



THE UNIVERSITY
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**INNOVATING TRADITIONAL PRODUCTS:
PRODUCT AUTHENTICITY VS. PERCEIVED SACRIFICE FROM THE
INNOVATION**

By

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Abstract

Products are continuously innovated to improve organization efficiency and meet consumer expectations. Although satisfying consumer expectations in a society where continuous product improvement is imperative to survival, 41% of these innovated products eventually fail (Barczak et al., 2009). While this could be due to the perceived lack of authenticity of the innovated product leading to diminished perceived value, our understanding of the relationship between authenticity and value creation remains limited. Moreover, there is no conceptual explanation relating to how consumers react when a traditional product is modified or how consumers' characteristics, and consumption situation moderate trade-offs between perceptions of product authenticity and increased functional benefits. This study addresses these gaps through the development and testing of a conceptual framework employing three different contexts and three different countries. The research examines whether the innovation of a product will elicit a stronger influence on perceived authenticity when the product is traditional rather than not traditional, and whether perceptions of authenticity of the innovated product will impact perceptions of gain from the innovation and purchase intention.

A preliminary exploratory qualitative study conducted to inform and support the conceptual framework, involving eleven focus groups and wine tastings, was conducted in Jakarta, Adelaide, and France. The focus groups investigating perceptions towards the innovated products (low and no alcohol wine as well as bamboo bicycles and traditional Asian Medicine served in the form of pills/capsules), were conducted in different countries with the purpose of understanding the role of product traditionality on perceptions towards product innovation.

A quantitative study followed, consisting of three surveys (each focusing on a specific stimulus) launched in France (1333 participants), Singapore (1326 participants) and Australia (1321 participants). The quantitative study aimed to test the hypothesised relationships between product traditionality, congruence of innovation, perceived authenticity of the innovated

product, and perceived gain and sacrifice from the innovation among others. The data of the quantitative study was analysed using Structural Equation Modelling (AMOS).

Overall the qualitative results supported the conceptual model, showing that Indonesian participants are more open to consuming low/no alcohol wine but still consider the product to be wine in contrast to Australian and French participants, who reacted more negatively to the product innovation and did not consider the product to be wine (authentic). The opposite was true for traditional Asian medicine. Consumption history, frequency, gender and situation were found to play a moderating role. Quantitative results indicated that the conceptual model fit the data for all three contexts when considering the aggregated and country specific samples. Moreover, support was provided for the hypothesised relationship between traditionality perceptions and perceptions of authenticity of the innovated product, which in turn was found to significantly and positively influence perceived gain from the innovation and purchase intention. While several hypothesised relationships were found to be generalizable across different products and countries, a comparison between the contexts illustrated that some influences are likely to be context-specific as support for the hypotheses was not always consistent for all three contexts.

Declaration

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission in my name for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint award of this degree.

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Signature:

Date: 29/07/2017

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Chapter 1: Introduction

1.1 Introduction and Research Objectives

Innovation is very important for companies in order to meet consumer expectations, with 90% believing that innovation is a priority (Slimane, 2015). However, launching innovated products comes with high risks and the success rate is usually under 41% (Barczak et al., 2009) due to feelings of inherent uncertainty faced by consumers when purchasing new products. As a result, the question of what can lead to a successful product innovation becomes highly important. It is established that factors influencing the success of a product innovation relate to superior product attributes and consumer characteristics (d'Hauteville, 1994). Product authenticity has also become an increasingly important factor influencing consumer behaviour and has been argued to overcome even objective quality perceptions as the main purchasing criterion (Gilmore and Pine, 2007), thus carrying with it an almost sacred, cultural type of interpretation that conveys value (Frazier et al., 2009). However, research offering quantitative evidence that subjective interpretations of product authenticity post an innovation create value for consumers, thus leading to increased purchase intentions, is very limited (Kovács et al., 2013). Moreover, while the consumption preferences and behavior of consumers who seek authentic value have been explored (Lewis and Bridger, 2011, Crosby and Johnson, 2003), the concept of consumer need for authenticity in the context of product innovation is relatively under researched (Liao, 2015).

At its core, product value is a subjective assessment of what is received versus what is sacrificed to get it (Gupta and Zeithaml, 2006), referred to in this study as *perceived sacrifice* (perceived disadvantages from a product innovation are higher than perceived advantages) and *perceived gain* (perceived advantages from the product innovation are higher than perceived disadvantages).

When it comes to goods and services considered to be traditional, objects perceived as authentic are considered more valuable than non-authentic objects with the same characteristics (Kovács et al., 2013). However, when product characteristics change due to innovation, the current literature does not indicate whether consumers' need for authenticity outweighs the *functional benefits* (advantages) they would enjoy from the innovation. Different consumers rely on diverse cues to assess the properties of authenticity; hence, attributions of authenticity may vary among them creating variations in perceptions. For example, higher consumer personal innovativeness leads to a higher propensity to accept new products and innovations (d'Hauteville, 1994), while conversely, higher involvement in a product category is expected to decrease such adoption of the innovated product if it is perceived as less authentic (Liao, 2015, Carroll and Wheaton, 2009). However, our overall understanding of these apparently opposing dynamics on consumer behaviour with respect to innovating traditional products is poor. Due to authenticity becoming an issue when compromised (Peterson, 2005b, Trilling, 2009), traditional products which might evoke feelings similar to those aroused by something regarded as authentic (Carroll and Wheaton, 2009, Levine, 2005) are likely to represent particular challenges to consumer acceptance when innovated as opposed to 'modern' product types. Hence, this study seeks to answer the following research questions:

1. How do perceptions of product traditionality (product integration in the culture) impact perceived authenticity of the innovated product and its ability to deliver value (perceived gain/sacrifice from the innovation)?
2. Do product and innovation characteristics (degree of complexity of the innovation, and degree of innovativeness) impact congruence of the innovation with the original product category?
3. Does congruence of the innovation with the original product category impact perceptions of authenticity of the innovated product?

4. Does perceived product authenticity significantly and positively impact perceived gain/sacrifice from the innovation and purchase intention?
5. Is the impact of authenticity on perceived gain/sacrifice and purchase intentions moderated by consumer characteristics (product involvement, knowledge and past orientation)?
6. Are the answers of the questions above generalizable for different products and for consumers of different cultures?

1.2 Conceptual Model

Given the need for continuous product innovation and improvement, and the substantial number of gaps in our knowledge related to what consumers believe when characteristics of a product change substantially due to innovation, a new conceptual framework was developed which focuses on the extent to which authenticity generates value for innovated products (Figure 1.1). Product authenticity represents consumers' subjective judgment about the products' authentic value (Grayson and Martinec, 2004, McNamara, 1997). Authenticity can be defined as a characteristic attributed by social agreement to certain entities, based on whether an object is considered genuine or 'real' (Trilling, 2009). Modern consumers often characterize authentic products as original, genuine, unique, and real (Munoz et al., 2006). Apart from authenticity, perceived gain/sacrifice, perceived functional benefits, consumer and product characteristics, another factor likely to influence consumer behaviour in the context of product innovation is the perceived congruence of the particular innovation with the original product category and its attributes. It is expected that a more relevant or congruent association between an innovated product and the product category, would facilitate the introduction of innovated products to a market and assist consumers' processing of marketing messages (Fleck and Quester, 2007). However, if perceived incongruence results from an innovation, it is expected that consumers would react defensively and negatively, resulting in unfavourable cognitive elaborations and/or consumer frustration (d' Astous and Bitz, 1995). Currently, there

is no empirical evidence as to whether a perceived incongruence of the innovation with the original product attributes could lead to lower levels of perceived authenticity of the innovated product, which warrants a more detailed exploration.

Consumers rely on different cues to assess the properties of authenticity, where attributions of authenticity may vary between consumers, creating variations in value ratings (McNamara, 1997). Thus, as consumer characteristics might influence final judgment, the moderating effect of consumer attributes (such as: product involvement, past orientation, and subjective knowledge) on the relationships between perceived authenticity and perceived gain/sacrifice from the innovation, and perceived authenticity of the innovated product and purchase intention is analysed. It is expected that consumers with a high past orientation will value authenticity more as it can imply sacredness when it relates to memories of past days or produces nostalgia (Beverland, 2005). The study offers important managerial implications as it explicates how consumers react to innovations of traditional products, as well as theoretical contributions about authenticity and congruence in the context of product innovations.

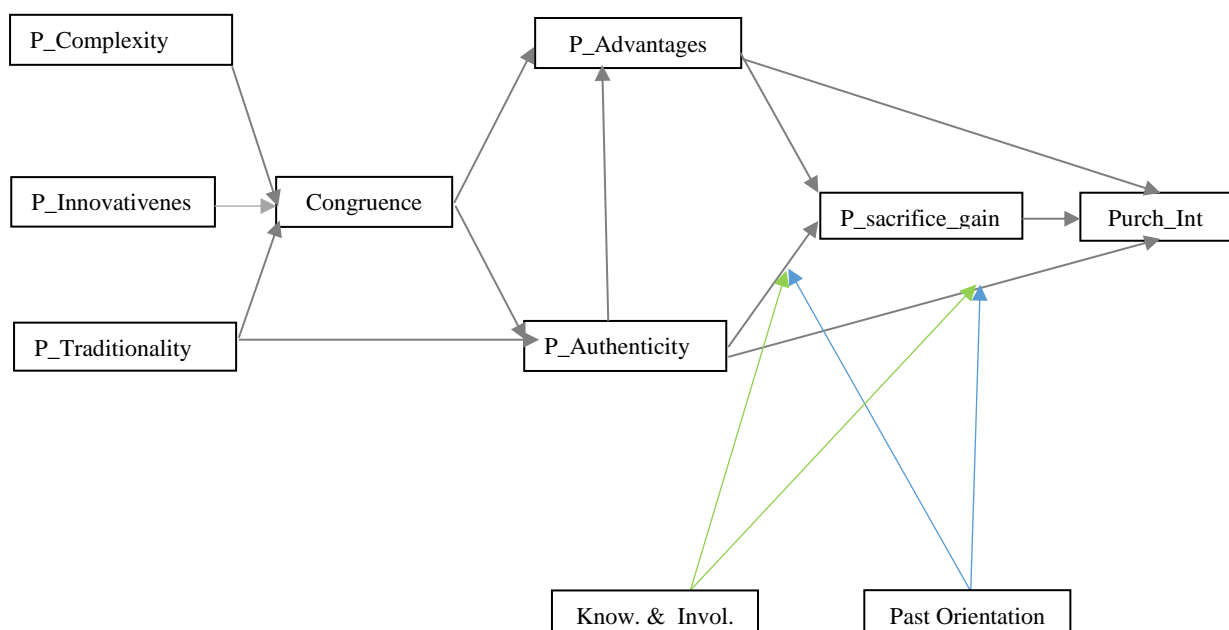


Figure 1.1: Proposed Conceptual Framework

1.3 Method and Analysis

This research adopts a mixed methodological approach and includes both qualitative and quantitative stages. The combination of qualitative and quantitative data collection, analysis and interpretation, gives the researcher additional insights that surpass the scope of a single technique (Creswell and Clark, 2007). The combination of qualitative and quantitative methods in the current research (Figure 1.2) resembles the research design as described by Creswell and Clark (2007) in which qualitative data collection stage is considered as supportive in regards to the quantitative data collection stage, designed to empirically test the proposed model.

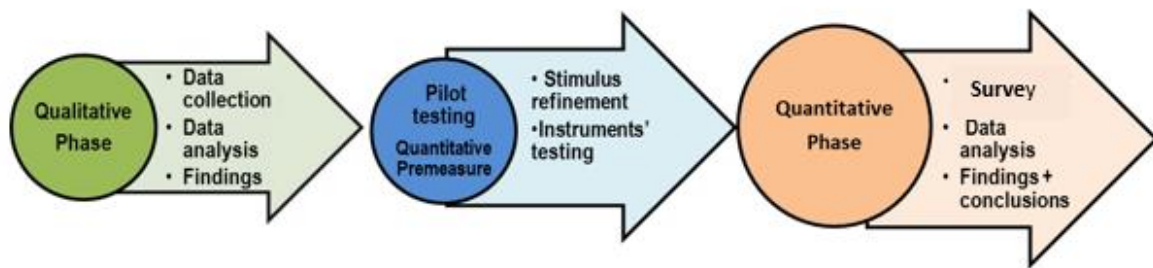


Figure 1.2: Research Design of This Study

The study is comprised of 3 stages. Data was collected for three different contexts: wine, bicycles and traditional Asian medicines (TAMs), in three different countries (Australia, France, and Singapore for the quantitative research stage, and Australia, France, and Indonesia for the qualitative research stage). The innovations consisted of lowering the alcohol level of wine, serving TAMs in the form of pills/capsules (TAMc), and changing the frame of the bicycle to bamboo. The countries were selected on the basis of product traditionality perceptions. Wine is highly traditional in France and Australia, and not traditional in Singapore or Indonesia. The opposite can be said for TAMs, while bicycle is considered traditional in all three countries. The first qualitative stage consists of focus groups conducted in Indonesia, Australia and France. The purpose of conducting these groups is to gather exploratory data specific to the relationships illustrated in Fig. 1.1, inform the conceptual framework in terms of advantages obtained from the innovation, situation of consumption and what participants

consider traditional and culturally integrated products, and determine if the products identified for testing were suitable. Convenience sampling was employed to examine the relationship between the perception of product traditionality and perceived authenticity of the innovated product. A semi-structured interview guide was developed based on the gaps in the literature with a view to encourage discussion, provide flexibility, and ensure consistency across several focus groups (Stewart and Shamdasani, 2014). Key questions were directed to period of product consumption, situation of consumption, frequency of consumption, perception of the innovated product, benefits obtained from the innovated product, perceptions of authenticity of the innovated product, whether they viewed the product as traditional etc. Stage 2 consists of a pilot survey in the form of an online questionnaire conducted with Australian respondents. The primary objectives of the pilot survey were to validate measurement instruments and product stimuli. Using the questionnaires which were developed and refined after conducting the pilot study, stage 3 consists of a survey conducted in Australia, Singapore and France for all three contexts. Non probability sampling was employed, with respondents recruited using a variety of communications and incentive methods through a professional research company in the USA, Qualtrics. Samples were comprised of members of the general public and the criteria of selection differed depending on the stimulus. However, all respondents had to be over 18 years old and citizens of their respective countries. Data was analysed via structural equation modelling. Each of the hypotheses was analysed using the complete path model, other than only the constructs involved, as this allows for the nature of the relationships between constructs to be explored simultaneously (Hair et al., 2012b). The path model was specified, identified and estimated using fit indices (χ^2/DF , CFI, GFI, TLI, and RMSEA). After determining the fit of the model, parameter estimates were examined with the purpose of individually assessing each of the proposed relationships.

1.4 Scope of the thesis

The theoretical contributions and managerial implications (discussed in chapter 8) suggest that relationships identified in this study can be generalized beyond the scope of this thesis. However, further examination among the key constructs encompassing a broader spectrum of authenticity perceptions is recommended.

The scope of this thesis included three different stimuli that belong to three different product categories. While it can be argued that wine and TAMs are in the field of consumable products, the third stimuli (bicycle) is outside of that category. Therefore, the relationships examined in this study can be extrapolated and the findings applied to different unrelated product categories. In addition, data for the three stimuli was collected not only Australia wide, but also in France and Singapore. This allows for cultural influences to be identified. This is particularly relevant for the context of traditional products, such as wine, where consumer wine culture is anticipated to impact consumer perceptions and behaviour (Overby et al., 2004). To allow for a clear differentiation, countries with a different degree of product integration and consumption culture were selected. For example, in the case of wine, France is an ‘old world’ wine country, Australia is a ‘new world’ wine country, while Singapore is at the other end of the spectrum when it comes to wine making and consumption (O’Neill et al., 2002). The opposite is the case for TAMs, where Singapore is the one with a long history of consumption of traditional Asian medicine, while Australia and France are at the other end of the spectrum.

Finally, this thesis specifically investigates consumer perceptions of product authenticity, and does not consider brand authenticity or the impact of perceptions of authenticity of one’s self. Further research including a broader spectrum of authenticity is recommended.

1.5 Outline of the thesis

The structure of this thesis is an adaptation of the structure approach in Perry (1998). An outline of the thesis and a short description of each chapter can be found below.

Chapter 1 provides a brief background and introduction to the study, particularly focusing on the research questions, conceptual framework, research methodology and research scope.

Chapter 2 consists of a literature review pertinent to product innovation, authenticity and consumer behaviour and provides a conceptual framework addressing gaps specific to how consumers react when a traditional product is modified, whether perceptions of traditionality impact the authenticity perceptions of the innovated product and whether authenticity perceptions influence perceived gain/sacrifice from the innovation and purchase intention. A thorough review of product innovation and authenticity is undertaken followed by a literature review on congruence of the innovation, consumer characteristics potentially moderating the impact of authenticity perceptions on perceived gain/sacrifice and purchase intention (past orientation, involvement, and knowledge), and external attributes such as situation and its role on consumer behaviour.

In chapter 3, the hypotheses tested in this research are formalised and summarised. Developing from this theoretical foundation, the rationale for the research design, stimuli and measures used are discussed. The chapter ends by providing evidence of consumers' perceptions of authenticity, functional benefits, perceived sacrifice/gain and purchase intention obtained from focus group discussions as preliminary data supporting the conceptual framework and determining products and countries to be used as stimuli in the main study.

The knowledge gained from the qualitative stage of the study, together with measures established in the literature, is used to develop the data collection instruments described in detail in chapter 4. The research design is outlined followed by a description of the sampling methods and a specification of the data collection instruments with descriptions of the measures used to quantify consumer knowledge, involvement, past orientation, authenticity of the innovated product, congruence of the innovation with the original product category, product integration (traditionality) and advantages of the innovated product. The chapter ends with a

discussion of the preliminary quantitative study (pre-test), including a description of the sample, and the analysis undertaken to examine the reliability and validity of the measures used. Chapter 5 addresses the results of one of the contexts, namely low alcohol wine. A demographic profile of the participants surveyed is presented followed by the results of a confirmatory factor analysis conducted to verify the factor structure of the constructs used in the study. The chapter also investigates the invariance of the measurement instruments (via multigroup analysis) as only in the event of complete or partial invariance can the results be compared country wise. Moreover, the identified path model reflecting the conceptual model and hypothesised relationships is introduced and an estimation of the path model is conducted for Australia, Singapore and France separately in order to test the robustness of the model across different locations.

The chapter ends with an investigation of the moderation effect of consumer characteristics on the path model and an examination of the potential impact of situation on perceived gain and sacrifice from the innovation. The same structure was employed for chapters 6 (addressing the results of Traditional Asian Medicine in the form of capsules) and 7 (addressing the results of the third context, bamboo bicycle).

Chapter 8 identifies and summarises the main findings and conclusions of this thesis, highlighting the theoretical contributions to academic knowledge. The managerial implications are then outlined, followed by a discussion of the limitations of the research and directions for the future.

1.6 Chapter summary

This chapter laid the foundation for this thesis by introducing the research questions, conceptual framework, research methods, the scope of the study and a thesis outline based on which the thesis can proceed with a detailed description of each step. The next chapter presents

a summary of the literature, mainly in the research areas of authenticity, consumer behaviour, congruence and product innovation.

Chapter 2: Literature Review

2.1 Introduction

Product innovation is a critical survival strategy for companies that has many interpretations (O'Dwyer et al., 2009). For example, innovation has been conceptualized as “an information process which is then concretized as a product that meets demand” (Nonaka and Kenney, 1991, p.67). Innovation is also perceived as a process enabling the generation of new information, and realized in the final product (Nonaka and Kenney, 1991). Similarly, innovation is the acceptance, implementation, and generation of processes, new ideas, services, or products (Kanter, 1984). The development of a product can be described as the transformation of a market opportunity into a tangible or intangible (experience, service) product available for sale (Krishnan and Ulrich, 2001). Hence, product innovation can be geared toward the conceptualisation of an idea for an entirely new product not currently on the market that will occupy a new niche (Gruenwald, 1997). However, innovation does not always need to involve the creation of a totally new product, it can also be defined as the process of developing a new offer through modifying or updating an existing product (Gruenwald, 1997) and this will be the focus of this research.

In the past, organizations were able to survive with limited/little innovation (Rainey, 2008). Instead they would focus on providing good products in order to maintain market competitiveness. While this can still occur, particularly for products with long lifecycles and limited potential for innovation, it is no longer the norm (Rainey, 2008). It is now generally accepted that product innovation is imperative for any business to withstand the test of time (Gruenwald, 1997). The motivation to innovate has been driven by internal (improving the efficiency of organizations) and external factors (consumer expectations, needs and wants etc.),

with the goal of gaining and maintaining consumer interest and a competitive advantage (Rainey, 2008). Satisfying consumer expectations in markets where they are used to continuous product improvement, is essential to survival in today's competitive environment. Compared to just a decade ago, customers desire products with exceptional value, improved benefits, as well as good quality and reliability (Fawcett and Fawcett, 2013). Thus, for a business to keep growing and remain competitive, it is important to anticipate changes in technology, customer preferences, and industry standards and execute product improvements and innovations on a timely basis. The importance of innovation is accentuated almost 30 years ago by Gruenwald (1997), who states that businesses, whether they sell waste management or interstellar communications, gene-splicing or janitorial services, live through new growth and not through clones of the past. The transition from physical books to e-books serves as a good illustration of the importance of product innovation – the companies that have been selling physical books and did not conduct any product development, quickly failed. Not keeping up with market changes, such as the technology innovations that made it more convenient for people to download books rather than purchase a physical copy in a shop, proved very detrimental. In contrast, companies that anticipated this change and embraced product innovation offered full packages to their customers by not only making it possible to download books from their Web sites, but also integrating e-books with their own brand of electronic readers.

Another illustration of the importance of product innovation is in the area of smart phones, where several companies have established themselves as market leaders by being pioneers in introducing new products. Such companies innovate periodically, while examining closely the lifecycle of their current product offering. Recognising the importance of innovation has kept companies relevant in the face of constant technology innovations and changing consumer preferences. However, meeting consumer expectations can be challenging – it is hard for companies to introduce new products and even harder to innovate already established ones

(Katz, 2003). Launching innovated products is costly and risky with a success rate of usually under 41% (Barczak et al., 2009). This can be explained by the inherent feelings of uncertainty experienced by consumers when purchasing any innovated product. Consumers, generally risk averse, use supportive information to reduce their uncertainty (Martínez et al., 2009). Companies often seek to reduce uncertainty by resorting to brand extension strategies to introduce an innovated product (Martínez et al., 2009). Brand extensions usually involve the usage of an already existing brand name to introduce an innovated product (Aaker and Keller, 1990) with the purpose of transferring brand equity already developed in traditional markets (Farquhar, 1989, Balachander and Ghose, 2003). The equity transfer from the original brand to the extension, serves to stimulate demand and to avoid the costs of developing and marketing a new brand name (Aaker and Keller, 1990, Milewicz and Herbig, 1994) and at the same time, provide consumers with a strong element of familiarity. These advantages make brand extensions one of the most common marketing strategies (Völckner and Sattler, 2006). However, in this research, the brand of the innovated products explored will not be mentioned, as the intent is to investigate other factors that can potentially influence the success of product innovations.

The literature suggests that a company can influence the success of a product innovation by assuring consumer perceptions of better value/quality and by understanding customer needs, the nature of the market and the competitive environment (McNally et al., 2011). On the other hand, factors that influence the product's acceptance by the consumers include a belief in superior product attributes, consumer characteristics, and congruence of the innovation with the original product category (d'Hauteville, 1994, Fleck and Quester, 2007, Gilmore and Pine, 2007). Authenticity has also become an increasingly important factor for consumers and has been said to overcome even objective quality perceptions as the main purchasing criterion (Gilmore and Pine, 2007). Importantly, product category has been shown to play a role, as

consumers are more accepting of product innovations in categories such as computers, software, cars etc. where innovation is not only welcomed but also expected.

In spite of the existing body of literature specific to consumer reactions to product innovations, the examination of consumers' reactions to an innovation of a product steeped in tradition, like wine, is limited leading to a substantial gap in our current knowledge. Even though the innovation of a traditional product can propose new benefits, potential perceived downfalls of the innovation might influence its success leading to the question of "What happens when a product with a strong traditional and historical heritage is innovated as compared to one considered less entrenched?" This chapter provides a thorough review of the existing literature relevant to the research, including the identification of gaps in current knowledge specific to how product attributes (product traditionality (integration in the culture), complexity of the innovation and perceived product innovativeness), consumer characteristics (past orientation, product knowledge, and involvement), perceptions of authenticity of the innovated product and congruence of innovation with the original product category, influence perceived sacrifice/gain and purchase intentions specific to an innovated traditional product. Perceived sacrifice refers to the degree by which the perceived downfalls of an innovation overcome the perceived benefits (advantages) obtained from the innovation, while perceived gain refers to the degree by which the perceived benefits (advantages) of the innovation overcome the downfalls. Moreover, what is considered a very traditional product in one culture, might not be considered to be so in another and a society's culture affects the behavior of its members (Hofstede, 2010). Hence, this research will explore how consumer acceptance differs when the innovated product is traditional to their culture in comparison to when it is not. Furthermore, as it is recognized that characteristics of an individual interact with different situations to induce certain behaviours (Belk, 1974, Bonner, 1985, Celsi and Olson, 1988, Chow et al., 1990, Dickson, 1982, Hornik, 1982, Richins and Bloch, 1986), this study will analyse the impact of the

situation of consumption on perceived sacrifice/gain related to an innovated traditional product. The chapter concludes with the illustration of a conceptual framework providing the basis of the investigation of how consumers react when a traditional product is innovated and how consumers' characteristics moderate the perceived tradeoff between perceived authenticity of the innovation, and the gained functional benefits.

2.2 Attributes of an innovated product

Perceptions of product attributes influence the success of an innovated product (Lai, 1995). The appreciation of a product's attributes depends largely upon the individual consumer's perceptions and the situation in which the product is consumed. As consumer perceptions are more malleable and represent a key to any marketing communication, this study focuses on consumer perceptions and factors that influence their value judgement about an innovated product. The majority of innovation studies examine the issue of who adopts innovations, rather than examining the attributes of innovations that may lead to faster diffusion (e.g., how innovative a product is perceived to be) (Rogers, 2003). Perceived product innovativeness can be defined by how new a product is (Hoeffler, 2003). Newness is a key dimension of perceived innovativeness (Hoeffler, 2003, Rogers, 2003). Another product attribute that influences the success of an innovated product and that is considered in the study, is perceived complexity of the innovated product. Perceived complexity is the degree to which an innovation is perceived as relatively difficult to understand (Rijdsdijk and Hultink, 2009). It is negatively related to adoption such that an innovation perceived to be more complex will be less likely to be adopted (Rogers, 2003). Given perceived complexity is defined in terms of difficulty of comprehension, it is expected that products that rank high on complexity are likely to be perceived low on functionality thus translating into lower levels of perceived advantages from the innovation (Lowe and Alpert, 2015).

The examination of these constructs in the context of traditional products is missing, resulting in a gap in our knowledge related to what leads to a successful innovation of products that are accepted and deeply rooted in tradition. As a result, apart from how innovative (perceived product innovativeness) and complex (perceived complexity of the innovation) the innovated product is perceived to be, product traditionality (how traditional a product is perceived to be both in its original) will be one of the main product attributes. Traditional products were chosen because something steeped in tradition might evoke feelings similar to those aroused by products regarded as authentic (Carroll and Wheaton, 2009, Levine, 2005, Sokolov, 1998) and as already briefly mentioned, authenticity is argued to have overcome quality as a major purchasing criterion (Gilmore and Pine, 2007) carrying with it an almost sacred, cultural type of interpretation that conveys value (Carroll and Wheaton, 2009, Frazier et al., 2009). However, consumers' judgment of the authenticity of a product and its adoption is subjective (McNamara, 1997). It is mostly agreed by research scholars that authenticity is not an attribute inherent in an object; thus, is better understood as an evaluation given or made by a particular evaluator in a particular context (Carroll and Wheaton, 2009, Bruner, 1994, Cohen, 1988, DeLyser, 1999, Haslam, 1985, Grayson and Martinec, 2004). Consumers rely on their perceptions to make an evaluation (Scott, 1993, Stem, 1992, Peñaloza, 2000) so for an offering to be considered authentic, it needs to conform to consumers beliefs regarding how things need to be (Grayson and Martinec, 2004). As a result, the management and analysis of these perceptions of authenticity will be critical when launching any innovated product. In order to understand the potential influence of the product innovation on these variables (such as authenticity and congruence), it is important to understand their meaning, importance, and what is already known.

2.3 Authenticity

Authenticity is a complex concept (Boyle, 2003) that can be analysed in various contexts, including product evaluations (Leigh et al., 2006). Although this term is used frequently, few researchers have clearly defined it, allowing for the term to imply different meanings in different contexts (Grayson and Martinec, 2004). Some synonyms for authenticity include: ethical, natural, sustainable, beautiful, honest, simple, rooted, and human (Boyle, 2003), and for modern consumers authenticity also implies being real, unique, genuine, and original (Munoz et al., 2006). In the most elaborate examination of authenticity in the marketing field, Grayson (2002) stated that depending on the circumstances and on what is being evaluated, consumers' perceive authenticity differently. Grayson and Martinec (2004) identified two types of authenticity, namely indexical authenticity, when an object has either factual or spatiotemporal connection to history (Grayson and Shulman, 2000), or iconic authenticity, when an object resembles the originals only physically (accurate reproduction). These two types of authenticity are not inherent to an object and are not necessarily mutually exclusive, thus making authenticity a consumer evaluation dependent on personal experience (Carroll and Wheaton, 2009, Bruner, 1994, Cohen, 1988, DeLyser, 1999, Haslam, 1985, Grayson and Martinec, 2004). All market offerings have iconic or indexical properties, but not all will be considered as authentic by consumers, resulting in no completely objective criteria for determining whether a market offering is iconically or indexically authentic (Phillips, 1997). Since consumers rely on their perceptions to make an evaluation (Scott, 1993, Stem, 1992, Peñaloza, 2000), an offering needs to conform to their personal views of the criteria necessary for a product to be considered authentic (Grayson and Martinec, 2004). As a result, the analysis of perceptions of authenticity will be critical for product managers when launching a new product. As Trilling (2009) points out, evaluating whether one's self is authentic is not the same

as evaluating whether something else is authentic (Daniel, 1996). As the purpose of this research is to examine consumer evaluations of market offerings, we will focus on the latter.

Authenticity has been thoroughly discussed in the fields of geography, communication studies, anthropology, archaeology, tourism, sociology, aesthetics, and literary criticism (Grayson and Martinec, 2004); however not enough attention has been given to authenticity in consumer research. The fact that its market manifestations are still not clearly understood (Peñaloza, 2000), provides an opportunity to expand our understanding of this concept and contribute to the ongoing research in the social sciences. Several researchers have discussed the marketplace manifestations of authenticity and few articles have focused completely on this topic. For example, Costa and Bamossy (1995) showed that consumers seek authenticity in museum souvenirs. On a similar note, authors have discussed that consumers look for authenticity when experiencing foreign cultures (Thompson and Tambyah, 1999), props from favourite television shows (Kozinets, 2001), brands (Holt, 2002), reproductions of period artefacts (Belk and Costa, 1998), personal possessions (Grayson and Shulman, 2000), retail settings (Wallendorf et al., 1998) and consumption communities (Kozinets, 2002). The appeal of authenticity has been also noted in other domains such as art, tourism, chocolate, music, beer, cosmetics, architecture, furniture, etc. with consumers progressively embracing products that emanate the ‘authentic’ (Lehman et al., 2014). In the case study of the Volkswagen Beetle, Brown et al. (2003) discuss the importance of authenticity when judging a new car model. Consumers disputed the authenticity of the new car, because even though the essence of the brand was infused in the design of the new car, the physical properties were not exactly as the original. On a similar note, they discovered that consumers could not agree on the authenticity of the Star Wars movie sequel due to the fact that they used different cues to determine the authenticity. This is another support of the argument by (Grayson and Martinec, 2004) that

authenticity is constructed by physical attributes (indexical authenticity) and brand essence (iconic authenticity) and that consumers judgment is subjective and based on personal experience (Leigh et al., 2006).

Cohen (1988) discussed how consumers seek authentic experiences, or a natural and primitive location when selecting a touristic destination. This type of authenticity is linked or placed side to side with a point of reference situated in a more traditional past (Stewart, 1993). Another author discussing the importance of authenticity is Peterson (1997), who states that one of the most important elements considered by country music producers when seeking for talent is authenticity. He goes into detail discussing how the country music industry has historically promoted itself as 'authentic', thus only selecting certain artists and controlling the output tightly to fit the image. Similarly, Grazian (2005, p.17) studies "how different kinds of people within the world of Chicago blues employ the concept of authenticity in their daily rounds in everyday life". Likewise, Rao et al. (2005) examine how issues of authenticity affect the boundaries between nouvelle and classical French cuisine and the resulting implications for restaurants. Fine (2006) discusses how the biographies of artists define their sense of authenticity. In order to create an authentic innovation, producers of the innovation face the challenge of creating a product that is original while at the same time conforming to the conventions of a genre or category (Fine, 2006, Peterson, 1997). Rao et al. (2005) found that restaurant critics, representing the consumer, were concerned with authenticity, thus penalized chefs that digressed from classical French cuisine and borrowed from other types of cuisines. However, frequency was found to play a moderating effect. When borrowing techniques from another genre became common, the penalties decreased. Wherry (2006) analyses the importance of authenticity in the Thai market for handicrafts. Holt (2002) thoroughly discusses the attempts by brands to be considered authentic, thus supporting the argument that authenticity is constructed and that it takes an effort to appear authentic (Peterson, 2005a). For

instance, the Levi's 501 campaign in the 1980s made the use of cinema verite techniques popular in order to create the perception that a transparent view onto everyday life was being offered. Similarly, retailers Eddie Bauer, L.L. Bean, and Abercrombie & Fitch suggest that their brands started by outfitting World War II pilots. The Harley-Davidson Company is one of the best examples of a brand working both the subculture and the history angles to increase the perception that Harley's value originates from authentic sources. The managers of the brand have focused their marketing strategy towards the creation of the idea that Harley is an anachronistic company whose heart remains in the 1950s irrespective of the countless innovations to their products over the years. On a similar note, Beverland (2005) discussed tactics employed by wine makers to assert authenticity by stating that the new products authentically represent the old. Images of authenticity were achieved by delivering a sincere story that allowed winemakers to maintain quality while at the same time appearing above commercial considerations. Sincerity was attained through claiming the use of hand crafted techniques, a relationship to place, uniqueness, passion for wine production, while renouncing commercial motives, a use of modern marketing techniques and rational production methods. Such tactics are used to sell a wide range of products. For instance, Jones et al. (2005) show that a London coffee and tea retailer continuously refers to the date the store was founded and the name of the founder, in order to appear authentic. Moreover, studies by Halter (2007), Boyle (2003) and Cobe (2004) discuss the desire expressed by many consumers to experience authenticity within retail spaces.

While these studies are significantly different in context and approach when it comes to the way they consider the concept of authenticity, each of them addresses how authenticity affects consumers and markets (prices, consumption patterns). Moreover, they also agree that the perception of authenticity, permeates an object or service with a deeper, positive meaning to consumers. Taking into consideration authenticity's persistent, long-standing, and

contemporary marketplace appeal, it can be inferred that it is a significant research topic (Grayson and Martinec, 2004). Moreover, when discussing the significance of authenticity as a topic for consumer research, many scholars indicate (Grayson and Martinec, 2004, Peñaloza, 2000, Thompson and Tambyah, 1999, Kozinets, 2001, Kozinets, 2002, Belk and Costa, 1998, Fine, 2006, Holt, 1997) that the consumer search for authenticity is one of the cornerstones of contemporary marketing, being central to consumer roles in every communal consumption context and subculture (Peñaloza, 2000, Kozinets, 2002, Belk and Costa, 1998, Holt, 1997, Muniz and O'guinn, 2001, Schouten and McAlexander, 1995). It has certainly become a trend, particularly in the last couple of decades, to announce that the market offering is "real" in some way that the competition is not. In a world increasingly filled with deliberately staged experiences, consumers rely on how real, genuine, original, sincere and authentic they perceive an offering to be to make their buying decisions (Gilmore and Pine, 2007). This definition is in agreement with other researchers (Trilling, 2009, Costa and Bamossy, 1995, p.300, Bendix, 1992, p.105, Goldman and Papson, 1996, p.142, Kennick, 1985, p.4, Peterson, 1997, p.209, Phillips, 1997, p.5) who define authenticity as a characteristic attributed by social agreement to certain entities and is based on whether the subject being considered is 'genuine', 'real' or 'true'.

However, the words "genuine" and "true" can signify different things to consumers. For instance, one will perceive a Native American necklace to be genuine only if it is made by a Native American craftsperson, while another consumer will consider it genuine as a result of its overall design (Evans-Pritchard, 1987). Similarly, a consumer might consider a meal genuinely Mexican only if it is made in Mexico and consumed by Mexicans, while for another, it is the recipes that provide authenticity regardless of who makes or eats the food (Salamone, 1997). The word authentic is also used to describe something perceived to be not an imitation or copy (Bruner, 1994, Huntington, 1988), thus implying that an object is original or represents

the real thing (Cohen, 1988, Peterson, 1997, Benjamin, 1969, Sagoff, 1978, MacCannell, 1999, Orvell, 2014, Barthel, 1996, Culler, 1981). For instance, an actors' handprints in the concrete of Grauman's Chinese Theatre in Los Angeles are authentic if they are thought to be the real handprints left by the actor (O'Guinn, 1991). Actions are perceived to be authentic if they reflect who the person making them really is (Trilling, 2009, Goldman and Papson, 1996, Phillips, 1997, Curnutt, 1999, Weinberg, 1996, Upton, 1996) and not an act to satisfy social conventions (Cohen, 1988, Trilling, 2009, Thompson and Tambyah, 1999, Holt, 2002, Gair, 1997, Kingston, 1999, Martin, 1993). The literature states that authenticity can be inherent to an object, can be attributed to an object by consumers or marketers, or can result from a relationship between an object and/or a historical period, or nature. Hence, authenticity can be either true or contrived. When, authenticity is inherent, objects or products cannot undergo alterations against quality, history, or art (Postrel, 2003). Hence, consumers as well as marketers play an important role at imparting authenticity to objects (Peterson, 1997, Holt, 1998, Lewis and Bridger, 2011). Postrel (2003) presents a number of subjective forms of authenticity, such as authenticity as balance, harmony, or delight. Authenticity as a connection to time and place is also important for consumers as it affirms tradition (Postrel, 2003). Authenticity considered as self-expression implies that products will be deemed authentic when they serve as an expression of an inner personal truth (Postrel, 2003). The view that authenticity can be intrinsic to an object but also imparted by consumers and marketers is also supported by Beverland (2005) who states that authenticity can be defined as a story that balances industrial and rhetorical attributes with the purpose of projecting sincerity through the promise of commitments to traditions. Therefore, product authenticity can often be more contrived than real (Peterson, 1997, Holt, 2002, Brown et al., 2003). For example, companies can bolster claims of authenticity by portraying themselves as small craft producers that use

natural ingredients and methods preserved over time with the purpose of achieving a competitive advantage (Carroll and Swaminathan, 2000).

Consumer desire for authentic products is not new, as it has existed for hundreds of years (Grayson and Martinec, 2004). The European retail and tourism revenues from the ninth to the eleventh centuries were predominantly generated by an interest in authentic religious relics (Phillips, 1997). In China, the diversity in consumer standards for authenticity during the fifteenth and sixteenth centuries helped to create a booming market for luxury goods (Clunas, 1992). The demand continues to persist today and it can be observed by the purchase of a vast market offerings, ranging from less conventional consumer goods such as ethnic food (Lu and Fine, 1995), travel souvenirs (Harkin, 1995), original art (Bentor, 1993), tickets to historical reconstructions (Handler and Gable, 1997), to more conventional goods and services, such as brokerage advice and athletic shoes (Goldman and Papon, 1996). Outside of marketing and consumer research, authenticity has also inspired philosophers (Heidegger, 1962, Sartre, 1969) and social critics (Trilling, 2009) to debate its meaning and its role in guiding moral behaviour since the nineteenth century (Carroll and Wheaton, 2009, Taylor, 1991), leading many scholars to agree on its importance as a topic of study. Over the past decades, authenticity has been explored in a vast number of influential works and has been labelled as a crucial attribute of contemporary life (Trilling, 2009, Benjamin, 1969, MacCannell, 1999, Anderson, 1990, Goodman, 1976, Baudrillard, 1983). For example, Jacknis (1990, p.9) states that “authenticity is a general preoccupation of modern western culture” while Lowenthal (1992, p.184) proposes that “the cult of authenticity pervades modern life.” On a similar note, Orvell (2014) discusses how the tension between authenticity and imitation has been a “key constituent” in American culture since the Industrial revolution, and MacCannell (1999, p.145) refers to authenticity as “the key to the development of the modern world”.

2.4 Perceived Value and the impact of authenticity on value creation

Consumers evaluate the value of a product before purchasing it. The value of a product can be summarized as the person's evaluation of the utility of a product on the basis of what is perceived to be received and what is given up (Zeithaml, 1988). The value dimensions often include the social, emotional, quality and price (Sweeney and Soutar, 2001) but at its core, it is indeed an assessment of what is given up versus what is received (Gupta and Zeithaml, 2006). However, when a product is innovated, the perceptions of what is received (benefits) and what is given up (disadvantage of the innovation) may change. In the example of e-books, benefits of the innovation include increased mobility (ability to carry a whole library in your pockets), convenience (ease to obtain another books), saving physical space, saving time and money (no wait time or cost for shipping) while disadvantages include library loss, tactile loss and lending loss among others. Depending on the consumer and their preferences, some will prefer to stick to the original version while others will value more the benefits obtained via the innovation. This preference could also change in different occasions. It is precisely this concept of what is given up versus what is received that explains the '*perceived sacrifice*' variable used in this study. More specifically, perceived sacrifice can be defined as the degree by which the disadvantages of the innovation (benefits that are lost) overcome the benefits obtained from the innovation (the value of what is received). Following the same logic, '*perceived gain*' can be defined as the degree by which the benefits of the innovation overcome the perceived disadvantages of the innovation. This is critical to understand in the context of a product innovation because value ratings tend to drive consumer choice and purchase intention (Sweeney and Soutar, 2001).

When authenticity relates to transacted market goods and services, it is regarded as conveying direct literal meaning: objects perceived as authentic are considered as more valuable when compared to non-authentic objects that possess the same characteristics (Kovács et al., 2013).

However, empirical studies demonstrating that consumers translate product, service or organization authenticity into higher value ratings are rare (attempts have been made by Derbaix and Derbaix (2010); Castéran and Roederer (2013) and Kovács et al. (2013)). Alternatively, many attributions of authenticity depend on subjective interpretations of consumer behaviour rather than on an analyses of consumers' declared preferences (Peterson, 1997, Rose and Wood, 2005, West, 2010, Beverland and Farrelly, 2010, Beverland et al., 2008, Botterill, 2007). This interpretative approach can lead to two potential problems arising (Kovács et al., 2013). Firstly, the association of authenticity with value ratings can be specious or epiphenomenal. Consumers may use authenticity as a subtle way to convey quality judgments. Secondly, other than it being a trigger of value, in a process consistent with 'self-authentication' (Rose and Wood, 2005, Arnould and Price, 2000), the attribution of authenticity may be a post-hoc rationalization of a prior value assessment (Kovács et al., 2013).

As mentioned, three empirical studies exist that attempt to measure an empirical association between consumer value generation (ratings) and authenticity. In the first, Derbaix and Derbaix (2010) dealt with the authenticity and value of attending generational music concerts and a positive correlation was found. Castéran and Roederer (2013) conducted an online study with 645 respondents on opinions about the 2010 Strasbourg Christmas market (attendance was not mandatory to complete the survey). The results showed that perceived authenticity lead to more visits (30.2% more) and a more recent visit (by 22 months). Even though the studies above offer some evidence to the claim that authenticity imputes value, this evidence is limited (Kovács et al., 2013). Both studies used far less direct measures of authenticity that do not consider how attributions of authenticity is embedded in language, leaving interpretation open. Furthermore, both used the same measure for authenticity (Camus, 2004), questioning claims of causality. Lastly, the social contexts examined varied vastly, making generalizability questionable. Our study will attempt to address this gap by measuring the link between

authenticity and value for three different product offerings (wine, traditional Asian medicines and bicycle) and three different countries (France, Singapore, Australia).

The third study by Kovács et al. (2013) showed that consumers assigned higher ratings to restaurants regarded as authentic, even after controlling for restaurant quality in several ways. However, ratings were collected by Yelp reviewers (or any online reviewer) that are not necessarily representative of the judgments of the average consumer and the influence of consumer characteristics was not taken into account. Kovács et al. (2013) also argued that when it comes to some categories of goods and services, objects perceived as authentic are considered more valuable than other non-authentic objects with the same characteristics. This leads to a gap in our current understanding about what occurs when characteristics of the product change with the innovation and whether consumers' need for authenticity outweighs the functional benefits they derive from the innovation. To better understand this, it is helpful to analyse how consumers react when they perceive the authenticity has been diminished. Knowing that "people buy things not only for what they can do, but also for what they mean," (Levy, 1959, p.118) and that consumers gain symbolic and experiential benefits from products (e.g., Belk (1988), Keller (1993), Mick (1986), Solomon (1983)), the question of whether a perceived diminished authenticity would strip away the symbolic value from the product arises. Peterson (2005a) states that authenticity becomes an issue only when it is compromised. To support this argument, theorists like Benjamin (1969) and Trilling (2009) proclaim that authenticity becomes a pressing problem only when it is under threat. An example would be when mass production techniques are used to produce furniture, a demand emphasizing craft like hand-made furniture develops (Orvell, 2014). On a similar note, Peterson (1997) denotes how the appeal of country music increased after most Americans moved away from the farm and into suburbs and cities; Negro et al. (2006) discuss how traditional winemaking becomes an important point when "modern" Californian and French wines are introduced into the market;

and Eig (2007) note how handmade bamboo fly fishing rods gain a symbolic value after graphite rods became available. These arguments imply a variation in how much people care about authenticity that is temporal in nature (Carroll and Wheaton, 2009).

Even though the consumption preferences and behavior of consumers who seek authentic value have been explored (Lewis and Bridger, 2011, Crosby and Johnson, 2003), the concept of consumer need for authenticity in the context of product innovation is relatively under researched (Liao, 2015). Apart from authenticity, another factor likely to influence consumer behaviour in the context of product innovation is the perceived congruence of the particular innovation with the original product category and its attributes (Fleck and Quester, 2007).

2.5 Congruence of the innovation with the original product category

Congruence is a construct that has often been analyzed in the context of product innovation through brand extensions and advertising, with a particular focus on celebrity endorsement. Words being used to describe the concept include fit, in research related to brand extensions (Aaker and Keller, 1990, Tauber, 1988, Park et al., 1991, Sheinin and Schmitt, 1994, Broniarczyk and Alba, 1994, Lane, 2000) and co-branding (Park et al., 1996, Simonin and Ruth, 1998). Another word used to describe congruence is typicality (Boush and Loken, 1991, Ladwein, 1994) or similarity (Broniarczyk and Alba, 1994, Boush et al., 1987). Meyers-Levy and Tybout (1989) were the first authors to use the word congruence when discussing brand extensions, and defined the notion as a match between characteristics/attributes of an object and the relevant schema, thus leading to an understanding of the notion beyond brand extensions. With time, this understanding was refined and congruence was seen to correlate with the strength of the link between the innovated product and the product category (Meyers-Levy et al., 1994). In comparison, some authors focused on incongruence (e.g., Lane (2000)) and defined it as a lack of consistency between the brand extension and the brand. A brand extension would be incongruent if deemed to be unexpected or surprising.

The consensus is that congruence of the innovation with the original product category is a positive factor facilitating the introduction of new products to a market and/or assisting consumers' processing of the message (Fleck and Quester, 2007). Several researchers have come to the conclusion that the more relevant or congruent an association, the more the consumers would be interested and positively inclined towards it (Fleck and Quester, 2007, Speed and Thompson, 2000, Basil and Basil, 2003, Rodgers, 2003). While some level of incongruence can be positive, higher levels of incongruence that influence consumers' cognitive structure substantially, would lead to negative responses and unfavourable cognitive elaborations (d'Astous and Bitz, 1995). Having gained an understanding of the term congruence, its importance and its association with product innovation, it is interesting to analyze whether a perceived misfit (incongruence) could lead to lowered perceived authenticity. The only connection between authenticity and congruence comes from a study conducted by Beverland (2006) which characterized authenticity (in the domain of wine) in terms of stylistic consistency which is a term used to refer to congruence.

2.6 Moderating Effects of Consumer Characteristics, Situation & Culture

Consumers rely on different cues to assess the properties of authenticity and for different consumers authenticity means different things. Thus, attributions of authenticity may vary from one consumer to the next, and such variations can be expected to create variations in value ratings across consumers. As a result, the question of how consumer characteristics might influence their judgement and perceptions arises. Moreover, as literature in both marketing and psychology stresses the importance of not only personal characteristics but also situational factors as influencers of consumer behavior (Hornik, 1982) thus both will be accounted for in this study.

As already mentioned, traditional products might evoke feelings similar to those aroused by something regarded as authentic (Carroll and Wheaton, 2009, Levine, 2005, Sokolov, 1998).

However, what is considered as a traditional product in one culture might not be in another, and society's culture affects the values and thus the behavior of its members (Hofstede, 2010). As a result it is important to analyze how consumers' perception of authenticity differs when the innovated product is traditional to their culture in comparison to when it is not. This study will focus on analyzing the moderating effect of consumer characteristics (product involvement, past orientation, and knowledge of the product category) on relationship between perceived authenticity of the innovated product and purchase intention (and perceived gain).

2.6.1 Product knowledge and involvement

Involvement is a consumer behaviour construct which influences different processes and behaviours. It can be defined as a non-observable state of motivation, excitation or interest. It is created by external variables (situation, object, communication) and internal variables (the ego, values) (Rothschild, 1984). Involvement has been conceptualized and measured in multiple contexts including involvement with: a purchase decision (e.g. Slama and Tashchian (1985), Mittal and Lee (1989), Smith and Bristor (1994)), an activity or event (e.g. Speed and Thompson (2000), Goldsmith and Emmert (1991), Mittal and Lee (1989), Neelamegham and Jain (1999), Flynn and Goldsmith (1993), Tyebjee (1979)), a product class (e.g. Michaelidou and Dibb (2006), Rahtz and Moore (1989), Zaichkowsky (1985b), Kapferer and Laurent (1985), Kapferer and Laurent (1993)), a service (e.g. Keaveney and Parthasarathy (2001)) advertising or message processing (e.g. Andrews et al. (1990), Laczniak et al. (1989), Mitchell (1981), Petty and Cacioppo (1981), Vaughn (1986), Zaichkowsky (1994), Greenwald and Leavitt (1984)). Three types of involvement have been presented (Houston and Rothschild, 1978, Laaksonen, 1994, Stone, 1984), namely situational, enduring and response involvement. Response involvement refers to a behavioural orientation involving the acquisition of information and decision processes. Enduring involvement focuses on the consumer's

attachment to a product while situational involvement represents the concern of an individual with the purchase of a product. This study will focus on enduring involvement.

Enduring Involvement: Enduring involvement is defined by many researchers as the degree of connection between an individual and an object, which could be a product, advertisement, brand etc. (Celsi and Olson, 1988, Bloch, 1981, Hupfer and Gardner, 1971, Lastovicka and Gardner, 1979). Therefore a psychological attachment with a product is formed, which reflects the extent to which the product is perceived as relevant with an individuals' personal goals or values (Celsi and Olson, 1988). Previous empirical research in consumer goods has shown that involvement is positively related to new product purchases in the same product class (d'Hauteville, 1994). It is known that in the case of "low involvement" types of purchases (importance or risk relatively slight), impulse or curiosity buying can precede the information of an opinion about the object bought. In this case, the purchase can be analysed as being part of the process of informing the person (d'Hauteville, 1994). While studies have demonstrated the existence of a relationship between product involvement and several aspects of consumer behaviour, it is argued that an effective segmentation of markets necessitates the consideration of the consumption situation (Quester and Smart, 1998). This research will attempt to identify the potential moderating effect of involvement on the relationship between authenticity and purchase intention and authenticity and perceived sacrifice/gain individually and under different situations thus adding to the literature of the relevance of involvement constructs used in marketing research.

Involvement and Situation

As products devoid of situational influences are rare, an investigation of buying behaviour that doesn't account for situational effects is unlikely to provide reliable results. An exception would be a scenario where there are no choice alternatives or the buyer characteristics are dominant to the point of influencing behaviour across all situations (Belk, 1974). This has led

to an alternative approach called person-by-situation interactionism, which is based on the observation that a situation/person interaction is likely to account for more variation in consumer behaviour than either situational factors or individual characteristic in isolation (Hornik, 1982, Quester and Smart, 1998). The interactionist approach is based on the principle that individual characteristics interact with each other and with different situations, to promote certain behaviours (Belk, 1974, Bonner, 1985, Celsi and Olson, 1988, Chow et al., 1990, Dickson, 1982, Hornik, 1982, Richins and Bloch, 1986). Consumer behaviour research should consider the interactionism approach as it provides a more accurate understanding of behaviour, and is more relevant when applying theoretical findings to practical scenarios (Quester and Smart, 1998).

Involvement and Authenticity

Few articles have discussed the relationship between authenticity and involvement. A study by Liao (2015) argued that consumers with a high need for authenticity prefer to consume authentic products congruent with their interests and product involvement. However the study was only qualitative and included a small sample. The argument was supported by Carroll and Wheaton (2009) who stated that interest in the authenticity of a specific domain was probably confined to people with an attachment to the domain. They argued that authenticity in self-taught art (Fine, 2003), classical music (Davies, 2001), handcrafted furniture (Orvell, 2014), and oriental rugs (Spooner, 1986) most likely rested primarily with affluent groups. On the other hand, the authenticity of hip-hop music appeared to be of great concern to those who listened to it (African-Americans in general) (Light, 2004). Similarly, they conjectured that authenticity in weapons held fascination mainly for those with a high interest in weapons (working class individuals usually from the rural areas). Lastly they assumed that authenticity of cosmetics would be of greatest interest to women. However, these arguments were all

speculations and the identification of how the need for authenticity changes as consumers become more or less involved in a product category will be another contribution of this study.

2.6.2 Past Orientation

Nostalgia or past orientation as a construct can be defined as a fondness for tangible or intangible possessions and activities connected with the past, or as a yearning for the past, and is experienced in the cases when an individual feels divided from an era to which he is attached to (Davis, 1979, Holbrook, 1993, Sierra and McQuitty, 2007). Nostalgia has the capacity to influence the behaviour of a consumer both emotionally (Davis, 1979, Hirsch, 1992, Holak and Havlena, 1998, Batcho, 1995), and cognitively (Holbrook and Schindler, 1994, Stern, 1992, Marconi, 1996), and to generate positive consumer responses about the past (Davis, 1979, Sierra and McQuitty, 2007). These responses to past experiences have the potential of helping individuals understand their sense of self (Brown and Humphreys 2002).

On a similar note, nostalgia can be described as "a preference (liking) toward objects (people, places, things or experiences) from when one was younger or from times about which one has learned vicariously, perhaps through socialization or the media" (Fairley, 2003, p.287-288). It is an emotion created by reflecting about objects, experiences or people affiliated with the past (Hirsch, 1992) that has the capability of creating preferences for possessions that produce nostalgic responses (Holak and Havlena, 1998). For example, reminiscing about sporting events may lead to a nostalgia related sports memorabilia purchase (Sierra and McQuitty, 2007). Being able to identify with an object can reinforce consumers' sense of self, which comes as a result of self-experience (Richins, 1994). When self-identity is evoked in a transaction, the perceptions of value become more intense (Richins, 1994) and provide another reason to buy the product (Reed, 2002). Such products can connect consumers with their past through emotions, attitudes and memories (Sierra and McQuitty, 2007); thus, as people grow older, they may purchase items from their past in order to revisit certain periods (Taylor and

Konrad, 1980, Motley et al., 2003), to facilitate self-continuity (Kleine et al., 1995), to use as links between the present and a period of time for which they long (Sierra and McQuitty, 2007), and to help the process of self-knowledge (Belk, 1990). Attitudes about the past can affect purchase decisions, as positive emotions about a certain time period can lead to nostalgia for both tangible (possessions) and intangible (music or olfactory cues) stimuli from that time period (Davis, 1979), which in turn increases the likelihood that these items (stimuli) will be purchased (Sierra and McQuitty, 2007).

To summarize, consumers value possessions and objects for their symbolic representation of the past and qualitative research conducted by Beverland (2005) suggests that authenticity can imply sacredness when it relates to memories of past days or when it produces nostalgia. While there is no empirical assessment of the above-mentioned effects, it is expected that consumers with a past orientation or a strong sense of nostalgia will value authenticity more. This study will analyse the moderating effect of 'past orientation' on the need for authenticity and perceived sacrifice on consumers.

2.6.3 Situation

The impact of situation on consumer behaviour became the focus of consumer research studies in the 1970s, at a time when the limitations of analysing solely the impact of consumer characteristics on purchase behaviour were recognized (Belk, 1974, Quester and Smart, 1998). Situation can be characterised as all the factors attributed to a specific place and time of observation which have an effect on consumer behaviour (Belk, 1974). There are three different types of situations which are relevant in the context of marketing strategy, namely the consumption situation, the purchase situation and the communication situation (Lai, 1991). As the importance of the purchase and consumption situation have been previously researched in a variety of studies (Lai, 1991), this study focuses solely on the consumption or usage situation. With regard to beverage products, such as wine and herbal teas, the situational conditions can

occur in the future (e.g. fear of intoxication or weight gain), present (e.g. environment where the product is consumed) or the past (e.g. yesterday's food choices) (Rozin and Tuorila, 1993). However, the majority of situational research focuses on simultaneous contextual variables (Quester and Smart, 1998). Important concurrent context effects that can affect the perception of beverages include: social interaction at the time of consumption, the function of a beverage as a meal component, freedom to select the food, and the environment of consumption (Meiselman, 2002). This study will examine the major concurrent situation effects, excluding food choice freedom in the context of traditional products that have been changed as a result of an innovation.

2.7 Towards a Conceptual Framework

This critical review provides the basis for a conceptual framework showing the possible effect of a substantial innovation of a product with a strong traditional and historical heritage, on perceived authenticity and benefits obtained from the innovation. Moreover, the framework shows the potential relationship between the innovated products' perceived benefits, authenticity and perceived sacrifice/gain with flow on effects to purchase intention. The relationship is impacted, although not yet known to what degree, by product characteristics (perceived innovativeness of the product, perceived traditionality and perceived complexity of the innovation), consumer characteristics (past orientation, involvement, and knowledge) and external attributes (situation).

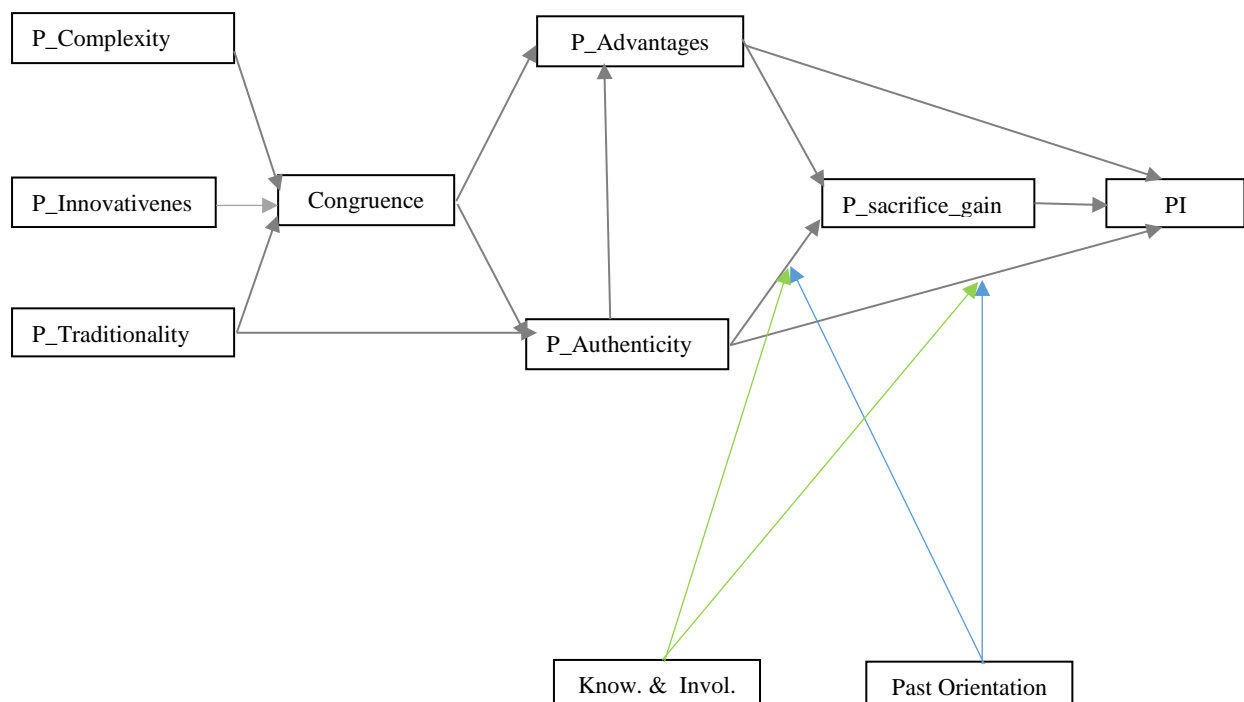


Figure 2.1: Proposed Conceptual Framework

Chapter 3: Conceptual Framework, Hypothesis Development, and Research Design for the Study

3.1 Introduction

Chapter two provided an extensive review of the literature relevant to the innovation of a traditional product. From this, a proposed conceptual model (Fig. 2.1) was presented showing the possible effect of a substantial innovation of a product with a strong traditional and historical heritage, coupled with the impact of perceived complexity of the innovation, on perceived product authenticity and functional benefits. Also shown were the possible moderating effects of consumer characteristics (past orientation, involvement and knowledge), situation and country of origin. Moreover, Fig.2.1 showed the potential relationship between the innovated products' perceived functional benefits, authenticity of the innovated product and perceived sacrifice and gain to purchase intentions. It is expected that congruence of the innovation will positively influence perceived product authenticity while situation should play a role in impacting perceived sacrifice and gain from the innovation.

In chapter three, the hypotheses tested in this research are formalised and summarised. Developing from this theoretical foundation, the rationale for the research design, stimuli and measures used are discussed. The chapter ends by providing evidence of consumers' perceptions of authenticity, functional benefits, perceived sacrifice/gain and purchase intention obtained from focus group discussions as preliminary data informing and supporting the conceptual framework and determining products and countries to be used as stimuli in the main study.

3.2 Research framework and questions

Before finalizing the hypotheses and determining the appropriate methodology, it is useful to summarize the overriding research questions and the main theoretical aspects.

Important factors known to influence the success of a product innovation relate to superior product attributes and consumer characteristics (d'Hauteville, 1994). Authenticity has also become an increasingly important factor for consumers and has been said to overcome even objective quality perceptions as the main purchasing criterion (Gilmore and Pine, 2007), thus carrying with it an almost sacred, cultural type of interpretation that conveys value (Frazier et al., 2009). However, research offering quantitative evidence that subjective interpretations of authenticity stand to create value for consumers, and thus lead to an increase of purchase intentions, is very limited (Kovács et al., 2013).

As stated, launching innovated products comes with high risks and the success rate is usually under 41% (Barczak et al., 2009) due to feelings of inherent uncertainty faced by consumers when purchasing new products. Different consumers rely on diverse cues to assess the properties of authenticity; hence, attributions of authenticity may vary among them creating variations in perceptions. For example, higher consumer personal innovativeness leads to a greater propensity to accept new products and innovations (d'Hauteville, 1994), while conversely, higher involvement in a product category is expected to decrease such adoption of

the innovated product if it is perceived to be less authentic (Liao, 2015, Carroll and Wheaton, 2009). However, our overall understanding of these apparently opposing dynamics with respect to innovating traditional products is poorly understood. Consequently, this research will seek to answer the following research questions:

1. How do perceptions of product traditionality (product integration in the culture) impact perceived authenticity of the innovated product and its ability to deliver value (perceived gain/sacrifice from the innovation)?
2. Do product and innovation characteristics (degree of complexity of the innovation, and degree of innovativeness) impact congruence of the innovation with the original product category?
3. Does congruence of the innovation with the original product category impact perceptions of authenticity of the innovated product?
4. Does perceived product authenticity significantly and positively impact perceived gain/sacrifice from the innovation and purchase intention?
5. Is the impact of authenticity on perceived gain/sacrifice and purchase intentions moderated by consumer characteristics (product involvement, knowledge and past orientation)?
6. Are the answers of the questions above generalizable for different products and for consumers of different cultures?

3.2.1 Stimuli used

This research tests the proposed empirical model (Figure 3.1) using three different products and countries in order to enhance the robustness of results that investigate, among others, the extent to which perceived traditionality of a product affects its perceived authenticity, the potential mediating role of congruence of the innovation, and the flow on effects to purchase intention. Therefore, it was necessary to select countries exhibiting different levels of cultural affiliation with the products to be tested, which is in turn expected to influence the perceived

traditionality of these products. Products deemed appropriate for testing are wine, traditional Asian medicines and bicycles. The countries identified as appropriate for testing are Australia, France and Singapore. Wine is considered to be traditional in Australia, highly traditional in France and not traditional in Singapore. In contrast, traditional Asian medicine is expected to be considered traditional in Singapore and less traditional in Australia and France. Different from wine and traditional Asian medicines, a bicycle is expected to be considered ‘traditional’ in all countries selected due to a similar product history.

Product 1: Wine

Australia’s wine industry is renowned throughout the world. It has a history of more than 200 years and is consistently one of the top ten wine producing countries in the world and one of the few countries that produces every one of the major wine styles. However, this product history is comparatively short when considering that France has a wine making history of at least 2600 years. In contrast, general Asian wine markets (like Singapore) are less mature and the product is not so culturally ‘grounded’ in celebrations, bereavement and religious holidays, although people are increasingly incorporating wine as a lifestyle choice, especially as an accompaniment to food. The Singaporean wine market in particular is expected to record positive and stable growth over the next five years (Euromonitor, 2014). Due to the contrast in the market maturity of Australia, France and Asia in general, it is expected that the perceived traditionality of wine will be different (high in Australia, even higher in France and lower/low in an Asian country).

Wine, in cultures where its consumption is a part of life, is a traditional product carrying a high symbolic value (Ulin, 1995, Meillon et al., 2010). The mainstreaming of wine consumption by New World winemakers in the past two decades, has led to complaints about the lack of authenticity of mass produced wines by traditional producers and critics (Beverland, 2005), making wine an appropriate context for authenticity discussions. Moreover, wine is an

appropriate context for an investigation of situational factors and involvement (Quester and Smart, 1998, Lockshin et al., 1997, Laurent and Kapferer, 1985, Zaichkowsky, 1985a). The innovation of wine in this study will be the partial removal of alcohol. Consumers becoming more conscious of their alcohol consumption and demanding ‘healthier’ products (ICAP 2007), has stressed the need to develop and sell new wine products of high quality with lower alcohol strength in order to provide a consumer choice for lower alcohol alternatives (Grant, 2010). A study conducted by Wine Intelligence analysts in 2012 in the UK, Germany, US and China showed that it was mainly Chinese regular wine drinkers who desired a lower alcohol level wine. Countries such as China, Taiwan, Hong Kong, Vietnam, Thailand, Indonesia, Malaysia, Japan, Singapore, and Korea where the consumption of wine is a relatively recent phenomena have become increasingly important (Beverland, 2002) due to wine exporting nations seeking out new markets for their products.

Product 2: Traditional Asian Medicine

Traditional Asian Medicine (TAM) is a system of primary health care that includes Chinese herbal medicine, acupuncture, exercise and breathing therapy, remedial massage, and lifestyle and diet advice (Dunn, 1976). In many non-Asian countries, the most popular forms of TAM are Chinese herbal medicines; hence, in this research traditional Asian medicine refers only to herbal medicines (herbal tea).

TAMs have an uninterrupted history of development (dating back thousands of years) in China and other parts of East Asia. Although some forms of TAMs are popular in non-Asian societies, due to different historical heritage, the product is likely to be considered as less traditional by non-Asians (Australian or French consumers) as compared to Singaporeans or Asians in general. The innovation of traditional Asian medicines in this study will be in the way they are presented – from the traditional forms (herbal teas) to more conventional ones (pills and tablets).

Product 3: Bicycles

The bicycle is a universally accepted form of personal transport. The ownership of bicycles worldwide is extensive and 43% of the Australian population own a bike. This is perhaps due to the consideration given to cyclists — through paths, cycle-ways, and laws which make cycling a safe and appealing experience in many places. In Asia, bicycles and other pedal-powered machines are often still the main form of personal transport. After China, France is the country with the next highest number of bikes. Thus, the bicycle as a product is expected to be considered traditional by both non-Asian and Asian respondents. The innovation of bicycles in this study will be change of the frame from the typical metallic frame to bamboo.

3.3 Development of model and hypotheses

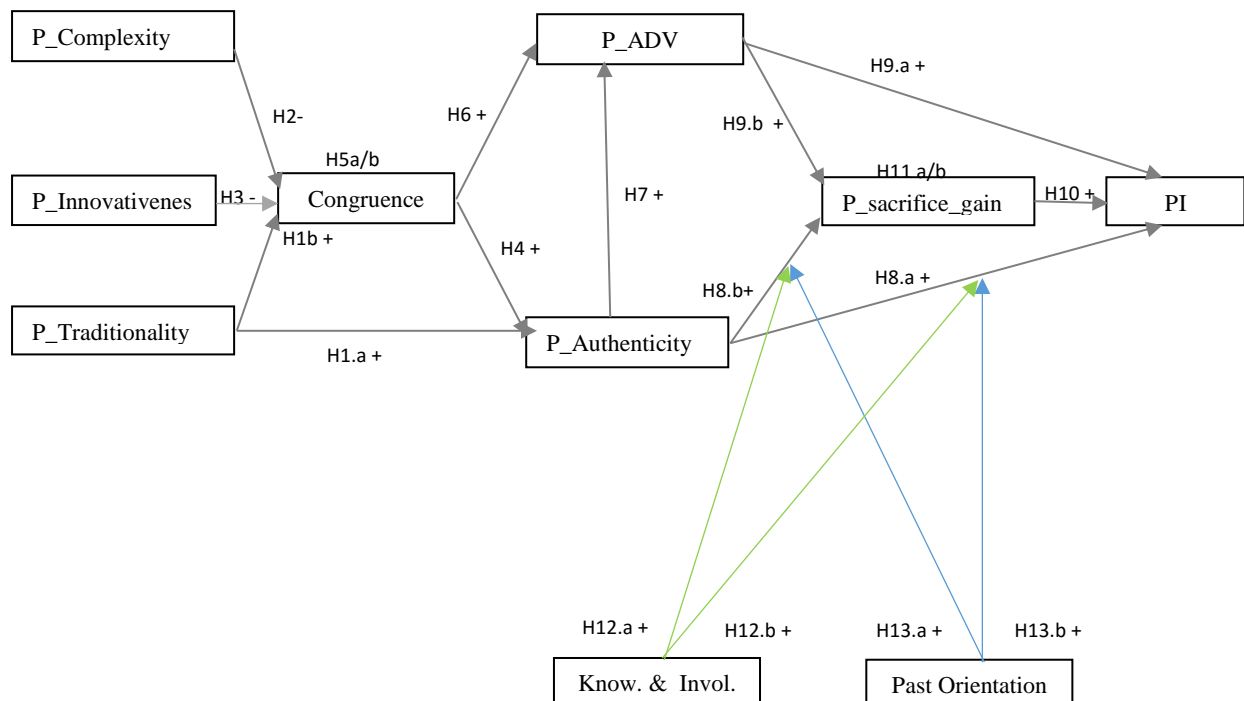


Figure 3.1: Conceptual framework and proposed hypothesis

3.3.1 Hypotheses

Traditional products may evoke feelings similar to those aroused by something regarded as authentic (Carroll and Wheaton, 2009, Levine, 2005, Sokolov, 1998). We propose that the

higher the perceptions of product traditionality, the higher the perceptions of authenticity of the innovated product (H1.a).

H1.a: Perceptions of traditionality of the original product will significantly and positively influence consumer perceptions of authenticity of the innovated product.

As congruence has been considered a factor likely to influence consumer behaviour in the context of product innovation, it is expected that a higher perceived congruence of the innovation with the traditional attributes and values of the existing product will positively influence perceived authenticity of the innovation (H1b & H4). Moreover, as both congruence and authenticity have been characterised in terms of stylistic consistency, it is expected that the association will be positive (H4) (Beverland, 2006). Furthermore, as authenticity becomes an issue when it is compromised (Peterson, 2005b, Benjamin, 1969, Trilling, 2009) it is expected that the less the innovation compromises the original perceptions of the product, the lower the impact on authenticity.

H1.b: Perceived congruence of the innovation with the original product mediates the impact of traditionality perceptions on authenticity perceptions of the innovated product.

H4: Congruence of the innovation with the original product will significantly and positively influence perceptions of authenticity of the innovated product.

While the role of consumer innovativeness in the acceptance of new (innovated) products has been researched (d’Hauteville 1994), the impact of product characteristics such as the degree of innovativeness or the degree of complexity of the innovation have not. We propose that the degree of innovativeness and complexity of the innovation will significantly impact the fit in perceptions (congruence) between the innovation and original product category (the higher the degree of complexity of the innovation, the lower the perceptions of congruence (H2), and the higher the degree of innovativeness of the innovated product, the lower the perceptions of congruence (H3)).

H2: The degree of complexity of the innovation will significantly and negatively influence the congruence of the innovation with the original product.

H3: The degree of innovation will significantly and negatively influence the congruence of the innovation with the original product.

H5a-b: Congruence of the innovation with the original product mediates the impact of the degree of complexity (5a) and innovativeness (5b) on perceptions of authenticity.

The literature suggests that congruence leads to favourable cognitive elaborations (d'Astous and Bitz, 1995), and the more congruent an association, the more consumers are positively inclined towards it (Fleck and Quester, 2007, Speed and Thompson, 2000, Basil and Basil, 2003, Rodgers, 2003). Hence, we propose that the higher the congruence of the innovation with the original product, the higher the perceived advantages from the innovation (H6).

H6: Congruence of the innovation with the original product will significantly and positively influence perceived advantages of the innovated product.

Traditional products that represent objects perceived as authentic are considered more valuable than those considered as non-authentic objects with the same characteristics (Kovács et al., 2013). Thus, we propose that higher perceptions of authenticity of the innovated product, will positively influence perceived advantages from the innovation (H7). It is not currently known whether a consumer's need for authenticity would 'outweigh' any (intrinsic & extrinsic) product benefits resulting from the innovation. When the characteristics of a product change as a result of the innovation, the perceived functional benefits will change as well. Furthermore, it is expected that with the increase of the perceived advantages from the innovation, the perceived gain from the innovation will also increase (H9a-b). The literature suggests that a belief in superior product attributes influences product's acceptance (d'Hauteville, 1994) and that consumers buy things for what they can do (Levy, 1959) and for the experiential benefits to be gained from them (Belk, 1988, Keller, 1993, Mick, 1986, Solomon, 1983). Thus, we propose

that the higher the perceived advantages from the innovation, the higher the perceived gain from the innovation (H9a) and purchase intention (H9b).

H7: Perceptions of authenticity of the innovation will significantly and positively influence perceived advantages of the innovated product.

H9a-b: Perceived advantages of the innovation will significantly and positively influence perceived gain from the innovation (9a) and purchase intention (9b).

While authenticity is argued to have possibly overcome quality as the main purchasing criterion (Gilmore and Pine, 2007), few empirical studies are made demonstrating that product authenticity directly influences perceptions of gain from an innovation (H8a) and purchase intention (H8b) (Derbaix and Derbaix, 2010, Castéran and Roederer, 2013, Kovács et al., 2013).

H8a-b: Perceptions of authenticity of the innovation will significantly and positively influence perceived gain from the innovation (8a) and purchase intention (8b).

In the context of a product innovation value ratings tend to drive purchase intention (Sweeney and Soutar, 2001), thus we propose that a higher perceived gain from the innovation will lead to a higher purchase intention (H10).

H10: Perceived gain from the innovation will significantly and positively influence purchase intention.

H11a-b: Perceived gain from the innovation mediates the impact of perceived advantages (11a) and perceived authenticity (11b) on purchase intention.

Consumers rely on different cues to assess the properties of authenticity; thus attributions of authenticity may vary among consumers. As consumer characteristics might influence the final judgment, the moderating effect of consumer characteristics, such as: product involvement, past orientation, and knowledge is expected to have an impact on perceived authenticity.

Involvement or attachment to a product is speculated to have a positive relationship with the need for authenticity (Liao, 2015, Carroll and Wheaton, 2009). However, the study by Liao (2015) was qualitative and only included a small sample so the identification of how perceptions of authenticity change as consumers become more or less involved in a product category will be another contribution of this study. We hypothesize that involvement significantly impacts and strengthens the effect between perceived authenticity of the innovation and perceived gain (14a) and perceived authenticity and purchase intention (14b). Moreover, it is expected that consumers with a high *past orientation* will value authenticity more as it can imply sacredness when it relates to memories of past days and/or may produce nostalgia (Beverland, 2005). Consumers often assign sacred meanings to products, based mostly from their profound product related memories (Liao, 2015). However, there is no empirical evidence for this claim and this study will analyse the moderating effect of past orientation on perceptions of authenticity and perceived gain from the innovation and authenticity and purchase intention, representing an important theoretical contribution. We propose that consumer past orientation significantly impacts and strengthens the effect between perceived product traditionality and perceived authenticity (12a), authenticity of the innovation and perceived gain (12b) and perceived authenticity and purchase intention (12c).

H12a-b-c: Consumer past orientation significantly impacts and strengthens the effect between perceived product traditionality and perceived authenticity (12a), authenticity of the innovation and perceived gain (12b) and perceived authenticity and purchase intention (12c).

For an offering to be considered authentic it needs to conform to consumers beliefs regarding how things need to be (Grayson and Martinec, 2004). Product knowledge influences such beliefs in the context of product innovation (d'Hauteville, 1994); thus, we hypothesize that a higher product knowledge significantly impacts and strengthens the effect between perceived

authenticity of the innovation and perceived gain (13a) and perceived authenticity and purchase intention (13b).

H13a-b: Consumer knowledge significantly impacts and strengthens the effect between perceived authenticity of the innovation and perceived gain (13a) and perceived authenticity and purchase intention (13b).

H14a-b: Consumer involvement significantly impacts and strengthens the effect between perceived authenticity of the innovation and perceived gain (14a) and perceived authenticity and purchase intention (14b).

According to Belk (1974), any investigation of buyer behaviour that does not account for situational effects is not likely to provide reliable results. Consumption situations can provide alternative explanations of consumer behaviour (Quester and Smart, 1998, Lai, 1991), and at times alter the perception of a particular product category (Meiselman, 2002). Hence, we propose that situation of consumption will significantly influence perceived sacrifice and gain obtained from the innovation (H15a-b). Moreover, based on the observation that the person/situation interaction accounts for considerably more variation in consumer behaviour than do situational factors in isolation (Hornik, 1982), we propose that situation of consumption and consumer involvement will account for more variation in perceptions of gain and sacrifice (H15c).

H15a-b: Situation of consumption will significantly influence perceived gain (H15a) and sacrifice (H15b) from the innovation.

H15c: Situation of consumption coupled with consumer involvement will account for more variation in perceptions of gain and sacrifice from the innovation than situational influence alone.

Table 3.1 summarizes the hypothesis to be tested within the new conceptual model.

Table 3.1: Summary of Hypothesized Relationships

H1.a: Perceptions of traditionality of the original product will significantly and positively influence consumer perceptions of authenticity of the innovated product.
H1.b: Perceived congruence of the innovation with the original product mediates the impact of traditionality perceptions on authenticity perceptions of the innovated product.
H2: The degree of complexity of the innovation will significantly and negatively influence the congruence of the innovation with the original product.
H3: The degree of innovation will significantly and negatively influence the congruence of the innovation with the original product.
H4: Congruence of the innovation with the original product will significantly and positively influence perceptions of authenticity of the innovated product.
H5a-b: Congruence of the innovation with the original product mediates the impact of the degree of complexity (5a) and innovativeness (5b) on perceptions of authenticity.
H6: Congruence of the innovation with the original product will significantly and positively influence perceived advantages of the innovated product.
H7: Perceptions of authenticity of the innovation will significantly and positively influence perceived advantages of the innovated product.
H8a-b: Perceptions of authenticity of the innovation will significantly and positively influence perceived gain from the innovation (8a) and purchase intention (8b).
H9a-b: Perceived advantages of the innovation will significantly and positively influence perceived gain from the innovation (9a) and purchase intention (9b).
H10: Perceived gain from the innovation will significantly and positively influence purchase intention.
H11a-b: Perceived gain from the innovation mediates the impact of perceived advantages (11a) and perceived authenticity (11b) on purchase intention.
H12a-b-c: Consumer past orientation significantly impacts and strengthens the effect between perceived product traditionality and perceived authenticity (12a), authenticity of the innovation and perceived gain (12b) and perceived authenticity and purchase intention (12c).
H13a-b: Consumer knowledge significantly impacts and strengthens the effect between perceived authenticity of the innovation and perceived gain (13a) and perceived authenticity and purchase intention (13b).
H14a-b: Consumer involvement significantly impacts and strengthens the effect between perceived authenticity of the innovation and perceived gain (14a) and perceived authenticity and purchase intention (14b).
H15a-b: Situation of consumption will significantly influence perceived gain (H15a) and sacrifice (H15b) from the innovation.
H15c: Situation of consumption coupled with consumer involvement will account for more variation in perceptions of gain and sacrifice from the innovation than situational influence alone.

3.4 Justification of the Model

When Hunt (1991) describes the normative criteria used to validate the explanatory adequacy of a model, he specifies, (i) the phenomenon to be explained should be expected to occur and (ii) the model should be pragmatic, inter-subjectively certifiable, and have empirical content (p51). Chapter 2 provided an illustration and justification of the conceptual model showing the potential relationship between the innovated products' perceived advantages, authenticity of the innovated product and perceived sacrifice/gain with flow on effects to purchase intention.

3.5 Overview of research design

This research adopts a mixed methodological approach and is comprised of both qualitative and quantitative stages. The combination of qualitative and quantitative data collection, analysis and interpretation, gives the researcher additional insights that surpass the scope of a single technique (Creswell and Clark, 2007). Such synthesis of research paradigms offers an accepted method of data triangulation to enhance validity (Brennen, 1992). The combination of qualitative and quantitative methods in the current research (schematically outlined in figure 1.2) resembles the research design as described by Creswell and Clark (2007) in which qualitative data collection stage is considered as supportive in regards to the quantitative data collection stage, designed to empirically test the proposed model.

The study is comprised of 3 stages. The first qualitative stage consisted of focus groups conducted in Indonesia, Australia and France. These countries were selected as they are expected to have different perceptions of traditionality for the stimuli proposed. The purpose of conducting these groups was to gather exploratory data specific to the relationships illustrated in Fig. 3.1, inform the conceptual framework in terms of advantages obtained from the innovation, situation of consumption and what participants consider traditional and culturally integrated, and determine if the products identified for testing were suitable. The

following sections of this chapter outline the research methodology used to conduct these focus groups, including the sampling plan, data collection instruments and data analysis procedures. Stage 2 consists of a pilot survey in the form of an online questionnaire conducted with Australian respondents. The primary objectives of the pilot survey were to validate measurement instruments and product stimuli. Using the questionnaire which was developed and retouched after conducting the pilot study, stage 3 consists of a survey conducted in Australia, Singapore and France. Data was analysed via structural equation modelling.

3.5.1 Stage 1 – Qualitative study

Since studies investigating consumers' reaction towards intrinsically and extrinsically modified traditional products, as well as the influence of traditionality perceptions on perceived authenticity of an innovated product, are limited, exploratory research in a form of focus group interviews was employed to explore consumer behaviour in depth and inform the conceptual framework (Morgan, 1997). This technique allows probing for participants' perceptions (Albrecht et al., 1993), providing an amicable environment and has been successfully used in previous studies about wine and authenticity (Beverland, 2005). Moreover, group interviewing allows for interaction between participants enabling the researcher to gain insight into consumer opinions regarding topics of interest (Malhotra et al.). Furthermore, focus groups may lead to unexpected findings for further investigation and are also useful to triangulate information from other sources (Collis and Hussey, 2013, Näslund, 2002).

In this research, focus groups were conducted to confirm whether Asian, Australian and French consumers perceive a traditional product that has been intrinsically or extrinsically modified as part of the innovation, to be less authentic and whether this perceived lowered authenticity, together with the functional benefits (i.e., perceived advantages from the innovation) obtained from the innovation, influence perceived sacrifice/gain from the innovation and purchase intention. Australian, Asian and French consumers were chosen as they are from different

markets exhibiting different market maturity for the products tested in the study (wine, traditional Asian medicines, bicycle). As already mentioned, it is expected that wine will not be considered as traditional in markets where it is not grounded culturally and is comparatively new to consumers living there. Thus, perceptions of authenticity of an innovated wine product will not be as negative as in Australia and France. The opposite is expected for traditional Asian medicines. On the other hand, a bicycle is a product expected to be comparably traditional in all three locations. Another purpose of the focus groups was to identify whether consumers were able to identify the alcohol level of the wines being tasted. Moreover, focus groups included wine tasting to attempt to identify perceptions towards low/zero alcohol wines before and after information being given.

3.5.2 Sampling for focus groups

Convenience sampling was employed to examine the relationship between the perception of product traditionality and authenticity. All participants were recruited through a university network in Australia (Adelaide) and France (Dijon) and through a company in Indonesia (Jakarta). Thirteen focus groups were conducted in Adelaide (5 focus groups), Jakarta (4 focus groups) and Dijon (4 focus groups). The respondents were stratified based on age and gender (Table 3.2), as both are important variables in the choice of products, particularly beverages (Ritchie, 2009). This stratification also allowed for a gender balance to be achieved. Moreover, participants recruited had to be wine drinkers, TAMs consumers and bicycle riders. The focus groups were conducted in March 2015 (Jakarta), July-September 2015 (Adelaide) and October 2016 (Dijon) and involved wine tasting.

Table 3.2: Demographic profile of focus group participants conducted in Adelaide, Jakarta & Dijon

	Demographic	Adelaide	Jakarta	Dijon
<i>Focus Group 1-3</i>	Age	18-35	18-35	18-35
	Gender	6 males	6 males	7 males
	Nationality	Australian	Indonesian	French
<i>Focus Group 4-6</i>	Age	36-65	36-65	36-65
	Gender	6 males	8 males	8 males
	Nationality	Australian	Indonesian	French
<i>Focus Group 7-9</i>	Age	18-35	18-35	18-35
	Gender	6 females	6 females	9 females
	Nationality	Australian	Indonesian	French
<i>Focus Group 10-12</i>	Age	36-65	36-65	36-65
	Gender	5 females	6 females	6 females
	Nationality	Australian	Indonesian	French

One more focus group was conducted in Adelaide with participants recruited through a university network. The respondents were stratified based on nationality and age (Table 3.3). The focus group was conducted in September 2015 (Adelaide) to further explore the relationship between perceived traditionality and participants' reactions to the innovation in the context of traditional Asian medicines, bicycles and wine and did not include wine tasting.

Table 3.3: Demographic profile of focus group participants conducted in Adelaide

<i>Demographic</i>	<i>Focus Group 13</i>
Age	18-65
Gender	4 males/7 females
Nationality	Indonesian

3.5.3 Interview Protocol and Data Analysis

A semi-structured interview guide was developed based on the gaps in the literature with a view to encourage discussion, provide flexibility, and insure consistency across several focus groups (Stewart and Shamdasani, 1990). Key questions (see Appendix 3.1) were directed to period of product usage or consumption ('How long have you been drinking wine?'; 'How long have you been riding a bicycle'), situation ('When do you like consuming wine?'; 'When do you consume traditional Asian medicines?'), criteria of selection ('What do you look for when buying a bottle of wine?'; 'What do you look for when choosing traditional Asian

medicines?’), frequency of product usage/consumption, perceived traditionality of the product, why they considered a product traditional and culturally integrated, benefits obtained from consuming/using the innovated product, perceived authenticity of the innovated product, congruence of innovation, downfalls of the innovation, perceived sacrifice/gain etc. In the wine tasting focus groups, participants were given eight different wines to taste. The wines varied in attributes and alcohol level (three reds: 0.5 %, 7.5%, 15.5% alcohol level respectively; two rose: 0% and 13.5 %; three white wines: 0.5%, 5.5% and 13.5 %). No information was given about the wines and the labels were covered. After the tasting, participants were told that three wines had no alcohol and were asked whether their perception of those wines changed after finding out the alcohol level and whether they still considered the beverages to be authentic wine. Moreover, they were asked to guess the alcohol level and to give any comments on the wine (Appendix 3.2). Identical methodology was used in all countries.

3.6 Results

3.6.1 Results for Indonesian participants

The participants had trouble associating the character of the wine with the alcohol level, and overestimated the level of alcohol in the wine. The no-alcohol red wine was the least accepted, following the prediction made from the literature review that ‘red wine does not handle the dealcoholisation process the same way as rose and white wines’. The rose wine was received the most positively, being described as ‘refreshing’ and ‘easy to drink’. Men above and below 35 were the most against the dealcoholized wines, however the history of drinking and frequency (years of drinking wine) played a moderating role (‘*very nice for beginners*’). Men that had not been drinking for long were more open to lower alcohol wines. Same occurred for females below and above 35 years old. Participants listed different benefits from the innovation such as lower calories, no risk of intoxication, lighter (‘*very fruity and light*’) etc. Downfalls mentioned related to taste, complexity of the innovation and method of production

(*'undrinkable, a spoiled wine', 'awful', 'no taste'*). However, overall, they were more open to the idea of consuming these wines on occasion such as when wanting to relax after a long day of work, when not eating and during a business lunch (*'I would drink it on occasion when not wanting to get drunk, when not eating'*). The majority still considered the no alcohol to be wines and their perceptions did not change after finding out the information. Wine was not considered a traditional product by most participants. These participants reacted more positively to the innovation and saw the benefits as overcoming the downfalls in particular situations. The innovated product was still perceived as authentic. On the other hand, the participants that were raised with the culture of drinking wine reacted more negatively to the innovation, seeing the new product as not authentic, and the perceived sacrifice as high. The majority of the women expressed purchase intention while men were more apprehensive.

Traditional Asian medicines were considered traditional by all participants regardless of their usage history. They believed that the innovated product would not be as thorough, natural (authentic) and efficient as the original (*'I don't believe that pills would be as natural as the herbal prepartate'; 'I think pills would have adverse effects'; 'I am concerned about the process of production'*). However, several benefits were observed such as more acceptable texture of the medication, increased accessibility, diminished time of preparation, lack of odor and more acceptable taste (*'I find the herbal medicines so bitter so I think the pills/tablets would be better'*). The perceived benefits mentioned were incorporated in the questionnaire. The majority believed that the downfalls overcame the benefits and that the perceived sacrifice was high.

Bicycles were considered traditional by all participants. They viewed the product and its innovated form as authentic. They believed that the innovated product had benefits such as uniqueness and low carbon footprint (*'I think such a bicycle would stand out a lot!'*) but were

apprehensive of the robustness and durability. The benefits did not overcome the downfalls and the perceived sacrifice was high.

3.6.2 Results for Australian participants

Wine was considered a traditional product and perceived to be authentic. Authenticity was associated with the method of production, location, and producer. Similarly to the data collected in Jakarta, the no alcohol wines were the least preferred, however there was a discrepancy between the rating of the white, rose wines and the red. The white and rose wines were considered light and refreshing, while the red was deemed to be ‘undrinkable’ and ‘like fruit juice’. As wine color played a role in the Indonesian focus groups as well, this differentiation was implemented in the questionnaire where participants will be asked questions for four different wines (red, white, rose and sparkling). In contrast to the Indonesian participants, respondents reacted more negatively upon finding out that the wines contained no alcohol with one participant stating that *‘now that i found out that it contains no alcohol, i would never buy it’* regardless whether they had liked the taste. Judgement of the wine was also related to a quality benchmark created through years of drinking wine, particularly when they started as young adults, linking their judgement to the tradition of drinking wine with their parents. Upon finding out the alcohol content, the majority did not see the product as authentic and did not agree with the idea of calling it wine. Frequency of drinking, situation and history of drinking were found to play a moderating role similar to the results with the Indonesian participants.

Wine was considered a traditional product by most participants. These participants reacted more negatively to the innovation and saw the downfalls as overcoming the benefits. On the other hand, the participants that were not raised with the culture of drinking wine reacted more positively to the innovation, and the perceived sacrifice was lower. Similar to the results for the Indonesian participants, Australians overestimated the level of alcohol in the wine.

Traditional Asian medicines were considered somewhat traditional but the knowledge on the products was limited. They deemed the medicine to be bitter, difficult to find and prepare as well as having a bad smell. The participants believed the innovation to be less authentic but were willing to consume it if the benefits were high. Downfalls of the innovation included a belief that the innovated product is less natural and less effective.

As expected, bicycles were considered traditional by all participants. They believed that a bamboo bicycle would look very interesting and unique but were apprehensive about using it in competitions due to the belief that it would be less professional. Female participants stated that they would only use it if it was coloured and the fact that it was bamboo was not visible. The innovated product was seen as less authentic and the benefits did not overcome the downfalls. The perceived sacrifice was high.

3.6.3 Results for French participants

Wine was considered a traditional product and perceived to be authentic by all participants. Similarly to the data collected in Jakarta and Adelaide, a low/no alcohol red wine was met with a more negative reaction as compared to white and rose wines. The majority of the participants were raised drinking diluted red wine since childhood and mentioned that one of the reasons for drinking wine was that it is part of the culture. They considered wine part of the culture as they had seen their families drink it often, and associated wine with special festive occasions (*“There is some type of pride on being French, on Sundays there is always a bottle on the table”; “My opinion on French culture and wine is that we want to give and take pleasure, share values such as wine with people when we host them. Wine gives us the feeling of being welcomed, this is what I think of French culture.”*) As a result, they had a strong consideration about how red wine should be. On the other hand, they considered sparkling wine to be suitable for celebrations and were more open to trying different kinds. When asked about the role of the alcohol level in their decision making, participants stated that it did not play a role and

overestimated the level of alcohol in the wines tasted; however, when asked if they would drink lower alcohol wines the reaction was negative. Upon finding out that the wines contained no alcohol, in contrast to the Indonesian and Australian participants, French respondents reacted more negatively. The majority did not see the product as authentic and did not agree with the idea of calling it wine. Situation and history of drinking were found to play a moderating role similar to the results with the Indonesian and Australian participants.

Gender also played a role on how the innovation was perceived. When men were made aware of the topic of the project and were informed about the alcohol level of the wines tasted, the reaction was stronger than the first instance of tasting the wines (*“The red wine looks like syrup”*, *“It would be better to drink fruit juice with sparkling water rather than no alcohol wine”*, or that *“the smell is not pleasant”*). However, similarly to the results in Australia and Asia, the rose and white wines were met with a more mixed and less negative reaction and some liked them. The innovated product was not considered authentic. Tradition/culture of drinking played a role in influencing perceptions of authenticity, with one of the participants stating that *“Wine is not just a set of experiments, it’s an experience of 1000 years. A lot of factors make it what it is, thus I think in France this product would not work”*. When asked about potential advantages a low or no alcohol wine could have, participants focused on the ability to drink and drive, how it can be positive for young people, how it can be a good introduction to someone who is new to wine, or it being a good option for people who are alcohol intolerant allowing them to feel part of the group and integrate. Women above 35 years old found wine to be a cultural and social element particularly for the French. Situation played an important role in wine consumption, as they liked drinking wine with friends accompanied by food (*“The situation gives drinking wine importance, I do not like drinking it alone”*, *“In winter I prefer red more but in summer accompanied with fried food I prefer white. It really depends on the situation though, for instance, for a meal to be good must be served with red*

wine. *But on evenings, I prefer white*", *"It also depends on food. For example, I would drink rose before dinner because it does not go well with nothing. You cannot eat anything else"*).

They mostly drank beer and wine and not heavier drinks. Similar to the men, no one liked the dealcoholized red wine, but the reviews on the white and rose wines were more mixed and more positive, with the sparkling dealcoholized white being particularly favorited, reinforcing the symbolic role red wine has in the culture. After finding out about the alcohol level, the wines were not considered authentic, but the reaction was not as negative as the men's.

Women below 35 years old, after blind tasting of the white and rose wines, differently from the rest of the participants, preferred the lower alcohol wines (no alcohol included), but not the ones with a higher level of alcohol. They were open to consuming these wines again in the future but were price conscious (*"The first one was perfect for a cocktail party and quite original"*). The reviews on the red wine were very mixed. Some were quite negative (*"It tastes very bad"*, *"I wouldn't call the first one red and I actually enjoyed the two others"*), while some found it to be pretty good for several occasions (*"I can see myself with the first or the second one on a party or with a meal"*, *"The first one would be better with dessert and the second one with meat"*). After finding out about the alcohol level in the wines they consumed, women below 35 were still open to buying and drinking the white and rose wines but not the red one (*"A no alcohol wine would be a good souvenir"*). They believed that even without alcohol white wine is still considered wine, while red wine was not. When asked about the advantages of drinking lower/no alcohol wines they mentioned the wine being child friendly, not getting drunk, or losing the shame of being drunk.

TAMs were considered to be an authentic and traditional product mostly in Asia, however some products, such as green tea, were considered to be popular even in France (*"They are traditional as they are part of a culture, even though not really ours"*).

When discussing TAMs served in the form of pills, participants were concerned whether the pill would retain the same healing effect, and about the process of creation and what the pill would contain. However, the majority thought that the pills, if the effect remained the same, would be better as they are more practical, and easier to be conserved. Moreover, they considered TAMs in the form of pills to be less time consuming to prepare, and easier to consume. Among disadvantages it was mentioned that the experience of making and drinking would be missing (*“And if you think about the elderly, maybe a tea would be better than another pill, because they have the time and pleasure to make it”*). They were undecided on whether the product could still be considered authentic (authentic only when not mixed with other things). Some thought the innovated product is less authentic since it wouldn't be as natural. Bicycle was also considered an authentic and traditional product. When asked about potential advantages and disadvantages of a bamboo bicycle, participants mentioned that a bamboo bicycle would be solid, weight less, and be better for the environment. They considered bamboo bicycles to be a fashion statement (*“They are hipster”*, *“Nice to look at but not very reliable”*), and original. Regarding the situation they would ride a bamboo bicycle, the product was not considered suitable for a mountain ride and participants saw themselves as riding one mostly for pleasure rather than for high utility. Some considered bamboo bicycles to be authentic and timeless. Some only perceived it to be authentic if made only of wood.

The results support the choice of stimuli thus allowing us to move forward to the next stage of the research.

3.7 Adopted Measurement Instruments

Chapters 4-7 provide detailed descriptions of all measurement instruments employed in the research and discuss their validity and reliability. The measure for congruence was adopted from that used by Kamins and Gupta (1994) and Till and Busler (2000). The measure for nostalgia (past orientation) was adopted from Sierra and McQuitty (2007). The purchase

intention measure was adopted from Putrevu and Lord (1994) and the measure for product authenticity was adopted from that used by (Camus (2004)) and Beverland (2006). Other variables seen in the model were measured by a single item (Rossiter, 2002) or through questions developed for this research (no existing measure was found in the literature) and subsequently validated for use in hypotheses testing.

3.8 Summary

Chapter 2 provided an illustration and justification of the conceptual model showing the potential relationship between the innovated products' perceived functional benefits, perceptions of authenticity of the innovated product and perceived sacrifice/gain with flow on effects to purchase intention. Evolving from this theoretical foundation, a causal model showcasing the relationships between the dependent variables (authenticity, functional benefits, and purchase intention) and independent variables (perceived traditionality, perceived innovativeness, perceived complexity of the innovation, past orientation, involvement, and knowledge) was proposed and defended in Chapter 3. This was followed by developing and summarizing the hypothesized relationships. The next section of the chapter provided a brief description of the 3 stages included in the study, followed by the methodology used in the qualitative research stage and a subsequent analysis of results. Chapter 4 provides a discussion of the quantitative research methodology employed in this study, including the measures used and the development of data collection surveys.

Chapter 4: Quantitative methodology

4.1 Introduction

Chapter 3 provided a justification of the empirical model and resulting hypotheses. It also provided an overview of each of the research stages. This was followed by an illustration of the methodology used for stage one (the qualitative component) and an analysis of the qualitative results. The knowledge gained from the qualitative stage of the study, in conjunction with measures established in the literature, was used to develop the data collection instruments described in detail in chapter 4. In the first section of the chapter the research design is outlined followed by a description of the sampling methods. Next, the data collection instruments are specified with descriptions of the measures used to quantify consumer knowledge, involvement, past orientation, authenticity of the innovated product, congruence of the innovation, product integration (traditionality) and advantages of the innovated product. In the next section, the preliminary quantitative study (pre-test) undertaken is discussed, including a description of the sample, and the analysis undertaken to examine the reliability and validity of the measures used. A brief overview of the data analysis tools employed in the study is also included.

4.2 Research Design

As already mentioned in section 3.5, the purpose of this research is to investigate the potential causal relationships proposed in chapter 3 between the products' perceived traditionality, perceived congruence of innovation, perceived authenticity of the innovated product, consumer characteristics (involvement, knowledge, past orientation), perceived sacrifice or gain and purchase intention among others. In order to provide empirical evidence for these relationships, a deductive research approach was undertaken. This approach is appropriate when seeking to determine causality between constructs (Neuman, 2006). The research adopted an initial qualitative approach to inform and support the proposed conceptual framework, and a

quantitative approach to implement a cross-cultural study collecting data from individuals who participated in the study only once. Three questionnaires were developed using three different contexts (wine, bicycle and traditional Asian medicines) in three different countries (Australia, France, and Singapore). Measures identified in the literature, adapted to the particular context when required, were used to represent each of the constructs. A pre-test was undertaken in one of the countries (Australia) to conduct factor and reliability analysis of the constructs used. The questionnaires were subsequently modified based on the findings before conducting the main study. The empirical data in this research was analysed using Structural Equation Modelling (SEM). Structural equation models are popular in a variety of disciplines such as sociology, psychology, and business research. This is due to the wide range of hypotheses that these models enable researchers to test. In some business disciplines, such as marketing, there has been a continuous increase in the number of articles published which make use of structural equation models (Martínez-López et al., 2013, Medsker et al., 1994, Schumacker and Lomax, 2004, Smith and Langfield-Smith, 2004).

Structural Equation Modelling is defined as a “class of methodologies that seeks to represent hypotheses about the means, variances, and covariances of observed data in terms of a smaller number of structural parameters defined by a hypothesized underlying model” (Kaplan, 2008, pg. 1). A structural equation model consists of the measurement model, which serves the purpose of linking the observed variables to the latent variables, and the structural part, which links the latent variables to each other (Kaplan, 2008, pg. 5). SEM provides estimates of the strength of all the hypothesized relationships between the constructs comparing the theoretical model to the empirical data (Hox and Bechger, 2007). This comparison is obtained via fit statistics which can then be used to reject or accept the assumed relationships between the latent and observed variables. Compared to regression analysis, SEM offers some advantages such as allowing for the simultaneous analysis of whole system of regression equations (Nachtigall

et al., 2003, Homburg, 1989, Gefen et al., 2000). First-generation regression models can analyse only one level of linkages between independent and dependent variables at a time. Moreover, SEM is able to deal with latent variables, which are very important for this study. Furthermore, Structural Equation Modelling provides a variety of measures to assess the sufficiency of model fit while also taking into account measurement errors. Conversely, regression analysis assumes that variables can be measured without measurement errors. Finally, a feature of the SEM framework that is very important for this research, is the extension to moderator models using a multi group approach. This research analyses the potential moderating effect of consumer characteristics (knowledge, involvement, and past orientation) on the relationship between traditionality perceptions and perceived authenticity of the innovated product as well the relationship between perceived authenticity of the innovated product and perceived gain and purchase intention. The AMOS program was used to conduct SEM as it provides a very “user friendly” graphic interface. A description of the fit indices used in the study as well as the procedure can be found in Chapter 5.

4.3 Sampling methods

Sampling is a statistical method to collect data in a way that a phenomenon observed in the sample can be generalized to the whole population. For this quantitative stage of the research, respondents were recruited (employing a non probability sampling) in Australia, France and Singapore using a variety of incentive and communications methods. A professional research company in the USA, Qualtrics, was contracted to recruit all respondents in each country. Samples were comprised of members of the general public and the criteria of selection differed depending on the stimulus. However, all respondents had to be over 18 years old and citizens of their respective countries. In the wine survey, the unit of analysis was defined as individual consumers, female or male (with a ratio of 1:1), that consume more than 5 glasses of wine in an average month. In the bicycle survey, the participants needed to be either male or female,

and needed to ride a bicycle at least once in a given month. In order to complete the survey for the third stimulus, traditional Asian medicines (TAMs), participants needed to be either female or male, and consumers (at least once in a given month) of traditional Asian medicines.

For SEM using AMOS statistical analysis software, a sample size over 100 is recommended (Tanaka, 1987). Using smaller samples can have negative consequences such as negative error variance estimates for measured variables as well as a lowered accuracy of parameter estimates and standard errors. While there is no absolute rule determining the required sample size for factor analysis (MacCallum et al., 1999), Hatcher and Stepanski (1994) recommend that the number of cases should be subjected to the number of variables with a ratio of 5:1 (MacCallum et al., 1999, Gorsuch, 1983). Cattell (2012) argues that even a 3:1 ratio is acceptable as long as the minimum sample size is no less than 250. In this study, a sample of around 500 respondents per wine survey, 400 for the bicycle and 400 for the TAMs survey in each country (resulting in a total of 1517 respondents for the wine stimulus, 1231 respondents for TAMs, and 1239 respondents for the bicycle stimulus) was obtained as a larger sample was deemed to further enhance the reliability of the results.

4.4 Data collection instruments

An online survey was used because it is a faster and easier method for researchers to collect data (Evans and Mathur, 2005), and it also reduces the response bias induced by the presence of the interviewer (Shaugnessy et al., 2006). However, using an online survey also has some disadvantages, such as inaccurate responses, incomplete surveys and low response rates. The surveys used in this research were created using Qualtrics software, a web based professional survey panel that provides survey templates enabling questionnaire customization by the researcher. As three stimuli in one survey rendered it too long, the content was divided into two surveys. One survey for wine (stimulus 1) and one for bicycles and traditional Asian medicines (stimuli 2 & 3). Constraints filtering participants who answered the survey too

quickly (the minimum time threshold was determined based on the average time taken to complete the survey) and those that answered questions in a straight line were established. Potential respondents were approached by Qualtrics through electronic invitations providing the survey link. They were informed of the nature of the research and the process of seeking more information or filing a complaint. Moreover, they were guaranteed confidentiality and were provided with a reimbursement for their participation.

The questionnaires were based on the measures described in section 4.5. Respondent demographics such as income, education, gender, occupation, and age were also asked. In the following section, the questionnaires (wine and bicycles & traditional Asian medicines) are described in detail. The wine questionnaire is longer and includes more questions (measuring the constructs being investigated for red, white, rose and sparkling wine) than the bicycle and traditional Asian medicines questionnaire. More detailed information needed to be gathered as this project is being funded by the ARC Training Center for Innovative Wine Production, with the purpose of investigating and understanding what influences consumers' perceptions towards partially and completely dealcoholized wines. As different wine types and varieties exist, and a difference was observed in the focus groups in the extent that participants associated the dealcoholization cue to negative perceptions, it was important to analyse our proposed constructs for different wine types (red, white, rose and sparkling wine) and different degrees of dealcoholization (partial and complete). However for the purpose of this study, only the questions and results pertaining to the hypothesized relationships for low alcohol (partially dealcoholized) wine will be discussed and reported.

4.4.1 Questionnaire development

In the pre-test study, the questionnaires were pre-tested with 75 participants per stimulus to ensure that the instructions in the questionnaires were easy to understand, the questionnaires were not too lengthy, and the constructs were reliable and valid. From this stage, few

modifications were made. Before sending the questionnaires to the public for the online survey, ethical clearance was obtained by the University of Adelaide Research Ethics Committee.

The final questionnaires consisted of four sections. The first section elucidated each respondent's right to opt out at any time and captured the introduction, an explanation of the research, confidentiality, as well as screening questions such as age, nationality and product consumption. The second section comprised questions about the original product (such as perceptions of traditionality, occasions of consumptions etc) while the third section focused on questions about the innovated product (such as perceptions of authenticity of the innovated product, benefits obtained from the innovation, congruence of the innovation with their established perceptions of the product, perceived gain from the innovation and purchase intention among others). The fourth section focused on consumer characteristics (past orientation, knowledge and involvement). Respondent's demographics were gathered in the fifth and final section. As the research was carried out for three product categories (wine, bicycle and traditional Asian medicines), as mentioned before, two different versions of the questionnaire were developed (one including the wine, while the other including the remaining products). The fourth and fifth sections of the questionnaires were identical for both versions. In the case of wine, the innovation was the partial removal of alcohol. In the context of bicycles, the frame was changed from the traditional metal construction to bamboo, while traditional Asian medicines were innovated by changing the way they are presented (e.g. from herbal teas to capsules and tablets). Respondents were asked to rate the product integration into their culture, the fit of the innovation with the product category, the perceived authenticity of the innovated product, the perceived sacrifice or gain, benefits obtained from consuming the innovated product, and purchase intention. The last section of the questionnaire asked about respondents' demographic characteristics including their place of birth, educational background and income. The questionnaires administered in Australia and Singapore were in

English, while the ones used in France were in French. The translation was conducted by native French speakers and rechecked for potential errors by a third party.

The constructs were measured using nine response option likert scales. A likert type scale is suitable as it is easy to understand by survey participants as well as easy to administer (Hair, 2008). In order to conduct SEM, it is important to ensure a sufficient scale variance, thus all constructs utilised in this study were measured using a nine point likert scale with a range from (1) strongly disagree to (9) strongly agree (Noar, 2003). An odd number of response options were provided in order to avoid forcing an opinion and to allow for a neutral midpoint (5: neither agree nor disagree) for undecided respondents. A lack of a neutral midpoint may be conducive to lower data quality as not all respondents are able to accurately respond to a given question (Hair, 2008).

4.5 Questionnaire testing the wine stimulus

4.5.1 Perceived Authenticity of the innovated product

Two different scales were used to measure perceived authenticity of the innovated product (Table 4.1), one introduced by Camus (2004) and one developed through the conceptualisation of authenticity by Liao (2015) and Beverland (2006). The scale introduced by Camus (2004) has been used and validated in the context of edible products, thus it was deemed important to use another scale as not all stimuli used in the study fall under the category of edible products. Moreover, in order to adapt the scale to measure the perceived authenticity of a non edible product, some of the items that were not applicable, needed to be left out (Table 4.1). The second scale was created using the authenticity attributes introduced by Beverland (2006) in the context of brand authenticity and expanded by Liao (2015). Items were adapted to fit the context of product authenticity and were finalised based on focus group discussions. The same items were used in the surveys for bicycles and TAMs.

Table 4.1: Perceived authenticity of the innovated product scale items

Response format: 1 = strongly disagree; 9 = strongly agree

Items of the authenticity of the innovated product scale		
<i>Thinking about how authentic you consider low alcohol wine, where 'authenticity' means 'original, genuine, unique, and real', please indicate how strongly you 'Agree' or 'Disagree' with the following statements.</i>		
1.	I think low alcohol wine is an original product.	
2.	Low alcohol wine has characteristics that can be passed from generation to generation.	
3.	There is no other product like low alcohol wine.	Camus (2004)
4.	Low alcohol wine is unique.	Camus (2004)
5.	Low alcohol wine fits with my expectations of how wine should be.	
6.	Low alcohol wine relates to memories of past days.	Camus (2004)
7.	Features of low alcohol wine are consistent with what is in my memory.	
8.	Low alcohol wine has features that cannot be imitated.	
9.	Low alcohol wine is pure (produced from one source).	
10.	Low alcohol wine makes use of hand made processes.	
11.	I know how low alcohol wine is made.	Camus (2004)
Unused items from the Camus (2004) Scale:		
1.	Low alcohol wine is a natural product.	
2.	Low alcohol wine is composed of natural elements.	
3.	Low alcohol wine does not contain artificial elements.	
4.	I know where low alcohol wine comes from.	
5.	Low alcohol wine reflects its personality.	
6.	Low alcohol wine is unique in its genre.	
7.	Low alcohol wine is simple.	
8.	Low alcohol wine is not extravagant.	
9.	Low alcohol wine reflects a certain philosophy.	

4.5.2 Subjective Knowledge and Involvement

Subjective knowledge is the consumer's perceived level of expertise of product knowledge (Monroe, 1976, Brucks, 1985, Park et al., 1994, Wirtz and Mattila, 2003). The five items for knowledge and three items for involvement used in this research were adapted from Goldsmith and Emmert (1991) and validated by testing across eight different product categories in three studies by Flynn and Goldsmith (1999). The items comprising this scales are shown in table 4.2. The same scales were used in the context of bicycles and TAMs.

Table 4.2: Subjective knowledge and involvement scale items

Response format: 1 = strongly disagree; 9 = strongly agree

Items of the subjective knowledge and involvement scale		
<i>Thinking about your knowledge of wines and how important wine is to your lifestyle, please indicate how strongly you 'Agree' or 'Disagree' with the following statements.</i>		
1.	Among my friends, I'm considered a wine 'expert'.	Subjective Knowledge
2.	I feel that i know how to judge the quality of wine.	Subjective Knowledge
3.	I know most of the wines around in shops.	Subjective Knowledge
4.	I feel confident about my knowledge of wine.	Subjective Knowledge
5.	When it comes to wine, I really know a lot.	Subjective Knowledge
6.	Drinking wine gives me pleasure.	Involvement
7.	Wine is important to my lifestyle.	Involvement
8.	I have a strong interest in wine.	Involvement

4.5.3 Consumption situations

The behaviour of consumers in a real life situation is often influenced by a variety and level of stimuli that is beyond the control of the researchers (Quester and Smart, 1998), such as purchasing motive or planned consumption situation. As an alternative to observing actual behaviour, in this study participants were presented with imagined situations, thus following the most commonly adopted approach. This method is easier to perform empirically while also allowing for a greater manipulation of the stimuli (Bonner, 1983). One-phrase descriptions were used to outline the various situations, allowing for more scenarios to be analysed, but at the same time limiting the number of elements included to time of day, presence of others, purpose of consumption and momentary mood of the individual. An analysis of several important studies on wine occasions in the academic research literature such as Berni et al. (2005), Dubow (1992), Hall et al. (2001), Olsen et al. (2007), Aurifeille et al. (1999), Thach and Olsen (2004)), shows that eight common wine consumption situations exist: (1) wine with a meal at home, (2) wine with a meal in restaurant, (3) wine with a meal in casual setting, e.g. Barbeque (BBQ), Picnic, (4) wine for a special occasion/celebration, (5) wine alone to relax, (6) wine at a bar/cocktail party, (7) wine at a concert, and (8) wine at a sporting event. From focus group results the following occasion was added: (9) wine at professional events (e.g.

business meeting or dinner). Table 4.3 summarizes the different wine consumption situations. For the purpose of this study, occasions 6, 7, 8, and 9 will be grouped under ‘special occasion’.

Table 4.3: Wine consumption situations

When do you typically drink wine? (Tick as many as apply)	
1.	When having a meal at home.
2.	When having a meal in a restaurant.
3.	Social setting (Barbeque, Picnic etc.)
4.	Professional events (e.g. a business meeting or dinner)
5.	Alone to relax (e.g. after work or whilst watching TV etc.)
6.	On a celebration! (E.g. a birthday, anniversary or wedding etc.)
7.	At a bar/cocktail party.
8.	Sporting event.
9.	At a concert.

4.5.4 Product Integration in the culture (traditionality perceptions)

The items determining the degree to which grape based wine would be considered a strong aspect of a respondent’s culture (Table 4.4) were developed based on feedback from focus group participants and literature. The scale was developed with the purpose of determining the perceived traditionality of the product. The items were created using the Cambridge English Dictionary definition of the word ‘traditional’. As synonyms included ‘customary, long-established, conventional, habitually done’, the items were created to reflect its meaning. The country was changed depending on where the survey was being conducted.

Table 4.4: Product integration (traditionality perceptions) in Australia (Singapore, France)

Response format: 1 = strongly disagree; 9 = strongly agree

Items of the culture scale	
<i>Thinking about how important, or integrated, grape based wine is in your culture, please indicate how strongly you ‘Agree’ or ‘Disagree’ with the following statements:</i>	
1.	Since I was a child I have seen people drink wine.
2.	Wine has always been one the most popular drinks in my culture.
3.	Drinking wine has always been traditional in my culture.

Questions on the wine innovation

The following section relates to questions about potential innovations to wine, specifically where alcohol has been partially removed, resulting in low alcohol wines. Wines with decreased alcohol content can be classified as de-alcoholised or alcohol-free (< 0.5% v/v), low alcohol (0.5 - 1.2% v/v) and reduced alcohol (1.2 - 5.5/6.5% v/v). Nevertheless, categories can vary depending on the country's own legislation (Saliba, 2013, Pickering, 2000). Even though there exists in the literature a definition of what constitutes low alcohol wine, as the alcohol level is too close to the de-alcoholised wines, for the purpose of this study we focused on the what consumers (participants) perceive low alcohol wine to be (Table 4.5) and whether their determinations change with the type of wine proposed.

Table 4.5: Determining what participants consider low alcohol wines
Response format: from 0 to 20% alcohol

Measuring what participants consider low, normal, high levels of alcohol for red (white/rose/sparkling) wine.	
<i>What would you consider to be low, normal and high levels of alcohol (%) for Red (White/Rose/Sparkling) wines? Please move the slider to indicate the level of alcohol (%).</i>	
1.	I consider a <u>low</u> alcohol level in Red (White/Rose/Sparkling) Wine to be:
2.	I consider a <u>normal</u> alcohol level in Red (White/Rose/Sparkling) Wine to be:
3.	I consider a <u>high</u> alcohol level in Red (White/Rose/Sparkling) Wine to be:

4.5.5 Characteristics of the innovated product and congruence of the innovation with the product category

The measure for congruence of the innovation with existing beliefs about the product, was adopted from the scale used by Kamins and Gupta (1994) and Till and Busler (2000). Table 4.6 displays the bi-polar single item used to measure congruence in this research. The same single item was also used in the context of bicycles and TAMs.

Table 4.6: Congruence measure

Response format: 1 = poor fit with my existing beliefs; 9 = excellent fit with my existing beliefs

Item measuring congruence										
<i>Based on what you consider a low alcohol wine to be, please indicate how you feel about the statement below.</i>										
<i>I think that low alcohol Wine is...</i>										
	1	2	3	4	5	6	7	8	9	
A poor fit with my existing beliefs of how wine should be	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	An excellent fit with my existing beliefs of how wine should be

The perceived complexity of low alcohol wines was measured via a straightforward one item measure ranging from 1 (strongly disagree) to 9 (strongly agree) (Table 4.7). Characteristics of the innovated product, including advantages obtained from the innovation, such as innovativeness, quality, taste, whether it is perceived to be healthy etc. were derived from focus group discussions and existing literature on low alcohol wines. They were all measured via a 9-point bi-polar measure (Table 4.7).

Table 4.7: Product characteristics and complexity of the innovation

Characteristics of the innovated product		
<i>Based on what you consider a low alcohol wine to be, please indicate how you feel about each statement below.</i>		
<i>I think that low alcohol Wine is...</i>		
Old fashioned	Vs.	Innovative
Lower in quality	Vs.	Higher in quality
Less healthy than full alcohol red wine	Vs.	Healthier than full alcohol red wine
Bland	Vs.	Tasty
(1) Strongly disagree to (9) Strongly agree		
I think it must be a complex process to partially remove alcohol from wine.		

4.5.6 Perceived sacrifice/gain

Perceived sacrifice is defined as the degree by which disadvantages of the innovation overcome the benefits of the innovation. Conversely, perceived gain refers to the degree by which the benefits of the innovation overcome the disadvantages. In other words, do people consider they ‘give up a lot to gain a little’ or do they believe they ‘give up a little to gain a lot’? In order to determine whether the participant would experience sacrifice or gain, a two point bipolar scale was used where respondents decided whether or not there was a net ‘gain’ or ‘sacrifice’ (Table 4.8). On one side the option was: ‘The disadvantages of the innovation (low alcohol wine)

outweigh the benefits of drinking low alcohol wine’. The other option was: ‘The benefits of the innovation outweigh the disadvantages of drinking low alcohol wine’.


Table 4.8: Determining perceived sacrifice or gain

Item determining whether respondents experience sacrifice or gain			
<i>Thinking about the benefits and disadvantages of low alcohol wine as opposed to full alcohol wine, please indicate your feelings about any benefits versus any disadvantages of low alcohol wine.</i>			
	1	2	
The disadvantages outweigh the benefits of drinking low alcohol wine	<input type="radio"/>	<input type="radio"/>	The benefits outweigh the disadvantages of drinking low alcohol wine

Depending on their selection, the participants continue to either answer a question measuring the degree of perceived sacrifice or the degree of perceived gain.

If participants perceived the “disadvantages” to overcome the benefits of the innovation, then they are asked to what *degree* the disadvantages overcome the benefits of drinking low alcohol wine (Table 4.9).

Table 4.9: The degree of perceived sacrifice

Item measuring degree of perceived sacrifice										
<i>On a scale from 1 to 9, where 1 stands for ‘very little’ and 9 for ‘to a great extent’, please indicate to what extent do you believe the disadvantages of the innovation overcome the benefits</i>										
	1	2	3	4	5	5	6	7	8	9
Extent of disadvantages overcoming benefits										

If participants perceived the benefits to overcome the disadvantages of the innovation then they are asked to what *degree* the benefits overcome the disadvantages of drinking low alcohol wine (Table 4.10).

Table 4.10: The degree of perceived gain

Item measuring perceived perceived gain									
<i>On a scale from 1 to 9, please indicate to what extent do you beleive the benefits of the innovation overcome the disatvantages.</i>									
	1	2	3	4	5	6	7	8	9
Extent of benefits overcoming disadvantages									

The same measure was used in the context of bicycles and TAMs.

Influence of situation on perceived sacrifice/gain

Based on the way perceived sacrifice and gain were measured, together with the type of situations that influence the purchase of wine, Table 4.11 showcases the way the influence of the situation on perceived sacrifice was measured, while Table 4.12 illustrates the influence of the situation on perceived gain. As mentioned above, participants answer only one of the questions depending on whether they perceive an overall sacrifice or gain.

Table 4.11: Influence of situation on perceived sacrifice

<i>On a scale from 1 to 9, please indicate to what extent do you believe the disadvantages of the innovation overcome the benefits in the situations below:</i>	
1.	Drinking alone with a meal
2.	Drinking alone to relax after work
3.	Drinking with friends at a restaurant
4.	Business lunch
5.	Drinking when pregnant
6.	Drinking with company on a special occassion/celebration

Table 4.12: The influence of situation on perceived gain

<i>On a scale from 1 to 9, please indicate to what extent do you believe the benefits of the innovation overcome the disatvantages in the situations below:</i>	
1.	Drinking alone with a meal
2.	Drinking alone to relax after work
3.	Drinking with friends at a restaurant
4.	Business lunch
5.	Drinking when pregnant
6.	Drinking with company on a special occassion/celebration

4.5.7 Purchase intention

The purchase intention measure was adapted from measures used by Bower and Landreth (2001), Barber et al. (2009), and Loureiro (2003). A single item was used (Table 4.13). The same scale was used in the context of bicycles, and TAMs.

Table 4.13: purchase intention of low alcohol wines
Response format: 1= Strongly Disagree, 9= Strongly Agree

<i>Thinking about purchasing and recommending low alcohol wines, please indicate how strongly you 'Agree' or 'Disagree' with the statements that follow:</i>	
1.	I would purchase low alcohol wines.

4.5.8 Past Orientation

The past orientation measure in this research was adopted from a scale introduced by Sierra and McQuitty (2007). Table 4.14 displays the past orientation scale used. The same scale, with no changes, was used for the other two stimuli (bicycle and TAMs survey).

Table 4.14: Past orientation scale items
Response format: 1 = strongly disagree; 9 = strongly agree

Items of the past orientation scale.	
1.	I like possessions that have a connection with the past.
2.	I purchase products that remind me of my past.
3.	I strongly long to be part of the time period from which the product came from.
4.	I have positive attitudes about the time period from which the product came from.

4.5.9 Demographics

The questions about first language and nationality at birth ensure that only participants with the required nationality are questioned (Table 4.15). Additional questions such as the current country of residence and amount of time spent abroad, facilitated the exclusion of respondents who were at risk of cultural adaptation. The questions were not open ended and options were offered. The same scale, with no changes, was used for the other two stimuli (bicycle and TAMs survey).

Table 4.15: Demographic questions

Items of the demographic questions	
1.	What is your nationality?
2.	What was your nationality at birth?
3.	What is your first language?
4.	How long have you lived abroad?
5.	Where do you currently reside?
6.	Approximately how many years have you been residing in your current location?
7.	What is your annual income range?
8.	Please indicate your occupation
9.	What is the highest level of education you have completed?

4.6 Questionnaire testing the bicycle and traditional Asian medicines stimuli

4.6.1 Bicycle Questionnaire

The same constructs and scales as the ones used in the wine survey were applied to the bicycle survey. The sole difference is the change in references to the stimulus. Thus, perceived product traditionality, product characteristics (perceived authenticity, benefits, complexity of the innovation and innovativeness), congruence of the innovation, perceived sacrifice/ gain, consumer characteristics (knowledge, involvement, and past orientation), and purchase intention were measured using the same scales. Differences between the surveys include context based modifications to the occasions of product usage (Table 4.16), product integration in the culture (Table 4.17), benefits of the innovation (Table 4.18) and influence of the situation on perceived sacrifice or gain (Table 4.19). The items for the above measures were derived primarily from focus groups discussions.

Occasion for riding a bicycle

Table 4.16: Occasions for riding a bicycle

<i>When do you typically ride a bicycle? (Tick as many as apply)</i>	
1.	Social events (with a group of friends or family).
2.	Competitive events (e.g. a race).
3.	To relax (e.g. after work etc.)
4.	To exercise.
5.	To go to work.
6.	To get around.
7.	To spend time outdoors.

Cultural integration of the product

Table 4.17: Product integration (traditionality perceptions) of the product in Australia

Response format: 1 = strongly disagree; 9 = strongly agree

Items of the cultural integration scale	
<i>Thinking about how important or integrated bicycles are in your culture, please indicate how strongly you ‘Agree’ or ‘Disagree’ with the following statements:</i>	
1.	Bicycles have always been one of the most popular means of transport in Australia.
2.	Since I was a child, I have seen people ride bicycles.
3.	Riding a bicycle has always been traditional in my culture.

The bicycle innovation consisted in replacing the metal based frame with a bamboo frame. Features of this innovation were explained to the participants in order to inform them as in the focus groups they seemed less than obvious without prompting. They included: low carbon footprint, comfort (surpassing aluminium, steel, titanium and most carbon frames in smoothness), and high durability: resisting damage from stress.

Benefits of the innovated product

Table 4.18: Product benefits

Response format: 1= Strongly Disagree, 9= Strongly Agree

<i>Thinking about bamboo bicycles, please indicate how strongly you ‘Agree’ or ‘Disagree’ with each of the statements that follow.</i>	
1.	It’s important to me that bamboo bicycles have a low carbon footprint.
2.	It’s important to me than bamboo bicycles are comfortable.
3.	It’s important to me that bamboo bicycles are durable.

Influence of situation on perceived sacrifice/gain

Table 4.19: Influence of situation on perceived sacrifice

<i>Perceived sacrifice: On a scale from 1 to 9, please indicate to what extent do you believe the disadvantages of the innovation overcome the benefits in the situations below:</i>	
<i>Or</i>	
<i>Perceived gain: On a scale from 1 to 9, please indicate to what extent do you believe the benefits of the innovation overcome the disadvantages in the situations below:</i>	
1.	Professional Competition.
2.	Riding alone to relax.
3.	Riding alone to exercise.
4.	Riding with company.
5.	Riding to work.

4.6.2 Traditional Asian Medicines Questionnaire

The same constructs and scales as the ones used in the wine survey were applied to the Traditional Asian medicines-TAMs- (which in this context include various forms of herbal

medicine served in the form of teas, creams etc.) survey. The innovation related to the change in the way TAMs are offered (in the form of pills and tablets instead of teas).

The sole difference is the change in the name of the stimulus. Thus product characteristics (perceived authenticity after the innovation, benefits, complexity of the innovation, innovativeness, and congruence), perceived sacrifice/ gain, consumer characteristics (knowledge, involvement and past orientation), and purchase intention remained the same. Differences between the surveys include the occasions of product usage (Table 4.20), product integration in the culture (Table 4.21), benefits of the innovation (Table 4.22) and influence of the situation on perceived sacrifice or gain (Table 4.23). The items for the above measures were derived from literature and focus groups discussions.

Occasions for using TAMs

The occasions for using traditional Asian medicines were derived from a study conducted by Astin (1998) and focus group results.

Table 4.20: Occasions for using TAMs

<i>When do you typically use traditional Asian medicines? (Tick as many as apply)</i>	
1.	When I am sick.
2.	When conventional treatments don't work.
3.	To maintain myself healthy.

Product integration in the culture

Table 4.21: Product integration (traditionality perceptions) in Australia

Response format: 1 = strongly disagree; 9 = strongly agree

Product Integration in the culture	
<i>Thinking about how important or integrated TAMs are in your culture, please indicate how strongly you 'Agree' or 'Disagree' with the following statements:</i>	
1.	Consuming TAMs has always been popular in my culture.
2.	Since I was a child, I have seen people consume TAMs.
3.	Using TAMs has always been traditional in my culture.

Benefits of using the product innovation

Motives for using traditional Asian medicines served in a more conventional form were obtained from focus group results.

Table 4.22: Benefits of using the product innovation

Response format: 1 = strongly disagree; 9 = strongly agree

Motive items	
<i>Thinking about traditional Asian medicines (TAMs) offered in a more conventional form (capsules, tablets etc.) please indicate how strongly you 'Agree' or 'Disagree' with each of the statements that follow.</i>	
1.	I believe that TAMs in the form of tablets are easier to consume.
2.	It's important to me that the TAMs offered as tablets are more accessible.
3.	It's important to me that there is no odour in the TAMs tablets.

*Influence of situation on perceived sacrifice/gain***Table 4.23:** Influence of situation on perceived sacrifice/gain

<i>Perceived sacrifice: On a scale from 1 to 9, please indicate to what extent do you believe the disadvantages of the innovation overcome the benefits in the situations below:</i>	
<i>Or</i>	
<i>Perceived gain: On a scale from 1 to 9, please indicate to what extent do you believe the benefits of the innovation overcome the disadvantages in the situations below:</i>	
1.	When I am sick.
2.	When conventional treatments fail.
3.	To maintain myself healthy.

4.7 Pre-Test Analysis

A pre-test was conducted to evaluate the process flow of the online survey and the format of the questionnaire, flow of questions and syntax errors. The pre-test also aimed to verify that all items served as valid and reliable measures for each latent variable. In this research the constructs tested were product authenticity, subjective product knowledge and involvement, product integration in the culture (traditionality), consumer past orientation and advantages (benefits) of the innovated product. For the one item variables such as congruence of innovation, complexity of the innovation, innovativeness of the innovated product and perceived sacrifice and gain, the construct validity tests were not needed. The study was conducted in November 2015, with 75 Australian respondents for each of the surveys.

4.7.1 Sample Profile

Non probability sampling was employed for this pre-test, with respondents recruited in Australia using a variety of communications and incentive methods. A professional research company in Australia, APD Group, was contracted to recruit all respondents. Samples were

comprised of members of the general public and the criteria of selection differed depending on the stimulus. In the wine survey, the unit of analysis was defined as individual consumers, older than 18 years old, a citizen of Australia, female or male, that consume more than 5 glasses of wine in an average month. In the bicycle survey the participants needed to be above 18 years old, a citizen of Australia, either male or female, and needed to ride a bicycle at least once a given month. In order to complete the survey for the third stimulus, traditional Asian medicines (TAMs), participants needed to be of age (above 18 years old), a citizen of Australia, either female or male, and consumers (at least once in a given month) of traditional Asian medicines. A total of 75 participants per stimulus participated in the pre-test. In the wine survey, in terms of gender, the sample was perfectly balanced (50 % females and 50 % males). 36 % of the participants were 18-35 years old, with the rest being 36-65. In the bicycle and TAMs survey, the sample was slightly skewed towards males (51%). 38% of the participants were 18-35 years old. Analysis indicated that no substantial modifications were required to the questionnaires. Minor modifications made were related to improving the layout and removing the item “Wine/bicycle/TAMs is new to my culture” as it negatively impacted the reliability of the scale.

4.7.2 Validation of research instruments

In order to test the scale consistency and the validity of constructs used to measure variables such as consumer characteristics, authenticity of the innovated product etc., reliability and validity tests were conducted.

4.7.3 Scale Reliability

Reliability tests were conducted to examine whether the instruments used in the surveys are reliable. All instruments examined in this research were tested using Cronbach Alpha. The Cronbach Alpha coefficient is one of the most commonly used indicators of internal scale consistency (deVellis, 2003). Scores range in value from 0.0 to 1.0 and the higher the score the

more reliable the scale is considered to be. Ideally, the Cronbach Alpha coefficient of a scale should meet or exceed 0.7 (Hall et al., 1999, deVellis, 2003).

However, as Cronbach alpha values are quite sensitive to the number of items in the scale, with scales with less than ten items, the mean inter-item correlation for the items can also be reported. Briggs and Cheek (1986) recommend a range of 0.2 to 0.4 for the inter-item correlation. Cronbach Alpha coefficients are illustrated in Table 4.24. Reliability tests showed that all variables are reliable with Cronbach alphas exceeding 0.7, with the exception of product integration (TAMs). However, the inter item correlation proved to be satisfactory (within the range of 0.2-0.4) (Table 4.25).

Table 4.24: Reliability scores of latent constructs used in the wine survey

Construct	Cronbach's Alpha	N of Items
Consumer Past orientation (wine)	0.86	4
Consumer knowledge (wine)	0.91	5
Consumer Involvement (wine)	0.76	3
Perceived Product Authenticity (wine)	0.92	7
Product integration (traditionality) (wine)	0.70	3
Consumer Past orientation (bicycle)	0.85	4
Consumer knowledge (bicycle)	0.93	5
Consumer Involvement (bicycle)	0.86	3
Perceived Product Authenticity (bicycle)	0.91	7
Product integration (traditionality) (bicycle)	0.72	3
Consumer Past orientation (TAMs)	0.85	4
Consumer knowledge (TAMs)	0.97	5
Consumer Involvement (TAMs)	0.91	3
Perceived Product Authenticity (TAMs)	0.93	7
Product integration (traditionality) (TAMs)	0.54	3

Table 4.25: Inter Item Correlation Mean (TAMs)

Constructs	Intern Item Correlation Mean	N of Items
Product integration (traditionality) (TAMs)	0.295	3

Since construct reliability does not guarantee that the constructs measure the intended measure, a validity test was conducted.

4.7.4 Validity tests

A validity test examines the validity of constructs used to measure variables such as consumer characteristics, authenticity of the innovated product, benefits obtained from the innovated

product etc. It tests the convergent validity (i.e. whether a latent construct is accurately measured by its items) and discriminant validity (i.e. whether each item only measures one construct) of the instruments used in the research. A construct is valid if it meets both convergent and discriminant validity. As the sample size is only 75 per stimulus, SPSS software was used to conduct the validity test. In the main study, the validity of constructs was determined using a confirmatory factor analysis (CFA) via AMOS. If an item exhibits high correlations with other items, which are theoretically predicted to correlate with, then it satisfies convergent validity. Discriminant validity is achieved when the item (s) do (es) not highly correlate with other constructs. Discriminant validity of a construct can be determined by the number of factors with Eigen values bigger than one (Hair, et al, 1998). Convergent validity and discriminant validity of a construct can be examined with factor analysis. The degree of correspondence between an item and its construct is represented by factor loading. A higher loading coefficient indicates that the item correlates strongly with its construct. For practical considerations, loading exceeding 0.7 are considered high as an indication of well-defined structure, while loading between 0.5 and 0.7 are considered practically significant (Hair et al., 2012a). Factor analysis will create an initial factor solution, an extraction of items into their representative groups in the order of their variance degree. The number of factors is determined by Eigenvalues greater than one (Hair et al., 1998). Principal factor analysis was used to confirm that a latent variable is being measured (Hall et al., 1999). In order to help assess the factorability of the data, two statistical measures are also generated by SPSS, namely Bartlett's test of sphericity (Bartlett, 1954), and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (Kaiser, 1974). Bartlett's test of sphericity should be significant ($p < .05$) for the factor analysis to be considered appropriate while the KMO index is recommended to be at least 0.6 (from a range of 0 to 1) for a good factor analysis (Tabachnick et al., 2006). The results are shown in Appendix 4.1 and were satisfactory for all constructs. Authenticity,

consumer past orientation, subjective knowledge and product involvement, past orientation and traditionality (product integration) were tested. For all stimuli used, factor analysis for consumer past orientation, subjective knowledge, involvement, product integration in the culture (traditionality perceptions) and benefits (advantages) obtained from the innovated product revealed that one factor with an eigen value above 1 was created and all factor loadings were above 0.6 (with the majority being above 0.7). In the case of authenticity, 2 factors with eigenvalues above 1 were created for TAMs and bicycles and 1 factor for wine. Factor loadings were satisfactory.

4.7.5 Pre-test study results summary

All variables used in this study were reliable and valid, thus ready to be used in the main survey.

4.8 Chapter Summary

Chapter 4 focused on the quantitative methodology used in this study, providing details related to the development of the data collection instruments, data analysis methods, the validation procedures and a discussion and justification of measures used. A pre-test was undertaken to measure the validity and reliability of the research instruments. Chapters 5 (results for the wine stimulus), 6 (results for the TAMs stimulus) and 7 (results for the third stimulus – bicycle) will cover the analysis of the data obtained from the main study.

Chapter 5: Results for Low Alcohol Wine

5.1 Introduction

This chapter details the data analysis addressing the hypotheses described in chapter 3. While the hypotheses were examined in the context of three different products, chapter 5 only addresses the results of one of the contexts, namely low alcohol wine. Data analysis was conducted via structural equation modelling (SPSS22 and AMOS22). A demographic profile of the participants surveyed is presented in the first section of this chapter. In the following section, the results of a confirmatory factor analysis conducted to verify the factor structure of the constructs used in the study are presented. Data from three countries is aggregated and factor models for authenticity, product integration (traditionality), perceived advantages of the innovation, consumer past orientation, product knowledge and involvement are presented, together with the scale reliability. As data was collected in three different countries (Australia, Singapore and France), the third section of the chapter investigates the invariance of the measurement instruments (via a multigroup analysis) used to measure perceived product authenticity, product integration (i.e.: product traditionality), advantages of the innovation, consumer past orientation, product knowledge and involvement with the product category. The section begins with a discussion of the multigroup analysis and the techniques used in this study. Only in the event of complete or partial invariance can the results be compared country wise. Section four introduces the identified path model reflecting the conceptual model and hypothesised relationships, beginning with a discussion of composite variables, and the process of composite variable calculation. This is followed by a description of the SEM analysis steps including model specification, identification, estimation and potentially re-specification. Hypotheses regarding the impact of traditionality on perceived product authenticity, the relationship between authenticity and perceived advantages from the innovation, and the

impact of perceived authenticity on value generation (perceived gain and sacrifice) and purchase intention (among other hypothesis) are then discussed.

An estimation of the path model is then conducted for Australia, Singapore and France separately in order to test the robustness of the model across different locations by observing any potential differences that may exist.

Section five utilises the multigroup analysis method and critical ratios to investigate the moderation effect of consumer characteristics such as past orientation, knowledge and involvement on the path model. The sixth and last section utilises multiple paired samples t-test analysis to examine the potential impact of situation on perceived gain and sacrifice from the innovation.

5.2 Demographic profile of respondents

In total 1517 respondents from three countries (Australia, Singapore and France) completed the online survey, namely 505 participants from Australia, 506 from Singapore and 508 from France (Table 5.1). The sample was determined based on gender, age and frequency of wine consumption. The gender proportion was balanced (almost 50/50) in all three countries. In the survey participants could select their year of birth; however, in order to show a clearer and more simple distribution, the age was divided into six categories (namely 18-28, 29-39, 40-50, 51-61, 62-72, and above 73 years old). All participants consumed wine at least 5 times in any given month.

Table 5.1: Demographic profile based on age, gender and frequency of consumption

Variables	Aggregate Sample		Australia		Singapore		France	
Age	Freq.	%	Freq.	%	Freq.	%	Freq.	%
18-28	412	27.2	123	24.5	182	36.0	107	21.1
29-39	447	29.5	136	27.0	181	35.8	130	25.6
40-50	299	19.7	105	20.9	92	18.2	102	20.1
51-61	171	11.3	60	11.9	45	8.90	72	14.2
62-72	136	9.0	51	10.1	6	1.20	75	14.8
73 up	52.0	3.4	28	5.60	0	0.00	22	4.30
Gender								
Male	757	49.9	251	49.9	252	49.8	254	50.0
Female	760	50.1	252	50.1	254	50.2	254	50.0
Frequency								
>20 times*	203	13.4	53	10.5	60	11.9	90	17.7
15-20 times	288	19.0	133	26.4	74	14.6	81	15.9
10-14 times	418	27.6	131	26.0	154	30.4	133	26.2
5-9 times	608	40.1	186	37.0	218	43.1	204	40.2
N=	1517		503		506		508	
*Frequency per month								

5.3 Scale Validation (Confirmatory Factor Analysis)

In order to evaluate the extent to which observed variables represent an underlying latent variable, the construct validity of the scales used in the study was examined via a confirmatory factor analysis (CFA) (Byrne, 2016). The strategies to conduct a CFA include the model generation, the model comparison and the strictly confirmatory strategy (MacCallum, 1995). The strictly confirmatory strategy consists in examining the fit indices of an initially specified model. If the model shows a fit that is not acceptable, no further analysis is conducted. Similarly to the strictly confirmatory strategy, model generation involves the analysis of the fit of an initially constructed model, but the approach differs when the model doesn't fit the data well. In that case, the fit of the model is improved using modification indices. The model comparison strategy consists in the use of multiple initially specified models to determine the one that better fits the data. These models are constructed on the basis of conflicting theoretical backgrounds (MacCallum, 1995, Byrne, 2016). In this study, the model generation strategy will be used to conduct the confirmatory factor analysis as the strictly confirmatory approach is too rigid.

Modification indices will be used to improve the model, but only when these modifications are meaningful and justifiable.

All scales can be structured in five different models: the single factor model, N-orthogonal factors model, N-correlated factors model, nested factor model and hierarchical factor model (Hair et al., 2010). The single factor model is the simplest and it occurs when all observed variables load onto a single factor. The N-orthogonal factor model and the N-correlated factor model occur when the observed variables load onto more than one factor, which are not correlated (N-orthogonal) or correlated (N-correlated). When there are first and second order factors in the model then the model is hierarchical, while the nested model is used to determine whether the observed variables load on a single or multiple factors (Hair et al., 2010, Darmawan and Keeves, 2006).

5.3.1 Model specification for confirmatory factor analysis

The first step of CFA is the specification of the model that is going to be analysed by showing the observed-latent variable relationship. When drawing the diagrams in AMOS, squares are used to represent observed variables while latent variables are represented by ellipses (Byrne, 2016). The relationship between an observed variable (item) and the latent variable is indicated by a single headed arrow from the ellipses to the rectangle. One item together with the value of the variance of the scale is assigned a value of 1 in order to enable the measurement models to be tested. SPSS AMOS 22 program assigns these two fixed values automatically. There are several requirements related to the use of structural equation modelling (SEM) when designing a measurement model. These requirements include the minimum number of items required to analyse a scale, the unidimensionality of the scale and the need for the measurement model to be a congeneric one (Hair et al., 2010). A minimum of three items per scale is essential for a CFA to ensure that enough information is obtained from the sample covariance in order to identify the model.

5.3.2 Model Assessment for CFA

The strength of the regression paths from the latent variable to the observed variables is a good way to determine how well the observed variables represent the latent one. For this reason researchers have tackled the issue of determining an appropriate cut off value above which the factor loadings are considered appropriate (Byrne, 2016). This study used the cut off values proposed by Tabachnick and Fidell (2006) where any loadings of 0.32 and above are considered acceptable for the measurement model to be interpretable.

5.3.3 Fit Statistics

CMIN represents the Likelihood Ratio Statistic, which is differently expressed as a χ^2 (Chi-square) statistic, the most basic statistic used to determine the model fit with the data. This statistic is equal to $(N-1) \times F_{min}$ (sample size minus 1, multiplied by the minimum fit function) and is distributed as a central χ^2 with degree of freedom equal to $\frac{1}{2}(p(p+1) - t)$ (t = number of parameters to be estimated; p = number of observed variables) (Bollen, 1989, Byrne, 2016). The χ^2 test simultaneously tests the extent to which the factor loadings, variances and covariances as well as error variances for the model being studied are valid (H_0) (Byrne, 2016, Bollen, 1989). However, a well-known limitation of this statistic leading to problems of fit is its basis on the central χ^2 distribution, which assumes that hypothesis zero (H_0 : the model fits perfectly in the population) is correct and its sensitivity to sample size. The χ^2 statistic can be big not only when the model does not fit well but also when the sample is large (Jöreskog and Sörbom, 1993, Byrne, 2016). However, large samples are critical to obtain precise parameter estimates (MacCallum et al., 1996) making the findings obtained from the statistic unrealistic in most SEM empirical research. As this study utilised a large sample and findings of a large χ^2 relative to degrees of freedom (DF) are more common (indicating a need to modify the model for a better fit), the χ^2 / DF was used instead of the χ^2 statistic (Jöreskog and Sörbom, 1993). Generally, the smaller the value of χ^2 / DF , the better the model fits the data, although

there is no clear cut-off value for a model to be accepted (Kline, 2011). As a single statistic represents only a specific aspect of a fit, a few fit indices need to be checked when analysing the fit of a model (Kline, 2011), particularly ones that approach the evaluation process in a more pragmatic manner (Gerbing and Anderson, 1993, Hu and Bentler, 1995, Marsh et al., 1998, Tanaka, 1993). Such indices are identified as absolute and comparative fit indices (Marsh et al., 1998, Hu and Bentler, 1995).

The Goodness of Fit Index (GFI) is an absolute fit index that compares the hypothesized model with no model at all (Hu and Bentler, 1995). It measures the ‘relative amount of variance and covariance in S (variance and covariance matrix of the sample data) that is explained by the variance and covariance matrix for the hypothesized model’ (Byrne, 2016, p.77). The values range from 0 to 1 where those closer to 1 indicate a good fit.

Comparative indices of fit are established based on a comparison of a hypothesized model with some standard (Byrne, 2016). CFI (Comparative Fit Index) is the criterion of choice since Bentler (1990) revised the NFI (Normed Fit Index) to take sample size into account. The CFI measures the improvement in the fit of the proposed model over the fit of a baseline model (the independence or null model) (Kline, 2011). Its values range between 0 and 1 where a higher value indicates a better model (Hair et al., 2010, Byrne, 2016). A value of 0.9 or more represents a well-fitting model while values ranging from 0.8 to 0.89 represent a moderately fitting model (Bentler, 1992). For the purpose of this study, a model with a CFI value of 0.85 or more is considered acceptable.

TLI is another incremental fit index which differs from CFI as it is not normed, thus allowing for its values to range below 0 or above 1 (Hair et al., 2010). Higher TLI values indicate a better model (Hair et al., 2010, Byrne, 2016). In this study, values close to or equal to 0.09 are considered acceptable. The final fit index that is used to examine the model fit in this study is the RMSEA.

RMSEA is one of the most informative statistic in structural equation modelling as it takes into account the error of approximation in the population (Byrne, 2016). By asking the question of how well the model with optimal parameter values would fit the population covariance matrix if it were available, it measures the discrepancy and expresses it via degrees of freedom (Browne et al., 1993). As a result, it is quite sensitive to the complexity of the model. Values less than 0.06 indicate a good fit (Hu and Bentler, 1999), while values ranging from 0.06 to 0.08 indicate reasonable errors of approximation in the population (Browne et al., 1993). Any values from 0.08 to 0.1 indicate a mediocre fit while anything above 0.1 indicates a poor fit (MacCallum et al., 1996). It is to be noted that when the sample size is small, the RMSEA is inclined to over reject true population models (Byrne, 2016). While the above criteria are subjective, they are still more realistic than a requirement of RMSEA being equal to 0 and indicating an exact fit (Browne et al., 1993, MacCallum et al., 1996).

To summarize, for the purpose of this study, multiple fit indices were used to examine the fit of the proposed model including the χ^2/DF ratio, the Comparative Fit Index (CFI), The Tucker-Lewis Index (TLI), the Goodness of Fit Index (GFI) and the Root Mean Square Error of Approximation (RMSEA). Table 5.2 shows the summary of the fit indices used and the acceptable cut-off scores.

Table 5.2: Fit Indices for examining model fit of CFA

Indices	Acceptable Cut-off scores for Model Fit
X ² /DF	The smaller the value, the better the fit of the model with the data
CFI	Close to, or 0.90, indicates a good fit (max of 1); 0.8-0.9 indicates a moderate fit
TLI	Close to, or 0.90, indicates a good fit
GFI	Close to, or 0.90, indicates a good fit (max of 1); 0.8-0.9 indicates a moderate fit
RMSEA	0-0.06 represents a good fit; 0.06-0.08 reasonable fit; 0.08-0.1 mediocre fit

The first model tested was perceived authenticity of the innovated product. The model was generated using the aggregated sample. The CFA for all the constructs used in this study performed country wise can be found in Appendix 1-3 (Australia, Singapore and France).

5.3.4 Perceived Authenticity of the Innovated Product

A 7-item authenticity model was tested for the innovated product (low alcohol wine), and findings revealed the existence of a large correlated error between Items 3 and 7. The final model reflecting the required modification is depicted in Figure 5.1. The model tested postulates that perceived authenticity of low alcohol wine is a one factor structure.

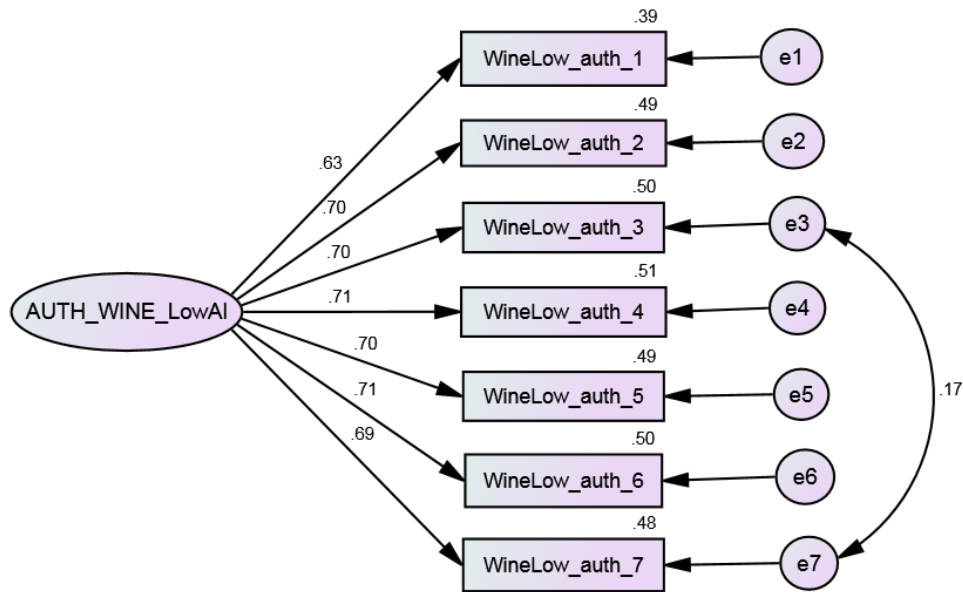


Figure 5.1: One factor CFA model of Authenticity of the innovated product (low alcohol wines)

Factor loadings were all above 0.32 (Table 5.3), allowing for the model to be interpreted.

Table 5.3: Factor Loadings of the One-factor Model of the Authenticity of the innovated product (Low alcohol wine)

<i>Item</i>	<i>L</i>	<i>CA</i>	<i>VE</i>
WineLow_auth_1 <i>'I think low alcohol wine is an original product'</i>	0.63	0.86	0.39
WineLow_auth_2 <i>'Low alcohol wine has features that cannot be imitated'</i>	0.70		0.49
WineLow_auth_3 <i>'Low alcohol wine makes use of handmade processes'</i>	0.70		0.50
WineLow_auth_4 <i>'Low alcohol wine fits in with my expectations'</i>	0.71		0.51
WineLow_auth_5 <i>'Features of low alcohol wine are consistent with what is in my memory'</i>	0.70		0.49
WineLow_auth_6 <i>'Low alcohol wine has characteristics that can be passed from generation to generation'</i>	0.71		0.50
WineLow_auth_7 <i>'Low alcohol wine is pure (produced from one source)'</i>	0.69		0.48
L = Loadings CA = Cronbach' alpha VE = Variance extracted			

An analysis of the fit indices (Table 5.4) demonstrated a good fit of the measure with the data. A CFI of 0.99 and equally high GFI and TLI coupled with an RMSEA of 0.05 indicate a strong goodness of fit between the one factor model and the sample data. A Cronbach alpha of 0.86 indicates that the scale is reliable.

Table 5.4: Goodness of fit indices – Authenticity of the Innovated Product (Low Alcohol Wine)

χ^2/df	P	CFI	GFI	TLI	RMSEA
5.36	0.000	0.99	0.99	0.98	0.05

5.3.5 Advantages of the Innovated product Low alcohol wine

The 3-item advantage model is depicted in Figure 5.2. The model tested postulates that advantages of the innovated product is a one factor structure.

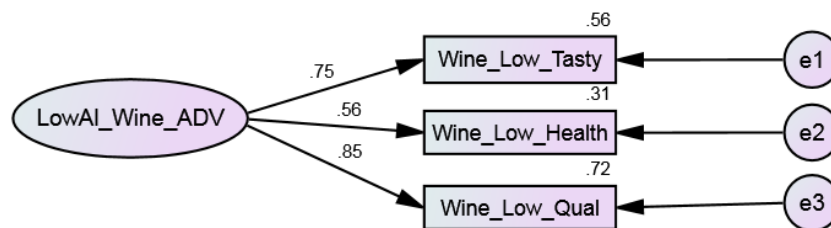


Figure 5.2: One factor CFA model of advantages of the innovated product (low alcohol wines)

Factor loadings were all above 0.32 (Table 5.5), allowing for the model to be interpreted. As this model included only three items, it is considered to be a just-identifiable model. As a result, in order to sufficiently identify the model (release degrees of freedom), an equality constraint was placed on the first and third item.

Table 5.5: Factor Loadings of the One-factor Model of the Advantages of the innovated product (Low alcohol wine)

<i>Item</i>	<i>L</i>	<i>CA</i>	<i>VE</i>
Wine_Low_Tasty <i>'I think low alcohol wine is tastier'</i>	0.75	0.72	0.56
Wine_Low_Health <i>'I think low alcohol wine is healthier'</i>	0.56		0.31
Wine_Low_Qual <i>'I think low alcohol wine has higher quality'</i>	0.85		0.72
L = Loadings			
CA = Cronbach' alpha VE = Variance extracted			

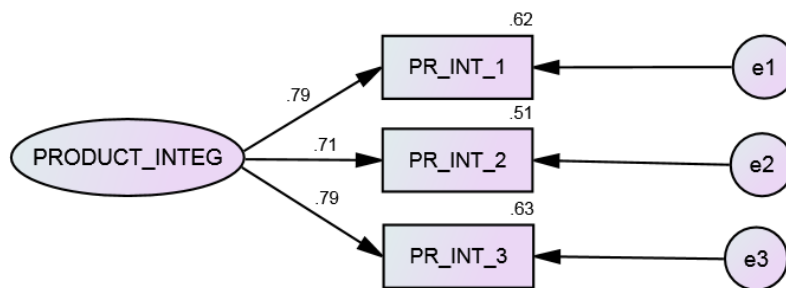
A CFI of 1 and equally high values of GFI and TLI, coupled with an RMSEA of 0.00 are indicative of a goof fit between the one factor model and the sample data (Table 5.6).

Table 5.6: Goodness of fit indices – Advantages of the Innovated Product (Low Alcohol Wine)

χ^2/df	P	CFI	GFI	TLI	RMSEA
0.66	0.41	1.00	1.00	1.00	0.00

5.3.6 Product Integration (traditionality)

The 3-item product integration model is schematically depicted in Figure 5.3. The model tested postulates that wine integration is a one factor structure. As this model included only three items, it is considered to be a just-identifiable model. As a result, in order to sufficiently identify the model, an equally constraint was placed on the first and third item.

**Figure 5.3:** One factor CFA model of wine integration in the respective culture

Factor loadings were all above 0.32 (Table 5.7), allowing the model to be interpreted.

Table 5.7: Factor Loadings of the One-factor Model of wine integration

Item	L	CA	VE
PR_INT_1 <i>'Wine has always been one of the most popular drinks in Australia'</i>	0.79	0.81	0.62
PR_INT_2 <i>'Drinking wine has always been traditional in my culture'</i>	0.71		0.51
PR_INT_3 <i>'Since I was a child I have seen people drink wine'</i>	0.79		0.63
L = Loadings CA = Cronbach' alpha VE = Variance extracted			

A CFI of 1 and equally high values of GFI and TLI, coupled with an RMSEA of 0.00 indicate a good fit between the one factor model and the sample data (Table 5.8).

Table 5.8: Goodness of fit indices – Advantages of the Innovated Product (Low Alcohol Wine)

χ^2/df	P	CFI	GFI	TLI	RMSEA
0.21	0.65	1.00	1.00	1.00	0.00

5.3.7 Past Orientation

The four item model for past orientation is depicted in Figure 5.4.

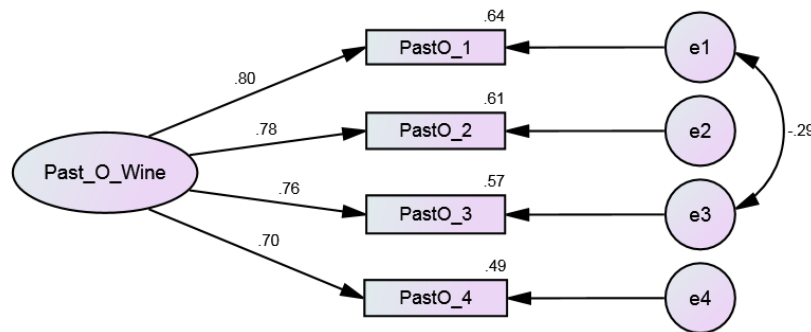


Figure 5.4: One factor CFA model of Past Orientation

The factor loadings were all above 0.32 (Table 5.9) thus it is considered acceptable for the measurement model to be interpretable.

Table 5.9: Factor Loadings of the One-factor model of Past Orientation

Item	L	CA	VE
PastO_1 <i>'I like possessions that have a connection with the past'</i>	0.80	0.83	0.64
PastO_2 <i>'I purchase products that remind me of my past'</i>	0.78		0.61
PastO_3 <i>'I strongly long to be part of the time period from which the product came from'</i>	0.76		0.57
PastO_4 <i>'I have positive attitudes about the time period from which the product came'</i>	0.70		0.49
L = Loadings CA = Cronbach' alpha VE = Variance extracted			

As shown in Table 5.10, the CFI (1.00) indicates that the model fits the data well (by adequately describing the sample data), although $\chi^2/df < 1$ suggests model overfit (Hair et al., 2012b). A GFI and TLI of 1 also indicate a good fit. The RMSEA value for Past Orientation was 0.00 which represents a good degree of precision. As Cronbach alpha is higher than 0.7, the scale is considered to be reliable.

Table 5.10: Goodness of fit indices - Past Orientation

χ^2/df	P	CFI	GFI	TLI	RMSEA
0.152	0.69	1.00	1.00	1.00	0.00

5.3.8 Subjective Knowledge

The model tested here postulates that subjective knowledge in wine is a one factor structure.

This hypothesized model is represented schematically in Figure 5.5.

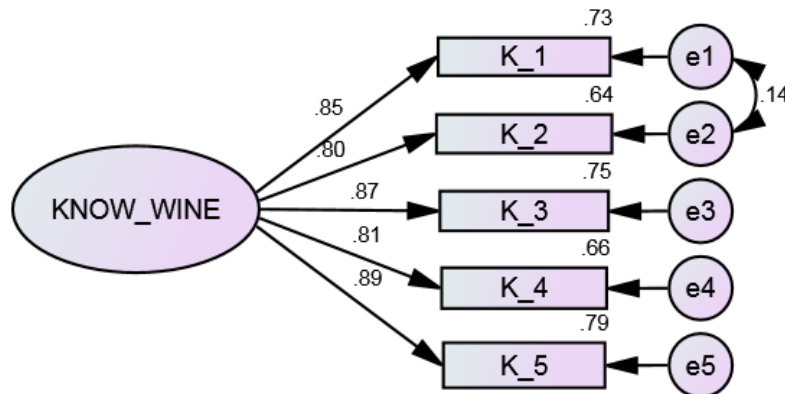


Figure 5.5: One factor CFA model of wine knowledge

The factor loadings were all above 0.32 (Table 5.11), allowing for the measurement model to be interpretable. The selected group of goodness of fit statistics are presented in Table 5.12. A CFI value of 0.99, and RMSEA of 0.04 are indicative of a strong goodness of fit between the one factor model and the sample data. Cronbach alpha is higher than 0.7 thus the scale is reliable.

Table 5.11: Factor Loadings of the One-factor Model of wine knowledge

<i>Item</i>	<i>L</i>	<i>CA</i>	<i>VE</i>
K_1 <i>'I feel confident about my knowledge of wine'</i>	0.85	0.92	0.73
K_2 <i>'I feel that I know how to judge the quality of wine'</i>	0.80		0.64
K_3 <i>'Among my friends, I'm considered a wine 'expert'</i>	0.87		0.75
K_4 <i>'I know most of the wines around in shops'</i>	0.81		0.66
K_5 <i>'When it comes to wine, I really know a lot'</i>	0.89		0.79
L = Loadings CA = Cronbach' alpha VE = Variance extracted			

Table 5.12: Goodness of fit indices – Wine knowledge

χ^2/df	P	CFI	GFI	TLI	RMSEA
4.6	0.00	0.99	0.99	0.99	0.04

5.3.9 Wine Involvement

The model tested here postulates that involvement in wine is a one factor structure. This model is represented schematically in Figure 5.6.

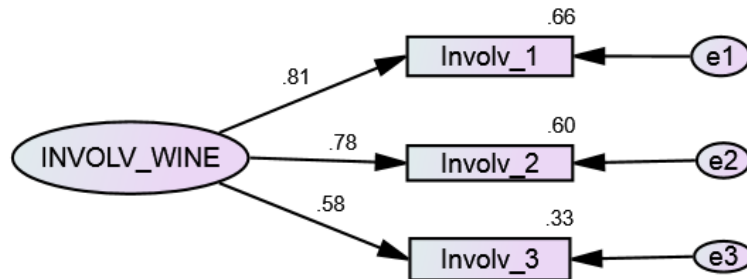


Figure 5.6: One factor CFA model of wine involvement

The factor loadings were all above 0.32 (Table 5.13), thus it is considered acceptable for the measurement model to be interpretable.

Table 5.13: Factor Loadings of the One-factor Model of wine involvement

Table 5.2.2. Factor Loadings of the One Factor Model of Wine Involvement			
<i>Item</i>	<i>L</i>	<i>CA</i>	<i>VE</i>
I_1 <i>'I have a strong interest in wine'</i>	0.81	0.76	0.66
I_2 <i>'Wine is important to me in my lifestyle'</i>	0.78		0.60
I_3 <i>'Drinking wine gives me pleasure'</i>	0.58		0.33
L = Loadings CA = Cronbach' alpha VE = Variance extracted			

The selected group of goodness of fit statistics are presented in Table 5.14. A CFI of 1.00, and RMSEA of 0.00, are indicative of excellent goodness of fit between the hypothesized one factor model and the sample data. The Cronbach alpha is higher than 0.7 thus the scale can be deemed reliable.

Table 5.14: Goodness of fit indices – Wine Involvement

χ^2/df	P	CFI	GFI	TLI	RMSEA
10.09	0.75	1.00	1.00	1.00	0.00

Having performed a confirmatory factor analysis on the measurement constructs used in this study, the next step is identifying via a multigroup analysis whether these constructs work the same way in the three countries where data was collected.

5.4 Testing For Multigroup Invariance between countries

As this research includes multigroup comparisons (e.g: the comparison of the Australian sample with the one collected in Singapore and France), it is important to statistically test that the instruments of measurement are operating in the same way. Moreover, the underlying construct being measured needs to have the same theoretical structure for each of the groups being studied. The equivalence of the instruments of measurement can be addressed by testing the invariance of the items and factorial structures across groups using the analysis of covariance structures (ANCOV). While most studies addressing multigroup comparison analysis based on ANCOV structures reported in the literature have used LISREL or EQS (Jöreskog and Sörbom, 1996, Bentler and Wu, 2002, Byrne, 2004), a graphical approach less conventionally used by AMOS (Arbuckle and Wothke, 1999), has become popular with researchers new to the application of the ANCOV methodology. Hence, it is through AMOS that the multigroup analysis was conducted in this research. The procedure of the analysis, even though the analytic approach remains similar, differed based on the hypothesized multigroup model being tested. More specifically, two different technical approaches were used, one when testing the invariance of an instrument whose specified factorial structure was identical across groups, and another when the pattern of factor loadings differed across groups.

When testing for invariance across different groups, a set of ordered and increasingly restrictive parameters are placed. Particularly, when testing for the invariance of a measuring instrument, the factor loading regression paths and the factor covariances are the only parameters restricted. The invariance of error variances and covariances can also be tested; however it is largely accepted that the equality of error covariances and variances is of the least importance and such parameters can be overly restrictive (Bender, 1995, Byrne, 2004). As a result, only the invariance of factor loading regression paths and factor covariances (in this order) was tested in this study.

Before placing the restrictive parameters, as is customary, the baseline models were considered. The baseline models represent the models that fit the data best from both meaningfulness and parsimony perspective. They were estimated separately for each group, as they are often group specific in the way they operate, and as a result, the models were not always completely identical across different groups (such as the baseline models for measuring product authenticity post innovation). This is to be expected and the literature states that while the number of factors and error covariances can differ, the specified parameters within the same factor need to be equated (Byrne et al., 1989, Werts et al., 1976, Byrne, 2004). In this study, the only differences consisted in different error covariances between groups.

The baseline models were analysed separately as their estimation does not include a between group constraint; however, when testing for invariance, as equality restrictions are placed on specific parameters, the data needs to be analysed at the same time for all groups (Bentler, 1995, Jöreskog and Sörbom, 1996).

5.4.1 Technical approach when the models specified are the same in all groups

The invariance of measuring instruments was tested across three groups of participants. Specifically, the invariance of the 4-item scale measuring consumers past orientation was tested across three groups (Australia (n= 503), Singapore (n= 506), France (n= 508)).

The validity of the instrument designed to measure consumers past orientation was initially tested. Findings revealed large correlated errors between items 1 and 3. An analysis of the content for each of these items indicated a substantial overlap between the item pair, which can trigger error covariances. The final model reflecting this modification was cross-validated for all three samples, yielding a baseline model that was identically specified for each of the samples. The model with the addition of an error covariance, is depicted in Figure 5.7.

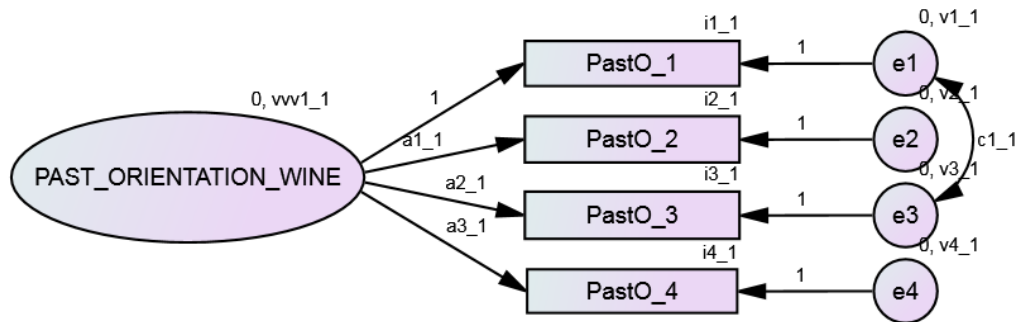


Figure 5.7: Baseline Model for past orientation for Australia, Singapore and France samples

Table 5.15: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	<i>ΔCFI</i>
Hypothesized model	Australian, Singaporean and French wine consumers	Unconstrained	1.000	-
Factor loadings constrained equal	Australian, Singaporean and French wine consumers	Model 1	0.998	0.002
Factor loadings, variances, and structural covariances constrained equal	Australian, Singaporean and French wine consumers	Model 2	0.969	0.02

As a preliminary step in testing for across group invariance, the validity of the factorial structure across all three groups was tested simultaneously as represented by the model shown in Figure 5.7.

Goodness-of-fit statistics related to this three-group unconstrained model (Model ‘Unconstrained’) are reported in Table 5.15. CFI and RMSEA values of 1.00 and .014 respectively, indicate that the model represents an excellent fit across the three samples. The next step consisted in testing for the invariance of the factor loadings across the three groups. The findings in Table 5.15 indicate that the difference in CFI between the unconstrained model and Model 1 is smaller than 0.01, which is what is required to establish that factor loadings across the three groups are equivalent (Byrne, 2004, Byrne, 2016). This signifies that the past orientation measure is operating in the same way across all groups. Results of constraining factor variances and covariances, indicate that the difference in CFI between the first and second model is bigger than 0.01, indicating that while the measure is partially invariant, a comparison between groups is still permissible.

Another measure the specifications of which did not change within the three groups was product traditionality. The invariance of the 3-item scale was tested across the same three groups.

The validity of the instrument was initially tested and findings were consistent in revealing no error correlations. Thus the unmodified model was fully cross-validated for all samples. As this model included only three items, it is considered to be a just-identifiable model. As a result, in order to sufficiently identify the model (release degrees of freedom), an equality constraint was placed on the first and second item. The model is schematically depicted in Figure 5.8.

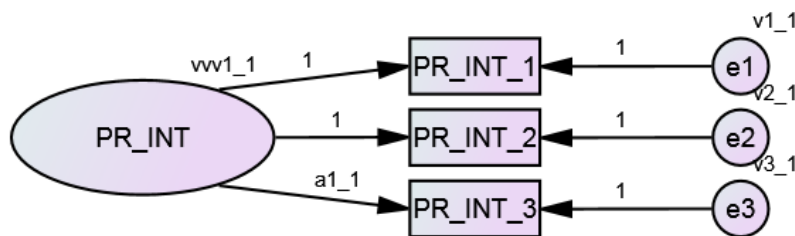


Figure 5.8: Baseline Model for traditionality for Australia, Singapore and France samples

Table 5.16: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	<i>ΔCFI</i>
Hypothesized model	Australian, Singaporean and French wine consumers	Unconstrained	0.99	-
Factor loadings constrained equal	Australian, Singaporean and French wine consumers	Model 1	0.99	0.001
Factor loadings, variances, and structural covariances constrained equal	Australian, Singaporean and French wine consumers	Model 2	0.99	0.001

The validity of the factorial structure was tested across all three groups simultaneously. Goodness-of-fit statistics related to this three-group unconstrained model (Model ‘Unconstrained’) are reported in Table 5.16. CFI and RMSEA values of 0.99 and .014 respectively, indicate that the model represents an excellent fit across the three samples. The findings in Table 5.16 indicate that the difference in CFI between the unconstrained model and Model 1 is smaller than 0.01. This signifies that the past orientation measure is operating the same way across all groups. Results of constraining factor variances and covariances, indicate

that the difference in CFI between the first and second model is also smaller than 0.01, implying that the measure is fully invariant.

Wine subjective knowledge was another measure where the specifications did not change within the groups. When testing for validity, findings were consistent in revealing no correlated errors. The model was cross-validated for all samples, yielding baseline models that were identically specified. The model is schematically depicted in Figure 5.9.

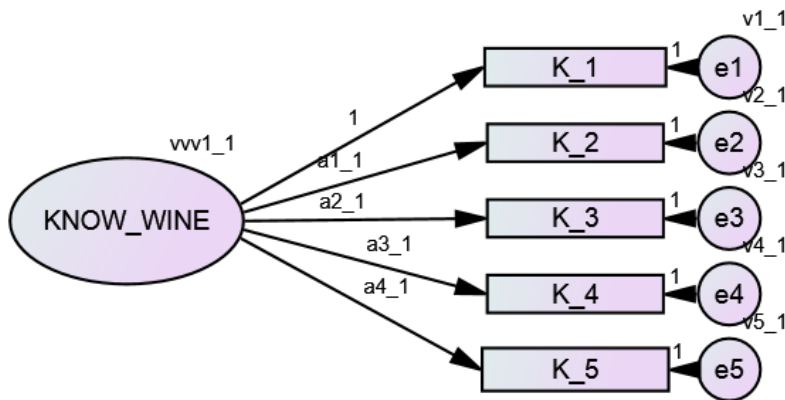


Figure 5.9: Baseline Model for Knowledge for Australia, Singapore and France samples

Table 5.17: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	<i>ΔCFI</i>
Hypothesized model	Australian, Singaporean and French wine consumers	Unconstrained	0.995	-
Factor loadings constrained equal	Australian, Singaporean and French wine consumers	Model 1	0.992	0.003
Factor loadings, variances, and structural covariances constrained equal	Australian, Singaporean and French wine consumers	Model 2	0.991	0.001

Goodness-of-fit statistics related to this three-group unconstrained model (Model ‘Unconstrained’) are reported in Table 5.17. CFI and RMSEA values of .995 and .037 respectively, indicate that the model represents a good fit across the three samples. In terms of the invariance of the factor loadings, the findings (Table 5.16) indicate that the difference in CFI between the unconstrained model and Model 1 is smaller than 0.01, signifying that the consumer wine knowledge measure is operating the same way across all groups. The final step included testing for the invariance of factor variances and covariances between the groups.

Results indicated that the difference in CFI between the first and second model is also smaller than 0.01, demonstrating that the measure is fully invariant.

The final measure for which the specifications did not change between groups is involvement. Findings of the validity testing were consistent in revealing no correlated errors. As this model included only three items, it is considered to be a just-identifiable model. As a result, in order to sufficiently identify the model (release degrees of freedom), an equality constraint was placed on the first and second item. The model is schematically depicted in Figure 5.10.

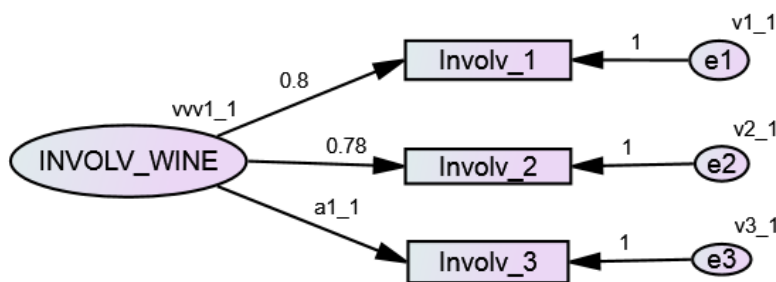


Figure 5.10: Baseline Model for Involvement for Australia, Singapore and France samples

Table 5.18: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	<i>ΔCFI</i>
Hypothesized model	Australian, Singaporean and French wine consumers	Unconstrained	1.000	-
Factor loadings constrained equal	Australian, Singaporean and French wine consumers	Model 1	1.000	0.000
Factor loadings, variances, and structural covariances constrained equal	Australian, Singaporean and French wine consumers	Model 2	0.998	0.002

Goodness-of-fit statistics related to this three-group unconstrained model (Model ‘Unconstrained’) are reported in Table 5.18. CFI and RMSEA values of 1.00 and .00 respectively, indicate that the hypothesized model represents a good fit across the three samples. In terms of the invariance of the factor loadings, the findings in Table 5.18 indicate that the difference in CFI between the unconstrained model and Model 1 is smaller than 0.01 signifying that the consumer involvement measure is operating the same way across all groups. The difference between the first and second model is also smaller than 0.01, demonstrating that the measure is fully invariant.

5.4.2 Technical approach when the models specified are different across groups

In testing for the validity of the 7-item authenticity model for each group, findings were inconsistent in revealing large correlated errors between Items 4 and 5 and items 6 and 7 for the Australian sample, items 3 and 7 for the Singaporean sample, and items 2 and 5 and 3 and 7 for the French sample. An analysis of the content for each of these items indicated an overlap between the item pairs, which in turn led to error covariances. Using an option in AMOS that allows for each model to be drawn individually (versus automatically using the first model drawn for all samples), the final models that reflected the above mentioned modifications were cross-validated for all three independent samples, yielding baseline models that were not identically specified (Byrne, 2004, Byrne, 2016). The models, with the addition of the error covariances, are depicted in Figure 5.11.

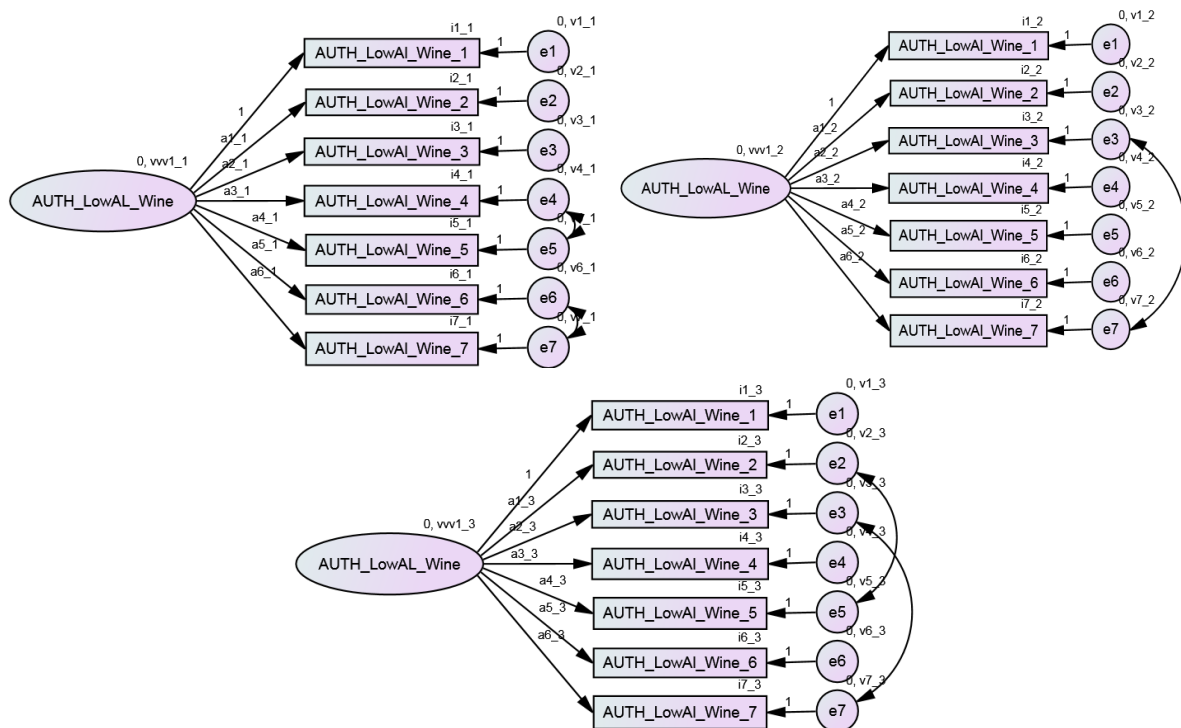


Figure 5.11: Baseline Model for Authenticity of the Innovated product for Australia, Singapore and France samples

Table 5.19: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	<i>ΔCFI</i>
Hypothesized model	Australian, Singaporean and French wine consumers	Unconstrained	0.98	-
Factor loadings constrained equal	Australian, Singaporean and French wine consumers	Model 1	0.97	0.01
Factor loadings, variances, and structural covariances constrained equal	Australian, Singaporean and French wine consumers	Model 2	0.89	0.08

Goodness-of-fit statistics related to this three-group unconstrained models (Model ‘Unconstrained’) are reported in Table 5.19. CFI and RMSEA values of .98 and .037, respectively, indicate that the hypothesized models represent a good fit across the three samples. In terms of the invariance of the factor loadings, the findings in Table 5.19 indicate that the difference in CFI between the unconstrained model and Model 1 is smaller than 0.01. Results also indicate that the difference in CFI between the first and second model is bigger than 0.01, demonstrating that the measure is only partially invariant. This still allows for a comparison between groups.

5.5 Path Model Analysis via SEM

Path analysis is a SEM approach where each connection of the path diagram indicates a relationship between constructs. It works by evaluating the strength and significance of each path thus also indicating the strength and significance of each relationship between constructs (Hair et al., 2012b). A path diagram is a visual representation of the conceptual model and all the hypothesized relationships between the constructs presented (Hair et al., 2012b).

Each of the hypotheses was analysed using the complete path model, other than only the constructs involved, as this allows for the nature of the relationship between traditionality, authenticity, congruence, advantages of the innovation, perceived gain and sacrifice and purchase intention to be explored simultaneously (Hair et al., 2012b). Path analysis is a comprehensive method that showcases direct and the indirect effects on the dependant variables (Kline, 2011). This will be particularly important in determining the mediating role

of congruence and perceived gain from the innovation (i.e. whether it is a mediating variable, and whether the mediation is full or partial). A large sample size is required for SEM to ensure statistical stability, and this was achieved by having a sample of around 500 participants for each country, resulting in a total sample of 1517 participants. As a result, there was no need for the calculation of composite variables during the main path analysis. However, composite variable calculation was needed when calculating the change of authenticity (before and after the innovation).

5.5.1 Calculating Composite Variables

Composite variables have usually been calculated to reduce data (Rowe, 2002), and enable a more accurate evaluation of complex models. The use of composite variables includes firstly creating the variables using factor score weights with AMOS 22 (Rowe, 2002). Second, the factor loading and error variance value for each composite variable is computed to remove additional complexity from the overall model, hence providing greater stability and accuracy of the path model results. The resulting composite variables are included in the path analysis model. Factor score weights were derived from the factor measurement models and used to calculate the composite variable (Rowe, 2002). Fitting a one factor congeneric measurement model allows for differences in the degree to which each individual measure contributes to the overall composite scale, thus providing a representation of the data that is more realistic (Rowe, 2002). The final composite scores were computed in SPSS.

Path models can investigate the relationships amongst the latent variables underlying these composite scales rather than the original observed variables. In this study, composite variable calculation was needed when determining the mean of past orientation, knowledge and involvement.

5.6 Evaluating Path Models

The path model evaluation process follows four steps of Structural Equation Modelling, namely model specification, model identification, model estimation and model re-specification (Kline, 2011). These steps are described in the following section.

5.6.1 Model Specification

Model specification includes the diagrammatic representation of the relationships proposed during the hypothesis development (Kline, 2011). The relationships demonstrated in the model specified in this study are based on theory and reflect the conceptual model initially presented in chapter 2. Literature was used not only to establish the potential existence of a relationship between constructs but also to determine the direction of said path. A strong basis in theory is imperative as Structural Equation Modelling is a confirmatory technique that evaluates the accuracy of a proposed relationship rather than proposing a new one (Hair et al., 2012b).

5.6.2 Model Identification

An identified model is a model where the number of data points (variables with an observed score) is higher than the number of estimated parameters and all latent variables have an assigned scale (Kline, 2011). In case the opposite occurs, the model is considered to be ‘unidentified’. In this case the number of reference points accounting for the model variance is too small thus an analysis cannot be conducted (Kline, 2011). The specified model presented in this study met both requirements of model identification.

5.6.3 Model Estimation (Hypothesis Testing)

Model estimation consists in the evaluation of the model fit with the data and the interpretation of the parameter estimates through a variety of fit indices (Kline, 2011). The estimation technique utilised in this study is maximum likelihood. It is particularly suitable for this study as it is a very robust technique even when data is not normally distributed. As previously discussed in section 5.3, the fit indices utilised in this study to assess model fit included the

principal goodness of fit index, Goodness of fit index (GFI), Root mean square error approximation (RMSEA), Tucker Lewis Index (TLI) and Comparative Fit Index (CFI). The fit indices and their perspective threshold value are outlined in Table 5.2. After determining the fit of the model, parameter estimates are examined to assess each of the proposed relationships individually. The estimates must be significantly significant and in the direction specified (Hair et al., 2012b). The standardized loading estimates for the low alcohol wine path model are reported in Table 5.21.

Figure 5.12 shows the identified path model, consisting of the variables representing product perceived traditionality (PROD_INT), degree of complexity of the innovation (Complexity_Inno), degree of innovativeness (Innovat_Inno), congruence of the innovation with the product category (Congruence_Inno), perceived advantages of the innovation (ADV_Inno), perceived authenticity of the innovated product (Auth_Inno), perceived gain and sacrifice from the innovation (P_Sac_P_Gain) and purchase intention (P_Inno). In order to unite the sample, the variables of perceived gain and perceived sacrifice were merged into one variable named perceived sacrifice and gain (P_Sac_P_Gain). The measure ranges from -9 to 9 with values from -9 to -1 indicating perceived sacrifice and values from 1 to 9 indicating perceived gain.

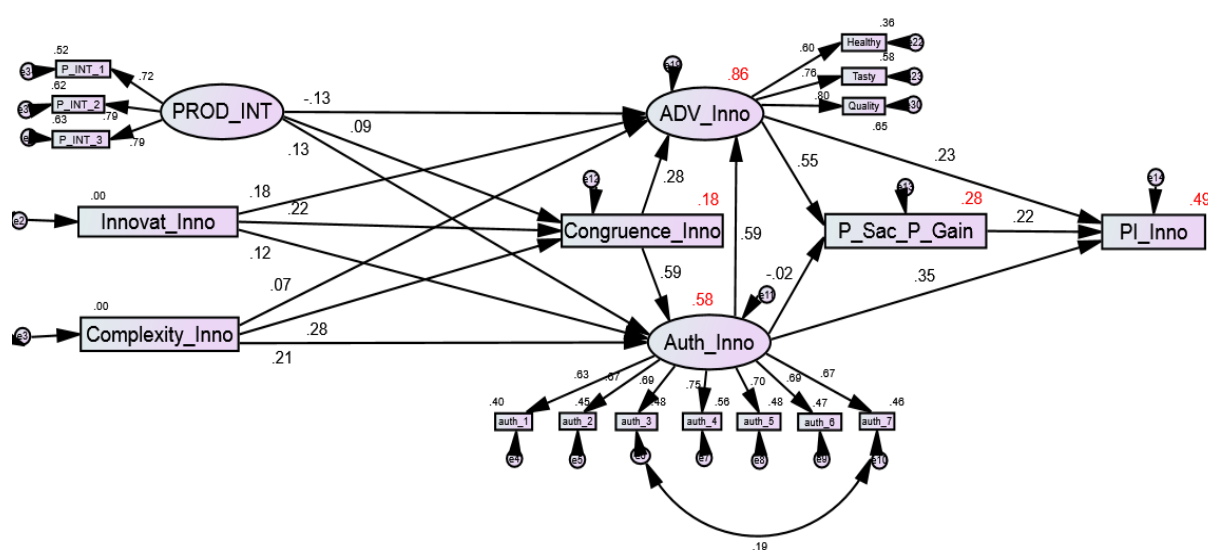


Figure 5.12: Path Model for Low Alcohol Wine

Table 5.20: Goodness of fit indices for identified path model

χ^2/df	P	CFI	GFI	TLI	RMSEA
5.6	0.00	0.95	0.94	0.93	0.05

Results from the identified path model indicate a good fit with the data (CFI= 0.95, GFI=0.94, TLI=0.93, RMSEA=0.05), with the fit indices reaching the required threshold (see Table 5.2). It is not common for an identified model to achieve fit (Kline, 2011). Although the p value was lower than 0.05, the values obtained were deemed sufficient due to the complexity of the model and the sensitivity of the chi-square index (Hair et al., 2012b, Byrne, 2016). A model that fits well with the data indicates that the relationships that exist between constructs or error variables have been accounted for in the model. However, it is still important to observe parameter estimates to identify the possible existence of insignificant paths.

Table 5.21: Standardized regression weights

H		Estimates	P
H3	Congruence_Inno <--- Innovat_Inno	0.22	***
	Congruence_Inno <--- PROD_INT	0.09	***
H2	Congruence_Inno <--- Complex_Inno	0.28	***
H4	Auth_Inno <--- Congruence_Inno	0.58	***
H1.a	Auth_Inno <--- PO_INT	0.12	***
	Auth_Inno <--- Complex_Inno	0.20	***
	Auth_Inno <--- Innovat_Inno	0.11	***
H6	ADV_Inno <--- Congruence_Inno	0.28	***
	ADV_Inno <--- Innovat_Inno	0.18	***
H7	ADV_Inno <--- Auth_Inno	0.59	***
	ADV_Inno <--- PO_INT	-0.12	***
	ADV_Inno <--- Complex_Inno	0.06	***
H9.a	P_Sac_P_Gain <--- ADV_Inno	0.55	***
H8.a	P_Sac_P_Gain <--- Auth_Inno	-0.02	0.774
H10	PI_Inno <--- P_Sac_P_Gain	0.22	***
H9.b	PI_Inno <--- ADV_Inno	0.23	***
H8.b	PI_Inno <--- Auth_Inno	0.34	***
*** indicates p-value significantly different from zero at the 0.001 level (two – tailed)			

The regression weights output (Table 5.21) shows one insignificant path, namely the path between authenticity perceptions of the innovation and perceived gain. As the model is already

parsimonious and has a good fit, no model re-specification was conducted. What follows is a summary of test results against hypotheses.

H1.a: Perceptions of traditionality of the original product significantly and positively influence consumer perceptions of authenticity of the innovated product.

The relationship between perceptions of traditionality of the original product and perceptions of authenticity of the innovated product was significant with perceptions of traditionality positively influencing perceived product authenticity (0.12, $p < 0.01$). These findings provide support for hypothesis H1.a.

H1.b: Perceived congruence of the innovation with the original product mediates the impact of traditionality perceptions on authenticity perceptions of the innovated product.

Since the direct effect between product traditionality and perceived authenticity decreased after introducing congruence of the innovation but still remained significant, congruence is found to partially mediate the impact of traditionality perceptions on authenticity perceptions (Baron and Kenny, 1986). Therefore, hypothesis H1.b is partially supported.

H2: The degree of complexity of the innovation will significantly and negatively influence the congruence of the innovation with the original product.

The degree of complexity of the innovation significantly and positively influenced the congruence of the innovation (0.28, $p < 0.01$) with the original product, thus partially supporting hypothesis 2.

H3: The degree of innovation will significantly and negatively influence the congruence of the innovation with the original product.

The degree of innovation significantly and positively influenced the congruence of the innovation with the original product (0.22, $p < 0.01$), thus partially supporting hypothesis 3.

H4: Congruence of the innovation with the original product will significantly and positively influence perceptions of authenticity of the innovated product. **H6:** Congruence of the

innovation with the original product will significantly and positively influence perceived advantages of the innovated product.

Results provided support for both hypothesis (H4 and H6). Perceived congruence of the innovation positively and significantly influenced perceived authenticity of the innovated product (0.58, $p < 0.01$). Moreover, congruence of the innovation positively and significantly influenced perceived advantages from the innovation (0.28, $p < 0.01$).

H5a-b: Congruence of the innovation with the original product mediates the impact of the degree of complexity (5a) and innovativeness (5b) on perceptions of authenticity.

Congruence of the innovation was found to partially mediate the impact of the degree of complexity and innovativeness on perceptions of authenticity, thus partially supporting hypothesis 5a-b.

H7: Perceptions of authenticity of the innovation will significantly and positively influence perceived advantages of the innovated product.

Perceptions of authenticity significantly and positively influenced perceived advantages of the innovated product (0.59, $p < 0.01$). Results support hypothesis 7.

H8a-b: Perceptions of authenticity of the innovation will significantly and positively influence perceived gain from the innovation (8a) and purchase intention (8b).

Perceptions of authenticity of the innovated product were found to significantly and positively influence purchase intention (0.34, $p < 0.01$) thus supporting hypothesis H8b. While authenticity is argued to have overcome quality as the main purchasing criterion (Gilmore and Pine, 2007), few empirical studies are made demonstrating that product authenticity directly influences purchase intention (Derbaix and Derbaix, 2010, Castéran and Roederer, 2013, Kovács et al., 2013).

With regard to hypothesis 8a, no significant direct effect was found between perceived authenticity of the innovated product and perceived gain from the innovation, thus the

hypothesis was not supported. However, perceived authenticity had a significant and positive indirect effect on perceived gain via significantly and positively influencing perceived advantages from the innovation proving that perceptions of authenticity convey value (Carroll and Wheaton, 2009, Frazier et al., 2009).

H9a-b: Perceived advantages of the innovation will significantly and positively influence perceived gain from the innovation (9a) and purchase intentions (9b).

Results supported hypotheses 9a and 9b demonstrating that perceived advantages derived from the innovation significantly and positively influence perceived gain from the innovation (0.55, $p < 0.01$) and purchase intention (0.23, $p < 0.01$). These findings are in accordance with literature indicating that a belief in superior product attributes influences product's acceptance (d'Hauteville, 1994) and that consumers buy things for what they can do (Levy 1959) and the experiential benefits they gain from them (Belk, 1988; Keller, 1993; Mick, 1986; Solomon, 1983).

H10: Perceived gain from the innovation will significantly and positively influence purchase intention.

Results indicate that perceived gain from the innovation significantly and positively influences purchase intention (0.22, $p < 0.01$); therefore, providing support for hypothesis H10.

H11a-b: Perceived gain from the innovation mediates the impact of perceived advantages (11a) and perceived authenticity (11b) on purchase intention.

Perceived gain from the innovation partially mediated the relationship between perceived advantages from the innovation and purchase intention as the direct effect between the latter was still significant. As the direct effect between perceived authenticity and perceived gain was insignificant, no support was provided for hypothesis 11b.

In order to test the robustness of the model across different locations and cultural backgrounds by observing any potential differences that may exist, an estimation of the path model was conducted for Australia, Singapore and France separately

5.6.4 Differences between nationalities (country location)

Table 5.22 indicates the sample number for Australia, Singapore and France.

Table 5.22: Country of origin Groups- value classification

<i>Country</i>	<i>n</i>
Australia	503
Singapore	506
France	508

The models indicating the path estimates for the three groups are presented in Figure 5.13, 5.14, and 5.15. The fit of the models together with an analysis of significant paths is also explored. Moreover, a discussion of the hypothesis on a country basis is also included.

Low Alcohol Wine Australia

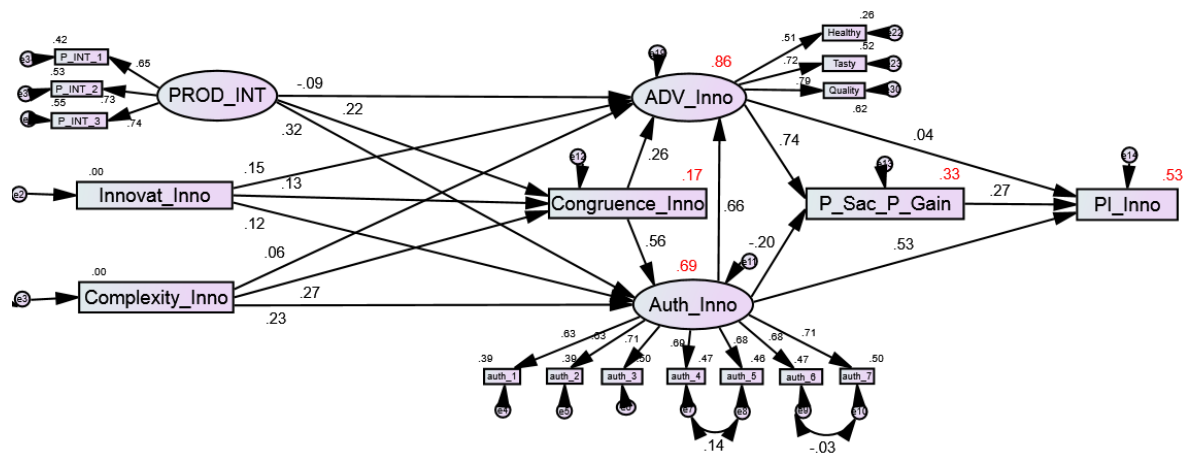


Figure 5.13: Path Model for Australia

Table 5.23: Goodness of fit indices for identified path model

χ^2/df	P	CFI	GFI	TLI	RMSEA
3.1	0.00	0.93	0.92	0.91	0.06

Results from the identified path model (Table 5.23) indicate a moderate to good fit with the data (CFI= 0.93, GFI=0.92, TLI=0.91, RMSEA=0.06), with the fit indices reaching their respective threshold as outlined in Table 5.2.

Regression weights output (Table 5.26) shows two insignificant paths, namely the path between authenticity perceptions of the innovation and perceived gain and the path between perceived advantages of the innovation and purchase intention. Two paths were significant at the 5% level (Degree of innovation on degree of complexity (0.2%) and the product integration on perceived advantages of the innovation (5%)) and one was significant at 10% level (degree of complexity on perceived advantages of the innovation (9%)).

Low Alcohol Wine Singapore

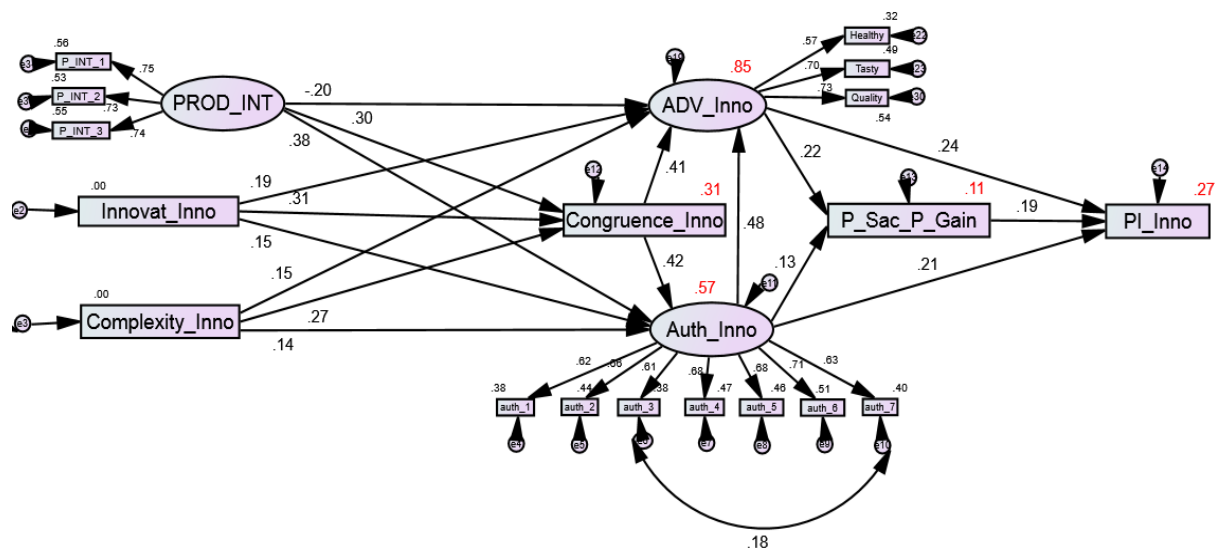


Figure 5.14: Path Model for Singapore

Table 5.24: Goodness of fit indices for identified path model

χ^2/df	P	CFI	GFI	TLI	RMSEA
2.88	0.00	0.93	0.92	0.91	0.06

Results from the identified path model (Table 5.24) indicate a good fit with the data (CFI= 0.93, GFI=0.92, TLI=0.91, RMSEA=0.06), with the fit indices reaching their respective threshold.

Regression weights output (Table 5.26) shows one insignificant path, namely the path between perceptions of authenticity of the innovation and perceived gain. Three paths were significant at the 5% level (perceived advantages of the innovation and perceived gain (0.6%), perceived advantages of the innovation and purchase intention (0.1%), and perceptions of authenticity of the innovation and purchase intention (0.5%)).

Figure 1 is a path diagram of the research model. It shows the following latent variables (ovals) and their associated observed variables (rectangles):

- PROD_INT** (Latent Variable) is measured by **P_INT_1**, **P_INT_2**, and **P_INT_3** (Observed Variables).
- ADV_Inno** (Latent Variable) is measured by **Healthiness**, **Tastiness**, and **Quality** (Observed Variables).
- Congruence_Inno** (Latent Variable) is measured by **Congruence_1-3**, **Congruence_4-6**, and **Congruence_7-9** (Observed Variables).
- Auth_Inno** (Latent Variable) is measured by **Auth_1**, **Auth_2**, **Auth_3**, **Auth_4**, **Auth_5**, **Auth_6**, and **Auth_7** (Observed Variables).
- P_Sac_P_Gain** (Latent Variable) is measured by **P_Sac_P_Gain_1-3**, **P_Sac_P_Gain_4-6**, and **P_Sac_P_Gain_7-9** (Observed Variables).
- PI_Inno** (Latent Variable) is measured by **PI_Inno_1**, **PI_Inno_2**, and **PI_Inno_3** (Observed Variables).

The diagram illustrates the following standardized path coefficients (beta weights):

- PROD_INT** to **ADV_Inno**: -.13
- PROD_INT** to **Congruence_Inno**: -.07
- PROD_INT** to **Auth_Inno**: .00
- PROD_INT** to **P_Sac_P_Gain**: .22
- PROD_INT** to **PI_Inno**: .19
- Innovat_Inno** to **ADV_Inno**: .18
- Innovat_Inno** to **Congruence_Inno**: .15
- Innovat_Inno** to **Auth_Inno**: .15
- Innovat_Inno** to **P_Sac_P_Gain**: .41
- Innovat_Inno** to **PI_Inno**: .19
- Complexity_Inno** to **ADV_Inno**: .15
- Complexity_Inno** to **Congruence_Inno**: .04
- Complexity_Inno** to **Auth_Inno**: .19
- Complexity_Inno** to **P_Sac_P_Gain**: .41
- Complexity_Inno** to **PI_Inno**: .19
- Congruence_Inno** to **Auth_Inno**: .61
- Congruence_Inno** to **P_Sac_P_Gain**: .41
- Congruence_Inno** to **PI_Inno**: .19
- Auth_Inno** to **P_Sac_P_Gain**: .41
- Auth_Inno** to **PI_Inno**: .19

Error variances (R-squared values) are shown in red next to each latent variable:

- PROD_INT**: .47
- ADV_Inno**: .85
- Congruence_Inno**: .17
- Auth_Inno**: .55
- P_Sac_P_Gain**: .36
- PI_Inno**: .55

Table 5.25: Goodness of fit indices for identified path model

Results from the identified path model (Table 5.25) indicate a moderate to good fit with the data (CFI= 0.94, GFI=0.92, TLI=0.92, RMSEA=0.06), with the fit indices reaching their respective threshold.

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Table 5.26: Path estimates for Australia, Singapore and France

	Aus		Sin		France	
	<i>Es</i>	<i>P</i>	<i>Es</i>	<i>p</i>	<i>Es</i>	<i>P</i>
Congruence_Inno <--- Complexity_Inno	0.27	0.00	0.27	0.00	0.19	0.00
Congruence_Inno <--- Innovat_Inno	0.13	0.002	0.32	0.00	0.30	0.00
Congruence <--- PROD_INT	0.22	0.00	0.30	0.00	-0.07	0.13
Auth_Inno <---PROD_INT	0.33	0.00	0.38	0.00	-0.00	0.90
Auth_Inno <--- Innovat_Inno	0.11	0.00	0.15	0.00	0.15	0.00
Auth_Inno <--- Complexity_Inno	0.22	0.00	0.14	0.00	0.15	0.00
Auth_Inno <--- Congruence_Inno	0.55	0.00	0.42	0.00	0.61	0.00
ADV_Inno <--- Innovat_Inno	0.15	0.00	0.19	0.00	0.20	0.00
ADV_Inno <--- Complexity_Inno	0.06	0.09	0.16	0.00	0.04	0.20
ADV_Inno <--- Congruence_Inno	0.26	0.00	0.41	0.00	0.18	0.00
ADV_Inno <--- PROD_INT	-0.08	0.05	-0.20	0.00	-0.13	0.00
ADV_Inno <--- Auth_Inno	0.66	0.00	0.48	0.00	0.65	0.00
P_Sac_P_Gain <--- ADV_Inno	0.74	0.00	0.23	0.006	0.63	0.00
P_Sac_P_Gain <--- Auth_Inno	-0.19	0.15	0.13	0.11	-0.03	0.78
PI_Inno <--- P_Sac_P_Gain	0.27	0.00	0.19	0.00	0.19	0.00
PI_Inno <--- Auth_Inno	0.53	0.00	0.21	0.005	0.41	0.00
PI_Inno <--- ADV_Inno	0.03	0.75	0.24	0.001	0.22	0.02
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10						

Table 5.27: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	<i>ΔCFI</i>
Hypothesized model	Australia, France, Singapore	Unconstrained	0.935	-
Regression weights constrained equal	Australia, France, Singapore	Model 1	0.922	0.012

Table 5.27 shows that the CFI difference between the unconstrained and constrained model is more than 0.01, thus implying that the equality constraint is unreasonable. As a result, the three groups differ from each other.

Table 5.28: Critical ratios (comparison between Singapore, France and Australia)

	CR		
	Sin-Fr	Au-Fr	Au_Si
Congruence_Inno <--- Complexity_Inno	-0.697	-1.164	-0.597
Congruence_Inno <--- Innovat_Inno	0.403	2.646***	2.517**
Congruence <--- PROD_INT	-5.513***	-4.457***	0.322
Auth_Inno <---PROD_INT	-5.487***	-5.843***	-0.529
Auth_Inno <--- Innovat_Inno	0.279	0.495	0.225
Auth_Inno <--- Complexity_Inno	0.685	-1.424	-2.215**
Auth_Inno <--- Congruence_Inno	2.627***	0.474	-2.315**
ADV_Inno <--- Innovat_Inno	1.536	1.91*	0.378
ADV_Inno <--- Complexity_Inno	-1.741*	-0.243	1.511
ADV_Inno <--- Congruence_Inno	-2.722***	-0.556	2.133**
ADV_Inno <--- PROD_INT	0.310	-1.049	-1.258
ADV_Inno <--- Auth_Inno	2.91***	1.412	-1.417
P_Sac_P_Gain <--- ADV_Inno	2.334**	-0.662	-2.763***
P_Sac_P_Gain <--- Auth_Inno	-1.134	0.793	2.092**
PI_Inno <--- P_Sac_P_Gain	0.310	-1.778*	-2.124**
PI_Inno <--- Auth_Inno	1.854*	-0.432	-2.351**
PI_Inno <--- ADV_Inno	-0.287	1.091	1.412
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10			

An examination of the individual relationships when contrasting Singapore and France (Table 5.28) indicates that several relationships (eight) differed significantly between the two groups. The relationship between traditionality (PROD_INT) and congruence was stronger for Singaporeans (0.3) than French participants (-0.07, $p < 0.01$). In fact the relationship was not significant in the French sample ($p = 0.13$). The same pattern was observed for the relationship between traditionality and perceived authenticity of the innovation. The relationship was significantly stronger for Singaporeans (0.38), but not for the French ($p = 0.9$). A further look at the estimates indicates that product traditionality played no role in influencing congruence

of the innovation, perceived authenticity or perceived advantages from the innovation for the French participants. Conversely, an examination of the relationship between congruence of the innovation and perceived authenticity of the innovation, indicated that it was significantly stronger for the French participants (0.61) than the Singaporeans (0.42, $p < 0.01$). Similarly, the relationships between perceived authenticity and perceived advantages of the innovation (0.48 vs. 0.65, $p < 0.01$), perceived advantages and perceived gain and sacrifice (0.23 vs. 0.63, $p < 0.05$) and perceived authenticity and purchase intention (0.21 vs. 0.41, $p < 0.01$) were also stronger in the French sample. The opposite was the case for the relationships between complexity of the innovation and perceived advantages (0.16 vs. 0.04, $p < 0.1$) and perceived congruence of the innovation and perceived advantages (0.41 vs. 0.18, $p < 0.01$) where the relationships were stronger in the Singaporean sample. The path between complexity and perceived advantages was not significant in the French sample.

A comparison between Australia and France indicates fewer significantly different relationships (five). Similarly to Singapore vs. France, the relationships between traditionality (PROD_INT) and congruence and traditionality and perceived authenticity of the innovation were significantly stronger in Australia (0.22 and 0.33 respectively) than France (-0.07 and 0.00, $p < 0.01$). As already mentioned, perceived traditionality played no significant role in influencing any of the proposed variables in the French sample. Differences between the two groups that were not observed between Singapore and France included the relationships between the degree of innovation and congruence and the degree of innovation and perceived advantages. In both instances, the relationships were significantly stronger in the French sample (0.13 vs. 0.30, $p < 0.01$ and 0.15 vs. 0.20, $p < 0.1$ respectively). The final significantly different relationship that was not observed between Singapore and France was between perceived gain and sacrifice and purchase intention. The path was significantly stronger in Australia than France (0.27 vs. 0.19, $p < 0.1$).

A final examination of the contrast between Australia and Singapore reveals the existence of eight significantly different relationships. Only two out of eight relationships were significantly stronger in Singapore, namely the relationship between degree of innovation and perceived congruence of the innovation (0.13 vs. 0.32, $p < 0.05$), and the relationship between perceived congruence and perceived advantages obtained from the innovation (0.26 vs. 0.41, $p < 0.05$). Relationships that were significantly stronger in Australia than Singapore included the one between degree of complexity of the innovation and perceived authenticity (0.22 vs. 0.14, $p < 0.05$), perceived congruence of the innovation and perceived authenticity (0.55 vs. 0.42, $p < 0.05$), perceived advantages derived from the innovation and perceived gain and sacrifice (0.74 vs. 0.23, $p < 0.01$), perceived gain and sacrifice and purchase intention (0.27 vs. 0.19, $p < 0.05$) and lastly perceived authenticity of the innovation and purchase intention (0.53 vs. 0.21, $p < 0.05$). A significantly different relationship was observed also between perceived authenticity and perceived gain and sacrifice, however this relationship was insignificant in both Australian and Singaporean samples.

5.7 Moderation Analysis

Moderation in this study was analysed via the use of multi-group analysis. While moderation in AMOS can be examined by other methods including the interaction method, the multigroup technique was selected as it allows for a more thorough view of the moderation impact. The model in its entirety is considered and not only a specific path, and the influence of the moderation is investigated for each individual path (Byrne, 2016). The potential moderation of knowledge, involvement and past orientation was investigated using the entire sample (1517 participants) and on a country level. The sample was divided into the subsamples of low and high knowledge, low and high involvement and low and high past orientation. Low and high groups were created via the use of the moderating variables' mean. Moreover, country-of-origin was also a moderator analysed showcasing potential differences in the main effects

between countries. In this instance, the sub samples consisted of the Australian, Singaporean and French participants. The baseline models were calculated and the structural regression weights were constrained to being equal between groups. The model for each moderation was estimated and as described in section 5.4, the invariance was assessed through the CFI difference between the unconstrained and constrained models. Moreover, critical ratios were reported with the purpose of indicating whether any individual relationships were significantly different between the two different subsamples even in the scenario where the model in its entirety is invariant. Due to the sample size, composite variables were not calculated.

5.7.1 Past Orientation

Table 5.29 indicates the sample number for the low and high past orientation groups.

Table 5.29: Past Orientation Groups- value classification

<i>Past Orientation</i>	<i>Mean = 5.01</i>	<i>N</i>
Lower group (<)	<5.01	761
Higher group (>)	>5.01	756

The models indicating the path estimates for the low and high past orientation groups are presented in Figure 5.16 and Figure 5.17 respectively.

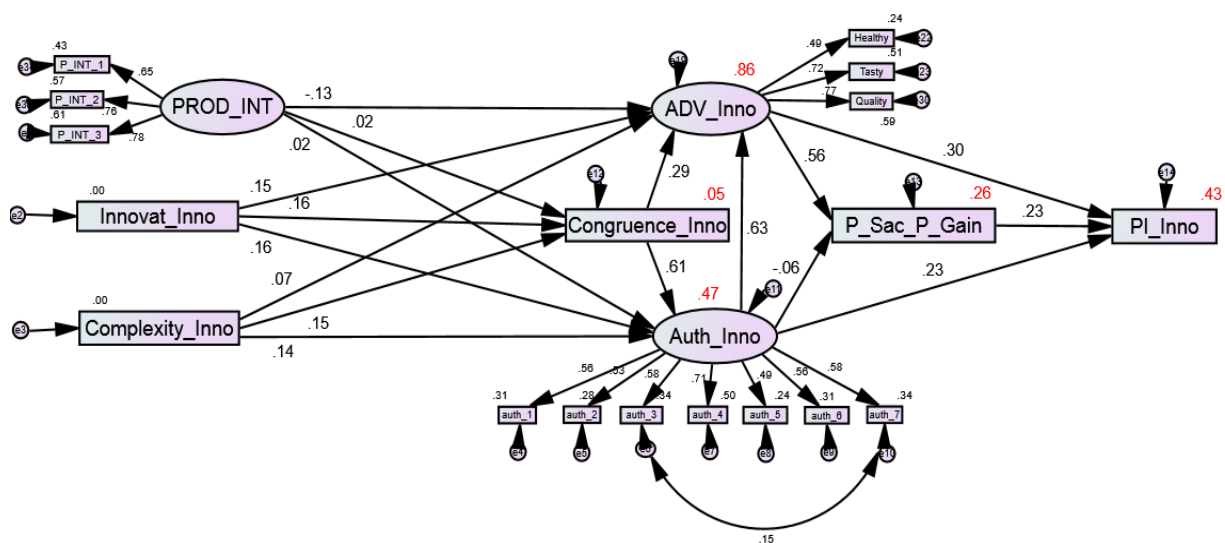


Figure 5.16: Path Model for low Past Orientation

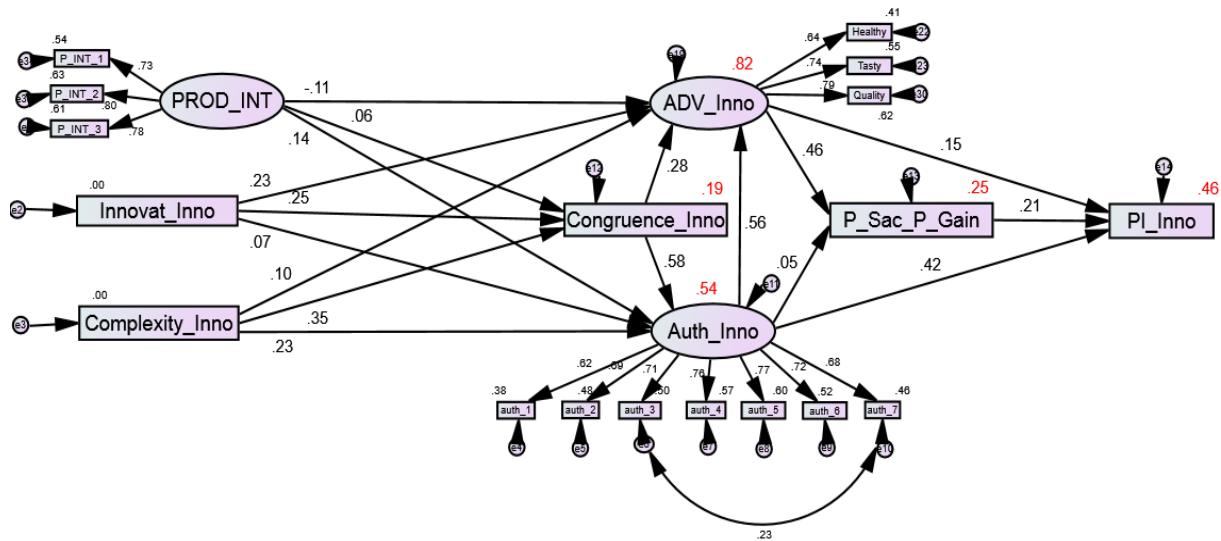


Figure 5.17: Path Model for high Past Orientation sample

Table 5.30: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	<i>ΔCFI</i>
Hypothesized model	Low and high PO	Unconstrained	0.925	-
Regression weights constrained equal	Low and high PO	Model 1	0.917	0.008

Table 5.30 shows that the CFI difference between the unconstrained and constrained model is less than 0.01, thus implying that the equality constraint is reasonable. As the CFI is computed using a formula that includes discrepancies (matrix of residuals) (Albright, J.J. & Park, H.M., 2009), a similar value between the two models implies that the residual is not significantly different. However, a similar residual does not necessarily mean that all measurement weights between the two groups are similar. An examination of the critical ratios of the individual relationships (Table 5.31) indicated that several relationships were significantly different for individuals with different past orientation.

Table 5.31: Model estimation and critical ratios

	Low PO		High PO		CR
	<i>Estimate</i>	<i>p</i>	<i>Estimate</i>	<i>p</i>	
Congruence_Inno <--- Complexity_Inno	0.15	0.00	0.35	0.00	3.447***
Congruence_Inno <--- Innovat_Inno	0.16	0.00	0.24	0.00	1.725*
Congruence <--- PROD_INT	0.02	0.54	0.05	0.11	0.766
Auth_Inno <---PROD_INT	0.02	0.51	0.14	0.00	3.183***
Auth_Inno <--- Innovat_Inno	0.15	0.00	0.07	0.01	-1.405
Auth_Inno <--- Complexity_Inno	0.14	0.00	0.22	0.00	2.148**
Auth_Inno <--- Congruence_Inno	0.60	0.00	0.58	0.00	1.819*
ADV_Inno <--- Innovat_Inno	0.15	0.00	0.22	0.00	2.106**
ADV_Inno <--- Complexity_Inno	0.06	0.01	0.10	0.00	0.675
ADV_Inno <--- Congruence_Inno	0.29	0.00	0.28	0.00	-0.039
ADV_Inno <--- PROD_INT	-0.13	0.00	-0.10	0.00	0.035
ADV_Inno <--- Auth_Inno	0.63	0.00	0.56	0.00	-2.286**
P_Sac_P_Gain <--- ADV_Inno	0.55	0.00	0.45	0.00	-1.306
P_Sac_P_Gain <--- Auth_Inno	-0.05	0.62	0.05	0.48	0.745
PI_Inno <--- P_Sac_P_Gain	0.22	0.00	0.21	0.00	-0.508
PI_Inno <--- Auth_Inno	0.23	0.01	0.42	0.00	0.526
PI_Inno <--- ADV_Inno	0.30	0.00	0.15	0.03	-1.565
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10 E = Estimate; CR = critical ratios					

The relationship between perceived authenticity of the innovation and perceived advantages obtained from the innovation was significantly ($p < 0.05$) weaker for individuals with high past orientation (0.56) than low past orientation (0.63). The same relationship was observed between congruence of the innovation and perceived authenticity (0.60 vs. 0.58 at $p < 0.10$). In addition, the relationship between traditionality (PROD_INT) and perceived authenticity of the innovation is significantly ($p < 0.01$) stronger in individual with high past orientation (0.14). In fact, for individuals with low past orientation the relationship between traditionality and perceived authenticity of the innovation is not significant ($p = 0.51$). The same relationship (significantly stronger for individuals with high past orientation) was observed between complexity of the innovation and congruence of the innovation (0.15 vs. 0.35), level of innovation and congruence (0.16 vs. 0.24), level of complexity and perceived authenticity (0.14 vs. 0.22) and level of innovation and perceived advantages obtained from the innovation (0.15 vs. 0.22). The remaining paths did not achieve a significant critical ratio value.

H12a-b-c: Consumer past orientation significantly strengthens the effect between perceived product traditionality and perceived authenticity (12a), authenticity of the innovation and perceived gain (12b) and perceived authenticity and purchase intention (12c).

The model estimates and critical ratios from Table 5.31, indicate that a higher past orientation significantly strengthens the relationship between perceived traditionality and perceived authenticity of the innovation. However, past orientation has no significant impact on the relationships between perceived authenticity and purchase intention and perceived authenticity and perceived gain from the innovation (thus supporting hypothesis 12a but not 12b-c). Consumers with high past orientation value possessions and objects for their symbolic representation of the past (Beverland, 2005). The impact of traditionality on perceived authenticity supports these findings by indicating that individuals that are oriented towards the past will perceive a traditional product to be more authentic than individuals with low past orientation.

When considering the moderation effect of consumer past orientation across the three countries (Appendix 5.4, 5.5, and 5.6), findings indicate that past orientation had a significant impact on the relationship between perceived traditionality and authenticity of the innovated product in Australia and Singapore. The relationship was stronger for individuals with high past orientation thus supporting hypothesis 12a. Results indicate that the moderating impact of past orientation is country specific and cannot be generalised across different cultures.

5.7.2 Subjective Wine Knowledge

Table 5.32 indicates the sample number for the low and high knowledge groups.

Table 5.32: Knowledge Groups- value classification

<i>Knowledge</i>	<i>4.96</i>	<i>N</i>
Lower group (<)	<4.96	709
Higher group (>)	>4.96	808

The models indicating the path estimates for the low and high knowledge groups are presented in Figure 5.18 and Figure 5.19 respectively.

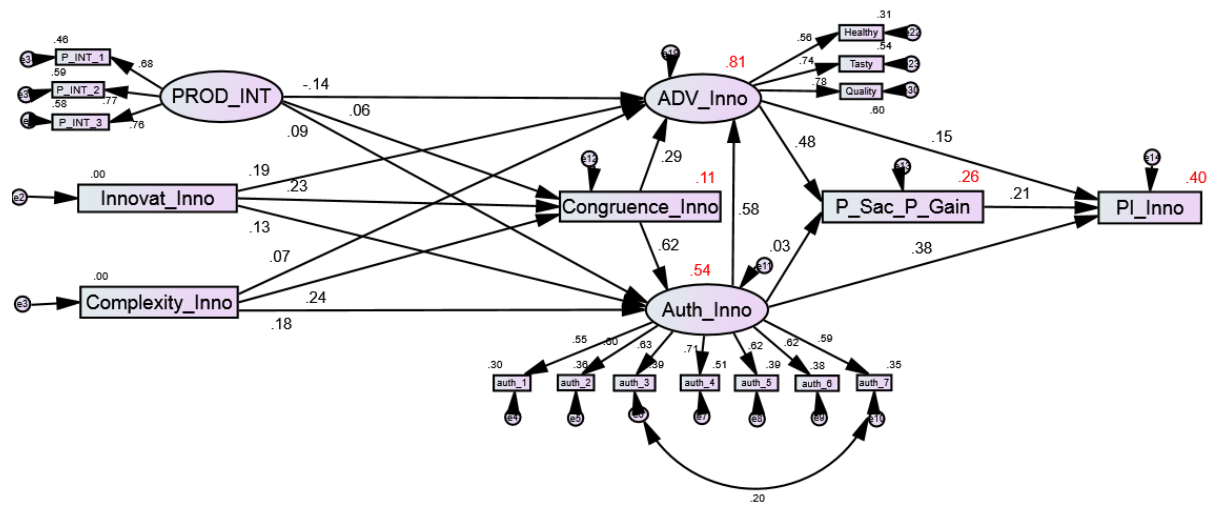


Figure 5.18: Path Model for low Knowledge

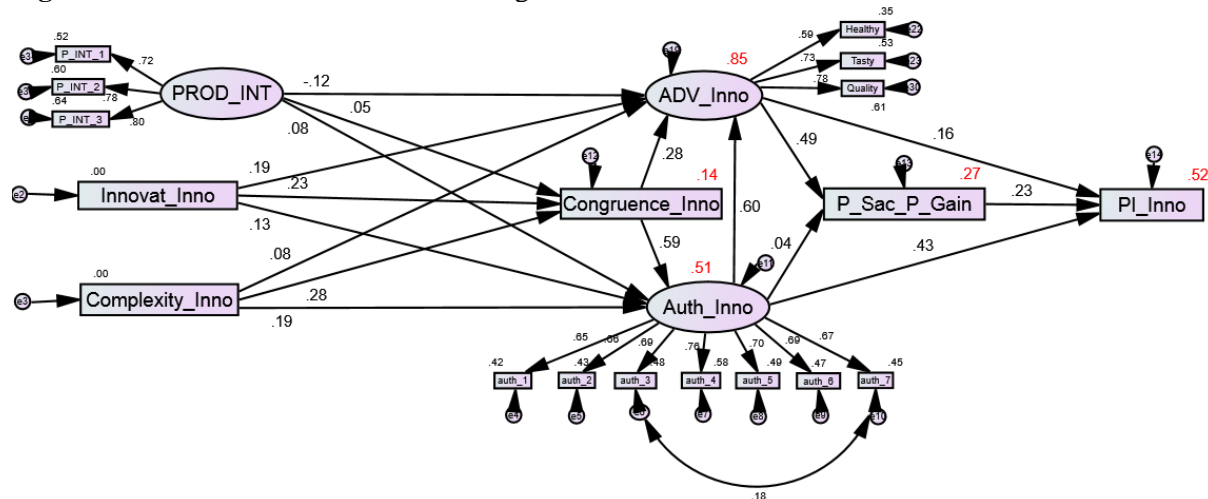


Figure 5.19: Path Model for high Knowledge

Table 5.33: Goodness of fit Statistics for tests of Invariance: A Summary

Model Description	Groups	Comparative Model	CFI	ΔCFI
Hypothesized model	Low and high Knowledge	Unconstrained	0.930	-
Regression weights constrained equal	Low and high Knowledge	Model 1	0.922	0.008

Table 5.33 shows that the CFI difference between the unconstrained and constrained model is less than 0.01, thus implying that the equality constraint is reasonable. An examination of the critical ratios of the individual relationships (Table 5.34) indicated that several relationships were significantly different for individuals with different levels of knowledge about the product category.

Table 5.34: Model estimation and critical ratios

	Low Knowledge		High Knowledge		CR
	<i>Estimate</i>	<i>p</i>	<i>Estimate</i>	<i>p</i>	
Congruence_Inno <--- Complexity_Inno	0.14	0.00	0.33	0.00	3.523***
Congruence_Inno <--- Innovat_Inno	0.19	0.00	0.25	0.00	1.477
Congruence <--- PROD_INT	0.01	0.69	0.09	0.00	1.71*
Auth_Inno <---PROD_INT	0.03	0.34	0.12	0.00	2.623***
Auth_Inno <--- Innovat_Inno	0.11	0.00	0.14	0.00	1.253
Auth_Inno <--- Complexity_Inno	0.09	0.00	0.23	0.00	3.332***
Auth_Inno <--- Congruence_Inno	0.60	0.00	0.57	0.00	1.386
ADV_Inno <--- Innovat_Inno	0.20	0.00	0.19	0.00	-0.001
ADV_Inno <--- Complexity_Inno	0.06	0.03	0.11	0.00	1.099
ADV_Inno <--- Congruence_Inno	0.33	0.00	0.26	0.00	-1.188
ADV_Inno <--- PROD_INT	-0.15	0.00	-0.09	0.00	0.581
ADV_Inno <--- Auth_Inno	0.55	0.00	0.60	0.00	-0.533
P_Sac_P_Gain <--- ADV_Inno	0.53	0.00	0.39	0.00	-1.536
P_Sac_P_Gain <--- Auth_Inno	0.01	0.87	0.10	0.24	0.595
PI_Inno <--- P_Sac_P_Gain	0.19	0.00	0.22	0.00	0.336
PI_Inno <--- Auth_Inno	0.14	0.06	0.62	0.00	3.059***
PI_Inno <--- ADV_Inno	0.40	0.00	-0.02	0.716	-4.102***
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10 E = Estimate; CR = critical ratios					

The relationship between perceived authenticity of the innovation and purchase intention was significantly ($p < 0.01$) stronger for individuals with high knowledge (0.62) than low knowledge (0.14). The same relationship was observed between level of complexity and perceived authenticity (0.09 vs. 0.23, $p < 0.01$) and level of complexity and congruence of the innovation (0.14 vs. 0.33, $p < 0.01$). In addition, the relationship between traditionality (PROD_INT) and perceived authenticity of the innovation is significantly ($p < 0.01$) stronger in individual with high knowledge (0.12) than individuals with low knowledge (0.03 at $p < 0.01$). In fact for individuals with low knowledge the relationship between traditionality and perceived authenticity of the innovation is not significant ($p = 0.34$). The same exact pattern (significantly stronger for individuals with high knowledge and no significant for individuals with low knowledge) was observed between traditionality and congruence (0.01 vs. 0.09 at $p < 0.1$). The opposite occurred with the relationship between perceived advantages of the innovation and purchase intention, where individuals with low knowledge had a significantly stronger

relationship, and the path was not significant for individuals with high knowledge. The remaining paths did not achieve a significant critical ratio value.

H13a-b: Consumer knowledge significantly strengthens the effect between perceived authenticity of the innovation and perceived gain (13a) and perceived authenticity and purchase intention (13b).

From an observation of the model estimates and critical ratios from Table 5.34, it can be determined that a higher knowledge significantly strengthened the relationship between perceived authenticity and purchase intention but it had no significant influence on the relationship between perceived authenticity and purchase intention (thus supporting hypothesis 13b but not 13a).

When considering the moderation effect of subjective knowledge across the three countries (Appendix 5.10, 5.11, and 5.12), findings indicate that knowledge had a significant impact on the relationship between perceived authenticity of the innovated product and purchase intention in Singapore. The relationship was stronger for individuals with high knowledge thus supporting hypothesis 13b. Results indicate that the moderating impact of subjective knowledge is country specific and cannot be generalised across different cultures.

5.7.3 Wine Involvement

Table 5.35 indicates the sample number for the low and high involvement groups.

Table 5.35: Involvement Groups- value classification

<i>Involvement</i>	<i>6.8</i>	<i>N</i>
Lower group (<)	<6.8	726
Higher group (>)	>6.8	791

The models indicating the path estimates for the low and high involvement groups are presented in Figure 5.20 and Figure 5.21 respectively.

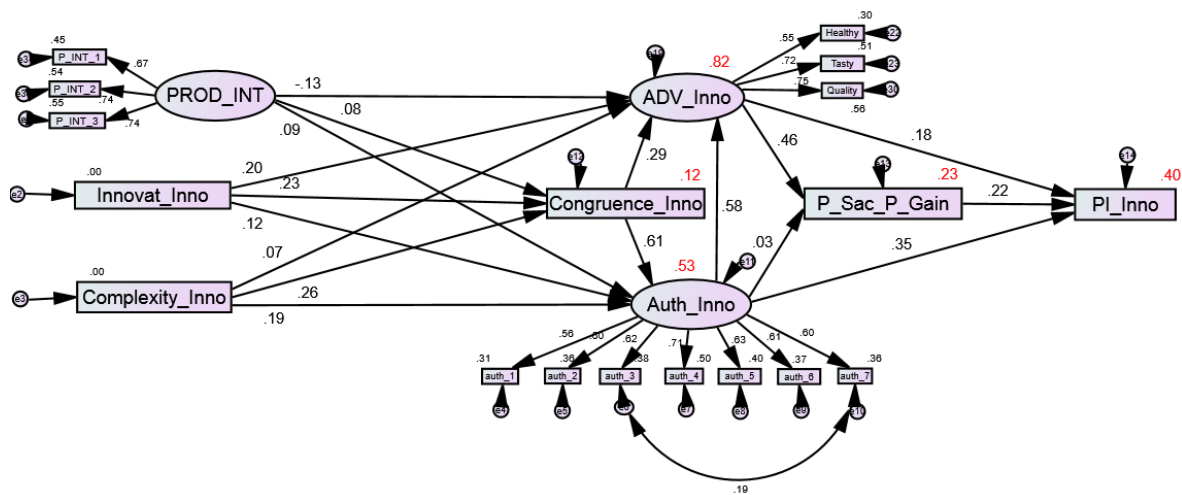


Figure 5.20: Path Model for low Involvement

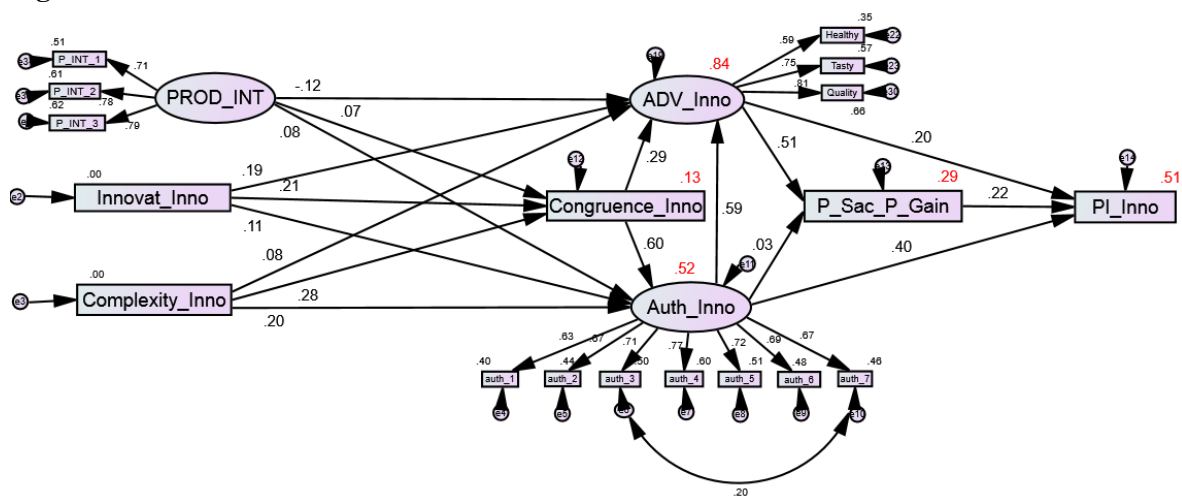


Figure 5.21: Path Model for high Involvement

Table 5.36: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	<i>ΔCFI</i>
Hypothesized model	Low and high Involvement	Unconstrained	0.929	-
Regression weights constrained equal	Low and high Involvement	Model 1	0.921	0.008

Table 5.36 shows that the CFI difference between the unconstrained and constrained model is less than 0.01, thus implying that the equality constraint is reasonable. An examination of the critical ratios of the individual relationships (Table 5.37) indicate that several relationships were significantly different for individuals with different levels of wine involvement.

Table 5.37: Model estimation and critical ratios

	Low Involvement		High Involvement		CR
	Estimate	p	Estimate	p	
Congruence_Inno <--- Complexity_Inno	0.15	0.00	0.35	0.00	4.083***
Congruence_Inno <--- Innovat_Inno	0.19	0.00	0.24	0.00	1.604
Congruence <--- PROD_INT	0.06	0.09	0.06	0.05	0.394
Auth_Inno <---PROD_INT	0.06	0.13	0.10	0.00	1.66*
Auth_Inno <--- Innovat_Inno	0.11	0.00	0.12	0.00	1.186
Auth_Inno <--- Complexity_Inno	0.12	0.00	0.21	0.00	2.594***
Auth_Inno <--- Congruence_Inno	0.55	0.00	0.62	0.00	3.013***
ADV_Inno <--- Innovat_Inno	0.17	0.00	0.21	0.00	1.997**
ADV_Inno <--- Complexity_Inno	0.08	0.00	0.08	0.00	0.093
ADV_Inno <--- Congruence_Inno	0.31	0.00	0.27	0.00	-0.222
ADV_Inno <--- PROD_INT	-0.15	0.00	-0.10	0.00	0.094
ADV_Inno <--- Auth_Inno	0.59	0.00	0.57	0.00	-1.042
P_Sac_P_Gain <--- ADV_Inno	0.51	0.00	0.43	0.00	-1.562
P_Sac_P_Gain <--- Auth_Inno	-0.02	0.79	0.11	0.16	0.950
PI_Inno <--- P_Sac_P_Gain	0.20	0.00	0.22	0.00	0.681
PI_Inno <--- Auth_Inno	0.24	0.00	0.48	0.00	1.015
PI_Inno <--- ADV_Inno	0.25	0.00	0.12	0.07	-1.488
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10 E=Estimates; CR= Critical ratios					

The relationship between traditionality (PROD_INT) and perceived authenticity of the innovation was stronger for individuals with high involvement (0.1) than individuals with low involvement (0.06, $p < 0.1$). Moreover, the relationship was not significant for individuals with low involvement ($p = 0.13$). In addition, the relationship between complexity of the innovation and congruence was also stronger for individuals with high involvement (0.15 vs. 0.35, $p < 0.01$). A similar pattern was observed for the relationships between complexity of the innovation and perceived authenticity (0.12 vs. 0.21, $p < 0.01$), congruence of the innovation and perceived authenticity (0.55 vs. 0.62, $p < 0.01$), and degree of innovation and advantages obtained (0.17 vs. 0.21, $p < 0.05$). The critical ratios for the remaining relationships were not significant.

H14a-b: Consumer involvement significantly strengthens the effect between perceived authenticity of the innovation and perceived gain (14a) and perceived authenticity and purchase intention (14b).

An observation of the model estimates and critical ratios from Table 5.37, suggests that higher involvement did not significantly strengthen the relationship between perceived authenticity and perceived gain or the relationship between perceived authenticity and purchase intention. When considering the moderation effect of consumer involvement across the three countries (Appendix 5.7, 5.8, and 5.9), findings indicate that involvement had a significant impact on the relationship between perceived authenticity of the innovated product and purchase intention in Singapore. The relationship was stronger for individuals with high past orientation thus supporting hypothesis 14b. Results indicate that the moderating impact of involvement is country specific and cannot be generalised across different cultures.

5.8 Influence of situation on perceived gain and sacrifice from the innovation

The influence of the situation of consumption on perceived gain and sacrifice from the innovation was analysed differently from the rest of the data. Since participants were asked to evaluate the degree of perceived gain or sacrifice multiple times under different situations, a multiple paired-samples t-test was performed via SPSS in order to evaluate the size and significance of the impact of situation on perceived gain and sacrifice. The method is appropriate when the same group of participants evaluates a measure under different conditions (with the original condition being the evaluation of perceived gain or sacrifice while not considering a specific situation). The size of the impact was measured via Eta squared which was calculated using the following formula: $Eta\ Squared = \frac{t^2}{t^2 + (N - 1)}$

The guidelines for interpreting the effect size value (Eta squared) can be found in Table 5.38 (Cohen, 1998).

Table 5.38: Guidelines for interpreting Eta squared

Eta squared values	Effect size
$0.01 \leq x < 0.06$	Small effect
$0.06 \leq x < 0.14$	Moderate effect
≥ 0.14	Large effect

Tables 5.39 and 5.40 indicate the consumption situations used in the study and their impact on perceived sacrifice (5.43) and perceived gain (5.44) from the innovation.

Table 5.39: Impact of situation on perceived sacrifice from the innovation

Situations	Mean	T value	N	Eta squared	P
Drinking alone with a meal	4.86	3.16	427	0.022	0.00
Drinking with friends at a restaurant	5.45	-2.46	427	0.014	0.01
Business lunch	4.89	2.4	427	0.013	0.02
Drinking when pregnant	3.75	9.29	427	0.168	0.00
Drinking with company on a special occasion	5.64	-4.04	427	0.036	0.00
Drinking alone to relax after work	5.00	1.74	427	0.007	0.08

Out of a sample of 1517 participants, 427 were of the opinion that the disadvantages from the innovation overcame the advantages, thus perceiving a level of sacrifice from the innovation. Without having a consumption situation in mind, the mean of perceived sacrifice was 5.19 (out of 9). Results of the multiple paired-samples t-test (Table 5.39) indicated that all situations presented had a statistically significant impact on perceived sacrifice. The degree of perceived sacrifice decreased when participants envisioned themselves drinking alone with a meal (M=4.86, with an eta squared of 0.022 indicating a small effect size), in a business lunch (M=4.89, with an eta squared of 0.013 indicating a small effect size), drinking when pregnant (M=3.75, with an eta squared of 0.168 indicating a large effect size), and drinking alone to relax after work (M=5.00, with an eta squared of 0.007 indicating a small effect size). These results confirmed the focus group results where participants envisioned themselves consuming a lower alcoholic wine when alone, and not wanting to get drunk. The degree of perceived sacrifice increased when participants envisioned themselves drinking with friends at a restaurant (M=5.45, with an eta squared of 0.014 indicating a small effect size), and when drinking with company on a special occasion (M=5.64, with an eta squared of 0.036 indicating a small effect size). These results also reflect the focus group observations. They both represent situations where participants seek the effect of alcohol.

Table 5.40: Impact of situation on perceived gain from the innovation

Situations	Mean	T value	N	Eta squared	P
Drinking alone with a meal	5.37	9.58	1090	0.077	0.00
Drinking with friends at a restaurant	6.03	-2.00	1090	0.003	0.04
Business lunch	5.7	2.57	1090	0.006	0.01
Drinking when pregnant	4.61	14.25	1090	0.157	0.00
Drinking with company on a special occasion	6.17	-4.42	1090	0.017	0.00
Drinking alone to relax after work	5.47	7.73	1090	0.052	0.00

Out of a sample of 1517 participants, 1090 were of the opinion that the advantages from the innovation overcame the disadvantages, thus perceiving a level of gain from the innovation. Without having a consumption situation in mind, the mean of perceived gain was 5.92 (out of 9). Results of the multiple paired-samples t-test (Table 5.40) indicated that all situations presented had a statistically significant impact on perceived gain. The degree of perceived gain decreased when participants envisioned themselves drinking alone with a meal ($M=5.37$, with an eta squared of 0.077 indicating a moderate effect size), in a business lunch ($M=5.7$, with an eta squared of 0.006 indicating a moderate effect size), drinking when pregnant ($M=4.61$, with an eta squared of 0.157 indicating a large effect size), and drinking alone to relax after work ($M=5.47$, with an eta squared of 0.052 indicating a small to moderate effect size). The degree of perceived gain increased when participants envisioned themselves drinking with friends at a restaurant ($M=6.03$, with an eta squared of 0.003 indicating a small effect size), and when drinking with company on a special occasion ($M=6.17$, with an eta squared of 0.017 indicating a small effect size). An observation of the impact of the situation on perceived gain and sacrifice from the innovation on a country level (Appendix 5.4), indicated that the country the participants were from, played an important role in influencing feelings of gain and sacrifice.

H15a-b: Situation of consumption will significantly influence perceived gain (H15a) and sacrifice (H15b) from the innovation.

The results above supported the hypothesis that situation will significantly influence perceived gain and sacrifice.

5.8.1 Influence of situation and involvement on perceived gain and sacrifice from the innovation

The influence of situation of consumption and consumer involvement on perceived gain and sacrifice from the innovation was analysed following the same method as described in 5.8. A multiple paired-samples t-test was performed via SPSS in order to evaluate the size and significance of the impact. To determine the impact of both situation and involvement on perceived gain and sacrifice from the innovation, the samples were divided into groups of high and low involvement (based on the mean calculation of consumer involvement).

Tables 5.41 and 5.42 indicate the consumption situations used in the study and their impact on perceived sacrifice for individuals with high involvement (5.41) and individuals with low involvement (5.42).

Table 5.41: Impact of situation on perceived sacrifice from the innovation for individuals with high involvement

Situations	Mean	T value	N	Eta squared	P
Drinking alone with a meal	4.84	2.47	217	0.027	0.01
Drinking with friends at a restaurant	5.77	-3.59	217	0.056	0.00
Business lunch	5.26	-0.33	217	0.001	0.73
Drinking when pregnant	4.05	5.36	217	0.117	0.00
Drinking with company on a special occasion	5.99	-4.88	217	0.099	0.00
Drinking alone to relax after work	5.09	0.81	217	0.003	0.42

Table 5.42: Impact of situation on perceived sacrifice from the innovation for individuals with low involvement

Situations	Mean	T value	N	Eta squared	P
Drinking alone with a meal	4.88	1.99	209	0.018	0.04
Drinking with friends at a restaurant	5.13	0.26	209	0.000	0.79
Business lunch	4.51	3.69	209	0.061	0.00
Drinking when pregnant	3.45	7.85	209	0.228	0.00
Drinking with company on a special occasion	5.28	-0.74	209	0.002	0.45
Drinking alone to relax after work	4.91	0.81	209	0.003	0.10

Out of a sample of 426 participants that perceived a level of sacrifice from the innovation, 217 had a high level of involvement with the product category and 209 had a low level of involvement. Without having a consumption situation in mind, the mean of perceived sacrifice for individuals with high involvement was 5.21 (out of 9). Results of the multiple paired-

samples t-test (Table 5.41) indicate that four out of six situations presented had a statistically significant impact on perceived sacrifice for individuals of high involvement. Without having a consumption situation in mind, the mean of perceived sacrifice for individuals with low involvement was 5.17 (out of 9). Results of the multiple paired-samples t-test (Table 5.42) indicate that three out of six situations presented had a statistically significant impact on perceived sacrifice. When contrasting the results between the two groups it can be observed that for individuals with high involvement, drinking with friends caused an almost moderate increase in sacrifice (for low involvement the effect was not significant), and business lunch had no significant impact, while for low involvement individuals it caused a decrease in perceived sacrifice. Drinking with company on a special occasion caused a moderate increase in sacrifice for high involvement individuals while it was not significant for low the involvement group.

Tables 5.43 and 5.44 indicate the consumption situations used in the study and their impact on perceived gain for individuals with high involvement (5.43) and individuals with low involvement (5.44).

Table 5.43: Impact of situation on perceived gain from the innovation for individuals with high involvement

Situations	Mean	T value	N	Eta squared	P
Drinking alone with a meal	5.69	5.82	574	0.055	0.00
Drinking with friends at a restaurant	6.25	-1.54	574	0.004	0.12
Business lunch	6.01	1.55	574	0.004	0.12
Drinking when pregnant	4.85	10.3	574	0.156	0.00
Drinking with company on a special occasion	6.34	-2.68	574	0.012	0.01
Drinking alone to relax after work	5.79	4.35	574	0.032	0.00

Table 5.44: Impact of situation on perceived gain from the innovation for individuals with low involvement

Situations	Mean	T value	N	Eta squared	P
Drinking alone with a meal	5.02	7.37	515	0.104	0.00
Drinking with friends at a restaurant	5.78	-1.28	515	0.003	0.19
Business lunch	5.49	2.08	515	0.008	0.04
Drinking when pregnant	4.36	9.83	515	0.158	0.00
Drinking with company on a special occasion	5.97	-3.61	515	0.024	0.00
Drinking alone to relax after work	5.11	6.59	515	0.078	0.00

Out of a sample of 1089 participants that perceived a level of gain from the innovation, 574 had a high level of involvement with the product category and 515 had a low level of involvement. Without having a consumption situation in mind, the mean of perceived gain for individuals with high involvement was 6.14 (out of 9). Results of the multiple paired-samples t-test (Table 5.43) indicate that four out of six situations presented had a statistically significant impact on perceived gain for individuals of high involvement. Without having a consumption situation in mind, the mean of perceived gain for individuals with low involvement was 5.68 (out of 9). Results of the multiple paired-samples t-test (Table 5.44) indicate that one out of six situations presented had a statistically significant impact on perceived gain. When considering perceptions of gain between the two groups, differences included some situations not being significant in one of the groups (business lunch significantly impacted perceptions of gain for low involvement individuals while the impact was not significant for high involvement individuals). The impact of drinking with a meal, while significant in both groups, was higher (moderately high versus a small effect size) for individuals with low involvement (the impact being a decrease in perceptions of gain). The same pattern was observed for the drinking alone to relax after work.

H15c: Situation of consumption coupled with consumer involvement will account for more variation in perceptions of gain and sacrifice from the innovation than situational influence alone.

Results indicate that situation of consumption coupled with consumer involvement accounted for more variation in perceptions of gain and sacrifice from the innovation than situational influence alone thus supporting hypothesis 15c.

Table 5.45 gives a summary of the studies' hypothesized relationships and their outcome for the whole sample (WS), the Australian (AS), French (FS) and Singaporean (SS) sample.

Table 5.45: Summary of the Results of Hypothesized Relationships

Hypothesis	WS	AS	SS	FS
H1.a: Perceptions of traditionality of the original product will significantly and positively influence consumer perceptions of authenticity of the innovated product.	S	S	S	NS
H1.b: Congruence of the innovation with the original product mediates the impact of traditionality perceptions on authenticity perceptions.	PS	PS	PS	NS
H2: The degree of complexity of the innovation will significantly and negatively influence the congruence of the innovation with the original product.	PS	PS	PS	PS
H3: The degree of innovation will significantly and negatively influence the congruence of the innovation with the original product.	PS	PS	PS	PS
H4: Congruence of the innovation with the original product will significantly and positively influence perceptions of authenticity of the innovated product.	S	S	S	S
H5a-b: Congruence of the innovation with the original product mediates the impact of the degree of complexity (5a) and innovativeness (5b) on perceptions of authenticity.	PS PS	PS PS	PS PS	PS PS
H6: Congruence of the innovation with the original product will significantly and positively influence perceived advantages of the innovated product.	S	S	S	S
H7: Perceptions of authenticity of the innovation will significantly and positively influence perceived advantages of the innovated product.	S	S	S	S
H8a-b: Perceptions of authenticity of the innovation will significantly and positively influence perceived gain from the innovation (8a) and purchase intention (8b).	NS S	NS S	NS S	NS S
H9a-b: Perceived advantages of the innovation will significantly and positively influence perceived gain from the innovation (9a) and purchase intention (9b).	S S	S NS	S S	S S
H10: Perceived gain from the innovation will significantly and positively influence purchase intention.	S	S	S	S
H11a-b: Perceived gain from the innovation mediates the impact of perceived advantages (11a) and perceived authenticity (11b) on purchase intention.	PS NS	S NS	PS NS	PS NS
H12a-c: Consumer past orientation significantly strengthens the effect between perceived product traditionality and perceived authenticity (12a), authenticity of the innovation and perceived gain (12b) and perceived authenticity and purchase intention (12c).	S NS NS	S NS NS	S NS NS	NS NS NS
H13a-b: Consumer knowledge significantly strengthens the effect between perceived authenticity of the innovation and perceived gain (13a) and perceived authenticity and purchase intention (13b).	NS S	NS NS	NS S	NS NS
H14a-b: Consumer involvement significantly strengthens the effect between perceived authenticity of the innovation and perceived gain (14a) and perceived authenticity and purchase intention (14b).	NS NS	NS NS	NS S	NS NS
H15a-b: Situation of consumption will significantly influence perceived gain (H15a) and sacrifice (H15b) from the innovation.	S S	S S	S S	S S
H15c: Situation of consumption coupled with consumer involvement will account for more variation in perceptions of gain and sacrifice from the innovation than situational influence alone.	S	NA	NA	NA

S=Supported PS=Partially Supported AS=Australian Sample
NS= Not Supported WS=Whole Sample SS=Singaporean Sample
FS=French Sample N/A= Not applicable

5.9 Chapter Summary

The results of the quantitative research for low alcohol wine were detailed in this chapter, and outlined in six sections. First, a demographic profile of participants based on age, gender and frequency of wine consumption was presented. Reliability and confirmatory factor analysis were then run to investigate the measurement constructs. It was concluded that all scales used were satisfactory, and were consequently included for the remaining analysis.

In section three, a multigroup analysis was conducted in order to explore the invariance of the measurement constructs between countries. Partial invariance was at least established, thus allowing for a cross country comparison. The next section focused on the steps necessary for conducting a path model analysis and the importance and process of calculating composite variables. This was followed by a path model analysis capturing the hypothesized relationships of interest in the study. The impact of traditionality on perceived authenticity, the role of congruence as a mediator, the influence of perceived authenticity, of perceived gain and sacrifice on purchase intention were investigated. The specified model achieved a good model fit, and goodness-of-fit indices and individual paths were presented. The findings indicated partial or full support for the hypothesized relationships. An analysis of the model in three different countries, indicated that several differences existed between each country.

In section five, multigroup and critical ratio analyses were used to analyse the potential moderating role of past orientation, knowledge and involvement. The sample was divided into high and low knowledge, past orientation and involvement groups. While the condition of variance was not fulfilled when considering the whole model, critical ratios showed that several relationships were different between samples of high and low knowledge, involvement and past orientation. In the sixth and last section, a multiple paired samples t-test was conducted to evaluate the impact of situation on perceived gain and sacrifice from the innovation. Results

indicated that the consumption situations significantly impacted both perceived gain and perceived sacrifice.

Chapter 6: Results for Traditional Asian Medicine

6.1 Introduction

Employing the same structure used in chapter 5, chapter 6 provides the results of empirical data analysis undertaken to test the hypotheses described in chapter 3 in a different context, namely traditional Asian medicines (TAMs). As in chapter 5, data analysis was conducted via structural equation modelling (SPSS22 and AMOS22). A demographic profile of the participants surveyed is presented in the first section. In the following section of this chapter, as seen in chapter 5, data from three countries (Australia, Singapore and France) was aggregated into one and the results of a confirmatory factor analysis conducted to verify the constructs of authenticity, product integration (traditionality), perceived advantages of the innovation, consumer past orientation, product knowledge and involvement are presented, together with the scale reliability. The third section investigates the invariance of the above measurement instruments (via multigroup analysis) across the different countries. Section four introduces the identified path model reflecting the conceptual model and hypothesised relationships. Hypotheses testing outcomes specific to the impact of traditionality on perceived product authenticity, the relationship between authenticity and perceived advantages from the innovation, and the impact of perceived authenticity on value generation (perceived gain and sacrifice) and purchase intention (among other hypotheses) are then discussed. An estimation of the path model is then conducted for Australia, Singapore and France separately in order to test the robustness of the model across different locations by reporting any potential differences.

Section five utilises multigroup analysis and critical ratios to investigate the moderation effect of consumer characteristics such as past orientation, knowledge and involvement on the path

model. The sixth and last section utilises multiple paired samples t-tests to examine the potential impact of situation on perceived gain and sacrifice from the innovation.

6.2 Demographic profile of respondents

In total 1231 respondents from three countries (Australia, Singapore and France) completed the online survey: 406 participants from Australia, 413 from Singapore and 412 from France (Table 6.1). The sample was determined based on gender, age and frequency of traditional Asian medicine consumption. All participants were required to consume traditional Asian medicine at least once a month. The gender proportion was balanced in all three countries. In the survey participants could select their year of birth; however, in order to show a clearer and more simple distribution, the age was divided into six categories (18-28, 29-39, 40-50, 51-61, 62-72, and above 73 years old).

Table 6.1: Demographic profile based on age, gender and frequency of consumption

Variables	Aggregate Sample		Australia		Singapore		France	
Age	Freq.	%	Freq.	%	Freq.	%	Freq.	%
18-28	281	22.8	77	19.0	87	21.1	117	28.4
29-39	393	31.9	123	30.3	136	32.9	134	32.5
40-50	233	18.9	73	18.0	79	19.1	81	19.7
51-61	186	15.1	58	14.3	81	19.6	52	12.6
62-72	113	9.20	62	15.3	24	5.80	22	5.30
73 up	25	2.00	13	3.20	6	1.50	6	1.50
Gender								
Male	634	51.5	219	53.9	198	47.9	217	52.6
Female	597	48.5	187	46.1	215	52.1	195	47.4
Frequency								
>20 times*	65	5.30	32	7.90	17	4.10	16	3.90
15-20 times	102	8.30	50	12.3	21	5.10	31	7.50
10-14 times	126	10.2	46	11.3	29	7.00	51	12.4
5-9 times	237	19.3	72	17.7	71	17.2	94	22.8
<5	701	56.9	206	50.7	275	66.6	220	53.4
N=	1231		406		413		412	
*Frequency per month								

6.3 Scale Validation (Confirmatory factor analysis)

In order to evaluate the extent to which observed variables represent an underlying latent variable, the construct validity of the scales used in the study was examined via a confirmatory factor analysis (CFA) (Byrne, 2016). For the purpose of this study, multiple fit indices were

used to examine the fit of the proposed model including the χ^2/DF ratio, the Comparative Fit Index (CFI), The Tucker-Lewis Index (TLI), the Goodness of Fit Index (GFI) and the Root Mean Square Error of Approximation (RMSEA). Table 6.2 shows the summary of the fit indices used and the acceptable cut-off scores.

Table 6.2: Fit Indices for examining model fit of CFA

Indices	Acceptable Cut-off scores for Model Fit
X ² /DF	The smaller the value, the better the fit of the model with the data
CFI	Close to, or 0.90, indicates a good fit (max of 1); 0.8-0.9 indicates a moderate fit
TLI	Close to, or 0.90, indicates a good fit
GFI	Close to, or 0.90, indicates a good fit (max of 1); 0.8-0.9 indicates a moderate fit
RMSEA	0-0.06 represents a good fit; 0.06-0.08 reasonable fit; 0.08-0.1 mediocre fit

As the procedure used to conduct the confirmatory factor analysis was thoroughly described in chapter 5, in the interest of parsimony they are not repeated here. However, a detailed view of the results for the aggregated sample (1231 participants) for the context of traditional Asian medicine following the same procedure can be found in Appendix 6.1. The results of the confirmatory factor analysis for the Australian, Singaporean and French sample can be found in Appendix 6.2, 6.3 and 6.4 respectively. An examination of the results indicates that all the constructs used fit the data well (fit indices were within the threshold for a good fitting model) and were reliable (Cronbach alpha above 0.7) (Table 6.3). Hence, all were deemed suitable for using in the hypotheses testing to follow.

Table 6.3: Goodness of fit statistics

Scales	χ^2/df	P	CFI	GFI	TLI	RMSEA
Authenticity of the innovation	2.71	0.001	0.99	0.99	0.99	0.03
Product Integration	0.003	0.95	1.00	1.00	1.00	0.00
Advantages of the Innovation	0.15	0.86	1.00	1.00	1.00	0.00
Past Orientation	4.67	0.03	0.99	0.99	0.98	0.05
Subjective Knowledge	3.47	0.02	0.99	0.99	0.99	0.04
Involvement	0.003	0.95	1.00	1.00	1.00	0.00

6.4 Testing For Multigroup Invariance between Countries

Since the procedure used to conduct the multigroup analysis was also thoroughly described in chapter 5, it is not provided again here. Rather, a detailed view of the results for the context of

traditional Asian medicines can be found in Appendix 6.5. A summary of the results (Table 6.4) indicates that the measures varied between being partially invariant (product integration) and fully invariant (authenticity of the innovation, advantages of the innovation, past orientation, subjective knowledge and involvement). Consequently, as partial invariance still allows for a comparison between groups, the results for each country can be compared.

Table 6.4: Multigroup Invariance between countries (Australia, Singapore and France)

Scales	Unconstrained Model CFI	Model 1 CFI	Model 2 CFI	ΔCFI_1	ΔCFI_2
Authenticity of the innovation	0.993	0.992	0.991	0.001	0.001
Product Integration	1.000	0.990	0.940	0.010	0.050
Advantages of the Innovation	0.997	0.996	0.996	0.001	0.000
Past Orientation	0.990	0.980	0.974	0.010	0.006
Subjective Knowledge	0.996	0.996	0.994	0.001	0.002
Involvement	1.000	1.000	0.999	0.000	0.001
<p><i>Model 1= Factor loadings constrained equal</i> <i>Model 2= Factor loadings, variances, and structural covariances constrained equal</i> ΔCFI_1 = difference between CFI of hypothesized unconstrained model and Model 1 ΔCFI_2 = difference between CFI of Model 1 and Model 2</p>					

6.5 Path Model Analysis via SEM

Each of the hypotheses was examined using the complete path model, other than only the constructs involved, as this allows for the nature of the relationships between traditionality, authenticity, congruence, advantages of the innovation, perceived gain and sacrifice and purchase intention to be explored simultaneously (Hair et al., 2012b). A large sample size is required for SEM to ensure statistical stability, and this was achieved by having a sample of approximately 400 participants for each country, resulting in a total sample of 1231 participants. As a result, there was no need for the calculation of composite variables during the main path analysis. However, composite variable calculation was needed when determining the mean of past orientation, knowledge and involvement. The procedure on how the composite variable was calculated can be found in section 5.4.1.

6.6 Evaluating Path Models (Hypothesis Testing)

The path model evaluation process followed the same four steps of Structural Equation Modelling as described in section 5.6. The path model was specified, identified and estimated using the fit indices summarised in table 6.2. After determining the fit of the model, parameter estimates were examined with the purpose of individually assessing each of the proposed relationships. The estimates must be significantly significant and in the direction specified (Hair et al., 2012b). The standardized loading estimates for the traditional Asian medicines path model are reported in Table 6.5.

Figure 6.1 shows the identified path model, consisting of the variables representing product perceived traditionality (PROD_INT), degree of complexity of the innovation (Complexity_Inno), degree of innovativeness (Innovat_Inno), congruence of the innovation with the product category (Congruence_Inno), perceived advantages of the innovation (ADV_Inno), perceived authenticity of the innovated product (Auth_Inno), perceived gain and sacrifice from the innovation (P_Sac_Gain) and purchase intention (P_Inno). The variables of perceived gain and perceived sacrifice were merged into one variable named perceived sacrifice and gain (P_Sac_Gain). The measure ranged from -9 to 9, with values from -9 to -1 indicating perceived sacrifice and values from 1 to 9 indicating perceived gain.

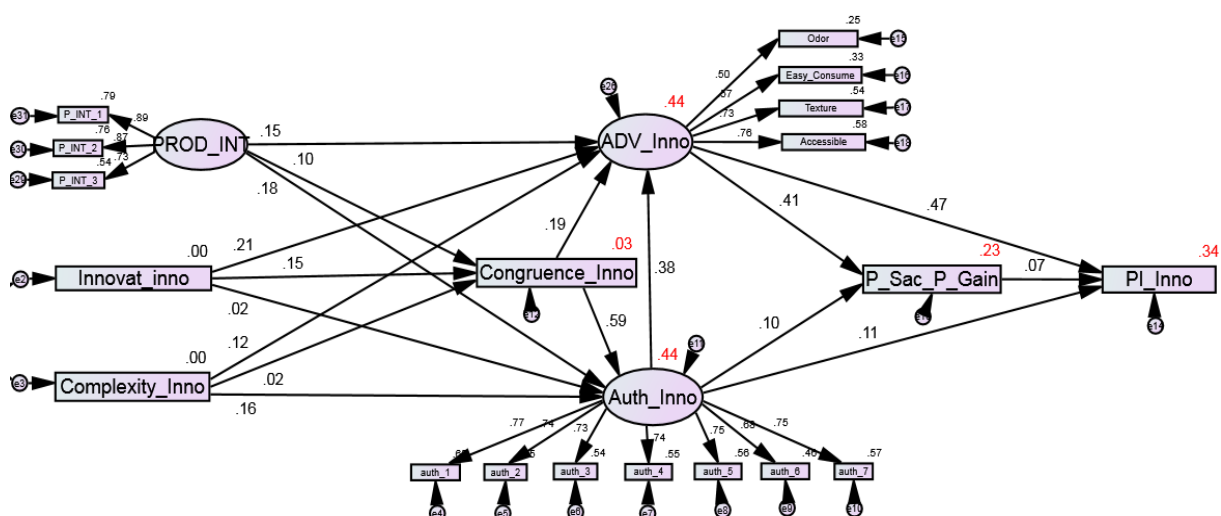


Figure 6.1: Path Model for TAMs

Table 6.5: Goodness of fit indices for identified path model

χ^2/df	P	CFI	GFI	TLI	RMSEA
5.3	0.00	0.94	0.94	0.92	0.05

Results indicate the model fits the data well (CFI= 0.94, GFI=0.94, TLI=0.92, RMSEA=0.05), with the fit indices reaching the required thresholds (see Table 6.2). Although the p value was lower than 0.05, the values obtained were deemed sufficient due to the complexity of the model and the sensitivity of the chi-square index (Hair et al., 2012b, Byrne, 2016). A model that fits well with the data indicates that the relationships that exist between constructs or error variables have been accounted for in the model. However, it is still important to observe parameter estimates to identify the possible existence of insignificant paths.

Table 6.6: Standardized regression weights

H		Estimates	p
H3	Congruence_Inno <--- Innovat_Inno	0.15	***
	Congruence_Inno <--- PROD_INT	0.10	***
H2	Congruence_Inno <--- Complex_Inno	0.02	0.39
H4	Auth_Inno <--- Congruence_Inno	0.59	***
H1.a	Auth_Inno <--- PO_INT	0.19	***
	Auth_Inno <--- Complex_Inno	0.16	***
	Auth_Inno <--- Innovat_Inno	0.02	0.52
H6	ADV_Inno <--- Congruence_Inno	0.19	***
	ADV_Inno <--- Innovat_Inno	0.21	***
H7	ADV_Inno <--- Auth_Inno	0.38	***
	ADV_Inno <--- PO_INT	0.15	***
	ADV_Inno <--- Complex_Inno	0.12	***
H9.a	P_Sac_P_Gain <--- ADV_Inno	0.41	***
H8.a	P_Sac_P_Gain <--- Auth_Inno	0.10	0.006
H10	PI_Inno<--- P_Sac_P_Gain	0.08	0.009
H9.b	PI_Inno <--- ADV_Inno	0.47	***
H8.b	PI_Inno <--- Auth_Inno	0.11	0.002
*** indicates p-value significantly different from zero at the 0.001 level (two – tailed) H=Hypothesis			

The regression weights output (Table 6.6) shows two insignificant paths, the path between complexity and congruence of the innovation and the path between level of innovation and perceived authenticity of the innovation. Three paths were significant at the 5% level

(perceptions of authenticity of the innovation on the level of perceived gain (0.6%); the level of perceived gain on purchase intention (0.9 %); perceptions of authenticity of the innovation on purchase intention (0.2 %)). As the model is already parsimonious and has a good fit, no model re-specification was conducted. What follows is a summary of test results against the hypotheses.

H1.a: Perceptions of traditionality of the original product significantly and positively influence consumer perceptions of authenticity of the innovated product.

The relationship between perceptions of traditionality of the original product and perceptions of authenticity of the innovated product was significant with perceptions of traditionality positively influencing perceived product authenticity (0.19, $p < 0.01$). Similar to the wine context, these findings provided support for hypothesis H1.a.

H1.b: Perceived congruence of the innovation with the original product mediates the impact of traditionality perceptions on authenticity perceptions of the innovated product.

Since the direct effect between product traditionality and perceived authenticity decreased after introducing congruence of the innovation but still remained significant, congruence is found to partially mediate the impact of traditionality perceptions on authenticity perceptions (Baron and Kenny, 1986). Therefore, unlike the wine context where hypothesis 1.b was supported, for the TAMs context, the hypothesis is partially supported.

H2: The degree of complexity of the innovation will significantly and negatively influence the congruence of the innovation with the original product.

The degree of complexity of the innovation did not significantly influence the congruence of the innovation with the original product, thus unlike the wine context where the hypothesis was partially supported, hypothesis 2 for the TAMs context is not supported. This illustrates that some influences are likely to be context specific.

H3: The degree of innovation will significantly and negatively influence the congruence of the innovation with the original product.

The degree of innovation significantly and positively influenced the congruence of the innovation with the original product (0.15, $p < 0.01$), thus similarly to the wine context, hypothesis 3 was partially supported.

H4: Congruence of the innovation with the original product will significantly and positively influence perceptions of authenticity of the innovated product and; **H6:** Congruence of the innovation with the original product will significantly and positively influence perceived advantages of the innovated product.

Results provided support for both hypothesis H4 and H6. The results for the TAMs context were consistent with the ones obtained for the wine context. Perceived congruence of the innovation positively and significantly influenced perceived authenticity of the innovated product (0.59, $p < 0.01$). Moreover, congruence of the innovation positively and significantly influenced perceived advantages from the innovation (0.19, $p < 0.01$).

H5a-b: Congruence of the innovation with the original product mediates the impact of the degree of complexity (5a) and innovativeness (5b) on perceptions of authenticity.

Congruence of the innovation was found to not mediate the impact of the degree of complexity on perceptions of authenticity, thus no support was found for hypothesis 5a. However, results showed that there was a direct effect between complexity of the innovation and perceptions of authenticity of the innovated product (0.16, $p < 0.01$). The impact of the degree of innovation on perceptions of authenticity was fully mediated by congruence thus fully supporting hypothesis 5b. The results differed from the previously analysed context, as for wine, hypotheses 5.a-b were both partially supported.

H7: Perceptions of authenticity of the innovation will significantly and positively influence perceived advantages of the innovated product.

Perceptions of authenticity significantly and positively influenced perceived advantages of the innovated product (0.38, $p < 0.01$). Results support hypothesis 7 and are consistent with the previously analysed context.

H8a-b: Perceptions of authenticity of the innovation will significantly and positively influence perceived gain from the innovation (8a) and purchase intention (8b).

Perceptions of authenticity of the innovation were found to significantly and positively influence purchase intention thus supporting hypothesis H8b (0.11, $p < 0.01$). The results were consistent for both contexts.

With regard to hypothesis 8a, a positive and significant direct effect was found between perceived authenticity and perceived gain from the innovation (0.10, $p < 0.01$), thus supporting the hypothesis and proving that perceptions of authenticity convey value (Carroll and Wheaton, 2009, Frazier et al., 2009). This was not the case for the wine context where hypothesis 8a was not supported.

H9a-b: Perceived advantages of the innovation will significantly and positively influence perceived gain from the innovation (9a) and purchase intention (9b).

Consistent with the first context, results supported hypotheses 9a-b demonstrating that perceived advantages derived from the innovation significantly and positively influence perceived gain from the innovation (0.41, $p < 0.01$) and purchase intention (0.47, $p < 0.01$).

H10: Perceived gain from the innovation will significantly and positively influence purchase intention.

Results indicated that similarly to the wine context, perceived gain from the innovation significantly and positively influences purchase intention (0.08, $p < 0.01$); therefore, providing support for hypothesis H10.

H11a-b: Perceived gain from the innovation mediates the impact of perceived advantages (11a) and perceived authenticity (11b) on purchase intention.

Perceived gain from the innovation partially mediated the relationship between perceived advantages from the innovation and purchase intention as the direct effect between the latter was still significant. The results provide partial support for hypothesis 11a. The same results were observed for hypothesis 11b, where perceived gain partially mediated the relationship between perceived authenticity of the innovated product and purchase intention. The results for 11a were consistent with the wine context, while 11b differed (in the wine context 11b was not supported).

In order to test the robustness of the model across different locations and where respondents have diverse cultural backgrounds, an estimation of the path model was conducted for Australia, Singapore and France separately in order to identify any significant differences.

6.6.1 Differences between nationalities (country location)

Table 6.7 indicates the sample number for Australia, Singapore and France.

Table 6.7: Country of origin Groups- value classification

<i>Country</i>	<i>N</i>
Australia	406
Singapore	413
France	412

The models indicating the path estimates for the three groups are presented in Figure 6.2, 6.3, and 6.4. The fit of the models together with an analysis of significant paths is also explored. Moreover, a discussion of the differences between countries is also included.

TAMs Australia

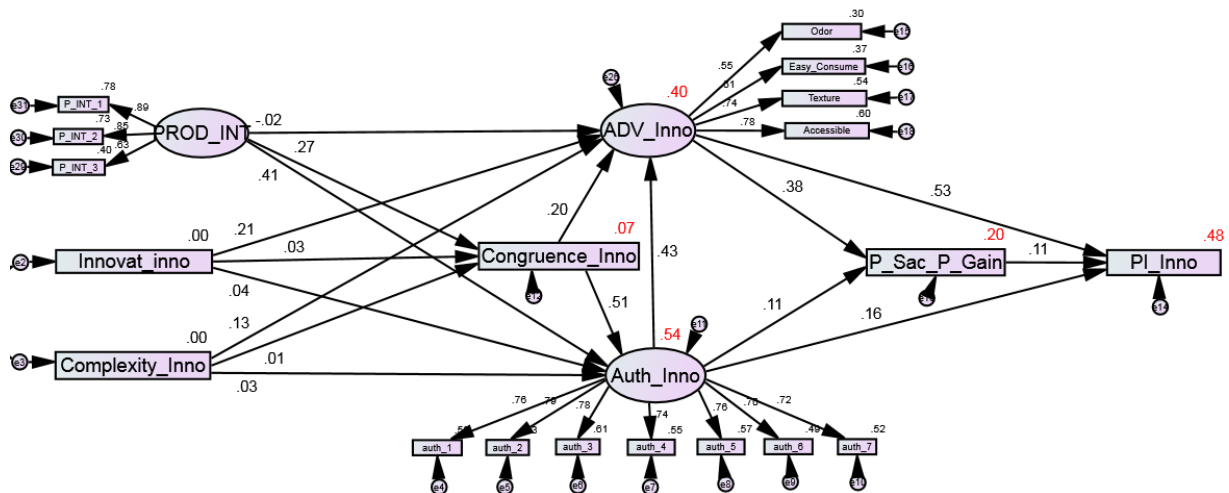


Figure 6.2: Path Model for Australia

Table 6.8: Goodness of fit indices for identified path model

χ^2/df	P	CFI	GFI	TLI	RMSEA
2.7	0.00	0.93	0.91	0.92	0.06

Results from the identified path model (Table 6.8) indicate a good fit with the data (CFI= 0.93, GFI=0.91, TLI=0.92, RMSEA=0.06), with the fit indices reaching the required thresholds (Table 6.2). Regression weights output (Table 6.11) shows five insignificant paths, namely the path between complexity of the innovation and congruence, level of innovation and congruence, complexity of the innovation and perceived authenticity, level of innovation and perceived authenticity and the path between traditionality and perceived advantages from the innovation. Four paths were significant at the 5% level (Complexity of the innovation on perceived advantages from the innovation (0.3%), congruence of the innovation on perceived advantages from the innovation (0.2%), perceived authenticity on purchase intention (0.2%), and perceived gain from the innovation on purchase intention (1.7%)), and one was significant at 10% level (perceived authenticity on perceived gain from the innovation (6%).

TAMs Singapore

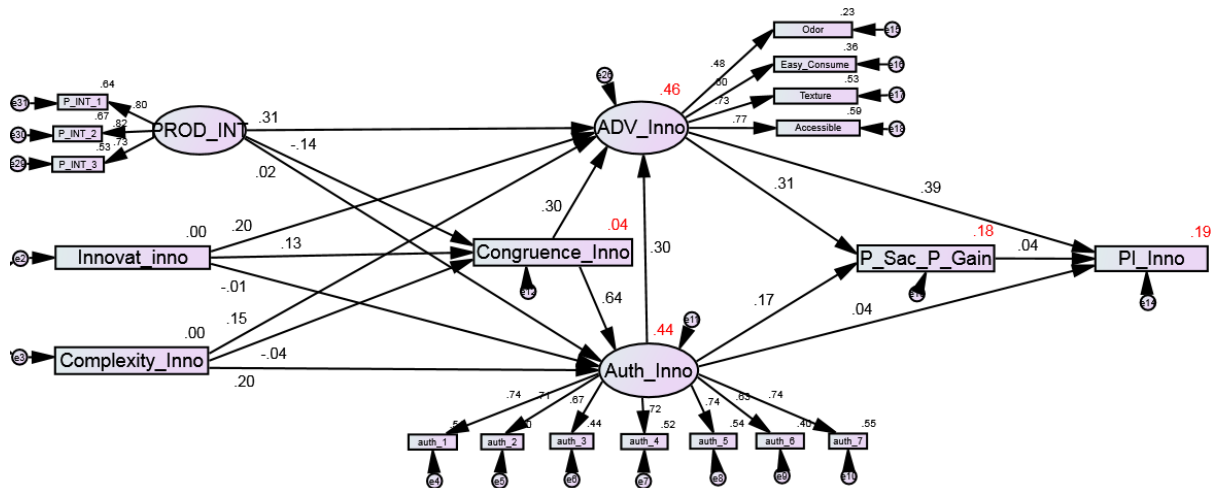


Figure 6.3: Path Model for Singapore

Table 6.9: Goodness of fit indices for identified path model

χ^2/df	P	CFI	GFI	TLI	RMSEA
2.9	0.00	0.9	0.9	0.88	0.06

Results from the identified path model (Table 6.9) indicate a moderate to good fit with the data (CFI= 0.9, GFI=0.9, TLI=0.88, RMSEA=0.06). Regression weights output (Table 6.11) shows five insignificant paths, namely the path between complexity of the innovation and congruence, traditionality perceptions and perceived authenticity of the innovated product, degree of innovation and perceived authenticity, perceived gain from the innovation and purchase intention, and perceived authenticity of the innovated product and purchase intention. Four paths were significant at the 5% level (degree of innovation on congruence (0.6%), traditionality perceptions on congruence (0.7%), complexity of the innovation on perceived advantages from the innovation (0.1%), and perceived authenticity of the innovated product on perceived gain from the innovation (0.5%)).

TAMs France

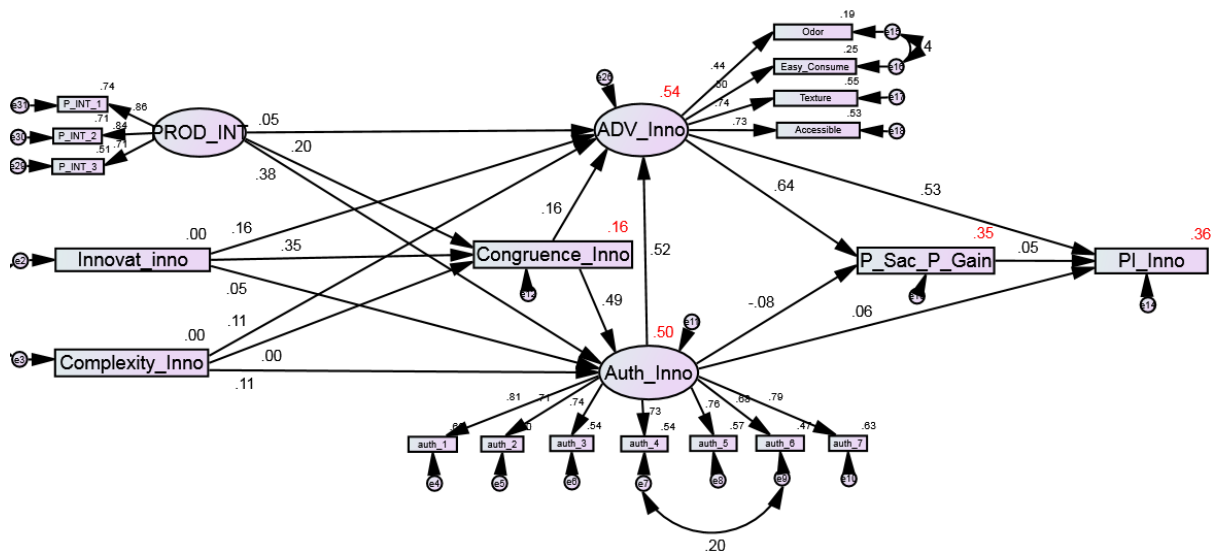


Figure 6.4: Path Model for France

Table 6.10: Goodness of fit indices for identified path model

χ^2/df	P	CFI	GFI	TLI	RMSEA
3.4	0.00	0.91	0.89	0.89	0.07

Results from the identified path model (Table 6.10) indicate a moderate fit with the data (CFI=0.91, GFI=0.89, TLI=0.89, RMSEA=0.07). Regression weights output (Table 6.11) shows six insignificant paths, namely the path between complexity of the innovation and congruence, degree of innovation and perceived authenticity of the innovated product, traditionality and perceived advantages from the innovation, perceptions of authenticity of the innovated product and perceived gain, perceived gain from the innovated and purchase intention, and perceived authenticity of the innovated product and purchase intention. Two paths were significant at the 5% level (degree of complexity of the innovation and perceived authenticity of the innovated product (1%), and the degree of complexity of the innovation on perceived advantages from the innovation (1%)).

Table 6.11: Path estimates for Australia, Singapore and France

	Aus		Sin		France	
	<i>Es</i>	<i>P</i>	<i>Es</i>	<i>P</i>	<i>Es</i>	<i>P</i>
Congruence_Inno <--- Complexity_Inno	0.02	0.75	-0.04	0.40	-0.004	0.93
Congruence_Inno <--- Innovat_Inno	0.03	0.51	0.13	0.006	0.35	0.00
Congruence <--- PROD_INT	0.26	0.00	-0.14	0.007	0.19	0.00
Auth_Inno <---PROD_INT	0.41	0.00	0.02	0.71	0.38	0.00
Auth_Inno <--- Innovat_Inno	0.04	0.34	-0.007	0.86	0.05	0.25
Auth_Inno <--- Complexity_Inno	0.03	0.44	0.21	0.00	0.11	0.01
Auth_Inno <--- Congruence_Inno	0.51	0.00	0.64	0.00	0.49	0.00
ADV_Inno <--- Innovat_Inno	0.21	0.00	0.21	0.00	0.16	0.00
ADV_Inno <--- Complexity_Inno	0.14	0.003	0.15	0.001	0.12	0.01
ADV_Inno <--- Congruence_Inno	0.19	0.002	0.30	0.00	0.16	0.004
ADV_Inno <--- PROD_INT	-0.04	0.51	0.31	0.00	0.05	0.38
ADV_Inno <--- Auth_Inno	0.44	0.00	0.30	0.00	0.52	0.00
P_Sac_P_Gain <--- ADV_Inno	0.38	0.00	0.31	0.00	0.64	0.00
P_Sac_P_Gain <--- Auth_Inno	0.11	0.06	0.17	0.005	-0.06	0.31
PI_Inno <--- P_Sac_P_Gain	0.11	0.017	0.04	0.48	0.06	0.36
PI_Inno <--- Auth_Inno	0.16	0.002	0.05	0.47	0.06	0.41
PI_Inno <--- ADV_Inno	0.53	0.00	0.39	0.00	0.53	0.00
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10						

Table 6.12: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	<i>ΔCFI</i>
Hypothesized model	Australia, France, Singapore	Unconstrained	0.913	-
Regression weights constrained equal	Australia, France, Singapore	Model 1	0.900	0.013

Table 6.12 shows that the CFI difference between the unconstrained and constrained model is more than 0.01, thus implying that the equality constraint is unreasonable. As a result, the three groups differ from each other.

Table 6.13: Critical ratios (comparison between Singapore, France and Australia)

H		CR		
		Sin-Fr	Au-Fr	Au_Si
H2	Congruence_Inno <--- Complexity_Inno	0.568	-0.299	-0.804
H3	Congruence_Inno <--- Innovat_Inno	3.073***	4.693***	1.516
	Congruence <--- PROD_INT	4.427***	-0.799	-5.023***
H1.a	Auth_Inno <---PROD_INT	4.784***	1.018	-4.29***
	Auth_Inno <--- Innovat_Inno	0.977	0.375	-0.737
	Auth_Inno <--- Complexity_Inno	-1.592	1.433	3.104***
H4	Auth_Inno <--- Congruence_Inno	-1.353	1.161	2.666***
	ADV_Inno <--- Innovat_Inno	-0.801	-0.734	0.070
	ADV_Inno <--- Complexity_Inno	-0.811	-0.696	0.090
H6	ADV_Inno <--- Congruence_Inno	-1.619	-0.411	1.163
	ADV_Inno <--- PROD_INT	-4.302***	1.068	5.057***
H7	ADV_Inno <--- Auth_Inno	1.577	-0.262	-1.593
H9.a	P_Sac_P_Gain <--- ADV_Inno	3.07***	2.841***	-0.375
H8.a	P_Sac_P_Gain <--- Auth_Inno	-2.655***	-1.973**	0.730
H10	PI_Inno <--- P_Sac_P_Gain	0.292	-0.686	-1.149
H8.b	PI_Inno <--- Auth_Inno	0.176	-1.217	-1.571
H9.b	PI_Inno <--- ADV_Inno	1.535	0.555	-1.409
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10				

An examination of the individual relationships when contrasting Singapore and France (Table 6.13) indicates that several relationships (six) differ significantly between the two groups. The relationship between traditionality (PROD_INT) and congruence was stronger for French (0.19) than Singaporean participants (-0.14, $p < 0.01$). The same pattern was observed for the relationship between traditionality and perceived authenticity of the innovated product (0.38 vs. 0.2, $p < 0.01$). In fact the relationship was insignificant in the Singaporean sample ($p = 0.71$). Similarly, the relationships between degree of innovation and congruence (0.35 vs. 0.13, $p < 0.01$), and perceived advantages from the innovation and perceived gain (0.64 vs. 0.31, $p < 0.01$) were also stronger for the French sample.

An examination of the relationship between product traditionality and perceived advantages from the innovation, indicated that it was significantly stronger for the Singaporean participants (0.31) than the French (0.05, $p < 0.01$). Again, the relationship was insignificant in the French sample ($p = 0.38$). Similarly, the relationship between perceived authenticity and perceived gain from the innovation (-0.06 vs. 0.17, $p < 0.01$), was also stronger in the Singaporean sample and weaker to the point of not being significant in the French sample.

A comparison of the contrast between Australia and France indicated fewer significantly different relationships (three). Similar to Singapore vs. France, the relationships between degree of innovation and congruence and perceived advantages from the innovation and perceived gain were significantly different between the two samples and stronger in France (0.35 and 0.64 respectively) than Australia (0.03 and 0.35, $p < 0.01$). The degree of innovation played no significant role in influencing congruence of the innovation in the Australian sample. Another difference between the two groups that was observed between Singapore and France included the relationship between perceived authenticity of the innovated product and perceived gain. The relationship was significantly stronger in the Australian sample (0.11 vs. -0.06, $p < 0.05$). As already mentioned, the path was not significant for France ($p = 0.31$).

A final examination of the contrast between Australia and Singapore reveals the existence of five significantly different relationships. Two relationships were significantly stronger in Australia, namely the relationship between product traditionality and perceived congruence of the innovation (0.26 vs. -0.14, $p < 0.01$) and product traditionality and perceived authenticity of the innovated product (0.41 vs. 0.02 – not significant, $p < 0.01$).

Relationships that were significantly stronger in the Singaporean sample as compared to the Australian sample included that between degree of complexity of the innovation and perceived authenticity (0.21 vs. 0.03 – not significant, $p < 0.01$), perceived congruence of the innovation

and perceived authenticity (0.61 vs. 0.51, $p < 0.01$) and product traditionality and perceived advantages derived from the innovation (0.31 vs. -0.04 – not significant, $p < 0.01$).

6.7 Moderation Analysis

Moderation in this study was analysed via the use of multi-group analysis as described in section 5.7. The model in its entirety was considered, and the influence of the moderation was investigated for each individual path (Byrne, 2016). The potential moderation of knowledge, involvement and past orientation was investigated using the entire sample (1231 participants) as well as on a country level. The sample was divided into subsamples of low and high knowledge, low and high involvement and low and high past orientation. Low and high groups were created via the use of the moderating variables' mean. The model for each moderation was estimated and as described in section 5.4, the invariance was assessed through the CFI difference between the unconstrained and constrained models. Moreover, critical ratios were reported to indicate whether any individual relationships were significantly different between the two different subsamples. Due to the sample size, composite variables were not calculated.

6.7.1 Past Orientation

Table 6.14 indicates the sample number for low and high past orientation groups.

Table 6.14: Past Orientation Groups- value classification

<i>Past Orientation</i>	<i>Mean = 5.17</i>	<i>N</i>
Lower group (<)	<5.17	570
Higher group (>)	>5.17	650

The models indicating the path estimates for the low and high past orientation groups are presented in Figure 6.5 and Figure 6.6 respectively.

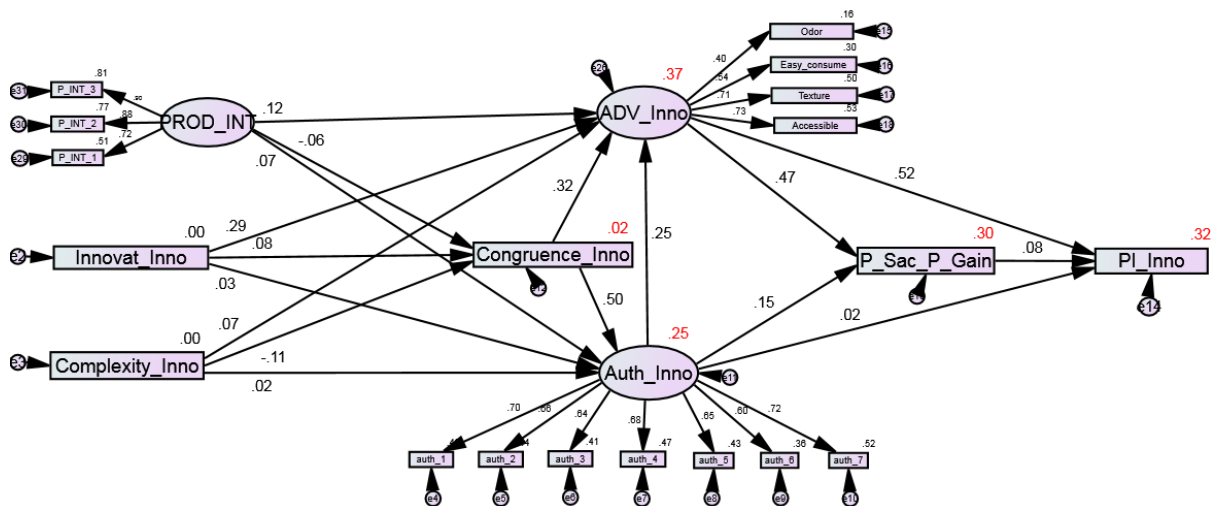


Figure 6.5: Path Model for low Past Orientation

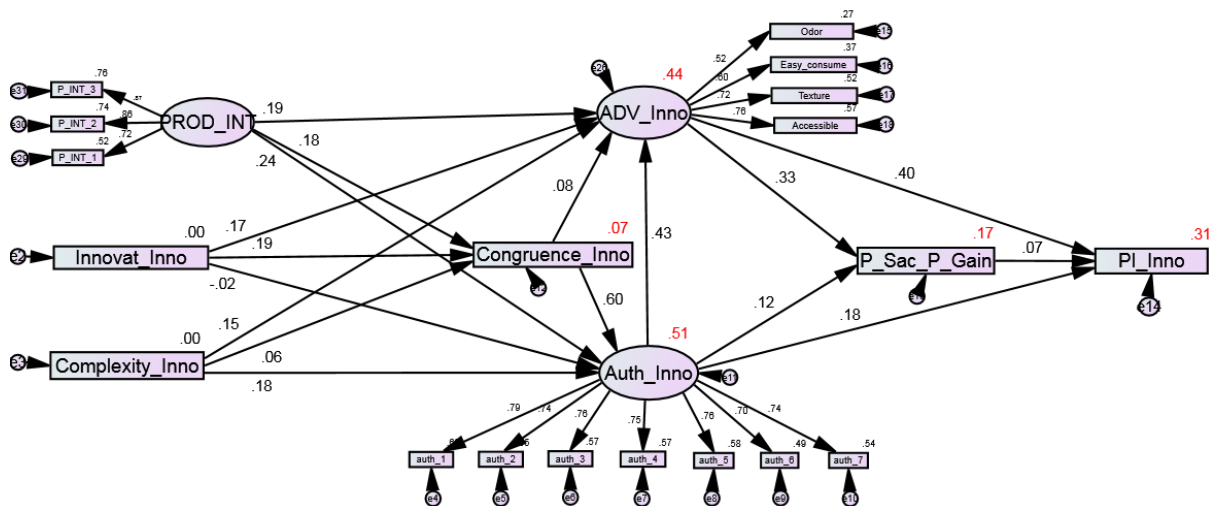


Figure 6.6: Path Model for high Past Orientation

Table 6.15: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	<i>ΔCFI</i>
Hypothesized model	Low and high PO	Unconstrained	0.929	-
Factor loadings constrained equal	Low and high PO	Model 1	0.917	0.012

Table 6.15 shows that the CFI difference between the unconstrained and constrained model is more than 0.01, thus implying that the equality constraint is not reasonable. As a result, the models for the low and high past orientation groups differ from each other in their entirety.

Table 6.16: Model estimation and critical ratios

	Low PO		High PO		CR
	E	p	E	p	
Congruence_Inno <--- Complexity_Inno	-0.11	0.01	0.06	0.12	2.874***
Congruence_Inno <--- Innovat_Inno	0.08	0.07	0.19	0.00	2.248**
Congruence <--- PROD_INT	-0.07	0.14	0.18	0.00	4.347***
Auth_Inno <---PROD_INT	0.07	0.10	0.24	0.00	3.676***
Auth_Inno <--- Innovat_Inno	0.03	0.41	-0.02	0.57	-0.982
Auth_Inno <--- Complexity_Inno	0.02	0.63	0.18	0.00	3.483***
Auth_Inno <--- Congruence_Inno	0.50	0.00	0.60	0.00	1.331
ADV_Inno <--- Innovat_Inno	0.29	0.00	0.17	0.00	-2.089**
ADV_Inno <--- Complexity_Inno	0.07	0.08	0.15	0.00	1.436
ADV_Inno <--- Congruence_Inno	0.32	0.00	0.08	0.10	-3.583***
ADV_Inno <--- PROD_INT	0.12	0.00	0.19	0.00	1.365
ADV_Inno <--- Auth_Inno	0.25	0.00	0.43	0.00	1.73*
P_Sac_P_Gain <--- ADV_Inno	0.47	0.00	0.34	0.00	-1.927*
P_Sac_P_Gain <--- Auth_Inno	0.15	0.00	0.12	0.02	-0.690
PI_Inno <--- P_Sac_P_Gain	0.08	0.10	0.07	0.08	-0.240
PI_Inno <--- Auth_Inno	0.02	0.73	0.18	0.00	2.145**
PI_Inno <--- ADV_Inno	0.52	0.00	0.40	0.00	-1.828*
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10 E = Estimate; CR = critical ratios					

An examination of the critical ratios of the individual relationships (Table 6.16) indicated that several relationships were significantly different for individuals with different past orientation. The relationship between perceived authenticity of the innovation and perceived advantages obtained from the innovation was significantly ($p < 0.10$) weaker for individuals with low past orientation (0.25) than high past orientation (0.43). The same relationship was observed between perceived authenticity and purchase intention (0.02 vs. 0.18 at $p < 0.05$). In fact, for individuals with low past orientation, the relationship between perceived authenticity and purchase intention was not significant ($p = 0.73$). The path between traditionality (PROD_INT) and perceived authenticity of the innovation was also significantly ($p < 0.01$) stronger in individuals with high past orientation (0.07 vs. 0.24). Other paths that followed the same pattern were the ones between the level of the innovation and congruence of the innovation (0.08 vs. 0.19 at $p < 0.05$), product traditionality and congruence of the innovation (-0.07 – not significant - vs. 0.18 at $p < 0.01$), and complexity of the innovation and perceived authenticity (0.02 – not significant - vs. 0.18 at $p < 0.01$).

In addition, the relationship between perceived advantages of the innovation and purchase intention was significantly ($p < 0.10$) stronger in individuals with low past orientation (0.52) as compared to individuals with high past orientation (0.40). The same relationship was observed between complexity of the innovation and congruence of the innovation (-0.11 vs. 0.06 - not significant), level of innovation and perceived advantages from the innovation (0.29 vs. 0.17), congruence and perceived advantages from the innovation (0.32 vs. 0.08) and perceived advantages and perceived gain from the innovation (0.47 vs. 0.34). The remaining paths did not achieve a significant critical ratio value.

H12a-b-c: Consumer past orientation significantly strengthens the effect between perceived product traditionality and perceived authenticity (12a), authenticity of the innovation and perceived gain (12b) and perceived authenticity and purchase intention (12c).

The model estimates and critical ratios (Table 6.16), show that a higher past orientation significantly strengthened the relationship between perceived traditionality and perceived authenticity of the innovated product and the relationship between perceived authenticity and purchase intention. However, past orientation had no significant impact on the relationships between perceived authenticity and perceived gain from the innovation (thus supporting hypothesis 12a and 12c but not 12b). Consumers with high past orientation value possessions and objects for their symbolic representation of the past (Beverland, 2005). The impact of traditionality on perceived authenticity supports these findings by indicating that individuals that are oriented towards the past will perceive a traditional product to be more authentic than individuals with low past orientation. The results for hypothesis 12a and 12b were consistent with the wine context, while 12c differed (the hypothesis was not supported for wine).

When considering the moderation effect of consumer past orientation across the three countries (Appendix 6.7, 6.8, and 6.9), findings indicate that past orientation had a significant impact on the relationship between perceived traditionality and authenticity of the innovated product in

Australia. The relationship was stronger for individuals with high past orientation thus supporting hypothesis 12a for the Australian sample. Moreover, past orientation has a significant impact on the relationship between perceived authenticity of the innovated product and perceived gain/sacrifice from the innovation in Singapore. The relationship was stronger for individuals with high past orientation thus supporting hypothesis 12b for the Singaporean sample. Furthermore, past orientation has a significant impact on the relationship between perceived authenticity of the innovated product and purchase intention in France. The relationship was stronger for individuals with high past orientation thus supporting hypothesis 12c for the French sample. Results indicate that the moderating impact of past orientation is country specific and cannot be generalised across different cultures.

6.7.2 Subjective TAMs Knowledge

Table 6.17 indicates the sample number for the low and high knowledge groups.

Table 6.17: Knowledge Groups- value classification

<i>Knowledge</i>	<i>4.09</i>	<i>N</i>
Lower group (<)	<4.09	582
Higher group (>)	>4.09	647

The models indicating the path estimates for the low and high knowledge groups are presented in Figure 6.7 and Figure 6.8 respectively.

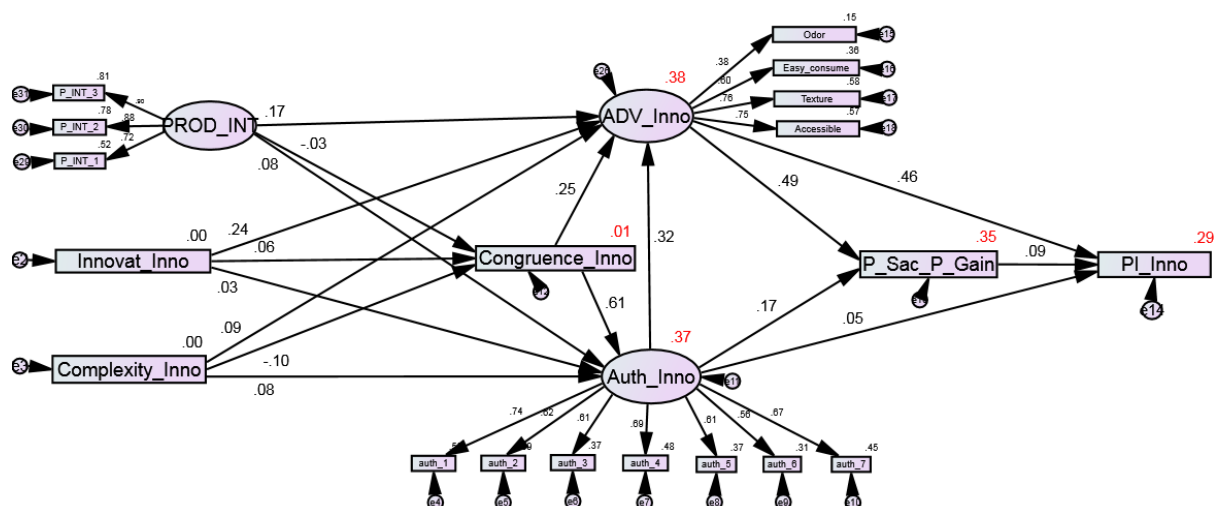


Figure 6.7: Path Model for low Subjective Knowledge

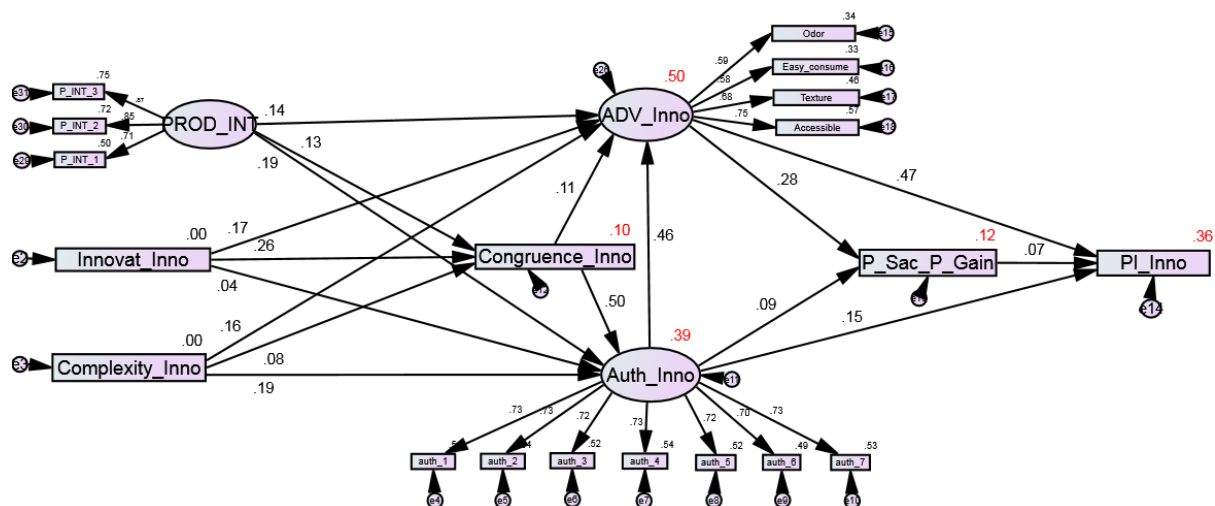


Figure 6.8: Path Model for high Subjective Knowledge

Table 6.18: Goodness of fit Statistics for tests of Invariance: A Summary

Model Description	Groups	Comparative Model	CFI	ΔCFI
Hypothesized model	Low and high Knowledge	Unconstrained	0.933	-
Regression weights constrained equal	Low and high Knowledge	Model 1	0.921	0.012

Table 6.18 shows that the CFI difference between the unconstrained and constrained model is more than 0.01, thus implying that the equality constraint is not reasonable. As a result, low and high knowledge models in their entirety differ from each other.

Table 6.19: Model estimation and critical ratios

	Low Knowledge		High Knowledge		CR
	E	p	E	p	
Congruence_Inno <--- Complexity_Inno	-0.10	0.01	0.08	0.02	3.207***
Congruence_Inno <--- Innovat_Inno	0.06	0.17	0.26	0.00	3.755***
Congruence <--- PROD_INT	-0.03	0.45	0.13	0.00	3.062***
Auth_Inno <--- PROD_INT	0.08	0.03	0.19	0.00	3.004***
Auth_Inno <--- Innovat_Inno	0.03	0.37	0.04	0.25	0.276
Auth_Inno <--- Complexity_Inno	0.08	0.03	0.19	0.00	2.765***
Auth_Inno <--- Congruence_Inno	0.61	0.00	0.50	0.00	-0.592
ADV_Inno <--- Innovat_Inno	0.25	0.00	0.17	0.00	-1.325
ADV_Inno <--- Complexity_Inno	0.09	0.02	0.16	0.00	1.310
ADV_Inno <--- Congruence_Inno	0.25	0.00	0.11	0.01	-2.163**
ADV_Inno <--- PROD_INT	0.17	0.00	0.14	0.00	-0.007
ADV_Inno <--- Auth_Inno	0.32	0.00	0.46	0.00	0.728
P_Sac_P_Gain <--- ADV_Inno	0.49	0.00	0.28	0.00	-2.211**
P_Sac_P_Gain <--- Auth_Inno	0.17	0.00	0.09	0.11	-1.328
PI_Inno <--- P_Sac_P_Gain	0.09	0.05	0.07	0.06	-0.538
PI_Inno <--- Auth_Inno	0.05	0.27	0.15	0.00	0.994
PI_Inno <--- ADV_Inno	0.46	0.00	0.47	0.00	-0.143
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10					
E = Estimate; CR = critical ratios					

An examination of the critical ratios of the individual relationships (Table 6.19) indicated that several relationships were significantly different for individuals with different levels of knowledge about the product category. The relationship between perceived authenticity of the innovation and purchase intention was not significantly different; however, it can be observed that for individuals with low knowledge the relationship was not significant while for individuals with high knowledge the relationship was significant. The relationship between traditionality (PROD_INT) and perceived authenticity of the innovation was significantly ($p < 0.01$) stronger in individuals with high knowledge (0.19) than individuals with low knowledge (0.08). The same relationship was observed between the complexity of the innovation and perceived authenticity (0.08 vs. 0.19 at $p < 0.1$), traditionality and congruence (-0.03 – not significant vs. 0.13 at $p < 0.1$), and level of innovation and congruence (0.06 – not significant vs. 0.26 at $p < 0.1$). In addition, the relationship between perceived advantages from the innovation and perceived gain was significantly ($p < 0.05$) stronger in individuals with low knowledge (0.49) as compared to individuals with high knowledge (0.28). The same relationship was observed between complexity of the innovation and congruence of the innovation (-0.10 vs. 0.08 at $p < 0.01$). The remaining paths did not achieve a significant critical ratio value.

H13a-b: Consumer knowledge significantly strengthens the effect between perceived authenticity of the innovation and perceived gain (13a) and perceived authenticity and purchase intention (13b).

The model estimates and critical ratios from Table 6.19, indicate that a higher knowledge strengthened the relationship between perceived authenticity and purchase intention (not significant for participants with low knowledge), however the change was not significant. Moreover, knowledge had no significant impact on the relationship between perceived authenticity and perceived gain from the innovation (thus hypothesis 13a and b are not

supported). The hypothesis 13b was supported in the wine context illustrating again that some influences are likely to be context specific.

When considering the moderation effect of subjective knowledge across the three countries (Appendix 6.13, 6.14, and 6.15), findings indicate that knowledge did not have significant impact on any of the hypothesized relationships in any of the countries. Results indicate that the moderating impact of subjective knowledge for the context of TAMc is not country specific and can be generalised across different cultures.

6.7.3 TAMs Involvement

Table 6.20 indicates the sample number for the low and high involvement groups.

Table 6.20: Involvement Groups- value classification

<i>Involvement</i>	<i>6.45</i>	<i>N</i>
Lower group (<)	<6.45	555
Higher group (>)	>6.45	676

The models indicating the path estimates for the low and high involvement groups are presented in Figure 6.9 and Figure 6.10 respectively.

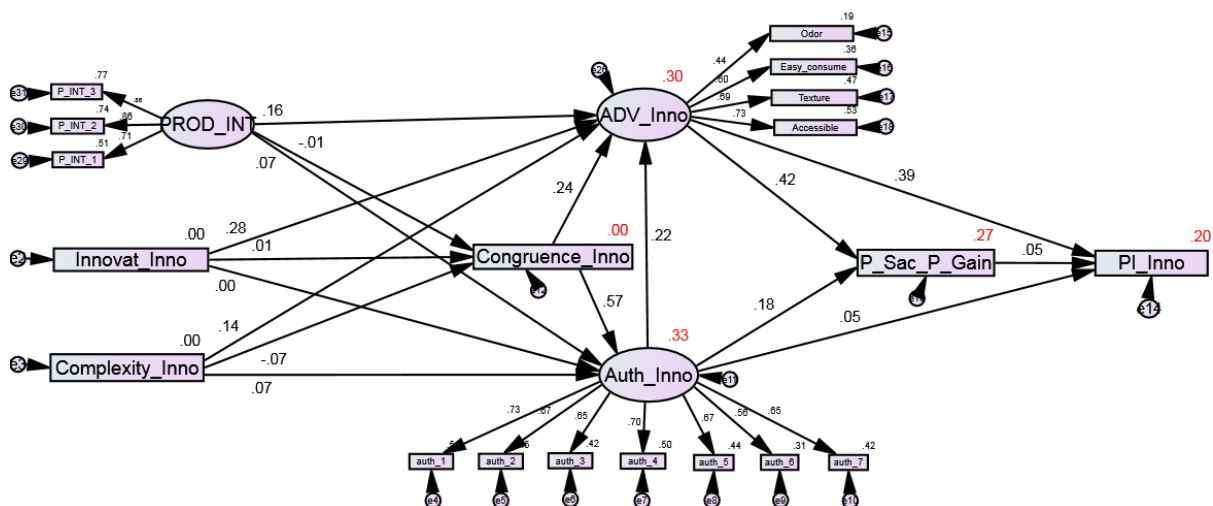


Figure 6.9: Path Model for low Involvement

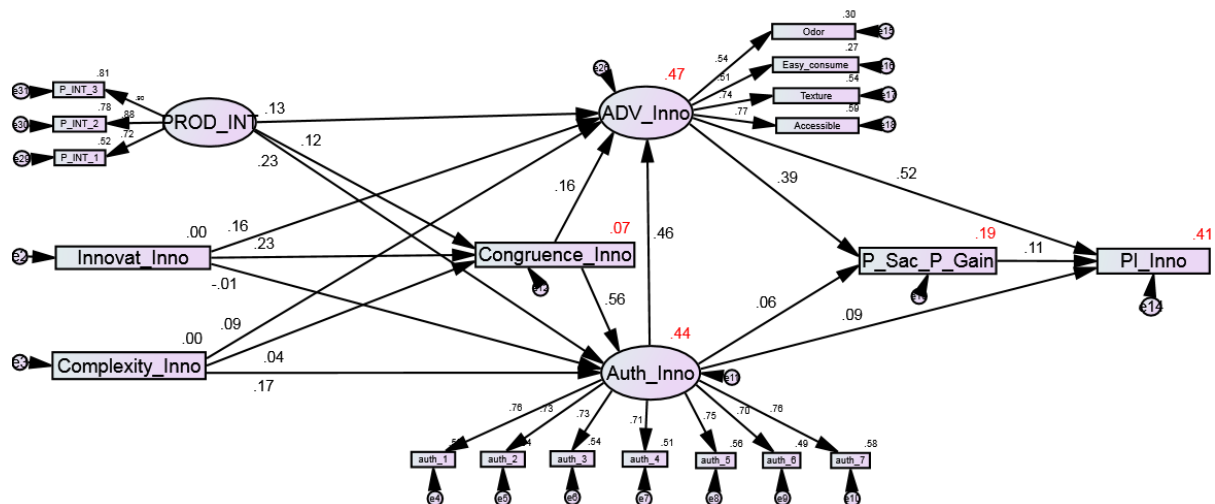


Figure 6.10: Path Model for high Involvement

Table 6.21: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	<i>ΔCFI</i>
Hypothesized model	Low and high Involvement	Unconstrained	0.927	-
Factor loadings constrained equal	Low and high Involvement	Model 1	0.919	0.008

Table 6.21 shows that the CFI difference between the unconstrained and constrained model is less than 0.01, implying that the equality constraint is reasonable. As the CFI is computed using a formula that includes discrepancies (matrix of residuals) (Albright and Park, 2009), a similar value between the two models implies that the residual is not significantly different. However, a similar residual does not necessarily mean that all measurement weights between the two groups are similar. An examination of the critical ratios of the individual relationships (Table 6.22) indicates that several relationships were significantly different for individuals with different levels of TAMs involvement.

Table 6.22: Model estimation and critical ratios

	Low Involvement		High Involvement		CR
	E	P	E	P	
Congruence_Inno <--- Complexity_Inno	-0.07	0.11	0.04	0.32	1.841*
Congruence_Inno <--- Innovat_Inno	0.01	0.89	0.23	0.00	4.294***
Congruence <--- PROD_INT	-0.01	0.84	0.12	0.00	2.235**
Auth_Inno <---PROD_INT	0.07	0.11	0.23	0.00	3.613***
Auth_Inno <--- Innovat_Inno	0.00	0.97	-0.01	0.75	-0.260
Auth_Inno <--- Complexity_Inno	0.07	0.08	0.17	0.00	2.282**
Auth_Inno <--- Congruence_Inno	0.57	0.00	0.56	0.00	1.071
ADV_Inno <--- Innovat_Inno	0.28	0.00	0.16	0.00	-1.8*
ADV_Inno <--- Complexity_Inno	0.14	0.00	0.09	0.00	-0.838
ADV_Inno <--- Congruence_Inno	0.24	0.00	0.16	0.00	-1.283
ADV_Inno <--- PROD_INT	0.16	0.00	0.13	0.00	-0.426
ADV_Inno <--- Auth_Inno	0.22	0.00	0.46	0.00	2.016**
P_Sac_P_Gain <--- ADV_Inno	0.43	0.00	0.39	0.00	-0.392
P_Sac_P_Gain <--- Auth_Inno	0.19	0.00	0.06	0.24	-2.065**
PI_Inno <--- P_Sac_P_Gain	0.05	0.27	0.11	0.00	0.884
PI_Inno <--- Auth_Inno	0.05	0.28	0.09	0.07	0.253
PI_Inno <--- ADV_Inno	0.39	0.00	0.52	0.00	1.199
Notes: *** p -value < 0.01; ** p -value < 0.05; * p -value < 0.10 E=Estimates; CR= Critical ratios					

The influence of traditionality (PROD_INT) on perceived authenticity of the innovated product was stronger for individuals with high involvement (0.23) than individuals with low involvement (0.07, $p < 0.01$). Moreover, the path was insignificant for individuals with low involvement ($p = 0.11$). In addition, the path between the level of innovation and congruence was also stronger for individuals with high involvement (0.01 – not significant vs. 0.23, $p < 0.01$). A similar pattern was observed for the influence of traditionality on congruence of the innovation (-0.01 – not significant vs. 0.12, $p < 0.05$), complexity of the innovation and perceived authenticity (0.07 vs. 0.17, $p < 0.05$), and perceived authenticity and perceived advantages from the innovation (0.22 vs. 0.46, $p < 0.05$). The path between perceived authenticity and purchase intention was not significantly different between the two groups; however, for individuals with low involvement, the impact was insignificant. For these individuals, the relationship between perceived authenticity and perceived gain from the innovation was substantial and significantly stronger than for individuals with high

involvement (0.19 vs. 0.06 – not significant, $p < 0.05$) for where the relationship was not significant. In addition, the relationship between the level of innovation and perceived advantages from the innovation was also stronger for individuals with low involvement (0.28 vs. 0.16, $p < 0.10$). The critical ratios for the remaining relationships were insignificant.

H14a-b: Consumer involvement significantly strengthens the effect between perceived authenticity of the innovation and perceived gain (14a) and perceived authenticity and purchase intention (14b).

The model estimates and critical ratios from Table 6.22, show that involvement significantly moderated the relationship between perceived authenticity and perceived gain, however the relationship was weaker for individuals with high involvement (thus partially supporting hypothesis 14a). The impact of involvement was not significant on the relationship between perceived authenticity and purchase intention (thus hypothesis 14b is not supported). The results were consistent with the wine context only for hypothesis 14b, where even though the path between authenticity and purchase intention was strengthened for individuals with high involvement, the impact was not significant.

When considering the moderation effect of involvement across the three countries (Appendix 6.10, 6.11, and 6.12), findings indicate that involvement had a significant impact on the relationship between perceived authenticity of the innovated product and perceived gain/sacrifice from the innovation in Singapore. The relationship was stronger for individuals with high involvement thus supporting hypothesis 14a. Results indicate that the moderating impact of involvement in the context of TAMc is country specific and cannot be generalised across different cultures.

6.8 Influence of situation on perceived gain and sacrifice from the innovation

The influence of the situation of consumption on perceived gain and sacrifice from the innovation was analysed as described in section 5.8. Tables 6.23 and 6.24 indicate the consumption situations used in the study and their impact on perceived sacrifice (6.25) and perceived gain (6.26) from the innovation.

Table 6.23: Impact of situation on perceived sacrifice from the innovation

Situations	Mean	T value	N	Eta squared	p
When I am sick	5.30	-1.20	288	0.005	0.22
When conventional medication fails	5.39	-1.89	288	0.012	0.05
To maintain my health	5.43	-2.12	288	0.015	0.03

Out of a sample of 1235 participants, 288 were of the opinion that the disadvantages from the innovation overcame the advantages, thus perceiving a level of sacrifice from the innovation. With no consumption situation in mind, the mean of perceived sacrifice was 5.15 (out of 9). Results of the multiple paired-samples t-test (Table 6.23) indicated that two out of three situations presented had a statistically significant impact on perceived sacrifice. The degree of perceived sacrifice significantly increased when participants envisioned themselves consuming TAMc when conventional medication failed ($M=5.39$, with an eta squared of 0.012 indicating a small effect size), and to maintain themselves healthy ($M=5.43$, with an eta squared of 0.015 indicating a small effect size).

Table 6.24: Impact of situation on perceived gain from the innovation

Situations	Mean	T value	N	Eta squared	p
When I am sick	6.27	-3.38	944	0.012	0.00
When conventional medication fails	6.33	-4.44	944	0.020	0.00
To maintain myself healthy	6.49	-7.93	944	0.063	0.00

Of the 1235 participants, 944 felt that the advantages from the innovation overcame the disadvantages, thus perceiving a level of gain from the innovation. With no consumption situation in mind, the mean of perceived gain was 6.09 (out of 9). Results of the multiple paired-samples t-test (Table 6.24) indicated that all situations tested had a statistically significant

impact on perceived gain. The degree of perceived gain increased when participants envisioned themselves consuming TAMc when sick ($M=6.27$, with an eta squared of 0.012 indicating a small effect size), when conventional medication failed ($M=6.33$, with an eta squared of 0.02 indicating a small effect size), and to maintain themselves healthy ($M=6.49$, with an eta squared of 0.063 indicating a moderate effect size).

An observation of the impact of the situation on perceived gain and sacrifice from the innovation on a country level (Appendix 6.6), indicated that the home country of participants played an important role in influencing feelings of gain and sacrifice.

H15a-b: Situation of consumption will significantly influence perceived gain (H15a) and sacrifice (H15b) from the innovation.

As with wine, results supported the hypotheses that situation will significantly influence perceived gain and sacrifice from the innovation.

6.8.1 Influence of situation and involvement on perceived gain and sacrifice from the innovation

The influence of situation of consumption and consumer involvement on perceived gain and sacrifice from the innovation was analysed following the same method as described in 5.8.1

Tables 6.25 and 6.26 indicate the consumption situations used in the study and their impact on perceived sacrifice for individuals with high involvement (6.25) and individuals with low involvement (6.26).

Table 6.25: Impact of situation on perceived sacrifice from the innovation for individuals with high involvement

Situations	Mean	T value	N	Eta squared	p
When I am sick	5.78	-1.95	135	0.027	0.05
When conventional medication fails	5.69	-1.39	135	0.014	0.16
To maintain my health	5.97	-2.82	135	0.056	0.01

Table 6.26: Impact of situation on perceived sacrifice from the innovation for individuals with low involvement

Situations	Mean	T value	N	Eta squared	P
When I am sick	4.87	0.04	151	0.001	0.97
When conventional medication fails	5.11	-1.29	151	0.011	0.19
To maintain myself healthy	4.95	-0.37	151	0.001	0.70

Out of a sample of 286 participants that perceived a level of sacrifice from the innovation, 135 were highly involved in the product category, while 151 had a low involvement in the product category. With no consumption situation in mind, the mean of perceived sacrifice was 5.44 for individuals with high involvement (out of 9). Results of the multiple paired-samples t-test (Table 6.24) indicated that one out of three situations presented had a statistically significant impact on perceived sacrifice. With no consumption situation in mind, the mean of perceived sacrifice for individuals with low involvement was 4.88 (out of 9). Results of the multiple paired-samples t-test (Table 6.25) indicated that none of the situations tested had a statistically significant impact on perceived sacrifice. When considering the contrast between the two groups, it can be observed that for individuals with high involvement perceptions of sacrifice were impacted by two situations (when sick and to maintain myself healthy-perceptions of sacrifice increased) while the situations had no impact on perceptions of sacrifice for low involvement individuals.

Tables 6.27 and 6.28 indicate the consumption situations used in the study and their impact on perceived gain for individuals with high involvement (6.27) and individuals with low involvement (6.28).

Table 6.27: Impact of situation on perceived gain from the innovation for individuals with high involvement

Situations	Mean	T value	N	Eta squared	p
When I am sick	6.65	-2.81	539	0.014	0.01
When conventional medication fails	6.63	-2.63	539	0.012	0.01
To maintain my health	6.90	-6.67	539	0.076	0.00

Table 6.28: Impact of situation on perceived gain from the innovation for individuals with low involvement

Situations	Mean	T value	N	Eta squared	P
When I am sick	5.75	-1.85	402	0.008	0.06
When conventional medication fails	5.92	-3.53	402	0.030	0.00
To maintain myself healthy	5.94	-4.42	402	0.046	0.00

Out of a sample of 941 participants that perceived a level of gain from the innovation, 539 were highly involved in the product category, while 402 had a low involvement in the product category. With no consumption situation in mind, the mean of perceived gain was 6.46 for individuals with high involvement (out of 9). Results of the multiple paired-samples t-test (Table 6.27) indicate that all three situations presented had a statistically significant impact on perceived gain from the innovation. With no consumption situation in mind, the mean of perceived gain for individuals with low involvement was 5.59 (out of 9). Results of the multiple paired-samples t-test (Table 6.28) also indicate that all three situations tested had a statistically significant impact on perceived gain from the innovation. When contrasting the two groups, perceptions of gain, while following the same pattern for both groups, increased moderately for high involvement individuals when consuming TAMc to maintain themselves healthy versus a small effect in low involvement individuals.

H15c: Situation of consumption coupled with consumer involvement will account for more variation in perceptions of gain and sacrifice from the innovation than situational influence alone.

Results indicate that situation of consumption coupled with consumer involvement accounted for more variation in perceptions of gain and sacrifice from the innovation than situational influence alone thus supporting hypothesis 15c.

Table 6.29 gives a summary of the studies' hypothesized relationships and their outcome for the whole sample (WS), the Australian (AS), French (FS) and Singaporean (SS) sample.

Hypothesis	WS	AS	SS	FS
H1.a: Perceptions of traditionality of the original product will significantly and positively influence consumer perceptions of authenticity of the innovated product.	S	S	NS	S
H1.b: Congruence of the innovation with the original product mediates the impact of traditionality perceptions on authenticity perceptions.	PS	PS	S	PS
H2: The degree of complexity of the innovation will significantly and negatively influence the congruence of the innovation with the original product.	NS	NS	NS	NS
H3: The degree of innovation will significantly and negatively influence the congruence of the innovation with the original product.	PS	NS	PS	PS
H4: Congruence of the innovation with the original product will significantly and positively influence perceptions of authenticity of the innovated product.	S	S	S	S
H5a-b: Congruence of the innovation with the original product mediates the impact of the degree of complexity (5a) and innovativeness (5b) on perceptions of authenticity.	NS S	NS NS	NS S	NS S
H6: Congruence of the innovation with the original product will significantly and positively influence perceived advantages of the innovated product.	S	S	S	S
H7: Perceptions of authenticity of the innovation will significantly and positively influence perceived advantages of the innovated product.	S	S	S	S
H8a-b: Perceptions of authenticity of the innovation will significantly and positively influence perceived gain from the innovation (8a) and purchase intention (8b).	S S	S S	S S	NS S
H9a-b: Perceived advantages of the innovation will significantly and positively influence perceived gain from the innovation (9a) and purchase intention (9b).	S S	S S	S S	S S
H10: Perceived gain from the innovation will significantly and positively influence purchase intention.	S	S	NS	NS
H11a-b: Perceived gain from the innovation mediates the impact of perceived advantages (11a) and perceived authenticity (11b) on purchase intention.	PS PS	PS PS	NS NS	NS NS
H12a-b: Consumer past orientation significantly strengthens the effect between perceived product traditionality and perceived authenticity (12a), authenticity of the innovation and perceived gain (12b) and perceived authenticity and purchase intention (12c).	S NS S	S NS NS	NS S NS	NS NS S
H13a-b: Consumer knowledge significantly strengthens the effect between perceived authenticity of the innovation and perceived gain (13a) and perceived authenticity and purchase intention (13b).	NS NS	NS NS	NS NS	NS NS
H14a-b: Consumer involvement significantly strengthens the effect between perceived authenticity of the innovation and perceived gain (14a) and perceived authenticity and purchase intention (14b).	PS NS	NS NS	S NS	NS NS
H15a-b: Situation of consumption will significantly influence perceived gain (H15a) and sacrifice (H15b) from the innovation.	S	S	S	NS
H15c: Situation of consumption coupled with consumer involvement will account for more variation in perceptions of gain and sacrifice from the innovation than situational influence alone.	S S S	S S NA	S S NA	S S NA

S=Supported PS=Partially Supported AS=Australian Sample
NS= Not Supported WS=Whole Sample SS=Singaporean Sample
FS=French Sample N/A= Not applicable

6.9 Chapter Summary

The results of the quantitative research for traditional Asian medicine were detailed in this chapter, and outlined in six sections. First, a demographic profile of participants based on aged, gender and frequency of TAMs consumption was presented. Reliability and confirmatory factor analysis were then run to investigate the measurement constructs. It was concluded that all scales used were satisfactory, and could be included for the remaining analysis.

In section three, a multigroup analysis was conducted to explore the invariance of the measurement constructs between countries. Partial invariance was at minimum established, allowing for a cross country comparison. The next section focused on a path model analysis capturing the hypothesized relationships for the study. The impact of traditionality on perceived authenticity, the role of congruence as a mediator, the influence of perceived authenticity, of perceived gain and sacrifice on purchase intention were investigated. The specified model achieved good model fit, and goodness-of-fit indices and individual paths were presented. A comparison between the wine and TAMs contexts illustrated that some influences are likely to be context specific as the support provided for the hypotheses tested was not always consistent for both contexts. Moreover, an analysis of the model in three different countries, indicated that several differences existed also between them. In section five, multigroup and critical ratio analyses were used to analyse the potential moderating role of past orientation, knowledge and involvement. The sample was divided into high and low knowledge, past orientation and involvement groups. While the condition of variance was not fulfilled for all moderators, namely involvement, when considering the whole model, critical ratios showed that several relationships were different between samples of high and low knowledge, involvement and past orientation. In the sixth and last section a multiple paired samples t-test was conducted to evaluate the impact of situation on perceived gain and sacrifice from the innovation. Results

indicated that the consumption situations significantly impacted both perceived gain and perceived sacrifice.

Chapter 7: Results for Bamboo Bicycle

7.1 Introduction

Following the same structure as chapter 5 and 6, chapter 7 describes each step of the data analysis undertaken to test the hypotheses put forward in chapter 3. Specifically, chapter 7 illustrates the results determined from data collected exploring the final context, a bicycle innovated by the introduction of a bamboo frame. A demographic profile of the participants surveyed is presented in the first section of this chapter. In the following section, similar to chapter 5 and 6, data from three countries (Australia, Singapore and France) was aggregated into one data set and the results of a confirmatory factor analysis conducted to verify the constructs of product integration (traditionality), authenticity of the innovated product, perceived advantages of the innovation, product knowledge, consumer past orientation, and involvement are presented, together with the scale reliability. The third section of the chapter investigates the invariance of the above measurement instruments across the different countries via a multigroup analysis. Section four introduces the identified path model reflecting the conceptual model and hypothesised relationships. The support of the hypotheses regarding the impact of traditionality on perceived product authenticity, and the impact of perceived authenticity on value generation (perceived gain and sacrifice) and purchase intention (as well as other hypotheses) is then discussed. To test the robustness of the model across different country locations, an estimation of the path model is conducted for Australia, France and Singapore. Section five illustrates the moderation effect of consumer characteristics such as past orientation, involvement and knowledge on the path model investigated via a multigroup and critical ratio analysis. The sixth and last section examines the potential impact of situation

on perceived gain and sacrifice from the innovation analysed via conducting a multiple paired samples t-test analysis.

7.2 Demographic profile of respondents

In total 1239 respondents from three countries (Australia, Singapore and France) completed the online survey, namely 413 participants from Australia, 413 from Singapore and 413 from France (Table 7.1). The sample profile was determined based on age, gender, and frequency of riding a bicycle in any given month. The gender proportion was balanced in all three countries. While in the survey participants could select their year of birth, for illustration purposes, the age was divided into six categories. All participants were required to ride a bicycle at least once per month.

Table 7.1: Demographic profile based on age, gender and frequency of usage

Variables	Aggregate Sample		Australia		Singapore		France	
Age	Freq.	%	Freq.	%	Freq.	%	Freq.	%
18-28	253	20.4	65	15.7	98	23.7	90	21.8
29-39	360	29.1	102	24.7	148	35.8	110	26.6
40-50	259	20.9	83	20.1	86	20.8	90	21.8
51-61	209	16.9	77	18.6	65	15.7	67	16.2
62-72	124	10.0	63	15.3	12	2.90	49	11.9
73 up	34	2.70	23	5.60	4	1.00	7	1.70
Gender								
Male	673	54.3	234	56.6	214	51.8	225	54.5
Female	566	45.7	179	43.4	199	48.2	188	45.5
Frequency								
>20 times*	122	9.80	43	10.4	25	6.10	54	13.1
15-20 times	133	10.7	49	11.9	27	6.50	57	13.8
10-14 times	171	13.8	55	13.3	45	10.9	71	17.2
5-9 times	282	22.8	102	24.7	77	18.6	103	24.9
<5	531	42.9	164	39.7	239	57.9	128	31.0
N=	1239		413		413		413	
*Frequency of riding a bicycle per month								

7.3 Scale Validation (Confirmatory factor analysis)

The construct validity of the scales used in the study was measured via a confirmatory factor analysis to evaluate the extent to which observed variables represent an underlying latent variable (CFA) (Byrne, 2016). Multiple fit indices were used to examine the fit of the proposed model including the χ^2/DF ratio, the Comparative Fit Index (CFI), The Tucker-Lewis Index

(TLI), the Goodness of Fit Index (GFI) and the Root Mean Square Error of Approximation (RMSEA). Table 7.2 shows the summary of the fit indices used and the acceptable cut-off scores.

Table 7.2: Fit Indices for examining model fit of CFA

Indices	Acceptable Cut-off scores for Model Fit
X ² /DF	The smaller the value, the better the fit of the model with the data
CFI	Close to, or 0.90, indicates a good fit (max of 1); 0.8-0.9 indicates a moderate fit
TLI	Close to, or 0.90, indicates a good fit
GFI	Close to, or 0.90, indicates a good fit (max of 1); 0.8-0.9 indicates a moderate fit
RMSEA	0-0.06 represents a good fit; 0.06-0.08 reasonable fit; 0.08-0.1 mediocre fit

As the procedure used to conduct the confirmatory factor analysis was thoroughly described in chapter 5, for parsimony, they are not described again here. However, a detailed view of the results for the aggregated sample (1239 participants) for the context of bicycles following the same procedure can be found in Appendix 7.1. The results of the confirmatory factor analysis for the Australian, Singaporean and French sample can be found in Appendix 7.2, 7.3 and 7.4 respectively. An analysis of the results indicates that all the constructs used fit the data well (fit indices were within the threshold for a good fitting model) and were reliable (Cronbach alpha above 0.7) (Table 7.3).

Table 7.3: Goodness of fit statistics

Scales	χ^2/df	P	CFI	GFI	TLI	RMSEA
Authenticity of the innovation	4.95	0.00	0.98	0.99	0.97	0.05
Product Integration	0.20	0.65	1.00	1.00	1.00	0.00
Advantages of the Innovation	0.33	0.56	1.00	1.00	1.00	0.00
Past Orientation	7.71	0.01	0.99	0.99	0.98	0.07
Subjective Knowledge	2.26	0.08	0.99	0.99	0.99	0.03
Involvement	0.002	0.96	1.00	1.00	1.00	0.00

7.4 Testing for Multigroup Invariance between Countries

As the procedure used to conduct the multigroup analysis was thoroughly described in chapter 5, a detailed view of the results for the context of bicycles following the same procedure can be found in Appendix 7.5. A summary of the results (Table 7.4) indicates that the measures

were fully invariant (authenticity of the innovation, advantages of the innovation and product integration).

Table 7.4: Multigroup Invariance between countries (Australia, Singapore and France)

Scales	Unconstrained Model CFI	Model 1 CFI	Model 2 CFI	ΔCFI_1	ΔCFI_2
Authenticity of the innovation	0.974	0.966	0.966	0.008	0.000
Product Integration	1.000	0.990	0.992	0.010	-0.002
Advantages of the Innovation	1.000	1.000	1.000	0.000	0.000
<p><i>Model 1= Factor loadings constrained equal</i> <i>Model 2= Factor loadings, variances, and structural covariances constrained equal</i> ΔCFI_1 = difference between CFI of hypothesized unconstrained model and Model 1 ΔCFI_2 = difference between CFI of Model 1 and Model 2</p>					

7.5 Path Model Analysis via SEM

The hypotheses were tested using the complete path model. A large sample size is required for SEM to ensure statistical stability, and this was achieved by having a sample of 413 participants for each country resulting in a total sample of 1239 participants. As a result, there was no need for the calculation of composite variables during the main path analysis. However, composite variable calculation was needed when determining the mean of past orientation, knowledge and involvement. The procedure on how the composite variable was calculated can be found in section 5.4.1.

7.6 Evaluating Path Models (Hypothesis Testing)

The path model evaluation process followed the same four steps of Structural Equation Modelling described in section 5.6. The path model was specified, identified and estimated using the fit indices summarised in Table 7.2. After determining the fit of the model, parameter estimates were examined to assess each of the proposed relationships individually. The estimates must be significantly significant and in the direction specified (Hair et al., 2012b). The standardized loading estimates for the bicycle path model are reported in Table 7.5.

Figure 7.1 shows the identified path model, consisting of the variables representing product perceived traditionality (PROD_INT), degree of complexity of the innovation (Complexity_Inno), degree of innovativeness (Innovat_Inno), congruence of the innovation with

the product category (Congruence_Inno), perceived advantages of the innovation (ADV_Inno), perceived authenticity of the innovated product (Auth_Inno), perceived gain and sacrifice from the innovation (P_Sac_Gain) and purchase intention (P_Inno). The variables of perceived gain and perceived sacrifice were merged into one variable named perceived sacrifice and gain (P_Sac_Gain). The measure ranges from -9 to 9 with values from -9 to -1 indicating perceived sacrifice and values from 1 to 9 indicating perceived gain.

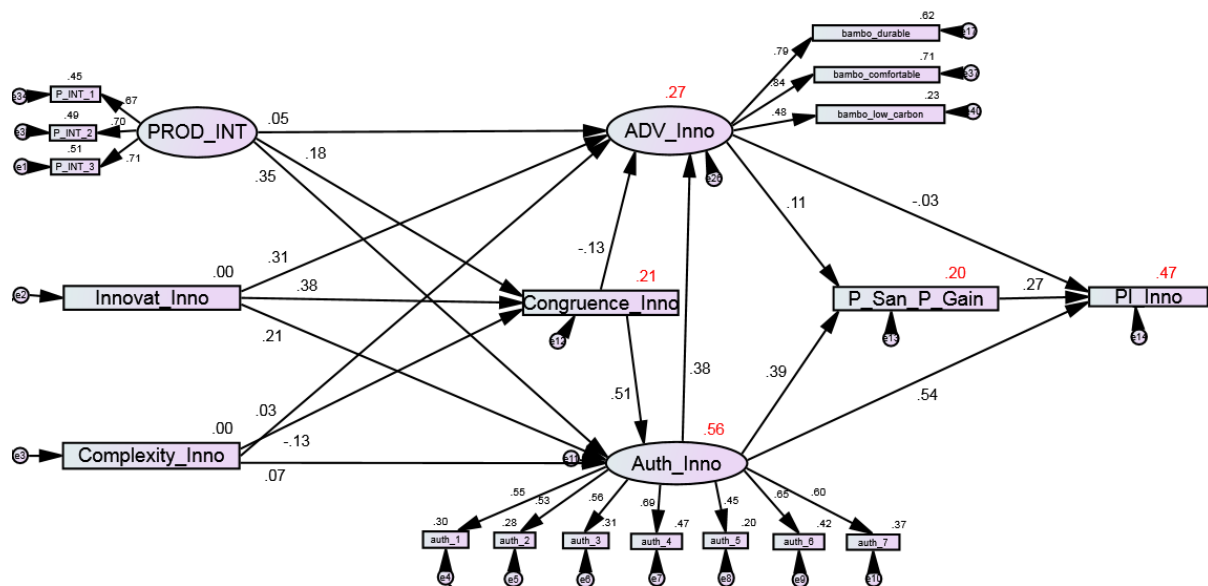


Figure 7.1: Path Model for Bamboo Bicycle

Table 7.5: Goodness of fit indices for identified path model

χ^2/df	P	CFI	GFI	TLI	RMSEA
9.8	0.00	0.86	0.90	0.82	0.08

Results from the model indicate a moderate fit with the data (CFI= 0.86, GFI=0.90, TLI=0.82, RMSEA=0.08), with the fit indices reaching the required thresholds (see Table 7.2). Although the p value was lower than 0.05, the values obtained were deemed sufficient due to the complexity of the model and the sensitivity of the chi-square index (Hair et al., 2012b, Byrne, 2016). A model that fits the data well indicates that the relationships that exist between constructs or error variables have been accounted for in the model. However, it is still important to observe parameter estimates to identify the possible existence of insignificant paths.

Table 7.6: Standardized regression weights

H		Estimates	P
H3	Congruence_Inno <--- Innovat_Inno	0.38	***
	Congruence_Inno <--- PROD_INT	0.18	***
H2	Congruence_Inno <--- Complex_Inno	-0.13	***
H4	Auth_Inno <--- Congruence_Inno	0.51	***
H1.a	Auth_Inno <--- PO_INT	0.35	***
	Auth_Inno <--- Complex_Inno	0.07	0.004
	Auth_Inno <--- Innovat_Inno	0.21	***
H6	ADV_Inno <--- Congruence_Inno	-0.13	0.002
	ADV_Inno <--- Innovat_Inno	0.31	***
H7	ADV_Inno <--- Auth_Inno	0.38	***
	ADV_Inno <--- PO_INT	0.05	0.21
	ADV_Inno <--- Complex_Inno	0.03	0.26
H9.a	P_Sac_P_Gain <--- ADV_Inno	0.11	0.002
H8.a	P_Sac_P_Gain <--- Auth_Inno	0.39	***
H10	PI_Inno<--- P_Sac_P_Gain	0.27	***
H9.b	PI_Inno <--- ADV_Inno	-0.04	0.23
H8.b	PI_Inno <--- Auth_Inno	0.54	***
*** indicates p-value significantly different from zero at the 0.001 level (two – tailed) H=Hypothesis			

The regression weights output (Table 7.6) shows three insignificant paths, the path between product integration (i.e: traditionality) and perceived advantages of the innovated product, perceived complexity of the innovation and perceived advantages of the innovated product and perceived advantages of the innovation and purchase intention. Three paths were significant at the 5% level (complexity of the innovation on perceptions of authenticity of the innovated product (0.4%); congruence of the innovation on perceived advantages from the innovation (0.2 %); perceived advantages of the innovation on perceived gain from the innovation (0.2 %)). As the model is already parsimonious and fits well, no model re-specification was conducted. What follows is a summary of test results against the hypotheses.

H1.a: Perceptions of traditionality of the original product will significantly and positively influence consumer perceptions of authenticity of the innovated product.

The relationship between perceptions of traditionality of the original product and perceptions of authenticity of the innovated bicycle was significant with perceptions of traditionality positively influencing perceived product authenticity (0.35, $p < 0.01$). Therefore, consistently with the previously analysed contexts (in chapter 5 & 6), H1.a is supported.

H1.b: Perceived congruence of the innovation with the original product mediates the impact of traditionality perceptions on authenticity perceptions of the innovated product.

Since the direct effect between product traditionality and perceived authenticity decreased after introducing congruence of the innovation but remained significant, congruence is found to partially mediate the impact of traditionality perceptions on authenticity perceptions (Baron and Kenny, 1986). Therefore, hypothesis 1.b is partially supported. The results are consistent with the second context presented in this study (TAMS), but differ from the first (wine) where hypothesis 1.b was supported.

H2: The degree of complexity of the innovation will significantly and negatively influence the congruence of the innovation with the original product.

The degree of complexity of the innovation negatively and significantly influenced the congruence of the innovation with the original product (-0.13, $p < 0.01$); thus, hypothesis 2 is supported. The results are not consistent with the ones obtained from the first (hypothesis 2 was partially supported) and second context (hypothesis 2 was not supported), illustrating that some influences are context specific.

H3: The degree of innovation will significantly and negatively influence the congruence of the innovation with the original product.

The degree of innovation significantly and positively influenced the congruence of the innovation with the original product (0.38, $p < 0.01$); hence, similar to the first and second context, H3 is partially supported.

H4: Congruence of the innovation with the original product will significantly and positively influence perceptions of authenticity of the innovated product, and: **H6:** Congruence of the innovation with the original product will significantly and positively influence perceived advantages of the innovated product.

Results provided support for hypothesis 4 and partial support for hypothesis 6. Perceived congruence of the innovation positively and significantly influenced perceived authenticity of the innovated product (0.51, $p < 0.01$). However, congruence of the innovation negatively and significantly influenced perceived advantages from the innovation (-0.13, $p < 0.01$). Results for hypothesis 4 are consistent throughout all three contexts, while hypothesis 6 was supported for the first and second context.

H5a-b: Congruence of the innovation with the original product mediates the impact of the degree of complexity (5a) and innovativeness (5b) on perceptions of authenticity.

Congruence of the innovation was found to partially mediate the impact of the degree of complexity and innovation on perceptions of authenticity of the innovated product, as a significant direct effect was still present between the degree of complexity and perceptions of product authenticity (0.07, $p < 0.01$) and degree of innovation and perceptions of product authenticity (0.21, $p < 0.01$). Results partially support hypothesis 5a and 5b. The results were consistent with context 1 but differed from the second context where hypothesis 5a was not supported while hypothesis 5b was supported.

H7: Perceptions of authenticity of the innovation will significantly and positively influence perceived advantages of the innovated product.

Perceptions of authenticity significantly and positively influenced perceived advantages of the innovated product (0.38, $p < 0.01$). Results support hypothesis 7. The findings are consistent though all three contexts.

H8a-b: Perceptions of authenticity of the innovation will significantly and positively influence perceived gain from the innovation (8a) and purchase intention (8b).

Perceptions of authenticity of the innovation were found to significantly and positively influence purchase intention thus, similar to the first and second context, supporting hypothesis H8b (0.54, $p < 0.01$).

With regard to hypothesis 8a, a positive and significant direct effect was found between perceived authenticity and perceived gain from the innovation (0.39, $p < 0.01$), thus supporting the hypothesis and providing further support that perceptions of authenticity convey value (Carroll and Wheaton, 2009, Frazier et al., 2009). The findings are consistent with the second context but differ from the first where the hypothesis was not supported.

H9a-b: Perceived advantages of the innovation will significantly and positively influence perceived gain from the innovation (9a) and purchase intention (9b).

Results support hypothesis 9a demonstrating that perceived advantages derived from the innovation significantly and positively influence perceived gain from the innovation (0.11, $p < 0.01$). The results are consistent through all three contexts. Even though a positive and significant indirect effect was observed between perceived advantages and purchase intentions, the direct effect was not significant; therefore, hypothesis 9b was not supported. The results for hypothesis 9b differ from the two previously analysed contexts, where the hypothesis was supported.

H10: Perceived gain from the innovation will significantly and positively influence purchase intention.

Results indicated that perceived gain from the innovation significantly and positively influences purchase intention (0.27, $p < 0.01$); therefore, providing support for hypothesis H10. The support was consistent through all contexts analysed in this study.

H11a-b: Perceived gain from the innovation mediates the impact of perceived advantages (11a) and perceived authenticity (11b) on purchase intention.

Perceived gain from the innovation fully mediated the relationship between perceived advantages from the innovation and purchase intention as the direct effect between the latter was not significant. The results provide support for hypothesis 11a. The results were not consistent with context 1 and 2, where the hypothesis was partially supported.

Perceived gain partially mediated the relationship between perceived authenticity of the innovated product and purchase intention as the direct effect was still significant. Hence, results provide partial support for hypothesis 11b. The results were consistent with those of TAMs but differed from wine, where the hypothesis was not supported.

To test the robustness of the model across different locations and cultural backgrounds by observing any potential differences that may exist, an estimation of the path model was conducted for Australia, Singapore and France separately.

7.6.1 Differences between nationalities (country location)

Table 7.7 indicates the sample number for Australia, Singapore and France.

Table 7.7: Country of origin Groups- value classification

<i>Country</i>	<i>N</i>
Australia	413
Singapore	413
France	413

The models indicating the path estimates for the three groups are presented in Figure 7.2, 7.3, and 7.4. The fit of the models, together with an analysis of significant paths, is also explored. Moreover, a discussion of the differences between countries is also included.

Bamboo Bicycle Australia

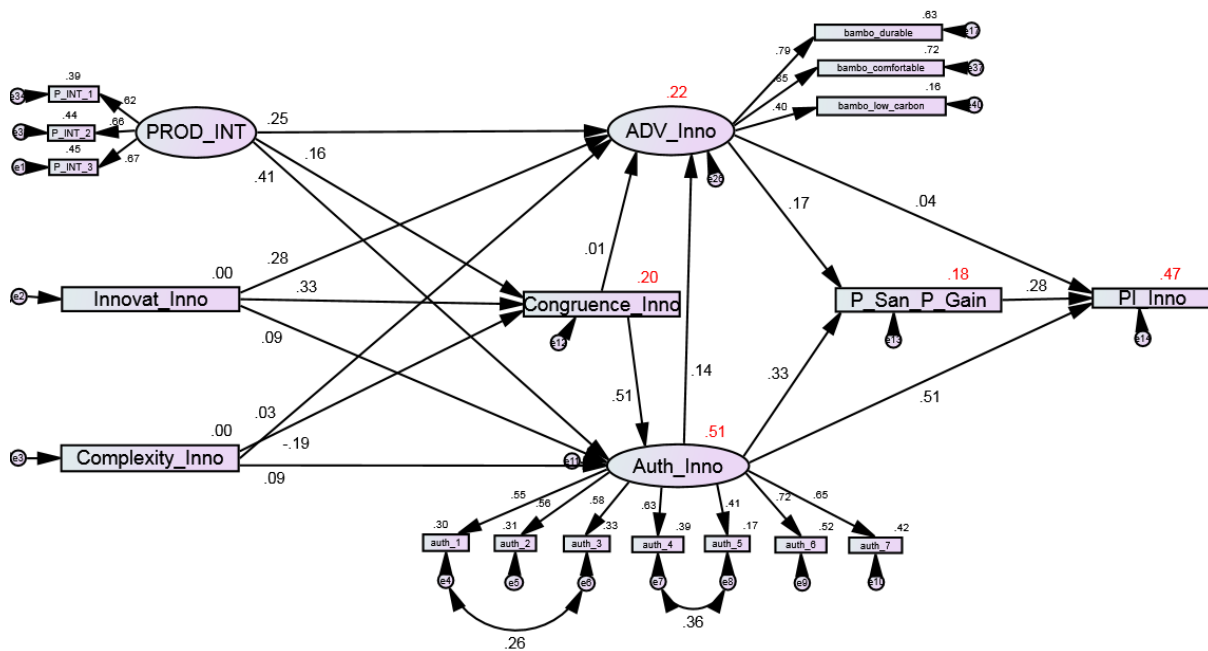


Figure 7.2: Path Model for Australia

Table 7.8: Goodness of fit indices for identified path model

χ^2/df	P	CFI	GFI	TLI	RMSEA
3.9	0.00	0.84	0.88	0.80	0.08

Results from the identified path model (Table 7.8) indicate a moderate fit with the data (CFI= 0.84, GFI=0.88, TLI=0.80, RMSEA=0.08), with the fit indices reaching their required thresholds (Table 7.2). Regression weights output (Table 7.11) shows four insignificant paths, namely the path between complexity of the innovation and perceived advantages from the innovation, congruence of the innovation and perceived advantages of the innovation, perceived authenticity of the innovation and perceived advantages from the innovation, and the path between perceived advantages from the innovation and purchase intention. Three paths were significant at the 1% level (perceived traditionality and congruence of the innovation (0.2%), perceived traditionality and perceived advantages from the innovation (0.2%), and perceived advantages from the innovation and perceived gain from the innovation (0.3%)). One path was significant at the 5% level (degree of complexity the innovation and perceived authenticity of the innovated product (5 %)), and one was significant at 10% level (degree of innovation and perceived authenticity of the innovated product (6%)).

Bamboo Bicycle Singapore

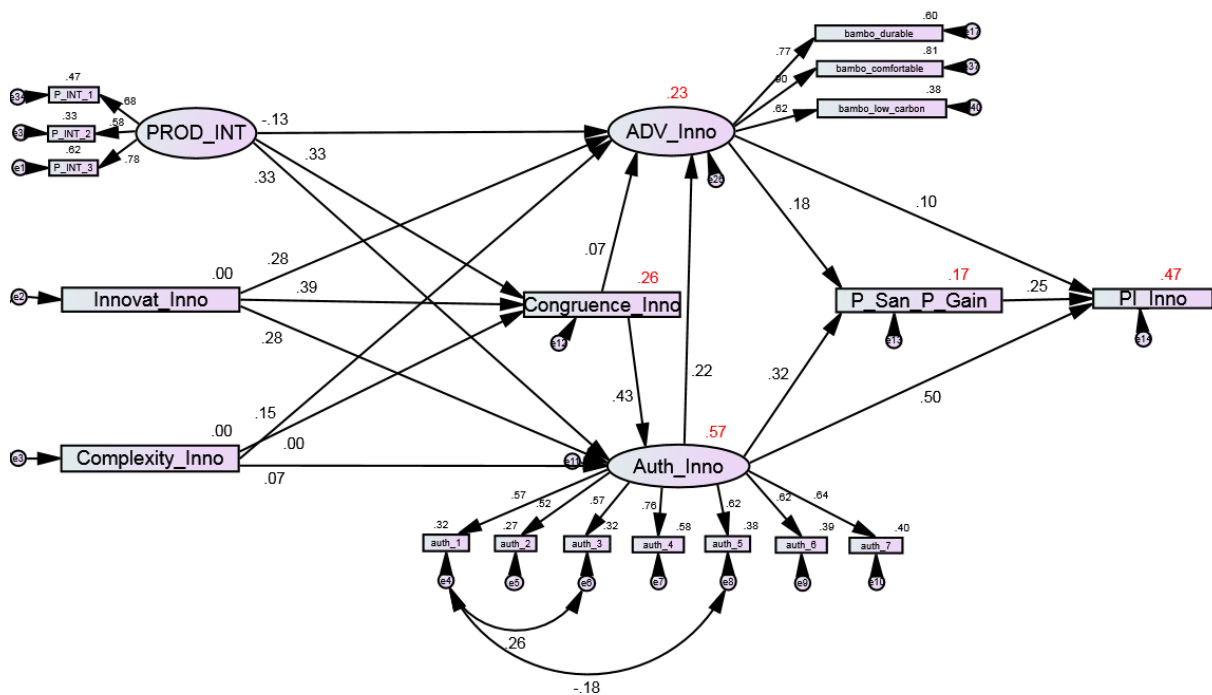


Figure 7.3: Path Model for Singapore

Table 7.9: Goodness of fit indices for identified path model

χ^2/df	P	CFI	GFI	TLI	RMSEA
3.56	0.00	0.88	0.90	0.85	0.07

Results from the identified path model (Table 7.9) indicate a moderate fit with the data (CFI=0.88, GFI=0.90, TLI=0.85, RMSEA=0.07). Regression weights output (Table 7.11) shows two insignificant paths, namely the path between congruence of the innovation and perceived advantages from the innovation and the path between degree of complexity and congruence of the innovation. Four paths were significant at the 5% level (degree of complexity of the innovation on perceived advantages from the innovation (0.2%), perceived authenticity of the innovated product on perceived advantages from the innovation (1 %), product traditionality on perceived advantages from the innovation (3%), and perceived advantages from the innovation on purchase intention (2%)). One path was significant at the 10% level (degree of complexity of the innovation and perceived authenticity of the innovated product (8%)).

Bamboo Bicycle France

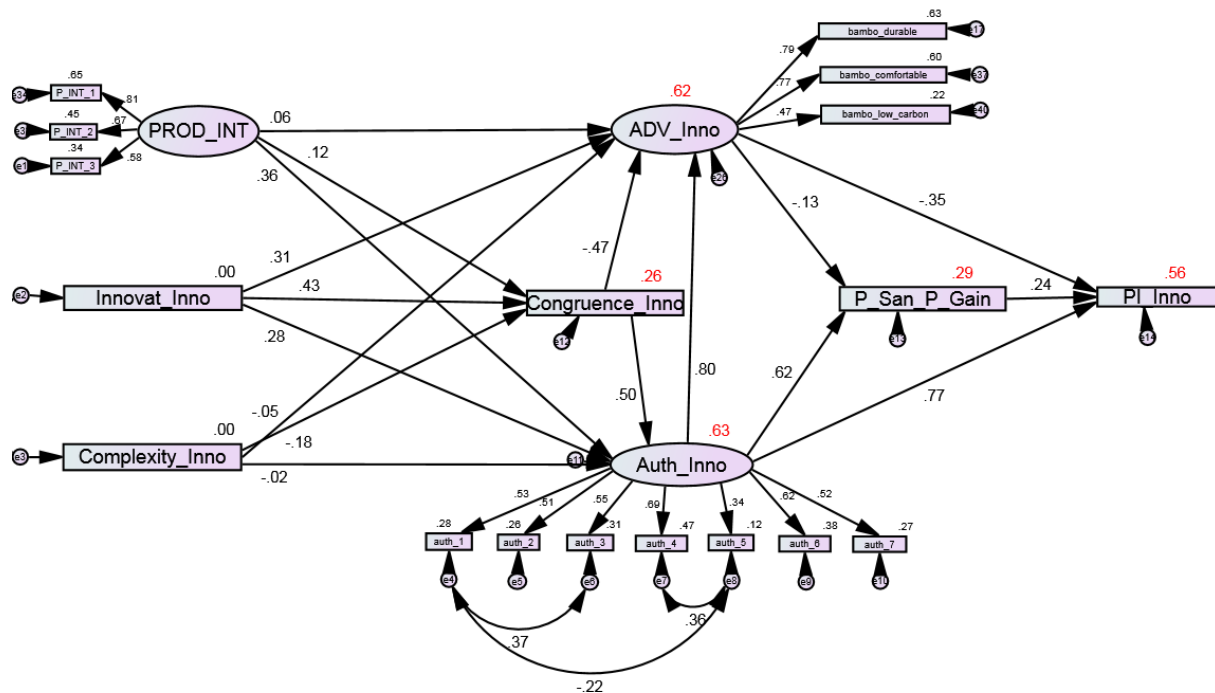


Figure 7.4: Path Model for France

Table 7.10: Goodness of fit indices for identified path model

χ^2/df	P	CFI	GFI	TLI	RMSEA
4.7	0.00	0.83	0.86	0.79	0.09

Results from the identified path model (Table 7.10) indicate a moderate fit with the data (CFI=0.83, GFI=0.86, TLI=0.79, RMSEA=0.09). Regression weights output (Table 7.11) shows three insignificant paths, namely the path between complexity of the innovation and perceived authenticity of the innovated product, degree of complexity and perceived advantages of the innovated product, and product traditionality and perceived advantages from the innovation. One path was significant at the 5% level (product traditionality and congruence of the innovation (2%), and one was significant at the 10% level (perceived advantages of the innovation and perceived gain from the innovation (8%)).

Table 7.11: Path estimates for Australia, Singapore and France

	Aus		Sin		France	
	<i>Es</i>	<i>P</i>	<i>Es</i>	<i>P</i>	<i>Es</i>	<i>P</i>
Congruence_Inno <--- Complexity_Inno	-0.19	0.00	0.02	0.95	-0.18	0.00
Congruence_Inno <--- Innovat_Inno	0.33	0.00	0.39	0.00	0.43	0.00
Congruence <--- PROD_INT	0.16	0.002	0.33	0.00	0.12	0.02
Auth_Inno <---PROD_INT	0.41	0.00	0.33	0.00	0.36	0.00
Auth_Inno <--- Innovat_Inno	0.09	0.06	0.28	0.00	0.28	0.00
Auth_Inno <--- Complexity_Inno	0.09	0.05	0.07	0.08	-0.02	0.70
Auth_Inno <--- Congruence_Inno	0.51	0.00	0.44	0.00	0.50	0.00
ADV_Inno <--- Innovat_Inno	0.28	0.00	0.28	0.00	0.31	0.00
ADV_Inno <--- Complexity_Inno	0.03	0.62	0.15	0.002	-0.05	0.22
ADV_Inno <--- Congruence_Inno	0.01	0.90	0.07	0.29	-0.47	0.00
ADV_Inno <--- PROD_INT	0.25	0.002	-0.15	0.03	0.06	0.36
ADV_Inno <--- Auth_Inno	0.14	0.13	0.23	0.01	0.80	0.00
P_Sac_P_Gain <--- ADV_Inno	0.17	0.003	0.18	0.00	-0.13	0.08
P_Sac_P_Gain <--- Auth_Inno	0.33	0.00	0.32	0.00	0.62	0.00
PI_Inno <--- P_Sac_P_Gain	0.28	0.00	0.25	0.00	0.24	0.00
PI_Inno <--- Auth_Inno	0.51	0.00	0.50	0.00	0.77	0.00
PI_Inno <--- ADV_Inno	0.04	0.43	0.10	0.02	-0.35	0.00
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10						

Table 7.12: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	<i>ΔCFI</i>
Hypothesized model	Australia, France, Singapore	Unconstrained	0.851	-
Measurement weights constrained equal	Australia, France, Singapore	Model 1	0.834	0.017

Table 7.12 shows that the CFI difference between the unconstrained and constrained model is more than 0.01, thus implying that the equality constraint is unreasonable. Hence, the three groups differ from each other.

Table 7.13: Critical ratios (comparison between Singapore, France and Australia)

H		CR		
		Sin-Fr	Au-Fr	Au_Si
H2	Congruence_Inno <--- Complexity_Inno	-3.136***	0.150	3.172***
H3	Congruence_Inno <--- Innovat_Inno	2.596***	2.062**	-0.305
	Congruence <--- PROD_INT	-1.739*	-0.268	1.534
H1.a	Auth_Inno <---PROD_INT	0.389	-1.257	-1.608
	Auth_Inno <--- Innovat_Inno	-0.379	2.103**	2.412**
	Auth_Inno <--- Complexity_Inno	-1.634	-1.907*	-0.377
H4	Auth_Inno <--- Congruence_Inno	-1.516	-2.113**	-0.539
	ADV_Inno <--- Innovat_Inno	0.180	0.483	0.275
	ADV_Inno <--- Complexity_Inno	-3.243***	-1.133	1.992**
H6	ADV_Inno <--- Congruence_Inno	-4.845***	-4.673***	0.733
	ADV_Inno <--- PROD_INT	2.287**	-1.722*	-3.866***
H7	ADV_Inno <--- Auth_Inno	3.88***	5.022***	1.062
H9.a	P_Sac_P_Gain <--- ADV_Inno	-3.432***	-3.257***	-0.039
H8.a	P_Sac_P_Gain <--- Auth_Inno	3.142***	3.229***	0.072
H10	PI_Inno <--- P_Sac_P_Gain	0.814	-0.149	-1.102
H8.b	PI_Inno <--- Auth_Inno	3.748***	3.458***	-0.445
H9.b	PI_Inno <--- ADV_Inno	-5.471***	-4.566***	0.737
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10				

An examination of the individual relationships when contrasting Singapore and France (Table 7.13) indicated that several relationships (eleven) differ significantly between the two groups. The relationship between the perceived authenticity of the innovated product and purchase intention was significantly stronger in France (0.77) than Singapore (0.50, $p < 0.01$). The same pattern was observed for the path between perceived authenticity of the innovated product and perceived gain from the innovation (0.62 vs. 0.32, $p < 0.01$). Similarly, the paths between perceptions of authenticity of the innovated product and perceived advantages obtained from the innovation (0.80 vs. 0.23, $p < 0.01$), congruence of the innovation and perceived advantages from the innovation (-0.47 vs. 0.07, $p < 0.01$), perceived advantages from the innovation and

purchase intention (-0.35 vs. 0.10, $p < 0.01$), the degree of innovation and congruence of the innovation (0.43 vs. 0.39, $p < 0.01$), and the degree of complexity and congruence of the innovation (-0.18 vs. 0.02, $p < 0.01$) were also stronger for the French sample. Conversely, an examination of the relationship between product traditionality and perceived advantages from the innovation, indicated that it was significantly stronger for the Singaporean participants (-0.15) than the French (0.06, $p < 0.05$). In fact, the relationship was insignificant for the French sample ($p = 0.36$). Similarly, the paths between perceived advantages and perceived gain from the innovation (-0.13 vs. 0.18, $p < 0.01$), the degree of complexity of the innovation and perceived advantages from the innovation (-0.05 vs. 0.15, $p < 0.01$), and product traditionality and congruence of the innovation (0.12 vs. 0.33, $p < 0.10$) were also stronger in the Singaporean sample.

A comparison between Australia and France indicated the same number of significantly different relationships (eleven). Similar to Singapore vs. France, the path between the perceived authenticity of the innovation product and purchase intention was significantly stronger in France (0.77) than Australia (0.51, $p < 0.01$). The same pattern was observed for the path between perceived authenticity of the innovated product and perceived gain from the innovation (0.62 vs. 0.33, $p < 0.01$). Similarly, the paths between perceptions of authenticity of the innovated product and perceived advantages obtained from the innovation (0.80 vs. 0.14, $p < 0.01$), congruence of the innovation and perceived advantages from the innovation (-0.47 vs. 0.01 -not significant, $p < 0.01$), perceived advantages from the innovation and purchase intention (-0.35 vs. 0.04 -not significant, $p < 0.01$), the degree of innovation and congruence of the innovation (0.43 vs. 0.33, $p < 0.05$), and the degree of innovation and perceived authenticity of the innovated product (0.28 vs. 0.09, $p < 0.05$) were also stronger for the French sample.

The paths between perceived advantages from the innovation and perceived gain (-0.13 vs. 0.17, $p < 0.01$), product traditionality and perceived advantages from the innovation (0.06 –not

significant vs. 0.25, $p < 0.10$), congruence of the innovation and perceived authenticity of the innovated product (0.50 vs. 0.51, $p < 0.05$), and the path between the degree of complexity of the innovation and perceived authenticity of the innovated product (-0.02 –not significant vs. 0.09, $p < 0.10$) were significantly stronger in the Australian sample.

A final examination of the contrast between Australia and Singapore reveals the existence of four significantly different relationships. Two relationships were significantly stronger in Australia, namely the relationship between product traditionality and perceived advantages from the innovation (0.25 vs. -0.15, $p < 0.01$), and degree of complexity and congruence of the innovation (-0.19 vs. 0.02, $p < 0.01$).

Relationships that were significantly stronger in the Singaporean sample as compared to the Australian sample included the one between degree of innovation and perceived authenticity (0.28 vs. 0.09, $p < 0.05$), and degree of complexity of the innovation and perceived advantages derived from the innovation (0.15 vs. 0.03, $p < 0.05$).

7.7 Moderation Analysis

Moderation was analysed via the use of multi-group analysis and the significance of critical ratios following the same procedure as described in section 5.7. The model was considered in its entirety, and the influence of the moderation was investigated for each individual path (Byrne, 2016). The potential moderation of knowledge, involvement and past orientation was investigated using the entire sample (1239 participants) and on a country level. The sample was divided into the subsamples of low and high knowledge, low and high involvement and low and high past orientation. Low and high groups were created via the use of the moderating variables' mean. The model for each moderation was estimated and as described in section 5.4, the invariance was assessed through the CFI difference between the unconstrained and constrained models. Moreover, critical ratios were reported with the purpose of indicating

whether any individual relationships were significantly different between the two different subsamples. Due to the sample size, composite variables were not calculated.

7.7.1 Past Orientation

Table 7.14 indicates the sample number for low and high past orientation groups.

Table 7.14: Past Orientation Groups- value classification

<i>Past Orientation</i>	<i>Mean = 4.52</i>	<i>N</i>
Lower group (<)	<4.52	608
Higher group (>)	>4.52	628

The models indicating the path estimates for the low and high past orientation groups are presented in Figure 7.5 and Figure 7.6 respectively.

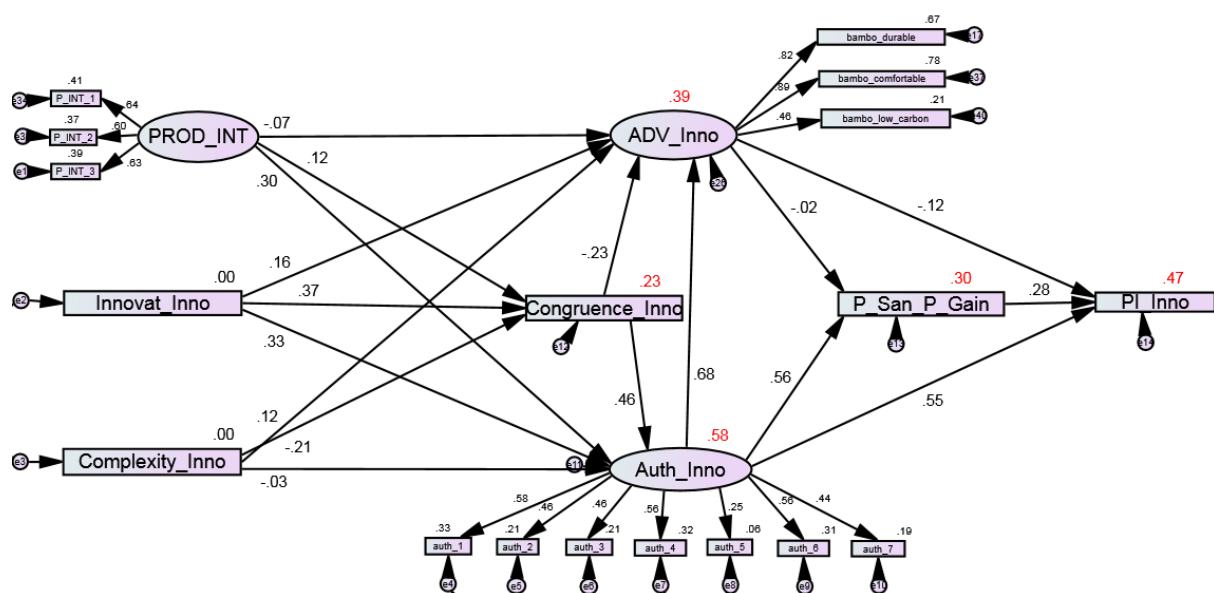


Figure 7.5: Path Model for low Past Orientation

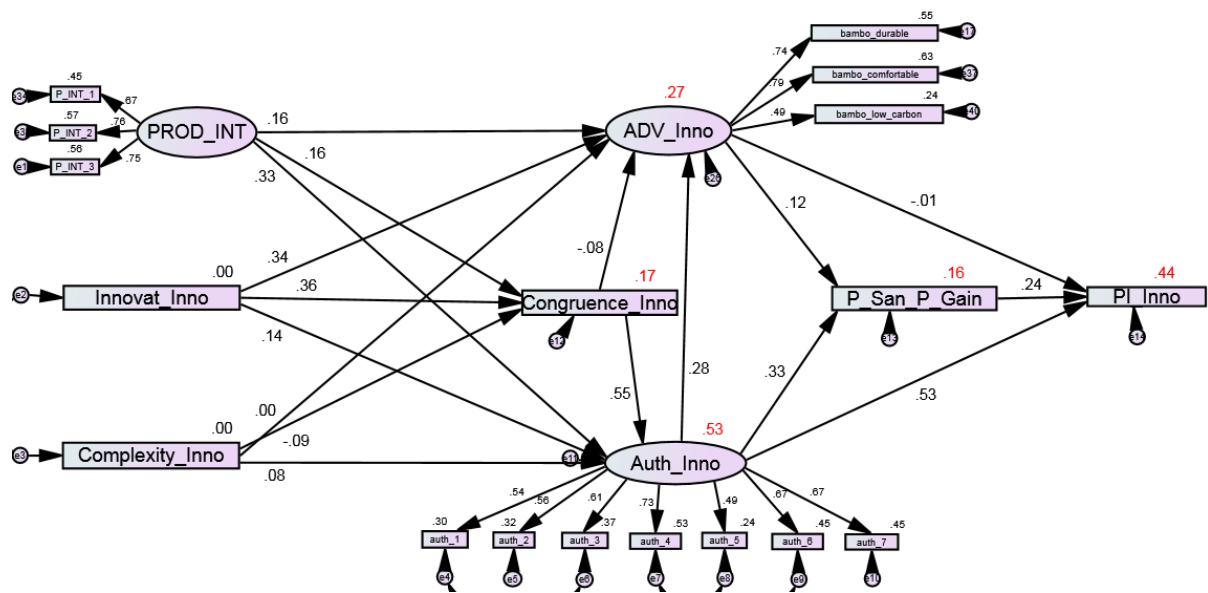


Figure 7.6: Path Model for high Past Orientation

Table 7.15: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	<i>ΔCFI</i>
Hypothesized model	Low and high PO	Unconstrained	0.854	-
Measurement weights constrained equal	Low and high PO	Model 1	0.846	0.008

Table 7.15 shows that the CFI difference between the unconstrained and constrained model is less than 0.01, thus implying that the equality constraint is reasonable. As the CFI is computed using a formula that includes discrepancies (matrix of residuals) (Albright, J.J. & Park, H.M., 2009), a similar value between the two models suggests that the residual is not significantly different. However, a similar residual does not necessarily mean that all measurement weights between the two groups are similar. An examination of the critical ratios of the individual relationships (Table 7.16) indicated that several relationships were significantly different for individuals with different past orientation.

Table 7.16: Model estimation and critical ratios

	Low PO		High PO		CR
	<i>E</i>	<i>p</i>	<i>E</i>	<i>p</i>	
Congruence_Inno <--- Complexity_Inno	-0.21	0.00	-0.09	0.01	2.432**
Congruence_Inno <--- Innovat_Inno	0.37	0.00	0.36	0.00	0.617
Congruence <--- PROD_INT	0.12	0.01	0.16	0.00	0.354
Auth_Inno <---PROD_INT	0.29	0.00	0.33	0.00	1.521
Auth_Inno <--- Innovat_Inno	0.33	0.00	0.14	0.00	-1.551
Auth_Inno <--- Complexity_Inno	-0.03	0.44	0.08	0.01	2.38**
Auth_Inno <--- Congruence_Inno	0.46	0.00	0.55	0.00	3.573***
ADV_Inno <--- Innovat_Inno	0.17	0.00	0.34	0.00	1.756*
ADV_Inno <--- Complexity_Inno	0.12	0.00	-0.00	0.93	-2.442**
ADV_Inno <--- Congruence_Inno	-0.23	0.00	-0.08	0.17	2.279**
ADV_Inno <--- PROD_INT	-0.07	0.27	0.16	0.00	2.471**
ADV_Inno <--- Auth_Inno	0.68	0.00	0.28	0.00	-4.447***
P_Sac_P_Gain <--- ADV_Inno	-0.02	0.69	0.12	0.01	2.142**
P_Sac_P_Gain <--- Auth_Inno	0.56	0.00	0.33	0.00	-3.981***
PI_Inno <--- P_Sac_P_Gain	0.28	0.00	0.24	0.00	-0.719
PI_Inno <--- Auth_Inno	0.56	0.00	0.53	0.00	-2.255**
PI_Inno <--- ADV_Inno	-0.12	0.01	-0.01	0.88	1.614
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10 E = Estimate; CR = critical ratios					

The relationship between perceived authenticity of the innovation and perceived advantages obtained from the innovation was significantly ($p < 0.01$) weaker for individuals with high past orientation (0.28) than low past orientation (0.68). The same relationship was observed between perceived authenticity and purchase intention (0.53 vs. 0.56, $p < 0.05$). The path between perceived authenticity of the innovated product and perceived gain from the innovation was also significantly ($p < 0.01$) stronger in individuals with low past orientation (0.33 vs. 0.56). Other paths that followed the same pattern were the ones between the congruence of the innovation and perceived advantages from the innovation (-0.08 – not significant vs. -0.23, $p < 0.05$), complexity of the innovation and perceived advantages from the innovation (-0.00 – not significant vs. 0.12 at $p < 0.05$), and complexity of the innovation and congruence of the innovation (-0.09 vs. -0.21 at $p < 0.05$).

In addition, the relationship between perceived advantages of the innovation and perceived gain from the innovation was significantly ($p < 0.05$) stronger for individuals with high past orientation (0.12) as compared to individuals with low past orientation (-0.02 -not significant).

The same relationship was observed between complexity of the innovation and perceived authenticity of the innovation (-0.03 – not significant vs. 0.08, $p < 0.05$), level of innovation and perceived advantages from the innovation (0.17 vs. 0.34, $p < 0.10$), congruence and perceived authenticity of the innovated product (0.46 vs. 0.55, $p < 0.01$) and product traditionality and perceived advantages from the innovation (-0.07 – not significant vs. 0.16). The remaining paths did not achieve a significant critical ratio value.

H12a-b-c: Consumer past orientation significantly impacts and strengthens the effect between perceived product traditionality and perceived authenticity (12a), authenticity of the innovation and perceived gain (12b) and perceived authenticity and purchase intention (12c).

The model estimates and critical ratios from Table 7.16 show that a higher past orientation strengthened the relationship between perceived traditionality and perceived authenticity of the innovated product; however, the relationship was not significant. The results were inconsistent with the two previously analysed contexts and provided no support for hypothesis 12a. Past orientation had a significant impact on the path between perceived authenticity and perceived gain from the innovation, and perceived authenticity and purchase intention; however, the paths were weakened, thus hypothesis 12b-c were partially supported. Hypothesis 12b was not supported in the previous contexts, while 12c was not supported in the wine context and supported in the TAMs context, demonstrating once again that some influences are context specific.

When considering the moderation effect of past orientation across the three countries (Appendix 7.7, 7.8, and 7.9), findings indicate that past orientation had a significant impact on the relationship between perceived authenticity of the innovated product and perceived gain/sacrifice from the innovation in Australia and Singapore. The relationship was stronger for individuals with low past orientation thus partially supporting hypothesis 12b. Moreover, past orientation had a significant impact on the relationship between perceived authenticity of

the innovated product and purchase intention in Australia. The relationship was also stronger for individuals with low past orientation thus partially supporting hypothesis 12c. Results indicate that the moderating impact of past orientation for the bamboo bicycle context is country specific and cannot be generalised across different cultures.

7.7.2 Subjective Bicycle Knowledge

Table 7.17 indicates the sample number for the low and high knowledge groups.

Table 7.17: Knowledge Groups- value classification

<i>Knowledge</i>	<i>4.19</i>	<i>N</i>
Lower group (<)	<4.19	598
Higher group (>)	>4.19	641

The models indicating the path estimates for the low and high knowledge groups are presented in Figure 7.7 and Figure 7.8 respectively.

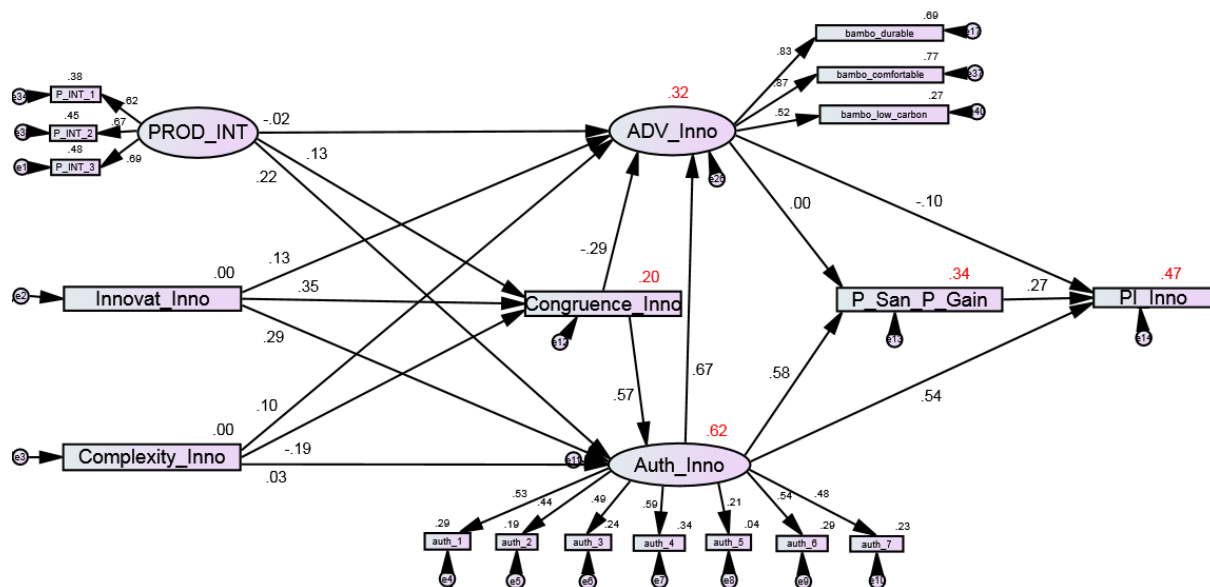


Figure 7.7: Path Model for low Subjective Knowledge

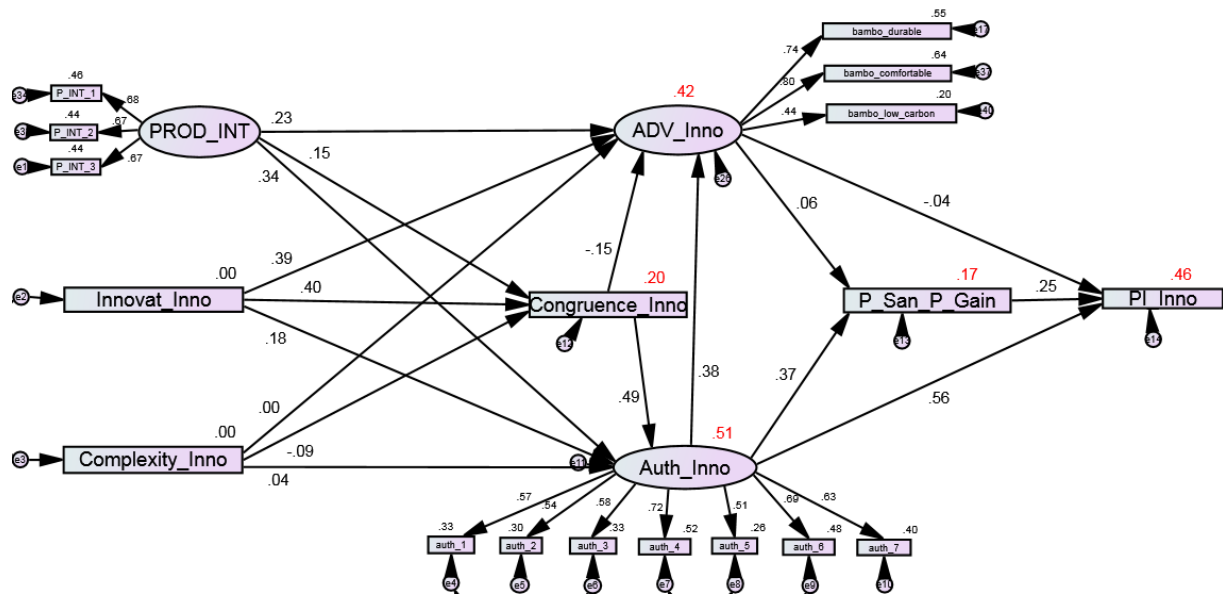


Figure 7.8: Path Model for high Subjective Knowledge

Table 7.18: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	<i>ΔCFI</i>
Hypothesized model	Low and high Knowledge	Unconstrained	0.851	-
Measurement weights constrained equal	Low and high Knowledge	Model 1	0.845	0.006

Table 7.18 shows that the CFI difference between the unconstrained and constrained model is less than 0.01, thus implying that the equality constraint is reasonable. As the CFI is computed using a formula that includes discrepancies (matrix of residuals) (Albright, J.J. & Park, H.M., 2009), a similar value between the two models suggests that the residual is not significantly different. However, a similar residual does not necessarily mean that all measurement weights between the two groups are similar. An examination of the critical ratios of the individual relationships (Table 7.19) indicated that several relationships were significantly different for individuals with different levels of knowledge about the product category.

Table 7.19: Model estimation and critical ratios

	Low Knowledge		High Knowledge		CR
	E	p	E	P	
Congruence_Inno <--- Complexity_Inno	-0.19	0.00	-0.10	0.01	1.844*
Congruence_Inno <--- Innovat_Inno	0.35	0.00	0.40	0.00	1.391
Congruence <--- PROD_INT	0.13	0.00	0.15	0.00	0.869
Auth_Inno <---PROD_INT	0.22	0.00	0.34	0.00	3.27***
Auth_Inno <--- Innovat_Inno	0.30	0.00	0.18	0.00	-1.213
Auth_Inno <--- Complexity_Inno	0.03	0.44	0.04	0.19	0.440
Auth_Inno <--- Congruence_Inno	0.57	0.00	0.50	0.00	-0.022
ADV_Inno <--- Innovat_Inno	0.13	0.02	0.39	0.00	3.358***
ADV_Inno <--- Complexity_Inno	0.10	0.02	0.00	0.96	-1.793*
ADV_Inno <--- Congruence_Inno	-0.29	0.00	-0.15	0.01	1.839*
ADV_Inno <--- PROD_INT	-0.02	0.74	0.23	0.00	3.171***
ADV_Inno <--- Auth_Inno	0.67	0.00	0.38	0.00	-3.106***
P_Sac_P_Gain <--- ADV_Inno	0.00	0.98	0.06	0.24	0.917
P_Sac_P_Gain <--- Auth_Inno	0.58	0.00	0.37	0.00	-2.715***
PI_Inno <--- P_Sac_P_Gain	0.27	0.00	0.25	0.00	-0.852
PI_Inno <--- Auth_Inno	0.54	0.00	0.56	0.00	-0.818
PI_Inno <--- ADV_Inno	-0.10	0.03	-0.04	0.41	0.805
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10 E = Estimate; CR = critical ratios					

The relationship between perceived authenticity of the innovated product and purchase intention, even though higher, was not significantly stronger for individuals with high knowledge. The relationship between traditionality (PROD_INT) and perceived authenticity of the innovation was significantly ($p < 0.01$) stronger in individuals with high knowledge (0.34) than individuals with low knowledge (0.22). The same relationship was observed between product traditionality and perceived advantages from the innovation (-0.02 –not significant vs. 0.23 at $p < 0.01$), and level of innovation and perceived advantages from the innovation (0.13 vs. 0.39 at $p < 0.01$). In addition, the relationship between perceived authenticity of the innovated product and perceived gain from the innovation was significantly ($p < 0.01$) stronger in individuals with low knowledge (0.58) as compared to individuals with high knowledge (0.37). The same relationship was observed between complexity of the innovation and congruence of the innovation (-0.19 vs. -0.10 at $p < 0.10$), complexity of the innovation and perceived advantages from the innovation (0.10 vs. 0.00 –not significant, $p < 0.10$), congruence of the innovation and perceived advantages from the innovation (-0.29 vs. -

0.15 at $p < 0.10$), and perceived authenticity of the innovation and perceived advantages from the innovation (0.67 vs. 0.38, $p < 0.01$). The remaining paths did not achieve a significant critical ratio value.

H13a-b: Consumer knowledge significantly impacts and strengthens the effect between perceived authenticity of the innovation and perceived gain (13a) and perceived authenticity and purchase intention (13b).

The model estimates and critical ratios from Table 7.19, indicate that a higher knowledge strengthened the relationship between perceived authenticity and purchase intention; however, the change was not significant. Moreover, knowledge had a significant but weakening impact on the relationship between perceived authenticity and perceived gain from the innovation (thus not supporting hypothesis 13b and partially supporting hypothesis 13a). The results for 13a were not consistent with the previous two contexts where the hypothesis was not supported. The results for 13b were consistent with the TAMs context but different from the first context where the hypothesis was supported.

When considering the moderation effect of subjective knowledge across the three countries (Appendix 7.13, 7.14, and 7.15), findings indicate that knowledge had a significant impact on the relationship between perceived authenticity of the innovated product and perceived gain/sacrifice from the innovation in Singapore and France. The relationship was stronger for individuals with low knowledge thus partially supporting hypothesis 13a. Results indicate that the moderating impact of knowledge for the bamboo bicycle context is country specific and cannot be generalised across different cultures.

7.7.3 Bicycle Involvement

Table 7.20 indicates the sample number for the low and high involvement groups.

Table 7.20: Involvement Groups- value classification

<i>Involvement</i>	<i>6.52</i>	<i>N</i>
Lower group (<)	<6.52	587
Higher group (>)	>6.52	652

The models indicating the path estimates for the low and high involvement groups are presented in Figure 7.9 and Figure 7.10 respectively.

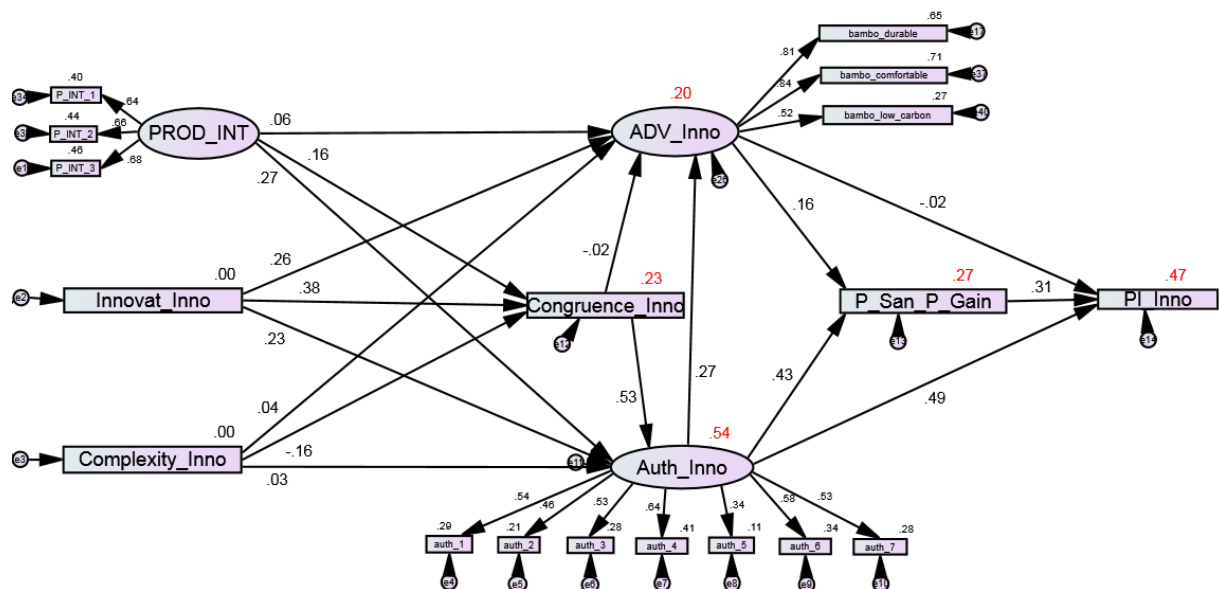


Figure 7.9: Path Model for low Involvement

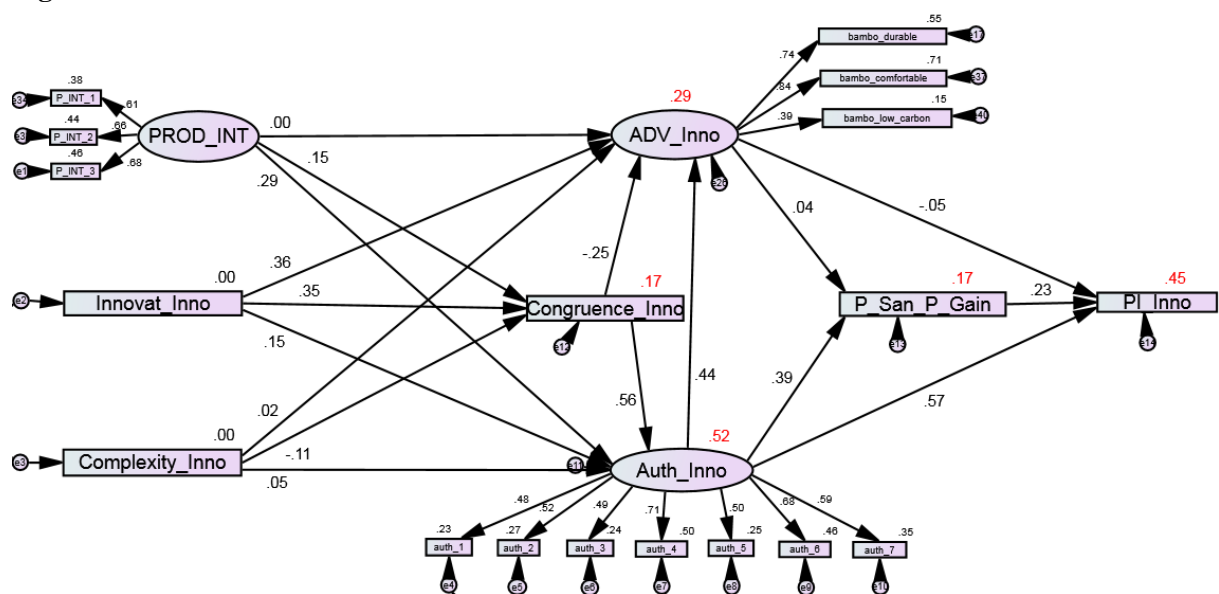


Figure 7.10: Path Model for high Involvement

Table 7.21: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	ΔCFI
Hypothesized model	Low and high Involvement	Unconstrained	0.842	-
Measurement weights constrained equal	Low and high Involvement	Model 1	0.839	0.003

Table 7.21 shows that the CFI difference between the unconstrained and constrained model is less than 0.01, thus implying that the equality constraint is reasonable. However, an examination of the critical ratios of the individual relationships (Table 7.22) indicates that several relationships were significantly different for individuals with different levels of involvement with the product category.

Table 7.22: Model estimation and critical ratios

	Low Involvement		High Involvement		<i>CR</i>
	<i>E</i>	<i>P</i>	<i>E</i>	<i>P</i>	
Congruence_Inno <--- Complexity_Inno	-0.16	0.00	-0.11	0.00	1.173
Congruence_Inno <--- Innovat_Inno	0.38	0.00	0.35	0.00	-0.159
Congruence <--- PROD_INT	0.17	0.00	0.15	0.00	-0.026
Auth_Inno <--- PROD_INT	0.27	0.00	0.29	0.00	0.972
Auth_Inno <--- Innovat_Inno	0.23	0.00	0.15	0.00	-0.910
Auth_Inno <--- Complexity_Inno	0.03	0.38	0.05	0.12	0.391
Auth_Inno <--- Congruence_Inno	0.53	0.00	0.56	0.00	1.043
ADV_Inno <--- Innovat_Inno	0.26	0.00	0.37	0.00	0.505
ADV_Inno <--- Complexity_Inno	0.04	0.34	0.02	0.62	-0.519
ADV_Inno <--- Congruence_Inno	-0.02	0.73	-0.25	0.00	-2.142**
ADV_Inno <--- PROD_INT	0.06	0.29	-0.00	0.98	-0.837
ADV_Inno <--- Auth_Inno	0.27	0.00	0.44	0.00	0.363
P_Sac_P_Gain <--- ADV_Inno	0.16	0.00	0.04	0.34	-1.477
P_Sac_P_Gain <--- Auth_Inno	0.43	0.00	0.39	0.00	-1.259
PI_Inno <--- P_Sac_P_Gain	0.31	0.00	0.23	0.00	-1.169
PI_Inno <--- Auth_Inno	0.49	0.00	0.57	0.00	0.414
PI_Inno <--- ADV_Inno	-0.02	0.57	-0.05	0.21	-0.620
<i>Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10</i> <i>E=Estimates; CR= Critical ratios</i>					

The influence of congruence of the innovation on perceived advantages of the innovation was stronger for individuals with high involvement (-0.25) than individuals with low involvement (0.02, $p < 0.05$). Moreover, the path was not significant for individuals with low involvement ($p = 0.73$). The critical ratios for the remaining relationships were not significant.

H14a-b: Consumer involvement significantly impacts and strengthens the effect between perceived authenticity of the innovation and perceived gain (14a) and perceived authenticity and purchase intention (14b).

The model estimates and critical ratios from Table 7.22, show that higher involvement did not significantly strengthen the path between perceived authenticity and perceived gain or the path between perceived authenticity and purchase intention (thus not supporting the hypothesis 14a-b). The results of hypothesis 14b were consistent for all three contexts. While 14a was partially supported only in the context of TAMs.

When considering the moderation effect of involvement across the three countries (Appendix 7.10, 7.11, and 7.12), findings indicate that involvement had a significant impact on the relationship between perceived authenticity of the innovated product and perceived gain/sacrifice from the innovation in Singapore. The relationship was stronger for individuals with low involvement thus partially supporting hypothesis 14a. Moreover, involvement had a significant impact on the relationship between perceived authenticity of the innovated product and purchase intention in all three countries. The relationship was stronger for individuals with low involvement in the Australian and Singaporean samples, thus partially supporting hypothesis 14b. The relationship was stronger for individuals with high involvement in the French sample, thus supporting hypothesis 14b. Results indicate that the moderating impact of involvement for the bamboo bicycle context is country specific and cannot be generalised across different cultures.

7.8 Influence of situation on perceived gain and sacrifice from the innovation

The influence of the situation of consumption on perceived gain and sacrifice from the innovation was analysed the same way as described in section 5.8. Tables 7.23 and 7.24 specify the consumption situations used in the study and their impact on perceived sacrifice (7.25) and perceived gain (7.26) from the innovation.

Table 7.23: Impact of situation on perceived sacrifice from the innovation

Situations	Mean	T value	N	Eta squared	P
Professional competition	5.03	0.70	323	0.002	0.48
Riding alone to relax	5.15	-0.20	323	0.000	0.82
Riding alone to exercise	5.28	-1.40	323	0.006	0.15
Riding with company	4.86	2.30	323	0.016	0.02
Riding to work	4.66	3.88	323	0.044	0.00

Out of a sample of 1239 participants, 323 felt that the disadvantages from the innovation overcame the advantages, thus perceiving a level of sacrifice from the innovation. With no situation in mind, the mean of perceived sacrifice was 5.12 (out of 9). Results of the multiple paired-samples t-test (Table 7.23) indicated that two out of the five situations presented had a statistically significant impact on perceived sacrifice. The degree of perceived sacrifice significantly decreased when participants envisioned themselves riding a bamboo bicycle with company (M=4.86, with an eta squared of 0.016 indicating a small effect size), and riding to work (M=4.66, with an eta squared of 0.044 indicating a small effect size).

Table 7.24: Impact of situation on perceived gain from the innovation

Situations	Mean	T value	N	Eta squared	P
Professional competition	4.70	21.4	916	0.333	0.00
Riding alone to relax	6.67	-6.49	916	0.044	0.00
Riding alone to exercise	6.62	-5.80	916	0.035	0.00
Riding with company	6.25	1.30	916	0.001	0.17
Riding to work	5.78	7.95	916	0.064	0.00

Out of a sample of 1239 participants, 916 were of the opinion that the advantages from the innovation overcame the disadvantages thus perceiving a level of gain from the innovation. With no situation in mind, the mean of perceived gain was 6.32 (out of 9). Results of the multiple paired-samples t-test (Table 7.24) indicated that four out of the five situations presented had a statistically significant impact on perceived gain. The degree of perceived gain increased when participants envisioned themselves riding a bicycle alone to relax (M=6.67, with an eta squared of 0.044 indicating a small effect size), and when riding alone to exercise (M=6.62, with an eta squared of 0.035 indicating a small effect size). The degree of perceived

gain decreased significantly when participants envisioned themselves riding in a professional competition ($M=4.70$, with an eta squared of 0.333 indicating a large effect size) and riding to work ($M=5.78$, with an eta squared of 0.064 indicating a moderate effect size).

An observation of the impact of the situation on perceived gain and sacrifice from the innovation on a country level (Appendix 7.6), indicated that the country the participants were from played a small role in influencing feelings of gain and sacrifice.

.H15a-b: Situation of consumption will significantly influence perceived gain (H15a) and sacrifice (H15b) from the innovation.

Results, similarly to the previous two contexts, supported the hypotheses that situation will significantly influence perceived gain and sacrifice from the innovation.

7.8.1 Influence of situation and involvement on perceived gain and sacrifice from the innovation

The influence of situation of consumption and consumer involvement on perceived gain and sacrifice from the innovation was analysed following the same method as described in 5.8.1

Tables 7.25 and 7.26 indicate the consumption situations used in the study and their impact on perceived sacrifice for individuals with high involvement (7.25) and individuals with low involvement (7.26).

Table 7.25: Impact of situation on perceived sacrifice from the innovation for individuals with high involvement

Situations	Mean	T value	N	Eta squared	P
Professional competition	5.49	-0.58	146	0.002	0.56
Riding alone to relax	5.17	1.02	146	0.007	0.30
Riding alone to exercise	5.31	0.33	146	0.001	0.72
Riding with company	5.10	1.51	146	0.015	0.13
Riding to work	4.84	3.04	146	0.060	0.00

Table 7.26: Impact of situation on perceived sacrifice from the innovation for individuals with low involvement

Situations	Mean	T value	N	Eta squared	P
Professional competition	4.63	1.49	175	0.012	0.13
Riding alone to relax	5.13	-1.41	175	0.011	0.16
Riding alone to exercise	5.25	-2.27	175	0.029	0.02
Riding with company	4.66	1.73	175	0.017	0.08
Riding to work	4.52	2.48	175	0.034	0.01

Out of a sample of 321 participants that perceived a level of sacrifice from the innovation, 146 were highly involved in the product category, while 175 had a low involvement in the product category. With no consumption situation in mind, the mean of perceived sacrifice was 5.37 for individuals with high involvement (out of 9). Results of the multiple paired-samples t-test (Table 7.25) indicated that one out of five situations presented had a statistically significant impact on perceived sacrifice. With no consumption situation in mind, the mean of perceived sacrifice for individuals with low involvement was 4.92 (out of 9). Results of the multiple paired-samples t-test (Table 7.26) indicated that three of the situations tested had a statistically significant impact on perceived sacrifice. When contrasting the two groups, it can be observed that perceived sacrifice for individuals with high involvement was only mitigated by the riding to work situation (moderate impact), while the other situations played no role. In individuals with low involvement, perceived sacrifice was also mitigated by the riding to work situation, however the impact was small. Moreover, perceptions of sacrifice increased when riding alone to exercise and decreased when riding with company and to work.

Tables 7.27 and 7.28 indicate the consumption situations used in the study and their impact on perceived gain for individuals with high involvement (7.27) and individuals with low involvement (7.28).

Table 7.27: Impact of situation on perceived gain from the innovation for individuals with high involvement

Situations	Mean	T value	N	Eta squared	P
Professional competition	5.10	14.5	504	0.295	0.00
Riding alone to relax	6.88	-4.56	504	0.039	0.00
Riding alone to exercise	6.90	-5.19	504	0.051	0.00
Riding with company	6.51	0.52	504	0.000	0.60
Riding to work	6.13	4.95	504	0.046	0.00

Table 7.28: Impact of situation on perceived gain from the innovation for individuals with low involvement

Situations	Mean	T value	N	Eta squared	P
Professional competition	4.21	15.8	410	0.381	0.00
Riding alone to relax	6.42	-4.63	410	0.049	0.00
Riding alone to exercise	6.29	-3.01	410	0.021	0.00
Riding with company	5.92	1.44	410	0.005	0.15
Riding to work	5.35	6.29	410	0.088	0.00

Out of a sample of 914 participants that perceived a level of gain from the innovation, 504 were highly involved in the product category, while 410 had a low involvement in the product category. When contrasting the results of the two groups, it can be observed that while perceptions of gain followed a similar pattern for both groups, the size of the impact varied for several situations.

H15c: Situation of consumption coupled with consumer involvement will account for more variation in perceptions of gain and sacrifice from the innovation than situational influence alone.

Results indicate that situation of consumption coupled with consumer involvement accounted for more variation in perceptions of gain and sacrifice from the innovation than situational influence alone thus supporting hypothesis 15c.

Table 7.29 gives a summary of the hypothesized relationships and their outcome for the whole sample (WS), the Australian (AS), French (FS) and Singaporean (SS) sample.

Table 7.29: Summary of the Results of Hypothesized Relationships

Hypothesis	WS	AS	SS	FS
H1.a: Perceptions of traditionality of the original product will significantly and positively influence consumer perceptions of authenticity of the innovated product.	S	S	S	S
H1.b: Congruence of the innovation with the original product mediates the impact of traditionality perceptions on authenticity perceptions.	PS	PS	PS	PS
H2: The degree of complexity of the innovation will significantly and negatively influence the congruence of the innovation with the original product.	S	S	NS	S
H3: The degree of innovation will significantly and negatively influence the congruence of the innovation with the original product.	PS	PS	PS	PS
H4: Congruence of the innovation with the original product will significantly and positively influence perceptions of authenticity of the innovated product.	S	S	S	S
H5a-b: Congruence of the innovation with the original product mediates the impact of the degree of complexity (5a) and innovativeness (5b) on perceptions of authenticity.	PS PS	PS PS	NS PS	S PS
H6: Congruence of the innovation with the original product will significantly and positively influence perceived advantages of the innovated product.	PS	NS	NS	PS
H7: Perceptions of authenticity of the innovation will significantly and positively influence perceived advantages of the innovated product.	S	NS	S	S
H8a-b: Perceptions of authenticity of the innovation will significantly and positively influence perceived gain from the innovation (8a) and purchase intention (8b).	S S	S S	S S	S S
H9a-b: Perceived advantages of the innovation will significantly and positively influence perceived gain from the innovation (9a) and purchase intention (9b).	S NS	S NS	S S	S PS
H10: Perceived gain from the innovation will significantly and positively influence purchase intention.	S	S	S	S
H11a-b: Perceived gain from the innovation mediates the impact of perceived advantages (11a) and perceived authenticity (11b) on purchase intention.	S PS	S PS	PS PS	PS PS
H12a-c: Consumer past orientation significantly impacts and strengthens the effect between perceived product traditionality and perceived authenticity (12a), authenticity of the innovation and perceived gain (12b) and perceived authenticity and purchase intention (12c).	NS PS PS	NS PS PS	NS PS NS	NS NS NS
H13a-b: Consumer knowledge significantly impacts and strengthens the effect between perceived authenticity of the innovation and perceived gain (13a) and perceived authenticity and purchase intention (13b).	PS NS	NS NS	PS NS	PS NS
H14a-b: Consumer involvement significantly impacts and strengthens the effect between perceived authenticity of the innovation and perceived gain (14a) and perceived authenticity and purchase intention (14b).	NS NS	NS PS	PS PS	NS S
H15a-b: Situation of consumption will significantly influence perceived gain (H15a) and sacrifice (H15b) from the innovation.	S	S	S	S
H15c: Situation of consumption coupled with consumer involvement will account for more variation in perceptions of gain and sacrifice from the innovation than situational influence alone.	S S	S NA	S NA	S NA
S=Supported PS=Partially Supported AS=Australian Sample NS= Not Supported WS=Whole Sample SS=Singaporean Sample FS=French Sample N/A= Not applicable				

7.9 Chapter Summary

The results of the quantitative research for the bicycle context were detailed in this chapter, and outlined in six sections. First, a demographic profile of participants based on age, gender and frequency of wine consumption was presented. Reliability and confirmatory factor analysis were then run to investigate the measurement constructs. It was concluded that all scales used were satisfactory, and were consequently included for the remaining analysis.

In section three, a multigroup analysis was conducted in order to explore the invariance of the measurement constructs between countries. Full invariance was established thus allowing for a cross country comparison. The next section focused on a path model analysis capturing the hypothesized relationships of interest in the study. The impact of traditionality on perceived authenticity, the role of congruence as a mediator, and the influence of perceived authenticity, of perceived gain and sacrifice on purchase intention were investigated. The specified model achieved moderate model fit, and goodness of fit indices and individual paths were presented. A comparison between the three contexts (wine, TAMs & bicycle), revealed that some influences are likely to be context specific as the support found for the hypotheses tested was not always consistent for all three contexts. Moreover, an analysis of the model in three different countries, showed that several differences existed between each country. In section five, multigroup and critical ratio analyses were used to analyse the potential moderating role of past orientation, involvement and knowledge. While the condition of variance was not fulfilled for all moderators, critical ratios showed that several relationships were different between samples of high and low knowledge, involvement and past orientation. In the sixth and last section, a multiple paired samples t-test was conducted to evaluate the impact of situation on perceived gain and sacrifice from the innovation. Results indicated that the consumption situations provided in the study significantly impacted both perceived gain and perceived sacrifice.

The next chapter will provide a discussion of the findings obtained from the three stimuli in the three countries and present research conclusions. Moreover, the theoretical and managerial contributions of the study will be presented, concluding in a discussion of the research limitations and potential for future research.

Chapter 8: Discussion and Conclusion

8.1 Introduction

The primary objective of this study was to explore quantitatively the influence of consumer perceptions of product authenticity on their opinions of gain and sacrifice from the innovation with flow through to purchase intention. It was proposed that perceived authenticity of an innovated product, would significantly and positively influence perceived gain from the innovation as well as purchase intentions. Consumer characteristics (past orientation, product knowledge, and involvement) were posited to moderate the magnitude of this influence. Moreover, it was also proposed that perceptions of product traditionality, and congruence of the innovation with the original product category, would significantly and positively influence perceptions of authenticity of the innovated product, which in turn, would impact perceived advantages of the innovated product and lead to value generation (perceived gain). Finally, product characteristics (such as degree of innovativeness of the innovated product) and degree of complexity of the innovation were hypothesised to impact perceptions of congruence, thus indirectly influencing perceived authenticity of the innovated product. A conceptual model derived from the literature on product innovation, authenticity, and consumer behaviour was developed and presented in chapter 3. This conceptual model was informed by the literature, supported by focus groups and tested empirically using three different stimuli (wine with the innovation being partial dealcoholisation; Traditional Asian medicine with the innovation being the way in which they are served –pills/capsules instead of teas (TAMc); and bicycle with the innovation being the introduction of a bamboo frame) in three different countries (Australia, Singapore, and France) representing contrasting cultural groups. Support was found for the majority of the hypotheses; however interesting variations in the results were also found. A hypothesis analysis was presented in chapter 5 (wine stimulus), chapter 6 (TAMs stimulus) and chapter 7 (bicycle stimulus).

This chapter identifies and summarises the main findings and conclusions of the thesis. The theoretical contributions to academic knowledge arising from this research are also highlighted. The practical applications of these results are then discussed in the form of managerial implications. Finally, the chapter concludes with the limitations of the research and directions for the future.

8.2 Summary of Findings

8.2.1 Impact of degree of innovation on congruence of the innovation and authenticity

When considering the results of the aggregated sample, a positive and significant relationship was found between the degree of product innovation and congruence of the innovation with the original product category/attributes for all three products, indicating that the impact is not context specific and can be generalized through different product categories (Table 8.1). While the significance of the relationship was expected, the impact was predicted to be negative (as derived from focus group results).

Table 8.1: Impact of degree of innovation on congruence of the innovation

	Aggregated Sample	Australia	Singapore	France
Low alcohol wine	PS	PS	PS	PS
TAMc	PS	NS	PS	PS
Bamboo Bicycle	PS	PS	PS	PS
S= Supported NS= Not Supported PS= Partially Supported				

When looking at the results by country (Table 8.1), the impact was positive and significant in all three locations for two out of three stimuli (low alcohol wine and bamboo bicycle). In the context of TAMc, the impact of the degree of product innovation on congruence of the innovation with the original product category/attributes was not significant in Australia only. Hence, these results indicate that cross cultural influences are likely to be country and market specific.

When considering the impact of the degree of innovativeness on perceived authenticity of the innovated product, it can be determined that congruence of the innovation with the original product category played a mediating role (either partial or full). The mediation was partial (due

to the existence of a direct effect between degree of innovativeness and perceived authenticity of the innovated product) in the context of low alcohol wine and bamboo bicycle in all three countries. Conversely, the mediation was full in the context of TAMc in two out of three countries (Singapore and France). While the results extend the literature respective to product characteristics and authenticity perceptions, future research should focus on better understanding the reasons behind such effects.

8.2.2 Impact of complexity of the innovation on congruence of the innovation and authenticity

The results from the aggregated samples indicate that complexity of the innovation had a significant and negative impact on congruence of the innovation with the original product category/attributes in the context of bamboo bicycle thus providing support for the hypothesized relationship (Table 8.2). These results were consistent with the ones obtained from the first qualitative stage of the study. However, the impact of complexity on congruence was not significant for TAMc but was positive (and significant) for low alcohol wine, indicating that the impact is context specific and practitioners should investigate likely impacts on target markets.

Table 8.2: Impact of complexity of the innovation on congruence of the innovation

	Aggregated Sample	Australia	Singapore	France
Low alcohol wine	PS	PS	PS	PS
TAMc	NS	NS	NS	NS
Bamboo Bicycle	S	S	NS	S
S= Supported NS= Not Supported PS= Partially Supported				

Results at a country level (Table 8.2) show that the effect remained positive and significant in all three countries for low alcohol wine, and not significant in all three countries for TAMc. In the context of bamboo bicycle, the impact of the degree of complexity of the innovation on congruence of the innovation with the original product category/attributes was not significant in Singapore. For specific contexts, generalizability cross country was not obtained. When considering the impact of the degree of complexity on perceived authenticity of the innovated

product, congruence of the innovation with the original product category played a mediating role in two out of three contexts (low alcohol wine and bamboo bicycle). The mediation was partial (due to the existence of a direct effect between degree of complexity of the innovation and perceived authenticity of the innovated product) in the context of low alcohol wine and bamboo bicycle in all three countries, with the exception of Singapore and France for the bamboo bicycle context. The mediation was not significant in Singapore (degree of complexity directly impacted perceptions of product authenticity) and was apparent in the France results, confirming that influences are context and country specific.

8.2.3 Impact of congruence on perceived authenticity of the innovated product and perceived advantages from the innovation

A positive and significant relationship was found between congruence and perceived authenticity of the innovation for all three products in all three countries, indicating that the impact is not context specific and can be generalized (Table 8.3). Moreover, the findings indicate that as authenticity becomes an issue when it is potentially compromised (Peterson 2005, Benjamin 1936, Trilling 1972), the less the innovation compromises the original perceptions of the product, the less authenticity would be impacted. As both congruence and authenticity have been characterised by different researchers, among other and more specific definitions, in terms of stylistic consistency (Beverland, 2006), the studies confirm quantitatively the existence of a positive association.

Table 8.3: Impact of congruence of the innovation on perceived authenticity of the innovated product

	Aggregated Sample	Australia	Singapore	France
Low alcohol wine	S	S	S	S
TAMc	S	S	S	S
Bamboo Bicycle	S	S	S	S
S= Supported NS= Not Supported PS= Partially Supported				

Congruence of the innovation positively, and significantly, influenced perceived advantages from the innovation for two out of three stimuli (Table 8.4). For low alcohol wine and Traditional Asian Medicine served in the form of pills, the higher the congruence of the

innovation with the original category, the higher the perceived advantages from the innovation. For these stimuli, the findings exhibited no variations between countries.

Table 8.4: Impact of congruence of the innovation on perceived advantages from the innovation

	Aggregated Sample	Australia	Singapore	France
Low alcohol wine	S	S	S	S
TAMc	S	S	S	S
Bamboo Bicycle	PS	NS	NS	PS
S= Supported NS= Not Supported PS= Partially Supported				

These results are consistent and add substantially to the existing literature which indicates that congruence leads to favourable cognitive elaborations (d'Astous and Bitz, 1995), and the more congruent an association, the more consumers are positively inclined towards it (Fleck and Quester, 2007, Speed and Thompson, 2000, Basil and Basil, 2003, Rodgers, 2003). However, the results were not consistent for the third stimulus, bamboo bicycle. When considering the aggregated sample, perceived congruence of the innovation with the original product category, had a significant impact on perceived advantages of the innovated product; however, this impact was negative. When evaluating the results by country, the impact was positive but not significant for the Australian and Singaporean samples. For the French sample, the impact was significant and negative (-0.47, $p < 0.01$). The results might be due to the specific advantages mentioned in the survey.

8.2.4 Impact of perceived advantages from the innovation on perceived gain (sacrifice) and purchase intentions

When looking at the results of the aggregated sample, a positive and significant relationship was found between perceived advantages of the innovation and perceived gain from the innovation for all three products, indicating that the observed impact is not context specific and can be generalized (Table 8.5). At the country level, the impact was positive and significant for all three countries for all three stimuli, indicating that the results are not culture dependent and can be generalized.

Table 8.5: Impact of perceived advantages from the innovation on perceived sacrifice/gain

	Aggregated Sample	Australia	Singapore	France
Low alcohol wine	S	S	S	S
TAMc	S	S	S	S
Bamboo Bicycle	S	S	S	S
S= Supported NS= Not Supported PS= Partially Supported				

In regard to the impact of perceived advantages of the innovated product on purchase intentions, a significant and positive direct effect was found in two out of three contexts (TAMc and low alcohol wine) when considering the aggregated samples (Table 8.6), indicating that there is, again, variability between contexts.

Table 8.6: Impact of perceived advantages from the innovation on purchase intention

	Aggregated Sample	Australia	Singapore	France
Low alcohol wine	S	NS	S	S
TAMc	S	S	S	S
Bamboo Bicycle	NS	NS	S	PS
S= Supported NS= Not Supported PS= Partially Supported				

At a country level, the impact of perceived advantages of the innovated product on purchase intentions (Table 8.6) was consistently significant and positive, in all three countries, for the TAMc context. For low alcohol wine, the direct impact was not significant in Australia. However, perceived advantages of the innovated product still significantly and positively impacted purchase intentions indirectly (effect was fully mediated by perceived gain from the innovation). This could be due to the specific advantages brought up and measured in the survey rather than ‘perceived advantages of the innovated product’ in general. While the specific advantages measured influenced perceptions of gain (value generation) which in turn influenced purchase intentions, they were not valued enough to directly influence purchase intentions. The same logic can be applied to the inconsistent results obtained for the bamboo bicycle stimulus. While the specific advantages constituting the ‘perceived advantages’ scale impacted purchase intention significantly and positively indirectly (impact fully mediated by perceived gain from the innovation), they were not valued ‘enough’ by Australian and French participants. Whether directly, or indirectly, perceived advantages of the innovated product impacted purchase intentions. Hence, the findings add support to the literature indicating that

consumers buy things for the added utility they provide (Levy, 1959) and the experiential benefits they gain from them (Belk, 1988, Keller, 1993, Mick, 1986, Solomon, 1983).

8.2.5 Impact of product traditionality perceptions on perceived authenticity of the innovated product

The results of the aggregated sample showed a positive and significant relationship between perceived product traditionality and perceived authenticity of the innovated for all three products, indicating that the impact is not context specific and can be generalized (Table 8.7).

Table 8.7: Impact of product traditionality perceptions on perceived authenticity of the innovated product

	Aggregated Sample	Australia	Singapore	France
Low alcohol wine	S	S	S	NS
TAMc	S	S	NS	S
Bamboo Bicycle	S	S	S	S
S= Supported NS= Not Supported PS= Partially Supported				

These findings provide empirical support for the claim that traditional products evoke feelings similar to those aroused by product authenticity (Carroll and Wheaton, 2009, Levine, 2005, Sokolov, 1998). By location, the impact was direct, positive and significant for all three countries for one of the three stimuli (bamboo bicycle), but not significant for the French sample for low alcohol wine nor the Singaporean sample for traditional Asian medicine served in the form of capsules context (TAMc), providing further evidence of the market and product specific nature of effects (Table 8.7). Wine was perceived to be the most traditional in France while TAMs were perceived to be the most traditional in Singapore, thus the lack of significance could be explained by the possibility that traditionality in these two contexts is being taken for granted in these two countries. However, in the contexts of TAMs for the Singaporean sample and low alcohol wine for the French sample, a positive indirect effect (fully mediated by *congruence* of the innovation with the original product category/attributes) still existed between traditionality perceptions and perceived authenticity of the innovated product. Congruence of the innovation with the original product category also played an

important role in influencing consumer behaviour in the context of product innovation by mediating (either partially or fully) the impact of product traditionality on perceptions of authenticity of the innovated product; thus indicating that a higher perceived congruence of the innovation with the traditional attributes and values of the existing product significantly and positively influences perceived authenticity of the innovation.

8.2.6 Impact of perceived authenticity of the innovated product on perceived advantages from the innovation

For the aggregated sample, a positive and significant relationship was found between the perceived authenticity of the innovated product and perceived advantages of the innovation for all three products in all three countries, indicating generalisability, and representing an important contribution to the authenticity literature (Table 8.8).

Table 8.8: Impact of perceived authenticity of the innovated product on perceived advantages of the innovated product

	Aggregated Sample	Australia	Singapore	France
Low alcohol wine	S	S	S	S
TAMc	S	S	S	S
Bamboo Bicycle	S	NS	S	S
S= Supported NS= Not Supported PS= Partially Supported				

When looking at the results by country (Table 8.8), the impact was positive and significant for all three countries for two out of the three stimuli (low alcohol wine, and TAMc). The results might be due to the specific advantages mentioned in the survey.

8.2.7 Impact of perceived authenticity of the innovated product on perceived gain (sacrifice) and purchase intentions

When looking at the results of the aggregated sample (Table 8.9), a positive and significant relationship was found between perceived authenticity of the innovated product and purchase intention for all three products, indicating that the impact is not context specific and can be generalized. When looking at the results on a country level (Table 8.9), the impact was also positive and significant for all three countries and all three stimuli (low alcohol wine, traditional

Asian Medicine in the form of capsules - TAMc, and bamboo bicycle), indicating that the higher the perceptions of authenticity of the innovated product, the higher the purchase intention. The findings provide generalizable (across different contexts and different countries) empirical evidence for the importance of product authenticity and make another substantial contribution to theory and practise. Moreover, they provide strong supporting arguments respective to the impact of authenticity on consumer behaviour and adding to the literature related to the importance of maintaining product authenticity in the context of product innovation (Gilmore and Pine, 2007, Derbaix and Derbaix, 2010, Castéran and Roederer, 2013, Kovács et al., 2013).

Table 8.9: Impact of perceived authenticity of the innovated product on purchase intention

	Aggregated Sample	Australia	Singapore	France
Low alcohol wine	S	S	S	S
TAMc	S	S	S	S
Bamboo Bicycle	S	S	S	S
S= Supported NS= Not Supported PS= Partially Supported				

In regard to the impact of perceived authenticity of the innovated product on perceived sacrifice/gain (Table 8.10), a significant and positive direct effect was found in two out of three contexts (TAMc and bamboo bicycles) when considering the aggregated samples. This hypothesized relationship was not supported for low alcohol wine and the findings were consistent across all three countries. However, perceived authenticity still had a significant and positive *indirect* effect on perceived gain via significantly and positively influencing perceived advantages from the innovation which in turn significantly and positively impacted perceptions of gain, proving that perceptions of authenticity convey value (Carroll and Wheaton, 2009, Frazier et al., 2009). For context number two (bamboo bicycle), the results were consistent throughout all three countries, indicating that within this context the results are generalizable. For the third and last context (TAMc), results indicated a positive and significant direct effect for the Australian and Singaporean samples. For the French sample, the direct effect between perceptions of product authenticity and purchase intention was strong and not mediated by

perceptions of gain. As in the case of wine, perceptions of product authenticity still had a significant and positive indirect effect on perceptions of gain. Thus, it can be argued, that whether directly or indirectly, perceived authenticity of the innovated product stood to significantly impact value generation in all three contexts and all three countries.

Table 8.10: Impact of perceived authenticity of the innovated product on perceived sacrifice/gain

	Aggregated Sample	Australia	Singapore	France
Low alcohol wine	NS	NS	NS	NS
TAMc	S	S	S	NS
Bamboo Bicycle	S	S	S	S
S= Supported NS= Not Supported PS= Partially Supported				

8.2.8 Impact of perceived gain (sacrifice) from the innovation on purchase intentions

For the aggregated sample (Table 8.11), a positive and significant relationship was found between perceived sacrifice/gain from the innovation and purchase intention for all three products, indicating that the impact is not context specific and can be generalized through different product categories. The results add to the literature on the importance of value generation in driving purchase intention (Sweeney and Soutar, 2001).

Table 8.11: Impact of perceived gain/sacrifice from the innovation on purchase intention

	Aggregated Sample	Australia	Singapore	France
Low alcohol wine	S	S	S	S
TAMc	S	S	NS	NS
Bamboo Bicycle	S	S	S	S
S= Supported NS= Not Supported PS= Partially Supported				

On a country level (Table 8.11), the impact was positive and significant in all three countries for two out of three stimuli (low alcohol wine and bamboo bicycle). In the context of TAMc, the impact of perceived sacrifice/gain on purchase intention was not significant in Singapore and France. Results again, highlight the need to consider possible differences here due to product type and market.

8.2.9 Moderation of Consumer Characteristics

When looking at the aggregated samples (Table 8.12), results indicate that the moderating effect of consumer characteristics (past orientation, knowledge, and involvement) on the

relationships between perceived authenticity of the innovated product and perceived gain/sacrifice from the innovation, and perceived authenticity and perceived purchase intentions, is context specific. Consumer past orientation significantly strengthened the effect between perceived product traditionality and perceived authenticity of the innovated product for low alcohol wine and TAMc, and perceived authenticity of innovated product and purchase intentions, thus providing empirical evidence that consumers who value possessions and objects for their symbolic representation of the past place a higher importance on product authenticity (Beverland, 2005). The impact of traditionality on perceived authenticity supports these findings by indicating that individuals that are oriented towards the past will perceive a traditional product to be more authentic than individuals with low past orientation. In addition, consumer past orientation significantly moderated the effect between perceived product authenticity of the innovated product and perceived sacrifice/gain from the innovation in the context of bamboo bicycles. However, the effect was weaker for groups of higher past orientation. Moreover, past orientation significantly moderated the relationship between perceived authenticity of the innovated product and purchase intentions for the context of bamboo bicycle. However, this relationship was also stronger for participants with low past orientation. It was expected that consumers with a high *past orientation* would value authenticity more as it can imply sacredness when it relates to memories of past days and/or may produce nostalgia (Beverland, 2005). However, while empirical evidence supports this claim for two contexts, the results are context specific.

Table 8.12: Moderation of consumer characteristics using the aggregate samples

	Whole Sample		
	Wine	TAMs	Bicycle
<i>PO moderates:</i> Traditionality → P_Auth P_Auth → P_Gain_sac P_Auth → PI	✓	✓ ✓	✓ ✓
<i>Involvement moderates:</i> P_Auth → P_Gain_sac P_Auth → PI		✓	
<i>Knowledge moderates:</i> P_Auth → P_Gain_sac P_Auth → PI	✓		✓

When considering the moderating effect cross country (Table 8.13), past orientation played a moderating role for all three contexts in both Australia and Singapore (while only for TAMc in France). This suggests that the country, or the culture of the country, plays a role in impacting the results. When considering the cultural dimensions proposed by Hofstede (2005), Australia scores 21 on the dimension of long term orientation thus indicating a normative culture (where society tries to maintain links with the past). Individuals in a normative society show great respect for traditions which could explain why past orientation played a moderating role for all three contexts in Australia. On the other hand, while for Singapore past orientation was also consistently a characteristic that played a moderating role, Singapore has a high score of 72 in long term orientating. However, when considering the mean of past orientation calculated per each context in each country, Singaporeans had the highest past orientation mean for all three contexts out of the three countries. France scores high in this dimension (63) and when considering the mean of past orientation calculated per each country, had the lowest one for the three contexts.

Table 8.13: Moderation of consumer characteristics across three countries

	Australia	Singapore	France
Low alcohol wine	<i>-Past orientation</i> moderates the relationship between product traditionality and perceived authenticity of the innovated product	<i>-Past orientation</i> moderates the relationship between product traditionality and perceived authenticity of the innovated product <i>-Involvement and knowledge</i> moderate the relationship between perceived authenticity of the innovated product and purchase intention	-
TAMc	<i>-Past orientation</i> moderates the relationship between product traditionality and perceived authenticity of the innovated product	<i>-Past orientation</i> and <i>involvement</i> moderate the relationship between perceived authenticity of the innovated product and perceived gain/sacrifice	<i>-Past orientation</i> moderates the relationship between perceived authenticity of the innovated product and purchase intention.
Bamboo Bicycle	<i>-Past orientation</i> moderates the relationship between perceived authenticity of the innovated product and perceived gain/sacrifice. <i>-Past orientation</i> and <i>involvement</i> moderate the relationship between perceived authenticity of the innovation and purchase intention	<i>-Past orientation, involvement and knowledge</i> moderate the relationship between perceived authenticity of the innovated product and perceived gain/sacrifice. <i>-Involvement</i> moderates the relationship between perceived authenticity of the innovated product and purchase intention.	- <i>Knowledge</i> moderates the relationship between perceived authenticity of the innovated product and perceived gain/sacrifice. <i>-Involvement</i> moderates the relationship between perceived authenticity of the innovated product and purchase intention.

Consumer involvement (Table 8.13) significantly moderated the relationship between perceived authenticity of the innovated product and perceived gain from the innovation for one out of three contexts (TAMc). When considering the moderating effect cross country, it can be observed that the impact of consumer involvement is very context and country specific and cannot be generalised. In Singapore, involvement played a moderating role for all three contexts. It significantly strengthened the relationship between perceived authenticity of the innovated product and purchase intention for individuals with high involvement in the context of wine. It significantly strengthened the relationship between perceived authenticity of the innovated product and perceived gain from the innovation for individuals with high involvement in the context of TAMc. However, while the moderation was significant in the context of bicycles, the relationships between authenticity and perceived gain and authenticity and purchase intention were weakened for individuals with high involvement. In France,

consumer involvement significantly moderated the relationship between perceived authenticity of the innovated product and purchase intention only in the context of bicycles. The relationship was stronger for individuals with high involvement. Same results were seen in the Australian data, with the only difference being that the relationship was weaker for individuals with high involvement.

Results obtained in the study also identify how the need for authenticity changes as consumers become more or less involved in a product category. Moreover, the study provides empirical justification to claims made by some researchers (Liao, 2015), who based on qualitative work, argued that interest in the authenticity of a specific domain was probably confined to people with an attachment to the product category, and that individuals with a high need for authenticity prefer to consume authentic products congruent with their product involvement (Liao, 2015, Carroll and Wheaton, 2009). Results indicate that while this is indeed the case for some contexts in some countries, where individuals with higher level of involvement place a higher importance on product authenticity, the results cannot be generalized.

Subjective knowledge (Table 8.13) significantly moderated the relationship between perceived authenticity of the innovated product and perceived gain from the innovation for one out of three contexts (bicycle). It also moderated the relationship between perceived authenticity of the innovated product and purchase intention (wine). These results indicate that the moderating impact of knowledge is context specific. When considering the moderating effect across countries, it can be observed that the impact of subjective knowledge is not only context dependant but also varies between countries, thus cannot be generalised. In Singapore, subjective knowledge played a moderating role for two out of three contexts (wine and bicycle). It significantly strengthened the relationship between perceived authenticity of the innovated product and purchase intention for individuals with high knowledge in the context of wine. While the moderation was significant in the context of bicycles, the relationship between

authenticity and perceived gain from the innovation was weakened for individuals with high knowledge. In France, consumer subjective knowledge significantly moderated the relationship between perceived authenticity of the innovated product and perceived gain from the innovation only in the context of bicycles. The relationship was stronger for individuals with low knowledge. These results for both knowledge and involvement, could be explained by considering the likelihood that individuals with low product knowledge and involvement, could be relying on other characteristics (such as higher perceived product authenticity) to make a purchase decision. Subjective knowledge played no moderating role for Australian respondents. When considering the mean score of knowledge, Australians had the lowest level for all three contexts when compared to France and Singapore. Results indicate that knowledge and involvement played a moderating role most strongly in Singapore. Whilst the Singaporean culture could be responsible for this outcome, as individuals from a collective society tend to score lower on the self-indulgence cultural dimension (Hofstede, 2005) and, hence, might be more inclined to selecting innovated products (based on their knowledge) that fit with the original category (thus more authentic) in order to not deviate from the norm, more research is needed to understand the difference in results.

8.2.10 Situation

Table 8.14 and Table 8.15 indicate the impact of situation on perceived sacrifice for all three contexts in all countries (Table 8.14), and the impact of situation on perceived gain for all three contexts in all three countries (Table 8.15).

Table 8.14: Impact of situation on perceived sacrifice

	Aggregated Sample	Australia	Singapore	France
Low alcohol wine	S	S	S	S
TAMc	S	S	S	S
Bamboo Bicycle	S	S	S	S
S= Supported NS= Not Supported PS= Partially Supported				

Table 8.15: Impact of situation on perceived gain

	Aggregated Sample	Australia	Singapore	France
Low alcohol wine	S	S	S	S
TAMc	S	S	S	NS
Bamboo Bicycle	S	S	S	S
S= Supported NS= Not Supported PS= Partially Supported				

Context 1: Low Alcohol Wine

The influence of the situation of consumption on perceived gain and sacrifice from the innovation was analysed via a multiple paired-samples t-test in order to evaluate the size and significance of the impact of situation on perceived gain and sacrifice.

Perceived Gain

Results indicate that all situations presented (drinking alone with a meal; drinking with friends at a restaurant; business lunch; drinking when pregnant; drinking with company on a special occasion; drinking alone to relax after work), had a statistically significant impact on perceived gain (Table 5.40). The degree of perceived gain decreased moderately when participants envisioned themselves drinking alone with a meal, and during a business lunch. The effect size of the decrease was large when participants envisioned drinking when pregnant, and small to moderate when drinking alone to relax after work. The degree of perceived gain increased (small effect size) when participants envisioned themselves drinking with friends at a restaurant, and when drinking with company on a special occasion.

Perceived Sacrifice

In regard to the impact of consumption situation on perceived sacrifice from the innovation, results indicate that all situations presented had a statistically significant impact (Table 5.39). The degree of perceived sacrifice decreased (small effect size) when participants envisioned themselves drinking alone with a meal, during a business lunch and when drinking alone to relax after work. The decrease in perceived sacrifice was large when participants envisioned themselves drinking when pregnant. The degree of perceived sacrifice increased (small effect size) when participants envisioned themselves drinking with friends at a restaurant, and when

drinking with company on a special occasion. These results are consistent with the focus group results where participants envisioned themselves consuming a lower alcoholic wine only under specific situations.

An observation of the impact of the situation on perceived gain and sacrifice from the innovation on a country level (Appendix 5.4), indicates that the country the participants were from plays an important role in influencing feelings of gain and sacrifice. Participants from Singapore, experienced a significant and higher degree of gain from the innovation (and a significant and lower degree of sacrifice) when drinking wine with friends at a restaurant and for a special occasion. On the other hand, these situations were not significant in influencing perceived gain and sacrifice in Australia and perceived gain in France. They did however significantly increase the degree of perceived sacrifice in France. These results indicate that for French and Australian participants, consumption of lower alcohol wine is more acceptable when consuming it alone, when pregnant or during a business lunch and much less acceptable on special occasions or when out with friends at a restaurant. The opposite was the case for Singaporean participants. The differences between countries can be explained from a cultural standpoint. Cultural factors (such as individualism vs. collectivism) have been proven to significantly influence consumers' impulsive buying behaviour (Kacen and Lee, 2002). Hofstede's (2005) ranking of individualism vs. collectivism indicates that Australia, France and Singapore, fall on different ends of the spectrum (Australia's individualism score =90, individualism score for France =70, individualism score for Singapore =20). Collectivism is defined as a social pattern where individuals see themselves as an integral part of one of more collectives (e.g., family, co-workers), while individualism is defined as a social pattern comprised of individuals that see themselves as independent (Triandis, 1995). Collectivist individuals prioritize goals and norms of the collective and are expected to put personal feelings aside and act in a socially responsible manner, while individualist people prioritize their own

preferences and needs (Triandis, 1995, Potter, 1988, Tsai and Levenson, 1997). In individualist cultures, people prefer to focus on the positive consequences of their actions and on their own feelings and goals (Rook, 1987, Kacen and Lee, 2002). The opposite may be true for people from collectivist cultures, who are more likely to focus on the potential negative consequences of their individual actions on group members (Triandis, 1995). Based on the tenant of liberalism, individuals in Western individualist societies are given individual rights to define their own goals and choose freely (Stalder, 1996). On the other hand, being based on the tenant of Confucianism, East Asian collectivist societies promote common group interests and social harmony over individual interests and hedonic desires (Stalder, 1996).

Culture influences both how an individual feels and acts (Ekman, 1972) and people in collectivist cultures (like Singapore) shift their behaviour based on the context of what is perceived to be right for the situation (Bagozzi et al., 2000, Lee, 2000); Thus, it is reasonable for culture (individualism vs. collectivism) to influence perceived sacrifice and gain differently in various situations depending on whether the individual comes from a collectivist or individualistic culture and on whether the product that underwent innovation is deeply ingrained in cultural norms. This explains why Singaporeans, a highly collectivist country where getting drunk in public is frowned upon and a punishable offence, perceived a higher degree of gain (and a significant and lower degree of sacrifice) under the situations of drinking low alcohol wine with friends at a restaurant and when drinking with company on a special occasion. It also explains why Australian and French (both highly individualistic countries) participants experienced the opposite, as drinking with company/friends at a restaurant or on a special occasion, are both situations where they seek the effect of alcohol to enhance the personal experience of having a good time.

Context 2: TAMc (Traditional Asian Medicines served in the form of capsules)

Perceived sacrifice

Results (Table 6.23) indicate that two out of three situations presented (when I am sick; when conventional medication fails; to maintain myself healthy) had a statistically significant impact on perceived sacrifice. The occasions for using traditional Asian medicines were derived from a study conducted by Astin (1998) and focus group results. The degree of perceived sacrifice significantly increased (small effect size) when participants envisioned themselves consuming TAMc when conventional medication failed, and to maintain themselves healthy.

Perceived Gain

Results (Table 6.24) indicate that all situations tested had a statistically significant impact on perceived gain. The degree of perceived gain increased (small effect size) when participants envisioned themselves consuming TAMc when sick, and when conventional medication failed. The increase was moderate when participants envisioned themselves consuming Traditional Asian Medicine in the form of pills to maintain themselves healthy. An observation of the impact of the situation on perceived gain and sacrifice from the innovation on a country level (Appendix 6.6), indicates that the home country of participants plays an important role in influencing feelings of gain and sacrifice.

In Singapore where TAMs is traditional and embedded in the culture, these products are consumed more often and the preparation and consumption is often part of everyday life considered necessary to stay energised, young and healthy. Thus, making the product look more like a conventional ‘western’ medication resulted in a perceived increase in sacrifice in this situation. The other two situations proposed did not have a significant impact. For Australians, it was the complete opposite. Consuming TAMc when sick and when conventional medication fails, increased their perceptions of sacrifice. This could be explained by the fact that TAMs are not traditional to the culture. The population relies and trusts more conventional medications when not feeling well, thus might perceive a scenario of taking TAMc when sick

as increasing the degree of sacrifice. In France, the perceptions of sacrifice were not impacted by situations.

The impact of situation of consumption on perceived gain was similar in all three countries. Particularly Australians and French, experienced a moderate increase in perceived gain when envisioning themselves consuming TAMc to maintain themselves healthy. From focus group results, it was clear that disadvantages of TAMs were related to odour, texture, difficulty to find the ingredients and preparation time. Thus, for participants that experienced a gain from the innovation and were not attached to the conventional preparation and look, it is sensible that they value the innovation more in a situation that entails consuming the product more often (maintaining themselves healthy).

Context 3: Bamboo Bicycle

Perceived Sacrifice

Results (Table 7.23) indicate that two out of five situations presented (professional competition; riding alone to relax; riding alone to exercise; riding with company; riding to work) had a statistically significant impact on perceived sacrifice. The degree of perceived sacrifice significantly decreased (small effect size) when participants envisioned themselves riding a bamboo bicycle with company, and riding to work.

Perceived Gain

Results (Table 7.24) indicate that four out of five situations presented had a statistically significant impact on perceived gain. The degree of perceived gain increased (small effect size) when participants envisioned themselves riding a bicycle alone to relax, and when riding alone to exercise. The degree of perceived gain significantly and largely decreased when participants envisioned themselves riding in a professional competition. The decrease was moderate when participants envisioned themselves riding a bamboo bicycle to work.

An observation of the impact of the situation on perceived gain and sacrifice from the innovation on a country level (Appendix 7.6), indicates that the country the participants were from played a small role in influencing feelings of gain and sacrifice. For French participants, perceptions of sacrifice significantly increased when participants envisioned themselves riding a bamboo bicycle in a professional competition. Professional bike tours, such as Le Tour de France, are very popular in France, thus participants are used to a certain type of look for a competitive bicycle. These results came up also in the focus groups (in all three countries, but particularly in France), where participants liked the idea of having a bamboo bicycle for occasions such as riding to work (which statistically resulted in a decreased perception of sacrifice), but not for anything competitive. In Australia and Singapore, the impact of riding professionally on perceived sacrifice was not significant. However, in all three countries, perceptions of gain decreased largely when participants envisioned themselves riding a bamboo bicycle during a professional competition. In all three countries perceptions of sacrifice were mitigated when participants envisioned themselves riding to work or with company. These results are also consistent with focus group results, where the bamboo bicycle was considered unique and a nice work of art to showcase. Perceptions of gain increased in all three countries, when participants envisioned themselves riding alone to relax or exercise, which as mentioned above, supports focus group results where the bamboo bicycle was seen as more of a recreational product used occasionally in situations with low 'strain' on the materials of the bike as opposed to competition riding or everyday use such as riding to work.

The effect of involvement and situation interaction

Consumer behaviour research should consider both person and situation variables as it provides more accurate understanding of behaviour (Quester and Smart, 1998). As a result, the person-by-situation interactionism approach was used to determine the influence of involvement and situation on perceived gain and sacrifice (using the aggregate sample).

Results indicate that for the wine context, the degree of involvement influenced the impact of situation on perceptions of gain and sacrifice from the innovation. In participants with high involvement, the increase in perceived sacrifice when drinking with friends was moderate while for low involvement participants the effect was not significant. For high involvement individuals, drinking low alcohol wine in the context of a business lunch did not impact perceptions of sacrifice, while for low involvement individuals it caused a significant decrease in perceived sacrifice. Moreover, drinking with company on a special occasion caused a moderate increase in sacrifice for high involvement individuals while it was not significant for low involvement group, indicating that high involvement individuals are more difficult to target using situation of consumption as a selling point. When considering perceptions of gain between the two groups, differences included some situations not being significant in one of the groups (business lunch significantly impacted perceptions of gain for low involvement individuals while the impact was not significant for high involvement individuals).

In TAMc, perceptions of sacrifice increased for individuals of high involvement when sick and when consuming TAMc to maintain themselves healthy, while the situations had no impact on perceptions of sacrifice for low involvement individuals. The results are understandable as consumers with high involvement have an attachment with the process of preparing and consuming traditional Asian medicine. Perceptions of gain followed the same pattern for both groups.

In the bicycle context, perceived sacrifice for individuals with high involvement was only mitigated by the riding to work situation (moderate impact), while the other situations played no role. In individuals with low involvement, perceived sacrifice was also mitigated by the riding to work situation, however the impact was small. Perceptions of sacrifice increased when riding alone to exercise for low involvement participants and decreased when riding with

company and to work. This might be due to lower involvement participants riding more for the social aspect. Perceptions of gain followed a similar pattern for both groups.

The results for all three contexts support the interactionist approach which is based on the idea that the person-situation interaction accounts for more variation in consumer behaviour than situational factors alone (Belk, 1974, Bonner, 1985, Celsi and Olson, 1988, Chow et al., 1990, Dickson, 1982, Hornik, 1982, Richins and Bloch, 1986).

8.3 Theoretical Contributions

The research makes a number of substantial contributions to theory and practise. The main contribution is providing empirical evidence that the perceived authenticity of an innovated product stands to positively impact perceptions of gain and purchase intentions. While an association between perceptions of product authenticity and value generation/purchase intentions has been discussed, no empirical evidence has been previously provided to support the relationship in the context of product innovation (Gilmore and Pine, 2007, Derbaix and Derbaix, 2010, Castéran and Roederer, 2013, Kovács et al., 2013). As the study was conducted using three contexts in three countries, the findings are generalizable across different product categories and across country, adding to existing literature specific to each product category. Moreover by examining the impact of perceptions of traditionality on perceived authenticity of the innovated product, the study provides empirical support (generalizable across different product categories) for the claim that traditional products evoke feelings similar to those aroused by something regarded as authentic (Carroll and Wheaton, 2009, Levine, 2005, Sokolov, 1998).

In addition, by examining the impact of situation of consumption on perceptions of gain and sacrifice in the context of product innovation separately and together with the impact of consumer involvement in the product category, the results add to existing literature which recognizes that characteristics of an individual interact with changing conditions and situations

to induce certain behaviours (Belk, 1974, Bonner, 1985, Celsi and Olson, 1988, Chow et al., 1990, Dickson, 1982, Hornik, 1982, Richins and Bloch, 1986).

Furthermore, by indicating that congruence of the innovation positively and significantly influences perceptions of authenticity of the innovated product, the study confirms quantitatively the existence of a positive association generalizable across different product categories and different countries. While both congruence and authenticity have been characterised by different researchers, among other definitions, in terms of stylistic consistency (Beverland, 2006), no previous study has empirically demonstrated the existence of a positive association.

Finally, the moderating effect of consumer characteristics on the relationships between perceived authenticity of the innovated product and perceived gain/sacrifice, perceived authenticity and purchase intention, and product traditionality and perceived authenticity of the innovated product was analysed. Consumers value possessions and objects for their symbolic representation of the past and qualitative research conducted by Beverland (2005) suggests that authenticity can imply sacredness when it relates to memories of past days or when it produces nostalgia. This study contributes to the literature by providing an empirical assessment of the above-mentioned effects, indicating that consumers with a past orientation or a strong sense of nostalgia will value authenticity more. Results show that the moderation is context specific and country specific and can't be generalised.

While few studies have argued that consumers with a high need for authenticity prefer to consume authentic products congruent with their interests and product involvement (Liao, 2015, Carroll and Wheaton, 2009), the arguments were based only on a qualitative study and included a small sample. This research provides empirical support on how perceptions of authenticity change as consumers become more or less involved in a product category

indicating that the moderating role of involvement is context specific and varies between countries.

8.4 Managerial Implications

The study offers a contribution to the wine industry by providing an insight as to how consumers perceive low and no alcohol wines leading to a foundation for lowering alcohol consumption per capita. Recently, Australia and other countries have seen a marked increase in the alcohol levels of many wines (Chikritzhs et al., 2010). This in turn, has led to an increase in the per capita consumption of alcohol as reported by the Australian Wine Research Institute (Chikritzhs et al., 2010). At the same time, there is mounting evidence of the economic and social costs from harmful use of alcohol. These include alcohol related road accidents, crime, domestic violence, loss of productivity and the burden of healthcare expenditures (Skov, 2009, Collins and Lapsley, 2008). Indeed, the negative impact that high alcohol consumption and binge drinking has on health and social issues has led the WHO (World Health Organization – 2004) to introduce a global strategy based on reducing alcohol consumption globally. From the wine industry's perspective this global strategy deserves special attention as it includes a number of very restrictive recommendations respective to alcohol availability, marketing of alcoholic beverages and pricing policies (Grant, 2010). The global alcohol industry is requested to support these initiatives aimed at preventing and reducing the harmful use of alcohol, including self-regulatory actions and initiatives. These types of pressures, together with growing consumer awareness of health issues leading to greater demands for 'healthier' products (ICAP, 2007), have resulted in a growing awareness amongst wine producers of the need to develop new wine products with lower levels of alcohol (Grant, 2010). However, previous research indicates generally negative consumer reactions to the dealcoholization cue influencing the success of these products in the market (Meillon 2010; Josselin 2008; Saliba et al. 2013). Even though some research has been done on analyzing consumer perceptions of

partially dealcoholized wines (Saliba et al. 2013; Meillon, 2010, Masson, 2008), no research has been conducted on analyzing perceptions to a completely dealcoholized wine. This study explored some of these identified questions through a cross cultural study. Hence, allowing for a comparison of reactions to low/no alcohol wines between wine buyers in well established western wine markets, and those from a non-traditional emerging Asian wine market. Results of this study support several recommendations to the wine industry related to launching partially/completely dealcoholized wines. When considering launching wines with a lower alcohol level gender should be considered. Results indicate that females are more open to consuming low alcohol wines. However, what impacted perceptions for both males and females was the history of consumption and level of involvement in the product category. Consumers with a shorter history of drinking and lower level of involvement are more likely to accept the innovation. Perceptions of authenticity of the innovated product also played an important role in influencing perceptions of gain from the innovation and purchase intentions, thus wine makers and marketers should focus on preserving perceptions of authenticity. This could be achieved by being mindful of the degree of congruence of the innovation with the original product category/product attributes, as the higher the congruence, the higher perceptions of authenticity of the innovated product. Moreover, traditionality perceptions and culture of drinking wine influenced consumer perceptions. Consumers that were raised with the culture of drinking wine, were less open to considering no alcohol wine as wine. Thus marketers could focus on newer wine markets and/or toward consumers that are new to drinking wine. Furthermore, situation plays an important role in influencing feelings of perceived sacrifice and gain from the innovation, thus it could be an important selling point when marketing the product. Participants were more open to drinking low/no alcohol wine when in a business lunch, not wanting to get drunk, when pregnant, while relaxing alone after a long day (not accompanied by food). However, marketers should also consider the impact of

culture on situational influence, as differences existed between countries. Singaporeans are more open to consuming low alcohol wines when with company in public settings while the opposite is true for Australians and French (coming from individualistic cultures). The type of wine also played a role in impacting consumer perceptions. Generally, participants were more open to the dealcoholisation (partial or full) of rosé, sparkling or white wines. A low alcohol red wine is likely to be less accepted as it is considered more traditional and more difficult to innovate.

Similar recommendations can be applied to the TAMs, bicycle and consumer goods industry in general. For the TAMs and bicycle contexts, perceived traditionality and authenticity of an innovated product, influenced perceptions of gain from the innovation and purchase intentions. Similar to the wine context, congruence of the innovation positively influenced perceptions of authenticity, thus marketers should be mindful of maintaining a high degree of congruence with the original product category when considering product innovation. Moreover, perceived advantages of the innovation played a role in impacting purchase intentions, thus superior product benefits should be at the forefront of a marketing campaign. The proposed consumer characteristics were also shown to play a moderating role. Past orientation was the predominant characteristic that played a moderating role for TAMc (higher past orientation participants placed more importance on perceptions of authenticity), while consumer involvement and knowledge had no significant impact on the relationship between authenticity and perceived gain/purchase intentions. However, critical ratios indicated that while not hypothesized, involvement and knowledge moderated several other relationships such as the impact of product traditionality on perceived authenticity of the innovated product (relationship was stronger for individuals of high knowledge and high involvement), thus should still be considered when positioning an innovated product. Situation of consumption, similar to wine, also played a role in impacting perceptions of gain and sacrifice for both TAMc and bamboo

bicycle contexts. Participants were more open to riding a bamboo bicycle alone or with company to relax rather than a professional competition. Thus, companies should focus more on characteristics such as uniqueness, work of art, lower carbon footprint when marketing such an innovation. However, companies should be mindful of cultural norms as not all results are generalizable. In the case of TAMc, situational impact was similar in all three countries. As disadvantages of TAMs were related to odour, texture, difficulty to find the ingredients and preparation time, participants experienced a gain from the innovation when not attached to the conventional preparation and look, in a situation that entailed consuming the product more often (maintaining themselves healthy).

8.5 Limitations of the Research

This research has a number of limitations that must be considered along with the results, and that would be useful to explore in future research. This study specifically investigates consumer perceptions of product authenticity, and does not consider brand authenticity (or any brand related information) or the impact of perceptions of authenticity of one's self. Further research including a broader spectrum of authenticity is recommended. Price of the innovated product was also not considered. These decisions were justified on the basis that brand related information and price tend to be main drivers of purchase intention while the purpose of the research was expanding on the literature on other product characteristics that play a role in influencing consumer behaviour.

Moreover, the samples collected in different locations did not have the exact same characteristics, which may play a role in influencing the final cross country results. Finally, when considering the perceived advantages of the innovated product, the number and type of advantaged presented in the study (even though derived from focus group results) might not be a reflection of all the perceived advantages of the innovation, which lead to some conflicting

results manifested in the context of bamboo bicycle. Further research could focus on expanding the number and type of perceived advantages measured.

8.6 Future research

Having observed the effect of perceived authenticity of an innovation on variables such as perceived gain and sacrifice, perceived advantages of the innovation and purchase intention, a future important step would be understanding the impact of the degree of loss of authenticity on the same variables. Authenticity is considered to become more important in the minds of consumers when it is under threat (Peterson, 2005a, Trilling, 2009). For example, when mass production techniques are used to produce furniture, a demand emphasizing craft like hand-made furniture emerges (Orvell, 2014). In this case, partially removing alcohol from wine could be considered as a threat to the authenticity of the product (as also indicated from focus group results). Having identified that authenticity of the innovation stands to create value in the minds of the consumers, enough to influence purchase intention, an interesting next step would be examining whether a higher degree of change in the authenticity of a product, will have a negative impact on value generation and purchase intention. Moreover, an examination of the relationship between product traditionality and degree of loss of authenticity would indicate whether the more traditional a product is perceived to be, the bigger the loss of product authenticity.

Future research should expand the spectrum of consumer characteristics that may moderate the impact of perceptions of authenticity on perceived gain from the innovation and purchase intention. There is surprisingly little evidence in the current literature about the influence of *socio-economic and lifestyle variables* on consumer decisions within the framework of innovation and authenticity (Liao, 2015). Future studies may explore whether consumers with different socioeconomic backgrounds and lifestyles hold different degrees of need for authenticity. As culture (individualism vs. collectivism) played a role in impacting consumer

behaviour, future studies could focus on other cultural dimensions such as innovativeness and risk aversion. The role of consumer *innovativeness* in the acceptance of new (innovated) products has been researched (d'Hauteville, 1994), however, no studies analysing the moderating effect of this construct on authenticity exist. Future studies could attempt to fill this gap. Risk aversion is a concept that has been discussed not only in marketing but also in finance and economics (Xiao et al., 2001). Risk aversion has been defined as a decision maker's "preference for a guaranteed outcome over a probabilistic one having an equal expected value" (Qualls and Puto, 1989, p.180). Thus, it has been conceived as an individual difference or predisposition, an attitude toward taking risks that is relatively invariant across situations (Qualls and Puto, 1989). The amount of risk someone is willing to incur, differs based on the situation and on the individual. Researchers have examined how risk aversion influences behaviours, varying for example from information search (Moorthy et al., 1997), brand choice (Tellis and Gaeth, 1990), decision making (MacCrimmon and Wehrung, 1984, MacCrimmon and Wehrung, 1990), preference for gambles (Kahneman and Tversky, 1979), decision framing of buyers (Qualls and Puto, 1989), financial portfolio management (Schooley and Worden, 1996, Xiao et al., 2001), and even the distance from which people choose to toss a ring onto a pole (Davis and McClelland, 1962). However, the potential moderating effect of risk aversion on perceived sacrifice/gain and purchase intention has not been researched.

8.7 Concluding Comments

Products are continuously innovated to improve organization efficiency and meet consumer expectations. However, consumers reject 50-80% of these innovated products. This increases the importance of understanding factors that influence the success of these products in the market, whether they relate to product characteristics, consumer characteristics or/and perceptions of authenticity of the innovation. As no conceptual explanation specific to how consumers react when a traditional product is modified and how consumers' characteristics, as

well as situation moderate any trade-off between perceptions of authenticity and gained functional benefits existed, this study addresses these gaps by demonstrating the impact of perceptions of traditionality on perceived authenticity of the innovated product, and the importance of authenticity of the innovated product in generating perceptions of gain from the innovation and purchase intention. Therefore, the study is beneficial from both a theoretical and managerial standpoint.

Appendices

Appendix 3.1: Focus Group Guide

Part 1: Attitudes towards wine

Objectives to explore:

1. Attitude towards wine (alcohol):
 - a. What do you like about drinking it? (Why do you drink it?)
 - b. What are the occasions when you like to drink it?
 - c. Do you enjoy other alcoholic beverages (beer, wine, cider?)
 - d. How long have you been drinking wine?
 - e. Do you feel that wine is a traditional type of product?
 - f. Do you feel that wine is an authentic product?
 - g. How important is wine to your lifestyle?
 - h. How much do you enjoy it?
 - i. Do you consider yourself quite knowledgeable about wine?
 - j. What do you think a good wine costs?
 - k. Who makes the best wines?
2. Attitude and preferences for styles of wine:
 - a. Do you favor reds, rose, sparkling or whites (why?)

Part 2: Wine tasting

-Time to explain and complete the form. After tasting the white wines (1.1-1.3) and completing the section of the form pertaining to the white wines, ask for their feedback:

- a. Did they like the wines? Which ones?
- b. Do they see themselves drinking them? Under which occasions? How much would they be willing to pay for them?

Repeat the above questions after tasting the two Rose wines (2.1-2.2), and the three reds (3.1-3.3).

Part 3: Low/No alcohol wines- tasting and perceptions

- a. Do you ever take note of the alcohol level?
- b. Is the level of alcohol a concern that prevents you from drinking more wine or less wine?
- c. Would you be more open to enjoying wine more often and in different company, if the alcohol levels were lower? What if the level of alcohol was 0?

Introduce for the first time that our project is about finding out perceptions of low and no alcohol wines. Inform the participants that they are about to taste three no alcohol wines 1.1, 2.1 and 3.1 (section 4.1-4.3 in the form). Do not let them know that they have already tasted these wines.

After the wines have been tasted and the form completed ask the participants the following questions:

- a. Did they like the wines? Which ones?
- b. Do they see themselves drinking them? Under which occasions? How much would they be willing to pay for them?

It is important to observe if they recognize that they have already tasted these wines before. It is also important to observe if the wine color plays a moderating role for their feelings and perceptions.

- c. Do they consider the low alcohol wines to still be wines? What about no alcohol wines?
 - i. Is it still authentic and valuable?
 - ii. Does the innovation (of lowering or removing the alcohol) fit with how they think wine should be?

- iii. Is the value and enjoyment enhanced because the alcohol is not there?
- iv. What are the potential benefits and sacrifices of consuming a low/no alcohol wine?

Part 4: Questions about Traditional Asian medicine (TAMS) and Bamboo Bicycle.

Do they consider TAMS and/or bicycles traditional?

Do they consume TAMS (have they ever?) or ride a bicycle?

Why or why not?

Do they think TAMS and bicycles are authentic?

What do they think of a bamboo bicycle (replacing the metallic frame with bamboo)? What would be the benefits and disadvantages of the innovation?

Do they consider the innovated product authentic? Would they be willing to purchase it?

What do they think of TAMS being offered in the form of pills instead of teas and drinks? What would be the benefits and disadvantages? Do they consider the product authentic? Would they be willing to buy it?

Appendix 3.2: Focus Group Form

Thank you for your participation!

Your confidentiality is assured – no information will be passed on to any other parties. Any confidentiality issues can be raised with Prof. Dr. Roberta Crouch (roberta.crouch@adelaide.edu.au) and Bora Qesja (bora.qesja@adelaide.edu.au).

Personal Details

First Name Only: _____ *Occupation:* _____

Ethnic Background (e.g. Indonesian, Chinese, Thai etc): _____

Wine oriented Questions

Approximately how many years have you enjoyed wine as part of your lifestyle?

On average, how many times in a month do you enjoy wine? _____

Thinking about the times you like to drink wine, please name some of the occasions in which you like to consume wine?

Tasting Feedback

Wine 1.1

What do you think the % of alcohol is in this wine: _____ %

Please score this wine from 1 to 10 (where 1 = didn't like it at all and 10 = liked it very much): _____

Please make any additional comments here:

Wine 1.2

What do you think the % of alcohol is in this wine:_____ %

Please score this wine from 1 to 10 (*where 1 = didn't like it at all and 10 = liked it very much*):_____

Please make any additional comments here:

Wine 1.3:

What do you think the % of alcohol is in this wine:_____ %

Please score this wine from 1 to 10 (*where 1 = didn't like it at all and 10 = liked it very much*):_____

Please make any additional comments here:

Wine 2.1:

What do you think the % of alcohol is in this wine:_____ %

Please score this wine from 1 to 10 (*where 1 = didn't like it at all and 10 = liked it very much*):_____

Please make any additional comments here:

Wine 2.2:

What do you think the % of alcohol is in this wine:_____ %

Please score this wine from 1 to 10 (*where 1 = didn't like it at all and 10 = liked it very much*):_____

Please make any additional comments here:

Wine 3.1:

What do you think the % of alcohol is in this wine:_____ %

Please score this wine from 1 to 10 (*where 1 = didn't like it at all and 10 = liked it very much*):_____

Please make any additional comments here:

Wine 3.2:

What do you think the % of alcohol is in this wine:_____ %

Please score this wine from 1 to 10 (*where 1 = didn't like it at all and 10 = liked it very much*):_____

Please make any additional comments here:

Wine 3.3:

What do you think the % of alcohol is in this wine:_____ %

Please score this wine from 1 to 10 (*where 1 = didn't like it at all and 10 = liked it very much*):_____

Please make any additional comments here:

Low Alcohol Wines:

Wine 4.1:

What do you think the % of alcohol is in this wine:_____ %

Please score this wine from 1 to 10 (*where 1 = didn't like it at all and 10 = liked it very much*):_____

Please make any additional comments here:

Wine 4.2:

What do you think the % of alcohol is in this wine:_____ %

Please score this wine from 1 to 10 (*where 1 = didn't like it at all and 10 = liked it very much*):_____

Please make any additional comments here:

Wine 4.3:

What do you think the % of alcohol is in this wine:_____ %

Please score this wine from 1 to 10 (*where 1 = didn't like it at all and 10 = liked it very much*):_____

Please make any additional comments here:

Appendix 4.1: Pre-Test Factor Analysis for the context of wine, bicycle and TAMs

Table A4.1: Factorability of authenticity -wine- Pre Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.725
Bartlett's Test of Sphericity	Approx. Chi-Square	229.630
	Df	21
	Sig.	.000

Table A4.2: Pattern Matrix of authenticity- wine- Pre Test

Component Matrix ^a	
	Component
	1
Low alcohol Wine fits in with my expectations of how wine should be.	.767
Low alcohol wine is pure (produced from one source).	.758
Low alcohol wine makes use of hand-made processes.	.758
Features of low alcohol wine are consistent with what is in my memory.	.755
Low alcohol wine has characteristics that can be passed from generation to generation.	.749
I think low alcohol wine is an original product.	.704
Low alcohol wine has features that cannot be imitated.	.683

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Table A4.3: Factorability of authenticity - Bicycle- Pre Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.795
Bartlett's Test of Sphericity	Approx. Chi-Square	229.347
	df	21
	Sig.	.000

Table A4.4: Pattern Matrix of authenticity - Bicycle- Pre Test

Pattern Matrix ^a		
	Component	
	1	2
Bamboo bicycles have characteristics that can be passed from generation to generation.	.913	
Bamboo bicycles fit in with my expectations on how a bicycle should be.	.897	
I think bamboo bicycles are an original product.	.707	
Features of bamboo bicycles are consistent with what is in my memory.	.655	
A bamboo bicycle is unadulterated (produced from one source).		.991
A bamboo bicycle has features that cannot be imitated.		.717
Bamboo bicycles makes use of hand-made processes.		.518

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Table A4.5: Factorability of authenticity – Traditional Asian Medicine- Pre test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.651
Bartlett's Test of Sphericity	Approx. Chi-Square	140.919
	df	21
	Sig.	.000

Table A4.6: Pattern matrix of authenticity - Traditional Asian Medicine (TAM) - Pre Test

Pattern Matrix^a		
	Component	
	1	2
TAMc fit in with my expectations of how TAMs should be.	.829	
TAMc are pure (produced from one source).	.818	
TAMc have characteristics that can be passed from generation to generation.	.727	
Features of TAMc are consistent with what is in my memory.	.720	
I think TAMc are original.		.915
TAMc have features that cannot be imitated.		.861
TAMc make use of hand-made processes.		.858

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 8 iterations.

Table A4.7: Factorability of past orientation- Wine- Pre Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.644
Bartlett's Test of Sphericity	Approx. Chi-Square	162.127
	df	6
	Sig.	.000

Table A4.8: Component matrix of past orientation- Wine- Pre Test

Component Matrix ^a	
	Component
	1
I purchase products that remind me of my past.	.900
I have positive attitudes about the time period from which the product came.	.876
I strongly long to be part of the time period from which the product came from.	.847
I like possessions that have a connection with the past.	.709

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Table A4.9: Factorability of past orientation- Bicycle/Traditional Asian Medicine- Pre Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.732
Bartlett's Test of Sphericity	Approx. Chi-Square	149.296
	df	6
	Sig.	.000

Table A4.10: Component matrix of past orientation- Bicycle/Traditional Asian Medicine- Pre Test

Component Matrix ^a	
	Component
	1
I purchase products that remind me of my past.	.915
I like possessions that have a connection with the past.	.844
I have positive attitudes about the time period from which the product came.	.840
I strongly long to be part of the time period from which the product came from.	.727

a. 1 components extracted.

Table A4.11: Factorability of knowledge -Wine- Pre Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.775
Bartlett's Test of Sphericity	Approx. Chi-Square	280.867
	df	10
	Sig.	.000

Table A4.12: Pattern matrix of knowledge -Wine- Pre Test

Component Matrix ^a	
	Component
	1
When it comes to wine, I really know a lot.	.881
I know most of the wines around in shops.	.880
I feel confident about my knowledge of wine.	.865
I feel that I know how to judge the quality of wine.	.847
Among my friends, I'm considered a wine 'expert'.	.824

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Table A4.13: Factorability of knowledge - Bicycle- Pre Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.834
Bartlett's Test of Sphericity	Approx. Chi-Square	315.935
	df	10
	Sig.	.000

Table A4.14: Component matrix of knowledge - Bicycle- Pre Test

Component Matrix ^a	
	Component
	1
When it comes to bicycles, I really know a lot.	.935
I feel confident about my knowledge of bicycles.	.900
I know most of the bicycles around in shops.	.886
Among my friends, I'm considered a bicycle 'expert'.	.885
I feel that I know how to judge the quality of a bicycle.	.812

a. 1 components extracted. Extraction Method: Principal Component Analysis.

Table A4.15: Factorability of knowledge - Traditional Asian Medicine- Pre Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.860
Bartlett's Test of Sphericity	Approx. Chi-Square	228.716
	df	10
	Sig.	.000

Table A4.16: Component matrix of knowledge- Traditional Asian Medicine- Pre Test

Component Matrix^a	
	Component
	1
Among my friends, I'm considered a TAMs 'expert'.	.971
I feel confident about my knowledge of TAMs.	.955
I feel that I know how to judge the quality of TAMs.	.950
When it comes to TAMs, I really know a lot.	.927
I know most of the TAMs around in shops.	.918

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Table A4.17: Factorability of involvement – Wine - Pre Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.692
Bartlett's Test of Sphericity	Approx. Chi-Square	54.370
	df	3
	Sig.	.000

Table A4.18: Component matrix of involvement – Wine - Pre Test

Component Matrix^a	
	Component
	1
Wine is important to me in my lifestyle.	.843
I have a strong interest in wine.	.823
Drinking wine gives me pleasure.	.803

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Table A4.19: Factorability of involvement - Bicycle- Pre Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.651
Bartlett's Test of Sphericity	Approx. Chi-Square	125.193
	df	3
	Sig.	.000

Table A4.20: Component matrix of involvement - Bicycle- Pre Test

Component Matrix^a	
	Component
	1
Bicycles are important to me in my lifestyle.	.942
I have a strong interest in bicycles.	.901
Riding a bicycle gives me pleasure.	.810

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Table A4.21: Factorability of involvement - Traditional Asian Medicine- Pre Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.736
Bartlett's Test of Sphericity	Approx. Chi-Square	70.662
	df	3
	Sig.	.000

Table A4.22: Component matrix of involvement - Traditional Asian Medicine- Pre Test

Component Matrix^a	
	Component
	1
I find using TAMs satisfying.	.942
I have a strong interest in TAMs.	.934
TAMs are important to me in my lifestyle.	.892

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Table A4.23: Factorability of product integration in the culture - Wine- Pre Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.633
Bartlett's Test of Sphericity	Approx. Chi-Square	43.844
	df	3
	Sig.	.000

Table A4.24: Pattern matrix of product integration in the culture - Wine- Pre Test

Component Matrix ^a	
	Component
	1
Drinking wine has always been traditional in my culture.	.847
Wine has always been one of the most popular drinks in Australia.	.831
Since I was a child I have seen people drink wine.	.694

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Table A4.25: Factorability of product integration in the culture - Bicycle- Pre Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.621
Bartlett's Test of Sphericity	Approx. Chi-Square	51.671
	df	3
	Sig.	.000

Table A4.26: Pattern matrix of product integration in the culture - Bicycle- Pre Test

Component Matrix^a	
	Component
	1
Riding bicycles has always been traditional in my culture.	.870
Bicycles have always been one of the most popular means of transport in Australia.	.843
Since I was a child, I have seen people ride bicycles.	.683

Extraction Method: Principal Component Analysis. a. 1 components extracted.

Table A4.27: Factorability of advantages obtained from the innovated product- Wine Pre Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.664
Bartlett's Test of Sphericity	Approx. Chi-Square	118.792
	df	3
	Sig.	.000

Table A4.28: Pattern matrix of advantages obtained from the innovated product - Wine Pre Test

Component Matrix^a	
	Component
	1
Higher in quality	.924
Tasty	.922
Healthier than full alcohol wine	.782

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Table A4.29: Factorability of advantages obtained from the innovated product - TAMs- Pre Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.583
Bartlett's Test of Sphericity	Approx. Chi-Square	37.784
	df	3
	Sig.	.000

Table A4.30: Pattern matrix of advantages obtained from the innovated product - TAMs - Pre Test

Component Matrix ^a	
	Component
	1
I believe that TAMs in the form of tablets are easier to consume.	.862
I believe that TAMs offered as tablets are more accessible.	.802
I believe that there is no odour in the TAMs tablets.	.636

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Table A4.31: Factorability of advantages obtained from the innovated product - Bicycle- Pre Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.582
Bartlett's Test of Sphericity	Approx. Chi-Square	68.536
	df	3
	Sig.	.000

Table A4.32: Pattern matrix of advantages obtained from the innovated product Bicycle- Pre Test

Component Matrix ^a	
	Component
	1
It's important to me that bamboo bicycles are durable.	.898
It's important to me that bamboo bicycles are comfortable.	.894
It's important to me that bamboo bicycles have a low carbon footprint.	.601

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Appendix 5.1: CFA – Wine low alcohol Singapore

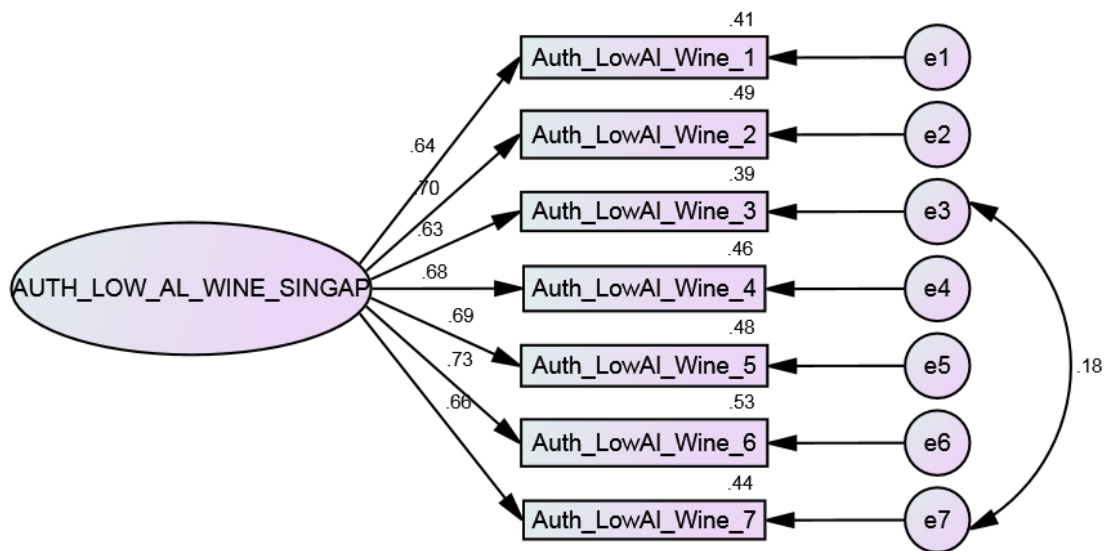


Figure A5.1: Hypothesized one factor CFA model of low alcohol wine authenticity perceptions for the Singaporean sample

Table A5.1: Goodness of fit indices –Authenticity perceptions of Low Alcohol Wine in Singapore

χ^2/df	p	CFI	GFI	TLI	RMSEA
1.674	0.05	0.993	0.98	0.988	0.037

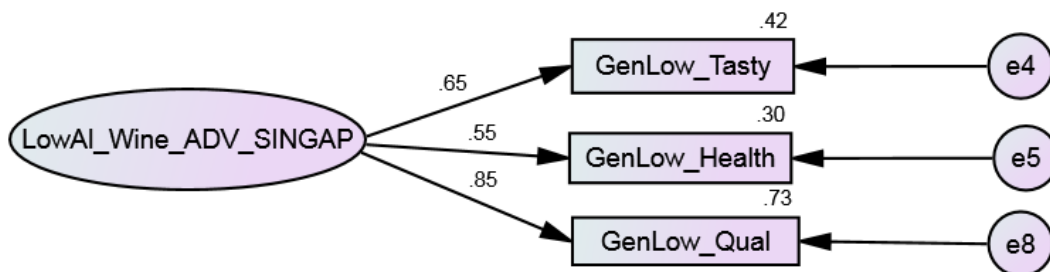


Figure A5.2: Hypothesized one factor CFA model of low alcohol wine advantages for the Singaporean sample

Table A5.2: Goodness of fit indices –Advantages of low alcohol wine in Singapore

χ^2/df	p	CFI	GFI	TLI	RMSEA
0.146	0.7	1.00	1.00	1.00	0.000

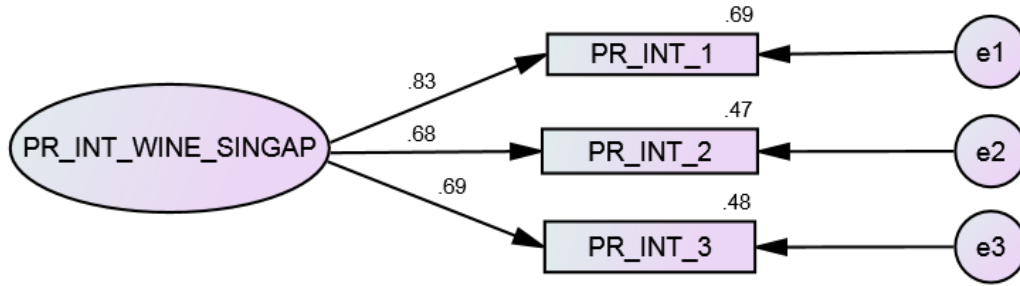


Figure A5.3: Hypothesized one factor CFA model of wine integration in Singapore

Table A5.3: Goodness of fit indices – Wine integration (traditionality perceptions) in Singapore

χ^2/df	p	CFI	GFI	TLI	RMSEA
1.194	0.27	1.00	0.998	0.999	0.02

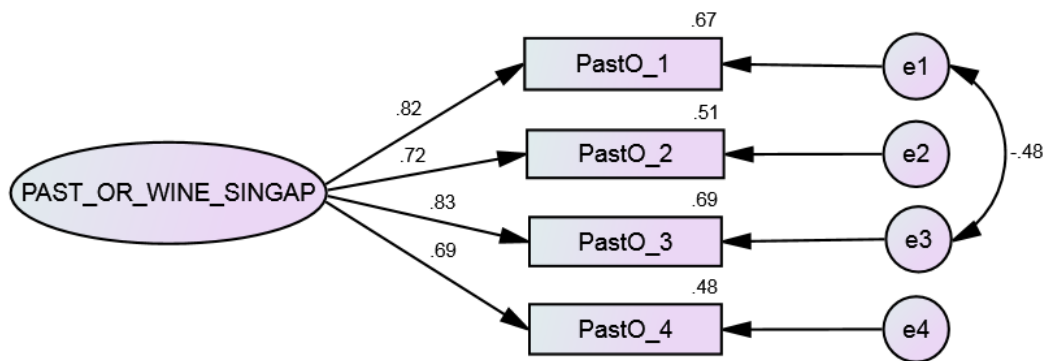


Figure A5.4: Hypothesized one factor CFA model of consumer past orientation for the Singaporean sample

Table A5.4: Goodness of fit indices – Consumer past orientation for the Australian sample

χ^2/df	p	CFI	GFI	TLI	RMSEA
2.53	0.112	0.998	0.998	0.988	0.055

Appendix 5.2: CFA – Wine low alcohol France

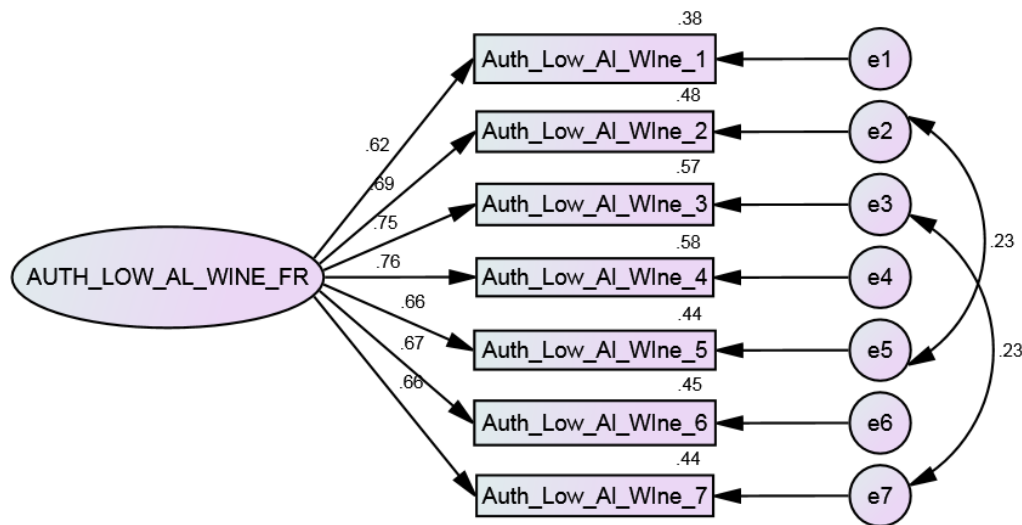


Figure A5.5: Hypothesized one factor CFA model of low alcohol wine authenticity perceptions for the French sample

Table A5.5: Goodness of fit indices –Authenticity perceptions of Low Alcohol Wine in France

χ^2/df	p	CFI	GFI	TLI	RMSEA
2.77	0.001	0.985	0.983	0.974	0.059

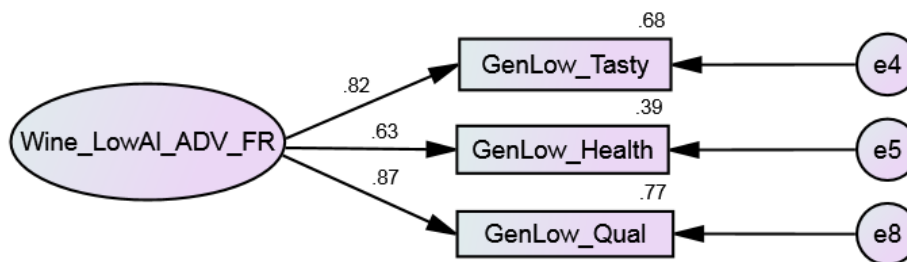


Figure A5.6: Hypothesized one factor CFA model of low alcohol wine advantages for the French sample

Table A5.6: Goodness of fit indices –Advantages of low alcohol wine in France

χ^2/df	p	CFI	GFI	TLI	RMSEA
0.521	0.471	1.00	0.99	1.00	0.00

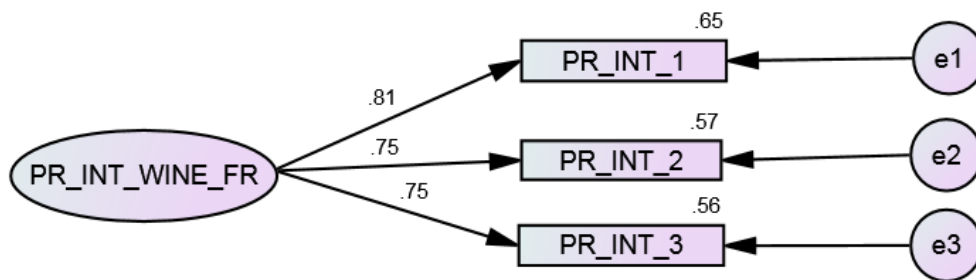


Figure A5.7: Hypothesized one factor CFA model of wine integration in France

Table A5.7: Goodness of fit indices – Wine integration (traditionality perceptions) in France

χ^2/df	p	CFI	GFI	TLI	RMSEA
0.01	0.91	1.00	1.00	1.00	0.00

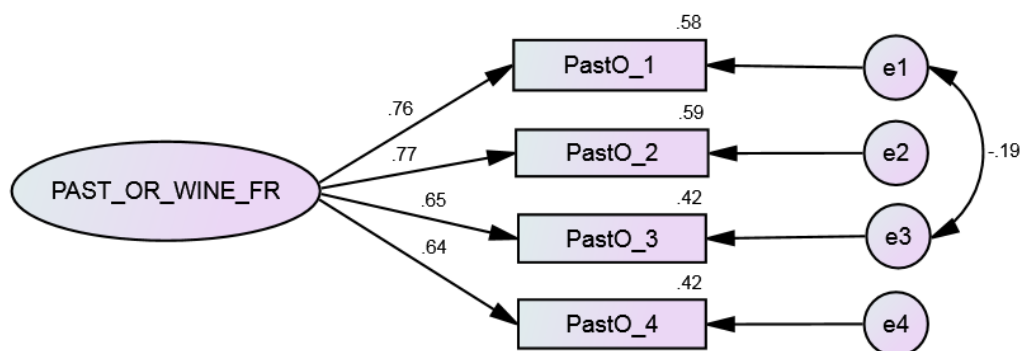


Figure A5.8: Hypothesized one factor CFA model of consumer past orientation for the French sample

Table A5.8: Goodness of fit indices – Consumer past orientation for the French sample

χ^2/df	p	CFI	GFI	TLI	RMSEA
1.115	0.29	1.00	0.99	0.99	0.015

Appendix 5.3: Influence of situation on perceived gain & sacrifice (Aus., Fr., Sing.)

Table A5.9: Impact of situation on perceived gain and sacrifice from the innovation (Australia, France, and Singapore)

Australia (perceived sacrifice)	T value	N	Eta square	P
Drinking alone with a meal	1.106	138	0.008	0.27
Drinking with friends at a restaurant	-0.59	138	0.002	0.55
Business lunch	1.608	138	0.018	0.11
Drinking when pregnant	4.26	138	0.116	0.00
Drinking with company on a special occasion	-2.016	138	0.028	0.00
Drinking alone to relax after work	-0.469	138	0.001	0.64
Australia (perceived gain)	T value	N	Eta square	
Drinking alone with a meal	4.199	365	0.046	0.00
Drinking with friends at a restaurant	-1.09	365	0.003	0.27
Business lunch	0.59	365	0.000	0.55
Drinking when pregnant	5.866	365	0.086	0.00
Drinking with company on a special occasion	-1.4	365	0.005	0.16
Drinking alone to relax after work	3.291	365	0.028	0.001
Singapore (perceived sacrifice)	T value	N	Eta square	
Drinking alone with a meal	0	106	0	1.00
Drinking with friends at a restaurant	-2.011	106	0.037	0.047
Business lunch	-0.96	106	0.008	0.337
Drinking when pregnant	2.443	106	0.053	0.01
Drinking with company on a special occasion	-2.623	106	0.061	0.01
Drinking alone to relax after work	-0.5		-0.333	0.60
Singapore (perceived gain)	T value	N	Eta square	
Drinking alone with a meal	7.29	400	0.117	0.00
Drinking with friends at a restaurant	-2.092	400	0.010	0.03
Business lunch	3.616	400	0.031	0.00
Drinking when pregnant	12.958	400	0.296	0.00
Drinking with company on a special occasion	-6.062	400	0.084	0.00
Drinking alone to relax after work	3.118	400	0.023	0.002
France (Perceived sacrifice)	T value	N	Eta square	
Drinking alone with a meal	3.927	183	0.078	0.00
Drinking with friends at a restaurant	-1.7	183	0.015	0.08
Business lunch	2.964	183	0.046	0.003
Drinking when pregnant	8.829	183	0.299	0.00
Drinking with company on a special occasion	-2.438	183	0.031	0.01
Drinking alone to relax after work	3.414	183	0.060	0.001
France (perceived gain)	T value	N	Eta square	
Drinking alone with a meal	5.047	325	0.072	0.00
Drinking with friends at a restaurant	-0.24	325	0.000	0.80
Business lunch	0.056	325	9.678	0.90
Drinking when pregnant	6.102	325	0.103	0.00
Drinking with company on a special occasion	-0.06	325	1.111	0.90
Drinking alone to relax after work	6.839	325	0.126	0.00

Appendix 5.4: Past orientation as a moderator (Australia)

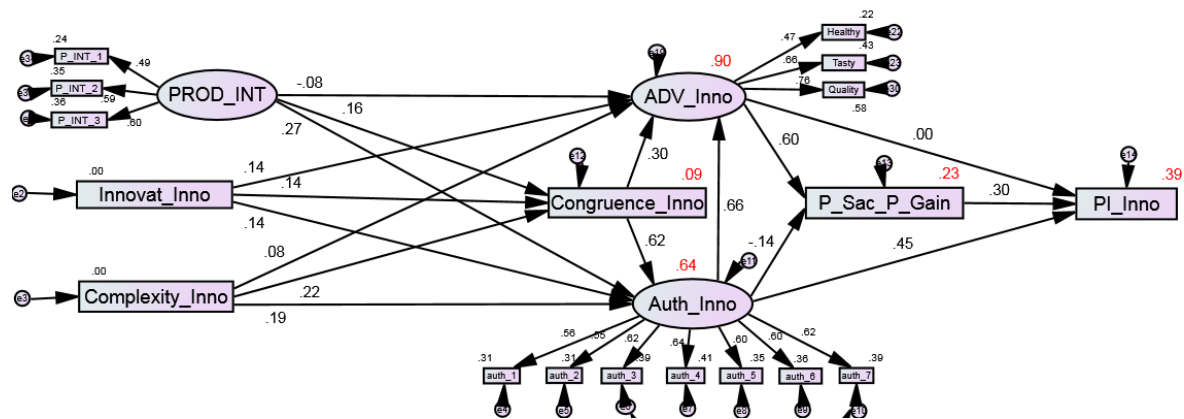


Figure A5.9: Path model for low past orientation

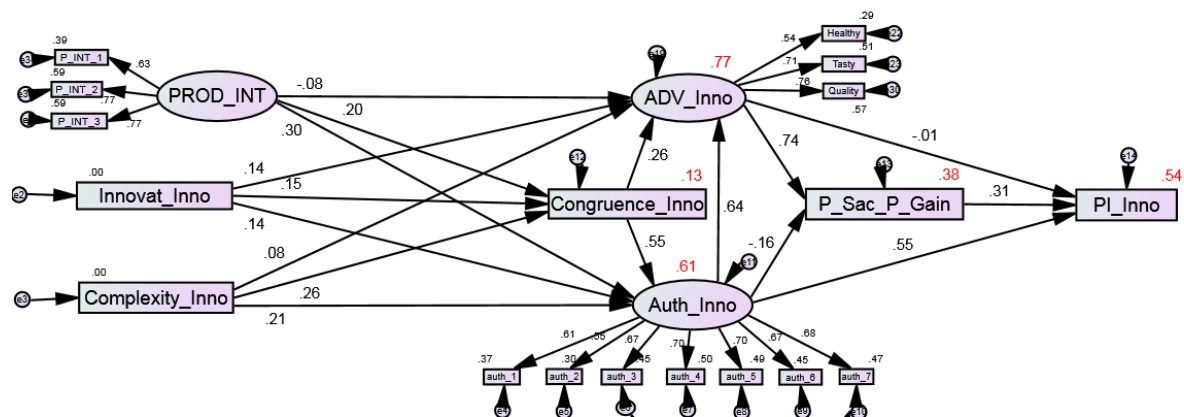


Figure A5.10: Path model for high past orientation

Table A5.10: Model Estimation and Critical Ratios

	Low PO		High PO		CR
	Estimate	p	Estimate	p	
Auth_Inno <---PROD_INT	0.21	0.00	0.34	0.00	2.203**
P_Sac_P_Gain <--- Auth_Inno	-0.18	0.54	-0.08	0.52	0.411
PI_Inno <--- Auth_Inno	0.78	0.01	0.60	0.00	-1.289

Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10
E = Estimate; CR = critical ratios

Appendix 5.5: Past orientation as a moderator (Singapore)

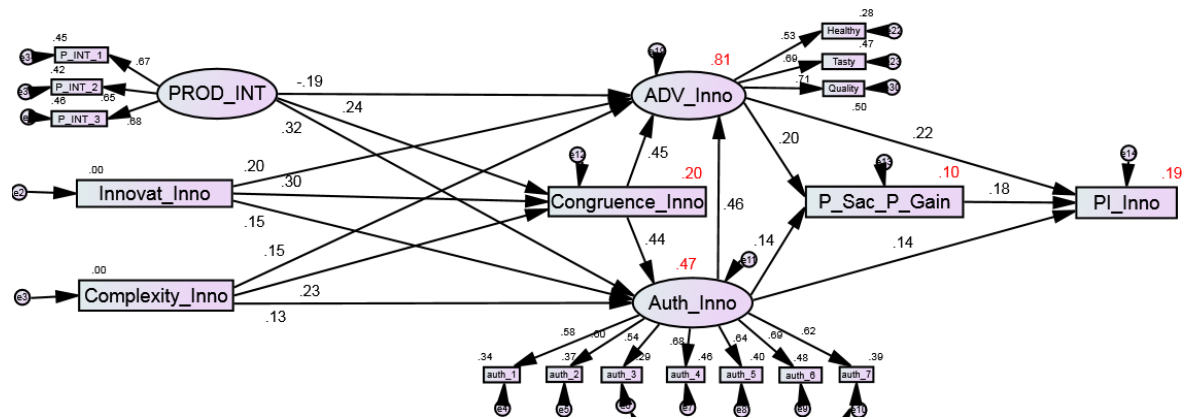


Figure A5.11: Path model for low past orientation

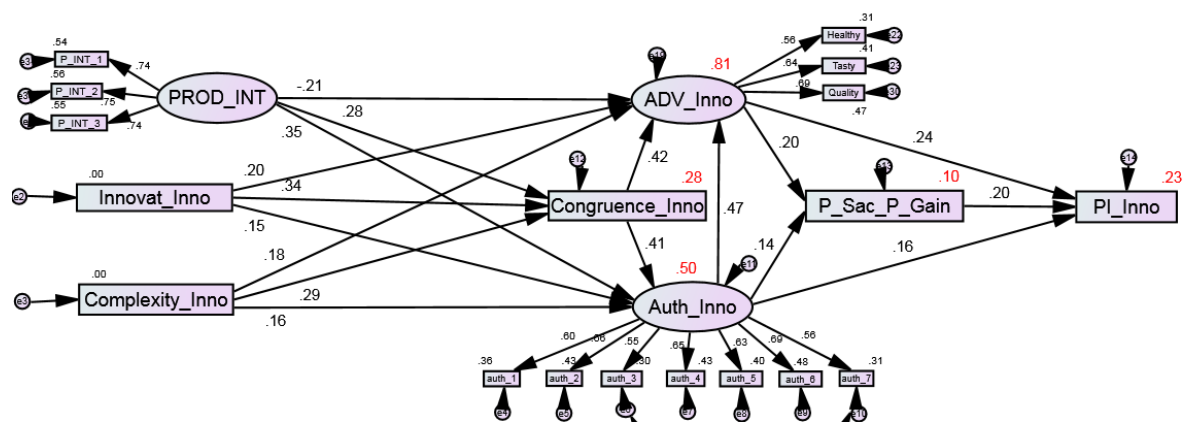


Figure A5.12: Path model for high past orientation

Table A5.11: Model Estimation and Critical Ratios

	Low PO		High PO		CR
	Estimate	p	Estimate	p	
Auth_Inno <---PROD_INT	0.23	0.00	0.40	0.00	1.85*
P_Sac_P_Gain <--- Auth_Inno	0.04	0.71	0.22	0.05	0.981
PI_Inno <--- Auth_Inno	0.19	0.05	0.17	0.12	-0.570

Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10
E = Estimate; CR = critical ratios

Appendix 5.6: Past orientation as a moderator (France)

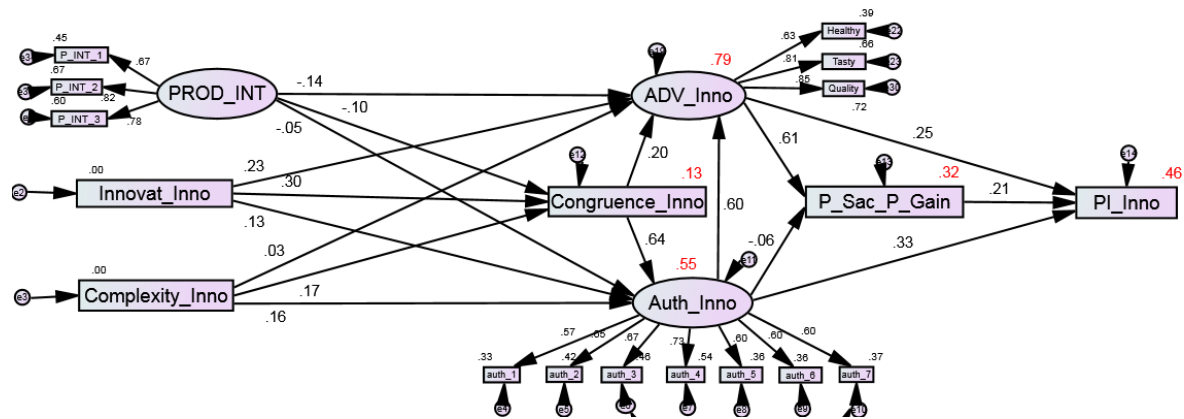


Figure A5.13: Path model for low past orientation

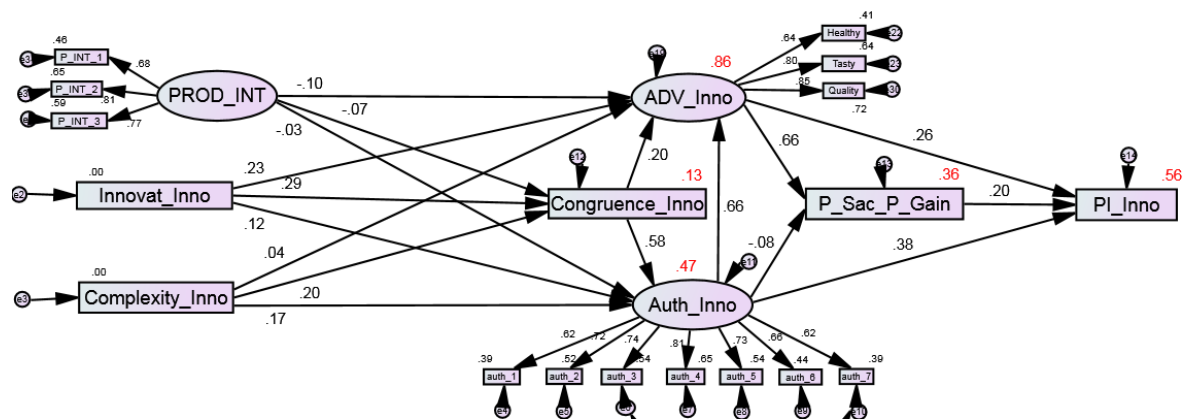


Figure A5.14: Path model for high past orientation

Table A5.12: Model Estimation and Critical Ratios

	Low PO		High PO		CR
	Estimate	p	Estimate	p	
Auth_Inno <--- PROD_INT	-0.09	0.10	0.02	0.73	1.182
P_Sac_P_Gain <--- Auth_Inno	-0.09	0.59	0.00	0.98	0.467
PI_Inno <--- Auth_Inno	0.28	0.06	0.44	0.00	0.434
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10					
E = Estimate; CR = critical ratios					

Appendix 5.7: Involvement as a moderator (Australia)

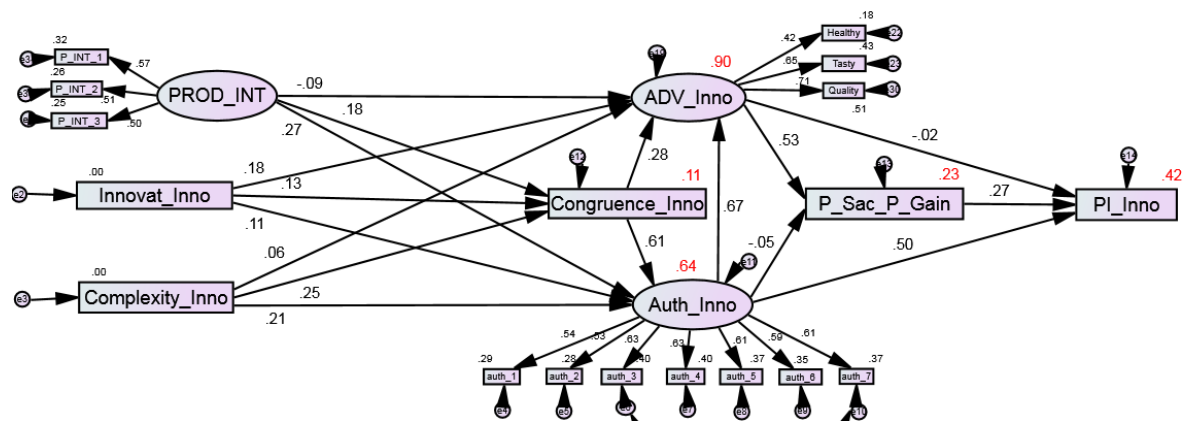


Figure A5.15: Path model for low involvement

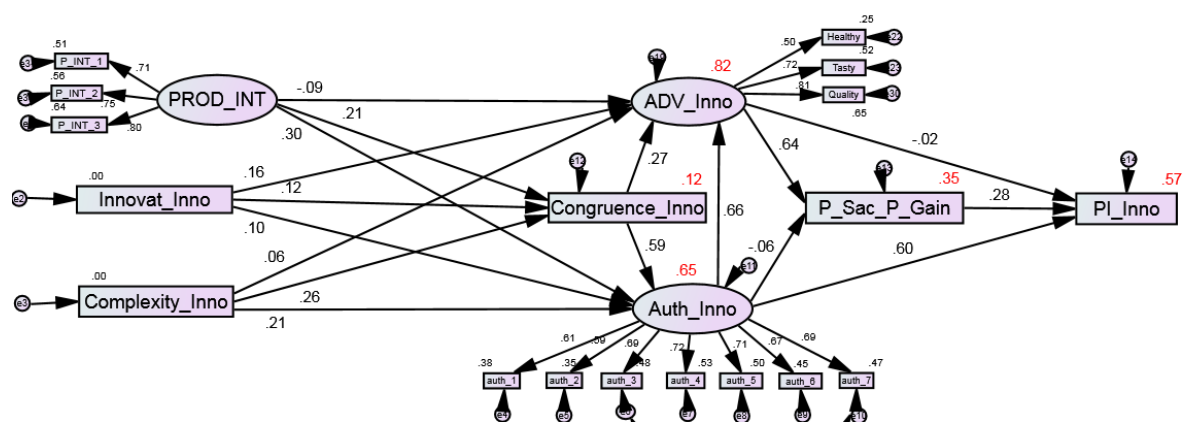


Figure A5.16: Path model for high involvement

Table A5.13: Model Estimation and Critical Ratios

	Low Involvement		High Involvement		CR
	Estimate	p	Estimate	p	
P_Sac_P_Gain <--- Auth_Inno	-0.61	0.15	0.16	0.23	1.634
PI_Inno <--- Auth_Inno	0.98	0.01	0.58	0.00	-1.537
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10 E = Estimate; CR = critical ratios					

Appendix 5.8: Involvement as a moderator (Singapore)

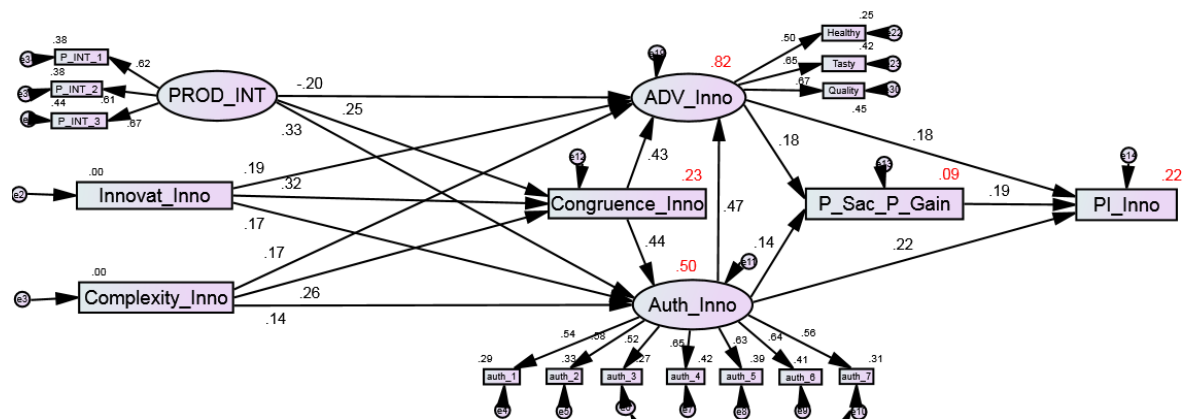


Figure A5.17: Path model for low involvement

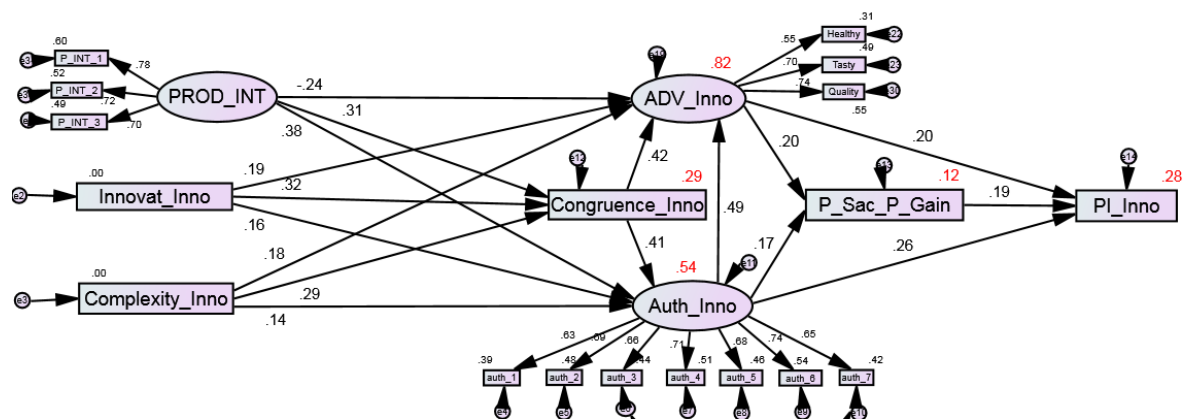


Figure A5.18: Path model for high involvement

Table A5.14: Model Estimation and Critical Ratios

	Low Involvement		High Involvement		CR
	Estimate	p	Estimate	p	
P_Sac_P_Gain <--- Auth_Inno	0.18	0.16	0.18	0.06	-0.179
PI_Inno <--- Auth_Inno	-0.14	0.26	0.46	0.00	3.496***
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10 E = Estimate; CR = critical ratios					

Appendix 5.9: Involvement as a moderator (France)

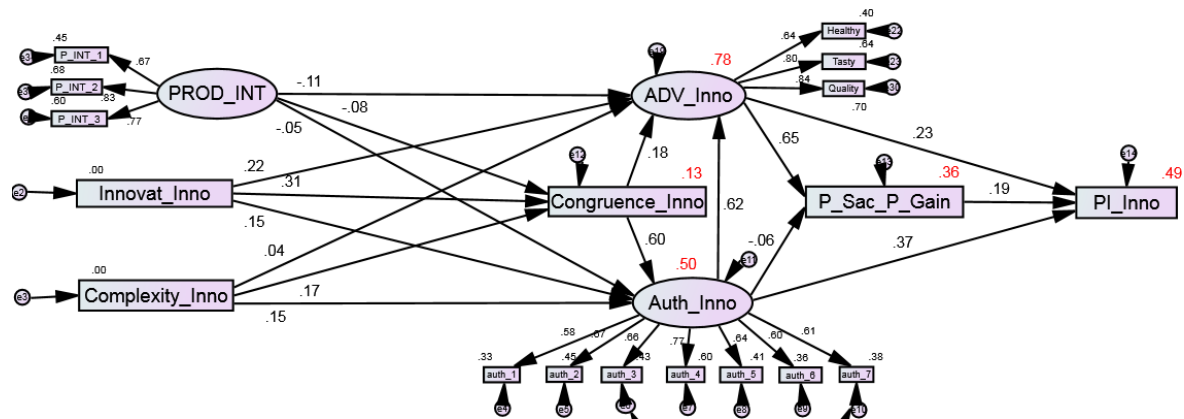


Figure A5.19: Path model for low involvement

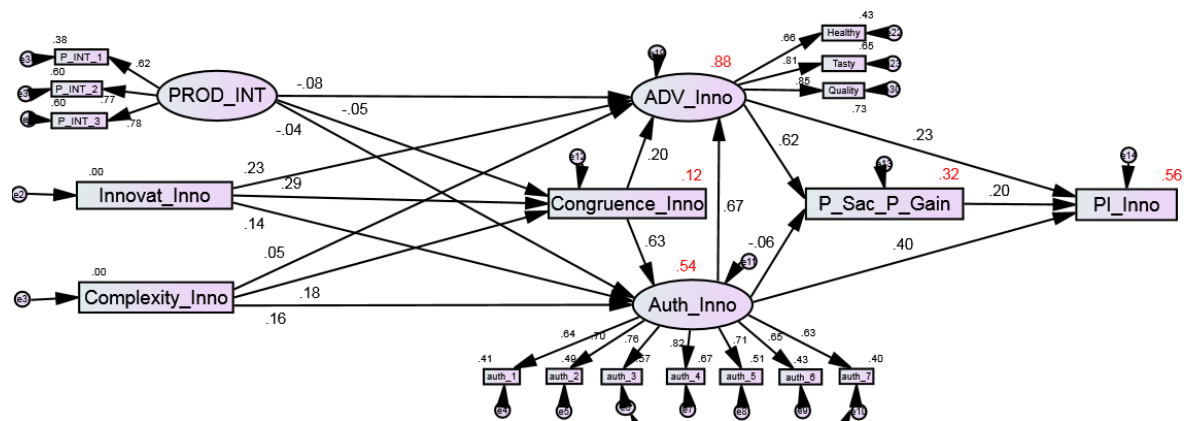


Figure A5.20: Path model for high involvement

Table A5.15: Model Estimation and Critical Ratios

	Low Involvement		High Involvement		CR
	Estimate	p	Estimate	p	
P_Sac_P_Gain <--- Auth_Inno	0.01	0.96	0.08	0.68	0.303
PI_Inno <--- Auth_Inno	0.27	0.01	0.62	0.00	1.360
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10 E = Estimate; CR = critical ratios					

Appendix 5.10: Knowledge as a moderator (Australia)

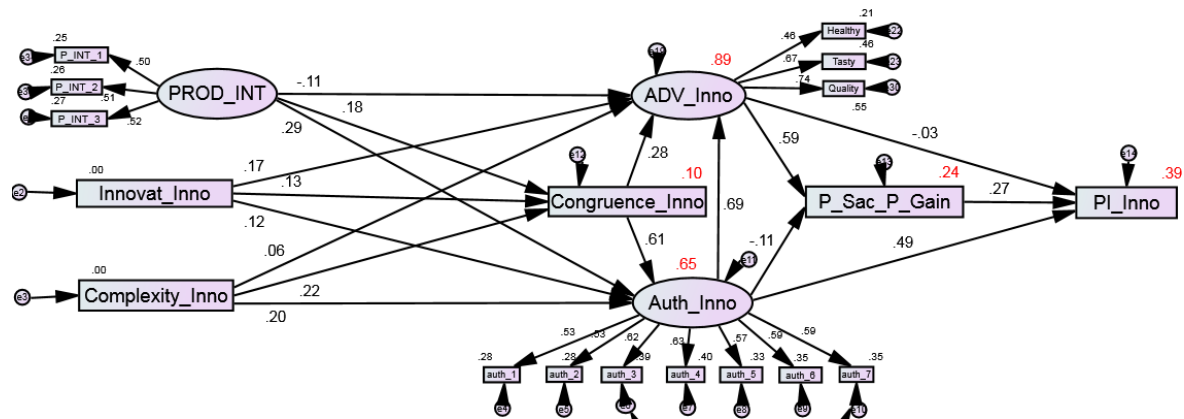


Figure A5.21: Path model for low knowledge

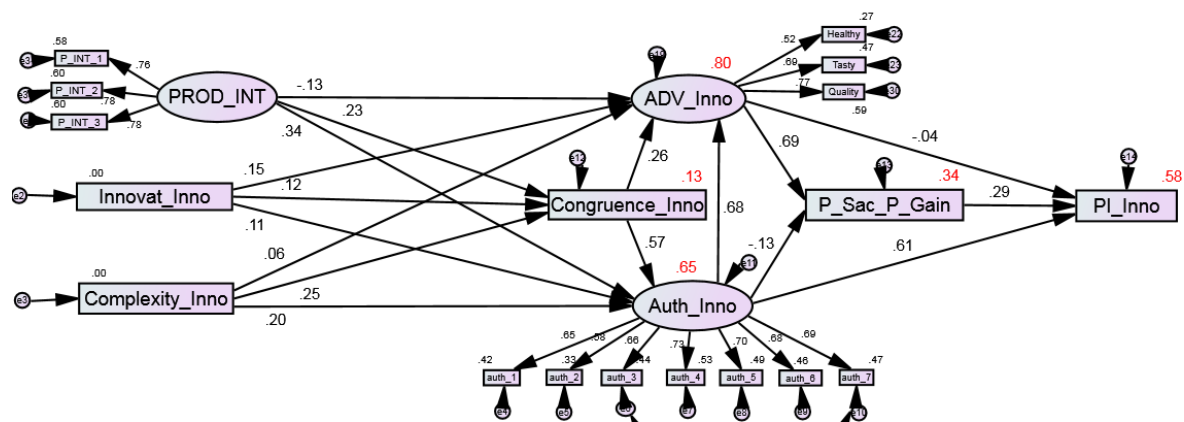


Figure A5.22: Path model for high knowledge

Table A5.16: Model Estimation and Critical Ratios

	Low Knowledge		High Knowledge		CR
	Estimate	p	Estimate	p	
P_Sac_P_Gain <--- Auth_Inno	-0.16	0.53	-0.02	0.89	0.528
PI_Inno <--- Auth_Inno	0.55	0.01	0.62	0.00	-0.625
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10					
E = Estimate; CR = critical ratios					

Appendix 5.11: Knowledge as a moderator (Singapore)

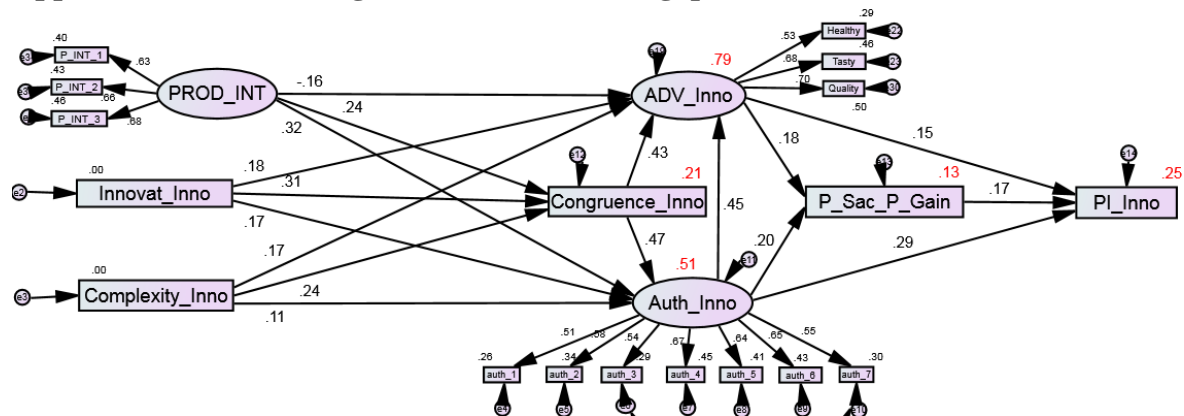


Figure A5.23: Path model for low knowledge

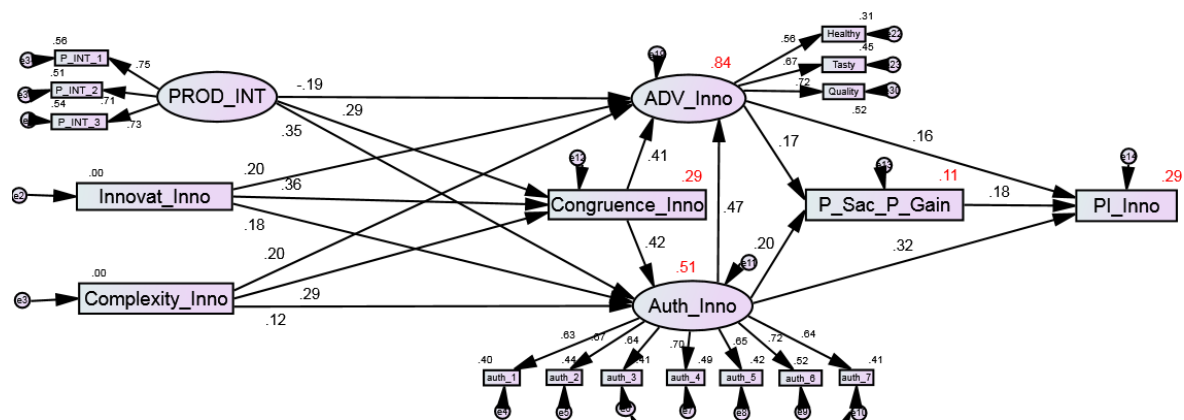


Figure A5.24: Path model for high knowledge

Table A5.17: Model Estimation and Critical Ratios

	Low Knowledge		High Knowledge		CR
	Estimate	p	Estimate	p	
P_Sac_P_Gain <--- Auth_Inno	0.13	0.30	0.23	0.02	0.431
PI_Inno <--- Auth_Inno	0.03	0.79	0.52	0.00	2.527**
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10 E = Estimate; CR = critical ratios					

Appendix 5.12: Knowledge as a moderator (France)

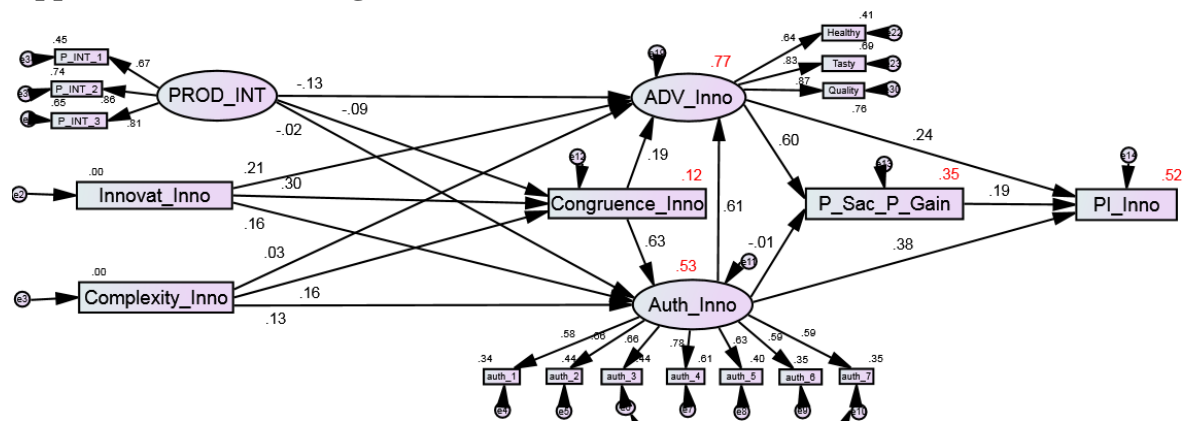


Figure A5.25: Path model for low knowledge

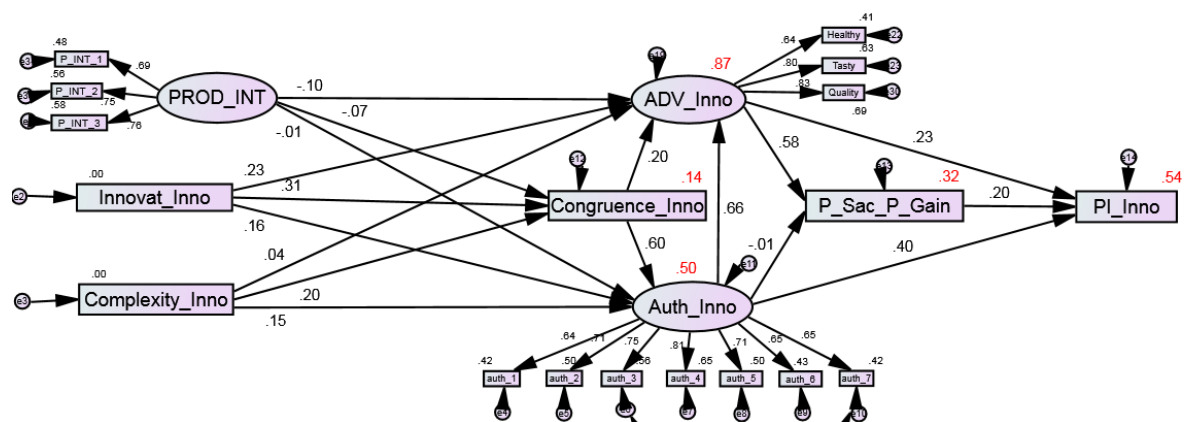


Figure A5.26: Path model for high knowledge

Table A5.18: Model Estimation and Critical Ratios

	Low Knowledge		High Knowledge		CR
	Estimate	p	Estimate	p	
P_Sac_P_Gain <--- Auth_Inno	0.10	0.36	0.00	0.98	-0.580
PI_Inno <--- Auth_Inno	0.27	0.01	0.70	0.00	1.375
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10 E = Estimate; CR = critical ratios					

Appendix 5.13: CFA – Wine low alcohol Australia

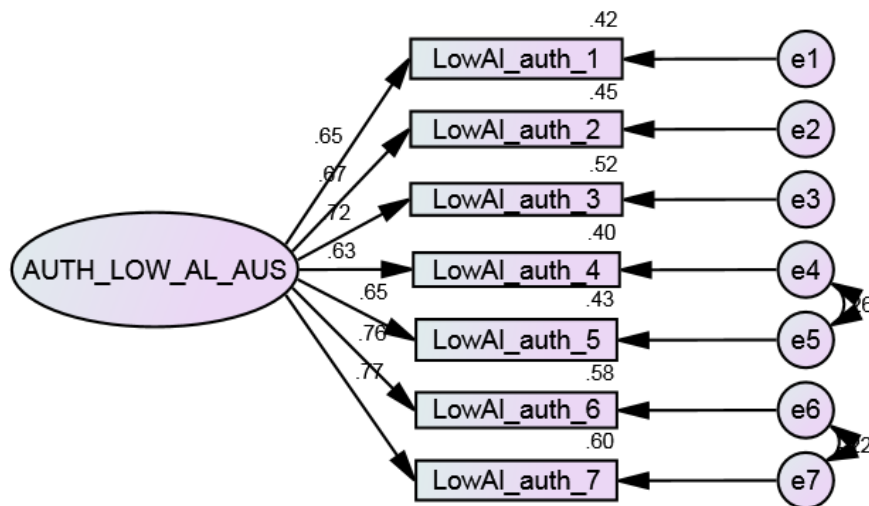


Figure A5.27: Hypothesized one factor CFA model of low alcohol wine authenticity perceptions for the Australian sample

Table A5.19: Goodness of fit indices –Authenticity perceptions of Low Alcohol Wine in Australia

χ^2/df	p	CFI	GFI	TLI	RMSEA
2.226	0.009	0.989	0.985	0.981	0.049

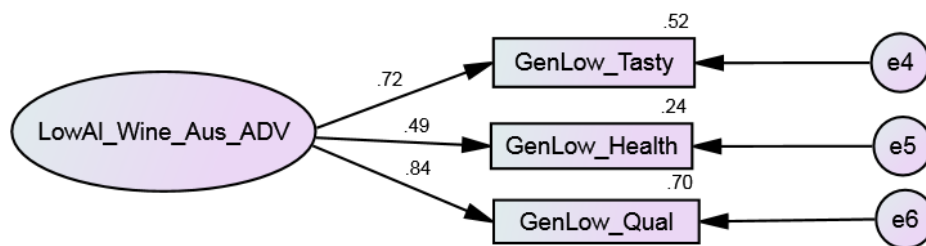


Figure A5.28: Hypothesized one factor CFA model of low alcohol wine advantages for the Australian sample

Table A5.20: Goodness of fit indices –Advantages of low alcohol wine in Australia

χ^2/df	p	CFI	GFI	TLI	RMSEA
0.224	0.636	1.00	1.00	1.00	0.000

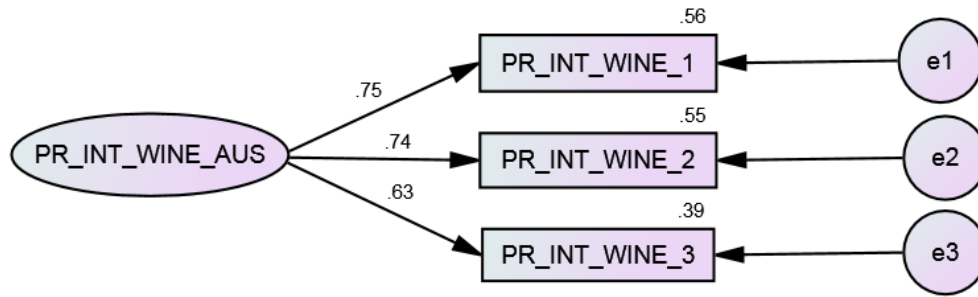


Figure A5.29: Hypothesized one factor CFA model of wine integration in Australia

Table A5.21: Goodness of fit indices – Wine integration (traditionality perceptions) in Australia

χ^2/df	p	CFI	GFI	TLI	RMSEA
0.323	0.57	1.00	0.997	1.00	0.00

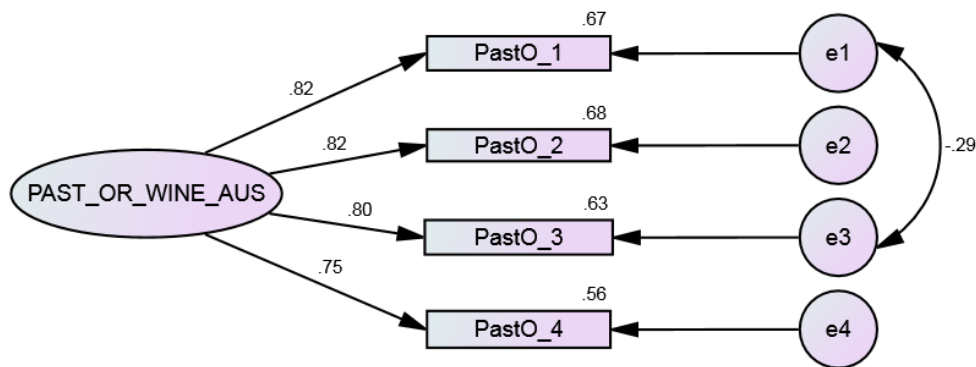


Figure A5.30: Hypothesized one factor CFA model of consumer past orientation for the Australian sample

Table A5.22: Goodness of fit indices – Consumer past orientation for the Australian sample

χ^2/df	p	CFI	GFI	TLI	RMSEA
0.254	0.614	1.00	0.997	1.00	0.00

Appendix 6.1: CFA for the whole TAMs sample

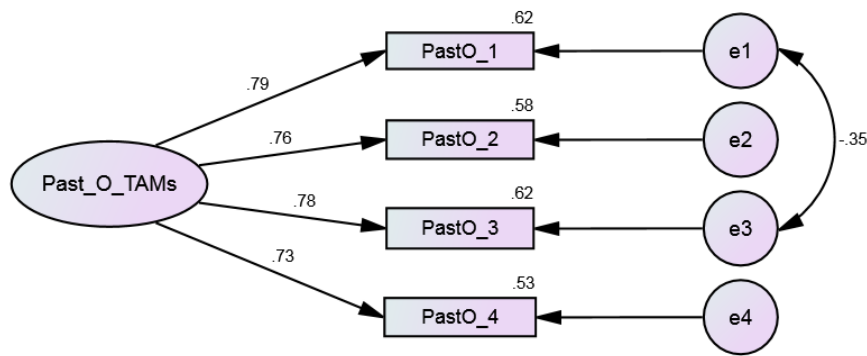


Figure A6.1: Hypothesized one factor CFA model of Past Orientation

Table A6.1: Factor Loadings of the One-factor model of Past Orientation

<i>Item</i>	<i>L</i>	<i>CA</i>	<i>VE</i>
PastO_1 <i>'I like possessions that have a connection with the past'</i>	0.79	0.83	0.62
PastO_2 <i>'I purchase products that remind me of my past'</i>	0.76		0.58
PastO_3 <i>'I strongly long to be part of the time period from which the product came from'</i>	0.78		0.62
PastO_4 <i>'I have positive attitudes about the time period from which the product came'</i>	0.73		0.53
L = Loadings CA = Cronbach' alpha VE = Variance extracted			

Table A6.2: Goodness of fit indices - Past Orientation

χ^2/df	P	CFI	GFI	TLI	RMSEA
4.67	0.03	0.99	0.99	0.98	0.05

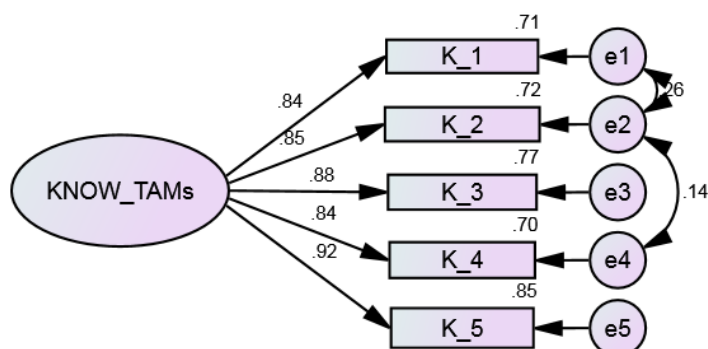


Figure A6.2: Hypothesized one factor CFA model of TAMs knowledge

Table A6.3: Factor Loadings of the One-factor Model of TAMs knowledge

<i>Item</i>	<i>L</i>	<i>CA</i>	<i>VE</i>
K_1 <i>'I feel confident about my knowledge of TAMs'</i>	0.84	0.94	0.71
K_2 <i>'I feel that I know how to judge the quality of TAMs'</i>	0.85		0.72
K_3 <i>'Among my friends, I'm considered a TAMs 'expert'</i>	0.88		0.77
K_4 <i>'I know most of the TAMs around in shops'</i>	0.84		0.70
K_5 <i>'When it comes to TAMs, I really know a lot'</i>	0.92		0.85
L = Loadings CA = Cronbach' alpha VE = Variance extracted			

Table A6.4: Goodness of fit indices – TAMs knowledge

χ^2/df	p	CFI	GFI	TLI	RMSEA
3.47	0.02	0.99	0.99	0.99	0.04

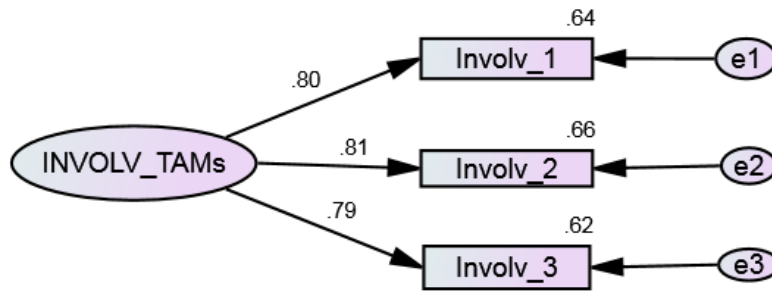


Figure A6.3: Hypothesized one factor CFA model of TAMs involvement

Table A6.5: Factor Loadings of the One-factor Model of TAMs involvement

<i>Item</i>	<i>L</i>	<i>CA</i>	<i>VE</i>
I_1 'I have a strong interest in TAMs'	0.80	0.84	0.64
I_2 'TAMs are important to me in my lifestyle'	0.81		0.66
I_3 'Drinking TAMs gives me pleasure'	0.79		0.62
L = Loadings CA = Cronbach' alpha VE = Variance extracted			

Table A6.6: Goodness of fit indices – TAMs Involvement

χ^2/df	p	CFI	GFI	TLI	RMSEA
0.003	0.95	1.00	1.00	1.00	0.00

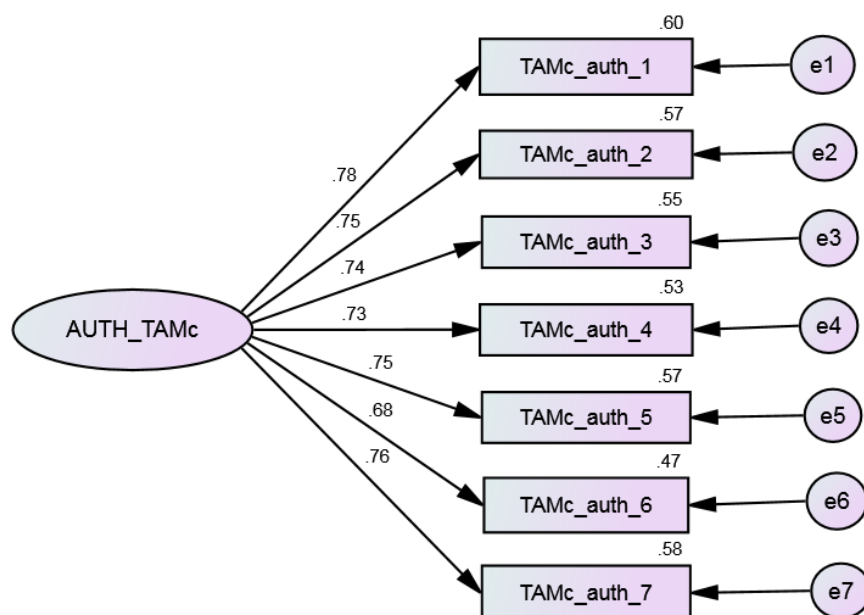


Figure A6.4: Hypothesized one factor CFA model of Authenticity of the innovated product (TAMc)

Table A6.7: Factor Loadings of the One-factor Model of the Authenticity of the innovated product (TAMc)

<i>Item</i>	<i>L</i>	<i>CA</i>	<i>VE</i>
TAMc_auth_1 <i>'I think TAMc is an original product'</i>	0.78	0.90	0.60
TAMc_auth_2 <i>'TAMc has features that cannot be imitated'</i>	0.75		0.57
TAMc_auth_3 <i>'TAMc makes use of hand made processes'</i>	0.74		0.55
TAMc_auth_4 <i>'TAMc fits in with my expectations'</i>	0.73		0.53
TAMc_auth_5 <i>'Features of TAMc are consistent with what is in my memory'</i>	0.75		0.57
TAMc_auth_6 <i>'TAMc has characteristics that can be passed from generation to generation'</i>	0.68		0.47
TAMc_auth_7 <i>'TAMc is pure (produced from one source)'</i>	0.76		0.58
L = Loadings CA = Cronbach' alpha VE = Variance extracted			

Table A6.8: Goodness of fit indices – Authenticity of the Innovated Product (TAMc)

χ^2/df	p	CFI	GFI	TLI	RMSEA
2.71	0.001	0.99	0.99	0.99	0.03

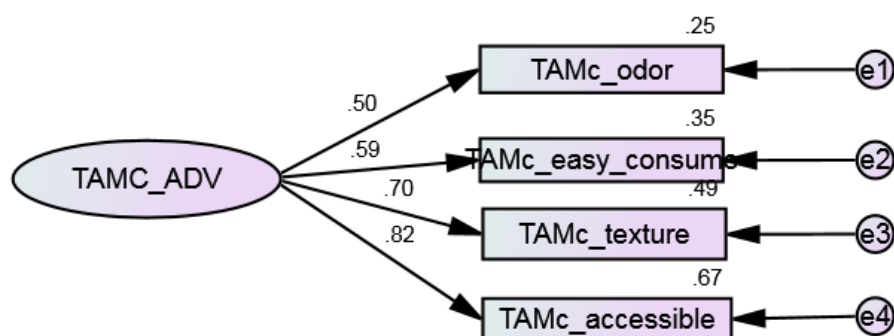


Figure A6.5: Hypothesized one factor CFA model of advantages of the innovated product (TAMc)

Table A6.9: Factor Loadings of the One-factor Model of the Advantages of the innovated product (TAMc)

<i>Item</i>	<i>L</i>	<i>CA</i>	<i>VE</i>
TAMc_odor <i>'I think TAMc has a more acceptable odor'</i>	0.50	0.74	0.25
TAMc_easy_consume <i>'I think TAMc is easier to consumer'</i>	0.59		0.35
TAMc_texture <i>'I think TAMc has a more acceptable texture'</i>	0.70		0.49
TAMc_accessible <i>'I think TAMc is more accessible'</i>	0.82		0.67
L = Loadings CA = Cronbach' alpha VE = Variance extracted			

Table A6.10: Goodness of fit indices – Advantages of the Innovated Product (TAMc)

χ^2/df	p	CFI	GFI	TLI	RMSEA
0.15	0.86	1.00	1.00	1.00	0.00

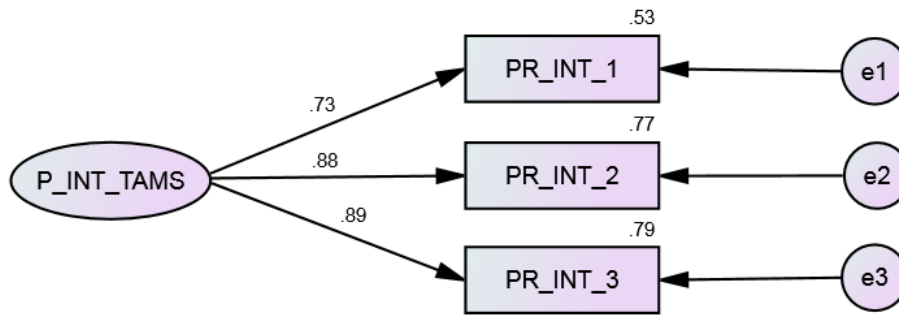


Figure A6.6: Hypothesized one factor CFA model of TAMs integration in the respective culture

Table A6.11: Factor Loadings of the One-factor Model of TAMs integration

<i>Item</i>	<i>L</i>	<i>Ca</i>	<i>VE</i>
PR_INT_1 <i>'TAMs have always been one of the most popular products in Australia'</i>	0.73	0.87	0.53
PR_INT_2 <i>'Consuming TAMs has always been traditional in my culture'</i>	0.88		0.77
PR_INT_3 <i>'Since I was a child I have seen people consume TAMs'</i>	0.89		0.79
L = Loadings CA = Cronbach' alpha VE = Variance extracted			

Table A6.12: Goodness of fit indices – Product Integration (TAMs)

χ^2/df	P	CFI	GFI	TLI	RMSEA
0.003	0.95	1.00	1.00	1.00	0.00

Appendix 6.2: CFA – TAMs Australia

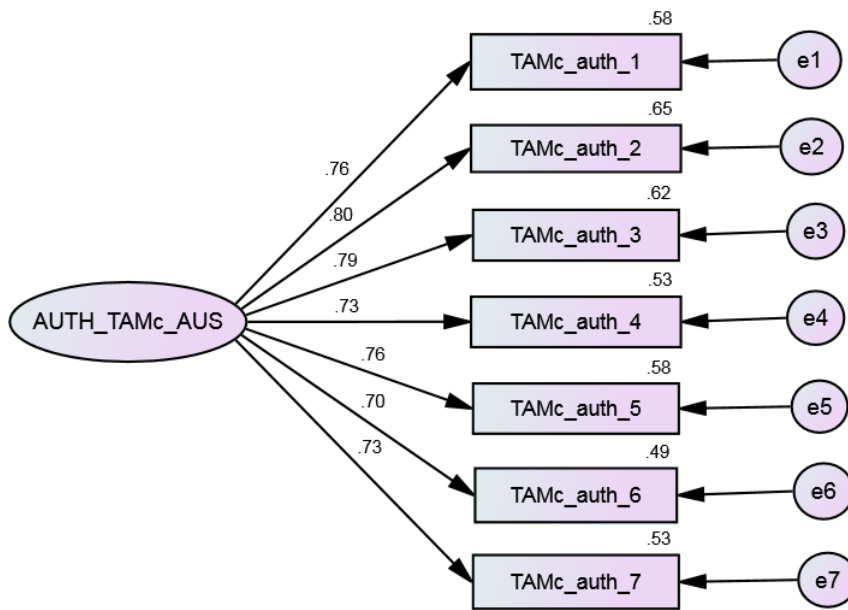


Figure A6.7: Hypothesized one factor CFA model of TAMc authenticity perceptions for the Australian sample

Table A6.13: Goodness of fit indices –Authenticity perceptions of TAMc in Australia

χ^2/df	p	CFI	GFI	TLI	RMSEA
1.58	0.075	0.994	0.984	0.992	0.038

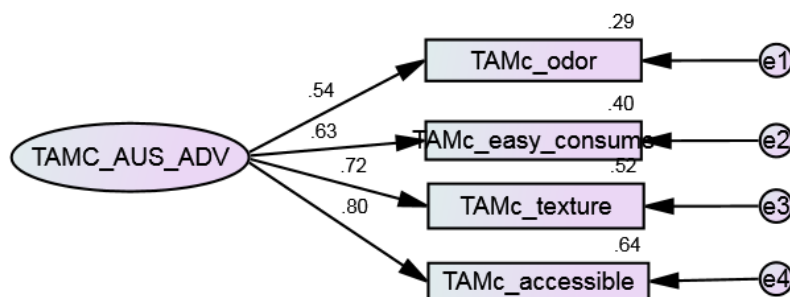


Figure A6.8: Hypothesized one factor CFA model of TAMc advantages for the Australian sample

Table A6.14: Goodness of fit indices –Advantages of TAMc in Australia

χ^2/df	P	CFI	GFI	TLI	RMSEA
1.66	0.19	0.997	0.996	0.99	0.04

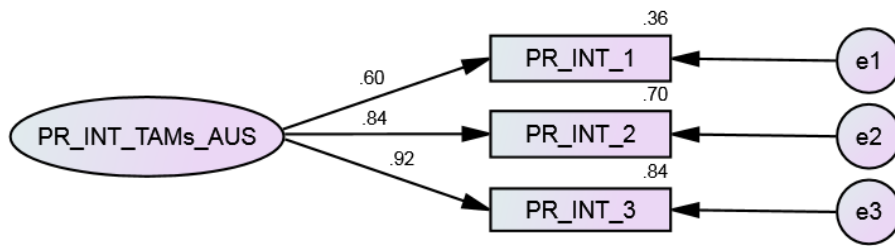


Figure A6.9: Hypothesized one factor CFA model of TAMs integration in Australia

Table A6.15: Goodness of fit indices – TAMs integration (traditionality perceptions) in Australia

χ^2/df	p	CFI	GFI	TLI	RMSEA
0.34	0.56	1.00	0.999	1.00	0.00

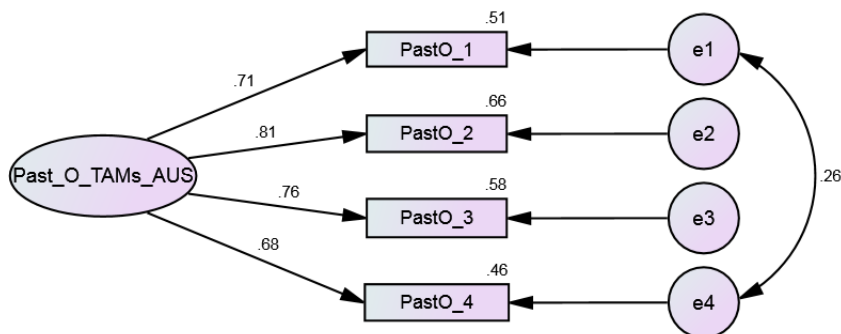


Figure A6.10: Hypothesized one factor CFA model of consumer past orientation for the Australian sample

Table A6.16: Goodness of fit indices – Consumer past orientation for the Australian sample

χ^2/df	p	CFI	GFI	TLI	RMSEA
0.254	0.614	1.00	0.997	1.00	0.00

Appendix 6.3: CFA – TAMs Singapore

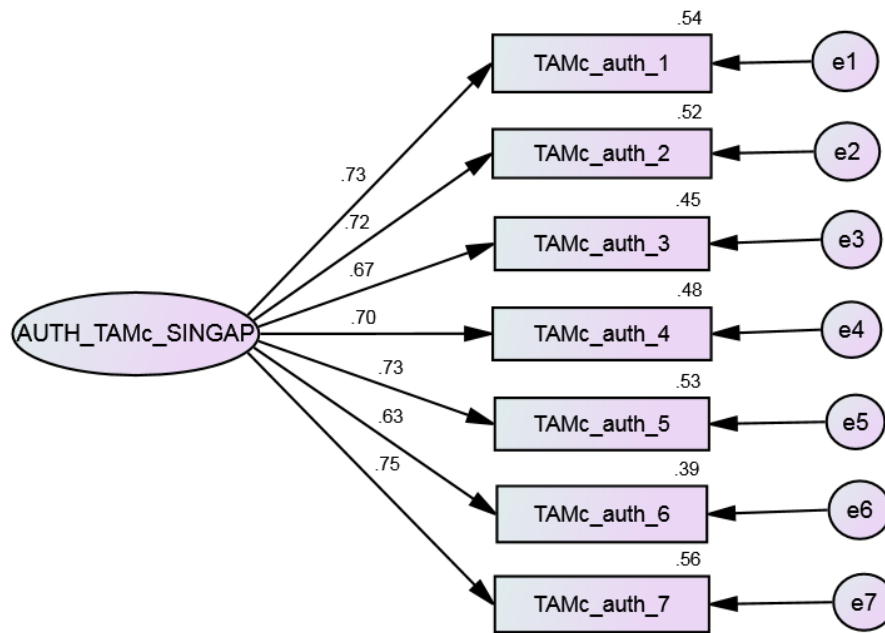


Figure A6.11: Hypothesized one factor CFA model of TAMc authenticity perceptions for the Singaporean sample

Table A6.17: Goodness of fit indices –Authenticity perceptions of TAMc in Singapore

χ^2/df	p	CFI	GFI	TLI	RMSEA
1.47	0.11	0.994	0.986	0.991	0.034

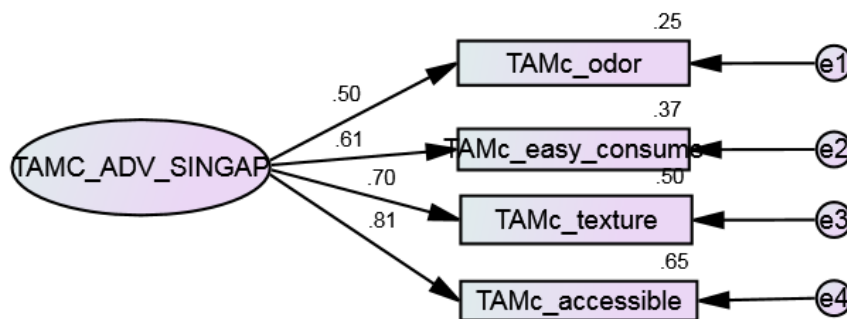


Figure A6.12: Hypothesized one factor CFA model of TAMc advantages for the Singaporean sample

Table A6.18: Goodness of fit indices –Advantages of TAMc in Singapore

χ^2/df	p	CFI	GFI	TLI	RMSEA
0.98	0.34	1.00	0.998	1.00	0.000

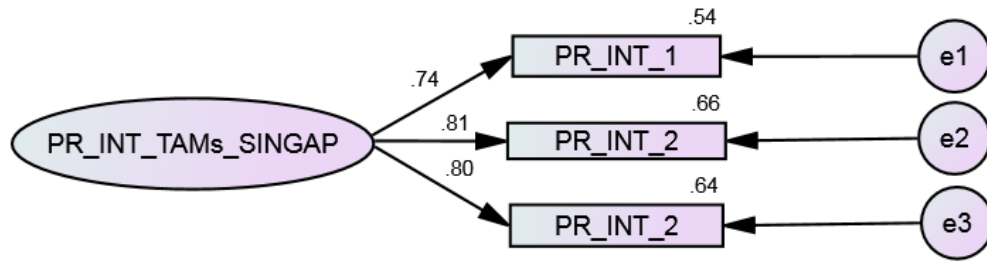


Figure A6.13: Hypothesized one factor CFA model of TAMs integration in Singapore

Table A6.19: Goodness of fit indices – TAMs (traditionality perceptions) in Singapore

χ^2/df	p	CFI	GFI	TLI	RMSEA
0.9	0.34	1.00	0.999	1.00	0.00

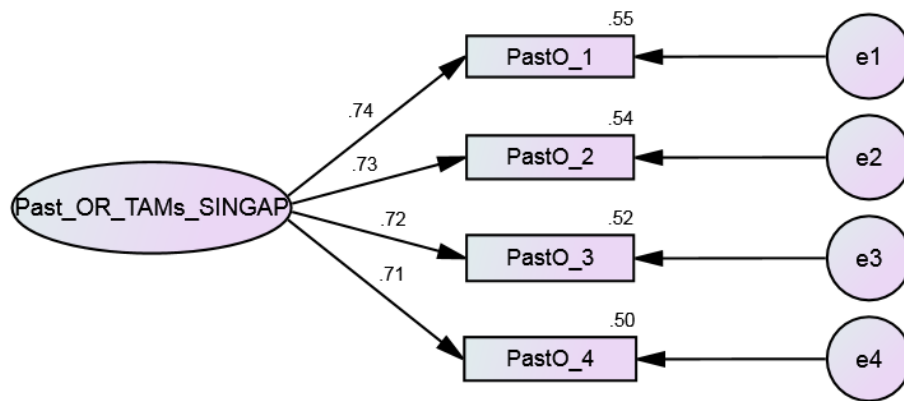


Figure A6.14: Hypothesized one factor CFA model of consumer past orientation for the Singaporean sample

Table A6.20: Goodness of fit indices – Consumer past orientation for the Singaporean sample

χ^2/df	p	CFI	GFI	TLI	RMSEA
2.27	0.103	0.995	0.995	0.986	0.056

Appendix 6.4: CFA – TAMs France

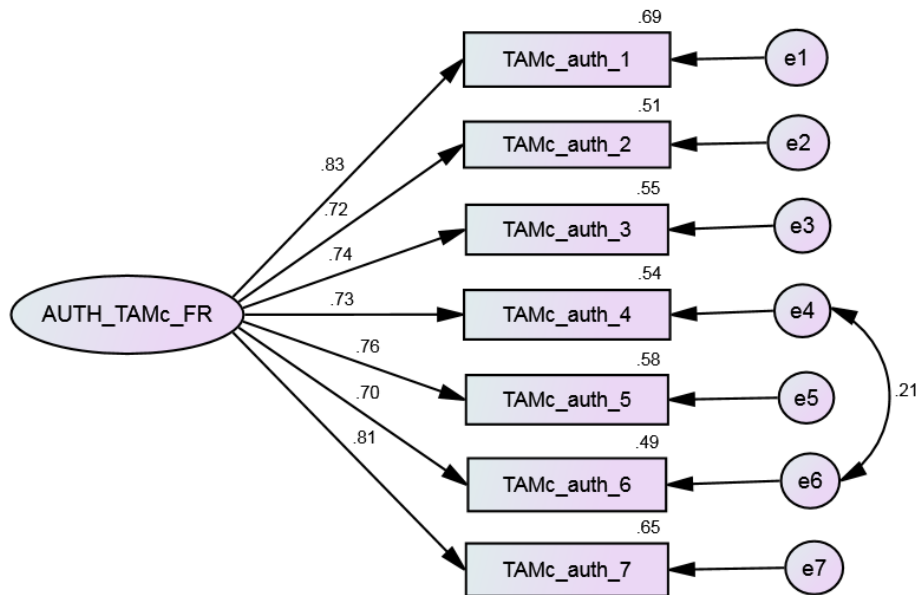


Figure A6.15: Hypothesized one factor CFA model of TAMc authenticity perceptions for the French sample

Table A6.21: Goodness of fit indices –Authenticity perceptions of TAMc in France

χ^2/df	p	CFI	GFI	TLI	RMSEA
2.06	0.013	0.991	0.983	0.986	0.051

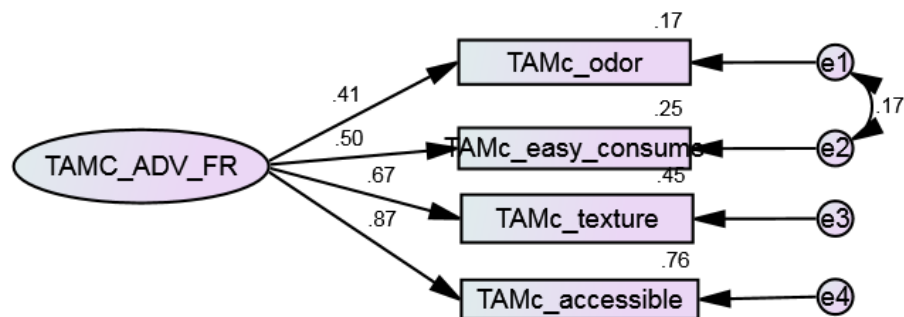


Figure A6.16: Hypothesized one factor CFA model of TAMc advantages for the French sample

Table A6.22: Goodness of fit indices –Advantages of TAMc in France

χ^2/df	p	CFI	GFI	TLI	RMSEA
3.28	0.07	0.993	0.996	0.96	0.07

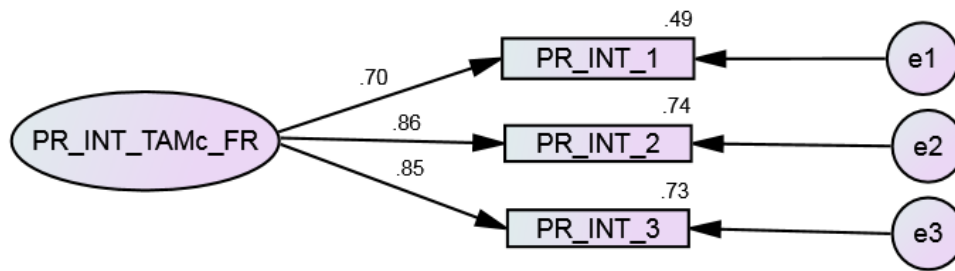


Figure A6.17: Hypothesized one factor CFA model of TAMs integration in France

Table A6.23: Goodness of fit indices – TAMs integration (traditionality perceptions) in France

χ^2/df	p	CFI	GFI	TLI	RMSEA
0.72	0.39	1.00	0.99	1.00	0.00

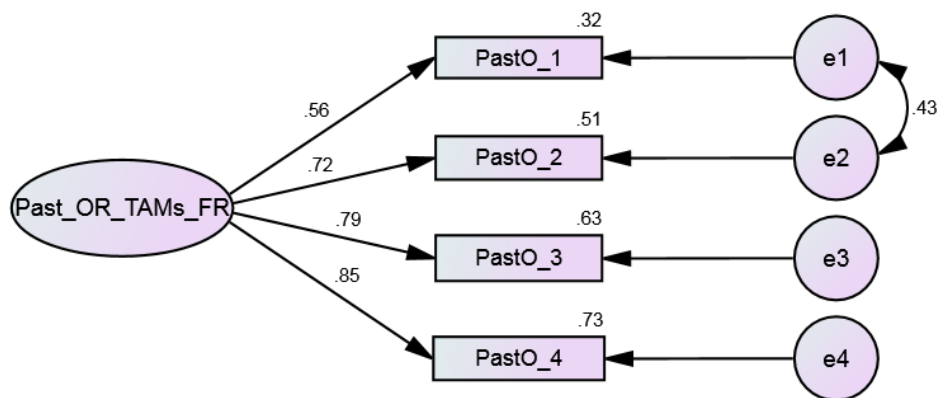


Figure A6.18: Hypothesized one factor CFA model of consumer past orientation for the French sample

Table A6.24: Goodness of fit indices – Consumer past orientation for the French sample

χ^2/df	p	CFI	GFI	TLI	RMSEA
1.80	0.17	0.99	0.998	0.993	0.04

Appendix 6.5: Multigroup Analysis

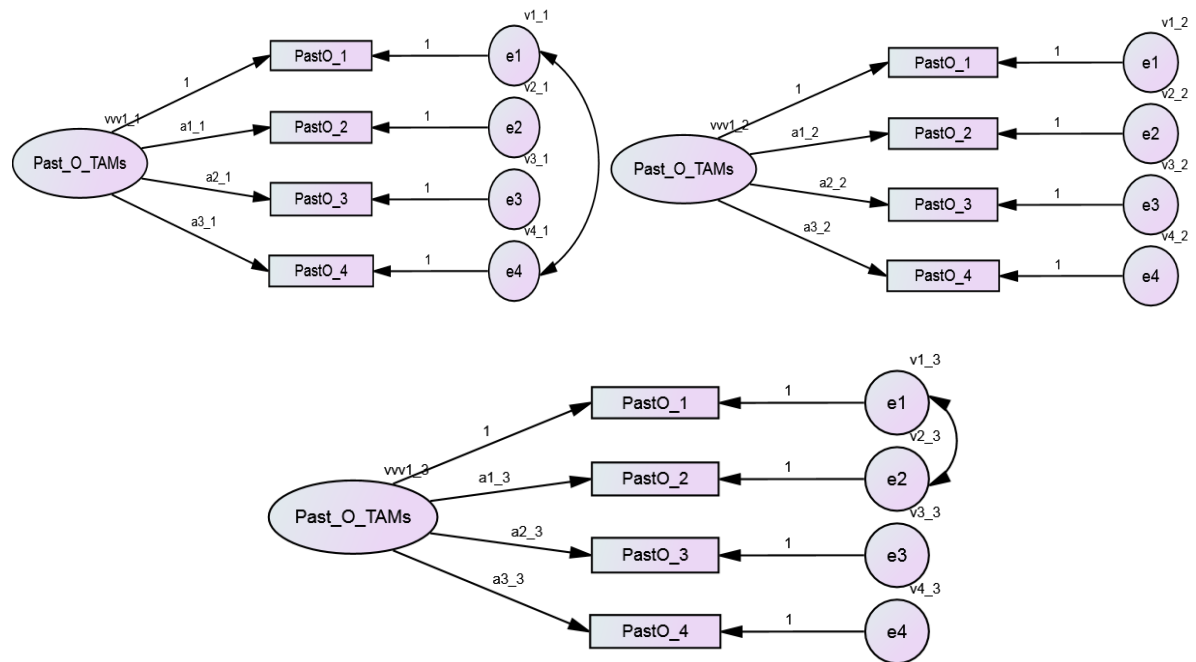


Figure A6.19: Baseline Model for past orientation for Australia, Singapore and France samples

Table A6.25: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	<i>ΔCFI</i>
Hypothesized model	Australian, Singaporean and French TAMs consumers	Unconstrained	0.99	-
Factor loadings constrained equal	Australian, Singaporean and French TAMs consumers	Model 1	0.98	0.01
Factor loadings, variances, and structural covariances constrained equal	Australian, Singaporean and French TAMs consumers	Model 2	0.974	0.006

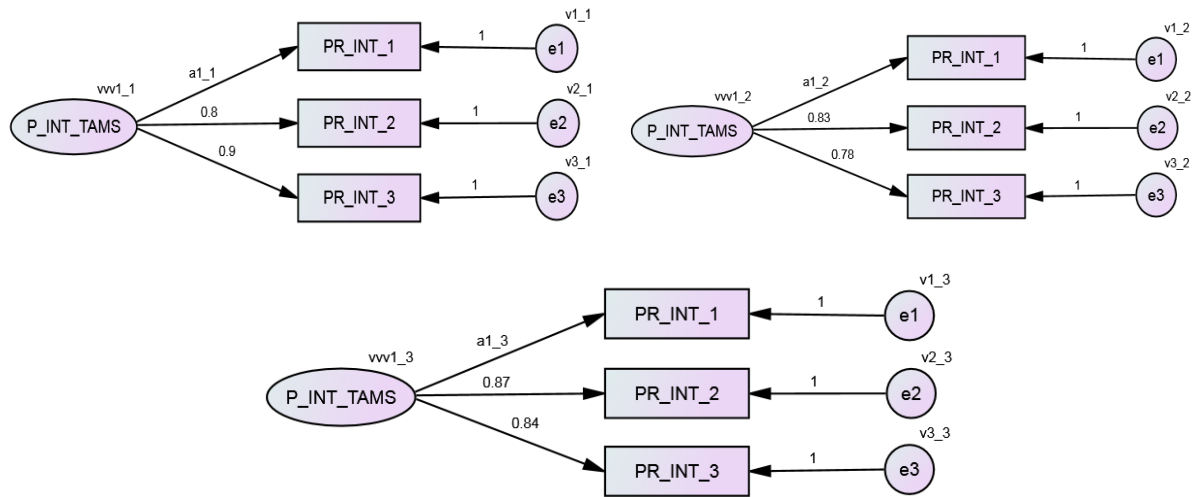


Figure A6.20: Baseline Model for traditionality perceptions (P_INT) for Australia, Singapore and France samples

Table A6.26: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	<i>ΔCFI</i>
Hypothesized model	Australian, Singaporean and French TAMs consumers	Unconstrained	1.00	-
Factor loadings constrained equal	Australian, Singaporean and French TAMs consumers	Model 1	0.99	0.01
Factor loadings, variances, and structural covariances constrained equal	Australian, Singaporean and French TAMs consumers	Model 2	0.94	0.05

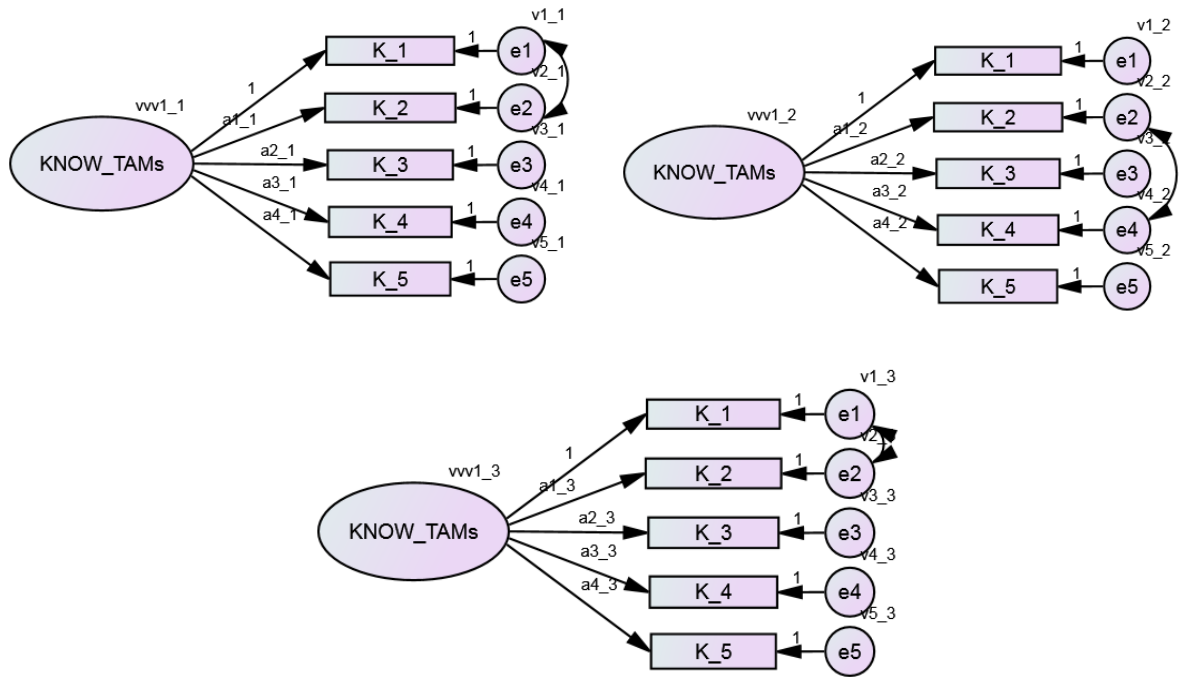


Figure A6.21: Baseline Model for Knowledge for Australia, Singapore and France samples

Table A6.27: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	<i>ΔCFI</i>
Hypothesized model	Australian, Singaporean and French TAMs consumers	Unconstrained	0.996	-
Factor loadings constrained equal	Australian, Singaporean and French TAMs consumers	Model 1	0.996	0.001
Factor loadings, variances, and structural covariances constrained equal	Australian, Singaporean and French TAMs consumers	Model 2	0.994	0.002

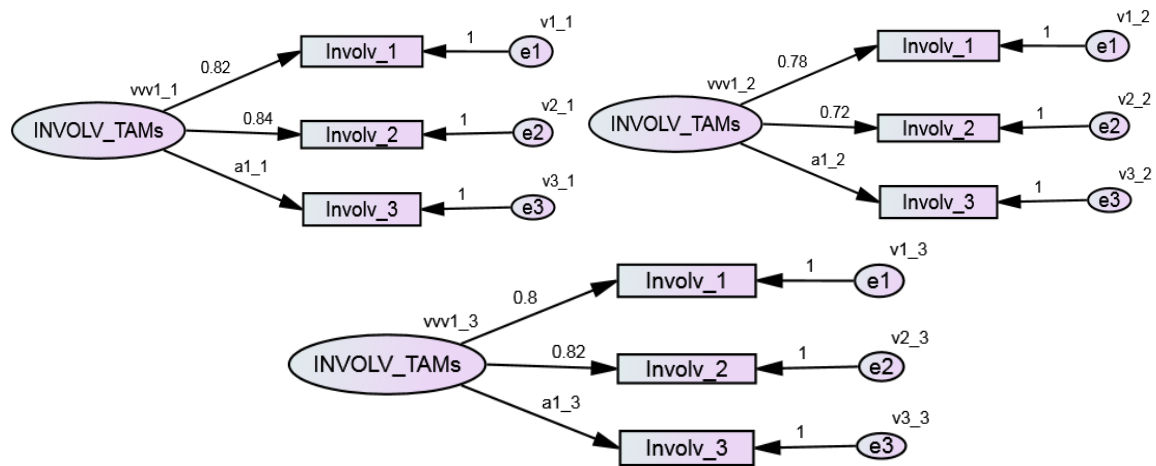


Figure A6.22: Baseline Model for Involvement for Australia, Singapore and France samples

Table A6.28: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	<i>ΔCFI</i>
Hypothesized model	Australian, Singaporean and French TAMs consumers	Unconstrained	1.00	-
Factor loadings constrained equal	Australian, Singaporean and French TAMs consumers	Model 1	1.00	0.00
Factor loadings, variances, and structural covariances constrained equal	Australian, Singaporean and French TAMs consumers	Model 2	0.999	0.001

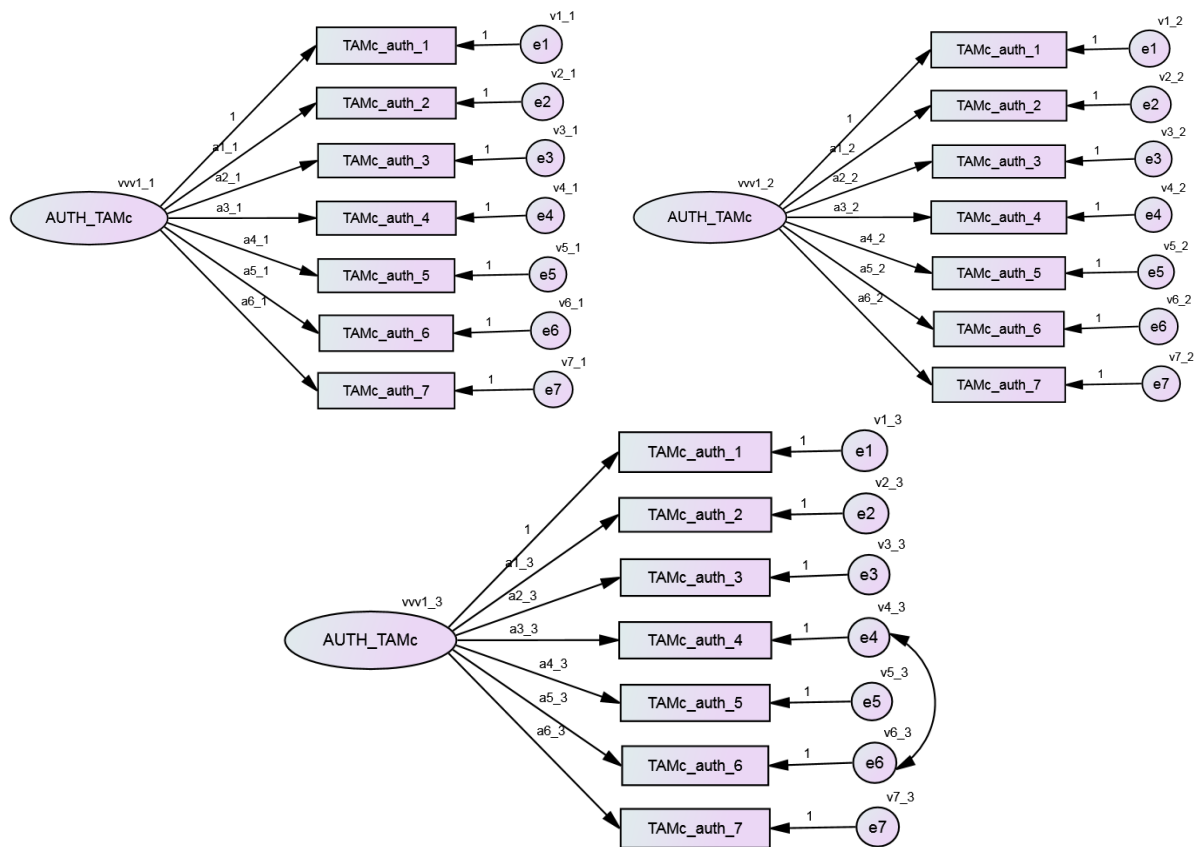


Figure A6.23: Baseline Model for Authenticity of the Innovated product for Australia, Singapore and France samples

Table A6.29: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	<i>ΔCFI</i>
Hypothesized model	Australian, Singaporean and French TAMs consumers	Unconstrained	0.993	-
Factor loadings constrained equal	Australian, Singaporean and French TAMs consumers	Model 1	0.992	0.001
Factor loadings, variances, and structural covariances constrained equal	Australian, Singaporean and French TAMs consumers	Model 2	0.991	0.001

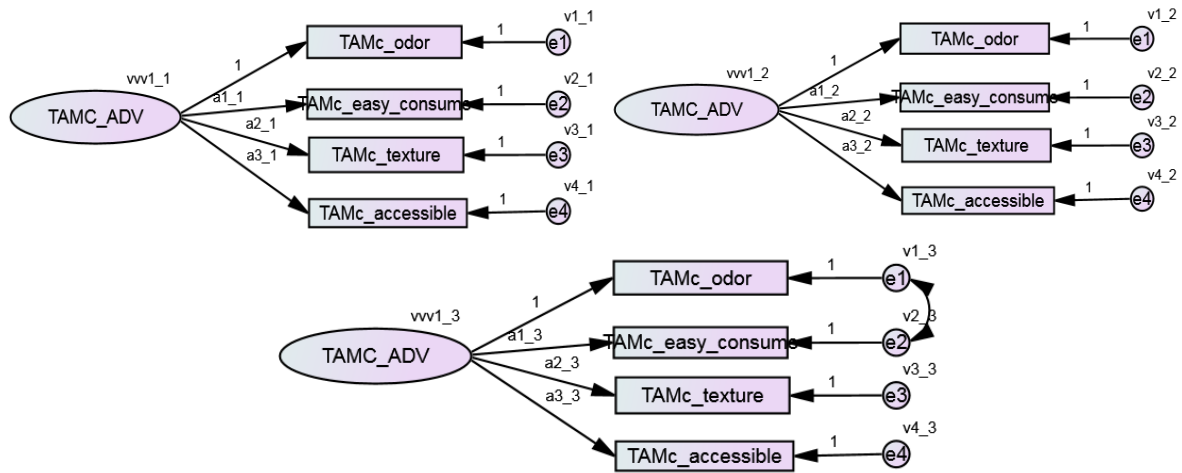


Figure A6.24: Baseline Model for Advantages of the Innovated product for Australia, Singapore and France samples

Table A6.30: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	<i>ΔCFI</i>
Hypothesized model	Australian, Singaporean and French TAMs consumers	Unconstrained	0.997	-
Factor loadings constrained equal	Australian, Singaporean and French TAMs consumers	Model 1	0.996	0.001
Factor loadings, variances, and structural covariances constrained equal	Australian, Singaporean and French TAMs consumers	Model 2	0.996	0.000

Appendix 6.6: Influence of situation on perceived gain & sacrifice (Aus., Fr., Sing.)

Table A6.31: Impact of situation on perceived gain and sacrifice from the innovation (Australia, France, and Singapore)

Australia (perceived sacrifice)	T value	N	Eta square	p
When I am sick	-2.06	93	0.044	0.04
When conventional medication fails	-1.85	93	0.035	0.06
To maintain myself healthy	-0.40	93	0.001	0.68
Australia (perceived gain)	T value	N	Eta square	
When I am sick	-2.46	313	0.018	0.02
When conventional medication fails	-2.82	313	0.024	0.01
To maintain myself healthy	-3.66	313	0.041	0.00
Singapore (perceived sacrifice)	T value	N	Eta square	
When I am sick	-0.64	93	0.004	0.52
When conventional medication fails	-1.59	93	0.026	0.12
To maintain myself healthy	-2.58	93	0.067	0.01
Singapore (perceived gain)	T value	N	Eta square	
When I am sick	-1.76	321	0.009	0.08
When conventional medication fails	-2.14	321	0.014	0.03
To maintain myself healthy	-4.72	321	0.065	0.00
France (Perceived sacrifice)	T value	N	Eta square	
When I am sick	0.39	102	0.001	0.69
When conventional medication fails	-0.16	102	0.000	0.87
To maintain myself healthy	-0.80	102	0.006	0.43
France (perceived gain)	T value	N	Eta square	
When I am sick	-1.73	311	0.009	0.08
When conventional medication fails	-2.75	311	0.023	0.01
To maintain myself healthy	-5.41	311	0.086	0.00

Appendix 6.7: Past Orientation Moderation (Australia)

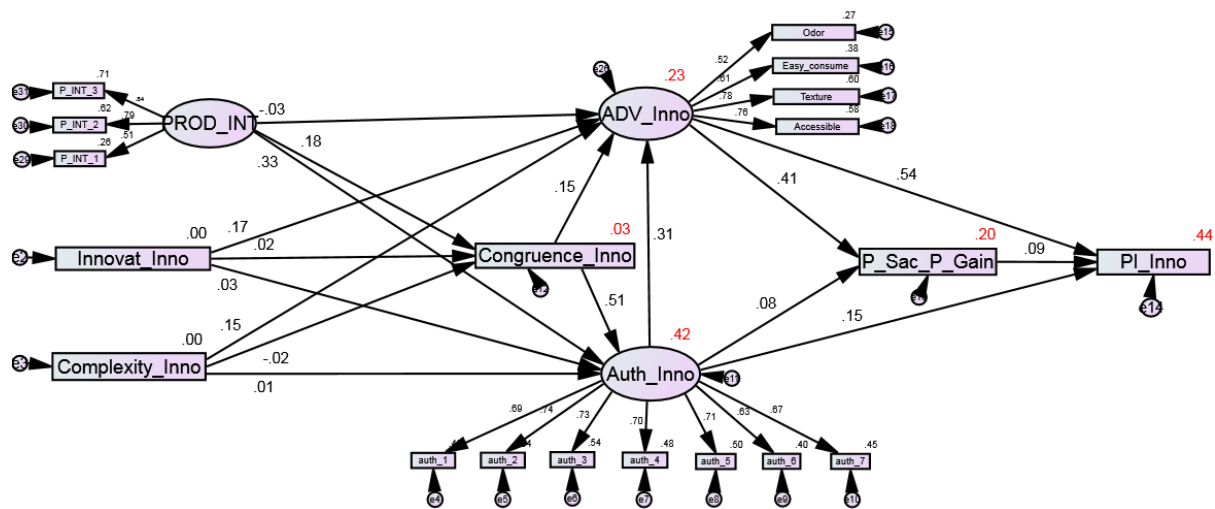


Figure A6.25: Path model for low past orientation

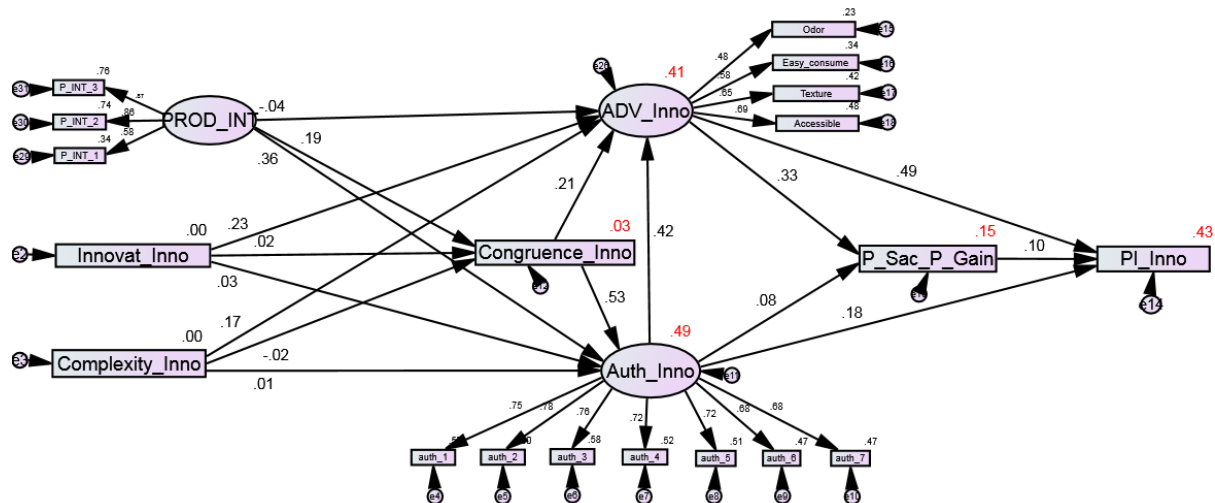


Figure A6.26: Path model for high past orientation

Table A6.32: Model Estimation and Critical Ratios

	Low PO		High PO		CR
	Estimate	p	Estimate	p	
Auth_Inno <---PROD_INT	0.18	0.01	0.45	0.00	3.345***
P_Sac_P_Gain <--- Auth_Inno	0.14	0.06	0.10	0.23	-0.694
PI_Inno <--- Auth_Inno	0.06	0.36	0.28	0.00	1.423

Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10
E = Estimate; CR = critical ratios

Appendix 6.8: Past Orientation Moderation (Singapore)

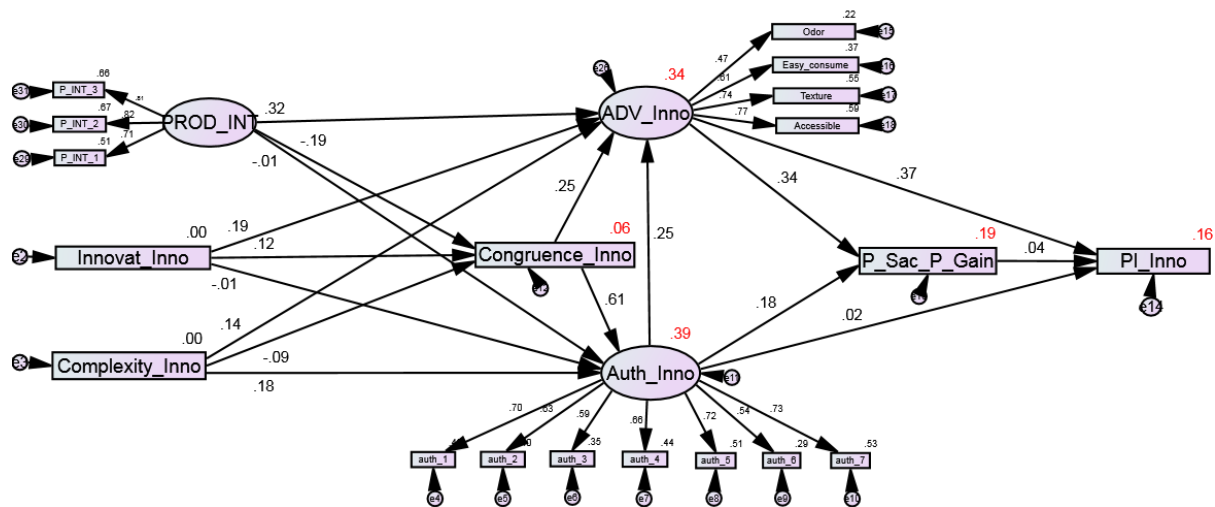


Figure A6.27: Path model for low past orientation

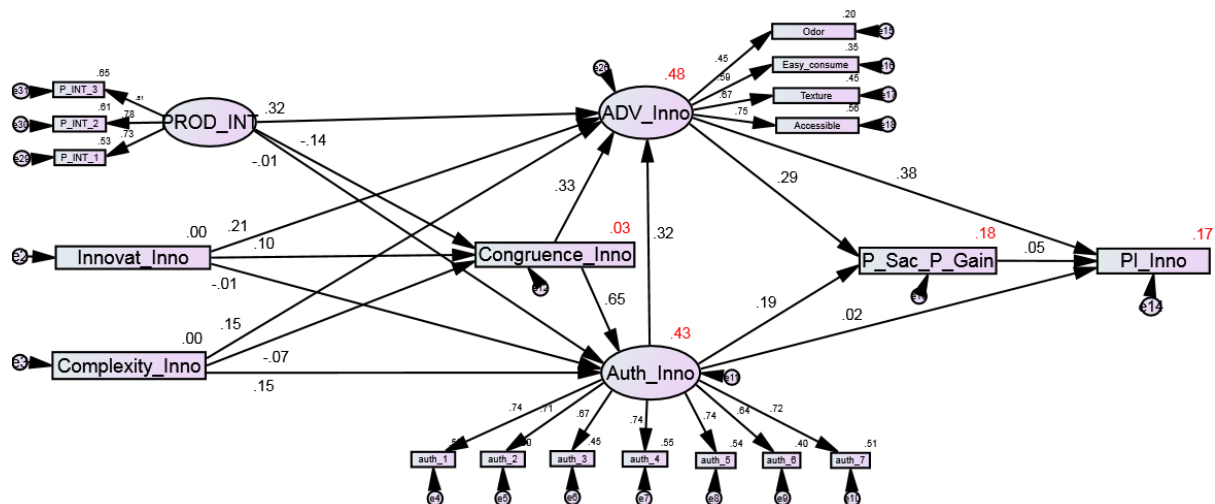


Figure A6.28: Path model for high past orientation

Table A6.33: Model Estimation and Critical Ratios

	Low PO		High PO		CR
	Estimate	p	Estimate	p	
Auth_Inno <---PROD_INT	-0.03	0.63	-0.00	0.97	0.283
P_Sac_P_Gain <--- Auth_Inno	0.30	0.00	0.13	0.13	-2.079**
PI_Inno <--- Auth_Inno	-0.01	0.87	0.00	0.99	0.140

Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10
E = Estimate; CR = critical ratios

Appendix 6.9: Past Orientation Moderation (France)

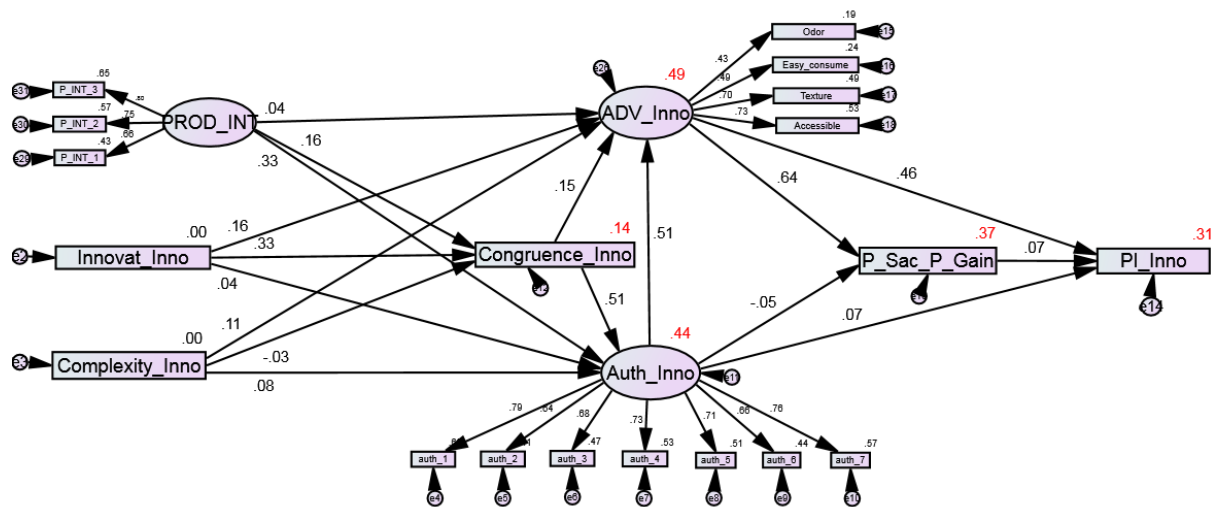


Figure A6.29: Path model for low past orientation

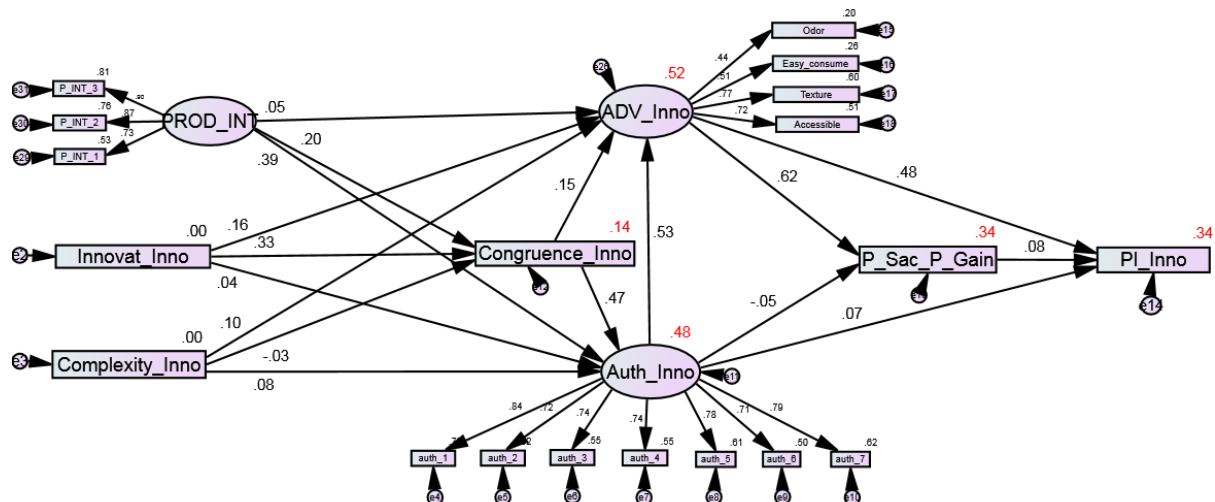


Figure A6.30: Path model for high past orientation

Table A6.34: Model Estimation and Critical Ratios

	Low PO		High PO		CR
	Estimate	p	Estimate	p	
Auth_Inno <--- PROD_INT	0.29	0.00	0.40	0.00	0.447
P_Sac_P_Gain <--- Auth_Inno	-0.15	0.17	0.04	0.68	1.285
PI_Inno <--- Auth_Inno	-0.33	0.02	0.34	0.00	3.783***

Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10
E = Estimate; CR = critical ratios

Appendix 6.10: Involvement Moderation (Australia)

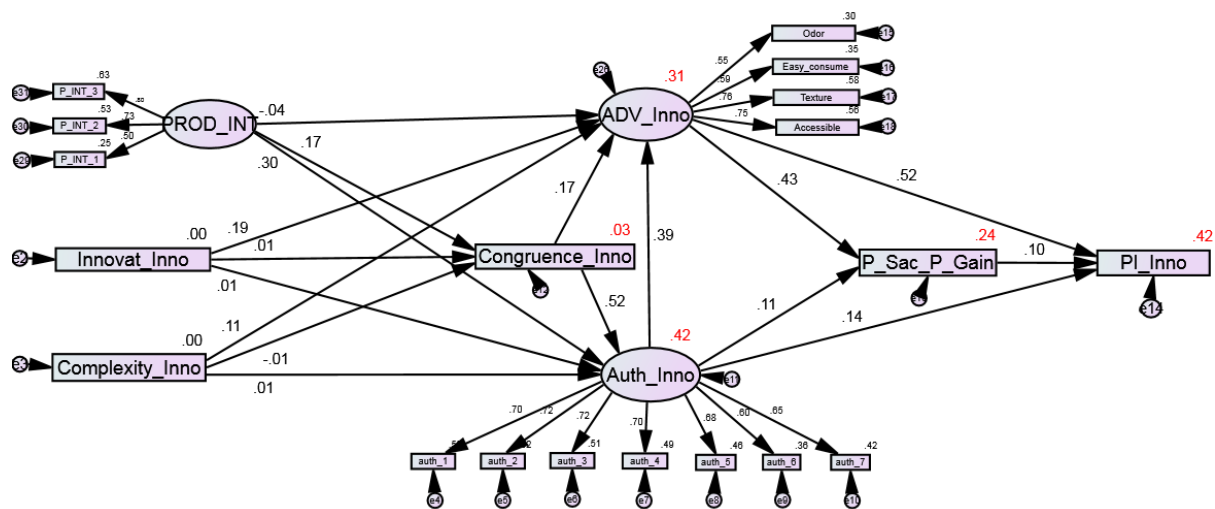


Figure A6.31: Path model for low involvement

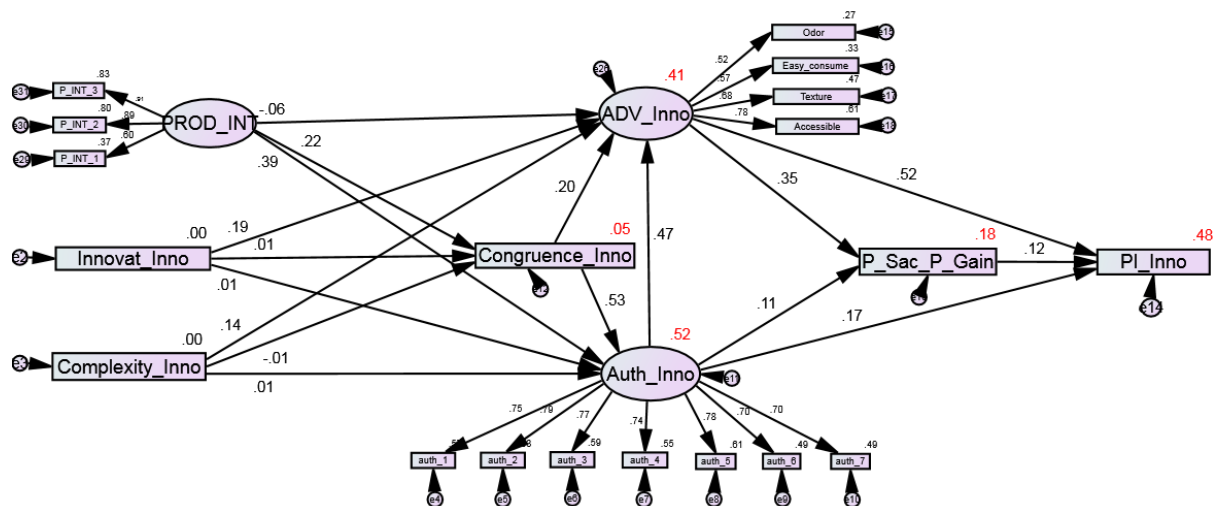


Figure A6.32: Path model for high involvement

Table A6.35: Model Estimation and Critical Ratios

	Low Involvement		High Involvement		CR
	Estimate	p	Estimate	p	
P_Sac_P_Gain <--- Auth_Inno	0.19	0.01	0.11	0.25	-0.877
PI_Inno <--- Auth_Inno	0.18	0.01	0.20	0.01	-0.346
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10					
E = Estimate; CR = critical ratios					

Appendix 6.11: Involvement Moderation (Singapore)

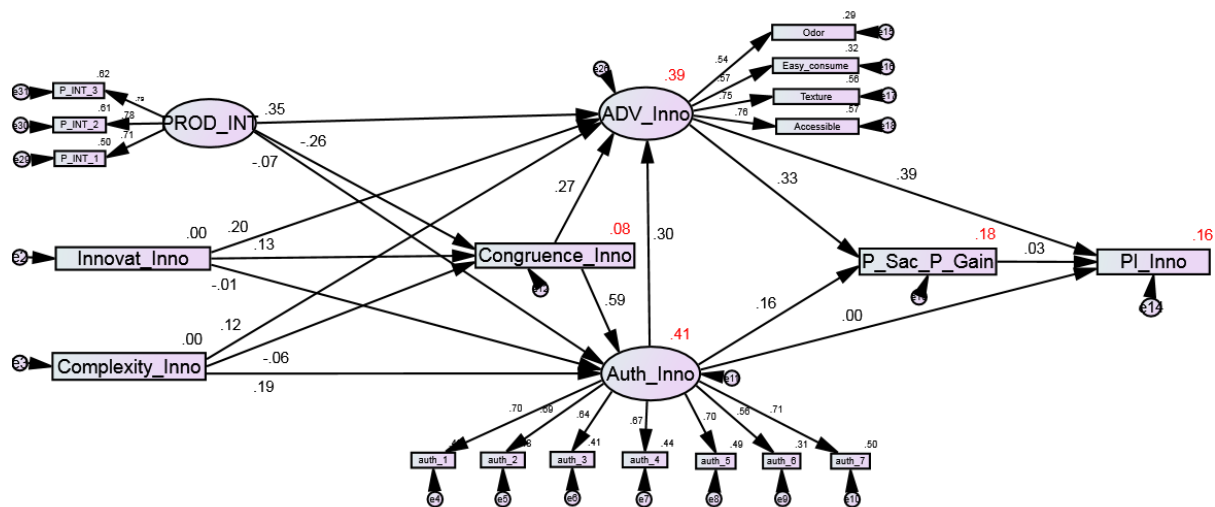


Figure A6.33: Path model for low involvement

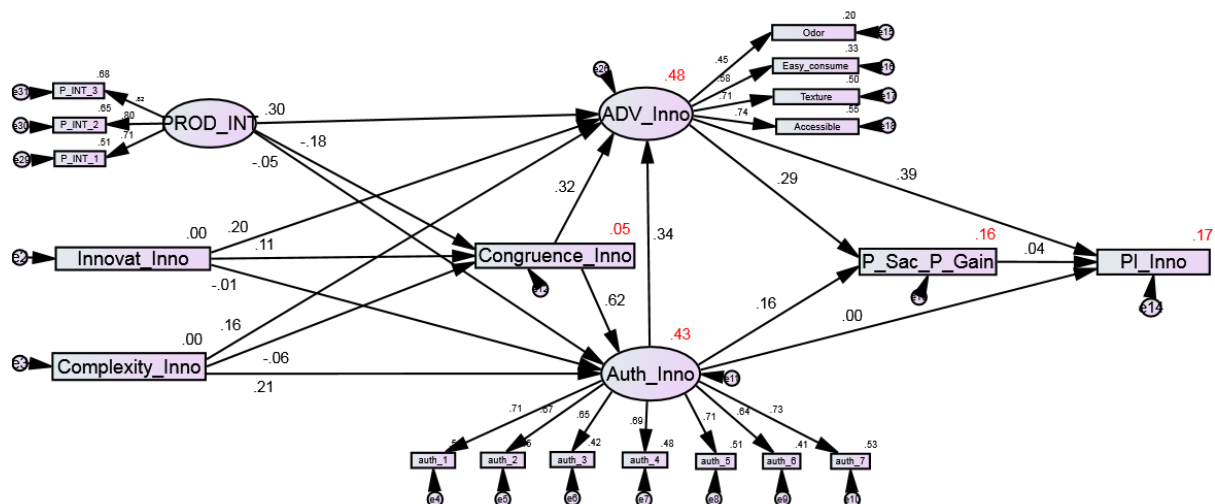


Figure A6.34: Path model for high involvement

Table A6.36: Model Estimation and Critical Ratios

	Low Involvement		High Involvement		CR
	Estimate	p	Estimate	p	
P_Sac_P_Gain <--- Auth_Inno	0.29	0.00	0.07	0.42	-2.31**
PI_Inno <--- Auth_Inno	-0.02	0.76	-0.05	0.56	-0.064

Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10
E = Estimate; CR = critical ratios

Appendix 6.12: Involvement Moderation (France)

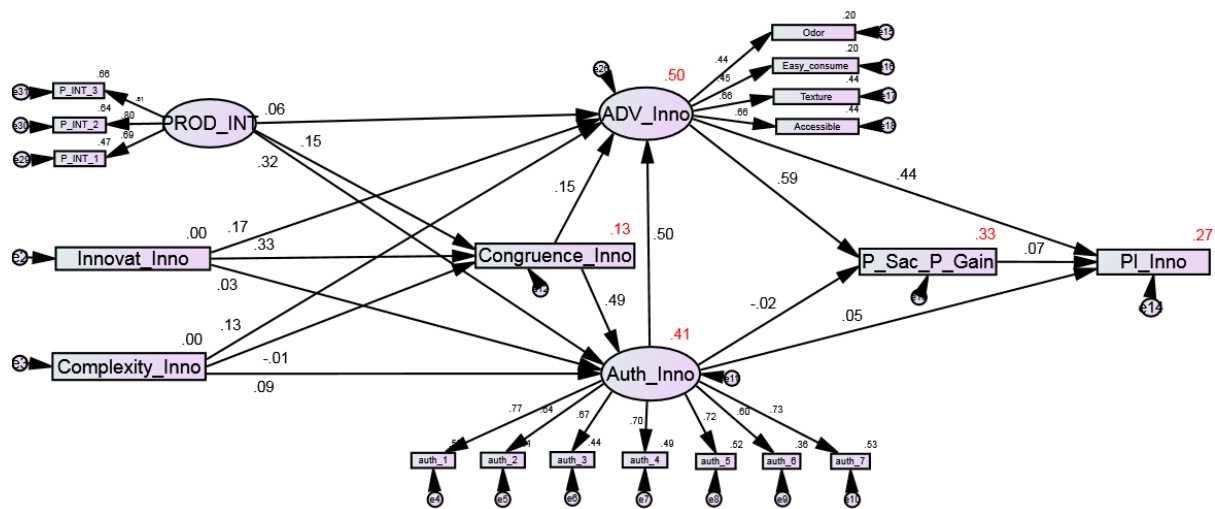


Figure A6.35: Path model for low involvement

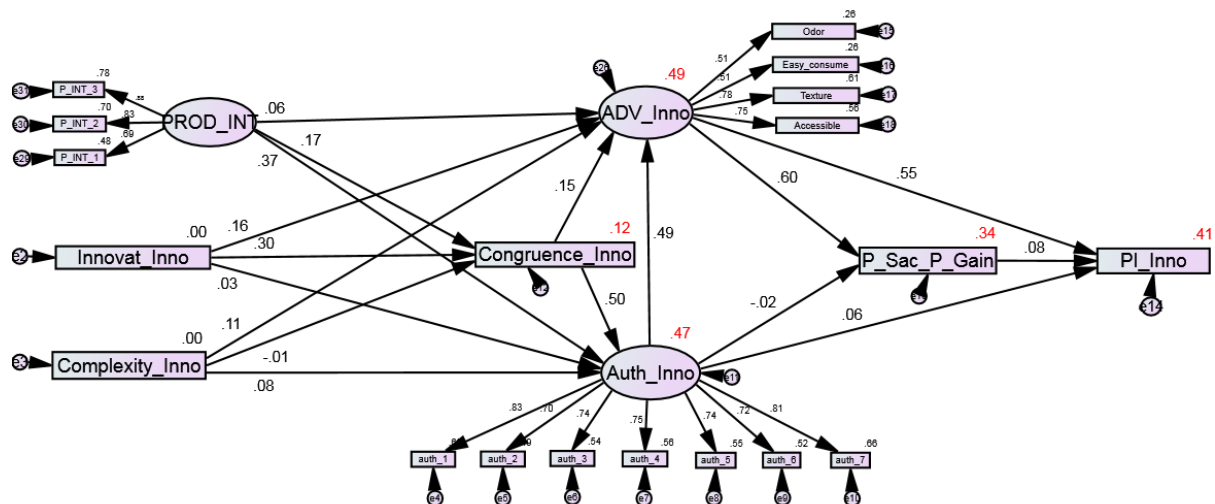


Figure A6.36: Path model for high involvement

Table A6.37: Model Estimation and Critical Ratios

	Low Involvement		High Involvement		CR
	Estimate	p	Estimate	p	
P_Sac_P_Gain <--- Auth_Inno	-0.12	0.33	0.02	0.82	0.930
PI_Inno <--- Auth_Inno	0.02	0.84	0.07	0.38	0.235

Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10
E = Estimate; CR = critical ratios

Appendix 6.13: Knowledge Moderation (Australia)

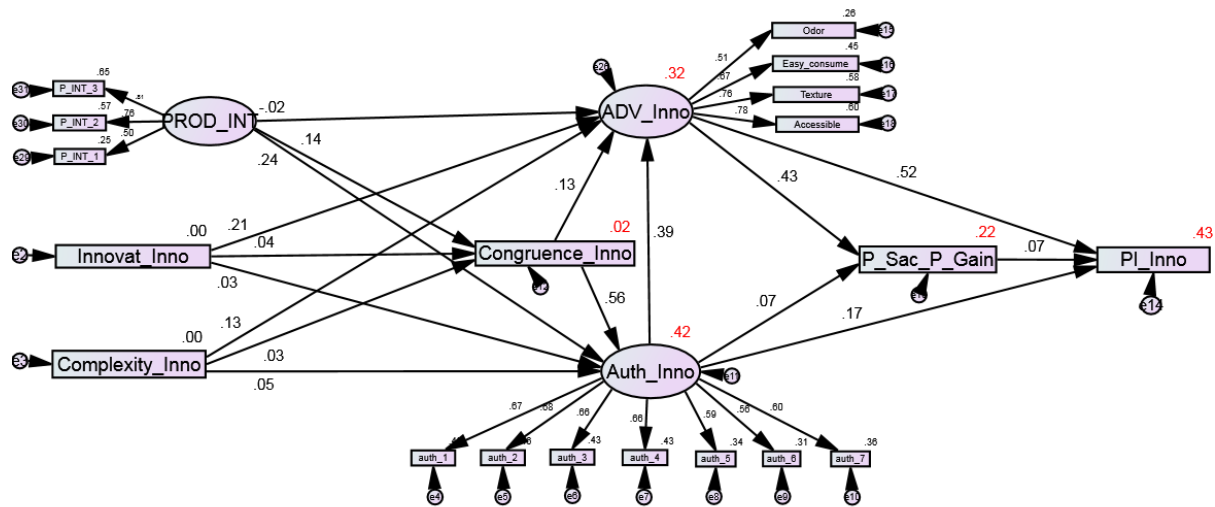


Figure A6.37: Path model for low knowledge

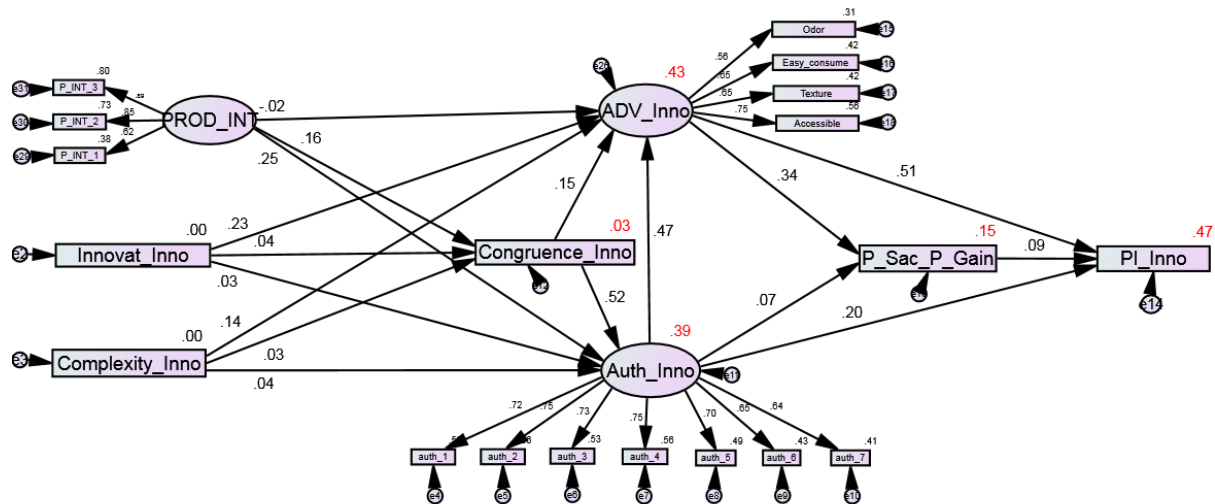


Figure A6.38: Path model for high knowledge

Table A6.38: Model Estimation and Critical Ratios

	Low Knowledge		High Knowledge		CR
	Estimate	p	Estimate	p	
P_Sac_P_Gain <--- Auth_Inno	0.17	0.02	0.02	0.78	-1.516
PI_Inno <--- Auth_Inno	0.13	0.06	0.26	0.00	0.252

Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10
E = Estimate; CR = critical ratios

Appendix 6.14: Knowledge Moderation (Singapore)

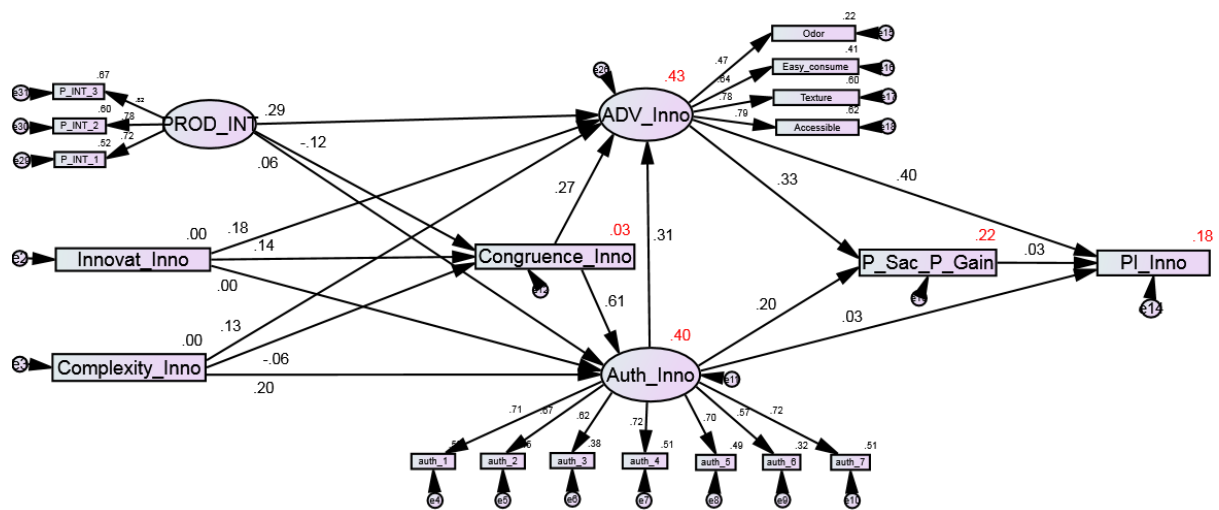


Figure A6.39: Path model for low knowledge

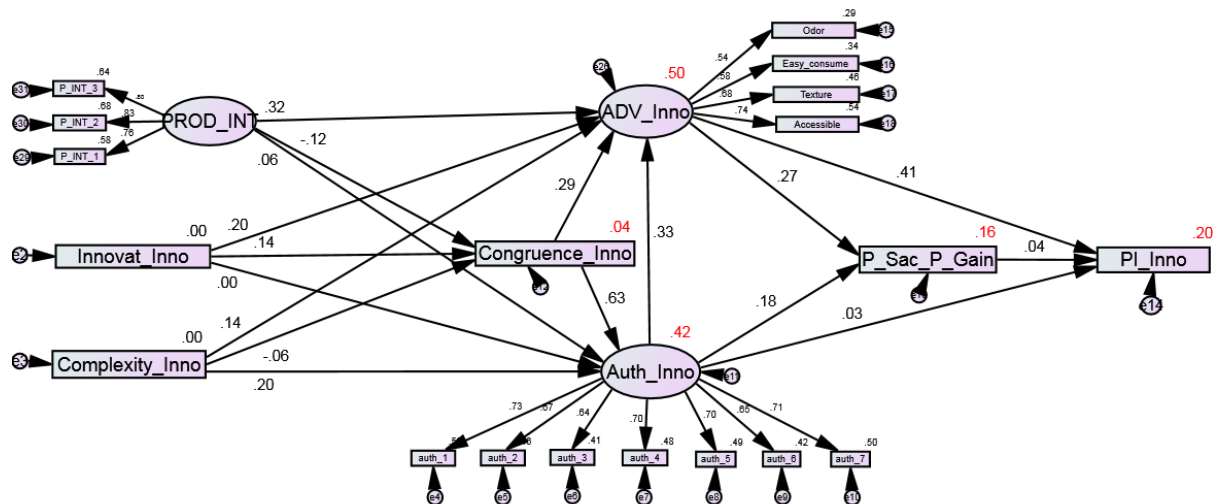


Figure A6.40: Path model for high knowledge

Table A6.39: Model Estimation and Critical Ratios

	Low Knowledge		High Knowledge		CR
	Estimate	p	Estimate	p	
P_Sac_P_Gain <--- Auth_Inno	0.24	0.00	0.16	0.09	-0.693
PI_Inno <--- Auth_Inno	0.07	0.42	-0.05	0.53	-1.009

Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10
E = Estimate; CR = critical ratios

Appendix 6.15: Knowledge Moderation (France)

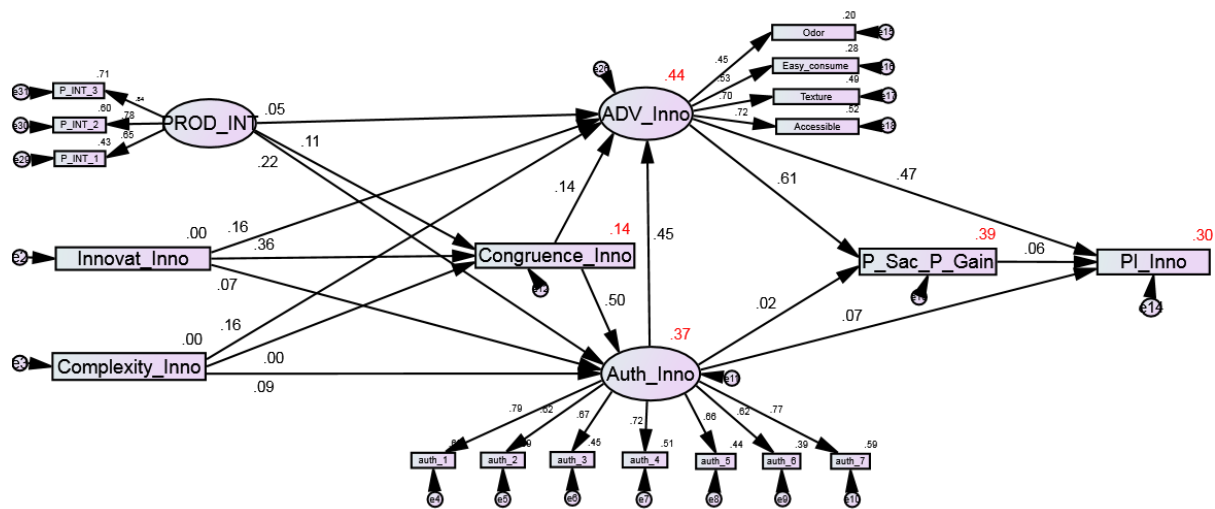


Figure A6.41: Path model for low knowledge

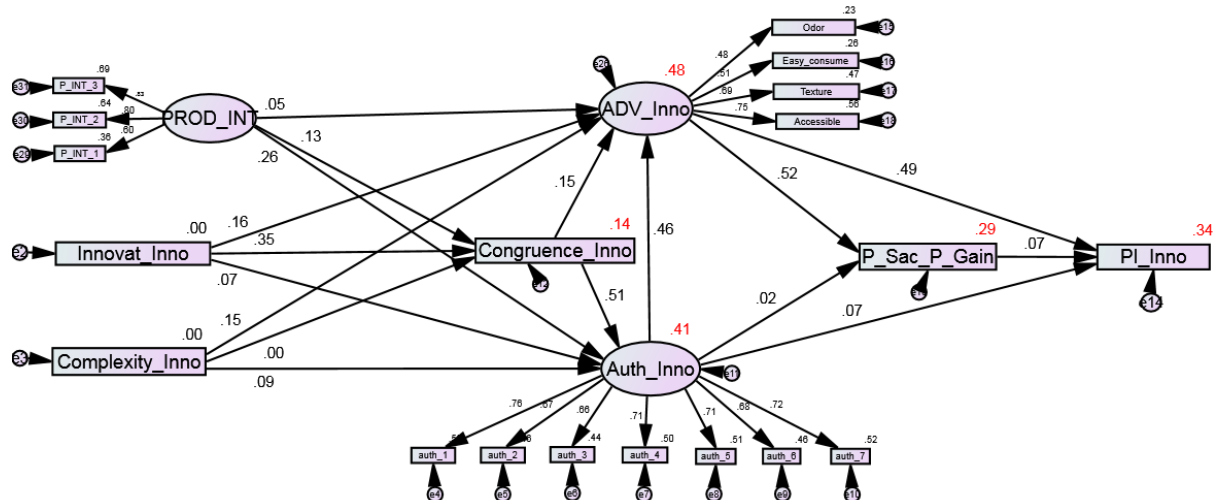


Figure A6.42: Path model for high knowledge

Table A6.40: Model Estimation and Critical Ratios

	Low Knowledge		High Knowledge		CR
	Estimate	p	Estimate	p	
P_Sac_P_Gain <--- Auth_Inno	-0.07	0.46	0.12	0.20	1.439
PI_Inno <--- Auth_Inno	-0.04	0.66	0.17	0.05	1.627

Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10
E = Estimate; CR = critical ratios

Appendix 7.1: CFA for the whole Bicycle sample

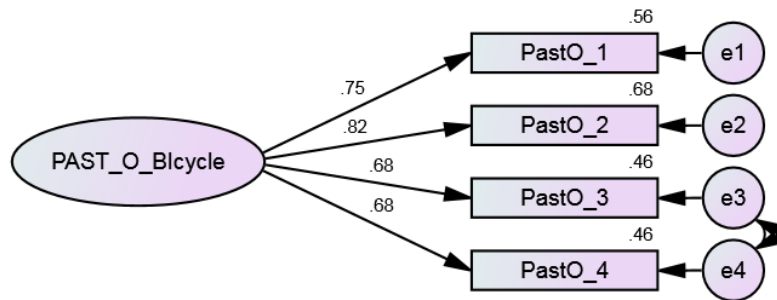


Figure A7.1: Hypothesized one factor CFA model of Past Orientation

Table A7.1: Factor Loadings of the One-factor Model of Past Orientation

<i>Item</i>	<i>L</i>	<i>CA</i>	<i>VE</i>
PastO_1 <i>'I like possessions that have a connection with the past'</i>	0.75	0.83	0.56
PastO_2 <i>'I purchase products that remind me of my past'</i>	0.82		0.68
PastO_3 <i>'I strongly long to be part of the time period from which the product came from'</i>	0.68		0.46
PastO_4 <i>'I have positive attitudes about the time period from which the product came'</i>	0.68		0.46
L = Loadings CA = Cronbach' alpha VE = Variance extracted			

Table A7.2: Goodness of fit indices - Past Orientation

χ^2/df	P	CFI	GFI	TLI	RMSEA
7.71	0.01	0.99	0.99	0.98	0.07

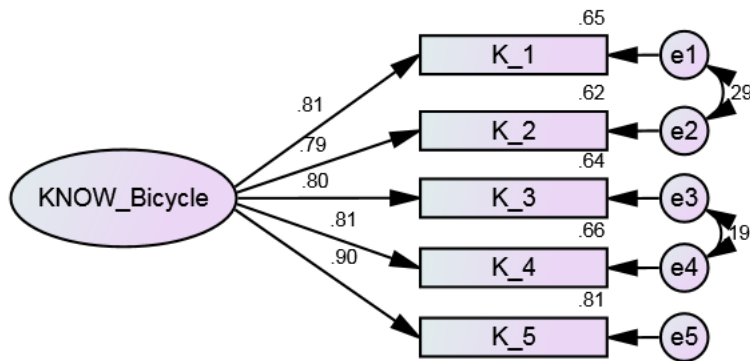


Figure A7.2: Hypothesized one factor CFA model of Bicycle knowledge

Table A7.3: Factor Loadings of the One-factor Model of Bicycle knowledge

<i>Item</i>	<i>L</i>	<i>CA</i>	<i>VE</i>
K_1 <i>'I feel confident about my knowledge of bicycles'</i>	0.81	0.92	0.65
K_2 <i>'I feel that I know how to judge the quality of bicycles'</i>	0.79		0.62
K_3 <i>'Among my friends, I'm considered a bicycle 'expert'</i>	0.80		0.64
K_4 <i>'I know most of the bicycles around in shops'</i>	0.84		0.66
K_5 <i>'When it comes to bicycles, I really know a lot'</i>	0.90		0.81
L = Loadings CA = Cronbach' alpha VE = Variance extracted			

Table A7.4: Goodness of fit indices – Bicycle knowledge

χ^2/df	p	CFI	GFI	TLI	RMSEA
2.26	0.08	0.99	0.99	0.99	0.03

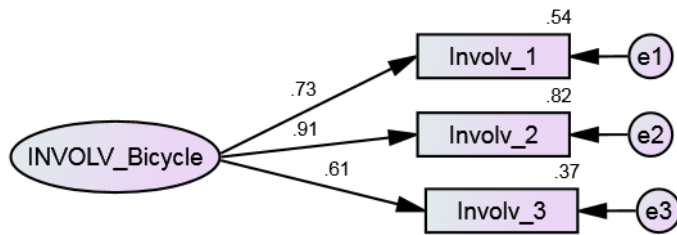


Figure A7.3: Hypothesized one factor CFA model of Bicycle involvement

Table A7.5: Factor Loadings of the One-factor Model of Bicycle involvement

<i>Item</i>	<i>L</i>	<i>CA</i>	<i>VE</i>
I_1 <i>'I have a strong interest in bicycles'</i>	0.73	0.79	0.54
I_2 <i>'Bicycles are important to me in my lifestyle'</i>	0.91		0.82
I_3 <i>'Riding bicycles gives me pleasure'</i>	0.61		0.37
L = Loadings CA = Cronbach' alpha VE = Variance extracted			

Table A7.6: Goodness of fit indices – Bicycle Involvement

χ^2/df	P	CFI	GFI	TLI	RMSEA
0.002	0.96	1.00	1.00	1.00	0.00

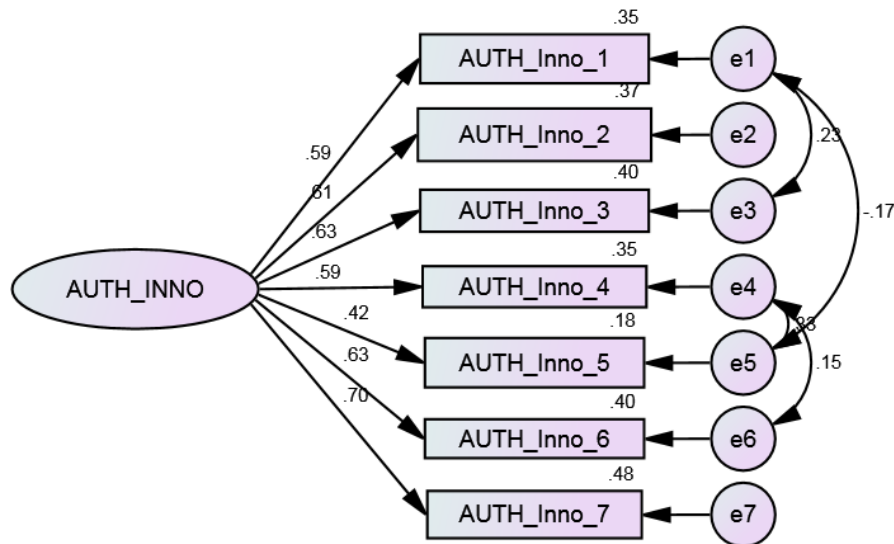


Figure A7.4: Hypothesized one factor CFA model of Authenticity of the innovated product (Bamboo Bicycles)

Table A7.7: Factor Loadings of the One-factor Model of the Authenticity of the innovated product (Bamboo Bicycles)

<i>Item</i>	<i>L</i>	<i>CA</i>	<i>VE</i>
AUTH_Inno_1 <i>'I think bamboo bicycles are an original product'</i>	0.51	0.80	0.35
AUTH_Inno_2 <i>'A bamboo bicycle has features that cannot be imitated'</i>	0.61		0.37
AUTH_Inno_3 <i>'Bamboo bicycles make use of handmade processes'</i>	0.63		0.40
AUTH_Inno_4 <i>'A bamboo bicycle fits in with my expectations'</i>	0.59		0.35
AUTH_Inno_5 <i>'Features of bamboo bicycles are consistent with what is in my memory'</i>	0.42		0.18
AUTH_Inno_6 <i>'A bamboo bicycles has characteristics that can be passed from generation to generation'</i>	0.63		0.40
AUTH_Inno_7 <i>'Bamboo bicycles are produced from one source'</i>	0.70		0.48
L = Loadings			
CA = Cronbach' alpha VE = Variance extracted			

Table A7.8: Goodness of fit indices – Authenticity of the Innovated Product (Bamboo bicycle)

χ^2/df	p	CFI	GFI	TLI	RMSEA
4.95	0.00	0.98	0.99	0.97	0.05

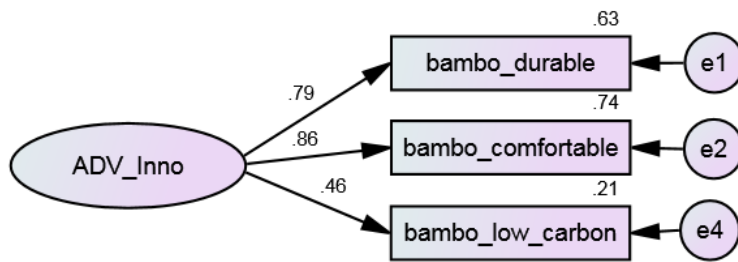


Figure A7.5: Hypothesized one factor CFA model of advantages of the innovated product (bamboo bicycle)

Table A7.9: Factor Loadings of the One-factor Model of the Advantages of the innovated product (bamboo bicycle)

<i>Item</i>	<i>L</i>	<i>CA</i>	<i>VE</i>
Bamboo_durable <i>'It is important to me that bamboo bicycles are durable'</i>	0.79	0.72	0.63
Bamboo_comfortable <i>'It is important to me that bamboo bicycles are comfortable'</i>	0.86		0.74
Bamboo_low_carbon <i>'It is important to me that bamboo bicycles have a low carbon footprint'</i>	0.46		0.21
L = Loadings CA = Cronbach' alpha VE = Variance extracted			

Table A7.10: Goodness of fit indices – Advantages of the Innovated Product (bamboo bicycle)

χ^2/df	p	CFI	GFI	TLI	RMSEA
0.33	0.56	1.00	1.00	1.00	0.00

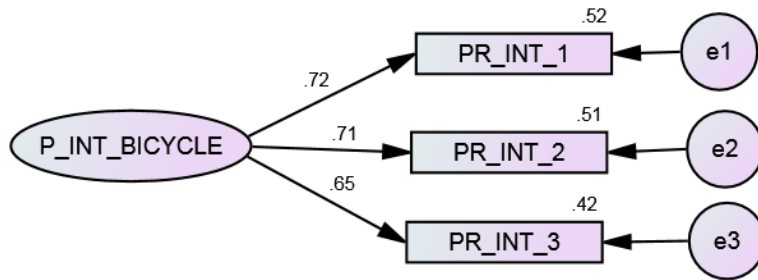


Figure A7.6: Hypothesized one factor CFA model of bicycle integration in the respective culture

Table A7.11: Factor Loadings of the One-factor Model of bicycle integration

<i>Item</i>	<i>L</i>	<i>Ca</i>	<i>VE</i>
PR_INT_1 <i>'Bicycles have always been one of the most popular products in Australia'</i>	0.72	0.73	0.52
PR_INT_2 <i>'Riding bicycles has always been traditional in my culture'</i>	0.71		0.51
PR_INT_3 <i>'Since I was a child I have seen people ride bicycles'</i>	0.65		0.42
L = Loadings CA = Cronbach' alpha VE = Variance extracted			

Table A7.12: Goodness of fit indices – Product Integration (bicycle)

χ^2/df	P	CFI	GFI	TLI	RMSEA
0.20	0.65	1.00	1.00	1.00	0.00

Appendix 7.2: CFA analysis – Bicycle Australia

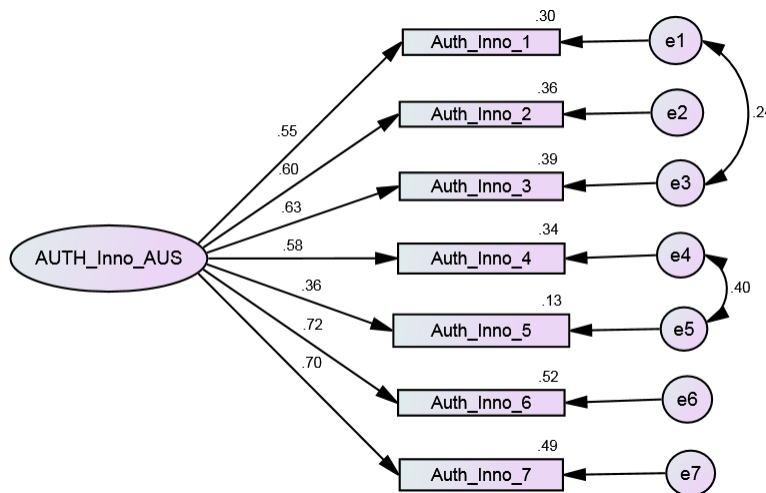


Figure A7.7: Hypothesized one factor CFA model of bamboo bicycle authenticity perceptions for the Australian sample

Table A7.13: Goodness of fit indices –Authenticity perceptions bamboo bicycle in Australia

χ^2/df	p	CFI	GFI	TLI	RMSEA
2.15	0.011	0.982	0.983	0.969	0.053

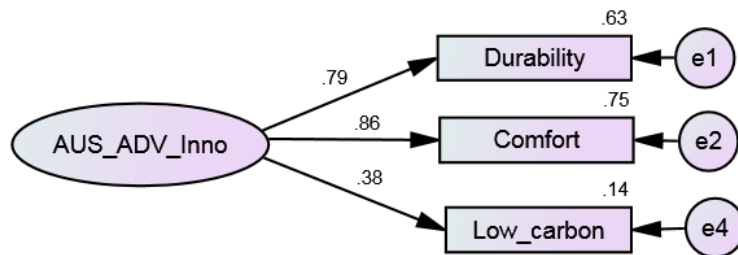


Figure A7.8: Hypothesized one factor CFA model of bamboo bicycle advantages for the Australian sample

Table A7.14: Goodness of fit indices –Advantages of bamboo bicycles in Australia

χ^2/df	P	CFI	GFI	TLI	RMSEA
0.001	0.97	1.00	1.00	1.01	0.00

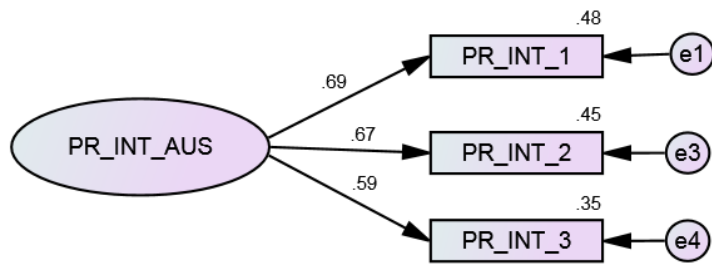


Figure A7.9: Hypothesized one factor CFA model of bicycle integration in Australia

Table A7.15: Goodness of fit indices – bicycle integration (traditionality perceptions) in Australia

χ^2/df	p	CFI	GFI	TLI	RMSEA
0.27	0.86	1.00	1.00	1.01	0.00

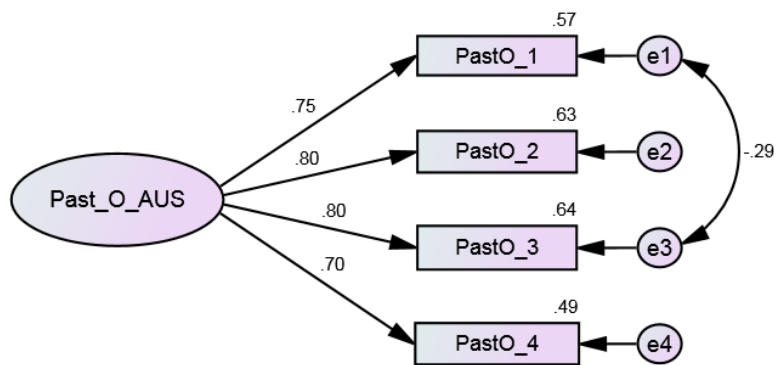


Figure A7.10: Hypothesized one factor CFA model of consumer past orientation for the Australian sample

Table A7.16: Goodness of fit indices – Consumer past orientation for the Australian sample

χ^2/df	p	CFI	GFI	TLI	RMSEA
1.30	0.25	1.00	0.99	0.99	0.27

Appendix 7.3: CFA analysis – Bicycle Singapore

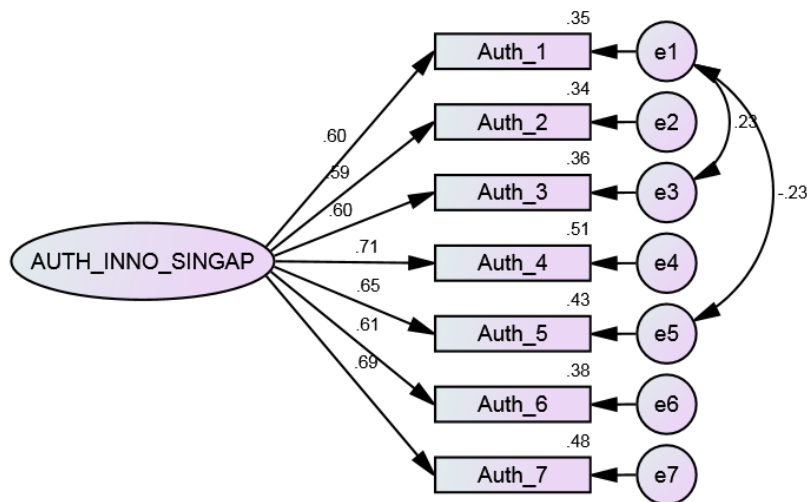


Figure A7.11: Hypothesized one factor CFA model of bamboo bicycle authenticity perceptions for the Singaporean sample

Table A7.17: Goodness of fit indices –Authenticity perceptions of bamboo bicycle in Singapore

χ^2/df	p	CFI	GFI	TLI	RMSEA
2.21	0.01	0.98	0.98	0.96	0.05

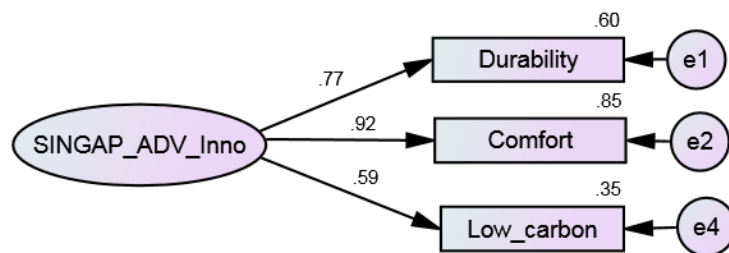


Figure A7.12: Hypothesized one factor CFA model of bamboo bicycle advantages for the Singaporean sample

Table A7.18: Goodness of fit indices –Advantages of bamboo bicycle in Singapore

χ^2/df	p	CFI	GFI	TLI	RMSEA
0.28	0.86	1.00	0.998	1.00	0.000

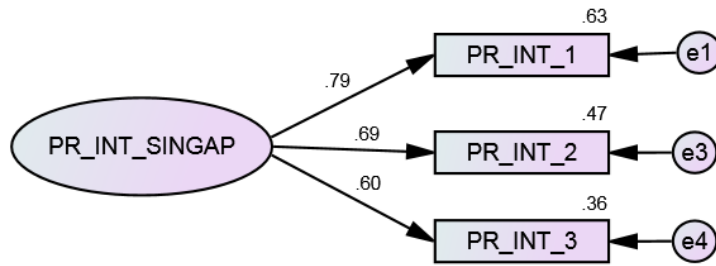


Figure A7.13: Hypothesized one factor CFA model of bicycle integration in Singapore

Table A7.19: Goodness of fit indices – Bicycle integration (traditionality perceptions) in Singapore

χ^2/df	p	CFI	GFI	TLI	RMSEA
0.03	0.86	1.00	0.999	1.01	0.00

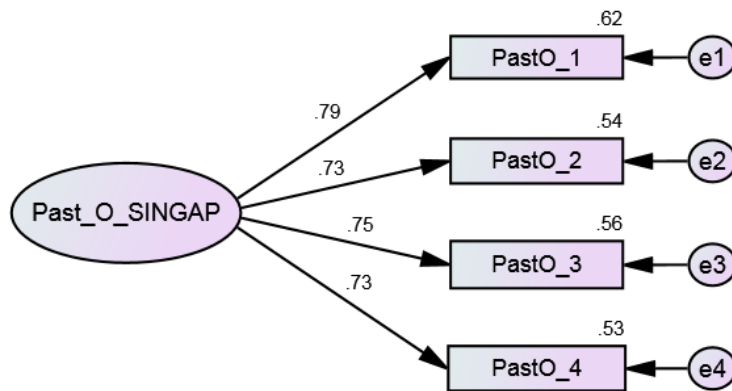


Figure A7.14: Hypothesized one factor CFA model of consumer past orientation for the Singaporean sample

Table A7.20: Goodness of fit indices – Consumer past orientation for the Australian sample

χ^2/df	p	CFI	GFI	TLI	RMSEA
3.06	0.04	0.99	0.99	0.98	0.07

Appendix 7.4: CFA analysis – TAMs France

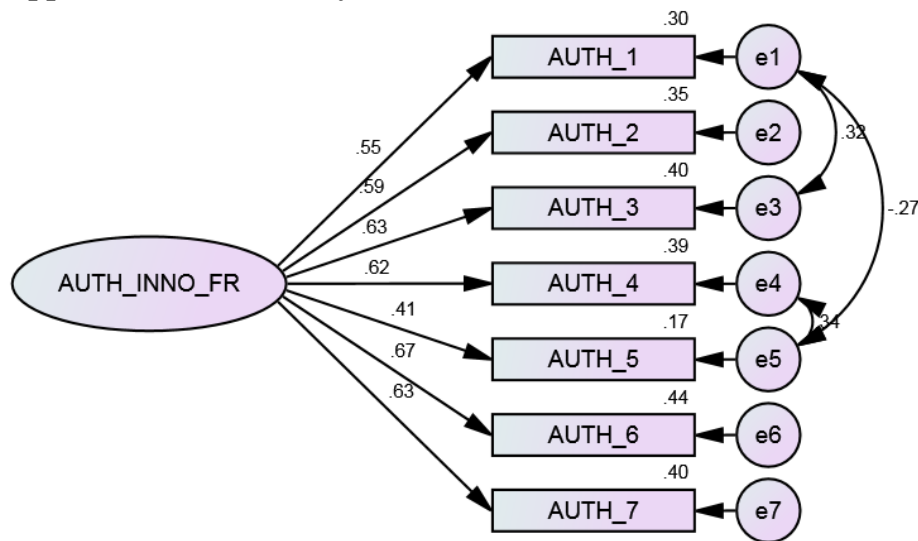


Figure A7.15: Hypothesized one factor CFA model of bamboo bicycle authenticity perceptions for the French sample

Table A7.21: Goodness of fit indices –Authenticity perceptions of bamboo bicycle in France

χ^2/df	p	CFI	GFI	TLI	RMSEA
4.12	0.00	0.96	0.97	0.92	0.08

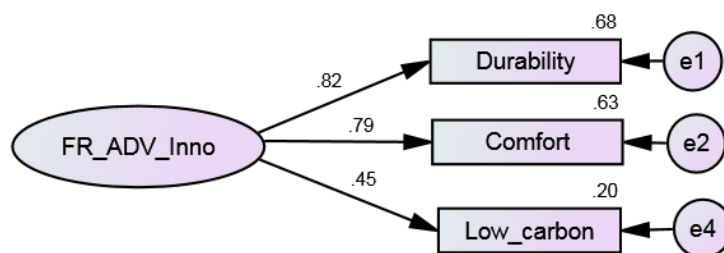


Figure A7.16: Hypothesized one factor CFA model of bamboo bicycle advantages for the French sample

Table A7.22: Goodness of fit indices –Advantages of bamboo bicycle in France

χ^2/df	p	CFI	GFI	TLI	RMSEA
0.36	0.54	1.00	0.99	1.00	0.00

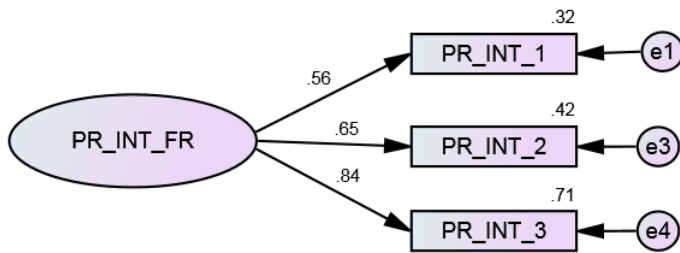


Figure A7.17: Hypothesized one factor CFA model of bicycle integration in France

Table A7.23: Goodness of fit indices – Bicycle integration (traditionality perceptions) in France

χ^2/df	p	CFI	GFI	TLI	RMSEA
0.39	0.52	1.00	0.99	1.00	0.00

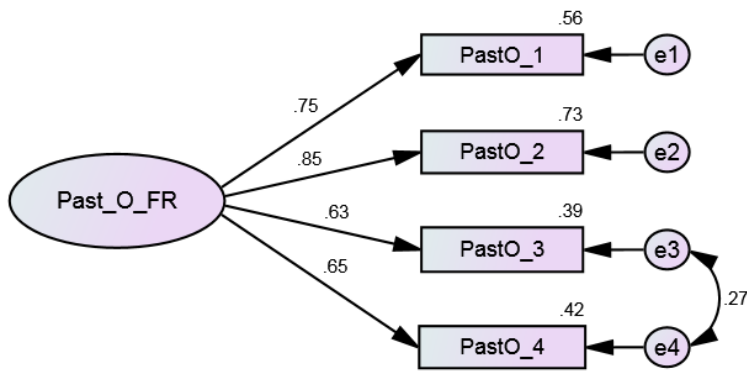


Figure A7.18: Hypothesized one factor CFA model of consumer past orientation for the French sample

Table A7.24: Goodness of fit indices – Consumer past orientation for the French sample

χ^2/df	p	CFI	GFI	TLI	RMSEA
3.71	0.05	0.99	0.99	0.97	0.08

Appendix 7.5: Multigroup Analysis

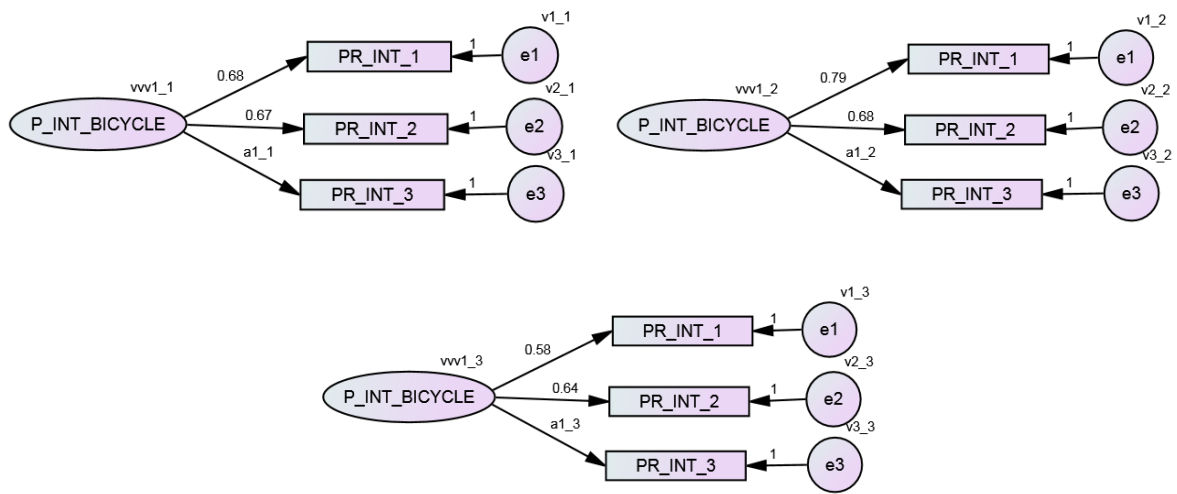


Figure A7.19: Baseline Model for traditionality for Australia, Singapore and France samples

Table A7.25: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	<i>ΔCFI</i>
Hypothesized model	Australian, Singaporean and French TAMs consumers	Unconstrained	1.000	-
Factor loadings constrained equal	Australian, Singaporean and French TAMs consumers	Model 1	0.990	0.01
Factor loadings, variances, and structural covariances constrained equal	Australian, Singaporean and French TAMs consumers	Model 2	0.992	-0.002

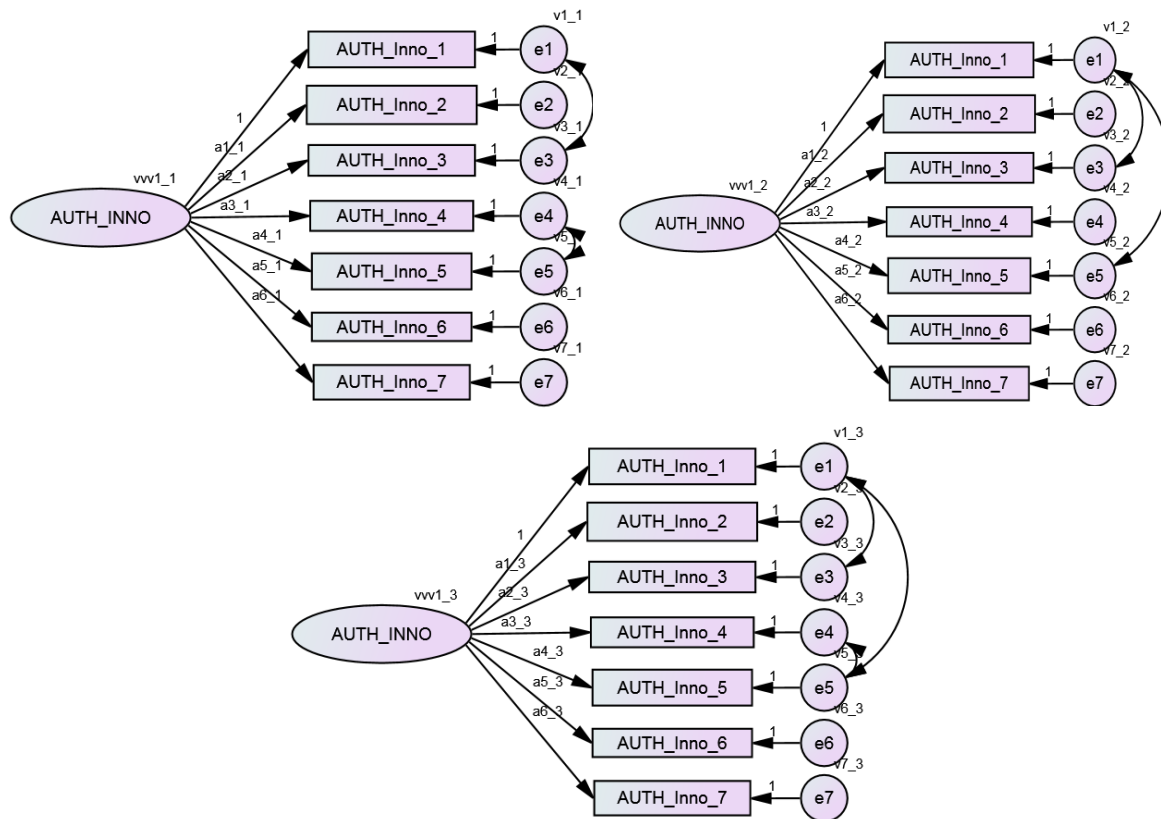


Figure A7.20: Baseline Model for Authenticity of the Innovated product for Australia, Singapore and France samples

Table A7.26: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	<i>ΔCFI</i>
Hypothesized model	Australian, Singaporean and French TAMs consumers	Unconstrained	0.974	-
Factor loadings constrained equal	Australian, Singaporean and French TAMs consumers	Model 1	0.966	0.008
Factor loadings, variances, and structural covariances constrained equal	Australian, Singaporean and French TAMs consumers	Model 2	0.966	0.000

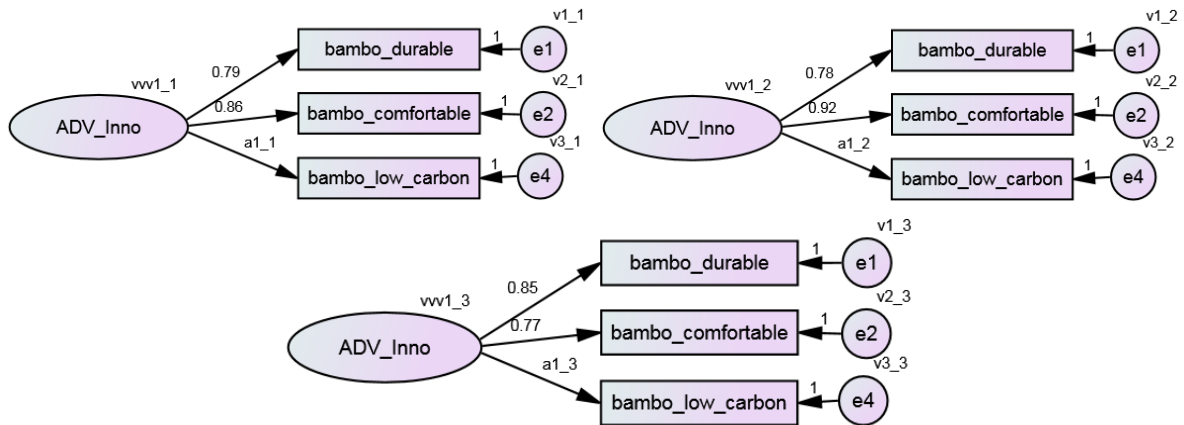


Figure A7.21: Baseline Model for Authenticity of the Innovated product for Australia, Singapore and France samples

Table A7.27: Goodness of fit Statistics for tests of Invariance: A Summary

<i>Model Description</i>	<i>Groups</i>	<i>Comparative Model</i>	<i>CFI</i>	<i>ΔCFI</i>
Hypothesized model	Australian, Singaporean and French TAMs consumers	Unconstrained	1.000	-
Factor loadings constrained equal	Australian, Singaporean and French TAMs consumers	Model 1	1.000	0.000
Factor loadings, variances, and structural covariances constrained equal	Australian, Singaporean and French TAMs consumers	Model 2	1.000	0.000

Appendix 7.6: Influence of situation on perceived gain & sacrifice (Aus., Fr., Sing.)

Table A7.28: Impact of situation on perceived gain and sacrifice from the innovation (Australia, France, and Singapore)

Australia (perceived sacrifice)	T value	N	Eta square	p
Professional competition	1.32	128	0.013	0.18
Riding alone to relax	0.28	128	0.000	0.77
Riding alone to exercise	-0.09	128	0.000	0.92
Riding with company	1.90	128	0.027	0.06
Riding to work	2.61	128	0.051	0.01
Australia (perceived gain)	T value	N	Eta square	
Professional competition	9.88	285	0.255	0.00
Riding alone to relax	-5.62	285	0.100	0.00
Riding alone to exercise	-4.21	285	0.058	0.00
Riding with company	2.76	285	0.026	0.00
Riding to work	5.55	285	0.097	0.00
Singapore (perceived sacrifice)	T value	N	Eta square	
Professional competition	1.54	108	0.021	0.12
Riding alone to relax	-1.98	108	0.035	0.05
Riding alone to exercise	-2.19	108	0.043	0.03
Riding with company	1.05	108	0.010	0.29
Riding to work	1.75	108	0.027	0.08
Singapore (perceived gain)	T value	N	Eta square	
Professional competition	13.1	305	0.359	0.00
Riding alone to relax	-5.14	305	0.080	0.00
Riding alone to exercise	-3.81	305	0.045	0.00
Riding with company	2.60	305	0.021	0.01
Riding to work	7.13	305	0.143	0.00
France (Perceived sacrifice)	T value	N	Eta square	
Professional competition	-1.68	87	0.031	0.09
Riding alone to relax	1.55	87	0.027	0.12
Riding alone to exercise	0.59	87	0.004	0.95
Riding with company	0.99	87	0.011	0.32
Riding to work	2.36	87	0.061	0.02
France (perceived gain)	T value	N	Eta square	
Professional competition	14.32	328	0.385	0.00
Riding alone to relax	-1.34	328	0.005	0.17
Riding alone to exercise	-2.17	328	0.014	0.03
Riding with company	-3.22	328	0.030	0.00
Riding to work	1.44	328	0.006	0.15

Appendix 7.7: Past Orientation Moderation (Australia)

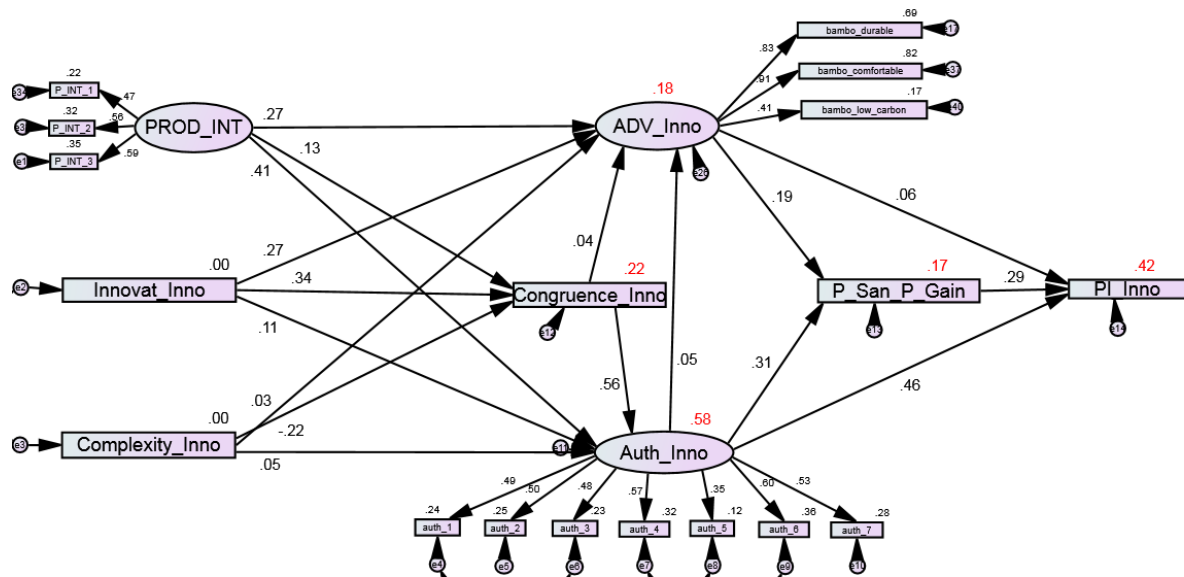


Figure A7.22: Path model for Low Past Orientation

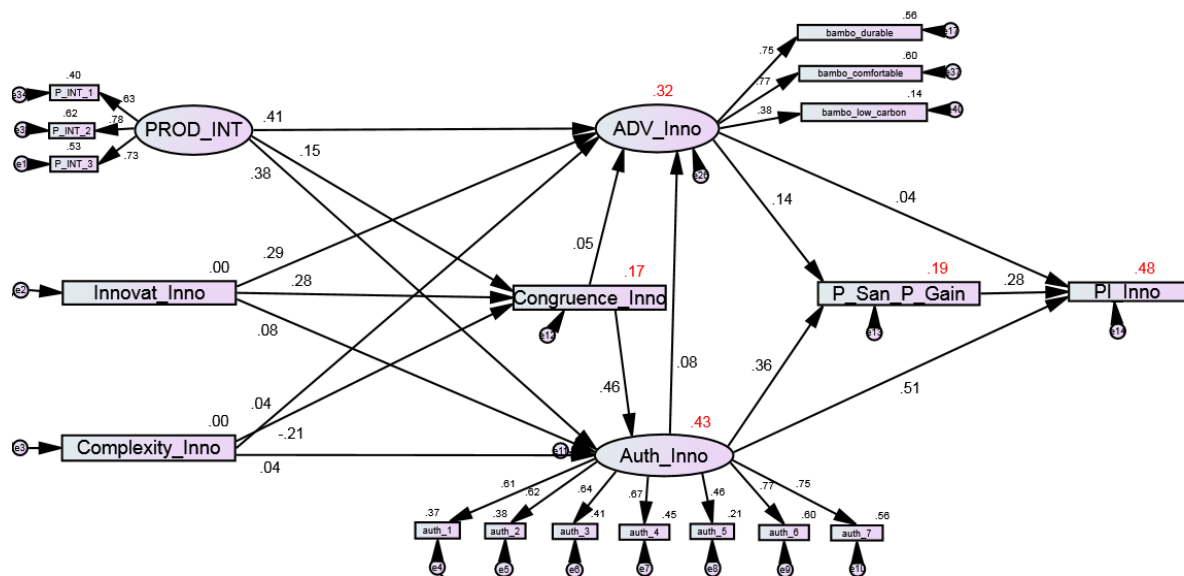


Figure A7.23: Path model for High Past Orientation

Table A7.29: Model Estimation and Critical Ratios

	Low PO		High PO		CR
	Estimate	p	Estimate	p	
Auth_Inno <--- PROD_INT	0.35	0.00	0.36	0.00	1.596
P_Sac_P_Gain <--- Auth_Inno	0.73	0.00	0.30	0.00	-3.036***
PI_Inno <--- Auth_Inno	0.71	0.00	0.54	0.00	-2.46**

Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10
E = Estimate; CR = critical ratios

Appendix 7.8: Past Orientation Moderation (Singapore)

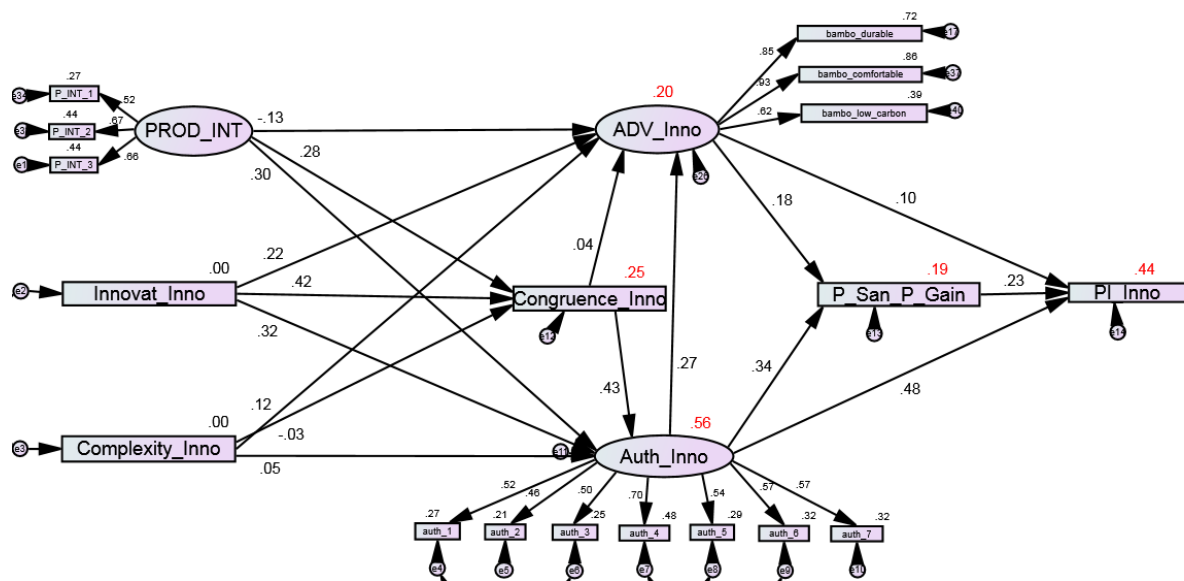


Figure A7.24: Path model for Low Past Orientation

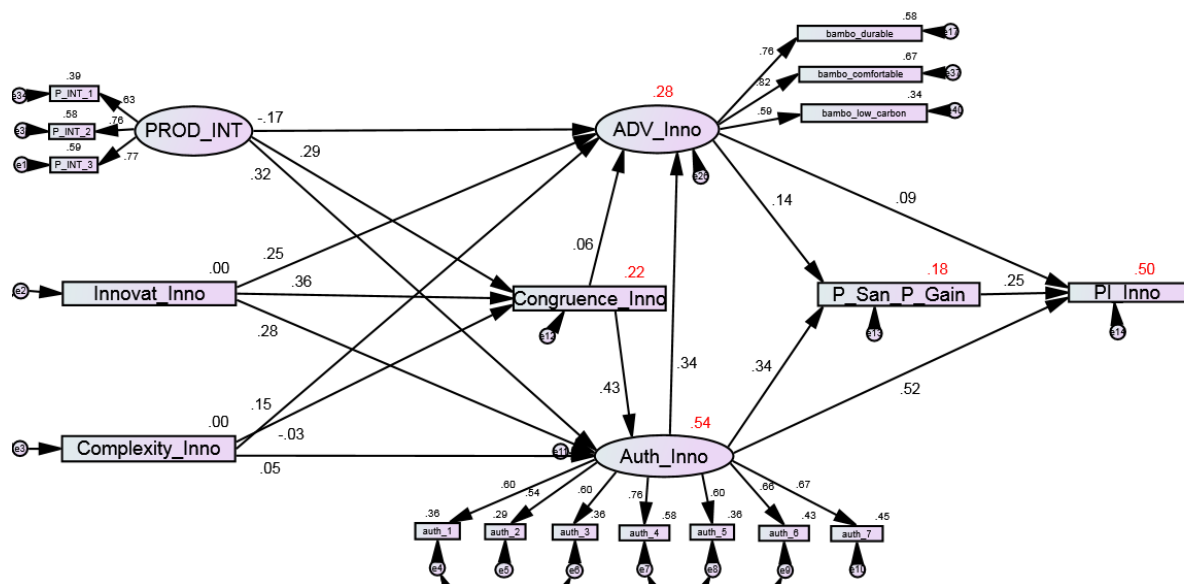


Figure A7.25: Path model for High Past Orientation

Table A7.30: Model Estimation and Critical Ratios

	Low PO		High PO		CR
	Estimate	p	Estimate	p	
Auth_Inno <---PROD_INT	0.24	0.00	0.37	0.00	1.582
P_Sac_P_Gain <--- Auth_Inno	0.53	0.00	0.16	0.03	-3.412***
PI_Inno <--- Auth_Inno	0.53	0.00	0.48	0.00	-1.614

Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10
E = Estimate; CR = critical ratios

Appendix 7.9: Past Orientation Moderation (France)

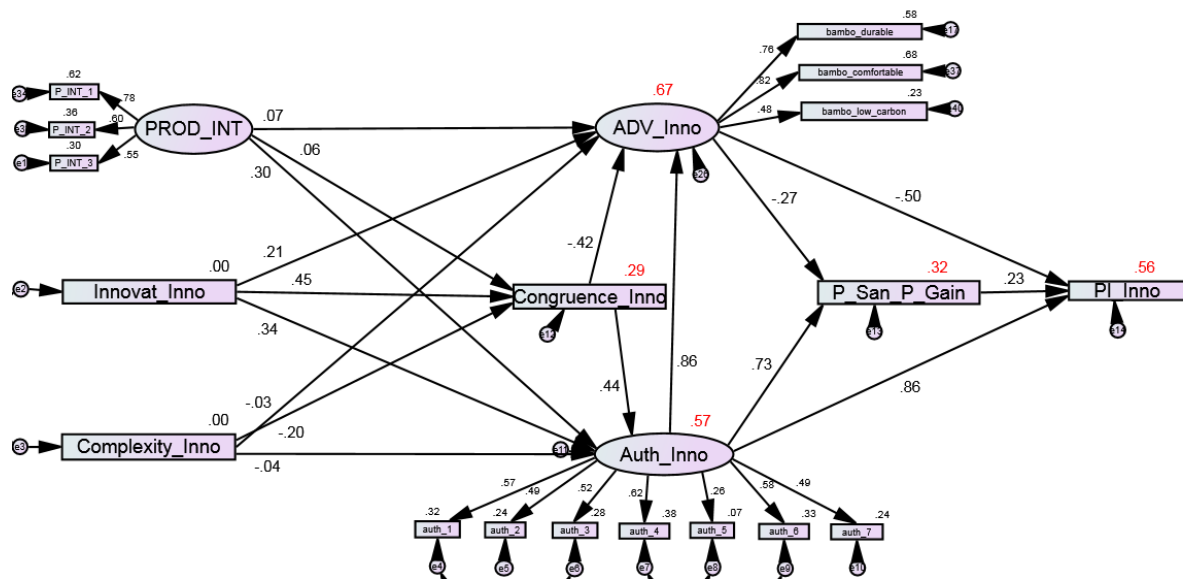


Figure A7.26: Path model for Low Past Orientation

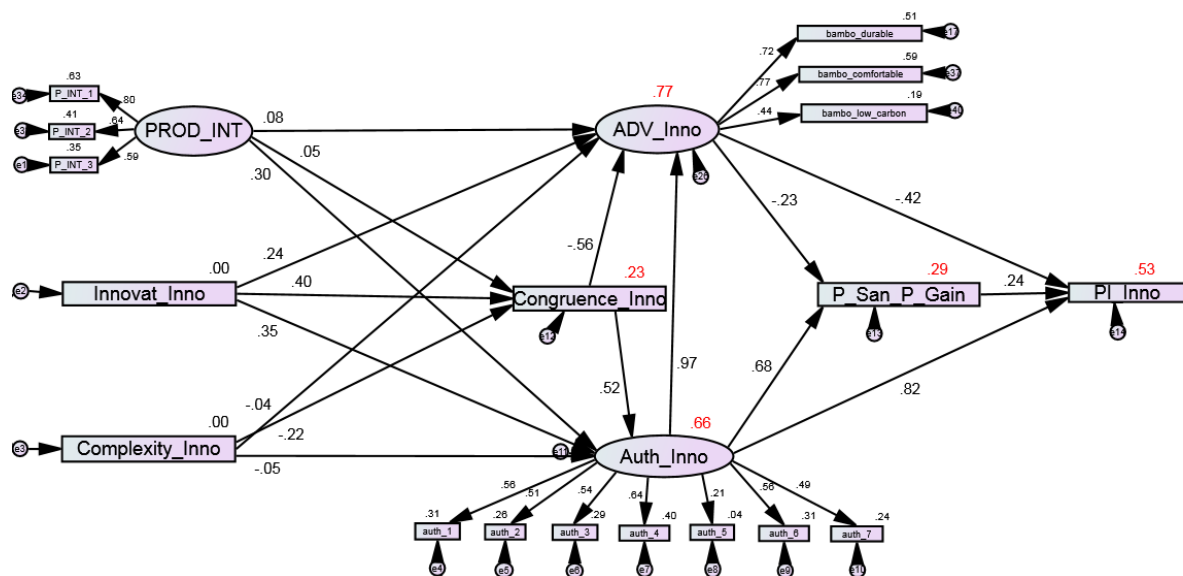


Figure A7.27: Path model for High Past Orientation

Table A7.31: Model Estimation and Critical Ratios

	Low PO		High PO		CR
	Estimate	p	Estimate	p	
Auth_Inno <--- PROD_INT	0.38	0.00	0.25	0.00	-0.657
P_Sac_P_Gain <--- Auth_Inno	0.66	0.00	0.82	0.00	0.597
PI_Inno <--- Auth_Inno	0.75	0.00	0.92	0.00	0.808

Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10
E = Estimate; CR = critical ratios

Appendix 7.10: Involvement Moderation (Australia)

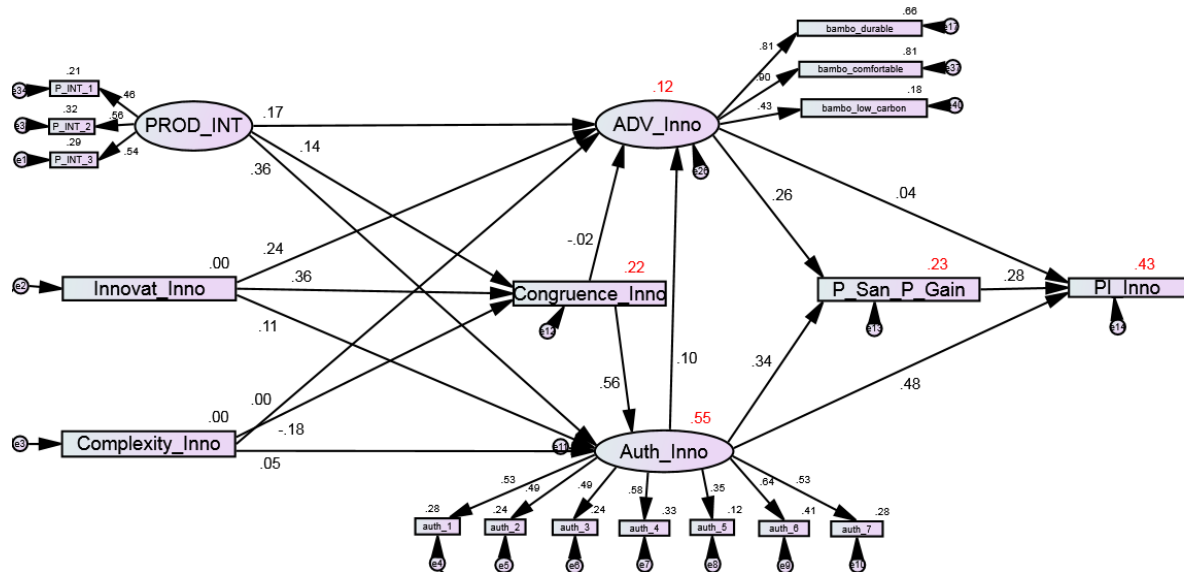


Figure A7.28: Path model for Low Involvement

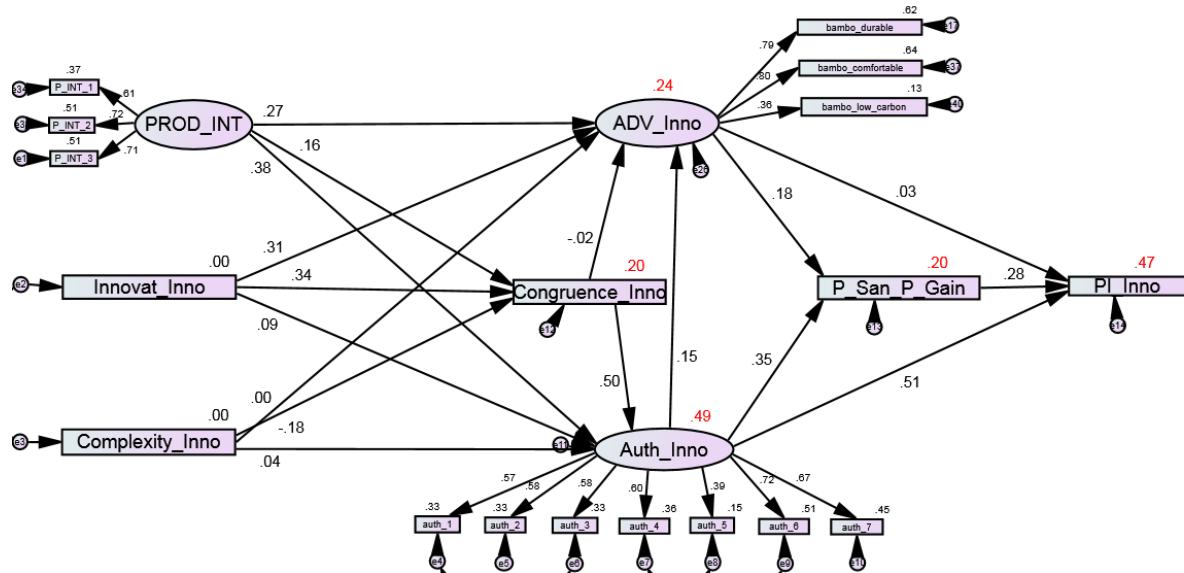


Figure A7.29: Path model for High Involvement

Table A7.32: Model Estimation and Critical Ratios

	Low Involvement		High Involvement		CR
	Estimate	p	Estimate	p	
P_Sac_P_Gain <--- Auth_Inno	0.37	0.00	0.35	0.00	-1.349
PI_Inno <--- Auth_Inno	0.56	0.00	0.50	0.00	-1.716*

Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10
E = Estimate; CR = critical ratios

Appendix 7.11: Involvement Moderation (Singapore)

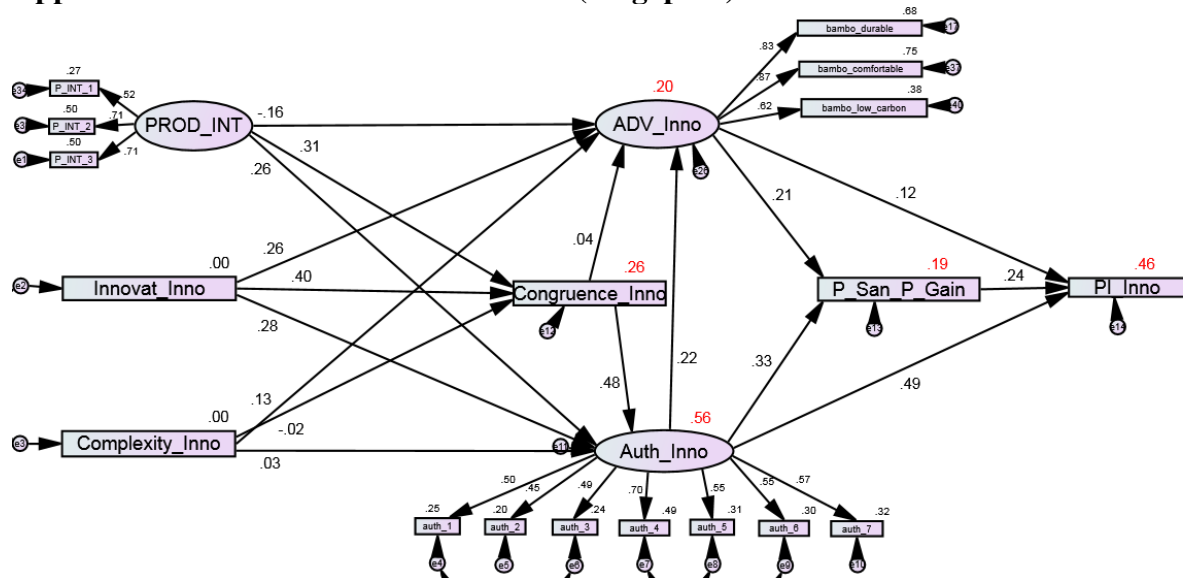


Figure A7.30: Path model for Low Involvement

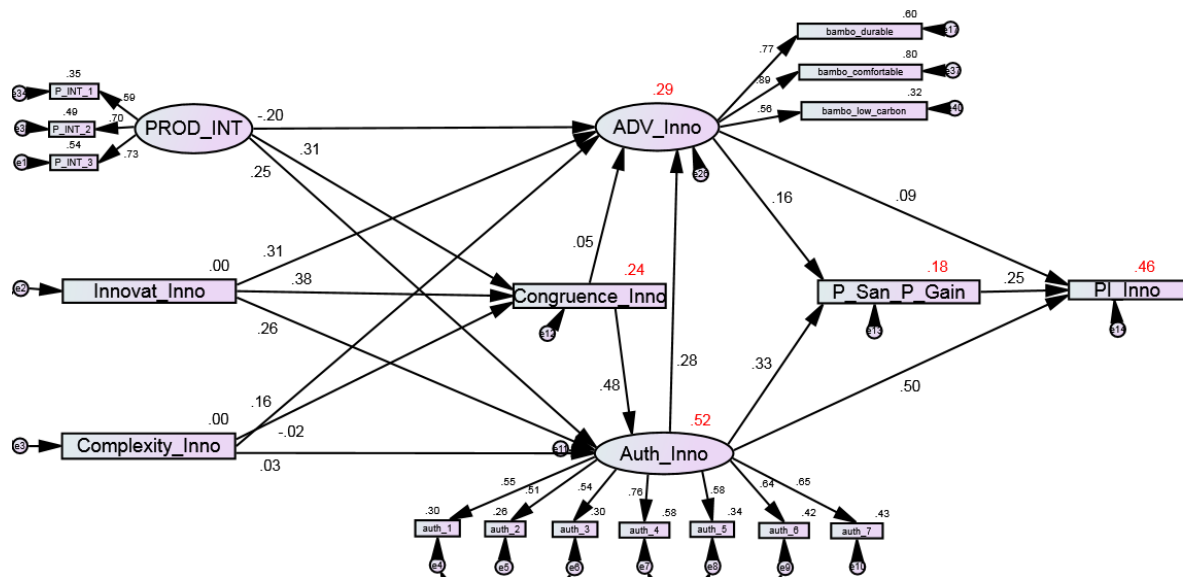


Figure A7.31: Path model for High Involvement

Table A7.33: Model Estimation and Critical Ratios

	Low Involvement		High Involvement		CR
	Estimate	p	Estimate	p	
P_Sac_P_Gain <--- Auth_Inno	0.46	0.00	0.25	0.00	-2.607***
PI_Inno <--- Auth_Inno	0.61	0.00	0.41	0.00	-3.114***

Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10
E = Estimate; CR = critical ratios

Appendix 7.12: Involvement Moderation (France)

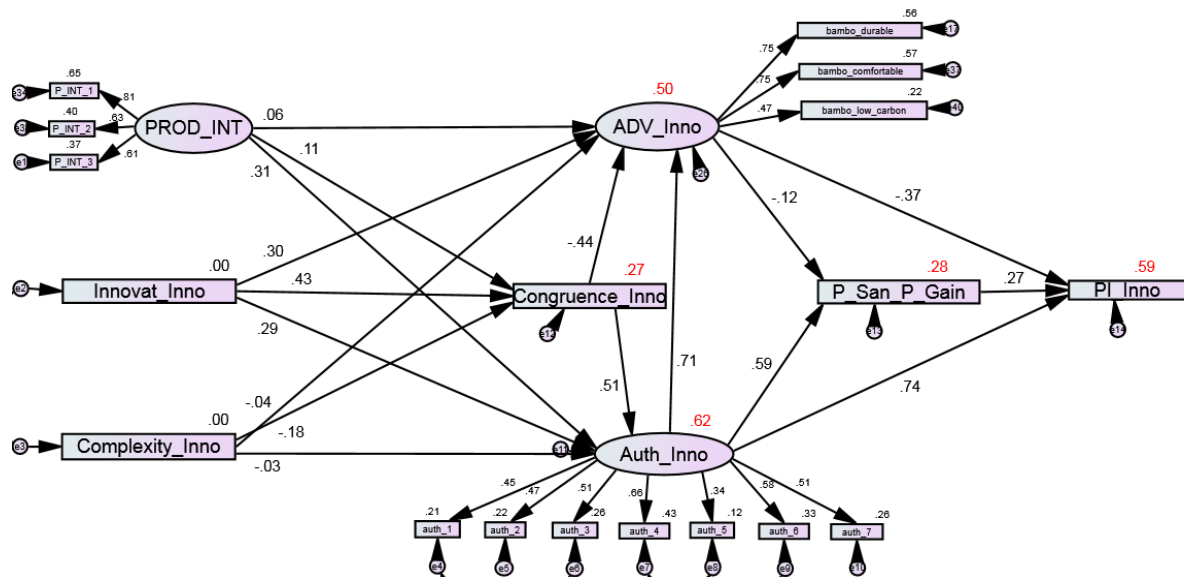


Figure A7.32: Path model for Low Involvement

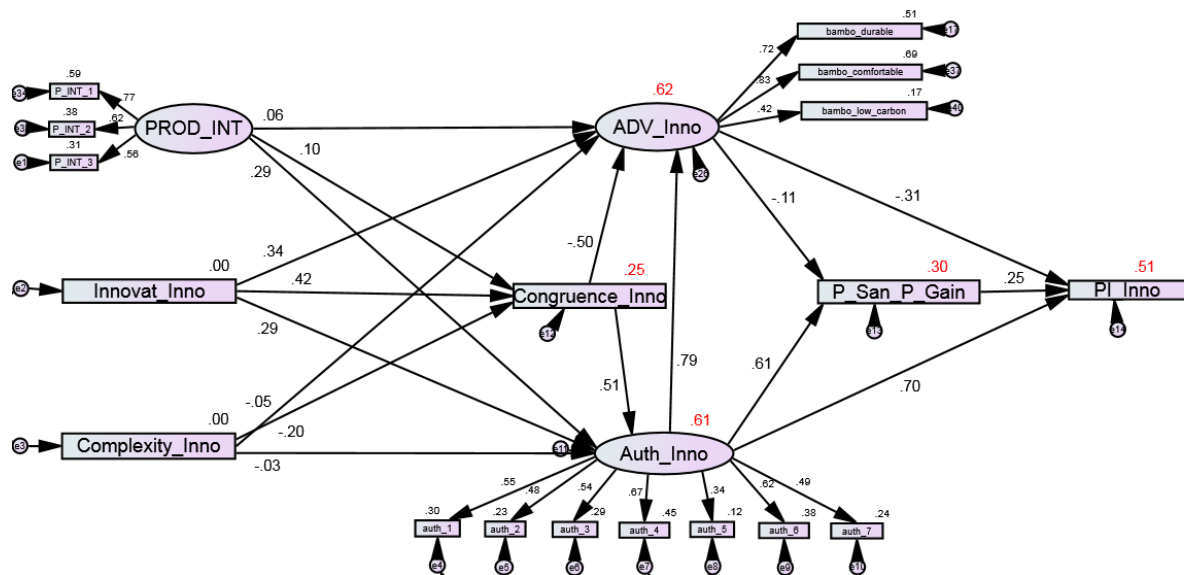


Figure A7.33: Path model for High Involvement

Table A7.34: Model Estimation and Critical Ratios

	Low Involvement		High Involvement		CR
	Estimate	p	Estimate	p	
P_Sac_P_Gain <--- Auth_Inno	0.71	0.00	0.55	0.00	-0.540
PI_Inno <--- Auth_Inno	0.60	0.00	0.80	0.00	1.874*
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10					
E = Estimate; CR = critical ratios					

Appendix 7.13: Knowledge Moderation (Australia)

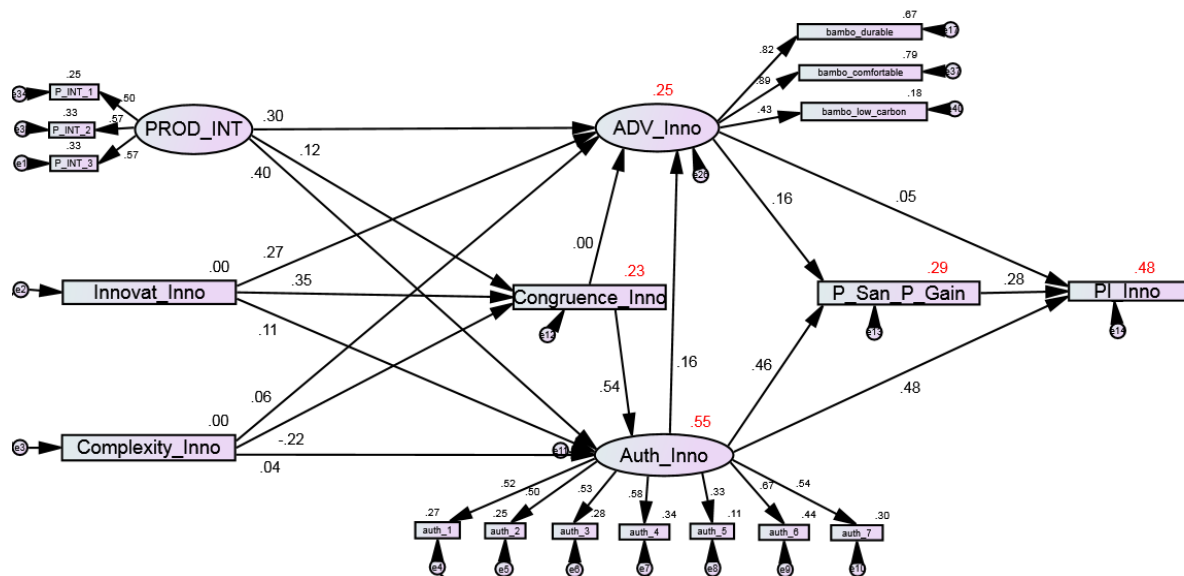


Figure A7.34: Path model for Low Knowledge

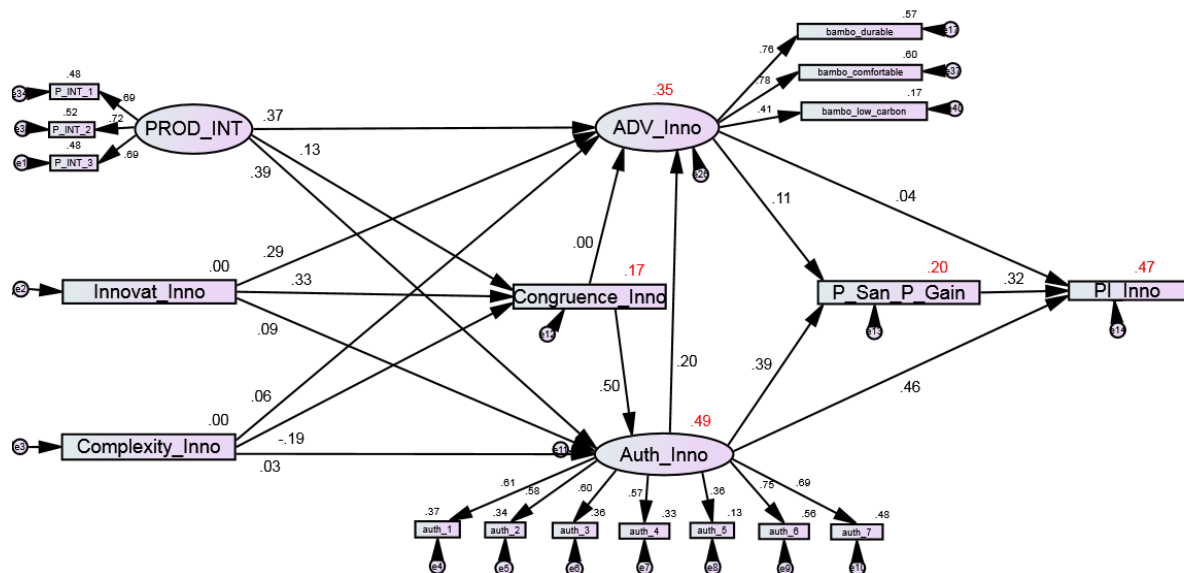


Figure A7.35: Path model for High Knowledge

Table A7.35: Model Estimation and Critical Ratios

	Low Knowledge		High Knowledge		CR
	Estimate	p	Estimate	p	
P_Sac_P_Gain <--- Auth_Inno	0.52	0.00	0.35	0.00	-1.440
PI_Inno <--- Auth_Inno	0.49	0.00	0.50	0.00	-0.656

Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10
E = Estimate; CR = critical ratios

Appendix 7.14: Knowledge Moderation (Singapore)

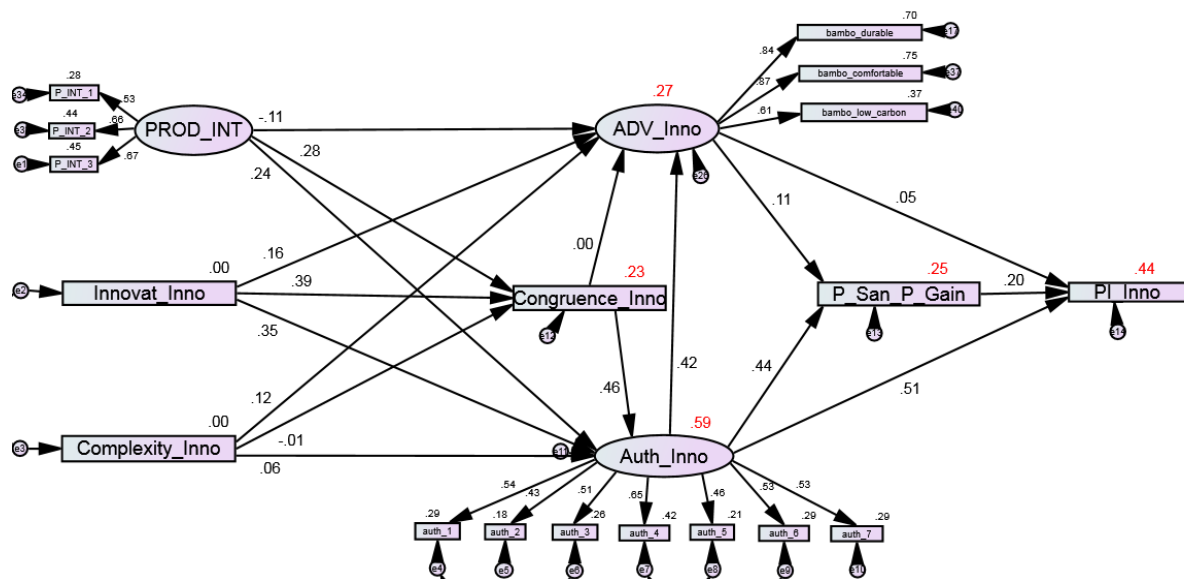


Figure A7.36: Path model for Low Knowledge

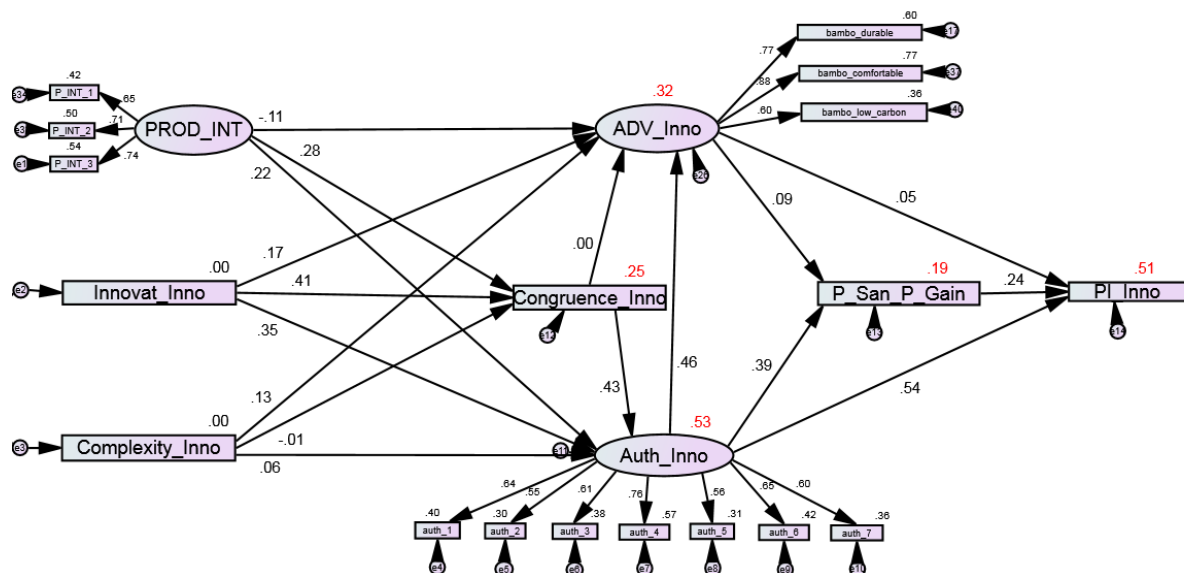


Figure A7.37: Path model for High Knowledge

Table A7.36: Model Estimation and Critical Ratios

	Low Knowledge		High Knowledge		CR
	Estimate	p	Estimate	p	
P_Sac_P_Gain <--- Auth_Inno	0.56	0.00	0.25	0.00	-2.013**
PI_Inno <--- Auth_Inno	0.61	0.00	0.47	0.00	-1.591

Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10
E = Estimate; CR = critical ratios

Appendix 7.15: Knowledge Moderation (France)

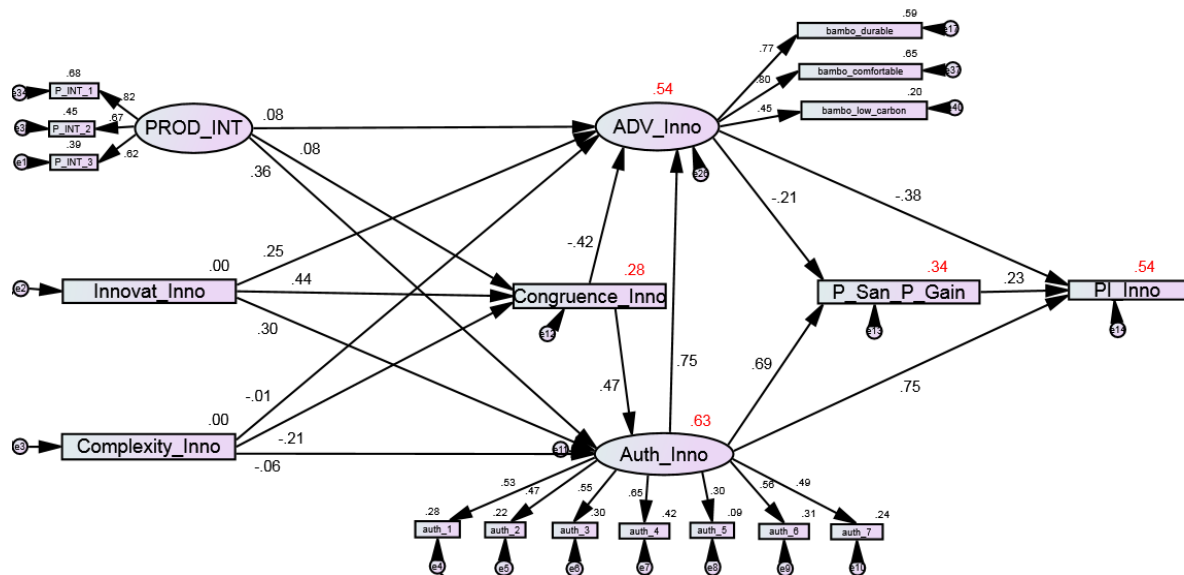


Figure A7.38: Path model for Low Knowledge

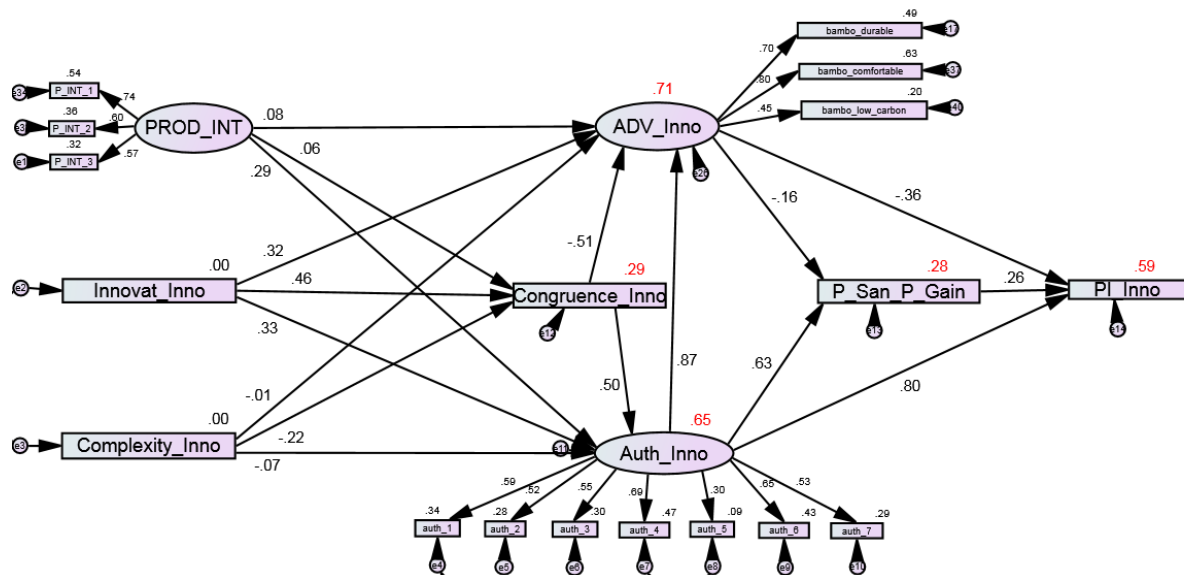


Figure A7.39: Path model for High Knowledge

Table A7.37: Model Estimation and Critical Ratios

	Low Knowledge		High Knowledge		CR
	Estimate	p	Estimate	p	
P_Sac_P_Gain <--- Auth_Inno	0.95	0.00	0.50	0.00	-2.325**
PI_Inno <--- Auth_Inno	0.84	0.00	0.71	0.00	-1.253

Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10
E = Estimate; CR = critical ratios

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