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Thesis

**Bridging the Gap: Product Adaptation and Cultural Barriers
for Italian PDO Agri-Food Products in the Dutch Market**
A Case Study on Grana Padano DOP

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Abstract

This study analyzes the determinants of Dutch consumers' acceptance of imported heritage food products, using Italian hard cheeses – specifically Grana Padano DOP – as an illustrative case. Despite the absence of trade barriers within the EU, cultural habits, local preference and purchasing inertia limit the integration of foreign products into everyday consumption. Through a structured survey and a multiple regression model, the research examines how cultural preferences, convenience-driven retail formats, price sensitivity and information cues are associated with the frequency and integration of Italian cuisine in daily cooking habits. Results provide theoretical insights into cross-cultural consumer dynamics and practical guidance for agri-food producers operating in international markets.

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Chapter 1

Introduction

1.1 Italy–Netherlands Trade within the EU Market

The world economy is characterized by strong bonds between countries due to regional integration processes. Among these initiatives, the European Union (EU) represents the most advanced example. After the creation of the Single European Market, formalized with the Single European Act ¹, and the abolishment of the internal borders in 1993 ², international trade rules have radically changed setting as central pillar the free movement of goods, services and people, and transforming a set of national markets into a single competitive economic space.

By removing tariff and non-tariff barriers it's easier for firms to develop effective marketing strategies and market-penetration economics models. Additionally, as regards the retail sector, especially the food one, the absence of elements of geopolitical and bureaucratic friction — such as customs duties — reduces transit times and costs of goods allowing supply chains to operate in a more efficient way and avoiding logistical delays that could damage perishable products.

European integration is not only about the removal of physical and fiscal controls but also about the adoption of common rules in food safety, traceability and sanitation standards, under the supervision of community bodies like the EFSA³. In this way, the principle of mutual recognition can take action: if a food product is legally fabricated and

¹European Commission (1986). Single European Act.

²European Commission (1992). Treaty on European Union

³EFSA (2024). Food Safety in the European Union.

commercialized in a member state then it can move freely to any other country of the EU. The same applies to trademark protection and transparency towards the customer. From one side, the legislative harmonisation protect the value of agri-food products through quality schemes, such as Protected Designation of Origin (PDO), against counterfeit products within the European territory. On the other side, it looks at the final customer through, for example, the progressive introduction of nutrition labelling systems ⁴, which contribute to build a common information base that allows all European citizens to make informed purchasing choices.

In order to understand how the market without barriers works, the Netherlands is taken into account as it represents an example of modern economy, open outward and integrated with the European sales network. Official figures, such as the Embassy of Italy The Hague ⁵, show that its total trade with the rest of the world exceeds 1.841 billion euros in 2024 and a huge part moves within European borders. In this scenario, the link between Italy and the Netherlands keeps growing, reaching 43.35 billion euros and showing a perfect bilateral cooperation. Looking at the goods departing from Italy, exports towards the Netherlands are 14.48 billion euros, leading Italy to gain a 2.4% market share in the country and to be the eighth largest provider at a global level for the Dutch market.

The positioning makes it clear that the commercial axis between Rome and Amsterdam is safe and consolidated over time. Thanks to this, Italian firms that want to sell in the Netherlands can rely on already open distribution channels, solid business relationships and efficient supply chains which allow a direct and systematic link between Italian productive districts and the Dutch market, optimizing times and distribution costs. Inside this commercial framework, the agri-food sector plays an important role. In 2024, Italian exports of food, beverages and tobacco to the Netherlands reached 1.63 billion euros representing the 11.3% of the total Italian export towards the Netherlands and being the third most sold category after pharmaceutical and industrial machinery. The achieving of these volumes makes it clear that Made in Italy products are not niche goods, indeed, stable components of the Dutch large-scale retail trade which go through advanced technical infrastructure able to conserve fresh products along the entire supply chain.

Since physical, regulatory and logistical frictions have been neutralized by structural

⁴European Parliament (2011). Regulation (EU) No 1169/2011 on food information to consumers.

⁵Italian Ministry of Foreign Affairs and International Cooperation – Embassy of Italy in The Hague (2026). InfoMercatiEsteri – Country Profile: The Netherlands. Updated 03/02/2026.

features of the European Single Market, this environment represents a relatable choice to try to build a mathematical model that studies how consumers behave. By isolating the core research problem from macroeconomic distortions, a product's failure or success depends just on marketing strategies, competitors and cultural or psychological factors which push the final customer to choose what to put or not into the shopping cart. In the field of international market, the product's entry in a foreign market is analyzed through export volumes — so quantity of good sold — and the capillarity of physical distribution, so whether the product is present everywhere or not. But the absence of the institutional barriers and the efficiency of the logistic networks are not enough. In this context, for a high cultural identity product, a long period lasting commercial success is not guaranteed. There is a fundamental analytical paradox due to the conceptual difference between market penetration and market share. Market penetration is the percentage of consumers that at least once, in a certain period of time, bought a specific product or the physical presence of that brand on the large-scale distribution's shelf. In most cases, excellent food product like certified PDO (Protected Designation of Origin) or PGI (Protected Geographical Indication) products benefit from a high initial market penetration due to Made in Italy international reputation. Foreign customers recognize that value and are willing to buy it. Sometimes, this market can be misleading if it's not related to the effective market share, which represents the real volume of consumption and the frequency at which that product is present in the daily grocery shopping of host country households. Here the real problem emerges: a foreign product can be easily available in the main supermarkets and be really appreciated, but just for occasional consumption. People consider these goods as special products and buy them just in particular events. That's why the real problem is not the physical distribution of the product or its brand awareness, but instead its lack of integration in the domestic feeding routine of the local population. The missing piece for a product to pass from an exceptional purchase to a daily ingredient is due to a psychological and cultural gap. The consumer, despite acting in a free and rich market, is led by culinary habits rooted since childhood and a natural tendency to distrust flavors which are away from domestic traditions. Microeconomics and behavioral factors must be investigated in order to break down the invisible barrier which is constraining the market share growth even though the distribution channels are perfectly working. To better understand the paradox between market penetration and market share, this research examines how an imported

heritage food product performs inside the Dutch retail market, using Italian hard cheese — such as Grana Padano DOP — as a representative example within this broader category. According to official data released by the Consorzio di Tutela del Grana Padano (2023), exports towards the Dutch market reached 82,255 wheels placing the Netherlands among the main destination countries for Grana Padano DOP. Analyzing the typology of products requested by the Dutch market, it turns out that there's a strong inclination towards formats which facilitate the usage of that product for the final customer. This is an important detail for marketing, as it shows that the Dutch customer knows and buys this product but the choice when purchasing is influenced by convenience in its daily consumption. However, these numbers must be put in relation with the whole local dairy market. 4 million kilograms of imported cheese represents a considerable volume for Italian producers, but it's almost invisible when compared to the local Dutch production which amounts to 941 million kilograms per year (above all Gouda and Edam) ⁶. Analyzing these data, it turns out that imported hard cheeses occupy a very small portion of the total available cheese in the Dutch market — Grana Padano DOP as leader in the hard cheese sector, represents just the 0.42% of the total available cheese of the Dutch market— highlighting how domestic dairy production dominates everyday consumption. This proves that the retail market of the Netherlands is a cultural and economic monopoly monitored by local producers. Hence, the Dutch customer shows a great loyalty towards its own national products, by buying big volumes and consuming them daily, instead, for everything concerning foreign excellences, they are confined to a marginal market share. Such a situation implies that trade-barrier removal and advanced logistics are not enough. In order to break this monopoly, research must focus not on the distribution but on those variables like local preference, purchasing inertia and modern marketing drivers (e.g., the Dutch Verspakket) which can modify the final customer psychology. International marketing literature about the agri-food field analyzed the culinary ethnocentrism's impact on customers' preferences, but the traditional theoretical models show a limit in highly digitalized retail markets and oriented to the convenience, like the one of the Netherlands. The majority of the existing studies treats cultural barriers and country-of-origin biases as static factors or analyzes the single marketing mix levers (e.g., price, packaging, brand positioning) in isolation. This approach ignores the impact of modern retail on the customer's mind. Consequently,

⁶Statistics Netherlands – CBS (2024). Dairy production statistics.

current literature overlooks how the large-scale distribution strategies can actively reshape the purchasing habits, acting as behavior facilitator able to soften the domestic inertia and local preference, directly in-store. The central problem of the research lies in this theoretical gap: it's missing a quantitative model able to simultaneously measure the cultural habits (such as preferences for Gouda) and the ability of the new supermarket trends to break down these barriers. Traditional studies do not clearly explain how the strategic integration of a product could reduce the customer's cognitive effort avoiding purchase hesitations. Some examples are the inclusion of foreign premium cheese inside fresh recipe kits (Verspakket) or the increase of high-service-content formats like grated or pre-portioned options. In addition, current models do not consider how the word-of-mouth generated by food bloggers and traditional purchasing channels (e.g., open-air markets, kaaswinkels) can influence consumer price sensitivity. Thus, in the light of the above, the main goal of this thesis is to quantitatively measure the contrasting forces which determine the success or marginalization of imported food product within the Dutch market. In order to understand it, this study raises the following main research question:

"In what way are Dutch cultural habits associated with the acceptance of imported food products, and to what extent are convenience-oriented retail formats and digital word-of-mouth associated with lower cognitive barriers and greater integration into everyday consumption?"

Through this research question, the study compares traditional market resistance forces with modern stimuli of the retail marketing allowing an understanding of whether the presence of innovation in distribution and digital communication is enough to overcome the boundaries of occasional consumption. In order to best answer the main question, this study adopts a quantitative approach based on a collection of primary data. Specifically, responses were obtained through a structured survey given to a sample of consumers residing in the Netherlands. Since customers' purchasing behaviors and psychological perceptions are complex phenomena that cannot be measured through isolated questions, the survey items have been clustered into four macro-areas. Each section combines multiple specific indicators to measure a behavioral dimension, which will be subsequently included in a multiple linear regression model. This approach allows us to evaluate the simultaneous interaction and relative weight of each variable on the Dutch customer's decisional process.

SRQ1: In what way are established domestic habits towards national cheeses (such as

Gouda) associated with the frequency of purchase and the perception of imported food products in everyday cooking?

SRQ2: To what extent are convenience-oriented retail strategies (e.g., Verspakket) associated with lower customer cognitive effort and greater trial of foreign products?

SRQ3: Which is the impact of the price sensitivity on the customer's final choice, and how do traditional purchasing channels (e.g., open-air market, kaaswinkels) shape perceived affordability of imported products compared to local ones?

SRQ4: Which information stimuli (e.g., PDO certification, nutri-score, social influence generated by food bloggers) have the greatest impact on the Dutch consumer's purchasing intentions toward international food products?

The value of this empirical analysis, aimed at answering to the research sub-questions, is reflected in two distinct areas. First, it has academic significance as it enriches the literature about the customer's behavior offering an integrated empirical model which shows how retail marketing operational variables and digital distribution channels can simultaneously interact with entrenched cultural variables, going beyond static and traditional models. Second, it has managerial significance for producers of high-value agri-food goods and linked to the territory (PDO/PGI) as it offers a practical and clear guide to firms which export typical products abroad. Results will help companies better understand the most efficient way to invest in packaging innovation, convenience-oriented formats or digital communication campaigns, optimizing resource allocation and evaluating potential return on investment (ROI), being able to identify where the highest trade returns come from. The present work is divided into five chapters. Chapter 2 analyzes the existing literature about food-purchasing behaviors, innovation in retail and digital marketing, to better understand from where the hypotheses come from. Chapter 3 is about the methodology, so about the structure of the survey, sampling techniques and the statistical models applied to the data elaboration. Chapter 4 exposes empirical results coming from the data capture and illustrates the statistical outputs and the hypotheses validation. Chapter 5, the last one, interprets the results in relation to the existing scientific literature to understand whether the collected data confirm or innovate the current theories, highlighting the limits of the study and outlining final strategic recommendations.

Chapter 2

Literature review

2.1 Strategic Approaches to International Markets

2.1.1 Standardization versus Adaptation: The Historical Debate

Historically, multinationals expanding across borders had to deal with a binary strategic choice between a fully marketing standardization or a local adaptation. This represents one of the most analyzed dichotomies in the international marketing and has at the center a clear distinction between two schools of thought about how a company should set up its own marketing mix, defined through the 7P, when transiting from a domestic environment towards foreign jurisdictions. On one hand, the school of standardization gained support thanks to Levitt (1983) who stated that international market are passing through a process of rapid and irreversible homogenization due to progress in the field of communication technology, global transport logistic and the progressive convergence of the customer's preferences at a global level. Owing to global internet diffusion and social media (e.g., Instagram, TikTok), streaming platform created a sort of shared global showcase. This subjects customers from all over the world to the same visual stimuli, gastronomic trends and lifestyles, breaking down cultural distances and creating homogeneous needs. The supporters of this theory state that treating the world as a single and uniform market allows companies to exploit economies of scale for everything concerning production, distribution and brand promotion. Thanks to the brand image and the corporate identity, multinationals can drastically reduce managerial complexity, optimizing research and development costs, avoiding redundant operating structures, and treating, in this way, local specialties as superficial elements which could easily be overcome by the placement of a standardized

global value proposition. It is assumed that for many product categories, customers from different countries are no more isolated entities but cross national segments, so they belong to the same category (e.g., young professionals, gourmet cuisine enthusiasts) and share same tastes regardless of their nationality. Those looking for quality or convenience will seek them in the same way, both in Rome and Amsterdam. This because international retail chain got people used to qualitative standards and universal consumption patterns through same supermarket formats, packaging or restaurant chains, educating customer's expectations towards common standards. On the other hand, the school of adaptation wants to emphasize the fragmentation of the global market. According to this viewpoint, national markets are divided by substantial obstacles, such as cultural heritage, different levels of economic development or unique legal frameworks, which cause a standardize product to encounter cognitive resistance and a commercial failure if exported into a foreign country without modifications. This means that customer behavior is extremely tied to the national, or even regional, context. Foreign customer's brain rejects a product because it is not part of his own culture, does not know how to use it or doesn't understand the advertising message. The direct consequence of the mental block is commercial failure. Gaining more market share and optimizing financial performance require a shift in strategy: product features, packaging dimensions, price and promotional channels must be modified to get closer to specific requests, values and institutional constraints of the host market. Local responsiveness, the ability of the firm to quickly answer to specific needs of a market, is not an unnecessary cost, indeed, it's a way to guarantee competitive advantage on international operations. Academic literature has always kept these strategies as two separated paths, by implying that a firm should prioritize or global efficiency through uniformity or local efficiency through differentiation, not taking into account the cross between the two of them.

2.1.2 Toward an Integrated Continuum: The Vrontis Framework

As global trade volatility increases, this dichotomy started to show significant theoretical limits and difficulties in explaining how modern multinational of the GDO succeed in simultaneously managing pressures for global costs efficiency and local market penetration. This paved the way for more complex framework able to wave these two opposing organizational forces. A fundamental theoretical contribution is represented by the framework of

Vrontis *et al.* (2009), according to which the international strategic choices does not stand at a fork, instead, it is collocated in a dynamic and multidimensional continuum. Successful companies don't adopt extreme positions — global standardization or local adaptation — but they simultaneously combine elements of both uniformity and differentiation. This is due to the fact that a firm, to sell its products, must take into account two huge opposite forces at the same exact time. Globalization forces push for cost efficiency and the easiest way to do it is through standardization, producing a single product, a single packaging, a single advertising campaign and obtaining economies of scale. But this force pushes the company to watch the world as single and homogeneous market. On the other side, the foreign customer has completely different habits and rhythms with respect to the Italian customer, showing the presence of cultural barriers and different GDO logics, meaning that these local fragmentation forces required answers to specific needs. The firm has to learn how to coexist with this contradiction. It means to find the exact point to save production-costs efficiency upstream — so that the product is produced always in the same way, respecting PDO regulations — and to answer to local fragmentation as well, by placing that product in certain formats and channels that suit the foreign customer. Vrontis *et al.* (2009) introduce the concept of tactical behavior, explaining how a firm should be able to map out its own marketing mix components in order to decide which aspects must be standardized and which must be adapted. There is a switch in the vision, passing from a monolithic strategic one to a granular one. This framework is perfectly related to the sociological and managerial concept of “Glocalization”¹. In the agri-food context, this perspective offers a way to understand penetration dynamics of premium products and with high cultural identity into foreign markets. A rigid application of standardization would result cognitively failing due to culinary barriers and food neophobia; at the same time a total adaptation would distort the product perception, removing its authenticity. The aim is to identify the point at which local customer disutility can be minimized without sacrifice profit margins coming from industrial efficiency.

Centripetal and centrifugal forces The strategic positioning of the firm along the continuum between standardization and adaptation is determined by internal and external forces divided into two categories: factors which encourage standardization (centripetal

¹Glocalization refers to the simultaneous combination of global strategies and local adaptations.

forces) and factors which impose adaptation (centrifugal forces). It's important to see the equilibrium between these pressures to understand how an agri-food firm can calibrate its presence on the foreign GDO channels. The main forces which drive the firm towards standardization are internal factors, tied to cost structure and nature of the company. Global economies of scale research represents the main driver, as maintaining a single production line, a uniform packaging and non-differentiated logistics processes allow to take down marginal costs and offer a competitive consumer price. Added to this is brand equity: when a company standardizes it presents itself with the same name, same logo, same colors and message (e.g., Coca-Cola, Apple), allowing the firm to capitalize value at a global level. No need to spend money to create and advertise a different label for each country. From an organizational point of view, important and strategic decisions come exclusively from the headquarters and apply to all foreign markets, simplifying organizational complexity and management control of the subsidiaries. But global market is not only driven by these forces. External forces, which lie in the outside market, push in the opposite direction calling for adaptation, such as legal constraints and local regulations (e.g., mandatory nutrition labelling systems, specific health regulations). Another one is the bargaining power of the host country, the giants of Dutch retail make the rules, for example in the Netherlands few big groups control the totality of the national supermarkets (e.g., Albert Heijn alone control a huge market share), so the firm must adapt to their needs to be able to stand on the shelves. Logistic requires are strict as well, Dutch GDO is one of the most technologically advanced and optimized in the world and they reason to maximize their profit for every square centimeter of shelf. Firms must adapt to shelf-ready packaging or sealed single-dose sachets suitable for be inserted into Verspakket. But customer's habits and taste preferences are the strictest barriers, so a high heterogeneity with regard to the home market (concerning culture, laws, habits) and an inflexible standardization will lead the foreign customer to refuse the product, causing a commercial flop. The sensitivity to this opposing forces depends on the product category of the exported good, and literature agrees that products with high cultural value, above all food products, are infinitely more affected by local fragmentation forces, compared to industrial and technological goods. This occurs because while microchip or smartphone answer to utilitarian and standardizable needs, food is intrinsically tied to people identity, memories and daily routine. As a result, managers must move along the continuum towards adaptation strategies instead of looking

at internal costs efficiency to be able to penetrate the domestic barrier of the foreign market, which drives customers towards Gouda (or product that they have known for a lifetime).

2.1.3 Empirical Evidence: The Nestlé Case in Asian Markets

Empirical evidence supporting the need to balance standardization and adaptation inside a strategic continuum comes from a study made by Tze *et al.* (2022) and is about Nestlé internalization on Asian markets. As a multinational leader of the agri-food sector, it represents a global benchmark for both the exploitation of economies of scale and the brand equity centralization. Industrial processes have been standardized in order to gain the maximum cost efficiency: to develop a new machinery or a packaging technology costs millions of euros, engineers and tests, Nestlé takes that project and replicates it for other factories around the world, cushioning the cost and minimize it almost to zero. The same for management efficiency, as the firm can negotiate the purchase of mechanical components on a global scale obtaining huge discounts and, at the same time, a trained engineer can adjust or optimize a machinery in Germany as well as in Brazil, operating manuals and safety procedure are identical everywhere. In the food sector, safety and consistency of the product are the most important thing, so if a packaging machinery is standardized, hygiene conditions, sealing procedures and moisture barriers will be identical everywhere. This guarantee that the brand equity, doesn't get damaged due to local production defects. The latter has been centralized in Switzerland and here identity, logo, quality values and the brand reputation are strictly controlled to ensure the customer: thanks to this, Nestlé can launch a product everywhere in the world and be almost immediately successful as the same values of food safety, familiarity and reliability are perceived from the customer. However, its positioning in very different contexts from the cultural point of view shows how a market success is strictly tied to the ability to use a "glocal" approach. The study highlights how the company maintains a strategic and organizational standardization but applies a systematic adaptation at tactical and marketing mix level to overcome macro-cultural barriers of host countries. An example is the instant coffee (Nescafé) in Asia, a market characterized by a rooted local food heritage. In terms of the product, Nestlé maintains core industrial processes and brand architecture unchanged, just modifying formulations and aroma profiles to align them with local palates (e.g., the addition of spices in India) and reducing grammars in single-dose format. The price reflects this flexibility, in the face

of a floor margin, penetration pricing logics and low-unit-pack solutions, to allow lower income consumers, are applied. To overcome distribution fragmentation (place), global framework agreement with large international retail chains are integrated with diffusion into local traditional channels, such as small neighborhood shops. As last one promotion, using cultural-adapted advertising messages and local testimonial through which the brand is able to preserve its visual and institutional identity reaching the host country population as well. So, production technology and industrial packaging are strictly standardized at global level to exploit huge economies of scale but, everything inside that standardized pack (e.g., recipe, weight, flavor) or the external graphics (e.g., language, color, messages) are locally adapted. Empirical evidence and scientific literature show that a clear-cut dichotomy has been overcome by an integrated perspective. Anyway, when this framework is applied to premium agri-food product (above all PDO products), a super-high cultural intensity product such as Grana Padano, there are more limits to take into account: recipe, production method, geographical origin of raw materials, which are unchangeable by law, excluding, thus excluding the product leverage. A question mark for international marketing arises, namely understanding the way through which a PDO agri-food product, structurally anchored to absolute standardization, can move along globalization continuum to penetrate culturally distant foreign market. The Netherlands represents a great field of analysis as the agri-food retail sector presents high logistic efficiency, high price sensitivity and high consumption of local semi-hard cheese (e.g., Gouda). So, the introduction of a cheese like Grana Padano in this context means letting collide a consumption model based on the country tradition and on slow tasting with a distribution and quick consumption model oriented to efficiency and convenience.

2.1.4 Product Line Design: Commonality versus Differentiation

The planning and management of a product line design represent one of the most complex and crucial strategic decisions for companies operating in international markets, as there is the need to understand the right trade-off between internal operative efficiency, tied to standardization, and an external commercial efficiency, tied to local satisfaction. According to literature, this balance is formalized through the dualism between commonality — that is, standardization of components, processes and final products, and differentiation of commercial supply. The framework developed by Jonnalagedda and Saranga (2017)

highlights how commonality enables firms to maximize economic of scale, optimize productive resources allocation and reduce R&D and logistic costs. If a firm produces the same product for both the home market and the host market, machinery fixed costs can be spread for a bigger amount of produced units, reducing the average unit cost, and at the same time, increasing bargaining power towards raw materials suppliers, obtaining higher discounts. In addition, with a standardized production, setup costs are equal to zero: machinery have a continuous cycle of operation which allows to reduce waste of time and labour and optimally saturate production capacity, as time and costs to stop the machinery, clean it, recalibrate it and change the format for the host country are not needed. Same for R&D and storage coordination, having a common product means investing once for the main market and using that innovation an all the other markets at no cost, and having a single stock keeping unit (SKU) ² making logistics smoother and demand forecasts more accurate. Standardize product architecture allows to centralize production and to establish homogeneous and easily controllable quality standards on a global scale.

Risks of over-standardization The risks identified by Jonnalagedda and Saranga (2017) about standardization and efficiency are reverse cannibalization and market alienation with relevance fragmentation as a consequence of it. In traditional market, cannibalization is when a firm launches a new product which steals markets shares to an existing product of that same brand. Instead, reverse cannibalization, inside the international product line design context, represents the opposite phenomena: the firm, for fear of complicating production and to maintain the maximum internal efficiency, decide to offer a single standardize product to satisfy everyone. In this way, the firm gives up on launching local variants that would have captured segments of consumers willing to pay a premium price, and destroys potential margins and the most profitable niches abroad, which will be left to local competitors. The second risk is market alienation. If a product is exported in the Netherlands but it has been designed to only satisfy Italian habits, it will make the dutch customer feel excluded. The inability to reflect demand heterogeneity causes the brand loss of relevance, as in Italy (the main market) that specific product has a deep cultural and usage meaning which is not present in the secondary market. Without a format or communication adaptation, that value is fragmented and the brand switch from a guarantee

²Stock Keeping Unit indicates the identification code of a single item managed in inventory.

of value to an inconvenient object or simply not suitable for daily Dutch shopping.

The logic of differentiation From the other side, differentiation answers to centrifugal forces due to market barriers, information asymmetries, local regulations and cultural habits. To design a differentiated product line means mapping the different market segments, maximizing, in this way, the perceived value and the potential market share. In order to do that, the product is no longer considered as a single block, instead, it's seen as a set of attributes. The meaning of differentiation is to isolate the attributes to understand which are the strict one, because of the PDO production discipline and which can be changeable to reach the willingness to pay of the Dutch customer. Information asymmetries act like disutility multiplier in foreign markets. A customer, to properly perceive the product value, must have those cultural skills about portioning, store and grate 1kg cheese tip (optimized product for the primary Italian market). Configuring specific attributes allows the firm to close this information gap, positioning the product into an ideal point of consumption for the secondary market (e.g., fresh grated cheese, single-serving snacks, clear directions for use).

The concept of customer disutility From a micro-economic point of view, Jonnalagedda and Saranga (2017) demonstrate how each product deviation creates disutility in the customer, reducing the perceived value of the product itself. They also explain how this value can be restored thanks to the configuration of local attributes, managing to align willingness to pay with market price and extracting the maximum possible surplus from segments that, facing a standardized product, would have rejected the purchase, maximizing the potential market share. Management finds itself in the condition of having to determine the optimal structural commonality level, to avoid compromising local attractiveness of the product, a precarious and elusive balance for the sector of excellent agri-food goods. To mathematically and logically formalize the impact of a strictly standardized product line, Jonnalagedda and Saranga (2017) integrate in their framework the concept of customer disutility. Inside a multi-market, customers evaluate a good not as a single utility block, but they rank their preferences on a multi-attribute metric scale, where an ideal point of consumption lies. A customer buys Grana Padano as a set of physical characteristics, both functional and psychological, called attributes, and each of them moves on a ladder from 0 to 10: attribute A could be the format or the weight (0 is the 20g single-dose envelope and

10 is the whole cheese form of 40kg), attribute B could be the preparation time or its use (0 is ready-to-eat with no effort and 10 requires instruments, time and a lot of effort to be eaten), attribute C is about taste and aging (0 is sweet, soft and young, while 10 is intense, grainy and super aged). So, each customer creates his own perfect combination of these sliders, depending on culture, habits and lifestyle, setting up the ideal point. The ideal point for an Italian customer is positioned on high values, as he loves prolonged aging, accepts the effort of cutting or grating the cheese tip and prefers substantial sizes to keep in the fridge. On the other hand, the ideal point for a Dutch customer is maximum convenience (grated or cubed cheese), small formats for weekly consumption and flavor profiles to which he is accustomed with Gouda. This distance can be measured. If the Italian firm exports the product without adapting it to Dutch taste in order to save on production costs, the Dutch customer, while looking at it in the supermarkets' shelves, will unconsciously calculate a spatial distance among the standardized product sliders and the sliders of his own ideal point. The further apart the sliders are, the bigger the customer disutility will be. Each millimeter away destroys the perceived value and the customer's willingness to pay. In their framework, Jonnalagedda and Saranga (2017), explain that the core architecture of the product is endogenously projected and optimized to target the primary market, the home country, where there is the perfect cultural alignment. Consequently, in this market, there's a minimal distance between the offered product attributes and the ideal point, meaning that the customer disutility is close to zero and the willingness to pay is maximum. When the same architecture is exported without any adaptation to the secondary market, a structural mismatch occurs, leading to economic frictions due to a psychological and cognitive penalty that the customer subconsciously subtract from the gross value of the good. The operative consequence of this mechanism penalizes the pricing power of the firm and the demand spread. As disutility grows, due to the failure to align standardized offer and local habits, customer willingness to pay significantly drops. If the penalty arising from disutility is high enough, net utility becomes negative, determining a commercial rejection in which the customer can decide either to leave the market or to turn to local alternatives already adapted. That happens because a negative number means that effort, discomfort and inadequacy of the standardized format overcome the value of the product quality, leading the customer to see just a complication on the daily groceries. If the customer decides to leave the market, he gives up on buying that product category and

using a premium Italian cheese. But, the bigger risk, is that the customer, in front of the minus sign of the scale, decides to buy a local alternative (e.g., aged Gouda or Edam) as it stands at the ideal point, already cut, low cost, with a zero disutility. The firm finds itself in front of a constrained optimization problem: savings on internal costs, thanks to standardization and no new machinery set up, are counterbalanced by the loss of revenue on the foreign market, due to customer disutility increase and willingness-to-pay fall.

2.1.5 International Product Adaptation: Intensity and Novelty

According to existing literature about international marketing, the strategic debate about product adaptation has been linked to an oversimplified representation which considered the choice between standardization and local adaptation a one-dimensional construct, a dichotomic decision, either one or the other. Here is where a recent study of Tsoungkou *et al.* (2025) comes in, providing a systematic contribution and a taxonomic interpretation of International Product adaptation (IPA). Authors demonstrate how the firm answer to foreign market pressures cannot be quantified as a single linear variable, but instead it must be divided into two operative and conceptual dimensions, which are as follows: adaptation intensity and adaptation novelty. The first one, adaptation intensity, determines the quantitative extent of changes made by the firm to its own products portfolio, while overcoming national borders. This dimension aims to measure and map out the number of elements and marketing mix attributes compared to the home market standard configuration, among which there are secondary packaging interventions, volumetric scaling of portions, different labelling, translation of writing and local adaptation to graphical and informative regulations. The second one, adaptation novelty, focuses on qualitative depth and degree of implemented change. It measures how far, innovative and disruptive is the change with respect to technological skills, production processes and trade standards of to the primary market itself. So the novelty doesn't focus on the single adjustment but analyzes the entire process of removal from the product core architecture, which could be a radical ingredients reformulation (e.g., to drastically reduce salt or fats percentage, to substitute cow milk with plant-based variants for the asian market), change in chemical-physical processes to modify the product consistency or preserving it for a longer amount of time (e.g., industrial thermal fusion) or the usage of new preservation technologies (e.g., irradiation, packaging in an extreme protective atmosphere, flash pasteurization) to artificially extend the shelf-life.

Due to structural legal constraints imposed by product specification, it's difficult to apply this two-dimensional decomposition theorized by Tsoukoku *et al.* (2025) to a protected agri-food excellence like Grana Padano. The exporting company is objectively unable to exert any leverage in terms of adaptation novelty: the core of the product, recipe, minimum aging and raw material, is not modifiable by law and cannot be altered to please foreign customer. This untouchable structure, the intrinsic component, can be compensated by manipulating extrinsic elements like reduction of grammages, development of grated or ready-to-eat petal formats and reconfiguration of packaging to communicate use-value. By analyzing how IPA works, it's possible to precisely understand how a DOP firm can defend the efficiency of its own core production platform, while maximizing the peripheral tactical adaptation to reduce entry barriers of the secondary market. According to the second conceptual pillar of the framework introduced by Tsoukoku *et al.* (2025), there is a positive linear relationship between the product level adaptation and the commercial performances of the firm on foreign markets. This elementary view maintains that a proportional increase in adaptation efforts should turn into an increase in revenues, market share and host country profitability, instead, the empirical reality shows the very opposite, highlighting the systematic failure of linear models in favor of more complex dynamics, usually represented by a curve or a U-shaped function. This structural failure can be explained through economic and cognitive forces which operate in an opposing way when the adaptation intensity overcomes a certain critical threshold: if the product is not enough adapted, the customer will reject it as it is too inconvenient, while, if it's too adapted, its own identity and value is destroyed. So, on one side, a null adaptation will lead to customer disutility and lower sales and, on the other side, an over-adaptation sets off three counter-destructive effects for the economic sustainability of export. The first one is a structural cost explosion with commonality losses: breaking a product line to adapt to each single specificity of the secondary market will destroy economies of scale and, at the same time, an increase in setup and storage costs will overcome economic margins coming from revenues on foreign sales. Another one is the brand identity dilution and the loss of the country-of-origin effect. In international marketing, above all in the agri-food sector, a big share of the perceived value is tied to the country-of-origin effect (e.g., Made in Italy) and the its perceived authenticity, so if the firm exceeds in adapting the product to make it similar to some already present in the local market, the risk is to lose the

psychological bond with the prestige and exoticism of the tradition. The product turns into a simple commodity, losing its ability to justify a premium price. The last analyzed effect is the customer cognitive saturation and confusion, due to a product portfolio full of local variants to satisfy the secondary market customer that, instead of helping him in his choice, causes a death by committee in front of too many options of the brand archetype that he came to know through media or advertisement. He seeks Italian authenticity, not a cheese that desperately tries to imitate Dutch products. Psychology of consumption Iyengar and Lepper (2000) shows that a choice overload causes the human brain to freeze for fear of making the wrong decision about the right variant on the shelves, leading the customer not to choose at all and to move to his usual purchase (e.g., Gouda, Edam). There is an ideal point beyond which extrinsic flexibility doesn't guarantee a greater performance, indeed, the removal from the brand core identity ruins economic value instead of creating it. Tsoungkou *et al.* (2025) show how a real success on foreign markets is a dynamic and conditioned balance that requires more sophisticated measuring instruments and not just classical linear interpolation. All traditional statistical models fail to capturing real competitive complexities. Commercial performance of an high cultural identification good, such as Grana Padano, in a secondary market cannot be analyzed by isolating variables into fixed compartments, because more variables can simultaneously show up in the customer's mind, so they must be analyzed under strategic contingency. This means that adaptation effect is not fixed but depends on cultural barriers or neophobia levels of the host market: if a customer is used to travel and open to try foreign food, format adaptation will work making sales take off, while if a customer lives in a super traditional and rural context, there's no strategy that will actually work. The framework that they have ideated demonstrate that the impact of International Product Adaptation (IPA) on performance is always modulated, accelerated or held back by ambient, cognitive and cultural factors intrinsic to the host market.

2.2 Cultural Frameworks and Country Image Effects

To deeply understand consumption dynamics and perception of premium foreign food goods in a specific market, cultural dynamics must be analyzed and the most recognized theoretical framework to evaluate and understand cross-national differences is the six

dimensions model theorized by Hofstede *et al.* (2011).

2.2.1 Hofstede's Cultural Dimensions

This framework maps out rooted value of a society through six guidelines which are the following: Power Distance Index (PDI), Individualism vs. Collectivism (IDV), Masculinity vs. Femininity (MAS), Uncertainty Avoidance Index (UAI), Long-term vs Short-term Orientation (LTO), Indulgence vs. Restraint (IND). To fully understand their impact on purchasing behavior, it's necessary to define the theoretical nature of each dimension:

- Power Distance Index (PDI): it measures the level at which less powerful members accept and expect that power is distributed unequally; so cultures with a high PDI will present a formal and centralized hierarchy, on the other hand, those with a low PDI will promote equality, autonomy and accessibility.
- Individualism vs. Collectivism (IDV): this metric analyzes the interdependence level of a society among its members, enhancing personal goals, autonomy and responsibility in each individualists cultures, at the contrary, collectivist cultures emphasize team bounding, community loyalty and social cohesion.
- Masculinity vs. Femininity (MAS): a masculine society is driven by competition, success, ambition and status recognition, while a feminine society is focused on life quality, care of others, solidarity and consensus.
- Uncertainty Avoidance Index (UAI): it explains the grade at which the members of a society are feeling threatened because of ambiguity and unknown situations, determining the need of rigid rules, certainties and protocols to follow or, for those with a lower UAI, a higher tolerance towards risk, flexibility and openness to change.
- Long-term vs Short-term Orientation (LTO): describes how an individual keeps ties with the past while facing present and future challenges. Long-term-oriented cultures will enhance perseverance, saving and future planning, while the short-term-oriented will respect established traditions and the achievement of immediate results.
- Indulgence vs. Restraint (IND): measures the extent to which a person tries to control impulses and desires, so an indulgent society will show a clear predisposition

to personal gratification, free time and pleasure of life, at the other side a restrained society will tend to repress the satisfaction of the needs through strict social norms.

The Netherlands in Hofstede's framework Each of these dimensions is measured using numerical standardized marks on a scale from 0 to 100 which represent a relative positioning (e.g., a score near the extremes shows a pronounced presence of that cultural trait inside that society). Inside the context of this study, the analysis will focus on the Dutch market, and according to the scores assigned by Hofstede, the Netherlands stands at the extremes of some dimensions with respect to the world average. The Netherlands has one of the most feminine culture in the world, the masculinity score is very low (around 14 out of 100), meaning that the society is entirely focused on life quality, equality and sustainability. All of this has to do with premium food because, as a matter of fact, Dutch people do not buy premium food to flaunt wealth or their social status, but just because their life quality goes through eating well, sharing a good meal with family or friends (e.g., *gezelligheid* is their concept of intimacy and hospitality), so the real intrinsic value of the product. Netherlands has an extreme individualism (around 80 out of 100), meaning that the customer is independent, makes his own choices based on personal and objective criteria, without being influenced by trends, group traditions or what other people might think. The customer just wants to be properly informed to independently choose in light of health, taste and traceability. As for the uncertainty, the country stands in the middle (around 53 out of 100) favoring cultural openness towards imported food products, while it remains crucial to ensure information transparency and clear quality standards to satisfy atypically pragmatic consumer. As a last trait that differentiates them, there's an high indulgence (around 68 out of 100), showing that Dutch culture actively promotes the flexible control of their impulses, leaving room for free time, enjoyment of life and personal gratification. For a restrictive culture, spending a lot of money on premium food could be seen as a waste but, in the Netherlands, spending something more for a premium food (e.g., excellent cheese) is seen as a way to indulge — a deserved reward.

2.2.2 Value Change and the Inglehart-Welzel Cultural Map

To better understand the contemporary customer, Hofstede's static value taxonomy must be integrated with a more dynamic and evolutionary perspective and, in this regard,

Beugelsdijk and Welzel (2018) offer a crucial interpretation drawing value from the World Values Survey ³ and the Inglehart-Welzel cultural map. The model shows how economic growth and a shift towards post-industrial societies change the values of a population over time, making them move along the Cartesian axes. The vertical axis describes the transition from a society strongly anchored in religious authority, strict family ties and nationalism to cultures in which scientific rationality is privileged, as well as pragmatism and openness to social change. Dutch people have long transcended the phase where food is just a mere subsistence needs, it is a vehicle for expressing one's identity, lifestyle and well-being, so the purchasing choice of a premium foreign food-product is legitimized by a strong component of individual hedonism, investing in an excellent product is perceived as a way to enhance free time and gastronomic experience of the single individual. The horizontal axis illustrates the passage from survival economies in which the priority of the single individual was physical and economic security to widespread high-well-being society where the focus shifts to life quality, self-expression and environmental protection. Inside this map, the Netherlands is placed at the far upper right vertex of the graph, being one of the most open and rational culture and self-expression oriented. This characteristic has a deep and direct impact on consumption dynamics and on receptivity to imported agri-food goods. In addition, the strong secular orientation significantly reduces dogma barriers and protective ethnocentrism, typically present in traditional cultures, determining a spontaneous curiosity and mental-openness towards global traditional cuisines. At the same time, the rational nature of this axis implies that the Dutch customer is not overcome by emotional impulses or trends, as he is a pragmatic and analytical purchaser, instead, his willingness to test and reward a product of international excellence is strictly tied to information transparency, supply chain traceability and verifiable quality standards. By using Beugelsdijk and Welzel (2018) approach it's easier to quantify the Dutch customer approach towards the high Italian food range and understand the level at which the country is culturally fertile to welcome it.

2.2.3 The Country-of-Origin Effect and Product-Country Image

During the internationalization process of enterprises and the penetration of foreign markets, it is crucial to understand the role of the Country-of-Origin Effect (COO), known

³World Values Survey Association (2017–2022). World Values Survey, Wave 7 – Official Data Release.

as “Made-in”, that, as Papadopoulos and Heslop (1993a) highlighted in their study, is not just a descriptive geographical indicator, it’s a real intangible marketing resource. Authors theorized that the Product-Country-Image (PCI) operates as extremely complex multidimensional construct, able to influence customers’ judgements. Images, stereotypes and mental associations, that customers link to a certain nation, have an impact on how quality, reliability and product value are perceived, acting in this way as an heuristic shortcut in complex decisional processes. The three interconnected psychological components involved are:

- Cognitive component: referring to objective beliefs and internal knowledge that the customer owns with regard to a specific nation (e.g., economic development level, technological progress, production expertise). The Dutch customer knows that in Italy, for example, there are strict production rules, making him associate Italy to a centuries-old manufacturing and artisanal tradition in the food sector.
- Affective component: represents the emotional response, the cultural bond, the attachment that the customer feels towards a specific population or territory. This affection creates a positive bias, a product like Grana Padano DOP is not just food, it brings with itself a positive emotion tied to the Italian good life.
- Conative component: expresses the customer readiness for action, so his real purchase intention and willingness to recommend the product.

These three dimensions merge in front of complex choices or saturated markets. The customer doesn’t analyze each characteristic separately, instead he projects the general image of the country on the specific good, using it as a surrogate cue of quality and reliability. That happens because in the foreign agri-food sector, where the customer cannot verify the effective food goodness or safety before purchase, the image of the country of origin must fill this information deficit, reducing perceived risk. However, scientific literature shows that a positive idea of the country of origin doesn’t guarantee the immediate commercial success of every kind of exported good. Its success on global markets depends on the degree of consistency and alignment between the perceived distinctive competences of the country of origin and the specific characteristics of the product category in question.

The Product-Category Matching framework This theoretical link is better explained with the Product-Category Matching framework developed by Roth and Romeo (1992), according to which the ideal match mechanism activates when cultural, productive and technological traits associated with a certain nation coincide with critical factors requested to succeed in a certain sector. Authors identify four possible matching scenarios:

- **Favorable Match:** when the country of origin has a strong image in the key dimensions of a certain product category (e.g., Japanese motoring, German watchmaking). The COO effect acts as a commercial accelerator, maximizing the customer willingness-to-pay.
- **Favorable Mismatch:** it occurs when the country has a great general reputation or in specific areas, but they are not related to the ones requested by the product (e.g., a luxury car produced in a country known for agricultural production), preventing the country image to support the product purchase.
- **Unfavorable Match:** meaning that the characteristics of the product are important but the country image is negative (e.g., Hungarian automotive industry), so firms must highlight product benefits or create joint-venture with partners associated with a favorable match country.
- **Unfavorable Mismatch:** it represents the scenario in which both the country image and the product characteristic are weak or negative for the customer, making firm completely ignore or omit Country-of-Origin information in their marketing communications, as highlighting geographical provenance wouldn't yield any commercial benefit or competitive advantage.

Application to Grana Padano DOP By applying this theoretical framework to the case study about Grana Padano in the Netherlands, a perfect example of positive Product-Category Matching emerges. The international customer, in this case the Dutch one, associates the “Made in Italy” image to concepts of gastronomic excellence, craftsmanship and tradition, and besides, premium hard cheeses requires supply chain authenticity, cultural heritage and intensity of sensory experience in order to be valued and justify a high price. Consequently, the Country-of-Origin effect amplifies the perceived value of the specific product, prompting the Dutch customer to project the macro-cultural

qualities of Italian gastronomic onto it, minimizing the evaluative effort and validating the purchase decision. This transforms the Italian geographical provenance into a highly differentiating competitive factor that remains difficult for local or generic competitor to replicate. Country-of-Origin effect and self-expression values outline a generally favorable picture for the introduction of foreign food into the Dutch Market, but the analysis of customer behavior cannot ignore the study of psychological barriers, innate or acquired ones, that regulate the acceptance of food.

2.2.4 Consumer Ethnocentrism and Food Neophobia

In the agri-food sector, above all the dairy one, choices are strongly influenced by two theoretical constructs: Consumer Ethnocentrism and Food Neophobia. The first concept refers to the tendency to prefer domestic products over imported ones, not necessarily for higher quality, just due to ethical, identity and patriotic reasons. As highlighted in the study of Xu *et al.* (2020), specifically applied to dairy markets, consumers with high levels of ethnocentrism perceive the purchase of foreign food products as an unfair trade practice, potentially harmful to the local economy and to national producers. In the context of the Netherlands, this phenomenon manifests itself primarily through the strong historical and identity-based link with local dairy production, symbolized by iconic products such as Gouda or Edam, that for Dutch people do not merely satisfy criteria of convenience, rather, this choice functions as a socio-economic support mechanism towards the national agricultural supply chain. Parallel to ethnocentrism, which has a predominantly socio-cultural origin, operates food neophobia, a psychological and biological barrier originally defined by Pliner and Hobden (1992) through the validation of the Food Neophobia Scale (FNS). This construct describes an individual's reluctance, rejection or fear of tasting new or unfamiliar foods compared to their dietary standards, that in dairy markets, can translate into resistance towards cheeses presenting organoleptic characteristics far removed from traditional ones, such as extremely hard texture (typical of Grana Padano). Specifically, food neophobia is not merely triggered by unfamiliar flavors, but is heavily driven by tactile and structural expectations. While the standard Dutch dairy diet is built around semi-hard, elastic and easily sliceable cheeses, the granular and crumbly texture of an aged cheese challenges the customer's established sensory expectations, increasing the cognitive effort required to accept and process the food. The stability of these food preferences over

time and the consequent resistance to change find a solid theoretical explanation in the evolutionary studies of Birch (1999), where the author demonstrates that dietary preferences and barriers stabilize during childhood through processes of environmental conditioning and repeated exposure, which tend to structure a gastronomic comfort zone that persists into adulthood. This resistance is further compounded by functional neophobia, which relates to the context of use. In the Netherlands, cheese consumption is traditionally integrated into highly standardized and practical routines, such as quick breakfast or lunches featuring sliced cheese (*broodje kaas*). A non-sliceable, premium product like Grana Padano, which requires preparation, forces consumers to break their functional habits. Although the Dutch market exhibits a strong rational openness toward international excellence, the interaction between protective ethnocentrism and neophobic traits consolidated by the childhood environment represents a critical barrier. Competitive success depends on the ability to mitigate the customer's perceived risk, aligning the foreign product with local usage habits without distorting its authenticity.

2.3 Retail innovation and Consumer Response

The theoretical analysis of consumer behavior must be contextualized within the macroeconomic framework of bilateral trade and the structural dynamics of the Dutch grocery retail sector, making it easier to understand how Italian dairy products penetrate the Dutch market.

2.3.1 Dutch Agri-Food Logistics and Trade Infrastructure

The Netherlands represents not only a highly affluent consumer market but also a strategic commercial gateway due to highly specialized logistical architecture designed for temperature-controlled food distribution (agri-food logistics). The port of Rotterdam, as Europe's largest seaport, acts as the primary maritime hub for the continent, housing dedicated facilities such as the "Rotterdam Food Hub"⁴, specialized in the import, storage and processing of perishable agri-food products, serving as the primary European hub for temperature-controlled cargo and refrigerated containers (called reefers). These infrastructures, combined with highly advanced temperature-controlled logistics systems and

⁴Port of Rotterdam Authority, 2024

a very efficient transport network (connecting inland shipping, rail and road networks), allow the Netherlands to import, store and redistribute perishable products across Northern and Central Europe with minimal transit times and maximum preservation of product freshness.

2.3.2 Bilateral Trade Flows and the Dutch Retail Landscape

From a macroeconomic perspective, trade flows between Italy and the Netherlands in the agri-food sector have shown robust and consistent growth. According to official data from InfoMercatiEsteri (2026), the institutional market intelligence platform of the Italian Ministry of Foreign Affairs and International Cooperation, the Netherlands ranks as one of the primary destination markets in Northern Europe of Italian food exports, with dairy products representing a cornerstone of this bilateral trade. Italian cheese exports, especially certified and geographical indication (GI) products, have benefited from high disposable income of Dutch households, however this does not imply a deep, widespread gastronomic culture. As in the Netherlands daily food consumption remains deeply practical and standardized, traditional meals focus primarily on convenience and price efficiency; consequently, even when Dutch consumers choose today a higher price for a premium food, they do not do so out of emotional food passion, rather, their choice is driven by specific and rational criteria. They value international certified standards, nutrition quality and they usually restrict premium consumption to specific social occasions, such as the weekend borrel (the traditional Dutch aperitivo).

Retail concentration: Albert Heijn, Jumbo and the discounters However, the Dutch market requires navigating an exceptionally consolidated and efficient retail landscape. The Dutch grocery retail sector (levensmiddelenomzet) is characterized by a highly concentrated oligopoly, where a small number of retail chains control the majority of market share. The two main players are Albert Heijn, holding a market share of approximately 35-37% Statista (2024) and setting the benchmark for product assortment and digital retail innovation ⁵, and Jumbo Supermarkten, the second largest chain, commanding around 21-22% of the market. The remaining market is partitioned among purchase alliances such as Superunie, which represents a cooperative of independent regional supermarkets, and

⁵EFMI Business School (2026). Dutch Grocery Retail Innovation and Supply Chain Trends. EFMI Retail Research Series.

hard-discount chains like Lidl or Aldi, which have progressively expanded their organic and premium imported product offerings to match evolving consumers preferences. For foreign producers, this high retail concentration creates a dual-faceted dynamic. On one hand, securing a distribution contract with a market leader like Albert Heijn guarantees immediate access to millions of consumers and highly optimized shelf exposure; on the other hand, because Dutch retail is so highly concentrated, supermarkets hold immense bargaining power over price negotiations, listing fees and promotions. Due to this fact, the market success of a product cannot rely solely on consumer pull dynamics and on the demand generated by its strong reputation, instead, it heavily depends on push factors, such as producer's ability to align with the highly automated, just-in-time logistics of Dutch distribution networks and to overcome the listing frictions of supermarkets where shelf space is extremely limited and heavily optimized.

2.3.3 Retail Innovation: The Upfront Case and the Bass Diffusion Model

The traditional grocery landscape in the Netherlands is currently facing new forms of retail innovation that directly challenge how product information is presented to consumers and a prime example of this shift is the Dutch brand Upfront, which recently transitioned from an online food start-up to opening its first physical supermarkets in Rotterdam ⁶. Its business model is built on radical transparency, not on traditional marketing-heavy packaging, instead, the brand displays the exact ingredient list and nutritional values in giant letters on the front packaging, reducing the assortment to a limited number of high-quality and clean-label products. According to the classic Bass Diffusion model (Bass, 1969), the market penetration of any new product or retail format depends on two types of consumers: “innovators”, who adopt a novelty based on direct communication and curiosity, and “imitators”, who require time, social proof and repeated exposure to overcome their initial skepticism. In the context of food choices, this initial inertia is highly pronounced. As explored by Aschemann-Witzel and Peschel (2019), when consumers encounter unfamiliar food formats or sustainable innovations, they experience a high cognitive load and purchasing friction, naturally tending to familiar, traditional brands to avoid the risk. Upfront's rapid market entry and expansion reflects a practical response to

⁶RetailTrends (2026). Upfront opent tweede supermarkt, opnieuw in Rotterdam. RetailTrends, 4 May 2026.

the cognitive food compromise explored by Aschemann-Witzel and Peschel (2019). For a traditional Italian product, this trend towards transparency represents both a barrier and a massive opportunity: traditional GI products carry complex regulatory information (e.g. PDO logos, consortium stamps, origin declarations) that the average Dutch customer, who values pragmatic price-efficiency, might find confusing or redundant; at the same time, Grana Padano has an incredibly clean and simple ingredient list (milk, salt, rennet and lysozyme) that producers could use to meet the demand for transparency, simplifying the packaging communication and directly highlighting the real nature of the cheese. In this way, they can lower the consumer's cognitive barrier, accelerating the product's adoption.

Grana Padano versus Parmigiano Reggiano: positioning in the Dutch market This demand for clarity becomes even more critical when analyzing the competitive friction between Grana Padano DOP and its primary counterpart, Parmigiana Reggiano. Within the Dutch market, these two products face a significant barrier of customer confusion, as for the average Dutch shopper, the subtle differences in maturation, production regulation and taste profiles between the two PDO cheeses, are often indistinguishable. This lack of differentiation leads the customer to perceive both as generic Italian hard cheese. In order to overcome this cognitive barrier and turn market confusion into a competitive advantage, it is essential to understand the distinct value propositions for the Dutch consumer. Historically, Parmigiano Reggiano is positioned as an ultra-premium, artisanal delicacy, reserved for special occasions. In contrast, Grana Padano's production rules and shorter minimum aging requirements allow for a more accessible price without compromising PDO quality standards; In this way the product is not an inferior alternative, it is indeed a high-quality everyday culinary staple. Dutch food culture strongly emphasizes utility, value-for-money and convenience in daily meal preparation. While average shoppers may hesitate to purchase its more expensive and ultra-premium counterpart for routine cooking, this product fits seamlessly into household budgets.

2.3.4 Sustainable Innovation and Consumer Ambivalence

The introduction of sustainable or circular innovation in the agri-food sector, such as underused ingredients, alternative processing methods or modern consumption formats, often generates ambivalent reactions among consumers. Although these innovations are

associated with environmental benefits, they may conflict with the expectations linked to traditional food products, especially when these products carry strong cultural identity. In contemporary retail environments, innovations such as ready-to-use mixes, recipe kits or circular packaging solutions are designed to simplify meal preparation and align with modern lifestyle demands, but when these innovations are applied to heritage food products, they can generate ambivalence. Consumers appreciate the functional benefits of convenience and sustainability but they may simultaneously question whether such changes alter the product's identity. This is due to the perceived mismatch between the new format and the product's established cultural cues. For GI products entering foreign markets, this challenge is amplified. As shown earlier, Dutch consumers prioritize clarity, simplicity and practicality, hence sustainable innovations are effective only when they remain compatible with existing consumption habits, making the product's usage more intuitive and reducing cognitive barriers and supporting adoption. Conversely, innovations that obscure the product's identity and complicate its meaning will reinforce the initial skepticism described in the diffusion process. For producers of traditional cheeses, sustainable and circular adaptation must therefore be carefully calibrated, since intrinsic characteristics cannot be modified in PDO products. That's the reason why firms must rely on extrinsic innovations (e.g., format, packaging, usage cues, communication) to enhance convenience without diluting authenticity, helping consumers integrate the product into familiar routines. Understanding how consumers evaluate non-traditional or innovative food options requires examining the psychological mechanisms that regulate acceptance, hesitation and rejection. While structural factors such as price, convenience and product identity shape initial perceptions, the ultimate decision to adopt a novel dietary pattern is governed by deeper cognitive and affective drivers, which determine whether consumers integrate an unfamiliar product into their routines or revert to established choices that minimize perceived risk.

2.3.5 Psychological Drivers of Acceptance: The Onwezen Framework

A comprehensive review by Onwezen *et al.* (2021) identifies four core psychological constructs that consistently moderate consumer acceptance of alternative food products: disgust sensitivity, perceived familiarity, social norms and risk attitude. Each of these drivers influences how consumers interpret novelty and how much cognitive effort they are

willing to invest when confronted with unfamiliar formats or usage cues.

- Disgust sensitivity plays a central role in shaping reactions to foods that deviate from established sensory expectations, even if it's objectively safe or high-quality, deviations in texture, appearance or preparation methods can trigger avoidance responses. This mechanism is particularly relevant for products entering foreign markets where consumers may lack the cultural background needed to contextualize the product's sensory profile.
- Perceived familiarity acts as a counterweight to neophobia. When consumers recognize elements that fit within their existing culinary repertoire, such as usage signs, portion sizes or preparation routines, the perceived effort required to adopt the product decreases. This can be achieved through repeated exposure, clear communication and alignment with known meal contexts.
- Social norms shape acceptance by signaling whether a product is appropriate, desirable or commonly used within a given cultural setting. Consumers rely on normative cues (e.g., household habits, peer behavior, media representation) to evaluate whether adopting a novel product aligns with socially validated practices; it follows that, when a product is perceived as congruent with everyday cooking norms, adoption becomes more likely.
- Risk attitude influences how consumers evaluate the potential downside of trying something new, hence individuals with higher risk aversion tend to avoid products that require interpretive effort or that lack clear usage instructions, especially in categories associated with tradition or craftsmanship. Conversely, consumers with lower risk aversion are more willing to experiment, provided that the product offers functional or symbolic benefits.

2.3.6 The Mere Exposure Effect and Information Accessibility

Beyond the cognitive and affective drivers that shape acceptance of novel dietary patterns, the way information is encountered and processed plays a decisive role in reducing consumer hesitation. One of the most robust mechanisms explaining how attitudes evolve through repeated contact with a stimulus is the Mere Exposure Effect, first formalized by Zajonc (1968), according to which individuals tend to develop more positive evaluations

of stimuli they encounter frequently even when those encounters are passive, incidental or not accompanied by deliberate reasoning. Familiarity generated through exposure alone can therefore reduce uncertainty soften neophobic reactions and increase the likelihood of adoption. In food consumption contexts, this mechanism is particularly relevant because many purchasing decisions are made under time pressure and with limited cognitive resources. Consumers often rely on affective shortcuts rather than analytical evaluation, and repeated visual or contextual exposure can transform an initially unfamiliar product into a recognizable and emotionally neutral option. Digital environments amplify this process: social media feeds, recipe videos, influencer content and algorithmic recommendations continuously present food products within familiar usage scenarios, normalizing their presence and subtly shaping expectations. For traditional GI products entering foreign markets, mere exposure can compensate for the lack of cultural background that typically supports understanding and usage, so when consumers repeatedly encounter a product in everyday cooking contexts, the product becomes cognitively easier to categorize. In this way, the perceived risk associated with trial decreases and the sense of fit with local routines increases. Information accessibility further strengthens this dynamic: clear packaging cues, intuitive usage instructions and straightforward ingredient communication reduce the cognitive effort required to interpret the product, making each exposure more effective. The Mere Exposure Effect provides a psychological foundation for understanding how repeated visibility can moderate consumer skepticism towards heritage foods in foreign markets.

2.3.7 Toward an Integrated Behavioral Framework

The reviewed literature converges toward a multidimensional understanding of how consumers evaluate and adopt heritage food products in foreign markets. Rather than being driven by a single factor (e.g., price, convenience, cultural distance), adaptation emerges from the interaction between structural product characteristics, cognitive processing demands and psychological moderators. This thesis proposes an Integrated Behavioral Framework that synthesizes these dynamics into a unified framework that explains how product adaptation influences consumer acceptance and under which conditions this relationship is strengthened or weakened. At the structural level, consumer evaluation is shaped by the degree of product-market fit, which depends on how closely the product

aligns with local expectations regarding usage, convenience and communication. As shown by Jonnalagedda and Saranga (2017), deviations from the customer's ideal point generate disutility, increasing cognitive effort and reducing willingness to pay; for PDO products, intrinsic characteristics cannot be modified, making extrinsic adaptation the primary lever through which firms can reduce friction and facilitate interpretation in foreign markets. The impact of these adaptations is moderated by a set of psychological drivers, identified by Onwezen *et al.* (2021), which jointly influence how consumers process the adapted product and therefore moderate the relationship between adaptation and acceptance. Information dynamics further refine this pathway. As demonstrated by the Mere Exposure Effect, repeated encounters with a product increase affective positivity and reduce uncertainty, even in the absence of deliberate reasoning. When exposure is combined with high information accessibility, the product becomes easier to categorize and integrate into existing routines, in particular with regard to heritage foods entering markets where consumers lack cultural background knowledge, as exposure compensates for unfamiliarity and strengthens the effect of extrinsic adaptation. Cultural context acts as a macro-level moderator: differences in pragmatism, uncertainty avoidance and value-for-money orientation influence how consumers respond to novelty and how much cognitive effort they are willing to invest in interpreting a foreign product. In markets such as the Netherlands, where practicality and everyday utility are prioritized, adaptations that enhance convenience and clarify usage are more likely to succeed. Taken together, all these elements form the proposed behavioral pathway.

Chapter 3

Methodology

3.1 Conceptual Model and Research Hypotheses

In statistical terms, respondents' openness toward a convenience-oriented format (X) doesn't exercise a direct and constant effect on the dependent variable (Y), but its impact coefficient depends on a third dimension, a moderator variable (Z); which in this study will be identified in Hofstede's cultural barriers (Hofstede *et al.*, 2011), the consumer's preference for locally produced cheese and the exposure level to information flows tied to Made in Italy. To formally test the strategic contingency, the non-linear relation theorized by Tsougkou *et al.* (2025) must be translated into an econometric framework. Following methodological standards for moderation analysis in international marketing (Aiken and West, 1991), this study adopts a multiple linear regression model with multiplicative interaction terms, expressed by the following equation:

$$Y = \beta_0 + \beta_1 X + \beta_2 Z + \beta_3 (X \cdot Z)$$

The dependent variable Y represents the frequency/integration of Italian cuisine in respondents' everyday cooking, X measures respondents' openness/willingness to try Grana Padano DOP when presented in a convenience-oriented format (Verspakkett) - that is, a self-reported attitudinal measure, rather than an objective indicator of the product's adaptation itself - and Z represents the environmental and psychological moderator (e.g., Hofstede's dimensions, local preference). The real predictive power of the model emerges when calculating the marginal association between X and the dependent variable, obtained

through the first degree partial derivative of the equation

$$\frac{\partial Y}{\partial X} = \beta_1 + \beta_3 Z$$

which mathematically demonstrates that the association between X and Y is not constant (β_1) but changes with respect to the assumed value of the moderator Z. The sign and the statistical significance of the interaction coefficient β_3 generate three strategic contingency scenarios that the firm can face in the Dutch market:

- Cultural friction ($\beta_3 < 0$): this scenario occurs when the interaction coefficient assumes a negative and statistically significant value. The environmental moderator acts as a cognitive barrier, if the Dutch customer expresses a strong preference for local products or a super-traditional attachment to local cheese (e.g, Gouda), the association between X and Y is weakened. Cultural frictions decrease the strategy marginal utility, so the firm bears costs arising from packaging reconfiguration but without obtaining the desired willingness to pay from the market.
- Synergy deriving from information ($\beta_3 > 0$): positive contingency occurs when the context variable acts as a commercial accelerator (e.g., a high exposure of the Dutch customer to information flows related to Made in Italy breaks down information asymmetries). When respondents show greater openness toward an adapted format, this is associated with a stronger positive relationship with the frequency/integration of Italian cuisine.
- Neutral contingency ($\beta_3 = 0$): if the multiplicative term is not statistically different from zero, the adaptation impact on the performance is linear and independent from the cultural context, only driven by β_1 . This scenario describes the interaction with cosmopolitan or innovative Dutch customers, for whom Hofstede barriers or food neophobia have no influence on the psychological purchase decision of the premium cheese.

Building on the theoretical foundations presented in the previous sections, it is possible to formalize the hypothesis that will be empirically tested through the multiple linear regression model presented in Chapter 4. These hypotheses concern how openness toward a convenience-oriented format is associated with the frequency/integration of Italian cuisine in everyday cooking and how this association varies with cultural and informational

moderators identified both in the literature and in the consumer survey conducted in this study.

- H1: Greater openness to trying Grana Padano DOP in a Verspakket format is positively associated with the frequency/integration of Italian cuisine in everyday cooking.
- H2: The association between Verspakket openness and the frequency/integration of Italian cuisine is weaker among respondents with a stronger preference for locally produced cheese.
- H3: The association between Verspakket openness and the frequency/integration of Italian cuisine is stronger among respondents who report that a clear nutritional label increases their willingness to try an unfamiliar imported cheese.
- H4: The association between Verspakket openness and the frequency/integration of Italian cuisine is stronger among respondents with greater familiarity with Grana Padano DOP.

The insertion of this econometric structure into a multiple linear regression model represents the scientific instrument to formalize the theoretical hypotheses emerging from the literature. While here the model is introduced to describe the three theoretical scenarios of adaptation, its empirical estimation and the testing of the hypothesis will be presented in chapter 4.

3.2 Questionnaire Design and Construct Measurement

The present study adopts a quantitative and cross-sectional survey design aimed at examining Dutch consumers' attitudes toward Italian food products and their willingness to consider imported items within everyday food-related decisions. The choice of a quantitative approach reflects the need to collect structured and comparable data on consumers' perceptions, while the cross-sectional nature of the research allows capturing a snapshot of evaluations at a single point in time. This design is appropriate for investigating stable attitudes such as familiarity with specific food products, preference for locally produced foods, responsiveness to nutritional information and general perceptions of Italian cuisine.

The analytical strategy relies on multiple regression to examine how the measured variables relate to purchase intention and to test the directional hypotheses derived from the conceptual framework. This approach allows assessing contribution of each attitudinal and contextual variable while controlling demographic differences. The questionnaire was structured to guide respondents smoothly through the different sections and to minimize potential order effects.

It begins with demographic questions (age, gender and employment status), allowing respondents to provide basic personal details before engaging with evaluative items. Subsequently, the survey introduces questions capturing respondents' general attitudes toward Italian cuisine and their familiarity with Italian food products (see Table 3.1).

Table 3.1: Key questionnaire item on attitudes toward Italian cuisine

Item	Question text	Response scale	Purpose
Attitude toward Italian cuisine	“When you think of Italian cuisine, how do you personally feel about it and how often does it feature in your home cooking?”	Open-ended + frequency scale	Contextualizing cultural attitudes

To make these evaluations more concrete, the questionnaire includes a reference example — Grana Padano DOP — used as an illustrative stimulus to help respondents anchor their perception of Italian food culture and imported cheese. The product does not constitute the focus of the study but serves as a practical case to elicit attitudes relevant to the conceptual model.

The following section includes items assessing preference for locally produced cheese, price sensitivity, responsiveness to Nutri-Score, and influence from food bloggers or social media figures. Finally, respondents' openness toward the adapted product format is measured, capturing their willingness to try Grana Padano DOP once relevant contextual information has been presented. All evaluative items were rated on a five-point Likert scale, ensuring sufficient variability of statistical analysis while maintaining clarity and ease of response. Particular attention was given to neutrality and simplicity of the wording: each item was formulated to avoid leading respondents toward positive or negative evaluations and to ensure that statements reflected only one idea at a time, thereby reducing measure-

ment error. Optional comment fields were included to allow respondents to elaborate on their perception of Italian cuisine or provide contextual remarks.

Building on the structure of the questionnaire described above, the following section outlines how each variable was applied in the empirical analysis. The empirical model focuses on purchase intention as the dependent variable, operationalized as described below, capturing respondents' frequency of engagement with Italian cuisine in their daily cooking routines. Several attitudinal and behavioral variables were included to provide a more complete understanding of Dutch consumers' food-related decision processes, as detailed below (see Table 3.2).

Table 3.2: Measurement of the dependent variable

Item	Question text	Scale	Construct
Frequency/ integration of Italian cuisine	"When you think of Italian cuisine, how do you personally feel about it and how often does it feature in your home cooking?" (coded, see below)	Coded 1–5	Purchase intention proxy (DV)

Regarding the dependent variable specifically, since the final questionnaire did not retain a direct Likert-scale item on purchase intention, this variable was instead constructed from the open-ended question above: each response was manually coded into a 1-5 frequency scale (1 = never/rarely, 5 = almost daily), based on explicit frequency cues in the text; responses lacking such cues were coded to the midpoint (3) as a neutral default.

Preference for locally produced cheese was captured through an item assessing respondents' preference for the origin of the cheese they purchase; price sensitivity was measured through an item evaluating the relevance of price considerations in respondents' purchasing decisions; responsiveness to Nutri-Score was assessed by examining the extent to which nutritional information influences willingness to try unfamiliar imported products (see Table 3.3);

influence from food bloggers or social media was assessed through a two-step item identifying whether respondents are influenced at all and, if so, to what degree; openness toward product integration formats was measured by evaluating respondents' likelihood of trying Italian products – cheese in this specific case – when included in a Verspakket (meal

Table 3.3: Key questionnaire items related to purchase drivers

Item	Question text	Scale	Construct
Preference for local cheese	“When buying cheese, how important is it to you that it is produced locally or in the Netherlands?”	Likert 1–5	Local origin preference
Price sensitivity	“How much does price influence your cheese purchasing decisions?”	Likert 1–5	Price importance
Nutri-Score responsiveness	“If you see a clear nutritional label (like Nutri-Score), how much does this increase your willingness to buy an unfamiliar imported cheese?”	Likert 1–5	Informational transparency

kit) (see Table 3.4).

Table 3.4: Key questionnaire items related to social and informational cues

Item	Question text	Scale	Construct
Influence from food bloggers / social media	“Are you influenced by food bloggers, chefs or social media figures?”	Yes/No + Likert 1–5	Social influence
Openness to integration	“How likely are you to try an Italian cheese when included in a Verspakket with local products and a simple recipe card?”	Likert 1–5	Openness to hybrid formats

The model includes also demographic controls as well as cheese related preferences which help isolate the effects of the attitudinal items by accounting differences that could otherwise influence purchase intention. Although the theoretical framework discusses broader constructs such as country image, authenticity, transparency and food neophobia,

these dimensions were not operationalized through validated multi-items scales in the questionnaire. Instead, related aspects were captured through targeted contextual items, which provide meaningful empirical indicators aligned with the study's objectives. The language of the questionnaire is English, as it is widely understood among Dutch people and ensures smooth participation without requiring translation or back-translation procedures. Before launching the survey, a small pre-test was conducted with few participants to verify clarity of wording, smooth navigation across sections and correct functioning of skip logic. Minor adjustments were made to improve reliability and transitions between questions, while the substantive content of the items remained unchanged.

3.2.1 Operationalization of the Regression Model Variables

Building on the theoretical model previously introduced, this section makes explicit how each questionnaire item operationalizes the dependent variable, the independent variable and the moderators used to test hypotheses H1 through H4 (see Table 3.5).

The independent variable X captures the respondent's declared openness toward Grana Padano DOP when included in a convenience-oriented adaptation format (the Verspakket), which is used here as an indicator of receptiveness to extrinsic adaptation, in line with the construct discussed by (Tsoungkou *et al.*, 2025). X does not measure the actual level of adaptation of a product, but stated openness toward one specific adapted format. The three moderators (Z1, Z2, Z3) correspond respectively to the cultural, informational and familiarity-related dimensions theorized to condition the relationship between adaptation and purchase intention. Price sensitivity, while measured in the questionnaire, is not included as a moderator in the interaction model but is retained as an additional explanatory variable to control for its independent effect on purchase intention, consistent with its established role as a primary driver of cheese purchasing decisions in the Dutch market (see Section 3.3).

It should be noted that each moderator is measured through a single questionnaire item rather than a validated multi-item scale (e.g. the Food Neophobia Scale by Pliner and Hobden, 1992); this choice and its implications for the interpretation of the interaction effects are discussed in Section 3.5.

Table 3.5: Mapping of survey items onto the regression model

Model role	Theoretical variable	Questionnaire item	Related hypothesis
Y (dependent)	Frequency/ integration of Italian cuisine (proxy for purchase intention)	"When you think of Italian cuisine, how do you personally feel about it and how often does it feature in your home cooking?" (coded 1–5)	–
X (independent)	Openness/ willingness to try Grana Padano in an adapted format	"How likely are you to try an Italian cheese when included in a Verspakket with local products and a simple recipe card?"	H1
Z1 (moderator)	Local preference	"When buying cheese, how important is it to you that it is produced locally or in the Netherlands?"	H2
Z2 (moderator)	Information transparency	"If you see a clear nutritional label (like Nutri-Score), how much does this increase your willingness to buy an unfamiliar imported cheese?"	H3
Z3 (moderator)	Familiarity with the Italian product	"Familiarity with Grana Padano DOP" + PDO label awareness	H4
Control variables	Demographics	Age, gender, employment status	–

3.3 Data Collection and Sample Characteristics

Data collection was carried out through an online self-administered questionnaire created using Google forms, a platform chosen for its accessibility, intuitive interface and compati-

bility across devices; its use ensured smooth navigation for respondents and facilitated real time monitoring of participation throughout the data collection period. The survey was administered during my Erasmus stay in Groningen, the Netherlands, which played a central role in shaping the research idea, as direct exposure to Dutch food culture and everyday consumer habits provided the initial insight that later developed into the present thesis project. It provided the direct access to Dutch residents and enabled the recruitment of a heterogeneous pool of participants across different locations and contexts.

The questionnaire was distributed over a 3 months period through a combination of in-person recruitment and digital dissemination. In-person data collection took place in various public settings, including university campuses, supermarkets, train stations and residential neighborhood. Respondents included university students, parents of students, commuters traveling from different Dutch cities and passers-by approached in everyday environments; this strategy was complemented by snowball sampling, whereby participants were encouraged to share the survey link within their personal networks. In addition, responses were obtained through online survey platforms, further broadening the reach of the questionnaire and enhancing sample diversity.

A total 174 responses were initially collected. The first question of the survey — “Are you Dutch / Did you grow up in the Netherlands?” — served as an automatic screening mechanism. Respondents who answered “no” were immediately directed to the end of the questionnaire, ensuring that only individuals with Dutch cultural and food-related backgrounds were included in the study. Only three respondents selected “no” and were therefore excluded, ending up with 171 valid responses, all of which met the inclusion criteria. Apart from nationality, the only inclusion criteria were full completion of the questionnaire and explicit consent to participate, both of which were satisfied by all respondents who passed the initial screening question. No cases of inattentive responding were detected and no technical issues occurred during data collection.

Although the recruitment process was successful, it presented several practical challenges: identifying eligible participants required substantial effort, particularly in public settings where individuals were often in transit or engaged in other activities; approaching commuters, passers-by and shoppers demanded flexibility and persistence, and response rates varied depending on location and time of the day.

The quality of the collected data is considered strong. The final sample size of 171

is adequate for multiple regression analysis and provides sufficient variability across demographic characteristics such as age, gender and education. Out of the initial 174 individuals who accessed the questionnaire, only three indicated that they were not Dutch or had not grown up in the Netherlands, ensuring that the dataset reflects individuals with direct cultural familiarity with Dutch food habits, which is essential for the objectives of this study. Respondents span a broad age range, from under 18 to over 50, as shown in Figure 3.1, with the majority concentrated in young and middle adulthood. The largest age group is 26-35 years, representing the 36.3%, followed by 18-25 years (30.4%) and 36-50 years (27.5%), with only a small minority under 18 or over 50, indicating that the sample is predominantly composed of adults in active working or studying phases. This age structure reflects the recruitment settings — universities, public transports, supermarkets — where younger and middle-aged individuals are more likely to participate.

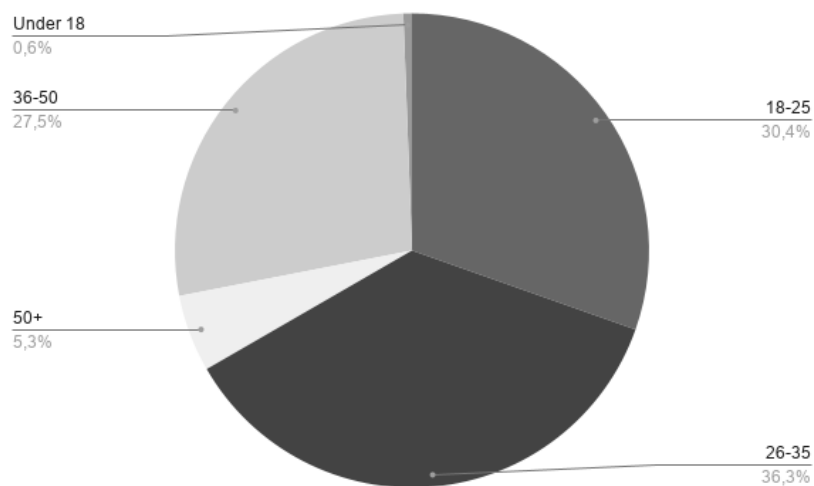


Figure 3.1: Respondents' Age

The gender composition is relatively balanced as shown in Figure 3.2, though slightly skewed towards males: 60.2% of respondents identify as male and 39.2% identify as female, with only a negligible share who selected “prefer not to say”. This distribution aligns with the mixed recruitment strategy which included both university environments and public spaces and does not indicate any systematic gender bias in participation.

Employment status shows a predominance of working individuals: 66.7% are employed full-time or part-time, while 20.5% are students. Smaller shares are unemployed or selected “other”. This suggests that the sample includes both active consumers and individuals still in education, offering a heterogeneous perspective on food purchasing habits. Although

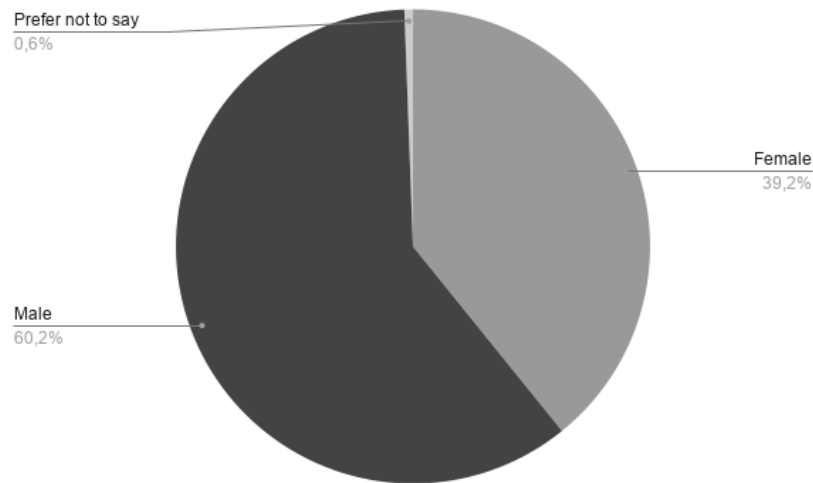


Figure 3.2: Respondents' Gender

education level was not directly measured, the high portion of students and employed adults suggests a generally medium-to-high educational background, consistent with typical Dutch urban population.

Respondents express overall positive attitudes towards Italian cuisine: qualitative answer indicate frequent consumption of Italian dishes, ranging from weekly pasta meals to regular visit to Italian restaurants. Many describe Italian food as “fresh”, “simple”, “honest” or “awesome”, and several mention cooking Italian dishes at least once a week, suggesting a high cultural familiarity with Italian cuisine, even if product-specific knowledge varies. In contrast, familiarity with Grana Padano DOP is more heterogeneous as shown in Figure 3.3, ratings on a 1-5 Likert scale show that 26.3% selected the lowest familiarity level, while the remaining responses are distributed relatively evenly across the scale, indicating that while Italian cuisine is widely appreciated, Grana Padano DOP specifically is less well-known, and reflecting its more limited presence in Dutch supermarkets compared to other Italian products such as Parmesan or pesto.

Also awareness of the PDO label is mixed, as shown in Figure 3.4: 48% have seen it but do not know its meaning, 26.3% know it well and 25.7% have never seen it. This confirms that European quality labels are not universally understood among Dutch consumers, despite their presence on many imported products.

Respondents show moderate preference for locally produced Dutch cheese. Ratings cluster around the middle of the scale, with 31.6% selecting level 3 and 28.7% selecting level 2, indicating that origin matters but is not the dominant factor. When asked how often

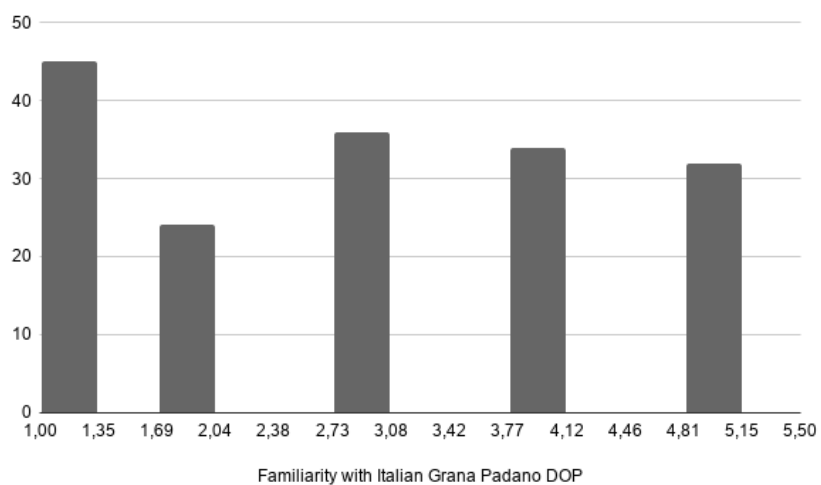


Figure 3.3: Familiariy with Grana Padano DOP

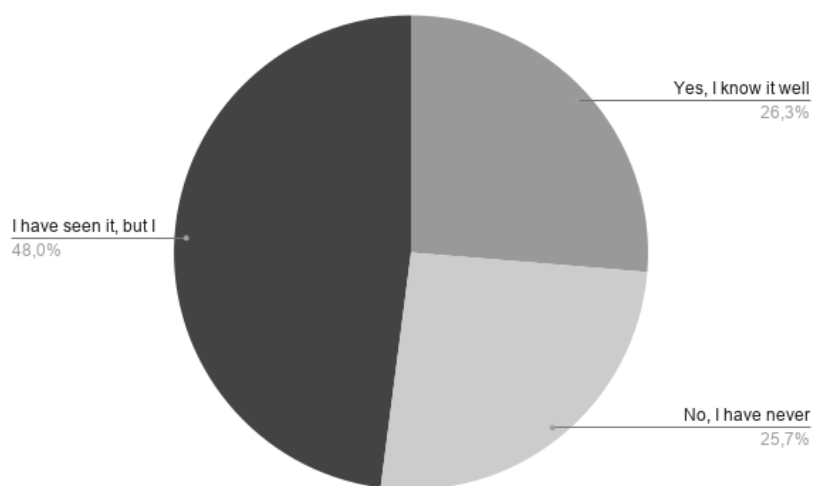


Figure 3.4: Knowledge of the wording PDO

they choose Dutch cheese over imported varieties, most respondents again select mid-range values (level 3 and 4), suggesting a balanced approach rather than strong ethnocentric preference.

Price sensitivity is considerably stronger, as shown in Figure 3.5: 47.4% rated price influence as level 4 and 23.4% rated it at level 5, confirming that price is a major determinant in cheese purchasing decisions. This is consistent with qualitative responses, here the price appears repeatedly as the biggest challenge when considering Grana Padano DOP.

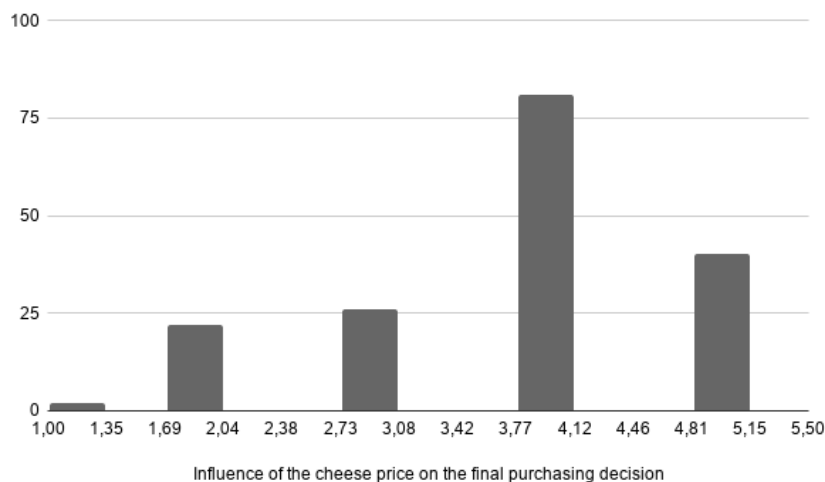


Figure 3.5: Influence of the cheese price on the final purchasing decision

The presence of a clear nutritional label (e.g., Nutri-Score) moderately increases willingness to try unfamiliar imported cheese, though responses are widely distributed: a significant portion (24% at level 1 and 29.2% at level 2) indicate limited influence, while only a 18.1% report a strong increase (level 4), suggesting that nutritional labels are helpful but not decisive. For everything concerning social media influence, it is generally low: 76.6% state that bloggers, chefs or influencers do not affect their choices, confirming that Dutch consumers rely more on personal preferences and price rather than on external endorsements, coherently with their individualistic culture.

When presented with a contextualized scenario — Grana Padano DOP included in a meal kit with other fresh or local products — respondents show high openness: 45.5% rated likelihood as level 4 and 24.6% as level 5, indicating that product framing and convenience significantly increase acceptance, even among those with low initial familiarity (see Figure 3.6).

The sample is diverse in age, gender and employment status, and includes respondents

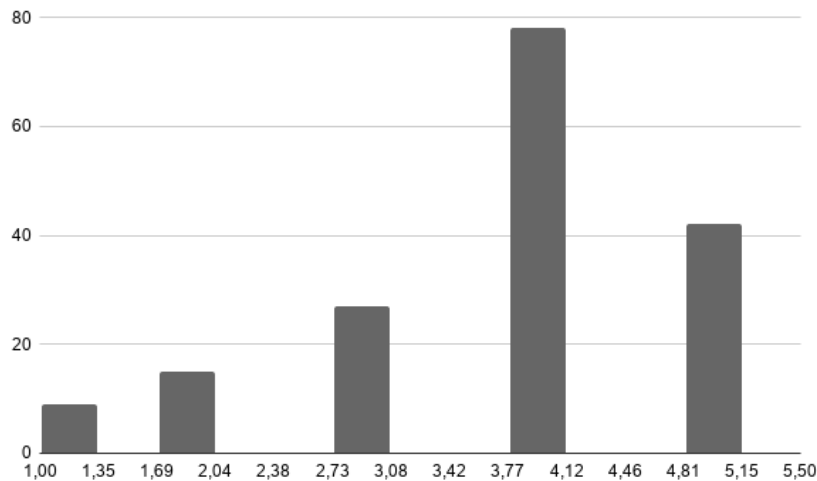


Figure 3.6: Openness to buy Grana Padano DOP whether included in a Verspakket

from multiple Dutch cities thanks to recruitment in train stations and public areas. However, it is not statistically representative of the entire Dutch population: younger adults and students are slightly overrepresented and convenience sampling may introduce selection bias. Despite this, the sample is sufficiently varied to support meaningful analysis of consumer attitudes and behavioral drivers.

3.4 Ethical Considerations and Statistical Analysis

The study followed standard ethical principles for research involving human participants, who were informed about the purpose of the survey, the voluntary nature of participation and the approximate time before accessing the questionnaire. Proceeding with the survey was considered an implicit form of informed consent. No personally identifiable information was collected and demographic variables were recorded exclusively in aggregated form. The questionnaire did not include sensitive questions, and data minimization principles were applied throughout it, collecting only information strictly necessary for the analysis (e.g., age, gender, employment status). Responses were gathered through Google Forms, which ensures automatic anonymization and the access to the dataset was restricted to the researcher and used solely for academic purposes. Given the non-invasive nature of the study and the absence of risks for participants, the research complies with the ethical standards commonly applied in behavioral and consumer studies.

The statistical analysis was conducted using R, a widely adopted open-source software

for quantitative research in the social sciences. The analytical process follows a structured sequence consisting of data preparation, diagnosis checks, model estimation and robustness assessment, ensuring, in this way, that the results are based on reliable and interpretable procedures.

Before running the main analysis the dataset was inspected to verify completeness and internal consistency; missing values were evaluated across all variables and, given their minimal occurrence, list wise deletion was applied, meaning that only respondents with complete information for the variables included in each model were retained. This approach is appropriate for cross-sectional survey data with low levels of missingness and avoids introducing artificial estimates through imputation. All variables were coded according to the structure of the questionnaire: demographic variables (gender, education, employment status) were transformed into dummy variables to allow their inclusion in regression models; Likert-scale items were treated as continuous variables, as is common practice in consumer behavior research, because they represent gradual differences in attitudes that can be interpreted within linear models. When necessary, variables were standardized to facilitate comparability across coefficients and reduce scale-related distortions.

A preliminary descriptive analysis was conducted to summarize the characteristics of the sample and the distribution of the main variables: measures of central tendency (mean) and dispersion (standard deviation) were computed for all continuous variables, while frequency tables were used for categorical variables. This step provides an initial understanding of consumer attitudes and perceptions, supporting the regression results.

The core analytical approach relied on multiple linear regression, selected for its ability to estimate the relationship between consumer attitudes and behavioral intentions while simultaneously controlling for demographic characteristics; this method is particularly suitable for cross-sectional survey data and allows the identification of unique contributions of each predictor to the dependent variable. Separate regression models were estimated for each dependent variable included in the study, enabling a clear interpretation of how familiarity, authenticity perceptions, PDO awareness and attitudes towards innovation influence consumer intentions. The inclusion of demographic controls ensures that the estimated effects are not confounded by age, gender or socio-economic characteristics.

Before interpreting the regression results, all standard assumptions of linear models were examined to ensure the validity of the statistical inference. The normality of residuals

was checked using both graphical inspection— through Q-Q plots¹ — and a formal statistical test — Shapiro-Wilk² — ensuring that model errors followed a reasonably normal distribution; while multicollinearity was evaluated using Variance Inflation Factor (VIF)³ to verify that predictors were not excessively correlated and that none of them exceeded commonly accepted thresholds. Homoscedasticity was inspected by analyzing residual-versus-fitted plots and by applying the Breusch-Pagan test⁴, which together provide a visual and statistical assessment of whether the variance of the residuals remains constant across fitted values. Whenever minor deviations from these assumptions emerged, robust standard errors were employed to obtain more stable and conservative significance tests; this adjustment does not modify the estimated coefficient but improves the reliability of the inferential results. The interpretation of the models focused on the direction, magnitude and statistical significance of the coefficients: significance was evaluated using conventional thresholds ($p < 0.05$), and confidence intervals were considered to assess the precision of the estimates. The explanatory power of each model was examined through the coefficient of determination (R^2), which indicates the proportion of variance in the dependent variable accounted for by the predictors. In addition to statistical significance, effect sizes were considered to contextualize the practical relevance of the findings, an important aspect in consumer behavior research where even small but consistent effects may hold theoretical or managerial value.

To ensure the stability of the results, several robustness checks were conducted. These included estimating alternative model specifications, removing potential outliers and comparing models with and without demographic controls, and additional verification was carried out by re-estimating the model using standardized predictors to confirm that the observed relationship were not driven by differences in scale.

The stability of the results across multiple model specifications reinforces confidence in the analytical framework and in the validity of the empirical evidence obtained.

¹See Wilk, M. B., & Gnanadesikan, R. (1968). Probability plotting methods for the analysis of data. *Biometrika*.

²Shapiro, S. S., & Wilk, M. B. (1965). An analysis of variance test for normality. *Biometrika*.

³Variance Inflation Factors were computed following standard guidelines for multicollinearity assessment (O'Brien, 2007).

⁴A concise and accessible overview of the Breusch–Pagan test is provided in Astivia and Zumbo (2019), who illustrate practical approaches to diagnosing heteroskedasticity.

3.5 Limitations of the Methodology

The methodological approach adopted in this study presents several limitations that should be acknowledged to ensure a transparent and balanced interpretation of the findings. These limitations concern the sampling strategy, the structure of the questionnaire, the nature of the data collected and the analytical framework employed.

The reliance on a convenience sample inevitably restricts the representativeness of the results. Participants were mainly recruited in public and university settings, which may have led to an overrepresentation of younger adults and individuals with higher education levels; although this approach is widely used in exploratory consumer research, it limits the extent to which the findings can be generalized to the broader population of Italian consumers. The cross-sectional design further contributes to this constraint, as it captures attitudes and intentions as a single point in time and therefore does not allow for causal inference or for the observation of changes in consumer perceptions over time. Consequently, the relationship identified through regression analysis should be interpreted as associations rather than causal effects.

Additional limitations arise from the measurement strategy adopted in the questionnaire: several constructs — particularly those related to authenticity, familiarity and attitudes toward innovation — were assessed using single-item indicators rather than validated multi-item scales. In particular, the moderators used to test H2, H3 and H4 (local preference, information transparency, familiarity with the Italian product) rely on single-item proxies; results concerning these interaction effects should be interpreted as indicative of directional tendencies and not as precise estimates of the underlying psychological constructs. While this choice reduces respondent burden and is common in consumer behavior research, it may not fully capture the multidimensional nature of these concepts. Multi-item scales, such as the CETSCALE for consumer ethnocentrism (?), could provide more detailed and robust measurement, although at the cost of increased survey length.

The decision to use Grana Padano DOP as a specific product example also introduces a degree of specificity that may limit the generalizability of the findings. Although this choice provides a concrete and recognizable reference point for respondents, it represents only one type of Italian food product and one form of certification, meaning that consumer reaction to innovation may differ substantially for products with different sensory profiles, levels of familiarity, symbolic meanings or perceived risk. As a result, the insights derived

from this study should be interpreted with caution when extending them to other food categories or to certification schemes that convey different types of information.

The nature of the data collection introduces further considerations: self-reported responses are inherently subject to biases such as social desirability, inaccurate recall or the tendency to over-report positive attitudes. These limitations are typical of survey-based research and should be taken into account when interpreting the strength and direction of the observed relationships. Moreover, the online administration of the questionnaire through Google Forms may have excluded individuals less familiar with digital tools or those without stable internet access, favoring younger and more digitally literate respondents.

Despite these limitations, the methodological choices adopted in this study remain appropriate for exploratory research in consumer behavior, providing a coherent and reliable framework for analyzing perceptions of authenticity and innovation while offering insights that can inform future studies employing more representative samples or longitudinal designs.

Chapter 4

Empirical Analysis and Results

4.1 Descriptive Statistics

Before turning to the regression analysis, this section presents a descriptive overview of the variables included in the empirical model allowing an initial assessment of the distributional properties of each variable. This is a necessary precondition for interpreting the regression results presented later in this chapter and providing a preliminary picture of how Dutch consumers in this sample position themselves with respect to the key constructs of the study, before any relationship between variables is formally tested. The empirical analysis is based on a final sample of 170 valid observations, drawn from the original 171 respondents described in Section 3.3, as one respondent, who selected “Prefer not to say” when asked about gender, was excluded from the regression sample. That’s because gender is included as a control variable in all three models presented in this chapter and this category was represented by a single case, insufficient to produce a reliable estimate. This exclusion doesn’t materially affect the representativeness of the sample, which remains broadly consistent, in terms of age, gender and employment status, with the descriptive profile already discussed in Chapter 3.

Table 4.1 reports descriptive statistics — mean, standard deviation, minimum and maximum — for the dependent variable and for the four independent variables directly involved in hypothesis testing, together with price sensitivity, included here as it is the only continuous control variable used in the regression models; the remaining controls (age, gender, employment status and blogger influence) are categorical and are therefore not included in this table.

Table 4.1: Descriptive statistics of the model variables

Variable	N	Mean	SD	Min–Max
Y – Frequency/integration of Italian cuisine	170	3.30	0.85	1–5
X – Verspakket openness	170	3.75	1.08	1–5
Z1 – Local preference	170	2.60	1.09	1–5
Z2 – Nutri-score responsiveness	170	2.46	1.11	1–5
Z3 – Familiarity with Grana Padano DOP	170	2.91	1.46	1–5
Price sensitivity (control)	170	3.79	0.98	1–5

The dependent variable The dependent variable (Y), capturing the frequency and degree of integration of Italian cuisine in respondents’ daily cooking habits, is centered around the midpoint of the scale ($M = 3.30$, $SD = 0.85$). This indicates that, on average, Italian cuisine occupies a moderate but non-marginal place in the weekly cooking routines of the Dutch respondents in this sample (consistent with the previously discussed qualitative evidence where several respondents described cooking Italian dishes, particularly pasta-based recipes, once or even more times per week). The standard deviation ($SD = 0.85$) indicates a reasonable degree of variability across respondents, ranging from occasional or rare consumption to near-daily integration, which represents a necessary condition for meaningful regression analysis. This variable is used as the closest available proxy for consumer receptiveness toward Italian food culture, given the absence, in the final questionnaire, of a direct Likert-scale item measuring purchase intention.

The independent variable and the three moderators Respondents show, on average, a moderate-to-high openness toward the Verspakket format (X : $M = 3.75$, $SD = 1.08$), the independent variable capturing openness toward Grana Padano DOP in a Verspakket format. This relatively high mean suggests that, independently of any moderating cultural or informational factor, Dutch consumers in this sample are generally receptive to the idea of encountering the product in a practical, ready-to-use format — a first descriptive indication consistent with the direction hypothesized in H1, although, as noted above, no causal or associative claim can be drawn from descriptive statistics alone. Among the

three moderators, familiarity with Grana Padano DOP (Z3) displays the highest variability in the dataset ($M = 2.91$, $SD = 1.46$). This heterogeneity reflects the pattern already observed, where a substantial share of respondents (26.3%) reported the lowest level of familiarity with the product, while the remaining responses were distributed relatively evenly across the higher end of the scale. This suggests that the sample includes both consumers with little to no prior exposure to Grana Padano DOP and consumers who are already regular buyers — a distinction that becomes particularly relevant when interpreting the interaction effect associated with H4 later in this Chapter. Local preference (Z1) and Nutri-score responsiveness (Z2) show comparatively lower means ($M = 2.60$ and $M = 2.46$, respectively) and similar standard deviations ($SD = 1.09$ and $SD = 1.11$). These values suggest that, on average, Dutch consumers in this sample do not exhibit an overly strong attachment to locally produced cheese, nor an exceptionally high to nutritional labelling as a standalone driver of trial behavior towards unfamiliar imported products. This is consistent with the moderate, and not extreme, positioning of the Dutch market discussed in Chapter 2 with reference to Hofstede's cultural dimensions, particularly regarding the intermediate level of uncertainty avoidance observed for the Netherlands.

The control variable: price sensitivity Price sensitivity, included as a continuous control variable in all three regression models, shows the highest mean among all variables considered ($M = 3.79$, $SD = 0.98$). This result is consistent with the qualitative evidence where price emerged repeatedly in respondents' open-ended answers as the most frequently cited practical challenge when considering the purchase of Grana Padano DOP. The relatively high mean and moderate standard deviation confirm that price remains a central and fairly consistent concern across the sample, rather than being a source of strong disagreement among respondents, and justify its inclusion as a control variable throughout the regression analysis, in order to avoid confounding the effects of the variables of theoretical interest with a purely price-driven explanation of purchase behavior.

Preliminary correlations To complement the descriptive statistics, Table 4.2 reports the pairwise correlations among the dependent variable, the independent variable, and the three moderators, offering at first a purely descriptive picture of how these variables relate to one another before accounting for the simultaneous presence of multiple predictors and control variables.

Table 4.2: Pairwise correlations among model variables

	Y	X	Z1	Z2	Z3
Y	1.00				
X	0.173	1.00			
Z1	-0.215	-0.019	1.00		
Z2	-0.026	0.064	0.131	1.00	
Z3	0.242	0.054	0.036	-0.184	1.00

The pattern of correlation is broadly consistent with the regression results discussed later: the dependent variable correlates positively with X ($r = 0.173$) and Z3 ($r = 0.242$), negatively with Z1 ($r = -0.215$), and shows a negligible association with Z2 ($r = -0.026$). No correlation among the predictors exceeds a moderate threshold (all $|r| < 0.20$), an early indication that multicollinearity is unlikely to be a concern.

4.2 Model Estimation

Here the estimation of the multiple linear regression model is presented and it aims at testing the four hypotheses formulated in this study. Consistently with the standard practice in moderation analysis (Aiken and West, 1991), the model is estimated through a sequential approach: three nested models, each building on the previous one by adding a further block of variables. This strategy allows the incremental contribution of each block — control variables, main effects and interaction terms — to be assessed separately, rather than estimating the full model directly, which would obscure the relative importance of each component.

The three nested models The first model (Model 1, baseline) includes only the control variables: age, gender, student status, unemployment status, blogger influence and price sensitivity. This model serves as a reference point and captures the extent to which the dependent variable can be explained by demographic and contextual factors alone, before introducing the variables of direct theoretical interest.

$$\begin{aligned}
Y = & \beta_0 + \gamma_1(\text{Age}) + \gamma_2(\text{Female}) + \gamma_3(\text{Student}) \\
& + \gamma_4(\text{Unemployed}) + \gamma_5(\text{Blogger}) + \gamma_6(\text{Price}) + \varepsilon
\end{aligned}
\tag{4.1}$$

The second model (Model 2, main effects) adds independent variable X (Verspakket openness) and the three moderators Z1 (local preference), Z2 (Nutri-score responsiveness) and Z3 (familiarity with Grana Padano DOP), without yet including their interaction with X. It tests whether these variables exert a direct, unconditional effect on the dependent variable.

$$\begin{aligned}
Y = & \beta_0 + \gamma_1(\text{Age}) + \gamma_2(\text{Female}) + \gamma_3(\text{Student}) \\
& + \gamma_4(\text{Unemployed}) + \gamma_5(\text{Blogger}) + \gamma_6(\text{Price}) \\
& + \beta_1(X) + \beta_2(Z_1) + \beta_3(Z_2) + \beta_4(Z_3) + \varepsilon
\end{aligned}
\tag{4.2}$$

The third model (Model 3, full model) adds the three interaction terms (X×Z1, X×Z2, X×Z3), constructed after mean-centering X and the three moderators, following the procedure recommended by Aiken and West (1991) to reduce multicollinearity between the interaction terms and their constituent variables. This is the model that directly tests the four hypotheses: H1 corresponds to the main effect of X, while H2, H3 and H4 correspond respectively to the interaction terms X×Z1, X×Z2 and X×Z3.

$$\begin{aligned}
Y = & \beta_0 + \gamma_1(\text{Age}) + \gamma_2(\text{Female}) + \gamma_3(\text{Student}) \\
& + \gamma_4(\text{Unemployed}) + \gamma_5(\text{Blogger}) + \gamma_6(\text{Price}) \\
& + \beta_1(X) + \beta_2(Z_1) + \beta_3(Z_2) + \beta_4(Z_3) \\
& + \beta_5(X \cdot Z_1) + \beta_6(X \cdot Z_2) + \beta_7(X \cdot Z_3) + \varepsilon
\end{aligned}
\tag{4.3}$$

Regression results Table 4.3 reports the estimated coefficients for the three models, together with their standards errors, significance levels and overall model fit statistics.

Table 4.3: Regression results: Frequency/integration of Italian cuisine

	Model 1	Model 2	Model 3
	(Baseline)	(Main effects)	(Full model)
Age	0.013 (0.008)	0.012 (0.008)	0.014* (0.008)
Female	0.041 (0.138)	0.014 (0.132)	0.020 (0.130)
Student	0.032 (0.196)	0.054 (0.189)	0.193 (0.193)
Unemployed	0.213 (0.250)	0.147 (0.238)	0.173 (0.236)
Blogger influence	0.422*** (0.160)	0.409*** (0.153)	0.390** (0.153)
Price sensitivity	0.039 (0.070)	0.049 (0.067)	0.052 (0.066)
X: Verspakket openness		0.119** (0.058)	0.143** (0.058)
Z1: Local preference		-0.188*** (0.058)	-0.183*** (0.057)
Z2: Nutri-score		0.011 (0.058)	-0.009 (0.059)
Z3: Familiarity GP		0.124*** (0.044)	0.133*** (0.043)
X × Z1			-0.028 (0.059)
X × Z2			0.040 (0.058)
X × Z3			-0.096** (0.042)
Constant	2.597*** (0.454)	2.610*** (0.438)	2.500*** (0.439)
Observations	170	170	170
R ²	0.061	0.183	0.222
Adjusted R ²	0.026	0.132	0.157
Residual Std. Error	0.846	0.798	0.787
F Statistic	1.759	3.571***	3.417***

Note: Standard errors in parentheses. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Interpretation of model fit The explanatory power of the model increases progressively across the three specifications, as reflected in the Adjusted R², which rises from 0.026 in the baseline model to 0.132 once the main effects are introduced, reaching 0.157 in the full model with interactions. Although these values may appear modest in absolute terms, they are broadly consistent with typical effect sizes reported in consumer behavior research, where R² values around 0.15 are generally classified as indicating a medium effect size (Cohen, 2013); purchase-related behavior is inherently influenced by a wide range of factors that a structured questionnaire cannot fully capture, including individual taste, prior experience with similar products and situational circumstances at the moment

of purchase. The overall F-statistics is non-significant in the baseline model ($F = 1.759$, $p > 0.1$), confirming that demographic and contextual controls alone do not meaningfully explain variation in the dependent variable. In contrast, both Model 2 ($F = 3.571$, $p < 0.01$) and Model 3 ($F = 3.417$, $p < 0.01$) are highly significant, indicating that the variables of theoretical interest — X and the three moderators, both as main effects and, in Model 3, through their interaction with X — contribute meaningfully to explaining variation in the dependent variable, well beyond what demographic factors alone can account for.

Control Variables Among the control variables, blogger and social media influence (measured as a binary variable, coded 1 for respondents who reported being influenced by bloggers or social media, and 0 otherwise) stands out as a consistent and significant predictor across all three models ($\beta = 0.390$, $p < 0.05$ in the full model), suggesting that respondents who report being influenced by food bloggers or social media figures also tend to integrate Italian cuisine more frequently into their daily cooking, independently of the variables of direct theoretical interest. Age shows a small but only marginally significant positive effect in the full model ($\beta = 0.014$, $p < 0.1$), while gender, employment status and price sensitivity do not emerge as significant predictors once the main variables of interest are included in the model. The results concerning the variables of direct theoretical interest, including the formal test of the four hypotheses, will be discussed in the following sections.

4.3 Comparison Between Models

While the individual coefficients presented in Table 4.3 indicate whether each variable has a significant effect on the dependent variable, they do not, on their own, establish whether adding a given block of variables — the main effects in Model 2, or the interaction terms in Model 3 — significantly improves the overall explanatory power of the model, relative to the simpler specification that precedes it. To formally test this, an analysis of variance (ANOVA) was conducted to compare the three nested models following the incremental approach previously outlined. Since Model 1 is nested within Model 2, and Model 2 is nested within Model 3 — that is, each model is a restricted version of the one that follows, obtained by setting the additional coefficients to zero — an F-test can be used to assess whether the additional variables included in the more complex model jointly contribute a

statistically significant improvement in the model fit, beyond what would be expected by chance alone.

Table 4.4: Analysis of variance – comparison of nested models

Comparison	Res. Df	RSS	Df	Sum of Sq	F	Pr(>F)
Model 1	163	116.547				
Model 2	159	101.333	4	15.214	6.143	0.0001***
Model 3	156	96.593	3	4.740	2.552	0.0576*

*Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$*

The comparison between Model 1 and Model 2 is highly significant ($F = 6.143$, $p < 0.001$), confirming that the joint addition of X and the three moderators, as main effects, independently of any interaction, produces a substantial and statistically robust improvement in the model's ability to explain variation in the dependent variable, well beyond what the control variables alone can account for. The comparison between Model 2 and Model 3 yields a smaller, marginally significant result ($F = 2.552$, $p = 0.058$). This indicates that the joint addition of the three interaction terms contributes an improvement in model fit that falls just short of the conventional 0.05 threshold. Taken at face value, this result suggests that the three interaction terms, considered together as a block, provide a comparatively modest — though not negligible — improvement over the main-effects model. This finding should, however, be interpreted in light of the individual coefficients reported in Table 4.3: among the three interaction terms, only $X \times Z3$ reaches conventional statistical significance ($p < 0.05$), while $X \times Z1$ and $X \times Z2$ do not. The marginal significance of the joint F-test is therefore consistent with a scenario in which one specific interaction, rather than the interaction block as a whole, drives the improvement in explanatory power, a pattern that is further examined through the formal hypothesis testing presented in Section 4.5.

Overall, the results of this comparison support the decision to retain the full model (Model 3) as the primary specification for hypothesis testing, since it is the only model that allows the moderating role of each individual variable to be assessed separately, and since it also achieves the highest Adjusted R^2 among the three specifications.

4.4 Diagnostic Checks

The validity of the inferences drawn from a multiple linear regression model depends on a set of underlying statistical assumptions concerning the behavior of the residuals. When these assumptions are violated, the estimated coefficients may remain unbiased, but the standard errors, and consequently the significance tests built upon them, may no longer be reliable, potentially leading to incorrect conclusions about which predictors are genuinely associated with the dependent variable. For this reason, before proceeding to the formal test of the four hypotheses, this section verifies that the full model (Model 3) satisfies these assumptions to a reasonable degree, following the diagnostic procedure previously outlined: the normality of residuals, the absence of severe multicollinearity among predictors and the homoscedasticity of residuals. Each assumption is assessed through both a graphical inspection and a formal statistical test, consistent with standard practice in applied regression analysis. Where a deviation from these assumptions is detected, an appropriate correction is applied and its effect on the reliability of the results is discussed in detail.

Normality of residuals Linear regression assumes that the residuals follow an approximately normal distribution around zero. Substantial departures from normality, particularly in small samples, can distort the reliability of the t-tests and confidence intervals reported for each coefficient. The normality of the residuals was assessed both graphically, through a Q-Q plot (Figure 4.1) and formally, through the Shapiro-Wilk test, chosen for its established statistical power in detecting departures from normality in samples of moderate size such as the present one ($n = 170$). The Q-Q plot shows that the residuals of Model 3 are closely aligned with the theoretical normal distribution, with only minor deviations at the extreme tails and no visible clustering of extreme values that would suggest the presence of influential outliers. This visual impression is confirmed by the Shapiro-Wilk test ($W = 0.994$, $p = 0.682$): as the p-value is well above the conventional 0.05 threshold, the null hypothesis of normally distributed residuals cannot be rejected. This result indicates that the standard errors and significance levels reported in Table 4.3 can be interpreted with confidence, as they do not appear to be distorted by non-normality in the error term and the sample does not appear to contain a substantial number of respondents whose answers deviate markedly from the patterns captured by the model.

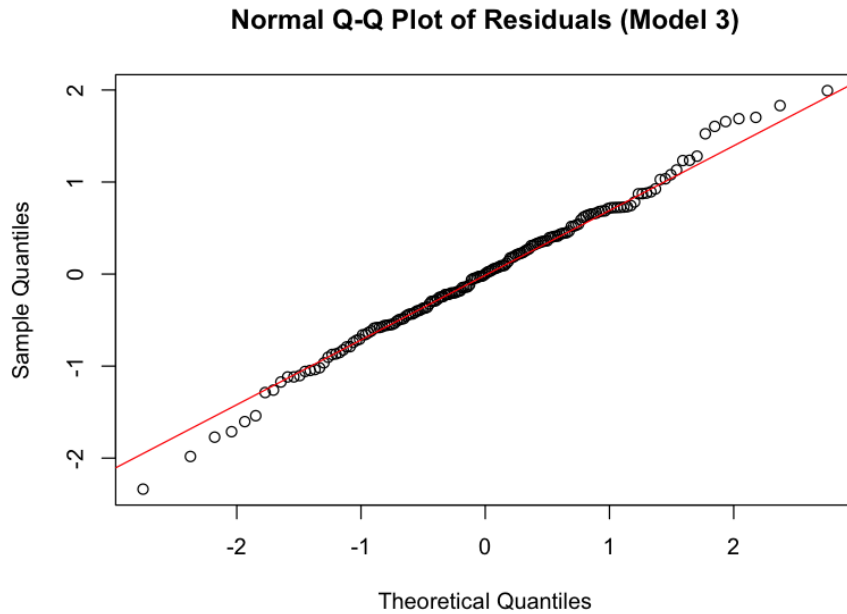


Figure 4.1: Normal Q-Q plot of residuals (Model 3)

Multicollinearity A second assumption underlying multiple regression is that predictors are not excessively correlated with one another. When two or more independent variables are highly correlated, the model struggles to isolate the individual contribution of each one, resulting in inflated standard errors or unstable coefficient estimates. Multicollinearity among the predictors was assessed through the Variance Inflation Factor (VIF), calculated for each independent variable: it quantifies how much the variance of a given coefficient is inflated due to its correlation with the other predictors in the model (VIF = 1 means no inflation at all, while progressively higher values indicate increasing collinearity). In the present model all VIF values range between 1.03 and 1.73, well below any commonly accepted threshold, confirming the preliminary indication already provided by the pairwise correlation matrix. Taken together, these two independent diagnostics provide converging evidence that each predictor in the model contributes distinct, non-redundant information, and that the mean-centering procedure applied to X and the three moderators before constructing the interaction terms was effective in preventing the artificial inflation of collinearity that interaction terms can otherwise introduce.

Homoscedasticity The third assumption is homoscedasticity, when the variance of the residuals remains constant across the range of fitted values rather than systematically

increasing or decreasing as predicted values change. When this assumption is violated (heteroscedasticity), ordinary least squares coefficients remain unbiased but their standard errors become unreliable, which can lead to incorrect conclusions regarding statistics significance. This assumption was assessed both graphically, through a plot of residuals against fitted values (Figure 4.2) and formally, through the Breusch-Pagan test. In a model that satisfies homoscedasticity, this plot should display a roughly constant spread of residuals across the horizontal axis, without any systematic pattern.

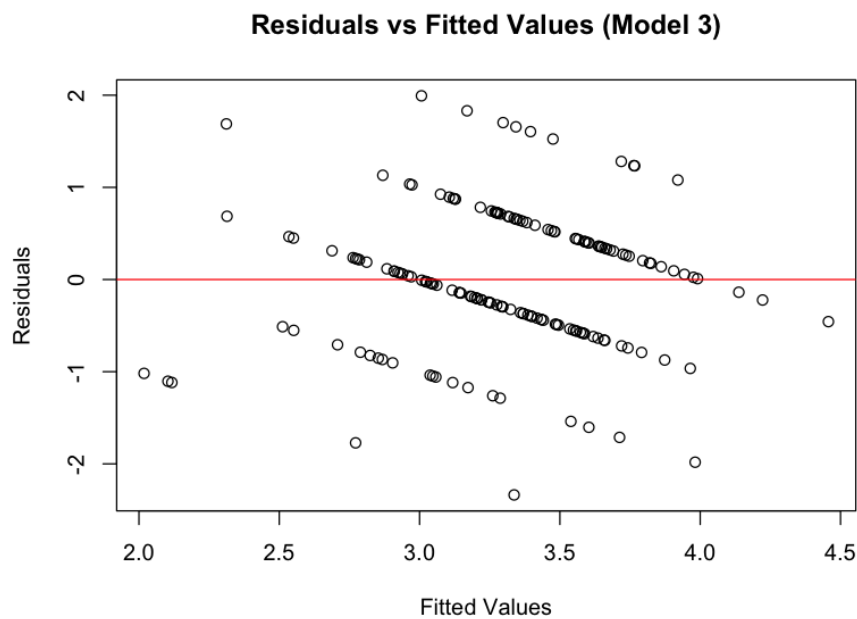


Figure 4.2: Residuals versus fitted values (Model 3)

The residual plot obtained for Model 3 displays a distinctive banded pattern, consisting of several parallel diagonal lines rather than a randomly scattered cloud of points. This pattern is a known effect of applying ordinary least squares regression to a five-point ordinal dependent variable: since the observed values of Y can only take five possible integer values, while the fitted values vary continuously across respondents, residuals necessarily align along a small number of parallel bands, one for each observed value of Y . This pattern does not signal a problem with the model, the bands are reasonably balanced above and below the zero line, and there is no clear funnel shape, which would be the real warning sign of a serious issue. The Breusch-Pagan test does indicate a statistically significant, though mild, deviation from homoscedasticity ($BP = 26.63$, $df = 13$, $p = 0.014$), likely connected to this same discrete nature of the dependent variable. This also supports

the choice to include the ordinal regression robustness check (presented in Section 4.6), which does not rely on the assumption of a continuous dependent variable. To address this deviation, the model was re-estimated using robust standard errors: this correction does not change the coefficients themselves, only their standard errors, making the significance tests more reliable. As shown in Table 4.5, comparing the two sets of results, every coefficient that was significant under conventional standard errors remains significant under robust standard error and every non-significant coefficient remains non-significant. So, the mild heteroscedasticity detected does not affect the substantive conclusions of the analysis and the robust standard errors are used as the reference values throughout the hypothesis testing.

Table 4.5: Comparison of p-values under conventional and robust standard errors (Model 3)

Variable	Coefficient	p (OLS)	p (Robust)
X: Verspakket openness	0.143	0.0147	0.0219
Z1: Local preference	-0.183	0.0015	0.0026
Z2: Nutri-score	-0.009	0.8821	0.8664
Z3: Familiarity GP	0.133	0.0025	0.0034
$X \times Z1$	-0.028	0.6275	0.6354
$X \times Z2$	0.040	0.4950	0.4995
$X \times Z3$	-0.096	0.0219	0.0441

4.5 Hypothesis Testing

Having established that Model 3 satisfies the core assumptions of linear regression and that its results are robust to the mild heteroscedasticity, this section presents the formal test of the four hypotheses. For each hypothesis, the relevant coefficient is examined in terms of its sign, magnitude, and statistical significance, and the result is interpreted in relation to the theoretical expectations that motivated the hypothesis.

H1: Product adaptation It states that higher openness toward the Verspakket format (X) is positively associated with the dependent variable. The coefficient for X in Model 3 is positive and statistically significant ($\beta = 0.143$, $p = 0.022$, robust SE). H1 is confirmed: respondents who reported greater openness toward encountering the product in a convenience-oriented, pre-portioned format also report greater frequency and integration of Italian cuisine in their daily cooking habits. This result is consistent with the theoretical expectation that extrinsic adaptation, rather than changes to the intrinsic, legally protected characteristics of a PDO product, represents the primary lever available to producers seeking to reduce the cognitive and practical barriers faced by unfamiliar imported products in the Dutch market. This result is further supported by the ordinal regression robustness check presented in Section 4.6.

H2: Local preference It states that the positive association between extrinsic adaptation and the dependent variable would be weaker as consumers' preference for locally produced cheese (Z1) increases. The interaction term $X \times Z1$ is negative, consistent in direction with hypothesis, but not statistically significant ($\beta = -0.028$, $p = 0.635$, robust SE). H2 is not confirmed: while the direction of the coefficient aligns with the theoretical expectation, the effect is too small, relative to its standard error, to be distinguished from zero. This result does not imply that local preference is irrelevant to the dependent variable, but rather that, within this sample, local preference does not significantly alter the strength of the relationship between product adaptation and the dependent variable. In other words, respondents with a strong attachment to Dutch cheese report, on average, lower values of the dependent variable regardless of their level of openness toward the Verspakket format, rather than specifically resisting the adaptation effect itself. The ordinal regression robustness check presented in Section 4.6 yields a consistent conclusion for this interaction term.

H3: Information transparency It states that the positive association between extrinsic adaptation and the dependent variable would be stronger when consumers show higher responsiveness to nutritional information (Z2, proxied by responsiveness to Nutri-score labelling). The interaction term $X \times Z2$ is positive, consistent in direction with the hypothesis, but not statistically significant ($\beta = 0.040$, $p = 0.500$, robust SE). As with H2, the coefficient points in the hypothesized direction but does not reach conventional levels of

statistical significance, H3 is not confirmed. Notably, Z2 itself shows no significant direct effect on the dependent variable either ($\beta = -0.009$, $p = 0.866$), the weakest result among all model variables. This suggests that, within the sample, responsiveness to nutritional labelling of the kind captured by the Nutri-score item does not play a meaningful role — neither as a direct driver nor as a moderator — in shaping the frequency and integration of Italian cuisine in respondent's daily cooking habits. This conclusion is unchanged in the ordinal regression robustness check.

H4: Product familiarity It states that the positive association between extrinsic adaptation and the dependent variable would be stronger when consumers have greater familiarity with the Italian product (Z3, familiarity with Grana Padano DOP). The interaction term $X \times Z3$ is statistically significant ($\beta = -0.096$, $p = 0.044$, robust SE), but its sign is negative, contrary to the direction hypothesized. This is the most unexpected result of the empirical analysis and one that merits particular attention. H4 is therefore not supported: the interaction is statistically significant, but its sign is opposite to the one hypothesized. Rather than strengthening the association between Verspakket openness and the dependent variable, greater familiarity with Grana Padano DOP appears to be associated with a weaker one. Combined with the strong, positive and highly significant direct effect of Z3 ($\beta = 0.133$, $p = 0.003$), this pattern suggests that familiarity operates primarily as a direct driver of the dependent variable in its own right, rather than as an amplifier of the adaptation effect. Consumers who are already familiar with the product report, on average, higher values of the dependent variable regardless of the adapted format, while the marginal contribution of the adapted format itself appears comparatively more relevant for consumers with lower familiarity. The ordinal regression robustness check yields the same sign and significance for this interaction, suggesting that this result does not depend on the linear specification.

Table 4.6: Summary of hypothesis testing results

Hypothesis	Relationship tested	Coefficient (robust SE)	p-value	Result
H1	$X \rightarrow Y$	0.143	0.022	Confirmed
H2	$X \times Z1 \rightarrow Y$	-0.028	0.635	Not confirmed
H3	$X \times Z2 \rightarrow Y$	0.040	0.500	Not confirmed
H4	$X \times Z3 \rightarrow Y$	-0.096	0.044	Significant but with opposite sign

4.6 Robustness Check: Ordinal Regression

The dependent variable used throughout this analysis is measured on a five-point scale (1 to 5), coded from respondents' open-ended answers. Ordinary least squares regression treats this variable as continuous, implicitly assuming that the distance between adjacent categories is equal — for instance, that the difference between a value of 1 and 2 carries the same substantive meaning as the difference between a value of 4 and 5. This assumption may not always hold for a variable of this kind, where categories reflect a qualitative progression rather than a precise numerical measurement. To verify that the results presented before do not depend on this assumption, the same three nested models were re-estimated using ordinal logistic regression, which treats the dependent variable as an ordered categorical outcome and does not require equal distances between categories. This method is therefore better suited, in principle, to the nature of the dependent variable, and serves here as a robustness check on the conclusions drawn from the linear specification. Table 4.7 compares the coefficients obtained from the linear model with those obtained from the corresponding ordinal model, for the seven variables of direct theoretical interest.

As shown in Table 4.7, the ordinal regression produces results that are fully consistent with the linear model, both in the direction and in the statistical significance of every coefficient examined. The pattern of results, including the support for H1, the lack of support for H2 and H3, and the significant interaction of opposite sign for H4, holds regardless of whether the dependent variable is treated as continuous or as an ordered categorical outcome.

Table 4.7: Comparison of linear and ordinal regression coefficients

Variable	Linear coef.	Linear p	Ordinal coef.	Ordinal p
X: Verspakket openness	0.143	0.022	0.410	0.006
Z1: Local preference	-0.183	0.003	-0.462	0.001
Z2: Nutri-score	-0.009	0.866	-0.032	0.821
Z3: Familiarity GP	0.133	0.003	0.343	0.002
$X \times Z1$	-0.028	0.635	-0.094	0.523
$X \times Z2$	0.040	0.500	0.100	0.481
$X \times Z3$	-0.096	0.044	-0.272	0.012

Note: coefficients are not directly comparable in magnitude; what matters is consistency of sign and significance.

4.7 Sensitivity Analysis: Exclusion of Ambiguously Coded Responses

As discussed in Chapter 3, a minority of open-ended responses used to construct the dependent variable lacked an explicit frequency cue (e.g., "once a week", "sometimes") and were therefore coded to the midpoint of the scale (3) as a neutral default. Since this coding decision introduces an element of researcher judgment, a sensitivity analysis was conducted to verify whether the empirical conclusions depend on the inclusion of these ambiguously coded responses. Of the 171 valid responses, 30 (17.5%) were identified as lacking an explicit frequency indicator and were coded to the midpoint by default. The entire analytical pipeline – the three nested regression models, the diagnostic checks and the ordinal regression robustness check – was re-estimated on the remaining 141 (140 after excluding one respondent with missing gender) observations, following the identical procedure described in Sections 4.2 to 4.6.

Table 4.8 compares the coefficients obtained from the full sample ($N = 170$) with those obtained from the reduced sample ($N = 140$), for the seven variables of direct theoretical interest. The results obtained on the reduced sample are consistent, in both sign and statistical significance, with those obtained on the full sample for every variable examined. Most notably, the counter-intuitive interaction between Verspakket openness and product familiarity ($X \times Z3$, associated with H4) remains negative and statistically significant ($p =$

0.038) after excluding the ambiguously coded responses, indicating that this result is not an artefact of the coding decisions made for the dependent variable. Diagnostic checks on the reduced sample (normality of residuals, multicollinearity and homoscedasticity) yielded results consistent with those reported in Section 4.4, and are therefore not repeated in detail here. Overall, this sensitivity analysis provides additional support for the robustness of the conclusions presented in this chapter, independently of how the small subset of ambiguously worded responses was coded.

Table 4.8: Sensitivity analysis: comparison of coefficients (full sample vs. sample excluding ambiguously coded responses)

Variable	Coef. (N=170)	p (N=170)	Coef. (N=140)	p (N=140)
X: Verspakket open- ness	0.143	0.022	0.156	0.025
Z1: Local preference	-0.183	0.003	-0.226	0.002
Z2: Nutri-score	-0.009	0.866	-0.007	0.916
Z3: Familiarity GP	0.133	0.003	0.143	0.006
$X \times Z1$	-0.028	0.635	-0.009	0.893
$X \times Z2$	0.040	0.500	0.034	0.605
$X \times Z3$	-0.096	0.044	-0.108	0.038

Note: p-values based on heteroscedasticity-robust standard errors.

Chapter 5

Discussion and Conclusions

5.1 Discussion of Findings

The empirical results presented in Chapter 4 offer a theoretically rich picture of how extrinsic product adaptation relates to the integration of Italian cuisine in the daily cooking habits of Dutch consumers. While one hypothesis was confirmed in the expected direction, two were not supported and one produced a statistically significant but counter-intuitive result. The confirmation of H1, a positive and significant effect of openness towards the Verspakket format on the dependent variable, is consistent with the theoretical premise that firms exporting a PDO product cannot exercise any leverage over its intrinsic characteristics. Recipe, minimum ageing and raw material origin are fixed by law and this structural constraint leaves extrinsic adaptation — packaging, portioning, integration into convenience-oriented formats — as the principal lever through which a firm can reduce the disutility that, according to Jonnalagedda and Saranga (2017), arises whenever a standardized product is offered to a market whose ideal point of consumption differs from that of the home market. The result obtained here provides empirical support for this theoretical mechanism: even a modest adaptation, such as pre-portioning the cheese and pairing it with a simple recipe card, appears to move the product perceptibly closer to the Dutch consumer's preference for convenience, one of the defining traits of the Dutch retail landscape. This finding also lends indirect support to the broader theoretical position of Vrontis et al. (2009), who argue that successful internationalization rarely results from a choice between pure standardization or pure adaptation, but rather from a calibrated position along a continuum. H2 hypothesized that the positive association between adaptation and the dependent

variable would be weaker among consumers with a strong preference for local Dutch cheese. This interaction was not statistically significant, even though local preference (Z1) itself showed a strong, negative and highly significant direct effect on the dependent variable. Taken together, these two results suggest that consumers with a strong attachment to Gouda or Edam appear to engage less with Italian cuisine, regardless of how the product is packaged or presented. Local preference behaves less like a moderator that blunts the effectiveness of adaptation and more like an independent barrier (closer to the notion of consumer ethnocentrism discussed by Xu et al. (2020)). This non-result is also informative in a more general sense. It suggests that the theoretical distinction proposed in this study, between resistance rooted in identity and tradition (captured by Z1) and resistance rooted in unfamiliarity or inconvenience, may be less permeable than assumed. If ethnocentric preference operates largely independently of format and convenience, this would be consistent with Shimp and Sharma's (1987) original conceptualization of consumer ethnocentrism as a stable, identity-linked disposition, rather than a purely situational barrier that tactical marketing adjustments can readily soften. Drawing on Hofstede's dimensions, Dutch consumers combine a moderate uncertainty avoidance with a pragmatic orientation toward information transparency; clear labelling was expected to reduce the cognitive cost of evaluating an unfamiliar product. The present results do not support this expectation, there is no meaningful effect associated with Z2, at least as operationalized through responsiveness to Nutri-score labelling. A possible explanation is that nutritional labelling, of the kind referenced in the questionnaire, functions primarily as a health-related signal, one that Dutch consumers may already treat as a baseline expectation on any packaged food product rather than a distinctive piece of information capable of shifting their evaluation of a specific imported item. Nutritional transparency may be a necessary condition for consumer trust but not a sufficient or differentiating one when it comes to encouraging trial of a specific heritage product such as Grana Padano DOP. The most theoretically interesting result of this study concerns H4. The interaction between Verspakket openness and product familiarity was statistically significant, but negative, which is the opposite of what was hypothesized; H4 is therefore not supported. Rather than amplifying the association between openness and the dependent variable, greater familiarity with Grana Padano DOP appears to be associated with a weaker one, even as familiarity itself remains positively and significantly associated with the dependent variable. This pattern may be

compatible with the non-linear relationship between adaptation intensity and performance proposed by Tsoukoku et al. (2025). Their framework suggests that adaptation efforts can produce diminishing, or even reversing, returns once a certain threshold is crossed, because its value depends on the specific segment of consumers being addressed. Consumers who are already familiar with the product may, in effect, already occupy a position close to their own ideal point of consumption — to use the terminology of Jonnalagedda and Saranga (2017) — built around the traditional, more authentic experience of the product. For this segment, a pre-portioned, convenience-oriented Verspakket format may not represent a reduction in disutility, but rather a mismatch with an already formed set of expectations. This result may suggest that Verspakket openness and product familiarity are not complementary, as hypothesized, but partially substitutable pathways toward the same outcome, although the cross-sectional data cannot establish this.

5.2 Theoretical Implication

Beyond the interpretation of individual hypotheses, the findings of this study carry broader implications for the theoretical debate on international product adaptation. First, the results contribute to the discussion on how firms exporting protected-origin agri-food products can manage the standardization-adaptation continuum when the intrinsic characteristics of the product cannot legally be modified. The confirmation of H1 demonstrates that, even within this structurally compressed continuum, extrinsic adaptation — untouched by legal constraints and confined to packaging, portioning and integration into convenient retail formats — remains capable of producing a measurable and significant shift in consumer receptiveness. This extends existing theory to a case it does not explicitly address, showing that meaningful adaptation effects can be achieved purely at the periphery of the product offer, without any leverage over its legally protected core. Second, the counter-intuitive result obtained for H4 challenges the assumption that psychological or cultural closeness to a foreign product necessarily amplifies the effectiveness of efforts to make the product more accessible. Much of the literature on country-of-origin effects and product familiarity, including the Product-Country-Image framework of Papadopoulos and Heslop (1993), discussed in Chapter 2, implicitly treats familiarity as a uniformly positive force: the more a consumer knows and trusts a foreign product's image, the more

receptive they should be to any effort that brings the product closer to them. The present findings complicate this assumption, suggesting that familiarity and extrinsic adaptation may operate as two largely independent, and in this specific case partially competing, pathways toward the same outcome, rather than complementary or mutually reinforcing forces. Third, the non-significant results obtained for H2 and H3, considered alongside the strong effects of the corresponding variables (Z1 and, to a lesser extent, Z3), point to a broader methodological consideration: cultural and informational factors that are commonly theorized as moderators of adaptation effectiveness may, in some contexts, behave more like independent, direct determinants of consumer response.

5.3 Managerial Implications

For producers and consortia seeking to strengthen the presence of Grana Padano DOP, and comparable Italian heritage products, within the Dutch retail market, the findings of this study suggest a set of possible implications, which should be read as interpretations of the empirical evidence rather than as direct prescriptions. The data show that openness toward the Verspakket format is positively associated with the frequency/integration of Italian cuisine (H1). This may suggest that convenience represents a relevant lever for producers of PDO-certified goods, particularly since the recipe, ageing and origin of these products cannot be altered by law; a possible implication is that investment could concentrate on packaging, portioning and ready-to-use formats. The finding that this association is weaker among consumers with greater familiarity with the product (H4) further suggests that communication and distribution might benefit from being segmented by consumer familiarity, rather than treated as a single, undifferentiated market. One possible interpretation is that newer or less-informed consumers may respond more favourably to accessible, convenience-oriented formats promoted through mainstream retail channels such as supermarkets and general grocery advertising, while consumers who already know the product could be more receptive to messaging centered on provenance and craftsmanship, potentially better conveyed through specialized channels such as cheese shops (*kaaswinkels*) and open-air markets. It should be noted, however, that this segmentation strategy is a plausible implication of the pattern observed, rather than a directly tested recommendation. Responsiveness to nutritional labelling showed no significant

association with either the dependent variable or the strength of the adaptation effect (H3 not confirmed). This suggests that marketing budgets may not need to rely heavily on nutritional labelling as a driver of trial; resources could possibly be better allocated toward the convenience adaptation and segmented communication discussed above, although this remains a tentative implication given the non-significant result. The descriptive and qualitative evidence discussed in Chapter 3 indicates that Grana Padano DOP is frequently confused with Parmigiano Reggiano in the Dutch market. This observation suggests that brand differentiation may deserve specific attention: producers could have an incentive to build recognition of Grana Padano as a distinct, accessible, everyday product — rather than an occasional indulgence — in order to convert passive familiarity into more deliberate brand preference, although this implication follows from contextual evidence rather than from a formally tested hypothesis. Among the control variables, influence from food bloggers and social media figures showed a stronger and more consistent association with the dependent variable than several of the theorized moderators. This finding suggests that digital word-of-mouth may represent a comparatively underexploited channel and that partnerships with content creators focused on everyday, practical cooking could offer a cost-effective way to reach less familiar consumers; this remains, however, a suggested avenue rather than a directly tested marketing strategy. Finally, price sensitivity was found to be the control variable with the highest mean among those considered, consistent with the qualitative evidence discussed in Chapter 3 identifying price as the most frequently cited barrier to purchase. Beyond communication efforts, this may indicate that smaller, lower-cost pack sizes could help lower the threshold for a first purchase; however, this specific format has not been directly tested in this study but could be regarded as a plausible avenue for future exploration.

5.4 Limitations and Difficulties Encountered

While the findings discussed above offer meaningful theoretical and managerial insights, several limitations affect the scope and generalizability of this study, some of which emerge directly from methodological choices made during the design phase and others from practical difficulties encountered during data collection and analysis. The most significant limitation concerns the operationalization of the dependent variable. The final

version of the questionnaire did not include a direct Likert-scale item measuring purchase intention toward Italian food products, despite this having been the original intention at the design stage. This was discovered only once data collection had already been completed, at which point revising the instrument was no longer possible. The dependent variable used throughout this study was therefore reconstructed from an open-ended question on the frequency and integration of Italian cuisine in respondents' daily cooking habits, coded manually into a five-point scale. While this variable captures a closely related and arguably more behaviorally grounded construct than a direct intention item, it does not correspond precisely to the purchase intention construct as originally theorized in the hypotheses. This discrepancy was identified and discussed with the thesis supervisor, who confirmed the appropriateness of this proxy while recommending that its nature be made explicit throughout the thesis and requested two additional robustness checks — reported in Chapter 4 — to verify that the empirical conclusions were not an artifact of this specific operationalization choice. The coding process itself constitutes a further limitation: it was carried out by a single researcher, without a second, independent coder to assess inter-rater reliability, and a minority of responses lacking explicit frequency cues required subjective judgment, coded by default to the midpoint of the scale. A second limitation concerns the measurement of the three moderators. Z1, Z2 and Z3 were each measured through a single questionnaire item, rather than through validated multi-item scales such as Food Neophobia Scale (Pliner and Hobden, 1992) originally referenced in the theoretical framework. This choice reduced respondent burden and allowed the questionnaire to remain of manageable length for the mixed in-person and online data collection strategy adopted, but it may not fully capture the multidimensional nature of the underlying psychological constructs and could plausibly contribute to the non-significant results obtained for H2 and H3: a single item is inherently more susceptible to measurement noise than a multi-item scale, which could partially mask a true, but weaker, moderating effect. A third limitation concerns the sample: the 174 respondents were recruited through a combination of in-person intercepts and online distribution, rather than probability sampling. Younger adults and students are somewhat overrepresented relative to the broader Dutch population. While the resulting sample of 170 observations used in the regression analysis provided sufficient variability to support meaningful hypothesis testing, it remains modest by the standards of some consumer research studies, and findings should be interpreted with an awareness that they

may in part reflect limited statistical power to detect smaller interaction effects. A related methodological point concerns the explanatory power of the regression models themselves. The full model achieved an Adjusted R^2 of approximately 0.16 — a value consistent with what Cohen (2013) classifies as a medium effect size in behavioral research, but one that leaves a substantial share of variation in the dependent variable unexplained. This is an expected and largely unavoidable feature of survey-based consumer behavior research, where purchasing and consumption habits are shaped by a wide range of individual, situational and historical factors that no structured questionnaire of manageable length can fully capture. Finally, it is worth acknowledging the iterative nature of the methodological process underlying this study. Several elements of the original design had to be revisited once data collection was complete: the dependent variable had to be reconstructed, the theoretical language describing the three moderators was refined from broader constructs such as food neophobia and Country-of-Origin Image to the narrower constructs of local preference and product familiarity actually captured by the questionnaire and an ordinal regression was added as a robustness check. None of these adjustments were part of the original plan; however, they ensured that the final hypotheses and their empirical tests matched, as closely and honestly as possible what the questionnaire had actually measured — rather than presenting a neater picture that the data could not truly support.

5.5 Conclusion

The paradox that opened this thesis has, in the end, a fairly simple answer: there is no single formula for turning an occasional purchase into a daily habit. What works for someone discovering a heritage food product for the first time is not what works for someone who already knows it well — and treating the Dutch market as one undifferentiated audience is, in itself, part of the problem. A product legally bound to its origins can still travel far, but doing so requires producers to adjust how they reach different consumers. That, more than any single number in this analysis, is what these 170 conversations with Dutch people ultimately revealed.

Bibliography

Agency, I. I. T. (2024). Italy–netherlands trade report 2024. <https://www.ice.it>.

Aiken, L. S. and West, S. G. (1991). *Multiple Regression: Testing and Interpreting Interactions*. Sage Publications, Newbury Park, CA.

Aschemann-Witzel, J. and Peschel, A. O. (2019). How circular economy principles are embedded in food marketing: A consumer perspective. *Journal of Cleaner Production*, **234**, 132–143.

Astivia, O. L. O. and Zumbo, B. D. (2019). Heteroskedasticity in multiple regression analysis: What it is, how to detect it and how to solve it with applications in r and spss. *Practical Assessment, Research & Evaluation*, **24**(1), n1.

Authority, E. F. S. (2024). Food safety and eu standards. <https://www.efsa.europa.eu>.

Bass, F. M. (1969). A new product growth model for consumer durables. *Management Science*, **15**(5), 215–227. Reprinted in *Management Science*, 50(12), 1825–1832 (2004).

Beugelsdijk, S. and Welzel, C. (2018). Dimensions and dynamics of national culture: Synthesizing hofstede with ingelehart. *Journal of cross-cultural psychology*, **49**(10), 1469–1505.

Birch, L. L. (1999). Development of food preferences. In E. D. Capaldi, editor, *Developmental Psychobiology of Taste*, pages 45–66. Cambridge University Press, Cambridge.

Booms, B. H. and Bitner, M. J. (1981). Marketing strategies and organizational structures for service firms. *Marketing of Services*, pages 47–51.

(CBS), S. N. (2024). Dairy production statistics. <https://www.cbs.nl>.

Cohen, J. (2013). *Statistical power analysis for the behavioral sciences*. routledge.

-
- Commission, E. (1986). Single european act. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:11986U/TXT>.
- Commission, E. (2024). Nutri-score: Front-of-pack nutrition labelling. <https://ec.europa.eu>.
- Consorzio di Tutela del Grana Padano (2023). Ottobre 2023 – export da record con oltre il +17%. <https://www.granapadano.it>.
- Embassy of Italy The Hague (2024). Country profile: The netherlands.
- European Food Safety Authority (2024). Food safety in the european union.
- Heijn, A. (2024). Verspakket product range. <https://www.ah.nl>.
- Hofstede, G., Hofstede, G. J., and Minkov, M. (2011). Dimensionalizing cultures: The hofstede model in context. In *Online Readings in Psychology and Culture*, volume 2. International Association of Cross-Cultural Psychology.
- Hyakkai, S. (1990). Nestle japan "morning time with nestle". *Shokei Ronso*, **31**(3), 205–254.
- Iyengar, S. S. and Lepper, M. R. (2000). When choice is demotivating: Can one desire too much of a good thing? *Journal of Personality and Social Psychology*, **79**(6), 995–1006.
- Jonnalagedda, S. and Saranga, H. (2017). Commonality decisions when designing for multiple markets. *European Journal of Operational Research*, **258**(3), 902–911.
- Kotler, P. and Keller, K. L. (2016). *Marketing Management*. Pearson, 15 edition.
- Levitt, T. (1983). The globalization of markets. *Harvard Business Review*, **61**(3), 92–102.
- NielsenIQ (2023). Global retail convenience trends. <https://nielseniq.com>.
- Onwezen, M., Bouwman, E., Reinders, M., and Dagevos, H. (2021). A systematic review on consumer acceptance of alternative proteins: Pulses, algae, insects, plant-based meat alternatives, and cultured meat. *Appetite*, **159**, 105058.
- Papadopoulos, N. and Heslop, L. A. (1993a). *Product-Country Images: Impact and Role in International Marketing*. Routledge, New York.

-
- Papadopoulos, N. and Heslop, L. A. (1993b). *Product-Country Images: Impact and Role in International Marketing*. Routledge, New York.
- Pliner, P. and Hobden, K. (1992). Development of a scale to measure the trait of food neophobia. *Appetite*, **19**(2), 105–120.
- Robertson, R. (1995). Glocalization: Time–space and homogeneity–heterogeneity. In *Global Modernities*, pages 25–44. SAGE.
- Roth, M. S. and Romeo, J. B. (1992). Matching product category and country image perceptions: A framework for managing country-of-origin effects. *Journal of International Business Studies*, **23**(3), 477–497.
- Schiffman, L. and Wisenblit, J. (2019). *Consumer Behavior*. Pearson, 12 edition.
- Shapiro, S. S. and Wilk, M. B. (1965). An analysis of variance test for normality (complete samples). *Biometrika*, **52**(3-4), 591–611.
- Shimp, T. A. and Sharma, S. (1987). Consumer ethnocentrism: Construction and validation of the cetscale. *Journal of Marketing Research*, **24**(3), 280–289.
- Single European Act (1986). Single european act. Official Journal of the European Communities.
- Statista (2024). Dairy consumption in the netherlands. <https://www.statista.com>.
- Tsougkou, E., Cadogan, J. W., Boso, N., Hodgkinson, I. R., Oliveira, J. S., Laukkanen, T., Yazdani, N., and Story, V. M. (2025). International product adaptation and performance: A systematic analysis of the literature and agenda for future research. *Journal of World Business*.
- Tze, X. C., Zhe, X. C., Sin, C. C., and Shieh, H. C. (2022). A study on marketing strategy of nestle in asia. *Advances in Global Economics and Business Journal*, **3**(1), 1–14.
- Union, E. (1993). Completion of the single market. <https://europa.eu>.
- Vrontis, D., Thrassou, A., and Lamprianou, I. (2009). International marketing adaptation versus standardisation of multinational companies. *International Marketing Review*, **26**(4–5), 477–500.

-
- Wilk, M. B. and Gnanadesikan, R. (1968). Probability plotting methods for the analysis for the analysis of data. *Biometrika*, **55**(1), 1–17.
- Xu, X., Comello, M. L. G., Lee, S., and Clancy, R. (2020). Exploring country-of-origin perceptions and ethnocentrism: the case of us dairy marketing in china. *Journal of Food Products Marketing*, **26**(2), 79–102.
- Zajonc, R. B. (1968). Attitudinal effects of mere exposure. *Journal of Personality and Social Psychology*, **9**(2), 1–27.

Appendix A

Questionnaire

This appendix reports the complete questionnaire administered to respondents, as described in Chapter 3.

1. Are you Dutch / Did you grow up in the Netherlands?
(Yes / No – respondents selecting "No" were directed to the end of the questionnaire)
2. What is your age?
(Under 18 / 18-25 / 26-35 / 36-50 / 50+)
3. What is your gender?
(Female / Male / Prefer not to say)
4. What is your current employment status?
(Student / Employed (Full-time/Part-time) / Unemployed - Looking for work / Other)
5. Do you know the meaning of the European "Protected Designation of Origin" (PDO) label (in Dutch: Beschermde Oorsprongsbenaming - BOB)?
(Yes, I know it well / I have seen it, but I don't know exactly what it means / No, I have never seen it)
6. How familiar are you with Italian Grana Padano DOP?
(Likert 1-5, from "Never heard of it" to "I know it and buy it regularly")
7. When you think of Italian cuisine, how do you personally feel about it and how often does it feature in your home cooking?
(Open-ended response)

-
8. Does the presence of an official European quality stamp (like the PDO/DOP logo) increase your perception of quality and trust in an imported product?
(Likert 1-5, from "Not at all" to "Extremely")
9. Based on your view of Italian food, what is the biggest practical challenge or doubt you face when considering buying a cheese like Grana Padano?
(Open-ended response)
10. When buying cheese, how important is it to you that it is produced locally or in the Netherlands?
(Likert 1-5, from "Not at all" to "A lot")
11. How often do you choose a Dutch cheese (e.g., Gouda, Edam) over an imported international cheese?
(Likert 1-5, from "Never" to "Always")
12. To what extent does the price of cheese influence your final purchasing decision?
(Likert 1-5, from "Not at all" to "Extremely")
13. Where do you usually buy local Dutch cheese (e.g., Gouda, Edam)? (Select all that apply)
(Traditional supermarkets / Discounters / Local open-air markets / Specialized cheese shops (Kaaswinkels) / Online grocery stores / Other)
14. If you see a clear nutritional label (like Nutri-score), how much does this increase your willingness to buy an unfamiliar imported cheese?
(Likert 1-5, from "Not at all" to "Extremely")
15. Do food bloggers, chefs, or social media influencers influence your choice when buying foreign food products (such as Italian cheese)?
(Yes, they do influence my choice / No, they do not influence me at all)
- If "Yes" to the previous question And to what extent?
(Likert 1-5, from "Slightly" to "Extremely")
16. If Grana Padano is included as a pre-portioned ingredient inside a meal kit (Verspakket) with fresh local vegetables and a simple recipe card, how likely are you to try it?
(Likert 1-5, from "Not at all" to "Extremely")

-
17. Do you have any suggestions, ideas or comments on how an international product like Grana Padano could better fit into your daily shopping or cooking habits?
(*Open-ended response*)

Appendix B

R Code

This appendix reports the software, packages and functions used to perform the empirical analysis presented in Chapters 3 and 4, together with the complete R script used for data cleaning, model estimation, diagnostic checks, the ordinal regression robustness check and the sensitivity analysis.

B.1 Software and Packages

All data cleaning, descriptive statistics and regression analyses were performed in R (version 4.4.2). Data manipulation relied on the `tidyverse` collection of packages (in particular `dplyr` and `tidyr`); descriptive statistics were computed with the `psych` package. The three nested linear regression models were estimated using the base R function `lm()`, and compared through an analysis of variance using the base R function `anova()`. Multicollinearity was assessed through the Variance Inflation Factor, computed with the `vif()` function from the `car` package; homoscedasticity was tested with the Breusch-Pagan test, implemented through the `bptest()` function from the `lmtest` package; robust standard errors were computed using `vcovHC()` and `coefTest()` from the `sandwich` and `lmtest` packages, respectively, with the HC1 specification. The ordinal regression robustness check was estimated using the `polr()` function from the `MASS` package. The sensitivity analysis was conducted by re-applying the same estimation and diagnostic procedures to a reduced sample, following the identical code used for the full sample. Regression tables were formatted using the `stargazer` package.

B.2 Complete R Script

The following script reports the code used to estimate the regression models, perform the diagnostic checks, and conduct the robustness checks (ordinal regression and sensitivity analysis) presented in Chapter 4.

```
# Packages
library(tidyverse)
library(car)
library(lmtest)
library(sandwich)
library(stargazer)
library(MASS)

# Load cleaned dataset
df_model <- readRDS("dataset_pulito_fase1_conY.rds")

# Demographic controls
df_model <- df_model %>%
  mutate(
    female = if_else(gender == "Female", 1, 0),
    student = if_else(employment == "Student", 1, 0),
    unemployed = if_else(employment == "Unemployed / Looking for work", 1, 0),
    age_numeric = case_when(
      age == "Under 18" ~ 16, age == "18-25" ~ 21.5, age == "26-35" ~ 30.5,
      age == "36-50" ~ 43, age == "50+" ~ 55
    )
  ) %>%
  drop_na(female, age_numeric)

# Mean-centering (Aiken and West, 1991) and interaction terms
df_model <- df_model %>%
```

```

mutate(
  X_c = scale(verspakket_openness, scale = FALSE),
  Z1_c = scale(local_pref, scale = FALSE),
  Z2_c = scale(nutriscore, scale = FALSE),
  Z3_c = scale(familiarity_gp, scale = FALSE),
  X_Z1 = X_c * Z1_c,
  X_Z2 = X_c * Z2_c,
  X_Z3 = X_c * Z3_c
)

# ---- Regression models ----

# Model 1: baseline (controls only)
m1 <- lm(Y_purchase_intention ~ age_numeric + female + student + unemployed +
  blogger_influence_dummy + price_sens, data = df_model)

# Model 2: main effects (+ X and moderators)
m2 <- lm(Y_purchase_intention ~ age_numeric + female + student + unemployed +
  blogger_influence_dummy + price_sens + X_c + Z1_c + Z2_c + Z3_c,
  data = df_model)

# Model 3: full model (+ interactions, tests H1-H4)
m3 <- lm(Y_purchase_intention ~ age_numeric + female + student + unemployed +
  blogger_influence_dummy + price_sens + X_c + Z1_c + Z2_c + Z3_c +
  X_Z1 + X_Z2 + X_Z3, data = df_model)

# Model comparison
anova(m1, m2, m3)
summary(m3)
stargazer(m1, m2, m3, type = "text")

# ---- Diagnostics ----

```

```

# Normality of residuals
shapiro.test(residuals(m3))
qqnorm(residuals(m3)); qqline(residuals(m3))

# Multicollinearity
vif(m3)

# Homoscedasticity
plot(fitted(m3), residuals(m3)); abline(h = 0, col = "red")
bptest(m3)

# Robust standard errors (HC1)
coeftest(m3, vcov = vcovHC(m3, type = "HC1"))

# ---- Robustness check: ordinal regression ----

df_model <- df_model %>%
  mutate(Y_ordinal = factor(Y_purchase_intention, levels = 1:5, ordered = TRUE))

m3_ord <- polr(Y_ordinal ~ age_numeric + female + student + unemployed +
  blogger_influence_dummy + price_sens + X_c + Z1_c + Z2_c +
  Z3_c + X_Z1 + X_Z2 + X_Z3, data = df_model, Hess = TRUE)

# p-values (not reported by default by polr())
coef_table <- coef(summary(m3_ord))
p_values <- pnorm(abs(coef_table[, "t value"]), lower.tail = FALSE) * 2
round(cbind(coef_table, p_values), 4)

# ---- Sensitivity analysis: excluding ambiguously coded responses ----

ambiguous_ids <- c(16, 18, 25, 36, 44, 45, 48, 49, 51, 62, 64, 66, 72, 73, 75,

```

```
      88, 90, 94, 95, 118, 121, 131, 137, 140, 141, 147, 148,  
      156, 158, 165)
```

```
df_sensitivity <- df_model %>%  
  filter(!respondent_id %in% ambiguous_ids)  
  
m3_sens <- lm(Y_purchase_intention ~ age_numeric + female + student + unemployed +  
  blogger_influence_dummy + price_sens + X_c + Z1_c + Z2_c + Z3_c +  
  X_Z1 + X_Z2 + X_Z3, data = df_sensitivity)  
  
summary(m3_sens)  
coeftest(m3_sens, vcov = vcovHC(m3_sens, type = "HC1"))
```