets and the favourable association of older German tourists visiting Aotearoa-New Zealand, the following hypotheses are proposed:

Hypothesis (H4a): *The more favourable association older German consumers have with Aotearoa-New Zealand as a country of origin is positively associated with their willingness to eat NZ food products.*

Hypothesis (H4b): *The more favourable association older German consumers have with Aotearoa-New Zealand as a country of origin is positively associated with their willingness to pay more for NZ food products.*

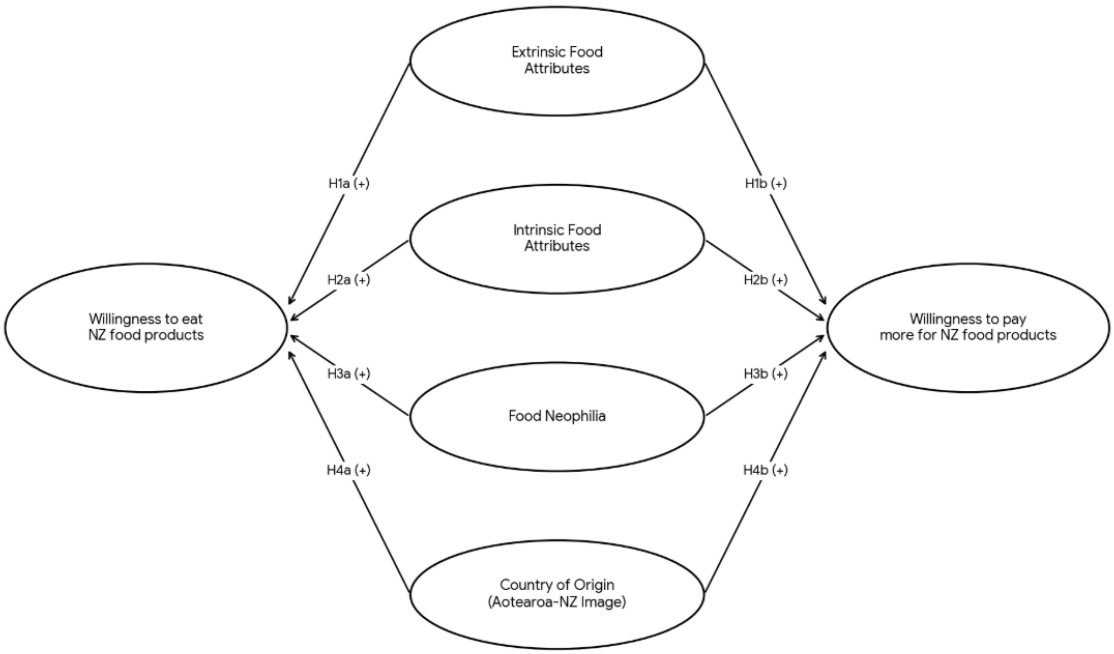


Figure 1: Conceptual Model

Methods

The present study builds on an online survey with older German consumers. The survey was administered in September 2025 with the software platform. Sampling involved the recruitment of participants from an opt in panel provider of German consumers provided by an international market research company. Opt-in panel providers manage large pools of participants who answer surveys. Within disciplines such as marketing and other social sciences, they are widely accepted for data collection (Berry et al., 2022). The survey was dedicated to consumers' behavioural intentions, such as willingness to eat and willingness to pay a price premium. In addition to socio-demographic questions, consumers answered questions about their attitudes and perceptions. All questions were fixed-choice questions and derived from the recent body of literature, using five-point Likert scales. The items on extrinsic and intrinsic attributes, as well as association with Aotearoa-New Zealand as a country of origin, were derived from Guenther et al. (2015) and Tait et al. (2021, 2020; 2019). The questions related to food neophilia follow Pliner & Hobden (1992). The survey was originally designed in English. Two of the authors are native German speakers, one facilitated the translation into higher German, and the other checked for translation accuracy and cultural appropriateness.

The sample of German consumers comprises a total of 134 consumers in the age brackets 50-64 years old and 65 years and older, assuring that consumers contribute to Germany's silver economy. To participate in the survey, consumers had to reside in Germany, go grocery shopping at least once per month and be aware of Aotearoa-New Zealand as a country. Sample demographics are provided in Table 1. The sample can be described as male-dominated and stronger in the mid-higher income groups. With respect to household make-up, over half of German older consumers can be classified as empty nesters.

Table 1: Sample demographics

	Frequency	Percentage (%)
Age Group		
50-64 years old	56	41.8
65 years old and older	78	58.2
Total	134	100
Monthly Household Income Group		
Less than 900 €	5	3.7
900 € to below 1300 €	11	8.2
1300 € to below 1500 €	7	5.2
1500 € to below 2000 €	12	9.0
2000 € to below 2600 €	22	16.4
2600 € to below 3600 €	26	19.4
3600 € to below 5000 €	36	26.9
5000 € to below 18000 €	15	11.2
18000 € and above	0	0
Total	134	100
Gender Group		
Male	108	80.6
Femal	26	19.4
Diverse	0	0
Total	134	100
Household makeup		
Single, no children	34	25.4
Single with children	3	2.2
Couple, no children	75	56
Couple with children	20	14.9
Other household set up	2	1.5
Total	134	100
Residence		
Baden Württemberg	14	12.1
Bayern	19	11.9
Berlin	10	5.9
Brandenburg	5	2.7
Bremen	2	0.8
Hamburg	3	2.8
Hessen	8	7.8
Mecklenburg Vorpommern	2	2.3
Niedersachsen	16	10.7
Nordrhein-Westfalen	27	20.9
Rheinland Pfalz	5	5.0
Saarland	3	1.0
Sachsen	8	6.9
Sachsen-Anhalt	6	3.3
Schleswig Holstein	4	3.1
Thüringen	2	2.7
Total	134	100

While the sample size may appear somewhat small, it needs to be noted that older German consumers are usually harder to engage in online surveys. They are often conscious with respect information sharing and may be less digitally literate or mobile. For this reason, they are also often less represented in consumer pools. However, the sample size is still appropriate for the partial least squares structural equation modelling analysis following Hair et al. (2022). Hair's minimum sample size "ten times rule" states that the sample should be at least ten times greater than the maximum number of structural paths directed towards any of the latent constructs within the model (Hair et al., 2022). The resultant minimum sample would be 40, and the sample therefore significantly exceeded this requirement. The analysis consisted of descriptive statistics, which were generated with IBM's SPSS Statistics 31 (see Table 1), and partial least squares structural equation modelling via SmartPLS 4.1. The latter consisted of a two-step process, beginning with the measurement model analysis, followed by a model structure analysis. Hair et al. (2022) outline procedure and recommendations for outer and inner analysis as well as the respective reliability, validity, fit indices and performance criteria. The PLS-SEM analysis was suitable due to the presence of multiple latent variables, the somewhat small sample size, and the absence of strict distribution requirements. The measurement and structural model, all relevant concepts, tests and thresholds, and the performance results, as well as their interpretation, are shown in Figure 2.

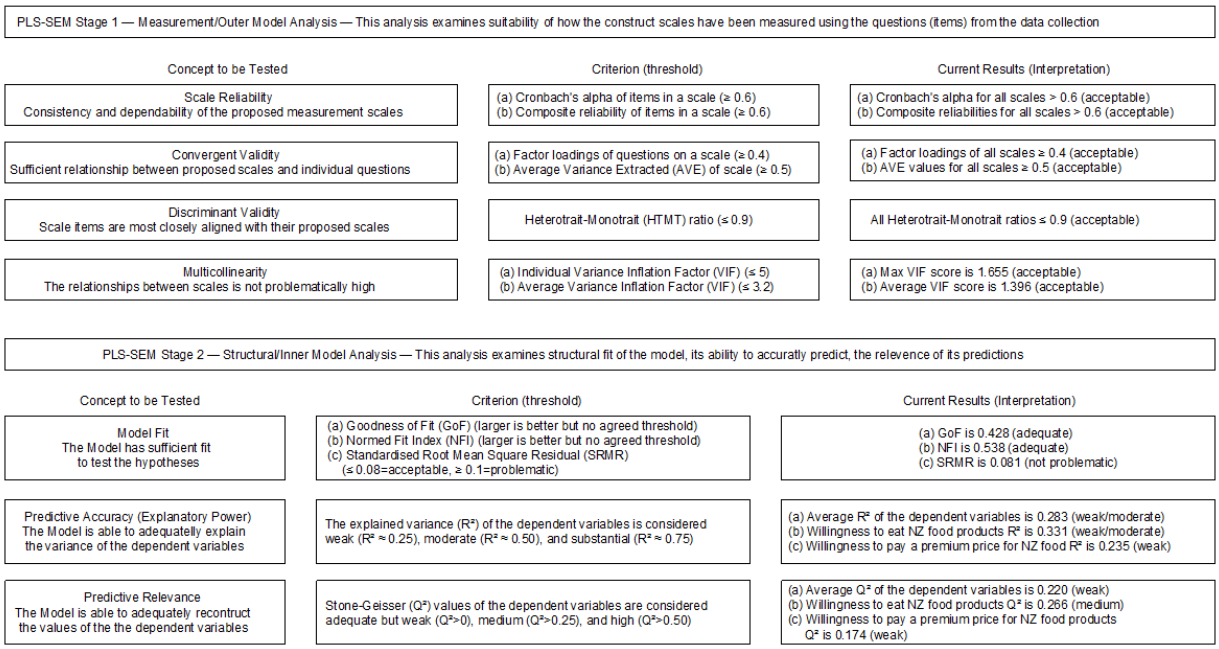


Figure 2: PLS-SEM Analysis

Results and discussion

PLS-SEM analysis involves two distinct steps: one examines model measurement, and the second, the performance of the model structure. First, the measurement or outer analysis focuses on the relationships between the items (individual questions) and constructs (multi-item scales), including reliability, convergent validity and discriminant validity. Second, the structural or inner analysis examines the robustness of the model structure, including model fit, predictive accuracy, predictive relevance and freedom from problematic collinearity. The concepts within the inner and outer model analyses, their descriptions, the test criteria, results, and interpretation appear in Figure 2. For this study, all of the tests were within the specified

criteria, indicating that the model satisfied the measurement and structure test criteria and was considered suitable for hypothesis testing. The wording of individual questions and more detailed reliability and convergent validity can be found in Table 2, and the specific HTMT ratios used to confirm the discriminant validity of the scales are in Table 3. Finally, the results of the hypothesis testing can be found in Table 4.

Table 2: Factor loadings and reliabilities

Scales and Items	Factor Loading	Cronbach's alpha	Composite reliability	Average variance extracted
Extrinsic Attributes		0.910	0.924	0.553
Reduced environmental impact of production	0.856			
High food safety standards	0.809			
Socially responsible production	0.610			
High animal welfare standards	0.766			
No GM ingredients	0.625			
Traceable to farm/orchard	0.818			
Country where product was produced	0.843			
Greenhouse gas emissions in production	0.592			
Regional production	0.670			
No chemicals to artificially colour or extend shelf life	0.786			
Intrinsic Attributes		0.686	0.803	0.505
Taste	0.730			
Appearance	0.733			
Scent	0.709			
Freshness	0.670			
New Zealand Association		0.923	0.936	0.621
Quality products	0.862			
Create great tasting food products and beverages	0.84			
Food safety	0.831			
Integrity	0.812			
Innovative	0.803			
Clean water	0.763			
Natural farming methods	0.748			
Clean environment	0.726			
Sustainable food production	0.689			
Food Neophilia		0.750	0.841	0.571
I like foods from different countries	0.782			
At dinner parties, I will try a new food	0.805			
I like to try new ethnic restaurants.	0.642			
I am constantly sampling new and different food	0.783			
Willingness to eat NZ products		0.944	0.951	0.602
Kiwifruit	0.847			
Apples	0.697			
Avocado	0.793			
Cheese	0.842			
Butter	0.674			
Milk	0.733			

Beef	0.846			
Lamb	0.822			
Honey	0.866			
Wine	0.737			
Willingness to pay a price premium for NZ products		0.950	0.957	0.691
Kiwifruit	0.886			
Apples	0.793			
Avocado	0.818			
Cheese	0.811			
Butter	0.864			
Milk	0.884			
Beef	0.816			
Lamb	0.776			
Honey	0.837			
Wine	0.820			

Table 3: Discriminant Validity

HTMT	A	B	C	D	E	F
A) Extrinsic Attributes						
B) Intrinsic Attributes	0.748					
C) NZ Association	0.36	0.338				
D) Food Neophilia	0.266	0.309	0.334			
E) Willingness to eat NZ food products	0.145	0.221	0.525	0.428		
F) Willingness to pay a price premium for NZ food products	0.279	0.112	0.424	0.327	0.537	

Table 4: Hypothesis testing results

	Coefficient	**T statistics**	**P values**
Extrinsic Attributes→Willingness to eat NZ food products	-0.205	2.145	0.032
Extrinsic Attributes→Willingness to pay a price premium for NZ food products	0.247	2.499	0.012
Intrinsic Attributes→Willingness to eat NZ food products	0.117	1.188	0.235
Intrinsic Attributes→Willingness to pay a price premium for NZ food products	-0.185	1.670	0.095
Food Neophilia→Willingness to eat NZ food products	0.244	3.265	0.001
Food Neophilia→Willingness to pay a price premium for NZ food products	0.187	2.300	0.022
NZ Association→Willingness to eat NZ food products	0.469	5.641	0.000
NZ Association→Willingness to pay a price premium for NZ food products	0.320	3.964	0.000

Bold=P<0.05

The associations between extrinsic food attributes and willingness to eat and pay a price premium for Aotearoa-New Zealand food products were significant, indicating support for hypotheses H1a for H1b. The findings are well aligned with the recent body of literature which shows that extrinsic food attributes can signal value but simultaneously imply that perceived risk at the consumer's end (Kim et al., 2008; Gallegos-Hernández et al., 2018; Phua et al., 2020;

Lees & Greenhalgh, 2024). The negative association between extrinsic attributes and willingness to eat can be explained as follows. While extrinsic food attributes serve as a quality signal, they may not translate fully into willingness to eat, as older consumers may rather rely on familiar, tried, and trusted products. Older consumers tend to be more habitual (Phua et al., 2020) and may regard Aotearoa-New Zealand's food products as foreign or unfamiliar, even when having extrinsic quality information at hand, which commonly serves heuristic in decision making among older consumers (Fagerstrøm et al, 2021). In contrast, the positive association between extrinsic food attributes and willingness to pay a price premium indicates that older German consumers still recognise the extrinsic attributes as indicators for value (Jordaan et al., 2025). Overall, it can be said that their willingness to pay a price premium reflects perceived value, unlike consumption intention. The associations between intrinsic food attributes and willingness to eat and pay a price premium for Aotearoa-New Zealand food products are both non-significant, showing no support for hypotheses H2a and H2b. The non-significant results could be attributed to sensory and physiological changes related to ageing. During the ageing process, the perception of taste, texture and smell can decline (Murphy& Vertrees, 2017; Ross, 2023), and ultimately, product distinctions specific to Aotearoa-New Zealand products may not be noticed or valued. In addition, limited exposure to kiwi food items and cultural familiarity may leave consumers unable to judge products, as they may not have expectations towards intrinsic attributes, which are the core function of the product. Overall, other factors related to health or ease of use could overshadow the relevance of intrinsic attributes (Caso & Vecchio, 2022) as predictors for willingness to eat and pay a price premium for Aotearoa-New Zealand food products. The associations between food neophilia and willingness to eat and pay a price premium for NZ food products are both positive and significant, showing support for hypotheses H3a and H3b. Despite the obvious aspect of food curiosity, the findings may indicate active food-related lifestyles, experience and identity of older German consumers. As empty nesters, older German consumers may have time for food-related leisure activities that are in line with their curiosity for food and socialisation (Rueter et al., 2020), such as food-related clubs, food-related travel, or food-related events. Eating food products from Aotearoa-New Zealand may be an expression of their self-perceived identity. For instance, openness, cultural exposure, and life course experience (Falk et al., 1996; Host et al., 2016) may make older consumers comfortable evaluating, choosing and paying a price premium for food from Aotearoa-New Zealand.

The associations between older German consumers' association with New Zealand as a country of origin and their willingness to eat and pay a price premium for NZ food products are both positive and significant, showing support for hypotheses H4a and H4b. Older German consumers may seek signal status, cultivated taste, quality and wealth through their food choices. The identity-based value associated with Aotearoa-New Zealand products can increase both the willingness to eat and to pay a premium, as the association with kiwi origin relates to the intangible value of the product.

Conclusion

The present study is of value for food marketers and exporters alike, as the study addresses a consumer segment that values quality and premium products. Based on the findings of this research, marketers and exporters may want to focus on knowledge related to extrinsic attributes, food neophilia and association with Aotearoa-New Zealand as a country of origin. Capitalising on the extrinsic food attributes in a way that meets the needs and wants of older German consumers is essential. Food products labelling should be easy to read, include

labelling that showcases a trustworthy food product on par with German premium product and production standards, but be authentic and unique to Aotearoa-New Zealand. Emphasising the "Kiwi-twist of purity and taste" of the product balances familiarity and food curiosity. Packaging should use good quality materials, and unite ease of use and elegance, signalling premium quality. However, product size and packaging also constitute a way to mitigate perceived risk when providing regular as well as sample size options. Leveraging Aotearoa-New Zealand's purity and quality narrative will serve exporters well, as this signals reliable premium products and food adventure for the curious.

Despite its small sample size, the current study is of value as it fills a research gap, related to the consumer segment, that appears to be somewhat neglected in the extant literature of German consumer behaviour and preferences for export products from Aotearoa-New Zealand and other similar export markets. Future studies may implement different techniques to mitigate the drawback related to the sample size. Point of sale sampling in German food retail chains or food fairs may be promising to accomplish this. Further real choice experiments or qualitative sensory evaluations where German consumers can experience food attributes and food quality would be of value for future studies. Comparison among various generational cohorts, would be a valuable addition to the state of the art.

References

Alves, L. S. M., Munduri, J. M. de S., Mattos, M. C. de O., Stefani, C. M., & Dame-Teixeira, N. (2024). Changes in taste perception in elderly population and its potential impact on oral health: a systematic review with meta-analysis. *Frontiers in Oral Health*, 5, 1-11. https://doi.org/10.3389/froh.2024.1517913

Badu-Baiden, F., Kim, S. (Sam), & Wong, I. A. (2023). A cross-cultural multilevel investigation on memorable destination local food consumption experience and food personality traits. *Journal of Travel & Tourism Marketing*, 40(4), 275–293. https://doi.org/10.1080/10548408.2023.2245423

Barković Bojanić, I., Erceg, A., & Damoska Sekuloska, J. (2024). Silver entrepreneurship: A golden opportunity for ageing society. *Economics and Business Review*, 10(1), 153-178. https://doi.org/10.18559/ebr.2024.1.1068

Becken, S., & Gnoth, J. (2004). Tourist consumption systems among overseas visitors: Reporting on American, German, and Australian visitors to New Zealand. *Tourism Management*, 25(3), 375-385. https://doi.org/10.1016/S0261-5177(03)00133-X

Ben Ali, S., Ben Hassine, K., & Mtimet, N. (2022). Market Segmentation Using Intrinsic Product Attributes: Evidence From the Tunisian Olive Oil Market. Journal of International Food &; Agribusiness Marketing, 35(4), 487–507. https://doi.org/10.1080/08974438.2021.2022555

Berry, C., Kees, J., & Burton, S. (2022). Drivers of data quality in advertising research: Differences across MTurk and professional panel samples. *Journal of Advertising*, 51(4), 515-529. https://doi.org/10.1080/00913367.2022.2079026

Bieszk-Stolorz, B., Dmytrów, K., & Frąckiewicz, E. (2024). Multivariate Analysis of the Sustainable Development of the Silver Economy in the European Union Countries. *Sustainability,* 16(23), 1-21. https://doi.org/10.3390/su162310703

Bisogni, C. A., Connors, M., Devine, C. M., & Sobal, J. (2002). Who we are and how we eat: A qualitative study of identities in food choice. *Journal of Nutrition Education and Behavior,* 34(3), 128-139. https://doi.org/10.1016/S1499-4046(06)60082-1

Brodie, R. J., & Benson-Rea, M. (2016). Country of origin branding: an integrative perspective. *Journal of Product & Brand Management*, 25(4), 322–336. https://doi.org/10.1108/jpbm-04-2016-1138

Bundesministerium für Familie, Senioren, Frauen und Jugend- BMFSFJ. (2020). Older people in Germany and the EU: Report. Online available at https://www.bmfsfj.de [Accessed 10/11/2025].

Bundesministerium für Wirtschaft und Klimaschutz- BMWK. (2022). Jahreswirtschaftsbericht 2022. Online available at https://www.bmwk.de [Accessed 10/11/2025].

Cano-Ibáñez, N., & Bueno-Cavanillas, A. (2024). Lifestyle Interventions in an Aged Population: Challenges and Opportunities from a Public Health Perspective. *Nutrients,* 16(1), 1-6. https://doi.org/10.3390/nu16010173

Caradus, J. (2022). Impacts of growing and utilising genetically modified crops and forages – a New Zealand perspective. *New Zealand Journal of Agricultural Research*, 66(5), 389–418. https://doi.org/10.1080/00288233.2022.2077380

Cardona, M., Izquierdo, D., Barat, J. M., & Fernández-Segovia, I. (2023). Intrinsic and extrinsic attributes that influence choice of meat and meat products: techniques used in their identification. *European Food Research and Technology,* 249(10), 2485–2514. https://doi.org/10.1007/s00217-023-04301-1

Caso, G., & Vecchio, R. (2022). Factors influencing independent older adults (un)healthy food choices: A systematic review and research agenda. *Food Research International*, 158, 1-16. https://doi.org/10.1016/j.foodres.2022.111476

Chen, P. J., & Antonelli, M. (2020). Conceptual models of food choice: influential factors related to foods, individual differences, and society. *Foods*, 9(12), 1-21. https://doi.org/10.3390/foods9121898

Connors, M., Bisogni, C. A., Sobal, J., & Devine, C. M. (2001). Managing values in personal food systems. *Appetite*, 36(3), 189-200. https://doi.org/10.1006/appe.2001.0400

Dimitrovski, D., & Crespi-Vallbona, M. (2016). Role of food neophilia in food market tourists' motivational construct: The case of La Boqueria in Barcelona, Spain. *Journal of Travel & Tourism Marketing,* 34(4), 475–487. https://doi.org/10.1080/10548408.2016.1193100

European Comission. (2015). Silver Economy. Aging active. Case study. Online available at file:///C:/Users/rombachm/Downloads/48%20-%20Silver%20Economy%20-%20Active%20Aging.pdf [Accessed 07/11/2025].

European Commission. (2021). The silver economy: Final report. Online available at https://publications.europa.eu/resource/cellar/2dca9276-3ec5-11e8-b5fe-01aa75ed71a1.0002.01/DOC_1 [Accessed 08/11/2025].

European Comission. (2023). Handbook on Silver Economy, Sustainable Development and

Innovation Ecosystem. Online available at https://sis-egiz.eu/wp-content/uploads/2023/09/HANDBOOK_SENIOR_ECONECT.pdf?utm_source=chatgpt.com [Accessed 07/11/2025].

Espejel, J., Fandos, C., & Flavian, C. (2007). The role of intrinsic and extrinsic quality attributes on consumer behaviour for traditional food products. Managing Service Quality: An International Journal, 17(6), 681-701. https://doi.org/10.1108/09604520710835000

Fagerstrøm, A., Richartz, P., Arntzen, E., & Sigurdsson, V. (2021). An Explorative Study on Heuristic Effects of Healthy Food Labels in an Online Shopping Situation. *Procedia Computer Science*, 181, 709–715. https://doi.org/10.1016/j.procs.2021.01.222

Falk, L. W., Bisogni, C. A., & Sobal, J. (1996). Food choice processes of older adults: a qualitative investigation. Journal of Nutrition Education, 28(5), 257-265. https://doi.org/10.1016/S0022-3182(96)70098-5

Fernqvist, F., Spendrup, S., & Tellström, R. (2024). Understanding food choice: A systematic review of reviews. *Heliyon*, 10 (12), 1-25. https://doi.org/10.1016/j.heliyon.2024.e32492

Furst, T., Connors, M., Bisogni, C. A., Sobal, J., & Falk, L. W. (1996). Food choice: a conceptual model of the process. *Appetite*, *26*(3), 247-266.

Ford, N., Trott, P., & Simms, C. (2019). Food portions and consumer vulnerability: qualitative insights from older consumers. *Qualitative Market Research: An International Journal*, 22(3), 435-455. https://doi.org/10.1108/QMR-10-2017-0134

Gallegos-Hernández, B. P., Pérez-Villarreal, H. H., Barahona, I., & Mayett-Moreno, Y. (2018). Analysis of the intrinsic signals, extrinsic signals and the expected quality of the organic tortilla to assess its purchasing intentions. *Cogent Business & Management,* 5(1), 1-23. https://doi.org/10.1080/23311975.2018.1548548

Guenther, M., Saunders, C., Dalziel, P., Rutherford, P. & Driver, T. (2015). Maximising Export Returns. Consumer attitudes towards attributes of food and beverages in developed and emerging export markets relevant to New Zealand. AERU Research Report 336. AERU: Lincoln University. Online available at https://researcharchive.lincoln.ac.nz/server/api/core/bitstreams/c56f327c-21c4-40a5-a22e-5feb181e4d71/content [Accessed 11/11/2025]\

Hair, J. E., Hult, G. T., Ringle, C. M., & Sarstedt, M. A. (2022). Primer on partial least squares structural equation modeling (PLS-SEM). (3rd ed.). Sage Publications.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. European Business Review, 31(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

Hempel, C. (2024). A segmentation and characterization of consumers affected by rising food prices. *Appetite*, 194, 1-11. https://doi.org/10.1016/j.appet.2023.107192

Henderson, K., Kemper, J., Lang, B., Conroy, D., & Frethey-Bentham, C. (2025). Threat or opportunity? A stakeholder perspective on country-of-origin brand and promoting gene edited foods. *Journal of Strategic Marketing*, 1–18. https://doi.org/10.1080/0965254x.2025.2519004

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Hinrichs, K. (2021). Recent pension reforms in Europe: More challenges, new directions. An overview. Social Policy & Administration, 55(3), 409-422. https://doi.org/10.1111/spol.12712

Hira, A., & Benson-Rea, M. (2013). New Zealand wine: a model for other small industries? Prometheus, 31(4) ,387–398,. https://doi.org/10.1080/08109028.2014.933601

Host, A., McMahon, A. T., Walton, K., & Charlton, K. (2016). Factors influencing food choice for independently living older people—a systematic literature review. *Journal of nutrition in gerontology and geriatrics*, *35*(2), 67-94. https://doi.org/10.1080/21551197.2016.1168760

Jordaan, D., Mielmann, A., & Brits, C. (2025). Consumers' Perceived Value of Pork Meat: A Segmentation on Intrinsic and Extrinsic Cues. *Foods*, 14(13), 1-13. https://doi.org/10.3390/foods14132324

Jorge, E. (2025). Exploring the impact of population aging, population density, and GDP on municipal waste generation in European OECD Countries-When do mediation effects matter? *Social Sciences & Humanities Open*, 11, 1-10. https://doi.org/10.1016/j.ssaho.2025.101432

Kamphuis, C. B., de Bekker-Grob, E. W., & van Lenthe, F. J. (2015). Factors affecting food choices of older adults from high and low socioeconomic groups: a discrete choice experiment. *The American Journal of Clinical Nutrition*, 101(4), 768–774. https://doi.org/10.3945/ajcn.114.096776

Kim, R. (2008). Japanese consumers' use of extrinsic and intrinsic cues to mitigate risky food choices. International *Journal of Consumer Studies*, 32(1), 49-58. https://doi.org/10.1111/j.1470-6431.2007.00636.x

Knuck, J., & Hess, S. (2023). Who buys regional fresh milk brands? An analysis of German household data. *Agribusiness*, *39*(2), 473-493. https://doi.org/10.1002/agr.21776

Korčok, M., Veverka, M., Nakonechna, K., Škrípová, S., & Vietoris, V. (2024). Factors Influencing Elderly Consumers' Preferences for Edible Gels: Insights from Slovakia. Gels, 10(10), 1-17. https://doi.org/10.3390/gels10100610

Lees, N., & Greenhalgh, J. (2024). The effects of purchase and consumption on beef quality attribute beliefs: A study of tourists visiting Vanuatu. *Cogent Business & Management*, 11(1), 1-21. https://doi.org/10.1080/23311975.2024.2333605

Ma, Y., & Xing, T. (2024). Encourage sustainable consumption among the elderly through generativity. *Journal of Retailing and Consumer Services*, 81, 1-12 https://doi.org/10.1016/j.jretconser.2024.104053

Makowska, M., Boguszewski, R., & Hrehorowicz, A. (2024). Generational Differences in Food Choices and Consumer Behaviors in the Context of Sustainable Development. *Foods*, 13(4), 1-16. https://doi.org/10.3390/foods13040521

Mashiah, L., Lavoisier, A., Gwala, S., Calahorra, A. A., Shani Levi, C., Rødbotten, R., Varela, P., Sarkar, A., Brodkorb, A., Dupont, D., & Lesmes, U. (2025). Strategic Considerations

in Designing Food Solutions for Seniors. *Foods*, 14(3), 1-13. https://doi.org/10.3390/foods14030396.

McIntyre, T., Olvermann, M., Rombach, M., Renwick, A., & de Koning, W. (2024). Here comes the sun: social acceptability of solar photovoltaics in New Zealand. Journal of the Royal Society of New Zealand, 55(4), 1073–1090. https://doi.org/10.1080/03036758.2024.2415886

Meneely, L., Strugnell, C., & Burns, A. (2009). Elderly consumers and their food store experiences. *Journal of Retailing and Consumer Services*, 16(6), 458-465. https://doi.org/10.1016/j.jretconser.2009.06.006

Murphy, C., & Vertrees, R. (2017). Sensory functioning in older adults: relevance for food preference. *Current Opinion in Food Science*, 15, 56–60. https://doi.org/10.1016/j.cofs.2017.05.004

New Zealand Trade & Enterprise. (2024). Find a new F&B export market: German foodservice channels. Online available at https://my.nzte.govt.nz/article/20241203-find-a-new-fb-export-market-german-foodservice-channels [Accessed 07/11/2025]

Niemczyk, A., Szalonka, K., Gardocka-Jałowiec, A., Nowak, W., Seweryn, R., & Gródek-Szostak, Z. (2023). *The Silver Economy*, 1-112. Routledge. London, United Kingdom. https://doi.org/10.4324/9781003377313

Oppermann, M. (1993). German Tourists in New Zealand. New Zealand Geographer, 49(1), 30–34. https://doi.org/10.1111/j.1745-7939.1993.tb02022.x

Phua, P., Kennedy, R., Trinh, G., Page, B., & Hartnett, N. (2020). Examining older consumers' loyalty towards older brands in grocery retailing. *Journal of Retailing and Consumer* Services, 52, 1-7. https://doi.org/10.1016/j.jretconser.2019.101893

Pliner, P., & Hobden, K. (1992). Development of a scale to measure the trait of food neophobia in humans. *Appetite*, 19(2), 105-120. https://doi.org/10.1016/0195-6663(92)90014-W

Podgórniak-Krzykacz, A., & Przywojska, J. (2025). Determinants of sustainable food purchasing behaviour in the context of the aging population in Poland. *Central European Economic Journal,* 12(59), 66-84. https://doi.org/10.2478/ceej-2025-0005

Richartz, C., Stark, S., & Kuhlen, M. (2025). Sustainability and crisis: Shifting consumer preferences for food products under the influence of the COVID-19 pandemic in Germany. *Journal of Cleaner Production*, 496, 1-10. https://doi.org/10.1016/j.jclepro.2025.145089

Ross, C. F. (2023). The texture factor: food product development for discrete populations including orally compromised elderly consumers and children with Down syndrome. *International Journal of Food Science & Technology*, 58(12), 6151–6157. https://doi.org/10.1111/ijfs.16696

Rueter, J., Brandstetter, S., Curbach, J., Lindacher, V., Warrelmann, B., & Loss, J. (2020). How Older Citizens in Germany Perceive and Handle Their Food Environment—A Qualitative Exploratory Study. *International Journal of Environmental Research and Public Health*, 17(19), 1-16. https://doi.org/10.3390/ijerph17196940

Saunders, C., Guenther, M., Saunders, J., Dalziel, P., & Rutherford, P. (2021). Consumer Preferences for Attributes in Food and Beverages in Developed and Emerging Export Markets and their Impact on the European Union and New Zealand. Australian and

New Zealand Journal of European Studies, 8(1), 53-68. https://doi.org/10.30722/anzjes.vol8.iss1.15159

Savelli, E., Murmura, F., & Bravi, L. (2024). Healthy and quality food attitudes and lifestyle: a generational cohort comparison. *The TQM Journal*, 36(8), 2693-2722. https://doi.org/10.1108/TQM-05-2023-0156

Sekuloska, J. D., & Erceg, A. (2024) *Silver Economy as an Opportunity for SME Growth.* Proceedings published from the ERAZ Conference – Knowledge Based Sustainable Development , 10, 19-27. Lissabon, Portugal.

Sobal, J., & Bisogni, C. A. (2009). Constructing food choice decisions. *Annals of Behavioral Medicine*, 38(1), 37-46. https://doi.org/10.1007/s12160-009-9124-5

Statistisches Bundesamt - DESTATIS. (2023). Bevölkerungsvorausberechnung: Bevölkerung Deutschland bis 2070. Online available at https://www.destatis.de [Accessed 11/11/2025]

Szakos, D., Ózsvári, L., & Kasza, G. (2020). Perception of Older Adults about Health-Related Functionality of Foods Compared with Other Age Groups. *Sustainability,* 12(7), 1-18. https://doi.org/10.3390/su12072748

Szakos, D., Ózsvári, L., & Kasza, G. (2022). Health-related nutritional preferences of older adults: A segmentation study for functional food development. *Journal of Functional Foods*, 92, 1-10. https://doi.org/10.1016/j.jff.2022.105065

Tait, P., Saunders, C., Dalziel, P., Rutherford, P., Driver, T., & Guenther, M. (2021). Examining the influence of purchase occasion on consumer preferences for credence attributes in the Californian beef market. *Empirical Economics Letters*, 20(2), 259-270.

Tait, P., Saunders, C., Dalziel, P., Rutherford, P., Driver, T., & Guenther, M. (2020). Measuring Chinese food consumers' preferences for sustainability attributes: The case of the Shanghai yogurt market. *Journal of Asia Entrepreneurship and Sustainability*, 16(4), 99-128.

Tait, P., Saunders, C., Dalziel, P., Rutherford, P., Driver, T., & Guenther, M. (2019). Estimating wine consumer preferences for sustainability attributes: A discrete choice experiment of Californian Sauvignon Blanc purchasers. *Journal of Cleaner Production*, 233, 412-420. https://doi.org/10.1016/j.jclepro.2019.06.076

Topolska, K., Florkiewicz, A., & Filipiak-Florkiewicz, A. (2021). Functional food-Consumer motivations and expectations. *International Journal of Environmental Research and Public Health*, 18(10), 1-14. https://doi.org/10.3390/ijerph18105327

Tourism New Zealand (2024). Germany: visitors and market insight. Online available at https://www.tourismnewzealand.com/assets/insights/market-overview/TNZ-Insights-Infographic-Market-Snapshots-2024-Germany.pdf [Accessed 11/11/2025].

Uribe, R., Infante, R., Kusch, C., Contador, L., Pacheco, I., & Mesa, K. (2020). Do Consumers Evaluate New and Existing Fruit Varieties in the Same Way? Modeling the Role of Search and Experience Intrinsic Attributes. *Journal of Food Products Marketing*, 26(8), 521–534. https://doi.org/10.1080/10454446.2020.1821419

Van der Zanden, L. D. T., van Kleef, E., de Wijk, R. A., & van Trijp, H. C. M. (2014). Understanding heterogeneity among elderly consumers: an evaluation of segmentation

approaches in the functional food market. *Nutrition Research Reviews*, 27(1), 159–171. https://doi.org/10.1017/s0954422414000092

Vatsa, P., & Renwick, A. (2024). Food prices in New Zealand: implications for feeding people better. Journal of the Royal Society of New Zealand, 55(6), 2305–2318. https://doi.org/10.1080/03036758.2024.2368788

Wortmann, H. R., Gisch, U. A., Bergmann, M. M., & Warschburger, P. (2023). Exploring the Longitudinal Stability of Food Neophilia and Dietary Quality and Their Prospective Relationship in Older Adults: A Cross-Lagged Panel Analysis. *Nutrients*, 15(5), 1-16. https://doi.org/10.3390/nu15051248

Zhang, Q., Huang, R., Chen, Q., & Zhang, J. (2025). Balancing familiarity and novelty: the interplay of cultural familiarity and food neophilia in shaping tourists' local food experiences. *Current Issues in Tourism*, 1–23. https://doi.org/10.1080/13683500.2025.2537229