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Consumer Ethnocentrism

A research synthesis and meta-analysis of its socio-psychological antecedents and outcomes

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Preface

Writing a master thesis is a challenging project, which could not have been realized without the help of certain people.

I first want to thank my supervisor, Einar Breivik, for drawing my interest to conducting research syntheses and meta-analyses. And also showing how rewarding it is to achieve useful results from a sample that one put together with his own hands just by searching existing literature. His quick response to any questions I had was extremely helpful, and I highly appreciate his knowledgeable remarks, which guided me through the process of conducting my research.

I also want to express my gratitude to my friends and family, for supporting me with their thoughts and their helpful comments, or even just for providing a welcomed distraction from sometimes monotonous coding work. Special thanks goes out to Julia Peitzmeier, who always had the time to discuss critical points, give advice, or build me up, and Carolin Hölscher and Charlotte Durieux, for taking this journey together.

I want to conclude this preface with a remark from Bengt Holmström, which he recently made on a visit to NHH:

> "If everything goes according to your expectations, you have not learned much."

Through the ups and downs of writing this thesis, there is one thing I can definitely say – that it did not go according to my initial expectations, but I am glad for the invaluable experience it has given me.

Abstract

The goal of this thesis is to identify the socio-psychological antecedents and main outcomes of consumer ethnocentrism, and to quantify the relationship of consumer ethnocentrism and these related constructs. For this, a research synthesis and meta-analysis were conducted, which allow for integration of the findings of a large amount of individual studies into one conceptual model and the determination of the size of the relationship. Consequently, more generalizable assertions can be made about the relationship of consumer ethnocentrism and its socio-psychological antecedents and outcomes. The results confirm previous research by showing that consumer ethnocentrism is positively influenced by the antecedents national values, animosity, collectivism, and materialism, and negatively influenced by international values. Conspicuous consumption, however, was identified as not influencing consumer ethnocentrism. Furthermore, the analysis confirmed that consumer ethnocentrism leads to more favorable domestic product judgements and higher willingness to buy domestic, while it leads to less favorable foreign product judgements and lower willingness to buy foreign products. This has important implications for managers and researchers alike, as they are able to more easily identify the magnitude of important relationships of consumer ethnocentrism and related constructs.

Content

List of Abbreviations

AGCC	Acculturation to Global Consumer Culture
CC	Conspicuous Consumption
CE	Consumer Ethnocentrism
CET	Consumer Ethnocentric Tendencies
CETSCALE	Consumer Ethnocentric Tendencies Scale, used as a tool to measure consumer ethnocentrism
CoO	Country-of-origin
COSMO-Scale	12-item scale developed by Riefler et al. (2013) to measure cosmopolitanism
PI	Purchase intention
PIWTB	Purchase intention and willingness to buy
PJ	Product judgements
WTB	Willingness to buy

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1. Introduction

Globalization affects and changes consumer behavior through the decrease of trade barriers, expansion of foreign trade, more unified markets, increased travel, multi-nationally operating firms, and technological advancements (Douglas & Craig, 1997). As a result, national consumer cultures collapse and companies find themselves in a more competitive environment, but with access to a larger, more nuanced customer base (Douglas & Craig, 1997). Therefore, more firms seek to sell their products in more countries as part of their expansion and horizontal diversification. Thus, it is important to understand consumer's perception of foreign products for nationally and internationally operating firms alike.

Research on consumer behavior in the international marketplace is not new. Much research has focused on the examination of how a product's country of origin affects consumers' perception of the product and their purchasing behavior (Fernández-Ferrín, Bande-Vilela, Klein, & del Río-Araújo, 2015), which dates back as early as 1965 (Peterson & Jolibert, 1995). In recent years, however, more researchers have tried to examine perceptions of foreign products not bound to one specific country of origin, which makes the findings more generalizable (Fernández-Ferrín et al., 2015). A factor influencing such general product perceptions is consumer ethnocentrism, whereby consumers assess whether it is appropriate or moral to purchase foreign products (Shimp & Sharma, 1987). Consumers with high consumer ethnocentric tendencies will prefer domestic products in order to support their own country (Netemeyer, Durvasula, & Lichtenstein, 1991). Consumer ethnocentrism is not only studied in isolation, but in context of a variety of antecedents and outcomes.

Even though a large amount of research has been added to the field since its first introduction by Shimp and Sharma in 1987, findings are scattered, and literature reviews on the topic are scarce and outdated (e.g. Shankarmahesh, 2006; Siamagka, 2010). A first attempt at synthesizing results has recently been done by Shoham, Gavish & Rose (2016), whose meta-analysis on consumer animosity and consumer ethnocentrism revealed negative effect sizes for the outcomes foreign product judgement and willingness to buy foreign. Still, a larger synthesis about consumer ethnocentrism is missing, especially regarding its antecedents. A quantifiable estimation of the relationship between consumer ethnocentrism and its antecedents has not been made yet. This thesis seeks to fill this gap and add to the understanding of the relationship between consumer ethnocentrism and its outcomes by

conducting a research synthesis and meta-analysis on the socio-psychological antecedents and general outcomes of consumer ethnocentrism.

The following research questions will therefore guide this thesis:

1. What are the main socio-psychological antecedents and the main outcomes of consumer ethnocentrism?
2. To what extent do the main socio-psychological antecedents influence consumer ethnocentrism, and to what extent does consumer ethnocentrism influence its outcomes?

The goal of the synthesis is to draw founded conclusions based on past research (Cooper, 2016). In comparison to a traditional theoretical review, a research synthesis goes beyond the narrative interpretation of results and produces much more reliable and replicable results (Cooper, 2016). This is due to four pitfalls of traditional literature reviews, as pointed out by Cooper (2016): firstly, they often do not follow a systematic search of the literature, secondly, they do not include reliability measures for the findings of the studies, thirdly, they only define clear search criteria after conducting the search, and fourthly and most importantly, they are not able to show how large a relationship between the observed constructs is. Systematic reviews aim to overcome these deficiencies. They are replicable, which means that other researches will come to the same results if they follow the same procedure (Cooper, 2016). For this, a synthesist needs to clearly define search criteria before conducting the search, document the information retrieval, and give an overall estimate of the size of relationship between the observed constructs (Cooper, 2016). As a result, research synthesis resembles the execution of primary research, where the studies revealed in the review can be viewed as a sample randomly drawn from a general population (Brown, Upchurch, & Acton, 2003).

Due to the large amount of research performed in this field, consumer ethnocentrism offers great possibilities for research synthesis. This, in turn, will help future researchers guide their further investigation of consumer ethnocentrism to the areas where further validation is needed. In addition, practitioners will be able to quickly obtain an overview of the topic and to guide their marketing practices accordingly.

This thesis is structured as follows: first, a general overview of consumer ethnocentrism and of its measurement is given, and a conceptual framework is derived. Next, a review of the literature explains the antecedents and outcomes that have frequently been studied with

consumer ethnocentrism; how they have been defined and measured across different studies. Thereafter, the methodological approach of the research synthesis and subsequent meta-analysis is explained in depth, followed by the actual meta-analysis examining the size of the relationship between consumer ethnocentrism and its antecedents and outcomes. Finally, this thesis ends with a general discussion of the findings, its contribution to current research, the implications of the findings for research and for practice, as well as limitations of the study.

2. Theoretical Background

2.1 Ethnocentrism

Consumer ethnocentrism is, as the construct suggests, a specific form of ethnocentrism. Therefore, before explaining consumer ethnocentrism, first the term ethnocentrism needs to be understood. While consumer ethnocentrism was first formally introduced by Shimp & Sharma in 1987, ethnocentrism has already been described in the late 19th century, originating in the social sciences. As unveiled in a recent literature review performed by Bizumic (2014), Gumplowicz was the first to introduce ethnocentrism as early as 1879 and described it as a focus on one's ethnic group, in which this group is regarded as superior and better than any other group (Bizumic, 2014). But according to Bizumic (2014), in prominent ethnocentrism literature from the past decades (such as LeVine & Campbell, 1972; Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950) Sumner (1906) is most often regarded as the first to formally define ethnocentrism. Sharma, Shimp, and Shin (1995) also cite Sumner's (1906) definition as follows:

"the view of things in which one's own group is the center of everything, and all others are scaled and rated with reference to it. . . Each group nourishes its own pride and vanity, boasts itself superior, exalts its own divinities and looks with contempt on outsiders." (p. 27)

Nevertheless, both Gumplowicz and Sumner distinguish between groups the individual identifies with ("in-groups") and all other groups, which are often seen as direct opposites ("out-groups") (Shimp & Sharma, 1987; LeVine & Campbell, 1972). Even though first conceptualized to apply to nations and tribes, further research found ethnocentrism to be more than just a cultural construct; according to Sharma et al. (1995) Murdock (1931) highlights that it encompasses all kinds of possible groups, such as family pride, religious prejudices, or racial discrimination. Next to the central assumption of distinguishing between different groups, ethnocentrism is reflected in seeing one's own group's way of life as superior to that of other groups, and out-groups are frowned upon and seen as inferior (Shimp & Sharma, 1987; Levine & Campbell, 1972). Additionally, according to Gumplowicz, ethnocentrism even extends to the belief of one's own group being better than any group that has ever existed (Bizumic, 2014). It is a major concept influencing social psychology, and several theories have built on it, such as the social identity theory by Tajfel and Turner (1986) (Bizumic, 2014).

2.2 Consumer Ethnocentrism

As mentioned earlier, Shimp and Sharma (1987) were the first to formally conceptualize the construct of consumer ethnocentrism, a specific form of ethnocentrism relevant for marketing when applying it to consumers and their behavior in an international marketplace (Javalgi, Khare, Gross, & Scherer, 2005). The authors defined the concept as “the beliefs held by American consumers about the appropriateness, indeed morality, of purchasing foreign-made products" (Shimp & Sharma, 1987, p. 280). For ethnocentric consumers, buying products from their home country is a moral obligation, in order to support their country and to keep the local economy going. As seen from an in-group vs. out-group perspective, products from the home country are perceived as better and superior to those coming from other countries, which are looked upon in disdain and seen as inferior (Shimp & Sharma, 1987).

Put differently, ethnocentric consumers think that the purchase of foreign products is bad, as it is perceived as causing domestic job loss and economic downfall (Shimp & Sharma, 1987). According to Sharma et al. (1995), highly ethnocentric consumers may buy domestic products even when the quality of foreign goods is better, out of a sense of moral obligation towards the home country, and are also relatively price inelastic (Shankarmahesh, 2006). Consumers with low ethnocentrism, on the other hand, evaluate products simply upon their quality, their appearance or other product attributes. This can also include buying a product *because* it is from a certain country (Shimp & Sharma, 1987).

As described by Sharma et al. (1995), consumer ethnocentrism therefore has three key characteristics:

(1) High identification with and concern about the home country and a wish to not harm the local economy through increased imports

(2) A reluctance to buy foreign products

(3) A prejudice towards foreign products

Resulting from this, domestic products are favored over imported products, because of both moral reasons and the perception of domestic products being superior. Consumer ethnocentrism accordingly serves as a guideline for consumers in a world with an ever-increasing product offer to determine which purchasing behavior is appropriate for the in-

group (Shimp & Sharma, 1987). It helps the consumer to identify with certain products, and to give him a feeling of belongingness in his social and cultural environment (Shimp & Sharma, 1987). For multinational firms seeking to enter new markets, consumer ethnocentrism can be regarded as a kind of protectionism that takes place at the consumer level (Feurer, Baumbach, & Woodside, 2016; Verlegh, 2007).

To measure how ethnocentric consumers of a certain country are, Shimp and Sharma (1987) developed the **C**onsumer **E**thnocentric **T**endencies Scale (in short: CETSCALE), which has now become a widely-applied construct to study consumer behavior. It is important to note that the construct measures a tendency, rather than specific attitudes. The authors argue this stems from the logic of an attribute being formed about a specific object, such as one specific product, while a tendency encompasses a general behavior towards a whole category, namely foreign products (Shimp & Sharma, 1987). It is therefore more like a personality trait, which influences consumer behavior and could be formed as early as in childhood (Sharma et al., 1995; Shimp & Sharma, 1987).

In order to develop the scale, the authors first gathered insights about foreign products from more than 800 consumers, resulting in several different dimensions influencing the behavior of consumers towards foreign products, such as price-value perceptions, rationalization-of-choice, and among those, consumer ethnocentrism. Through subsequent tests, the authors found that all other dimensions failed to meet statistical requirements, which resulted in concentration on developing a scale for consumer ethnocentric tendencies only. After further validity tests, Shimp and Sharma (1987) found the scale to consist of 17 items, usually measured on a seven-point Likert scale ranging from 1 – “strongly disagree” to 7 – “strongly agree”, of which an exact list can be found in Appendix A. Along with this classic scale, they also tested a reduced 10-item version, which makes it more applicable to longer studies measuring multiple constructs. The higher the score on the CETSCALE, the more a consumer has tendencies towards preferring domestic over foreign products (Javalgi et al., 2005).

As highlighted by Shankarmahesh (2006), Shimp and Sharma (1987) were not the first or only researchers to measure negative attitudes towards foreign products by consumers. According to the author, a scale developed by Reierson (1966) has been used in earlier works. Others, such as Ettenson, Wagner, and Gaeth (1988) or Strutton, Pelton, and Lumpkin (1994), have conducted research related to ethnocentrism without specifically measuring it.

2.3 Distinction from Country-of-Origin

Due to its application to consumer behavior towards foreign products, consumer ethnocentrism could be confused with another prominent concept in the marketing literature, the country-of-origin effect (CoO). While both constructs describe consumer's bias towards imported products, they are distinct from another. Central in the CoO effect is the identification of the specific origin of a product, which is typically facilitated through a "made in" label (Peterson & Jolibert, 1995). A consumer can therefore hold negative attitudes towards Japanese cars, which results in him not buying them, while holding positive attitudes and willingness to buy towards French wine, because wine from France is perceived as having better quality than wine produced in the home country. Consumer ethnocentrism, on the other hand, measures negative tendencies towards foreign products in general, independent of their specific country of origin (Shankarmahesh, 2006). As put by Herche (1992), a consumer with high ethnocentrism still would not buy the French wine, or any foreign wine for that matter, out of a moral obligation towards the home country. This makes consumer ethnocentrism more generalizable across different countries and different products, and does not necessarily require the specification of the origin of the foreign product.

2.4 General Application of the CETSCALE

Since its development, the CETSCALE has been extensively validated in many studies and is now widely used to understand consumer behavior when foreign products are involved. Netemeyer et al. (1991) were among the first to replicate the original study and found it applicable not only to the US, but also to Japan, France, and West Germany. Showing high reliability even when applied in different countries, the CETSCALE has now become a standard measure for consumer ethnocentrism. While many studies (e.g. Yoo & Donthu, 2005; Parker, Haytko, & Hermans, 2011) still apply the original 17-item scale, many others (e.g. Nguyen, Nguyen, & Barrett, 2008; Ishii, 2009) focus on shorter versions of the scale, which range from 10 to as little as 4 items of the original scale, but still reaching high reliability (Klein, 2002). This is especially found in studies measuring consumer ethnocentrism and a larger number of other constructs, in order to reduce the complexity and time needed for the study.

Interestingly, since its introduction, the CETSCALE has not been substantially redefined, even though some authors have found critical points. Among the first was Herche (1990), who pointed out that some items were worded in a way which could result in a statement polarity bias. This means that due to how the sentence is framed, it will make respondents react more strongly towards the statement and therefore they have a higher tendency to use the extreme points of the scale. Little attention has been given to this remark, which can be due to the facts that he only used a small sample, making it harder to generalize findings, and that it was only a conference proceeding and not published in a scientific journal. Another example of an attempt to re-conceptualize the CETSCALE was done by Mavondo and Tan (1999), but their approach to distinguish between the three dimensions morality, economic rationality, and economic animosity did not receive much attention. Still, minor adaptions of the original CETSCALE have been made, which are widely applied in the research field. As Jiménez-Guerrero, Gázquez-Abad, and del Carmen Linares-Agüera (2014) point out, notable adaptions have been done by Douglas and Nijssen (2003) and Altintas and Tokol (2007), although these are small and encompass the inclusion of a new item or the specification of foreign products as coming from Europe. Other adaptions usually only relate to reducing the numbers of items used and translating the scale in the language spoken in the country of the study.

2.5 Unidimensionality of the CETSCALE

As highlighted by Jiménez-Guerrero et al. (2014), unidimensionality is understood by many researchers as a requirement which needs to be met by a scale to arrive at reliable measurement outcomes. This is why the unidimensionality of the CETSCALE has been addressed in a large number of studies, in addition to measuring internal consistency. Especially in earlier works of consumer ethnocentrism using the CETSCALE, this assessment has been included, and studies most often found the CETSCALE to indeed be unidimensional, especially when using the full 17-item version (e.g. Netemeyer et al., 1991; Sharma et al., 1995; Caruana, 1996; Luque-Martínez, Ibanez-Zapata, & del Barrio-Garcia, 2000). But even with reduced items, unidimensionality was often given (e.g. Vida, Dmitrović, & Obadia, 2008; Balabanis & Diamantopoulos, 2001). However, other studies found the CETSCALE to contain multiple dimensions. Nijssen and Douglas (2003) for example discovered two dimensions for the CETSCALE in the Netherlands: core ethnocentrism and availability of domestic products. Lindquist, Vida, Plank, and Fairhurst (2001) even found the 10-item CETSCALE to contain four dimensions, namely product availability, patriotism, employment impact, and overall

economic impact concern. In their literature review of the unidimensionality of the CETSCALE, Jiménez-Guerrero et al. (2014) also find multiple other cases of multidimensional CETSCALE and argue for caution of its application across different countries. It is true that the application of a measurement construct across countries should always be done with caution, and that heterogeneity in results will arrive when using different samples and settings (Thelen, Ford, & Honeycutt, 2006; Jiménez-Guerrero et al. 2014). Nevertheless, the CETSCALE is agreed upon as a valid measure for gaining insights about consumer ethnocentrism throughout a great number of studies. Unless always applied in exactly the same context, measurements will produce slightly different results (Jiménez-Guerrero et al. 2014). In this light, I believe that the CETSCALE is still a highly valid and widely applicable measurement and assume the scale to be unidimensional in my further analysis.

2.6 Development of the Conceptual Model

Since the CETSCALE measures consumer behavior, consumer ethnocentrism is not a static concept, but rather must be seen in a larger context of consumer characteristics and consumer behavior. For consumer ethnocentrism, as measured by the CETSCALE, to be an important contributor to understanding consumer behavior, it needs to lead to consequences that provide meaningful implications for practitioners. In addition, practitioners should be able to understand the drivers of consumer ethnocentrism and how they could influence them. This motivates the research of outcomes (consequences) and antecedents (drivers) of consumer ethnocentrism, which has already been included in the initial study by Shimp and Sharma (1987). There, the authors examined the correlation between consumer ethnocentrism and attitudes towards foreign products, as well as purchase intention, and subsequent authors have added to this approach. Consumer ethnocentrism is thus often not studied in isolation but in context of its antecedents, moderators, and outcomes, but many studies only include few of these factors, and these factors, especially the antecedents, differ greatly across studies.

A broad overview of these factors has first been conducted by Shankarmahesh (2006) in his literature review about consumer ethnocentrism. He identified four different types of antecedents, namely socio-psychological, economic, political, and demographic antecedents. In addition, he included outcomes of consumer ethnocentrism, as well as mediators and

moderators that influence these outcomes. His conceptual framework can be seen in Figure 2.1.

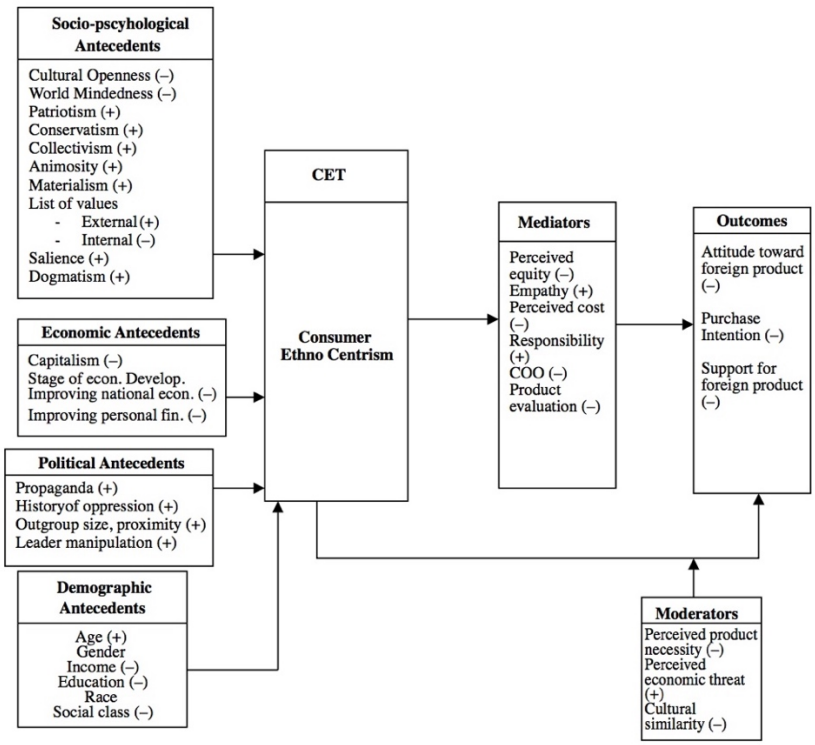


Figure 2.1 *CET, its antecedents and outcomes, by Shankarmahesh (2006)*

Since then, little has been done to further extend this model. A review by Alsughayir (2013) only added an interest in international travel. A more thorough analysis was made by Siamagka (2010) in her dissertation about consumer ethnocentrism. She rearranged the model of antecedents into the four building blocks socio-psychological, cultural, demographic, and economic antecedents. From the constructs originally clustered in the socio-psychological block by Shankarmahesh (2006), only animosity remained in this categroy in her adjusted model, whereas all other constructs moved to the new cultural cluster (if included). In addition, the author also identified other constructs such as foreign travel and global consumption orientation. Nevertheless, considering the vast amount of research available in the field of consumer ethnocentrism, little has been done to synthesize this knowledge. Most importantly, an overall estimation of the magnitude of the relationship between consumer ethnocentrism and its related constructs has not been made.

The aforementioned motivates the work of this thesis, whereby a systematic review and a subsequent meta-analysis aim at quantifying the relationship of consumer ethnocentrism and its related constructs. Consumer ethnocentrism imposes a great field for the application of

meta-analysis, for multiple reasons. Verlegh and Steenkamp (1999) highlighted these for conducting a meta-analysis about CoO effects, which can also be applied to the field of consumer ethnocentrism. The field of consumer ethnocentrism encompasses a large amount of studies that investigate the same construct in a variety of settings and countries. Still, these studies all aim at adding understanding to the same construct, by investigating how consumer ethnocentrism interplays with consumer characteristics and how it affects consumer behaviour. The research field therefore consists of imperfect replications of the same construct that measure the same effect, but are still different from each other (Verlegh & Steenkamp, 1999). Having this large set of imperfect replications in the field is important, as it allows for a wider understanding of the field than a single study or exact replication could provide (Verlegh & Steenkamp, 1999). Additionally, it is possible to identify and quantify moderating factors that influence the relationship between consumer ethnocentrism and related constructs (Verlegh & Steenkamp, 1999). This could be differences in the study participants, the data collection, or the country of where the study was undertaken.

For conducting a systematic review and a subsequent meta-analysis, the influence of socio-psychological antecedents on consumer ethnocentrism and the outcomes of consumer ethnocentrism proved most interesting. This stems from different reasons.

1. They are commonly used.
2. They are measured with relatively uniformed measures.
3. Their understanding is important for practitioners.

Explained in more detail, firstly, socio-psychological antecedents and outcomes of consumer ethnocentrism are often included in consumer ethnocentrism studies, allowing for a suitable amount of studies needed for a meta-analysis. Secondly, they are more clearly defined and measured than other antecedents, and more valid across countries (political antecedents for example are highly country specific). Even though regularly included in studies, especially demographic antecedents are hard to compare across studies in a systematic way due to their differences in measurement and the lack of availability of original data obtained in the studies. In addition, gaining further understanding about the socio-psychological antecedents and the outcomes of consumer ethnocentrism is highly relevant for the practical world as it allows for better understanding of consumers and influences of their purchasing behavior.

According to this focus, the literature review, which will be presented in detail in the following chapter, revealed the main socio-psychological antecedents and outcomes of consumer ethnocentrism. From this, the conceptual model was developed:

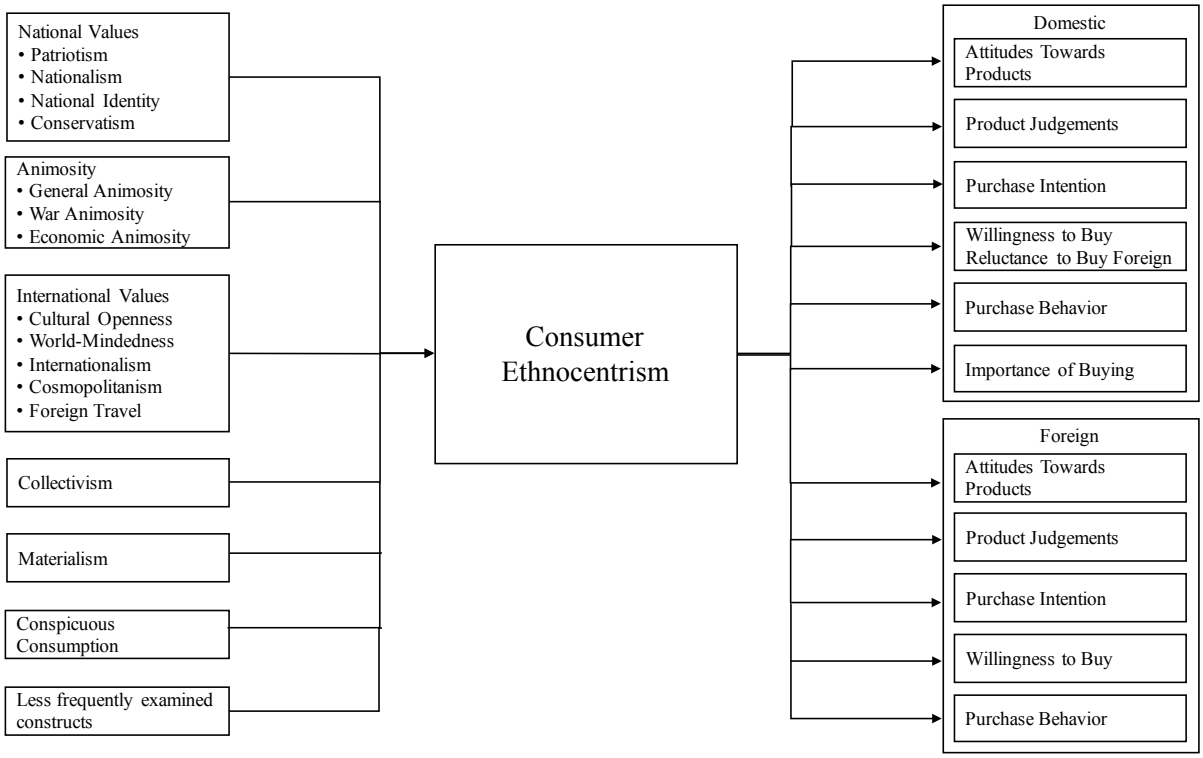


Figure 2.2 *Conceptual model*

Further explanation of these constructs will be given in the following chapter containing the literature review, while determining the size of the relationship between consumer ethnocentrism and its related constructs is the goal of the meta-analysis.

3. Literature Review

In order to understand the constructs related to consumer ethnocentrism, the literature was closely examined. Special attention was paid to how the constructs were measured. This review will first describe the socio-psychological antecedents of consumer ethnocentrism before examining the behavioral outcomes. Socio-psychological antecedents are regarded as attitudes, believes, or behaviors formed by consumers. Outcomes of consumer ethnocentrism encompass the beliefs held towards products and the consumption behaviors resulting from consumer ethnocentrism.

3.1 Socio-psychological antecedents

3.1.1 Patriotism

The Stanford Encyclopedia of Philosophy defines patriotism as "love of one's country, identification with it, and special concern for its well-being and that of compatriots" (ch. 1, 1.1 What is patriotism?). Sharma et al. (1995) have a very similar, shortened definition by describing patriotism as "love for or devotion to one's country" (p.28). According to the authors, other researchers such as Adorno et al. (1950) have found it to be closely linked to ethnocentrism, and Milhalyi (1984) found it to be a defensive mechanism to protect the in-group. In addition, Sharma et al. (1995) remark that Moore (1989) describes patriotism to reflect non-tariff trade barriers better than for example protectionism. Earlier research of international marketing done by Han (1988) found a significant influence of patriotism on product choice. More precisely, patriotic consumers preferred domestic over foreign products when it came to product choice, but the influence of attitudes towards foreign products was limited. Additionally, his research showed that patriotic consumers evaluate domestic products more favorably in terms of quality and serviceability.

Due to its close link to ethnocentrism, the influence of patriotism on consumer ethnocentrism has been extensively examined in the field and was subject to many studies. The systematic review revealed that 31 out of 138 accepted studies included the research of patriotism as an antecedent to CET. Most authors used established scales from psychology research, and adapted them to their needs. Most frequently (adapted) scales were taken from the works of Adorno et al. (1950) and Kosterman and Feshbach (1989), and only eight studies used other measurements. Even though the number of items used to measure patriotism varies between

the studies, the type of scale measurement is highly consistent and therefore allows for a coherent overall capture of the concept.

In line with previous research, the majority of studies found a medium to strong link between patriotism and ethnocentrism. Still, several analyses found weak links or even a negative link. For example, Lee, Hong, and Lee (2003) conclude that the impact of patriotism and other antecedents might be country- or at least culture-specific. A similar conclusion is drawn by Balabanis, Diamantopoulos, Mueller, and Melewar (2001), who had partially greatly conflicting results in the comparison between Turkey and the Czech Republic. They assume the way patriotism and other constructs relate to consumer ethnocentrism differs greatly between different countries. Caution towards the influence of patriotism on consumer behavior has also been called for by Shankarmahesh (2006), who argues that consumers can both love their country and still be world-minded, which relativizes the link between patriotism and purchase behavior. Additionally, by understanding that international trade is beneficial to all countries involved, the opening of one's economy cannot be seen as an unpatriotic action by an informed consumer (Shankarmahesh, 2006). Therefore, the author argues, patriotism could be mistaken for "pseudo-patriotism", which is stronger the less educated a consumer is. For further quantification of the general influence of patriotism on consumer ethnocentrism, the examination of the effect of patriotism on consumer ethnocentrism is included in the meta-analysis part of this thesis.

3.1.2 Nationalism and National Identity

Closely linked to patriotism are two other constructs frequently used in consumer ethnocentrism literature: nationalism and national identity. Many researchers differentiate between nationalism and national identity with nationalism being exclusive, while national identity is inclusive (Vida et al., 2008). More precisely, nationalism, as defined by Kosterman and Feshbach (1989) according to Balabanis et al. (2001), is characterized by a hostility towards other countries. Lee et al. (2003) add to this understanding of nationalism by including commitment to one's own country and the desire of it being superior to and dominant of other countries, which is also a definition the authors took from Kosterman and Feshbach (1989). National identity, on the other hand, does not include a negative view on the out-group, but focuses rather just on a positive view of the in-group, which is expressed through pride of and identification with the culture and values of one's home country (Lee et al., 2003; Zeugner-Roth, Žabkar, & Diamantopoulos, 2015; Dmitrovic, Vida, & Reardon, 2009).

Nationalism was measured by eight studies, and national identity by 14 studies. For measuring nationalism, most authors, such as Lee et al. (2003) and Balabanis et al. (2001), borrowed Kosterman and Feshbach's (1989) nationalism scale and only one research paper developed an own scale. For national identity, a scale by Keillor, Hult, Erffmeyer, and Babakus (1996) was mostly used (Dmitrovic et al., 2009; Vida et al., 2008). The difficulty to clearly distinct between the constructs shows for example the study by Strizhakova, Coulter, and Price (2012), who called their construct nationalism, but in fact used the scale from Keillor et al. (1996) which measures national identity. Still, across all studies, both constructs showed similar positive influence on consumer ethnocentrism.

3.1.3 Conservatism

In the context of studying consumer ethnocentric tendencies, conservatism relates to the admiration and preservation of traditions and social institutions throughout time, and the reluctance to change or alter them (Sharma et al., 1995). A highly conservative person is fundamentally religious, orients himself on the establishment, keeps and insists on strict rules, sticks to conventions, and gives little value to hedonic activities (Sharma et al., 1995). Altintas and Tokol (2007) see conservatism as part of a set of values, which in turn shape a person's attitude. In this context, they list conservation as one of four values describes by Schwartz (1994), which consists of the three sub-factors tradition, conformity, and security. Due to these values, a conservative consumer is more reluctant to anything foreign, which in turn has a positive influence on his consumer ethnocentric tendencies and preference for products from the home country.

In total, 16 studies measured conservatism as an antecedent of consumer ethnocentrism. Measurement of conservatism is mostly taken from Ray (1983), while some studies use individually adapted versions from Adorno et al. (1950), Schwartz (1994), or McCullough et al. (1986).

In their research, Sharma et al. (1995) found a strong correlation between conservatism and patriotism, which resulted in the combination of the two constructs. Other studies on conservatism have found them to be distinct from one another (e.g. Javalgi et al., 2005; Jain & Jain, 2013). Shankarmahesh (2006) argues that the influence of conservatism on CET may also be limited for the same reasons as with patriotism. More specifically, this is the case due to conservative parties standing for open trade in many countries, the ability of consumers to

distinct between their conservative values and purchase behaviour, and the construct not being completely distinct from world-mindedness. For further quantification of the effect of conservatism on consumer ethnocentrism, this construct is also examined in the meta-analysis.

3.1.4 Animosity

A construct closely related to consumer ethnocentrism, but more specific in nature, is that of animosity. Klein, Ettenson and Morris (1998) define it as "the remnants of antipathy related to previous or on-going military, political, or economic events" (p.90). According to the authors, this feeling of strong dislike will lead consumers to avoid purchasing products from the specific country. As reflected in the definition, animosity towards a country can have different reasons. It might be due to military interactions, which can be recent as in the case of Serbia and the Kosovo region (Gligorov, 2008), or hundreds of years old, as for example the mutual dislike between China and Japan (Jacques, 2012). A political reason for animosity is that of French nuclear tests conducted in the South Pacific in the 1970s, of which Australia and New Zealand strongly opposed and which resulted in the boycott of French products (Ettenson & Klein, 2005). Animosity out of economic reasons can for example be found between countries competing for jobs. An example is animosity held towards China by the United States which was utilized and promoted by Donald Trump in his election campaign (Yoon, 2017). Due to the strong feelings generated by animosity, the reluctance to buy products from the country towards which animosity is felt is often independent of product judgements (Klein et al., 1998). An Australian might have preferred French wine and thought it to be of higher quality, but still would not buy it in the 1970s due to the ongoing political discrepancy between Australia and France.

Animosity is distinct from consumer ethnocentrism in a sense that it is held towards one specific country, while CET is a dislike towards imported products in general (Klein et al., 1998). The authors argue that this distinction is important for marketers, as they need to understand whether consumers of the target country just hold general dislike towards foreign products, or if the dislike is influenced animosity towards the country of origin of the product in question.

In their initial study, Klein et al. (1998) differentiated between three different types of animosity: general animosity, war animosity and economic animosity. As pointed out by Cai, Fang, Yang, and Song (2012), Klein et al. (1998) still measured an overall animosity that was

divided in the underlying sub-categories war animosity and economic animosity. However, the authors argue that these two constructs are distinct from each other and regard them as separate, since their manifestations have been formed differently. Whether the size of the relationship between animosity and consumer ethnocentrism varies between the different types of animosity measurements will therefore be examined in the meta-analysis.

Subsequent studies examining animosity after Klein et al. (1998) have mostly used their scale, even though often adapted and without the distinction between the different types of animosity. Out of 63 studies, only eight used a scale that was not somehow adapted from the works of Klein et al. (1998), Klein (2002), or Ettenson and Klein (2005). Items used to measure animosity ranged from 1 to 10, while the original study by Klein et al. (1998) used a total of eight items; one for measuring general animosity, three for war animosity, and four for economic animosity. Findings consistently show a positive correlation between animosity and ethnocentrism, which will be further analysed in the meta-analysis

3.1.5 Cultural Openness

Cultural openness is a construct subject to different definitions and understandings in the examined literature. It can be understood as the willingness to interact with people from different cultures, to open up to their values, views, and traditions, and thereby reducing prejudice towards other countries (Sharma et al., 1995; Shankarmahesh, 2006). As added by Jain and Jain (2013), cultural openness is increased through travelling to other countries and the general contact with people with different cultural backgrounds in the own country. Nguyen et al. (2008) use the reduction of prejudice through the exposure to foreign culture as the basis for cultural sensitivity, “a degree of awareness, understanding, and acceptance of the values of other cultures” (p. 91). Suh and Kwon (2002), on the other hand, use the term “global openness”, which considers the influence of increased globalization, and the resulting sensitization for other countries and foreign cultures. Still, they do not measure a global mind-set per se, but rather an increased interest in and association with other cultures, which is similar to the measurement of cultural openness. For examining cultural openness in central European countries, Vida and Fairhurst (1999) use brand familiarity as an indicator. The more familiar and experienced the consumers were with foreign brands, the higher their cultural openness. Vida et al. (2008) used selected items from the cosmopolitanism scale developed by Yoon, Cannon, and Yaprak (1996) to measure cultural openness, and therefore show that those two concepts might be conceptually close and related. Shankarmahesh (2006) argues for

an exaggeration of the negative influence of cultural openness on ethnocentric tendencies due to neglecting that with increased familiarity, people develop a liking for it.

A total of 19 studies included in the review measured cultural openness. While many authors use the scale developed by Sharma et al. (1995), half of the studies use own scales or scales borrowed from different sources, which makes the measurement prone to more heterogeneity in showing the relationship to consumer ethnocentrism.

3.1.6 World-Mindedness

Closely linked, but still conceptually different to cultural openness is world-mindedness. Rawwas et al. (1996) defined world-mindedness as the ability to see humankind as a whole and to understand the different issues affecting humanity. World-minded people highly value internationalism and a common mind-set across all cultures (Rawwas et al., 1996). According to Kwak, Jaju, and Larsen (2006), Rhinesmith (1993) described a person with a global mind-set as being able to "scan the world from a broad perspective" (p. 371). In their understanding, world-mindedness is understood as part of the globalization of consumers. In contrast to cultural openness, which results in indifference to other cultures, world-mindedness sees those differences but perceives all cultures as equal (Kwan et al., 2006). Shankarmahesh (2006) adds that a consumer can be world-minded without being exposed to foreign culture, which sets the construct apart from cultural openness.

The measurement of world-mindedness used in the twelve studies considered is not uniform. All authors used different scales, making the concept harder to compare across studies. Nijssen and Douglas (2011) for example used a scale developed by Nijssen and Douglas (2008), in which world-mindedness is measured among the two dimensions cultural openness and consumer adaptability. Dmitrovic et al. (2009) used the cosmopolitanism scale developed by Yoon et al. (1996) to measure world-mindedness. Since this is clearly measuring a different concept though, this study was classified under cosmopolitanism and not world-mindedness.

Due to the closeness of world-mindedness and cultural openness, and many different definitions used by researchers, it is hard to clearly distinguish between the constructs. Whether the relationship between world-mindedness and consumer ethnocentrism is actually different from that of other related constructs will be examined in the meta-analysis.

3.1.7 Internationalism

According to Balabanis et al. (2001), a person expressing internationalism is concerned about the welfare of other nations and shows empathy for the fate of people from other countries. Lee et al. (2003) add the simple definition by Kosterman and Feshbach (1989), which classified internationalism to consist of "attitudes towards other nations" (p. 492). Furthermore, Karasawa (2002) defined that internationalism is characterized by preferring international collaboration, as mentioned by Ishii (2009). The author also describes internationalism as opposite to patriotism, and being similar to the concepts of cultural openness and world-mindedness (Ishii, 2009; Balabanis et al., 2001). According to Balabanis et al. (2001), internationalism is a more active attitude than cultural openness, which implies that its effect of negating consumer ethnocentrism should be stronger.

In total, eight studies measured internationalism. All included studies except for Ishii (2009) used the (adapted) scale developed by Kosterman and Feshbach (1989), while Ishii (2009) developed two items in relation to the definition of internationalism by Karasawa (2002). Interestingly, Ishii (2009) and Lee et al. (2003) find medium effects for the negative influence of internationalism on consumer ethnocentrism, while Balabanis et al. (2001), Tsai et al. (2013), and Al Gadineh and Good (2015) only find insignificant results, even though they use the same scale as Lee et al. (2003). Further investigation to understand this construct is therefore needed.

3.1.8 Cosmopolitanism

In their extensive study about the influence of cosmopolitanism on consumer ethnocentrism, Cleveland, Laroche, and Papadopoulos (2009) use a definition from Hannerz (1990) for the construct. Accordingly, cosmopolitan people are characterized by frequent travelling and meeting of people from different cultures, as well as by representing the voice of other cultures and deciding how they are perceived in their home country. Another important characteristic is an understanding of and desire for experiencing cultural differences expressed by cosmopolitans. Instead of being spectators, they want to be part of another culture (Cleveland et al., 2009). The authors also argue that while cosmopolitanism has long been exclusive for the elite, it is now possible to be a cosmopolitan without even leaving one's home country, due to the influence of media and also the presence of multiple cultures in a country through migration. Parts and Vida (2013) added that cosmopolitans have a positive attitude towards

the out-group, which is directly opposite to the characteristics of ethnocentrism. Jin et al. (2015) added that cosmopolitanism results in greater homogeneity of purchasing behaviour of consumers across countries, whereas consumer ethnocentrism leads to greater heterogeneity. In their work of developing a new scale to measure consumer cosmopolitanism, Riefler, Diamantopoulos, and Siguaw (2012) added a more specific view on the consumer and consumption-specific characteristics. According to them, consumer cosmopolitanism consists of three dimensions: "the extent to which a consumer (1) exhibits an open-mindedness towards foreign countries and cultures, (2) appreciates the diversity brought about by the availability of products from different national and cultural origins, and (3) is positively disposed towards consuming products from foreign countries" (p. 287). Their cosmopolitanism scale therefore consists of twelve items, which can be divided into the three categories open-mindedness, diversity appreciations, and consumption transcending borders. This approach has also been used by Zeugner-Roth et al. in their recent study from 2015. Vida and Reardon (2008), on the other hand, conceptualized cosmopolitanism as an eagerness for travelling to other countries, which in turn represents the individual's willingness to get to know different cultures, and is a more limited construct than that of the other studies. Therefore, this study was not categorized under cosmopolitanism but under travel in the analysis.

Even though the definition implies that cosmopolitan consumers possess characteristics opposing consumer ethnocentrism, research has found only limited to medium negative effects of cosmopolitanism on CET. Interestingly, the effects were bigger for recent studies using the COSMO-Scale developed by Riefler et al. (2012) in comparison to other studies using different measurements. It could be argued that the three-dimensional scale by Riefler et al. (2012) is a more precise measurement, but this needs further validation through its application in future research about cosmopolitanism and consumer ethnocentrism.

3.1.9 Foreign Travel

Nik-Mat, Abd-Ghani, and Al-Ekam (2015) argued that consumers increase their knowledge about other countries and are more open towards purchasing foreign products through the direct experience of foreign cultures by travelling to other countries. Thereby, ethnocentrism caused simply because of lack of knowledge is reduced (De Mooij, 2013, as cited in Nik-Mat et al., 2015). Other authors measuring the construct follow the same argumentation. Nijssen and Douglas (2011) also assumed that consumers with international travel experience hold more positive attitudes towards foreign products. Cleveland, Rojas-Méndez, Laroche, and

Papadopoulos (2016) and Lysonski and Durvasula (2013) measured foreign travel as part of the construct "acculturation of global consumer culture" (AGCC), which was developed by Cleveland and Laroche (2007). This construct describes "how individuals acquire the knowledge, skills and behaviours that are characteristic of a nascent and deterritorialized global consumer culture" (p. 252). Vida and Reardon (2008) measured foreign travel as cosmopolitanism, but since other researchers use more defined scales for cosmopolitanism and the items are clearly related to foreign travel, their research is categorized as using the construct of foreign travel.

The measurement of foreign travel is rather simple and only encompasses three to four items. While no uniform scale exists, all questions are quite similar in nature and it can therefore be said that foreign travel is measured the same way across all seven included studies.

3.1.10 Collectivism

People with a collectivistic mind-set value group goals or goals of society as more important than individual goals, reflect their actions on their impact on the group or society as a whole, and highly identify with the group or society they belong to (Sharma et al., 1995). Individualistic people, on the other hand, put more emphasis on the pursuit on personal goals, and use society to achieve them (Sharma et al., 1995). Huang, Phau, Lin, Chung, & Lin (2008) point out that Triandis (1989) introduced the terms allocentrism and idiocentrism for referring to collectivism and individualism on the group-level, because the latter are used to reflect behaviour towards societies and cultures. For simplicity, it is assumed here that collectivism applies to groups, societies and cultures. Due to their increased feelings of responsibility towards society, collectivistic people show close resemblance to characteristics of ethnocentric people, who feel responsible about the products made in their own country (Yoo & Donthu, 2005). Therefore, they may buy imported products out of a moral obligation to act in a way that is best for their own society, and are more likely than individualistic consumers to sacrifice their own goals, for example of owning a status reflecting imported product, if it benefits the society (Sharma et al., 1995; Yoo & Donthu, 2005).

Most of the ten research papers on collectivism as an antecedent to consumer ethnocentrism used a scale adapted from Hui (1988), while Yoo and Donthu (2005) used their own scale, and two used adaptations from studies done by Triandis, Brislin and Hui (1988) and Triandis and Gelfand (1998) (Kamaruddin, Mokhlis, & Othman, 2002; Kumar, Fairhurst, & Kim, 2013).

The number of items used to measure the construct ranges from three to eleven. Three authors further distinguished between different subscales of collectivism, namely collectivism towards parents and towards friends (Huang et al., 2008; de Ruyter, van Birgelen, & Wetzels, 1998; although the latter pool the two constructs for the analysis), or towards parents and towards co-workers (Sharma et al., 1995). In total, the investigated studies have found medium effects of collectivism on CE.

3.1.11 Materialism

According to Cleveland et al. (2009), materialism has been defined by Richins (2004) as follows: "the importance ascribed to the ownership and acquisition of material goods in achieving major life goals or desired states" (p. 118). Sharma (2011) added to this definition by including "envy, non-generosity, and possessiveness" (p. 289), which were defined by Belk (1985) as three sub-traits of materialism. From a consumer perspective, materialism helps the consumer to be more successful and happier through the possession of goods, whose acquisition is of central importance to achieve this (Richins & Dawson, 1992, as described by Sharma, 2011). This is often linked to using products as a status symbol (Sharma, 2011), and Park, Rabolt, and Sook Jeon (2008) reported that Fournier and Richins (1991) describe materialistic consumers to find reassurance and confirmation of their status in owning expensive and publicly visible products. Materialism is often present in emerging markets, due to its close link to reflecting a social status, while consumers in western countries show less materialism (Sharma, 2011), as they put less emphasis on status but rather express themselves through the consumption of goods (Inglehart, 1990, as described in Alden, Steenkamp, & Batra, 2006).

In the studies, materialism has consistently been measured with scales from Richins and Dawson (1992) and Richins (2004), with items used ranging from adapted versions with four items to the full 18-item scale. Therefore, the measurement of the construct is highly consistent across all studies. Only the study conducted by Kamaruddin et al. (2002) used a scale borrowed from Belk (1985), but they found insignificant results and did not report on the exact numbers, and the study can therefore not be included in further analysis.

Interestingly, the studies in the systematic review show insignificant to very limited effects of materialism on consumer ethnocentrism. Only Alden et al. (2006) found a medium negative

correlation, but their sample consisted only of women, which reduces the comparability of their results to those of the other studies.

3.1.12 Conspicuous Consumption

A concept related to that of materialism, but studied separately, is that of conspicuous, or status, consumption (Sharma, 2011). As mentioned by Sharma (2011), Eastman, Fredenberger, Campbell, and Calvert (1997) described conspicuous consumption as being motivated by expressing and improving one's status through the possession of costly products. Wang and Cheng (2004) used a definition by Piron (2000), whereby conspicuous consumption "refers to consumers' desire to provide prominent visible evidence of their ability to afford luxury goods" (p. 393). Ranjbarian, Barari, and Zabihzade (2011) claim that status consumption is conceptually different from conspicuous consumption. Still, the definition of status consumption by Eastman, Goldsmith and Flynn (1999) used by Ranjbarian et al. (2011) includes the term conspicuous consumption. Therefore, conspicuous consumption and status consumption are seen as comparable concepts in this thesis. Alden et al. (2006) and Wang, He, and Li (2013) also use a slightly different measurement, which is still considered to belong to conspicuous consumption. According to Wang et al. (2013), susceptibility to normative influence (SNI) has been defined by Bearden, Netemeyer, and Teel (1989) and Batra, Homer, and Kahle (2001) as "the tendency to live up to the expectations of others" (p. 37). People with high tendencies of SNI are more easily influenced by others and will therefore seek to impress them through the purchase of certain possessions (Alden et al., 2006).

From the six studies included in this review that measure the influence of conspicuous consumption on consumer ethnocentrism, two use a scale by Bearden et al. (1989), two the scale by Eastman et al. (1999) and the others use different measurements. The studies find conflicting results on the correlations between the two constructs. Half of the studies report a small negative correlation of conspicuous consumption and CE (Wang & Cheng, 2004; Ranjbarian et al., 2011; Mai & Tambyah, 2011), while the other half see a small positive one (Bevan-Dye, Garnett, & De Klerk, 2012; Alden et al., 2006; Wang et al., 2013). No pattern in the characteristics of the studies can be found to explain these conflicting findings. Further validation of the correlation between conspicuous consumption and CE is therefore needed, although the current findings propose that the influence is very limited.

3.1.13 Other Less Frequently Investigated Constructs

While most studies covered the antecedents already described in detail, further constructs were less frequently measured. These will be shortly presented in the following paragraph, if they have been measured by more than one research paper.

Dogmatism. A construct which has already been mentioned as influencing consumer ethnocentrism in their first introduction of the CETSCALE by Shimp and Sharma (1987) is dogmatism. Caruana (1996) defines dogmatism as "a personality trait that views reality in black and white" (p. 39). The Merriam-Webster dictionary (2007) adds to this understanding that dogmatism includes the presentation of opinions or beliefs as facts, even though they are not proven or sufficiently considered. All three studies investigating dogmatism use different borrowed scales. Shimp and Sharma (1987) take a 20-item scale from Robinson and Shaver (1973), while Caruana (1996) use a 5-item scale from Bruning, Kovacic, and Oberdick (1985), and Al Gadineh (2010) measure dogmatism with a 5-item scale from Ray (1983). Their research shows a positive correlation between dogmatism and consumer ethnocentrism, even though Al Gadineh (2010) reports insignificant results for the construct in the regression analysis, while Shimp and Sharma (1987) and Caruana (1996) both found medium effects. This could be due to Al Gadineh's (2010) study being conducted in the middle eastern country Jordan, while the other two authors used a sample from western culture, namely the United States and Malta.

Salience. This construct was included in the literature review done by Shankarmahesh (2006), who mentioned Olsen, Granzin, and Biswas (1993) to examine salience. The authors define salience as an "exogenous construct that connotes the extent to which the need for help is recognized as important by the (potential) helper" (p. 308). In the context of studying consumer behaviour, salient people perceive the need to help the local economy through purchasing domestic products (Olsen et al. 1993). Jain and Jain (2013), who also included salience in their study, rather see it as a perceived threat to the local economy resulting from the import of foreign products. This in turn leads to the same increased purchase of domestic products, out of the will to support one's nation. Both studies found a strong positive correlation between salience and consumer ethnocentrism, but Olsen et al. (1993) only used two items for measuring the CETSCALE, which is why their study was not included in the final analysis.

Acculturation to Global Consumer Culture (AGCC). This construct was introduced by Cleveland and Laroche in 2007 as describing "how individuals acquire the knowledge, skills and behaviours that are characteristic of a nascent and deterritorialized global consumer culture" (p. 252). The construct is measured by 53 items categorized in six domains. A medium negative correlation between AGCC and consumer ethnocentrism is found by Cleveland, Laroche, and Hallab (2013) for Muslims in Lebanon, while small negative correlations were found for Christians in Lebanon and for consumers in Canada (Cleveland et al., 2013; Cleveland et al., 2016). A small positive correlation between the constructs was found in Chile (Cleveland et al., 2016). While Lysonski and Durvasula (2013) also measure AGCC, they do not compare the overall construct to CE. Further investigation to confirm the relationship is needed.

Global Citizenship. This is a fairly new construct that has been used in studies done by Strizhakova (Strizhakova et al., 2008; Strizhakova, Coulter, & Price, 2012). It relates to consumers expressing a belief in a global consumer culture by purchasing global brands (Strizhakova et al., 2012). The studies have found a medium to strong positive relationship between global citizenship and consumer ethnocentrism in former soviet countries such as Russia, Romania, and Ukraine, but almost no relationship in the U.S. and Brazil.

Need for Uniqueness. Consumers with this need want to differentiate themselves from others and increase their self-image through the acquisition of goods (Park et al., 2008; Ranjbarian et al., 2011). Both studies found small negative correlations with consumer ethnocentrism, although they were not significant in the study by Park et al. (2008).

3.2 Behavioral Outcomes

3.2.1 Attitudes Towards Foreign Products

What kind of attitudes consumers hold towards foreign products is quite a vague measurement. Consequently, it is not measured by many researchers, and often the more precise and expressive construct of product judgements is used. If the scale used for measuring attitudes included any inferences about the quality of the product, it was considered as a product judgement. Therefore, only three research papers were considered as measuring attitudes. Shimp and Sharma (1987) used a single question, while Carter (2009) used three item pairs; negative/positive, unfavorable/favorable, and bad/good. Kwak et al. (2006) adapted a scale by

Zaichkowsky (1985) consisting of 10 items. All 10 individual studies found a negative link between attitudes towards foreign products and consumer ethnocentrism.

3.2.2 Product Judgements of Domestic vs. Foreign Products

For this review, all constructs were considered as product judgements that contained questions relating to the quality perception of products. Sometimes, these constructs were called differently, with the deviating name most often used being product evaluations. Bawa (2004), called them product beliefs and Kumar et al. (2011) measured attitudes, but since they included quality perceptions, it is more accurate to count it as product judgements. In total, 46 studies included the relationship of product judgements of foreign products and consumer ethnocentrism, and 20 of domestic products. The measurement scales used are relatively consistent, with 2/3 of the studies using an (adapted) version of Klein et al.'s (1998) scale, who adapted their scale from Darling and Arnold (1988), Darling and Wood (1990) and Wood and Darling (1993). Hereby, products are evaluated according to their workmanship, their quality, their technological advancement, their colour and design, their reliability, and their value for money.

3.2.3 Purchase Intention of Domestic vs. Foreign Products

Purchase intention is measured differently across the included studies. Some simply ask if consumers intent to purchase a foreign or domestic product (e.g. Park et al., 2008; Shimp & Sharma, 1987; Funk, Arthurs, Treviño, & Joireman, 2010), while others use a scale (Akdogan & Ozgener, 2012; Fakharmanesh & Miyandehi, 2013). In these two cases, the authors do not specify of which items the scale consisted. Parts and Vida (2013) use a scale from Balabanis and Diamantopoulos (2004), where consumers indicate their intention to purchase either domestic or foreign products from a list of suggested products. Sharma (2011) measure behavioral intention with product trial, purchase, and positive word-of-mouth.

Originally, more studies were considered as measuring purchase intention. A closer examination of the scales used to measure the construct though showed that the distinction between purchase intention and willingness to buy is not definitely clear, and some authors say they measure purchase intention when in fact they are using the willingness to buy scale developed by Klein et al. (1998). These studies were then counted towards WTB.

3.2.4 Willingness to Buy Domestic vs. Foreign Products

Next to product judgements, willingness to buy domestic or foreign products is the most frequently used construct to measure behavioural outcomes of consumer ethnocentrism. Most studies use a (sometimes adapted) scale developed by Klein et al. (1998), who adapted the scale from Darling and Arnold (1988), Darling and Wood (1990) and Wood and Darling (1993). This scale includes direct as well as inverted items. Zeugner-Roth et al. (2015), on the other hand, use a scale adapted from Putrevu and Lord (1994), which includes items linked to likeliness to buy and product trial, and is said to be closely linked to actually owning these products. Suh and Kwon (2002) include preference for foreign products and the liking of the idea of owning foreign products.

He and Wang (2015) take a different approach by asking participants to recall how many domestic and foreign products they had bought in the previous year, and derived preference for domestic and foreign brands from this. Since this can still be regarded as a willingness to buy, their study is also categorized as such.

3.2.5 Reluctance to buy foreign products

This concept was first introduced by Suh and Kwon (2002), who argue that while it is closely linked to willingness to buy, it is still distinct from it when examining foreign products in general. Other authors have also adapted this idea, such as Douglas and Nijssen (2003) and Nijssen and Douglas (2004). Huang et al. (2010) say they measure willingness to purchase, but in a further explanation specify that they actually mean a reluctance to buy foreign. The scales used are closely linked to the scale developed by Klein et al. (1998) to measure willingness to buy, just that certain items are not inverted.

3.2.6 Domestic vs. Foreign Purchase Behavior

Three research papers have also measured purchasing behaviour. Hereby, domestic purchasing behaviour is characterized by mostly buying domestic products, making an effort to buy domestic, and buying at stores that mostly offer domestic products (Kreckova, Odehnalova, & Reardon, 2012). Foreign purchase behaviour, on the other hand, is characterized by the liking of owning foreign products, the wish for availability of foreign products, and the desire for foreign products (Rybina, Reardon, & Humphrey, 2010).

3.2.7 Importance of Buying Domestic Products

Bawa (2004) also included measuring the importance consumers felt to buy domestic products. He found a medium correlation between this construct and consumer ethnocentrism among the three different participant groups in India. Since no other study included this measurement, further validation of this relationship is needed in future research.

4. Methodology

This thesis conducts a research synthesis, also referred to as systematic review, in order to examine the main findings in consumer ethnocentrism research. It uses the guideline of Cooper (2016), which includes the following steps:

1. Formulating the problem
2. Searching the literature
3. Gathering information from studies
4. Evaluating the quality of studies
5. Analyzing and integrating the outcomes of studies
6. Interpreting the evidence
7. Presenting the results

Therefore, I first defined the problem to be examined in this study, and then conducted a systematic literature search. Information was gathered from studies in a systematic way by using a coding scheme, and the resulting studies were assessed for quality. Studies were then reviewed and analyzed to find out how major constructs were measured and to categorize them correctly, which encompasses the literature review section of this thesis. From this, a meta-analysis was conducted on the most prominent constructs to arrive at quantitative effect size measures for the different relationships. Finally, the results are interpreted and set in context to existing findings and managerial implications.

4.1 Problem Definiton

The problem under investigation in this study is to determine the size of the relationship between consumer ethnocentrism and its socio-psychological antecedents and outcomes. Following from the conceptual model, two questions guide this thesis:

1. What are the main socio-psychological antecedents and the main outcomes of consumer ethnocentrism?
2. To what extent do the main socio-psychological antecedents influence consumer ethnocentrism, and to what extent does consumer ethnocentrism influence its outcomes?

Through the literature search and literature review the first question has already been answered and the main socio-psychological antecedents and the main outcomes of consumer ethnocentrism have been identified.

The following meta-analysis seeks to answer the second question, by quantifying the size of the relationship of consumer ethnocentrism and its main socio-psychological antecedents and its main outcomes.

4.2 Search for literature

To get an overview of the topic, first a broad google scholar search was conducted. Key articles were identified, such as the works of main empirical authors in the field (e.g. Shimp & Sharma, 1987; Sharma et al., 1995; Klein et al., 1998) and the literature review done by Shankarmahesh (2006). From this, the need for a meta-analysis of socio-psychological antecedents and outcomes of consumer ethnocentrism was derived.

Next, a more systematic search of the literature was conducted with the help of electronic database search. The database used was EBSCO Business Source Complete, which seemed most suitable for this topic since it is not restricted to a certain area of research and covers many fields. In order to retrieve all relevant articles, different combinations of search terms were used. A list of these terms can be found in Appendix B. It was not specified where in the article the search term should appear, to prevent excluding articles that do not mention the relevant constructs in the title, abstract, or keywords, but still examine it. There was also no limitation on the year of publication, although no studies were included prior to 1987, since this marks the year when Shimp and Sharma (1987) first introduced the CETSCALE.

Additionally, references of the papers found with the help of the database as well as other main works were screened in order to identify articles that were missed by the database search and also included in the analysis if they met the inclusion criteria.

4.3 Selection of Relevant Studies

4.3.1 Inclusion Criteria

Following the suggestions by Cooper (2016), clear criteria for including studies in the review were defined before conducting the literature search.

Most importantly, a study had to measure consumer ethnocentrism with the CETSCALE, since it is an extensively studied, reliable and valid measurement that allows for the comparison of consumer ethnocentrism across different countries and settings. Whether the original CETSCALE or an adapted or shortened version was used did not matter for inclusion. Next, it needed to look at the relationship between consumer ethnocentrism and a socio-psychological antecedent. This is a crucial inclusion criteria, since it excluded other studies that only looked at the outcomes of CET, but not at socio-psychological antecedents. This criterion was necessary, however, to achieve a clearly defined review that did not exceed the scope of this thesis. By including outcomes in the search, the resulting amount of possible studies that could be included would have been far too large, since many studies also contain consumer ethnocentrism and its outcomes even though they are not primarily concerned with ethnocentrism. The socio-psychological antecedents did not need to be named antecedents or regarded as antecedents in the studies. As long as the study measured the relationship of consumer ethnocentrism and a construct related to socio-psychological antecedents, it was included. In addition, the study also needed to report the numbers necessary for calculating the correlation coefficient in order to arrive at an overall effect size. For example, Sohail and Opoku (2016) examined consumer ethnocentrism and animosity, but did not report their correlation or any numbers that could be used to arrive at the correlation, and was therefore not included. Lastly, a study needed to apply to a broader population and should not be too specific, of which examples will be given in the exclusion criteria.

4.3.2 Exclusion Criteria

As consequence of the inclusion criteria, studies were excluded if they only measured the CETSCALE, outcomes of consumer ethnocentrism, or only looked at other antecedents such as demographics. An example for this is the study by Josiassen, Assaf, and Karpen (2011), which only examines consumer income, gender, and age as antecedents. A study was also excluded if other variables were too specific and not easy to generalize. An example is the

research of Oullet (2007), who includes consumer ethnocentrism and animosity, but looks at consumer racism of ethnic majorities and how this affects the purchase of goods from ethnic minorities, which makes it hard to compare to less specific purchasing behavior. Another example is that of Carpenter, Moore, Alexander and Doherty (2013), who measure the special constructs food and retail ethnocentrism.

4.3.3 Missing Values

Even though I used access to research provided by the Norwegian School of Economics as well as by the University of Mannheim, some potentially interesting articles still could not be retrieved. In total, missing values account for eight research papers that could not be accessed.

4.4 Data Abstraction

In order to make the identified articles comparable, a coding scheme was used to systematically extract information from the studies. The scheme was developed following recommendations from Cooper (2016) and Brown et al. (2003). First, report characteristics were mentioned, followed by the study design. Next, the setting of the study and the participant and sample characteristics were coded. Additionally, the constructs used in the studies and the way they were measured were included. Finally, the antecedents and outcomes of consumer ethnocentrism were coded, which means the correlation between consumer ethnocentrism and the dependent variable. The coding scheme left room for additional comments. A blank version of the coding scheme, containing all questions, can be found in Appendix C.

In a second step, the information retrieved from the articles was categorized and coded to simple numbers, which is needed to make the data analyzable with the software. Before categorization, the CETSCALE scores were transformed to a ten-point scale to make them comparable across studies.

4.5 Validity Assessment

The first version of the coding scheme was extended to include more precise information and allow for further analysis. Most importantly, assessment of the measurements used for all constructs were included, which allows for the comparison of measurement scales used across

studies. After coding all relevant articles, articles whose coding had not been clear in the first round were coded again, as well as articles with conflicting comments.

4.6 Final Dataset

After coding all studies, the dataset comprised of 83 articles with a total of 139 individual studies. A second screening of the studies eliminated two articles. One (Klein & Ettenson, 1999) only used one item each as proxy for measuring consumer ethnocentrism and patriotism, and was therefore found not to be comparable enough to the other studies. The other one used a sample only consisting of females, which makes it harder to compare to other studies that use the general population (Alden et al., 2006). Finally, a total of 137 studies from 81 research papers were included in the meta-analysis. The number of studies is higher than the number of research papers, since many authors examined two or more countries or participant groups in their research. Therefore, if different samples were used in a research article, each sample was treated as an individual study. Since no article measured the relationship of consumer ethnocentrism and all included constructs, the number of studies examined for each construct varies between five for conspicuous consumption and 69 for both national values and international values.

Effect size calculations and further analyses were performed on all constructs measured by at least four different authors, as constructs with fewer authors could be biased and need further investigation before their findings can be meaningfully quantified.

4.7 Study Characteristics

All studies included in the analysis came from either a journal article or dissertation, and range from the year 1987, when the CETSCALE was first introduced, until spring 2017, when the search was conducted. Furthermore, all studies conducted a survey to assess consumer ethnocentrism and its antecedents and outcomes. These surveys were typically administered with a questionnaire that was either filled in during an interview or handed out. Authors mostly used the general population or students as participants in their study. The studies were conducted in a wide range of different countries, with the majority being either in Asia (51), Europe (51), or Northern America (24), but also research coming from the other continents

(three in Southern America, two in Africa, and four in Australia, and two from a mix of continents).

These characteristics will be analyzed as moderators possibly influencing the relationship between consumer ethnocentrism and its socio-psychological antecedents and outcomes.

4.8 Quantitative Data Synthesis

4.8.1 Effect Measure

In order to quantify the size of the relationship between consumer ethnocentrism and its socio-psychological antecedents and outcomes, the effect size was calculated. Borenstein (2009) consider the computation of the effect size as the main part of a meta-analysis study, since it extracts the core findings, as described by Brendel (2011). For measuring the effect size, the r-index metric was used, which uses the correlation coefficient of two variables. According to Cooper (2016), the r-index is best used for calculating the effect size of studies examining the relationship between continuous variables. Since consumer ethnocentrism and its related constructs are certain attitudes, beliefs, or value systems that the consumer adheres to, the variables can be seen as continuous and their relationships are therefore best measured with the r-index.

Many researchers provide the correlation coefficient in their studies. Although it should be regarded as a normal practice, a great number of researchers still does not include the correlation. This makes it hard for synthesists to draw generalizable conclusions from a study. To include studies only reporting beta coefficients from regression analysis or structural equation modelling (SEM), a conversion of beta coefficients into the correlation coefficient r was undertaken, which was first introduced by Peterson and Brown (2005). They found that beta coefficients can be used in meta-analyses with the following convenience formula:

$$r = \beta + 0.05\lambda \text{ , where } \lambda = 1 \text{ when } \beta \geq 0 \text{ and } \lambda = 0 \text{ when } \beta \leq 0$$

Interestingly, this formula adjusts only positive betas, but not negative ones. Especially for relationships where studies have found positive as well as negative correlations, this distorts the picture and creates more heterogeneity compared to if they were not included in the analysis. For relationships which tend to be negative, as for example between consumer ethnocentrism and cultural openness, the formula even decreases the strength of the

relationship. Therefore, an adapted version of the formula was used, which included similar recalculation for positive and negative beta coefficients. A similar approach was done by Shoham et al. (2016), who used a version of the formula which also accounts for these differences. The final formula for calculating beta coefficients into correlation coefficients applied in this thesis is thus:

$$r = \beta + 0.05\lambda \text{ , where } \lambda = 1 \text{ when } \beta \geq 0 \text{ and } \lambda = -1 \text{ when } \beta \leq 0.$$

Four of the included studies only reported t-values and no correlation coefficient. The following formula, proposed by Rosenthal and DiMatteo (2001) and also Cooper (2016), was used to calculate the correlation coefficient from t-values:

$$r = \sqrt{\frac{t^2}{t^2 + df}}$$

Finally, the effect sizes of individual studies measuring the same construct were combined in order to assess the overall magnitude of the relationship between consumer ethnocentrism and one of its related constructs (Cooper, 2016). Hereby, the individual effect sizes shown by the r-index are weighted based on the sample size of the study (Cooper, 2016). Therefore, greater weight is put on studies with a larger sample size, since these give a more precise estimate of its underlying population than small sample sizes (Cooper, 2016). Therefore, the overall estimation of a relationship is the weighted average effect size.

4.8.2 Fixed Effect and Random Effects Models

There are two approaches to interpret the effect of a relationship as calculated by the meta-analysis. The first one is the fixed effect model. Hereby, it is assumed that a true effect size value exists, and all differences in observed effect sizes are due to sampling differences (Cooper, 2016). Therefore, more weight is put on studies with larger sample sizes, and less weight on studies with small sample sizes, since the effect size is assumed to be the same in all studies, and larger studies give a better representation about the population (Borenstein, Hedges, Higgins, & Rothstein, 2009).

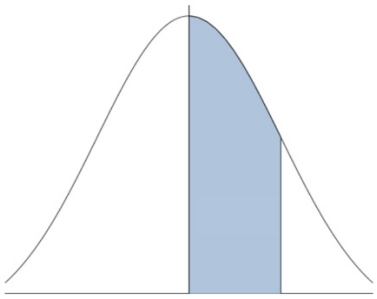


Figure 4.1 *Fixed Effect Model, adapted from Kovalchik (2013)*

In many cases however, other variables than sampling differences may account for variation in the effect sizes. This is likely the case in this analysis, since the studies have for example been conducted in many different countries, used different measurements, and were conducted across three decades. Random effects models account for these differences. According to Borenstein et al. (2009), random effects models "assume that the true effect size varies from one study to the next, and that the studies in [the] analysis represent a random sample of effect sizes that could have been observed" (Ch. 13, p. 77-78). Since all effect sizes are different, large samples cannot be weighted too heavily, and small samples cannot be weighted too little. The weights used in a random effects model are therefore slightly less divergent than in the fixed effect model.

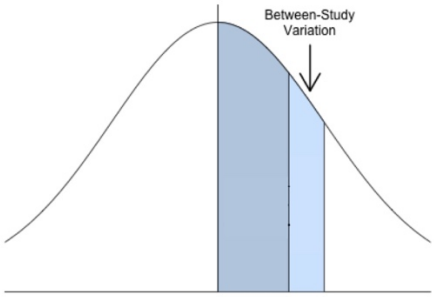


Figure 4.2 *Random Effects Model, adapted from Kovalchik (2013)*

Researchers argue that random effects models better portray the real world and give a more conservative estimate of the effect size than fixed models (Cooper, 2016). Hence, a random effect model seems more appropriate to be used here, however both models are examined.

4.8.3 Statistical Heterogeneity

In order to assess the consistency of the studies, heterogeneity of the results needs to be addressed (Higgins and Green, 2011). According to Brendel (2011), Petticrew and Roberts

(2006) defined heterogeneity as “the degree to which effect sizes differ from one another” (p. 53). As pointed out by Higgins, Thompson, Deeks, and Altman (2003), heterogeneity is expected in meta-analyses, since it combines different studies in different settings, using different methodologies. Still, it is important to understand whether all studies actually evaluate the same effect (Higgins et al., 2003). Tests for heterogeneity assess whether the variance in the effect sizes is simply due to chance or sampling error (Brendel, 2011). Heterogeneity is given if the deviations are great enough to exclude this possibility (Brendel, 2011). In this thesis, Cochran’s Q statistic is used for addressing heterogeneity. Since this statistic is said to over-evaluate heterogeneity in large studies, an additional assessment in form of I^2 is also analyzed, which is independent of the number of studies included in the analysis.

4.8.4 Sensitivity Analysis

Assessing the reliability of the effect sizes is also a vital part of a meta-analysis. A sensitivity analysis helps to determine if the results of the analysis would differ if a different statistical procedure was used or if the data was interpreted differently (Cooper, 2016). For assessing sensitivity of the results both the fixed effect and the random effects models were reported in the analysis. In addition, funnel plots are included, which graphically depict the correlations and their standard error. Hereby, Fisher’s z-transformation is used, which normalizes the distribution of the correlation coefficients (Cooper, 2016). The r-index is restricted to values between -1 and +1, which causes large values to lie on the end of these ranges (Cooper, 2016). The z-transformation extends these limits and allows for a more stabilized variance distribution along a bell shape (Cooper, 2016). If no other factors in terms of moderators influence the results, the correlations will be distributed symmetrically along the funnel plot.

4.8.5 Accounting for Missing Data

As described in 4.3.3, not all possibly fitting research papers could be retrieved. In addition, other relevant findings could be left unpublished, which Rosenthal (1979) called the file drawer problem, according to Cooper (2016). In order to account for missing data and assess a possible publication bias, Cooper (2016) propose the use of the Trim-and-Fill Method, which was introduced by Duval and Tweedie (2000). Hereby, the funnel plot will be extended to show where missing studies could lie.

4.8.6 Analysis of Moderators

For explaining the heterogeneity among studies, an analysis of moderators is included. The guiding question hereby is: are there differences in the studies that could explain the heterogeneity in effect sizes? Possible moderators examined are the year of the study, the continent of the study, whether it is set in a developed or developing country, if the participants come from urban regions, how the participants were selected, whether the participants belong to the general population or a narrower group, the type of CETSCALE used, and the average score on the CETSCALE. If more than one construct was combined in the analysis, differences between these constructs were also assessed.

4.8.7 Software Used For Analysis

The software "R" from the R Project was used to calculate effect sizes and analyze the results. This software offers special packages for the meta-analysis, and allows for great analysis adaptation, which is often not given in other statistical programs. In addition, it plots the data in a way that makes it easy to interpret the results. For the analysis, the packages "`meta`" and "`metacor`" were used.

5. Meta Analysis

5.1 Combination of Constructs for Analysis

For the analysis, several constructs were combined for the estimation of the effect size. This stems from the observation that even though the combined constructs all have distinct definitions and do technically measure different factors, in practice, measurements used have not been completely uniform and therefore do not allow for such a clear distinction. This is an observation made commonly in meta-analysis, whose challenge it is to combine heterogeneous studies into measuring one construct, resulting in a meaningful effect size for the construct Borenstein et al., 2009). Great care was therefore made in categorizing and combining the different studies. The logic in the specific cases will be discussed in the following.

5.1.1 National Values

Patriotism, nationalism, national identity, and conservatism were combined into one overall construct measuring national values. When comparing the definitions of those constructs, it already becomes clear that they are conceptually related. Nevertheless, the reasoning behind combining these constructs stems from a close look at the included studies. Several authors have pointed out that patriotism, nationalism, and national identity are closely related (e.g. Lee et al., 2003; Vida and Reardon, 2008). Lee et al. (2003) point out that initially, patriotism and nationalism were not used as distinct from each other, but as interchangeably. Balabanis et al. (2001) argue that Adorno et al.'s (1950) scale, which has been used in many studies about patriotism, is more related to nationalism, as defined by Kosterman and Feshbach (1989). They also found evidence for a combination of the constructs in their analysis, whereby consumer ethnocentrism was significantly influenced only by patriotism in one country, and only by nationalism in the other. Sharma et al. (1995) found such a high correlation between their measurements for patriotism and conservatism that they combined it into one scale, labelled PATCON.

Therefore, a clear distinction between the constructs cannot be made, and an overall effect size is calculated. Nevertheless, the analysis will include whether differences can be found between the constructs.

5.1.2 International Values

International values encompass the five constructs cultural openness, world-mindedness, internationalism, cosmopolitanism, and foreign travel. These constructs are also all conceptually related, and have not always been clearly distinguished in the included studies. Al Gandineh (2010), for example, argues that internationalism belongs to world-mindedness, and Parts and Vida (2008) suggest that world-mindedness and cosmopolitanism are the same. Items used in the scales for cultural openness and world-mindedness also overlap (e.g. “I like immersing myself in different cultural environments” and “I like to have contacts with people from different cultures” were items on the worldliness scale used by Dmitrovic et al., 2009, but were also used to measure cultural openness by Vida et al., 2008. In addition, foreign travel was labelled as cosmopolitanism by Vida and Reardon (2008). This resulted in the combination of the constructs into international values.

5.1.3 Animosity

While animosity is often divided into the three categories general animosity, war animosity, and economic animosity, this concept has already been combined in the first study done by Klein et al. (1998). Still, Cai et al. (2012) argue that war animosity and economic animosity are distinct from each other. Therefore, the analysis includes an examination of whether differences in effect sizes among the three constructs will be found.

5.1.4 Purchase Intention and Willingness to Buy

While purchase intention and willingness to buy are not necessarily the same, an examination of the measures used in the studies revealed that the distinction is vague or almost non-existent among the authors. In many studies measuring purchase intention it was found that they in fact employed scales frequently used to measure willingness to buy, and were therefore categorized as such. Some of the remaining research papers measuring purchase intention did not specify scale items, while others only used one item directly related to “I intend to purchase” (e.g. Park et al., 2008). Due to the infrequent categorization and since both constructs measure whether a consumer plans to buy a foreign or domestic product, they are pooled as one construct in the analysis.

5.2 Results

A detailed analysis of the particular constructs is presented in the following. Thereby only the most important findings are reported and discussed directly. Tables of all analyzed moderators including both fixed effect and random effects models as well as forest plots for significant moderators can be found in Appendix D in the corresponding subsections.

5.2.1 National Values

For analyzing the weighted average effect size of the relationship between national values and consumer ethnocentrism, 69 studies were combined in the meta-analysis. Overall, the results showed a weighted average effect size of r=0.3649 for the random effects model, which is significant at the p<0.0001 level.

In order to assess whether all studies evaluate the same effect, tests of heterogeneity were conducted (Higgins et al., 2003). The Cochran's Q statistic revealed high heterogeneity (Q value 1183.49, df = 68), which is significant at the p<0.0001 level. This shows that the differences among the studies are not due to chance (Higgins and Green, 2011). However, Higgins et al. (2003) argue that this statistic over-evaluates heterogeneity in large studies, which could be the case here as the analysis includes a total of 22,157 participants. They advise to use additional assessments of heterogeneity, and suggest I^2 as an analysis independent of the number of studies included in the meta-analysis. I^2 shows "the percentage of total variation across studies due to heterogeneity" (Higgins et al., 2003, p. 559). According to the authors, an I^2 above 75% signals high heterogeneity, which is the case for national values with an I^2 of 94.3%.

Table 5.1 *Weighted average effect sizes of national values*

	COR	95%-CI	z	p-value
Fixed effect model	0.3607	[0.3491; 0.3722]	55.96	< 0.0001
Random effects model	0.3649	[0.3156; 0.4122]	13.45	< 0.0001

Table 5.2 *Analyzing heterogeneity of national values*

Quantifying heterogeneity		
I^2	94.3% [93.3%; 95.1%]	
Test of heterogeneity		
Q	d.f.	p-value
1183.49	68	< 0.0001

The forest plot depicts all studies and their respective weighted effect sizes, as well as their weights. Almost all studies find a positive correlation between national values and consumer ethnocentrism, with the highest correlation of 0.67 found by Vida and Reardon (2008). Four studies found negative correlations, with the lowest value of -0.20 found by Tsai et al. (2013).

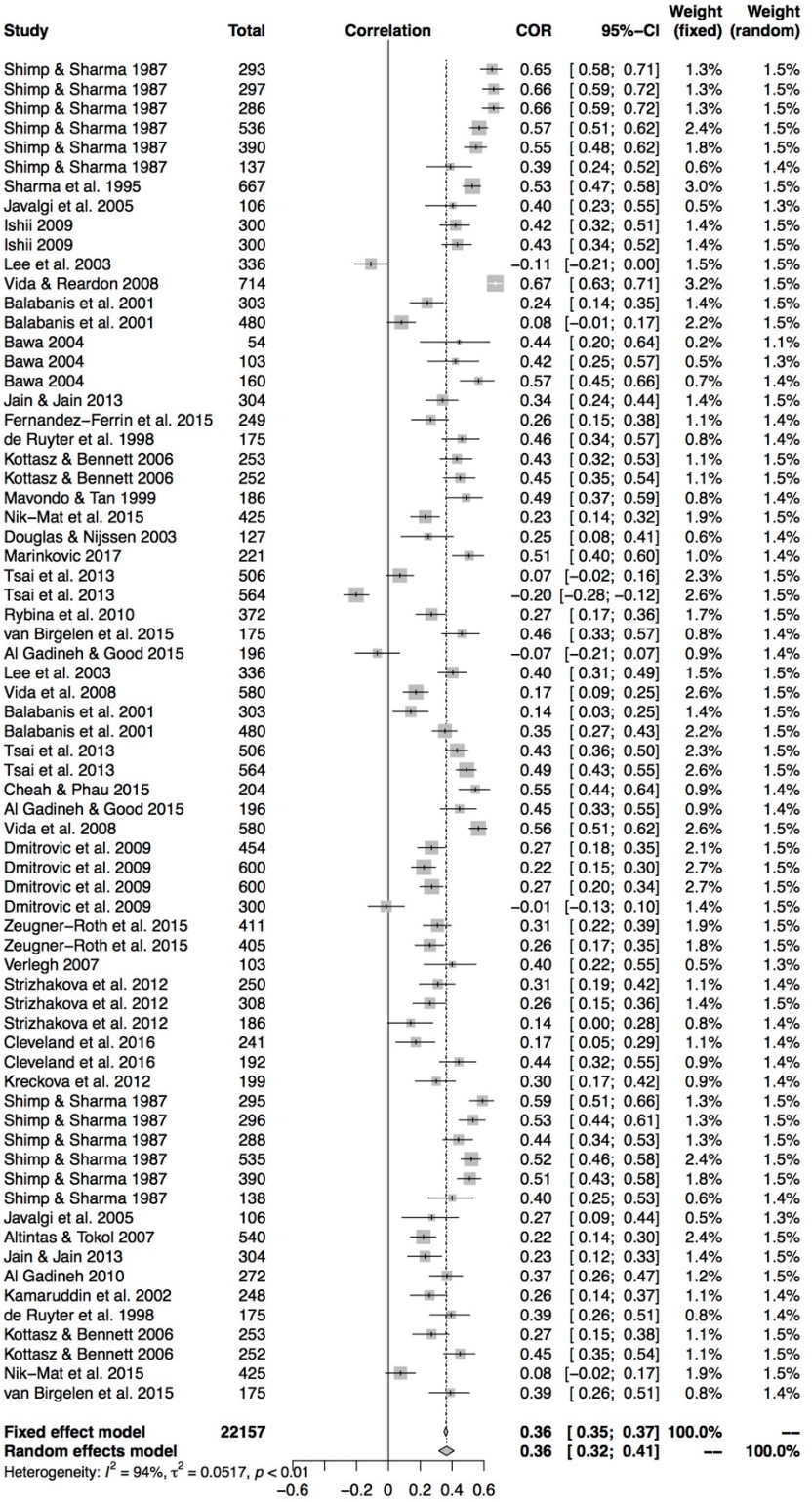


Figure 5.1 *Forest plot for national values*

Next, a funnel plot depicting the distribution of the correlations was created to test the robustness of the findings. As can be seen in Figure 5.2, the z-transformed correlations vary greatly among the mean and do not follow the triangle shaped distribution, which means that other factors in form of moderators could influence the distribution.

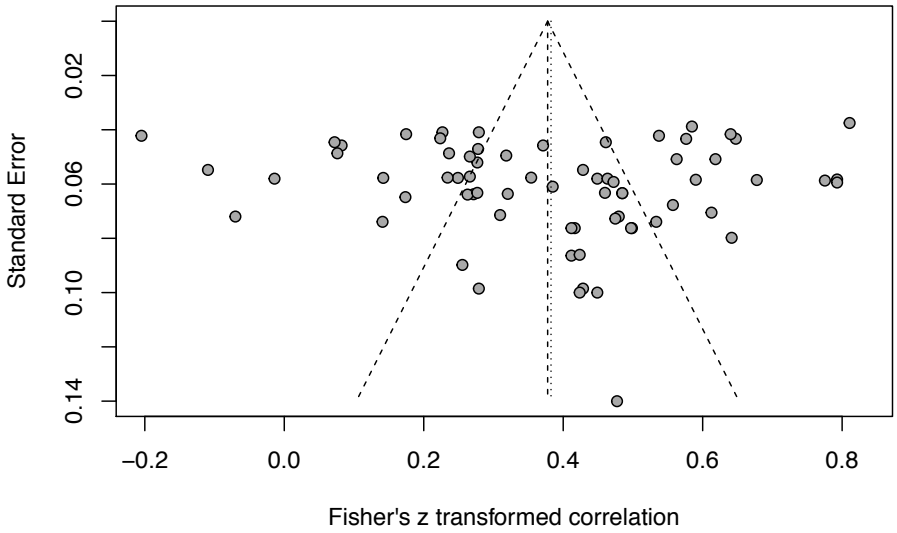


Figure 5.2 *Funnel plot for national values*

Further analysis using the Trim-and-Fill-Method of filling the funnel plot with missing values accounted for the publication bias and showed where missing studies could lie. Due to the few studies currently having found negative correlations, the missing values all lie in the lower end of the spectrum. Most of the studies reporting low or negative correlations come from recent years, so it could happen that future studies find more negative findings.

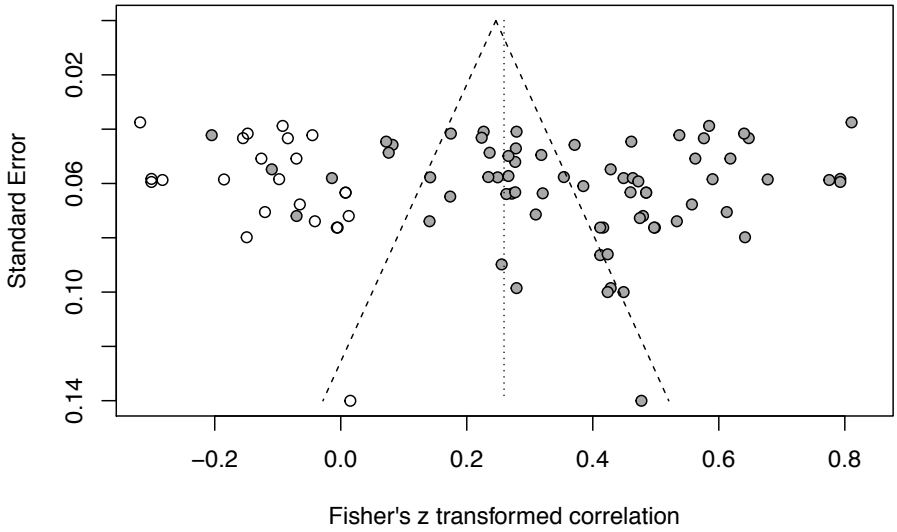


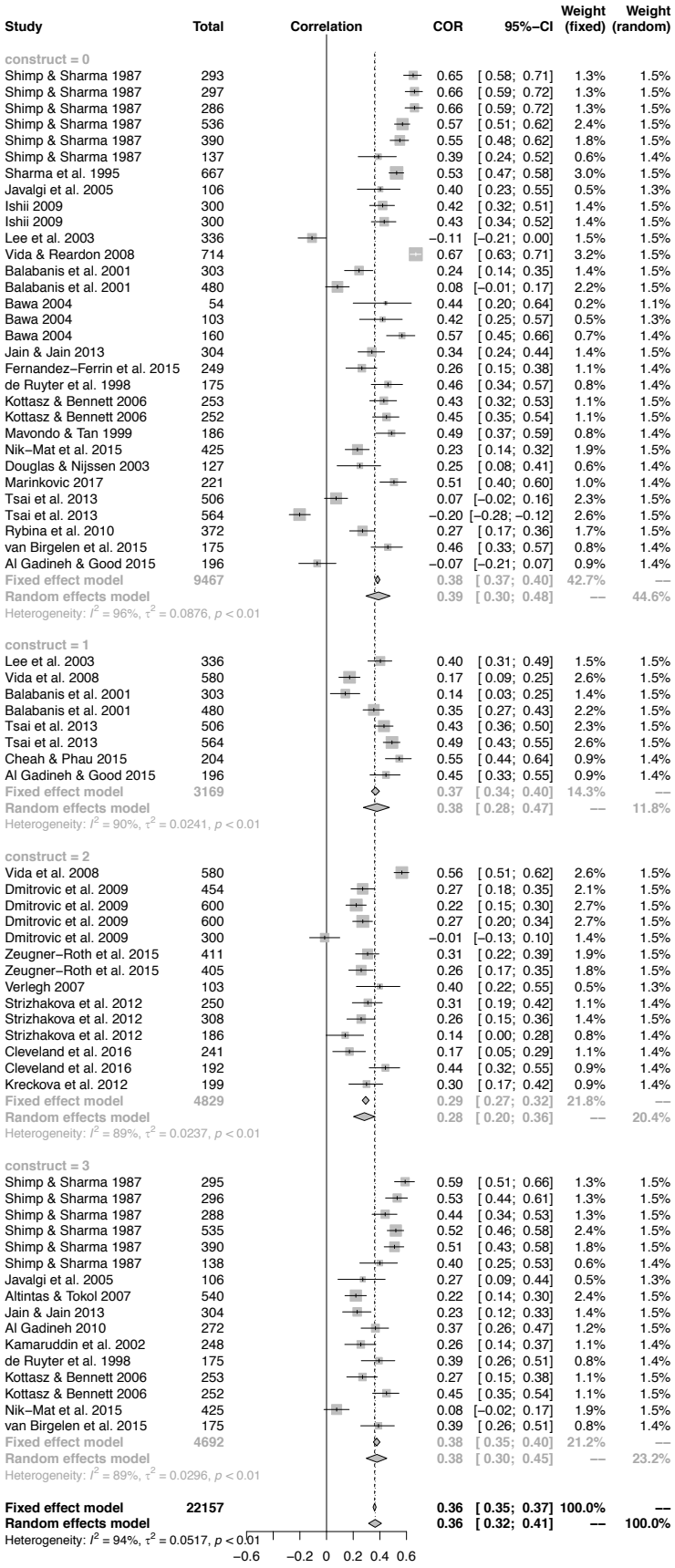
Figure 5.3 *Filled funnel plot for national values*

In order to explain some of the heterogeneity of the findings, additional analyses were run by including moderating factors. Since the national values construct consists of four different measures, I first examined whether the effect size differed according to the type of construct used – patriotism, nationalism, national identity, and conservatism. This did not explain a significant amount of variance, although differences could be found in the average weighted effect sizes, as shown in Table 5.3. As can be seen in the forest plot, effect sizes are lowest for the construct national identity. This could be due to its definition of not including a negative view on the out-group. Nevertheless, these differences are small and the constructs can still be analyzed as a whole under the national values construct.

Table 5.3 *Analysis of product national values for moderator construct*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Construct = 0	31	0.3900	[0.2958; 0.4767]	817.33	96.3%
Construct = 1	8	0.3785	[0.2769; 0.4718]	72.04	90.3%
Construct = 2	14	0.2844	[0.2031; 0.3619]	116.48	88.8%
Construct = 3	16	0.3780	[0.2984; 0.4524]	142.44	89.5%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	4.26	3	0.2347		

Notes: construct=0: patriotism, construct=1: nationalism, construct=2: national identity, construct=4: conservatism



Notes: construct=0: patriotism, construct=1: nationalism, construct=2: national identity, construct=3: conservatism

Figure 5.4 *Forest plot of single constructs encompassing national values*

Next, additional moderators were analyzed. Due to the large amount of studies included and the high heterogeneity among them, all other examined moderators except for the CETSCALE score were able to explain significant between group variance. Participants being set in an urban area were only significant at $p<0.10$, while all others were significant at $p<0.01$. The moderators explaining the highest amount of between group variance were the year of the study and the selection of the participants, which will be discussed in more detail.

Moderator analysis for the year of the studies showed that studies conducted in the years between 1987 and 1999 have the highest effect sizes, and they are decreasing in the subsequent decades with the lowest correlation between national values and consumer ethnocentrism found in the studies conducted between 2010 and 2017.

Table 5.4 *Analysis of national values for moderator year*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Yearcoded = 0	16	0.5333	[0.4929; 0.5715]	56.26	73.3%
Yearcoded = 1	28	0.3285	[0.2511; 0.4017]	441.41	93.9%
Yearcoded = 2	25	0.2881	[0.2106; 0.3621]	326.78	92.7%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	45.62	2	< 0.0001		

Notes: Yearcoded=0: study from 1987-1999; Yearcoded=1: study from 2000-2010; Yearcoded=2: study from 2010-2017

Most of the effect sizes in the years 1987-1999 come from the original CETSCALE study conducted by Shimp and Sharma (1987). This could explain why the correlations are so high in this year range, because the initial study developing a new concept needed to show high correlations in order to be published (Cooper, 2016). Lower effect sizes for the relationship between national values and consumer ethnocentrism in recent years could indicate declining national values or the ability of consumers to distinguish between their love for their country and their purchasing behavior, which was already proposed by Shankarmahesh (2006).

The selection of participants also was an important moderator of national values, which is in part due to the high amount of different selection criteria. Interestingly, quota sampling and samples retrieved from panels showed the lowest correlations (see exact values in Table 5.5). These selection criteria are often employed to achieve high representativeness of the underlying population, and could therefore depict a more accurate finding than studies with different sample selections. Convenience samples, which are often used with student samples,

also have a relatively low weighted average effect size. This shows that students generally hold lower correlations between national values and consumer ethnocentrism, which is also confirmed when looking at the moderator analysis of the characteristics of the participants, which can be found in Appendix D1.7. Random sampling lies quite close to the weighted average effect size of the whole sample, and semi-random sampling and samples with participants recruited from mail lists show the highest effect sizes. The latter can be explained by having been used by Shimp and Sharma (1987) in their initial study.

Table 5.5 *Analysis of national values for moderator selection*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Selection = 2	11	0.5659	[0.5262; 0.6032]	34.47	71.0%
Selection = 1	13	0.3156	[0.2305; 0.3959]	64.50	81.4%
Selection = 4	7	0.3940	[0.2959; 0.4838]	25.56	76.5%
Selection = 0	23	0.3416	[0.2523; 0.4252]	415.42	94.7%
Selection = 5	8	0.2401	[0.1756; 0.3026]	27.22	74.3%
Selection = 3	5	0.2234	[-0.0586; 0.4724]	198.65	98.0%
Selection = 9	2	0.3903	[0.1159; 0.6093]	7.21	86.1%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	91.45	6	< 0.0001		

Notes: Selection=0: Random sampling, Selection=1: Convenience sampling, Selection=2: Mail list, Selection=3: Panel, Selection=4: Semi-random sampling, Selection=5: Quota-sampling; Selection=9: N/a

Details of the other moderators showing slightly less significant results can be found in Appendix D1. In short, the analysis showed that the relationship between national values and consumer ethnocentrism was higher in developed (Western) countries than in developing countries. Interestingly, consumers living in urban areas also had higher correlations, but this is most likely due to the samples by Shimp and Sharma (1987) coming from urban areas. Students showed the lowest weighted average effect size, and high school students and managers the highest. The latter two were only conducted in one study though, so further confirmation would be needed to validate this tendency. The number of items used on the CETSCALE showed that the full 17-item scale and scales with only three to five items had the highest effect sizes. The former can again be explained by being used in the study by Shimp and Sharma (1987). Effect sizes were relatively uniform of studies using a CETSCALE items varying between six to 16 items.

5.2.2 Animosity

The animosity construct encompassed 63 individual studies included in the meta-analysis, resulting in the weighted average effect size of r=0.3293 for the random effects model.

The Cochran's Q statistic to test heterogeneity revealed high heterogeneity (Q value 719.27, df = 62), excluding random as a reason for differences among the studies. The I^2 of 91.4% also signals high heterogeneity.

Table 5.6 *Weighted average effect sizes of animosity*

	COR	95%-CI	z	p-value
Fixed effect model	0.3463	[0.3341; 0.3583]	51.44	< 0.0001
Random effects model	0.3293	[0.2863; 0.3710]	14.10	< 0.0001

Table 5.7 *Analyzing heterogeneity of animosity*

Quantifying heterogeneity		
I^2	91.4% [89.7%; 92.8%]	
Test of heterogeneity		
Q	d.f.	p-value
719.27	62	< 0.0001

As can be seen in the forest plot, all studies found a positive correlation between animosity and consumer ethnocentrism, but varied between 0.02 (Ma et al., 2012) and 0.61 (Tabassi et al., 2012).

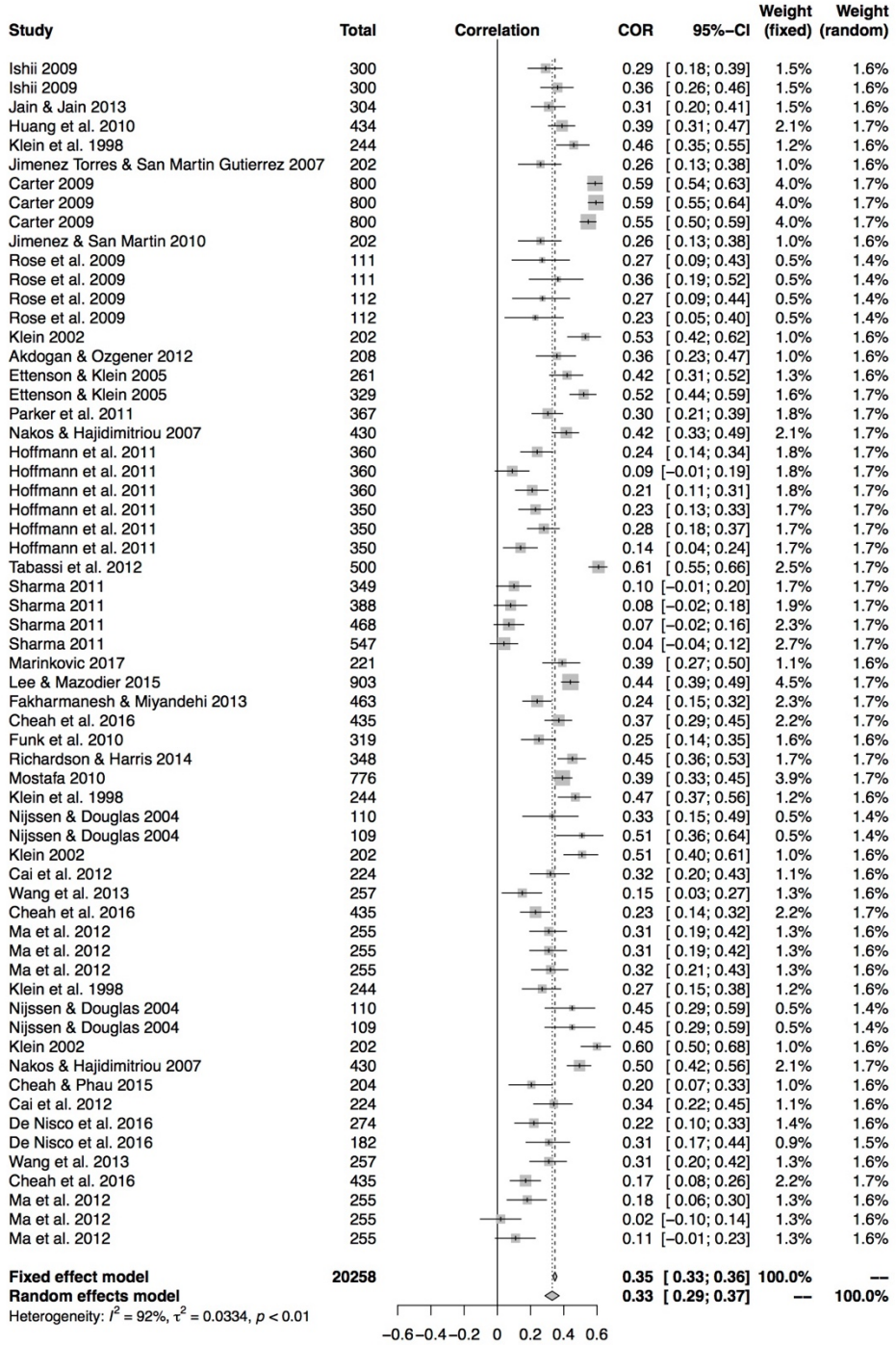


Figure 5.5 *Forest plot for animosity*

The funnel plot shows the distribution of the z-transformed correlations and their robustness. As can be seen in Figure 5.6, they vary greatly among the mean and do not follow the triangle shaped distribution, which means that other factors in form of moderators could influence the distribution.

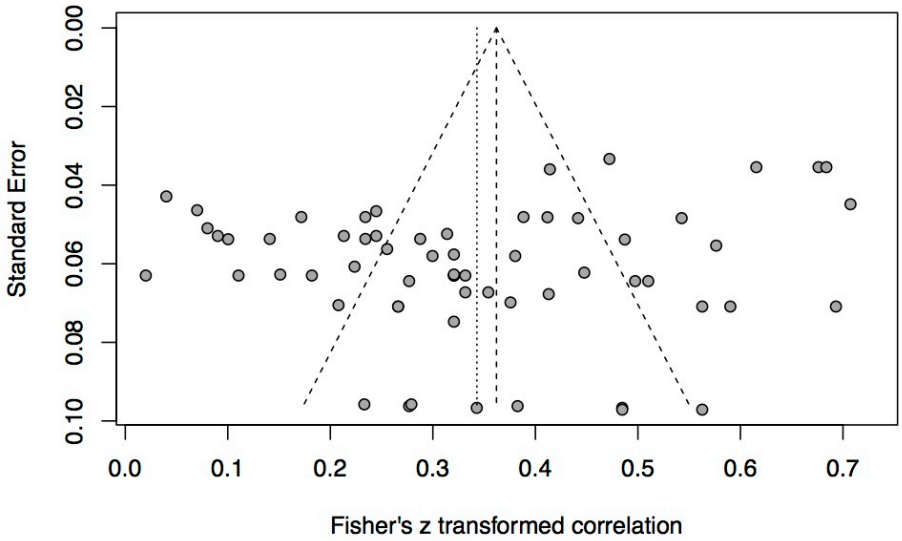


Figure 5.6 *Funnel plot for animosity*

Further analysis of filling the funnel plot with missing values accounted for the publication bias and showed where studies could lie. As can be seen in Figure 5.7, unpublished studies would need to report large effect sizes ranging from 0.7 to more than 0.9. Since studies with large effects are more likely to be published than studies with smaller effect sizes, it is not very likely that unpublished studies have found those missing effect sizes.

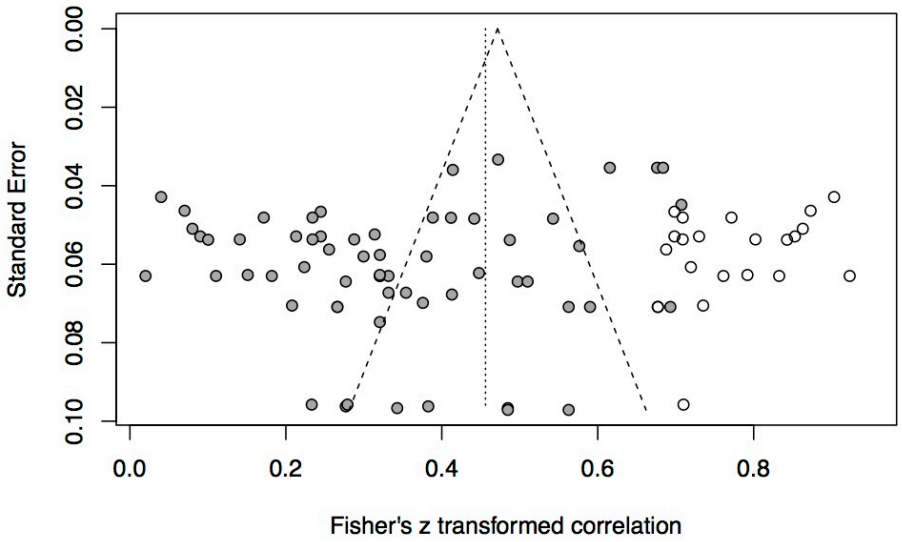


Figure 5.7 *Filled funnel plot for animosity*

In order to explain some of the heterogeneity, additional analyses were run by including moderating factors. First, I examined whether the effect size differed according to the type of animosity measurement – general animosity, war animosity, or economic animosity. This explained almost none of the variance and showed that the three animosity measurements can be combined into one, as shown in Table 5.8.

Table 5.8 *Analysis of animosity for moderator construct*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Construct = 0	39	0.3343	[0.2772; 0.3891]	557.06	93.2%
Construct = 1	10	0.3450	[0.2695; 0.4162]	36.22	75.2%
Construct = 2	14	0.3004	[0.2091; 0.3865]	106.83	87.8%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	0.62	2	0.7352		

Notes: construct=0: general animosity, construct=1: war animosity, construct=2: economic animosity

Next, other moderators were examined. Similar to the analysis of moderators of national values, the year of when the study was conducted, the selection of the participants, and additionally the characteristics of the participants as well as the number of items used on the CETSCALE were able to explain the most between group variance.

When the study was conducted showed significant differences between the three groups. While the effect size was over 0.4 in the 1980s until early 2000s, it was below 0.3 in the studies conducted since the year 2010, which could imply a trend to lower correlations between animosity and consumer ethnocentrism.

Table 5.9 *Analysis of animosity for moderator year*

Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	274.72	2	< 0.0001		
Within groups	444.55	60	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Years 2000-2009	21	0.4447	[0.3912; 0.4952]	119.99	83.3%
Years 2010-2017	39	0.2622	[0.2158; 0.3074]	316.28	88.0%
Years 1987-1999	3	0.4037	[0.2726; 0.5201]	8.29	75.9%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	26.62	2	< 0.0001		

Notes: Yearcoded=0: study from 1987-1999; Yearcoded=1: study from 2000-2010; Yearcoded=2: study from 2010-2017

A large amount of variance was explained by looking at the selection criteria of the participants. The link between animosity and consumer ethnocentrism was highest for studies that used random sampling or panels, and lowest for convenience samples. This brings into

question whether social desirability bias plays a role in the response patterns for these convenience samples, and causes the participants to show lower levels of animosity.

Table 5.10 *Analysis of animosity for moderator selection*

Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	413.34	5	< 0.0001		
Within groups	305.93	57	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Selection = 4	9	0.1918	[0.1055; 0.2753]	58.51	86.3%
Selection = 5	9	0.2644	[0.1783; 0.3465]	62.03	87.1%
Selection = 0	22	0.3950	[0.3432; 0.4444]	101.19	79.2%
Selection = 9	4	0.2863	[0.2173; 0.3524]	4.36	31.3%
Selection = 3	3	0.5261	[0.4476; 0.5965]	49.47	87.9%
Selection = 1	12	0.2473	[0.1902; 0.3027]	30.36	63.8%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	49.65	5	< 0.0001		

Note: Selection=0: random sampling, Selection=1: convenience sampling, Selection=2: mail list, Selection=3: panel, Selection=4: semi-random sampling, Selection=5: quota sampling, Selection=9: n/a

Characteristics of participants were also able to minimize variance, and exact values can be found in Table 5.11. Most of the studies included participants from the general population. Although the student effect size was lower compared to the one for the general population, the biggest difference was found with managers and employees from a multinational company, whose animosity was close to zero and therefore differed significantly from the other two groups. These all came from the same study though, and were quite homogeneous.

Table 5.11 *Analysis of animosity for moderator characteristics*

Test for subgroups (random effects model)					
	K	COR	95%-CI	Q	I^2
Characteristics = 0	53	0.3532	[0.3096; 0.3953]	536.88	90.3%
Characteristics = 1	6	0.2841	[0.2362; 0.3306]	4.21	0.0%
Characteristics = 3	4	0.0688	[0.0220; 0.1154]	0.85	0.0%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	81.45	2	< 0.0001		

Notes: Characteristics=0: General population; Characteristics=1: Students: Characteristics=3 managers/ employees from a firm

A highly significant amount of variance was also explained by examining the moderator of items used on the CETSCALE. As can be seen in Table 5.12, more items used led to higher correlations of animosity with consumer ethnocentrism. This draws to attention that CETSCALEs with more items could show different results, even though Cronbach's alphas have been high even for CETSCALEs with only a few items.

Table 5.12 *Analysis of animosity for moderator CETtype*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
CETtype = 4	19	0.3015	[0.2421; 0.3587]	110.13	83.7%
CETtype = 3	29	0.2806	[0.2233; 0.3360]	220.42	87.3%
CETtype = 2	1	0.3900	[0.3071; 0.4670]	0.00	--
CETtype = 1	5	0.4330	[0.3489; 0.5102]	13.37	70.1%
CETtype = 0	8	0.4551	[0.3495; 0.5492]	105.28	93.4%
CETtype = 9	1	0.4520	[0.3642; 0.5319]	0.00	--
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	22.42	5	0.0004		

Notes: CETtype=0: 17 items, CETtype=1: 10 items, CETtype=2: 11-16 items, CETtype=3: 6-9 items, CETtype=4: 2-5 items, CETtype=9: N/a

In addition, different continents could explain variance with a significance of $p<0.10$, with Northern America having the largest effect size and Asia the lowest, as well as whether the country was a developed (Western) country or a developing country, with developed countries having a higher effect size. Detailed results can be found in Appendix D2.

5.2.3 International Values

A total number of 69 studies encompass the international values construct. The analysis shows a weighted average effect size of r=-0.1908 for the random effects model, indicating a negative relationship between international values and consumer ethnocentrism.

The Cochran's Q statistic to test heterogeneity revealed high heterogeneity (Q value 628.58, df = 68), which is significant at the $p<0.0001$ level, excluding random as a reason for differences among the studies. The I^2 of 91.4% also signals high heterogeneity.

Table 5.13 *Weighted average effect sizes of international values*

	COR	95%-CI	z	p-value
Fixed effect model	-0.1743	[-0.1865; -0.1621]	-27.41	< 0.0001
Random effects model	-0.1908	[-0.2282; -0.1528]	-9.67	< 0.0001

Table 5.14 *Analyzing heterogeneity of international value*

Quantifying heterogeneity		
I^2	89.2% [87.0%; 91.0%]	
Test of heterogeneity		
Q	d.f.	p-value
628.58	68	< 0.0001

The forest plot shows all effect sizes of the included study, with most effect sizes being negative. The lowest correlation was found by Nijssen and Douglas (2011) with a value of -0.55, and highest correlation was found by Nik-Mat et al. (2015), with a value of 0.19 for the construct foreign travel.

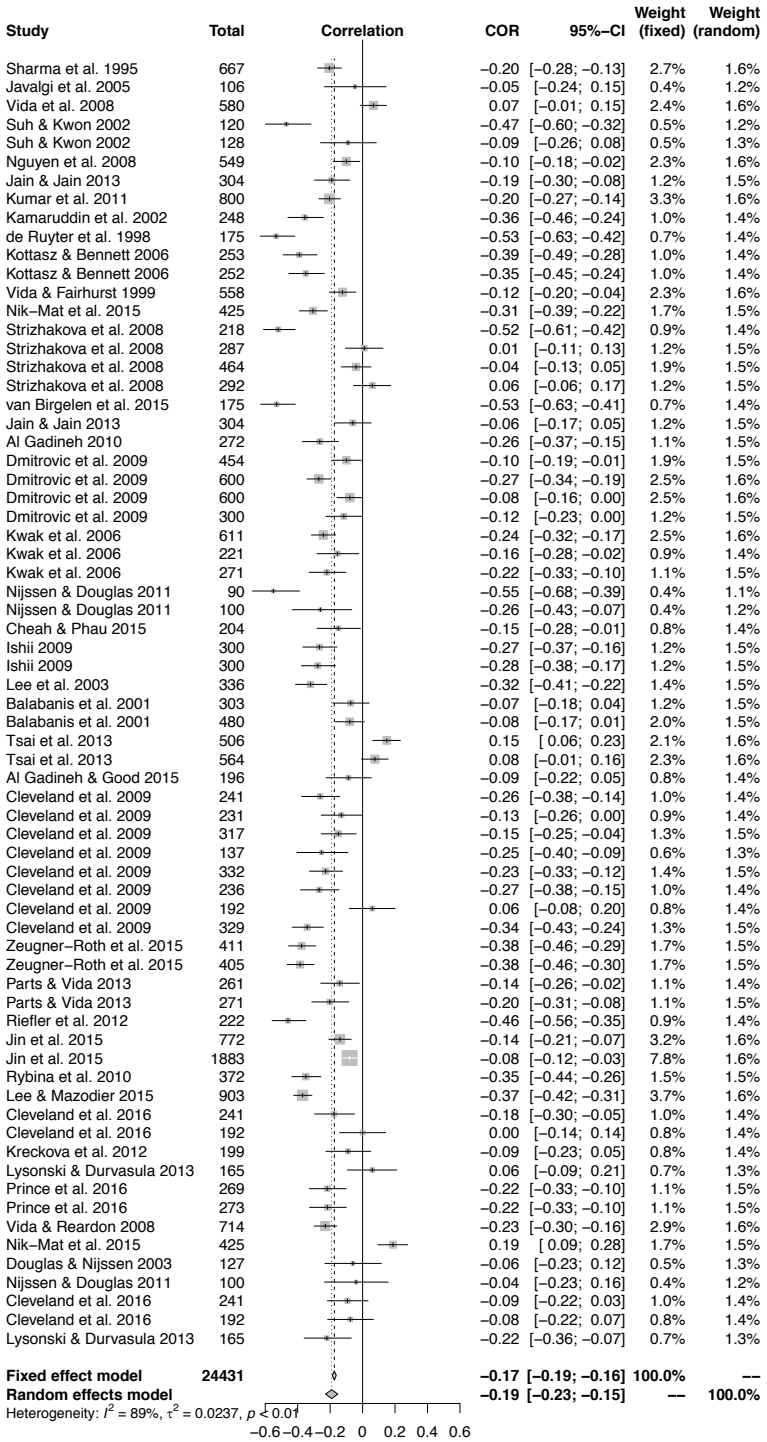


Figure 5.8 *Forest plot for international values*

The funnel plot depicts a picture similar to that of previous examined constructs, although more studies lie within the proposed distribution.

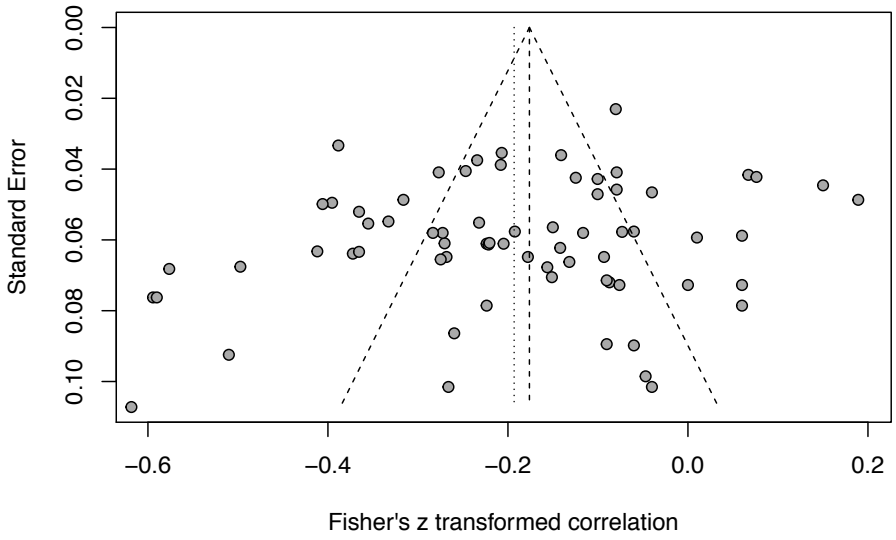


Figure 5.9 *Funnel plot for international values*

Missing values can be found on the positive side of the spectrum, since only few studies have depicted this so far. It could be that studies with such correlations have not been published, because these findings are opposite of expected negative relationship.

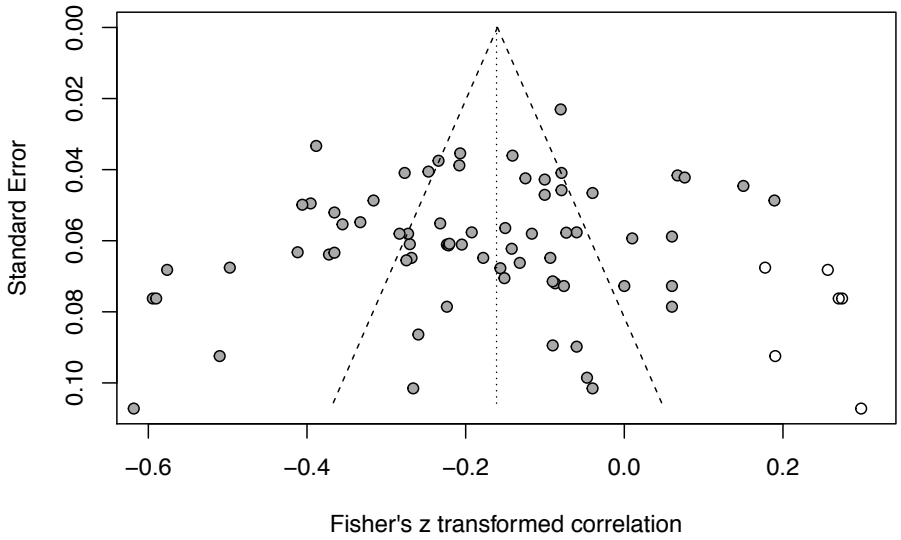


Figure 5.10 *Filled funnel plot for international values*

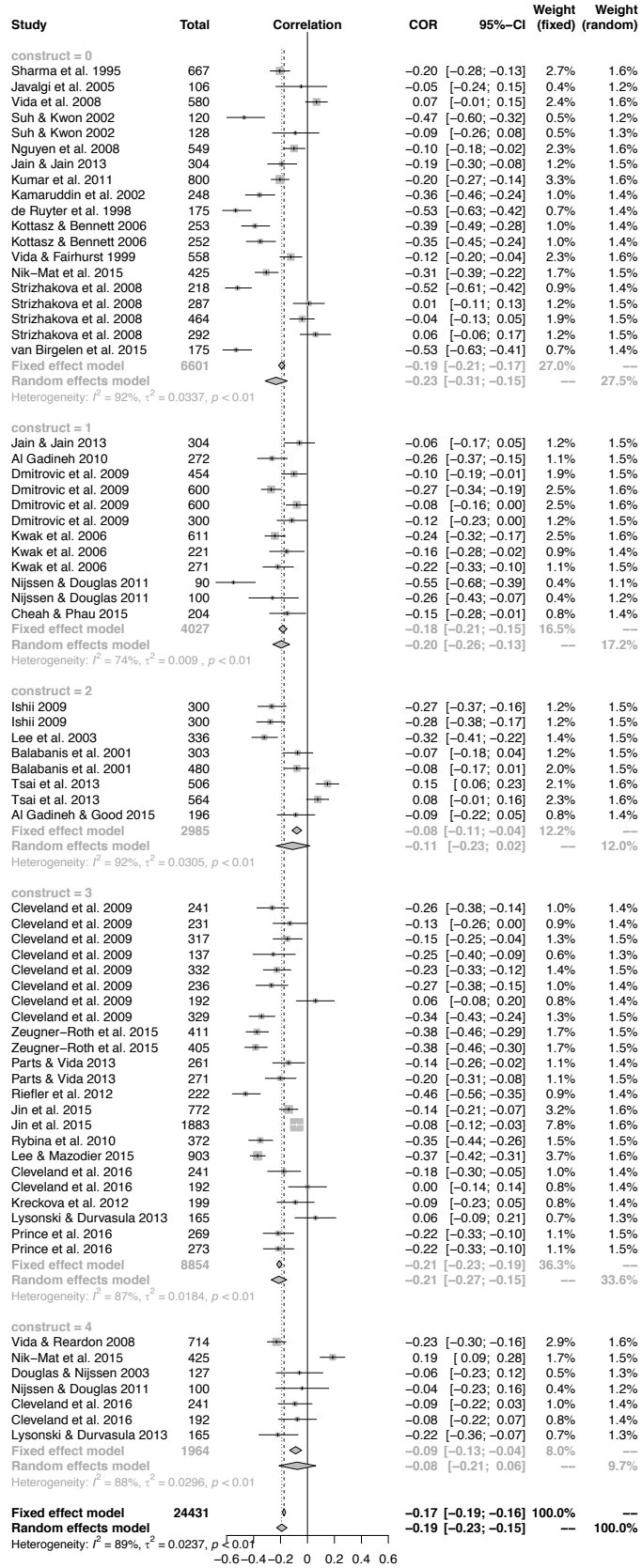
Since international values encompasses five different constructs, an analysis of these different constructs was performed next, of which the results are shown in Table 5.15. While cultural openness, world-mindedness, and cosmopolitanism all show similar weighted average effect sizes, internationalism and foreign travel show a less negative effect. Conceptually, only the large difference between foreign travel and the other concepts could be explained, since foreign travel is quite different from the others in its definition and measurement. Just from

comparing the different definitions of the constructs, one would have expected to see more similar results between the three constructs cultural openness, world-mindedness, and internationalism, and the two constructs cosmopolitanism and foreign travel. This is not the case, and since between groups comparison in the random effects model did not show significant differences, the five constructs remain analyzed as one in the following.

Table 5.15 *Analysis of international values for moderator construct*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Construct = 0	19	-0.2338	[-0.3144; -0.1499]	222.97	91.9%
Construct = 1	12	-0.1951	[-0.2560; -0.1328]	43.13	74.5%
Construct = 2	8	-0.1101	[-0.2330; 0.0163]	84.90	91.8%
Construct = 3	23	-0.2123	[-0.2694; -0.1536]	170.37	87.1%
Construct = 4	7	-0.0765	[-0.2116; 0.0615]	50.96	88.2%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	5.91	4	0.2058		

Notes: construct=0: cultural openness, construct=1: world-mindedness, construct=2: internationalism, construct=3: cosmopolitanism, construct=4: foreign travel



Notes: construct=0: cultural openness, construct=1: world-mindedness, construct=2: internationalism, construct=3: cosmopolitanism, construct=4: foreign travel

Figure 5.11 *Forest plot for international values with moderator construct*

In comparison to the two previously analyzed constructs of national values and animosity, moderators were able to explain less between group variance. Only the continent of the study, whether the country was developed or developing, and the number of items used on the CETSCALE showed significant between group differences.

For the continent of the study, the lowest correlation between international values and consumer ethnocentrism was found in Southern America, followed by Africa. The highest correlation was found in Australia, and Northern America, Europe, and Asia show relatively similar levels, as can be seen in Table 5.16. An explanation for this could be that Australians have higher international values, which negatively influences their consumer ethnocentric tendencies. Consumers from Southern America, on the other hand, might not have much contact to other countries and cultures, which results in lower international values and less negative influence on their consumer ethnocentrism. It needs to be kept in mind though that the meta-analysis results do not allow for drawing conclusions on such underlying constructs; and those possible explanations are therefore only assumptions.

Table 5.16 *Analysis of international values for moderator continent*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Continent = 2	19	-0.1796	[-0.2462; -0.1113]	146.27	87.7%
Continent = 1	31	-0.2059	[-0.2631; -0.1473]	290.43	89.7%
Continent = 0	10	-0.2322	[-0.3518; -0.1050]	115.65	92.2%
Continent = 5	2	-0.3139	[-0.5811; 0.0144	12.56	92.0%
Continent = 3	3	-0.0054	[-0.0874; 0.0768]	1.76	0.0%
Continent = 9	2	-0.1038	[-0.1610; -0.0460]	2.01	50.4%
Continent = 4	2	-0.0816	[-0.3451; 0.1938]	6.52	84.7%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	21.42	6	0.0015		

Notes: Continent=0: Northern America, Continent=1: Europe, Continent=2: Asia, Continent=3: Southern America, Continent=4: Africa, Continent=5: Australia, Continent=9: Mix of continents

A similar conclusion can be made when looking at the differences between developed (Western) countries and developing countries, where the relationship between international values and consumer ethnocentrism is more negative in developed countries than in developing, whose exact values are depicted in Table 5.17. This could be due to consumers from developed countries being more exposed to international values due to their higher possibilities to travel and to experience other cultures, while consumers from developing

countries have less opportunities to do so due to the costs involved, and therefore show less international values. This in turn reduces the negative relationship to consumer ethnocentrism.

Table 5.17 *Analysis of international values for moderator developed*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Developed = 1	45	-0.1433	[-0.1822; -0.1039]	300.88	85.4%
Developed = 0	24	-0.2824	[-0.3528; -0.2089]	240.71	90.4%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	10.60	1	0.0011		

Notes: Developed=0: developed (Western) countries, Developed=1: developing countries

In addition, the number of items on the CETSCALE were also able to explain a significant amount of between group variance. Clear conclusion can however not be drawn from the differences. As portrayed in Table 5.18, scales with the full 17-items as well as scales using only three to five items had the least negative correlations, while CETSCALEs with items ranging between six to 16 showed more negative correlations.

Table 5.18 *Analysis of international values for moderator CETtype*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
CETtype = 0	16	-0.1563	[-0.2439; -0.0662]	196.91	92.4%
CETtype = 4	34	-0.1792	[-0.2212; -0.1365]	186.79	82.3%
CETtype = 3	11	-0.1995	[-0.3161; -0.0770]	136.40	92.7%
CETtype = 2	2	-0.2190	[-0.4841; 0.0830]	8.03	87.5%
CETtype = 9	2	-0.3702	[-0.4434; -0.2922]	0.27	0.00%
CETtype = 1	4	-0.2963	[-0.5088; -0.0499]	56.19	94.7%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	19.38	5	0.0016		

Notes: CETtype=0: 17 items, CETtype=1: 10 items, CETtype=2: 11-16 items, CETtype=3: 6-9 items, CETtype=4: 2-5 items, CETtype=9: N/a

Interestingly, whether participants were recruited from an urban area or not did not explain significant between group variance, although it would be expected that an urban population is more exposed to foreign cultures and therefore shows more negative correlations between international values and consumer ethnocentrism. However, this assumption was not confirmed in the analysis.

5.2.4 Collectivism

Collectivism was measured in 14 studies revealed by the systematic review, and the weighted average effect size of its relationship with consumer ethnocentrism is positive with r=0.2038 in the random effects model. Heterogeneity is high in both the I^2 value as well as the Q value, where the results are significant at the $p< 0.0001$ level.

Table 5.19 *Weighted average effect sizes of collectivism*

	COR	95%-CI	z	p-value
Fixed effect model	0.2106	[0.1858; 0.2350]	16.28	< 0.0001
Random effects model	0.2038	[0.1244; 0.2807]	4.96	< 0.0001

Table 5.20 *Analyzing heterogeneity of collectivism*

Quantifying heterogeneity		
I^2	89.5% [84.1%; 93.0%]	
Test of heterogeneity		
Q	d.f.	p-value
123.56	13	< 0.0001

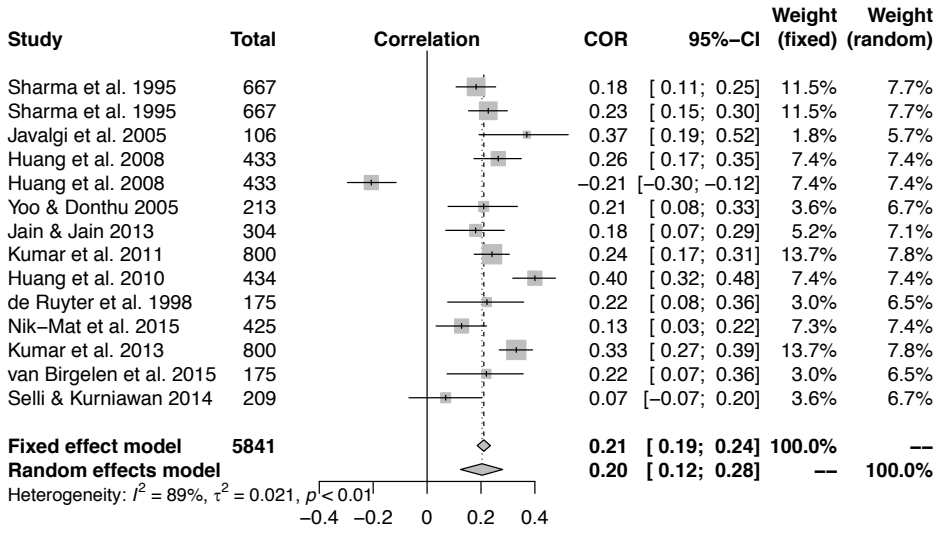


Figure 5.12 *Forest plot of collectivism*

The forest plot shows that all studies except from one find positive correlations between collectivism and consumer ethnocentrism. The one outlier is the from the study of Huang et al. (2008), who distinguished between collectivism towards parents and towards friends, with the negative correlation depicting collectivism towards friends. De Ruyter et al. (1998) also were the only others who also measured collectivism towards friends, but pooled the measure with collectivism towards parents. Their effect size however is very close to the weighted average effect size. The difference could lie in the countries of where the two studies were

conducted, with de Ruyter et al. (1998) being set in the Netherlands, a traditionally not very collectivist country, and Huang et al. (2008) conducting their study in Taiwan, a traditionally much more collectivist country (Hofstede, Hofstede and Minkov, 2010). It could be that due to collectivism being valued higher in society, participants feel more obligated to hold up to these expectations in front of their parents, but act more freely towards their friends. Another reason also pointed out by the authors is that higher collectivism towards parents could impose a higher national identity, which in turn leads to higher consumer ethnocentrism.

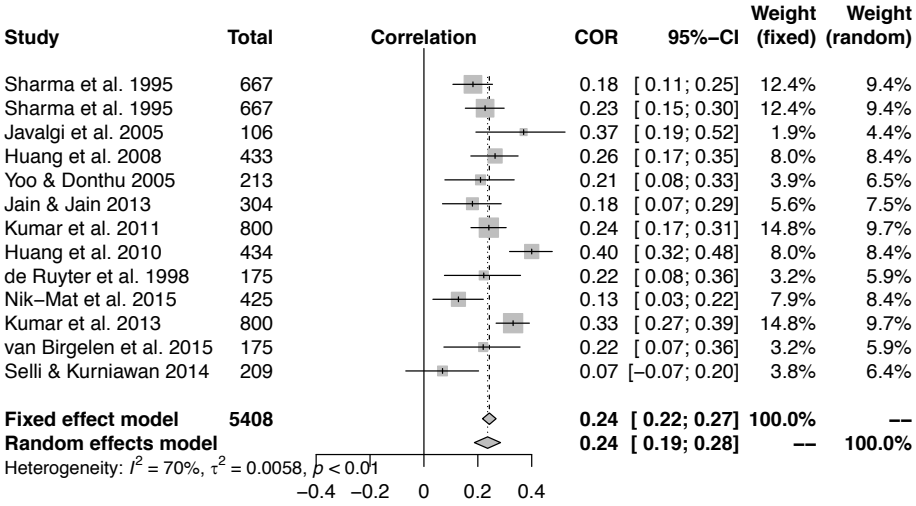


Figure 5.13 *Forest plot of collectivism with excluded collectivism towards friends*

An analysis without the collectivism towards friends measure by Huang et al. (2008) shows that the weighted average effect size increases from 0.20 to 0.24 in the random effects model. Still, the study by Huang et al. (2008) can be seen as an outlier and will still be considered in the subsequent analyses of this construct, resulting in the full 14 studies being included. This approach was confirmed when looking at the funnel plot and applying the Trim-and-Fill Method.

As can be seen in Figure 5.14, the effect sizes are relatively equally distributed and mostly found within the expected triangle. The Trim-and-Fill Method did not add any missing values, which indicated that outliers have already been identified with the existing studies.

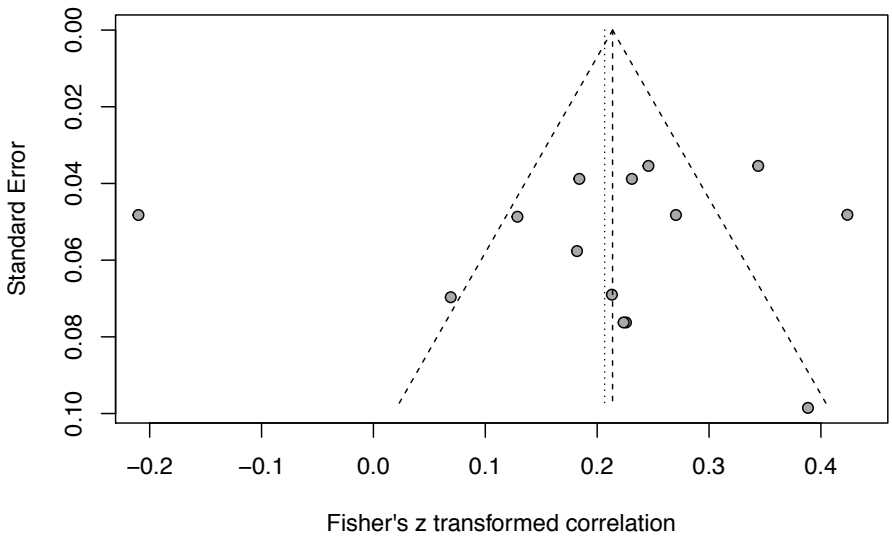


Figure 5.14 *Funnel plot of collectivism*

The analysis of moderators showed a couple of interesting results. Firstly, no significant between group results were found when comparing the continent of the studies, even though Asian cultures are more collectivist than Western cultures (Hofstede et al., 2010).

Table 5.21 *Analysis of collectivism for moderator continent*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Continent = 2	10	0.1867	[0.0875; 0.2823]	120.28	92.5%
Continent = 1	3	0.2573	[0.1659; 0.3443]	2.12	5.9%
Continent = 0	1	0.2100	[0.0778; 0.3350]	0.00	--
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	1.13	2	0.5685		

Notes: Continent=0: Northern America, Continent=1: Europe, Continent=2: Asia

Due to the negative correlation of consumer ethnocentrism and collectivism towards friends found in the study by Huang et al. (2008), which was conducted in Asia, an additional analysis was run without their study. This increased the weighted average effect size for Asia, making it almost the same as Europe. Nevertheless, Asia still did not score higher, and differences between the continents were not found (see Appendix D4.3 for detailed results).

Differences between the groups were however found in the selection of the participants and the type of CETSCALE used. In the former, between group differences were significant at the $p<0.05$ level in the random effects model, as can be seen in Table 5.22. This is also due to the few studies analyzed, resulting in some selection criteria only being used once. Making

inferences about why the effect sizes differ across the selection methods used is therefore rather prone to speculation and a larger number of studies would be needed to confirm the findings.

Table 5.22 *Analysis of collectivism for moderator selection*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Selection = 2	2	0.2046	[0.1526; 0.2555]	0.73	0.0%
Selection = 4	1	0.3700	[0.1929; 0.5238]	0.00	--
Selection = 0	7	0.1535	[0.0175; 0.2840]	72.24	91.7%
Selection = 5	3	0.3105	[0.1979; 0.4150]	10.50	80.9%
Selection = 9	1	0.0690	[-0.0673; 0.2028]	0.00	--
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	11.25	4	0.0239		

Notes: Selection=0: Random sampling, Selection=1: Convenience sampling, Selection=2: Mail list, Selection=4: Semi-random sampling, Selection=5: Quota-sampling, Selection=9: N/a

The different CETSCALEs used were able to explain the most variance, with the results being significant at the $p<0.01$ level in the random effects model. This again is also due to the small number of studies, with two CETSCALE types only being used once. Nevertheless, studies using the full 17-item CETSCALE were quite consistent, and have a relatively small confidence interval even in the random effects model.

Table 5.23 *Analysis of collectivism for moderator CETtype*

Test for subgroups (random effects model)					
	K	COR	95%-CI	Q	I^2
CETtype = 0	9	0.2197	[0.1645; 0.2736]	24.24	67.0%
CETtype = 3	3	0.0801	[-0.2190; 0.3655]	54.76	96.3%
CETtype = 2	1	0.4000	[0.3178; 0.4762]	0.00	--
CETtype = 1	1	0.2200	[0.0741; 0.3567]	0.00	--
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	14.58	3	0.0022		

Notes: CETtype=0: 17 items, CETtype=1: 10 items, CETtype=2: 11-16 items, CETtype=3: 6-9 items, CETtype=4: 2-5 items, CETtype=9: N/a

5.2.5 Materialism

Consumers with high materialism seek happiness through consumption. The relationship of this construct with consumer ethnocentrism was measured in 21 studies included in the meta-

analysis. These studies showed a weighted average effect size of r=0.0586, but the correlation of consumer ethnocentrism and materialism is only significant at the p<0.05 level in the random effects model. This shows that materialism has only a limited effect on consumer ethnocentrism, although slightly positive. This could imply that consumers show somewhat higher consumer ethnocentric tendencies if they are materialistic.

Table 5.24 *Weighted average effect sizes of materialism*

	COR	95%-CI	z	p-value
Fixed effect model	0.0565	[0.0311; 0.0818]	4.36	< 0.0001
Random effects model	0.0586	[0.0079; 0.1090]	2.26	0.0235

Table 5.25 *Analyzing heterogeneity of materialism*

Quantifying heterogeneity		
I^2	74.3% [60.5%; 83.2%]	
Test of heterogeneity		
Q	d.f.	p-value
77.71	20	< 0.0001

The forest plot reveals that some studies find quite differing results, especially in the study conducted by Cleveland et al. (2009), which encompassed many different countries. In their research, both the lowest and highest values are found, with the lowest value being -0.20, and the highest value being 0.36.

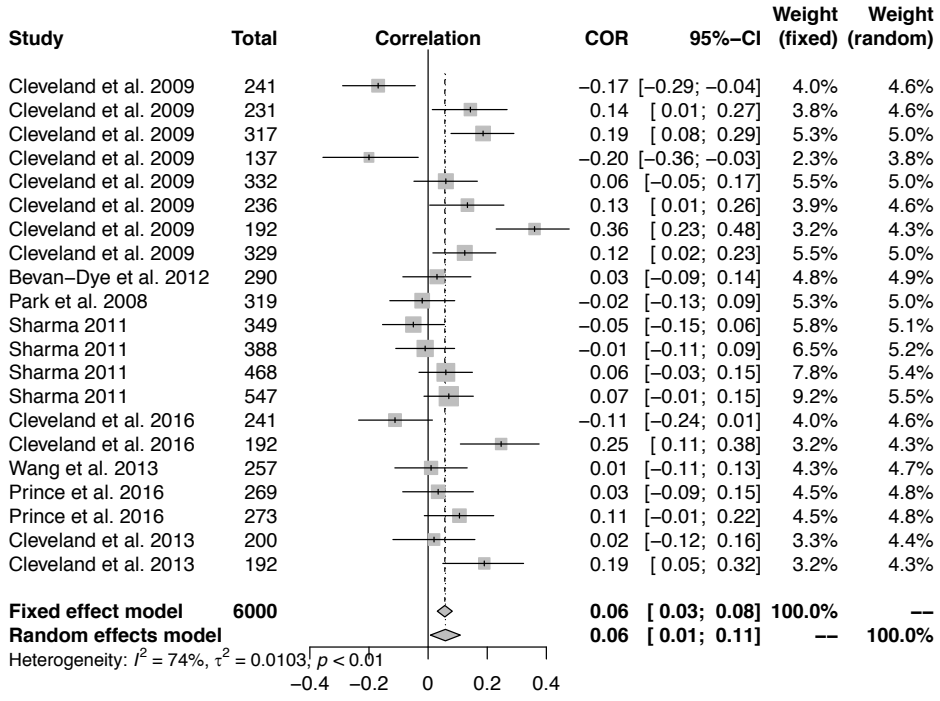


Figure 5.15 *Forest plot for materialism*

The funnel plot shows that most studies lie within the triangle shaped distribution, and the Trim-and-Fill Method did not add any missing values.

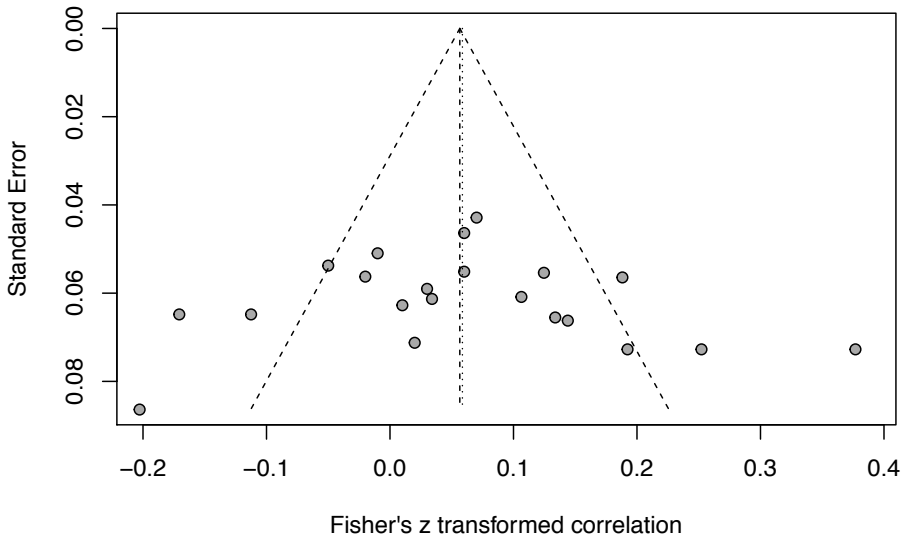


Figure 5.16 *Funnel plot for materialism*

Next, the moderator analysis was run. The only significant moderator was the continent of the study, with the highest correlation of consumer ethnocentrism and materialism found in Southern America, and the lowest in Northern America, where materialism essentially plays no role on consumer ethnocentrism.

Table 5.26 *Analysis of materialism for moderator continent*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Continent = 0	5	-0.0045	[-0.1123; 0.1034]	17.54	77.2%
Continent = 1	5	0.1030	[-0.0558; 0.1497]	3.90	0.0%
Continent = 2	8	0.0112	[-0.0585; 0.0808]	17.62	60.3%
Continent = 3	2	0.3046	[0.1900; 0.4109]	1.47	31.9%
Continent = 4	1	0.0300	[-0.0855; 0.1447]	0.00	--
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	21.88	4	0.0002		

Notes: Continent=0: Northern America, Continent=1: Europe, Continent=2: Asia, Continent=3: Southern America, Continent=4: Africa

5.2.6 Conspicuous Consumption

The relationship of conspicuous consumption and consumer ethnocentrism was examined in five studies, and therefore just met the inclusion criteria for being analyzed in the meta-analysis. Due to the high variations among the studies, the overall weighted average effect size of r=-0.0319 shows a non-significant relationship of conspicuous consumption and consumer ethnocentrism, at least in the random effects model. Still, the heterogeneity analysis shows satisfying results with both the I^2 and the Q value, excluding chance as cause for the result. This means that conspicuous consumption does not influence consumer ethnocentric tendencies. Considering that consumers with conspicuous consumption buy goods in order to enhance their status, these findings are not completely surprising, since they put more emphasis on the image of the product than where it comes from. It could be that consumers hold ethnocentric tendencies, but do not apply these when purchasing goods that serve for enhancing their status.

Table 5.27 *Weighted average effect sizes of conspicuous consumption*

	COR	95%-CI	z	p-value
Fixed effect model	-0.0744	[-0.1126; -0.0361]	-3.80	0.0001
Random effects model	-0.0319	[-0.1494; 0.0865]	-0.53	0.5978

Table 5.28 *Analyzing heterogeneity of conspicuous consumption*

Quantifying heterogeneity		
I^2	88.8% [76.5%; 94.7%]	
Test of heterogeneity		
Q	d.f.	p-value
35.71	4	< 0.0001

The forest plot graphically shows that the effect sizes vary greatly from study to study.

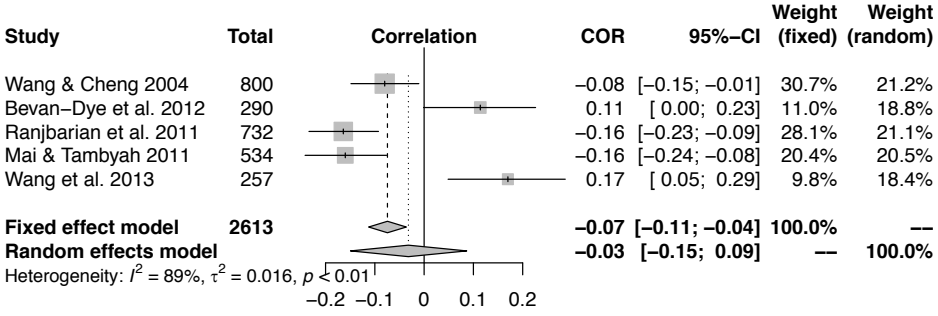


Figure 5.17 *Forest plot conspicuous consumption*

As can be seen in the funnel plot, the correlations hardly fit in the triangle shaped distribution, and the two positive values are further away from it.

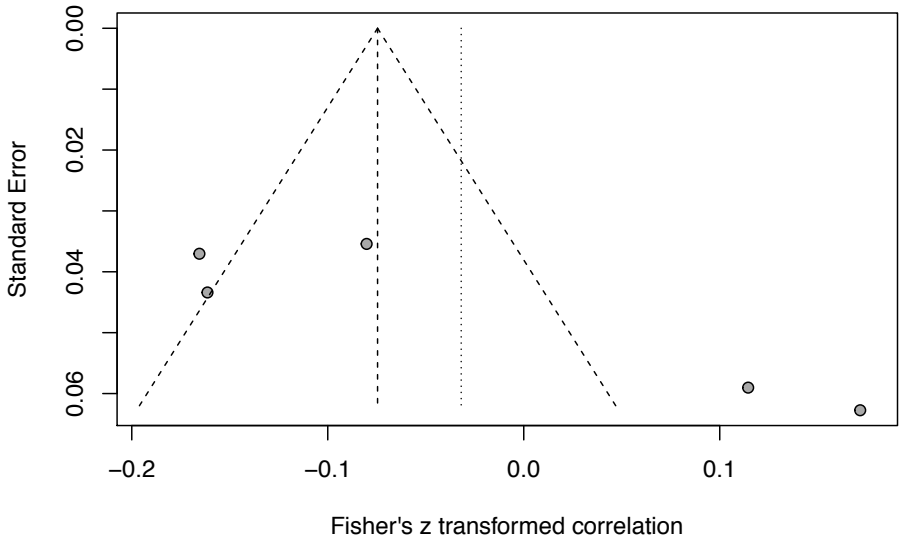


Figure 5.18 *Funnel plot for conspicuous consumption*

Using the Trim-and-Fill Method, a missing value is assumed at the lower end of the spectrum. This is not likely a result left unpublished, as it would show a stronger correlation than results previously published. Further examination of the relationship between consumer ethnocentrism and conspicuous consumption could reveal such a finding, but overall it appears that these two constructs are distinct from each other.

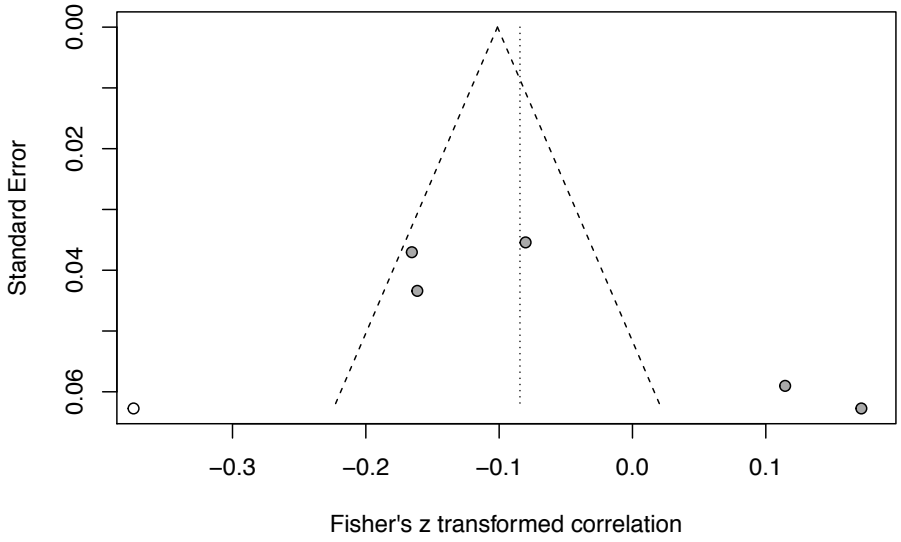


Figure 5.19 *Filled funnel plot for conspicuous consumption*

Due to the low amount of studies found measuring conspicuous consumption, as well as the insignificant relationship, moderator analysis was not performed on this construct.

5.2.7 Product Judgements Domestic

Assessment of the quality perception and overall evaluation of domestic products and correlating these to consumer ethnocentrism was included in 20 studies, with an overall weighted average effect size of r=0.2838 in the random effects model. As in all previously examined constructs, heterogeneity is also given with both the I^2 value as well as the Q value.

Table 5.29 *Weighted average effect sizes of product judgements domestic*

	COR	95%-CI	z	p-value
Fixed effect model	0.2647	[0.2468; 0.2825]	27.74	< 0.0001
Random effects model	0.2838	[0.2193; 0.3458]	8.30	< 0.0001

Table 5.30 *Analyzing heterogeneity of product judgements domestic*

Quantifying heterogeneity		
I^2	91.5% [88.2%; 93.8%]	
Test of heterogeneity		
Q	d.f.	p-value
222.92	19	< 0.0001

The forest plot shows positive correlations in all studies, with the lowest value being 0.09 (Bawa, 2004), and the highest value 0.66 (Douglas and Nijssen, 2003).

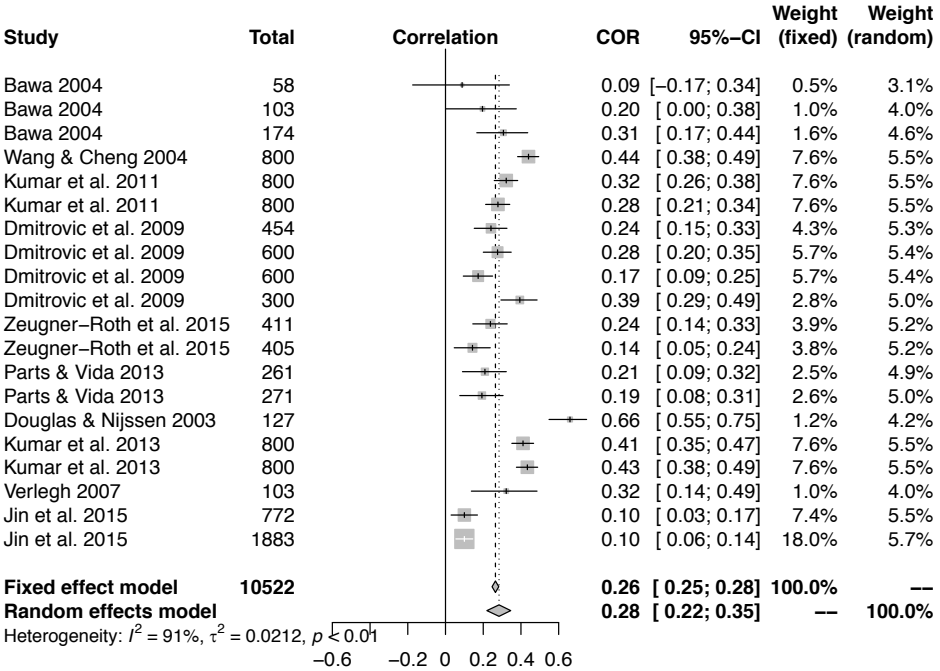


Figure 5.20 *Forest plot of product judgements domestic*

The funnel plot shows more graphically that the highest value is an outlier in comparison with what has been found in other studies. The Trim-and-Fill Method did not reveal any missing values, implying that the studies included give a very representative picture of the relationship between product judgements of domestic products and consumer ethnocentrism.

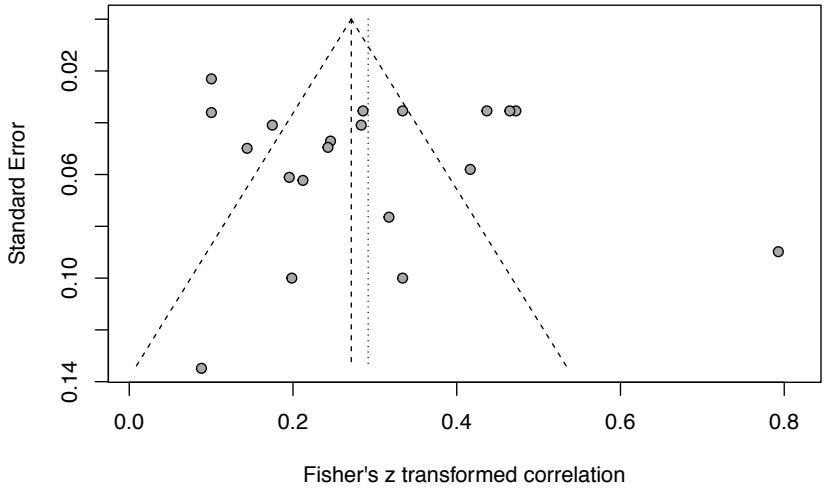


Figure 5.21 *Funnel plot of product judgement domestic*

Moderator analysis showed that actually many different moderators were well able to explain the heterogeneity found between the studies. First, there were significant differences between studies in different continents, with interestingly the highest correlation of domestic product judgements and CE found in Asia, and lowest in Europe.

Table 5.31 *Analysis of product judgement domestic for moderator continent*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Continent = 2	8	0.3448	[0.2812; 0.4053]	32.34	78.4%
Continent = 1	9	0.2799	[0.1955; 0.3602]	54.42	85.3%
Continent = 0	1	0.3220	[0.1955; 0.3602]	0.00	-
Continent = 9	2	0.1000	[0.0622; 0.1375]	0.00	0.0%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	49.62	3	< 0.0001		

Notes: Continent=0: Northern America, Continent=1: Europe, Continent=2: Asia, Continent=9: Mix of continents

As found often, selection of participants also explained a significant amount of between group variance. This is also due to the higher number of different selection criteria used, resulting in smaller studies combined under one criteria. Nevertheless, effect sizes are relatively uniform

for random and quota sampling, while they are lowest for convenience samples (see Table 5.32).

Table 5.32 *Analysis of product judgement domestic for moderator selection*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Selection = 1	4	0.1209	[0.0566; 0.1843]	5.28	43.2%
Selection = 0	3	0.2938	[0.2480; 0.3382]	2.09	4.5%
Selection = 4	2	0.3881	[0.2547; 0.5070]	3.38	70.4%
Selection = 5	10	0.2769	[0.2033; 0.3473]	67.33	86.6%
Selection = 9	1	0.6600	[0.5489; 0.7482]	0.00	-
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	59.12	4	< 0.0001		

Notes: Selection=0: Random sampling, Selection=1: Convenience sampling, Selection=4: Semi-random sampling, Selection=5: Quota-sampling; Selection=9: N/a

In addition, characteristics of participants also played an important role as moderators. The general population and high school students showed the highest effect sizes, whereas the effect sizes of university student samples and employees in a multinational company were significantly lower. An explanation for this could be that the latter two groups are more oriented towards and exposed to internationalism and show therefore less appreciation for domestic products.

Table 5.33 *Analysis of product judgement domestic for moderator characteristics*

Test for subgroups (random effects model)					
	K	COR	95%-CI	Q	I^2
Characteristics = 3	1	0.0880	[-0.1743; 0.3386]	0.00	-
Characteristics = 2	4	0.1327	[0.0650; 0.1992]	6.03	50.3%
Characteristics = 1	1	0.3070	[0.1658; 0.4359]	0.00	-
Characteristics = 0	14	0.3183	[0.2549; 0.3790]	114.35	88.6%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	18.02	3	0.0004		

Notes: Characteristics=0: General population; Characteristics=1: Students, Characteristics=2: High-school students, Characteristics=3 managers/ employees from a firm

As commonly found, the type of CETSCALE was also able to explain between group variance. As can be seen in Table 5.34, the standard 17-item CETSCALE showed higher correlation with domestic product judgements than CETSCALEs with only two to five items.

Table 5.34 *Analysis of product judgement domestic for moderator CETtype*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
CETtype = 0	8	0.3448	[0.2812; 0.4053]	32.34	78.4%
CETtype = 4	11	0.2097	[0.1531; 0.2648]	46.57	78.5%
CETtype = 2	1	0.6600	[0.5489; 0.7482]	0.00	-
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	41.34	2	< 0.0001		

Notes: CETtype=0: 17 items, CETtype=2: 11-16 items, CETtype=4: 2-5 items

Lastly, the CET scores obtained were also relevant for examining differences between groups. Expectedly, lower CET scores resulted in lower effect sizes, whereas higher CET scores showed led higher to effect sizes. Still, most of the studies included in domestic product judgements did not report the CET score, so cannot be analyzed, which again relativizes the findings.

Table 5.35 *Analysis of product judgement domestic for moderator CETcoded*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
CETcoded = 1	3	0.1136	[0.0581; 0.1685]	0.54	0.00%
CETcoded = 0	1	0.1960	[0.0026; 0.3753]	0.00	-
CETcoded = 3	1	0.3070	[0.1658; 0.4359]	0.00	-
CETcoded = 4	3	0.2646	[0.0270; 0.4739]	77.77	97.4%
CETcoded = 9	12	0.3272	[0.2613; 0.3901]	81.21	86.5%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	25.88	4	< 0.0001		

Notes: CETcoded=0: Low (3-4), CETcoded=1: Medium (5), CETcoded=2: Medium-high (6), CETcoded=3: High (7-8), CETcoded=9: N/a

5.2.8 Purchase Intention and Willingness to Buy Domestic

For analyzing whether consumer ethnocentrism is related to consumers preferring to buy domestic products, 25 studies were included. The overall weighted average effect size is very positive, with the random effects models producing an r of 0.3319. Both tests conducted for assessing heterogeneity show high heterogeneity, with the Q value being significant at the $p<0.0001$ level.

Table 5.36 *Weighted average effect sizes of PIWTB domestic*

	COR	95%-CI	z	p-value
Fixed effect model	0.3178	[0.2981; 0.3372]	29.67	< 0.0001
Random effects model	0.3391	[0.2675; 0.4069]	8.78	< 0.0001

Table 5.37 *Analyzing heterogeneity of PIWTB domestic*

Quantifying heterogeneity		
I^2	91.9% [89.3%; 93.9%]	
Test of heterogeneity		
Q	d.f.	p-value
296.92	24	< 0.0001

Graphical depiction of the findings in the forest plot reveals that all effect sizes are positive, although they do vary across studies, with the lowest effect size found by He and Wang (2015) with 0.08 and the highest effect size found by Wang and Cheng (2004) with 0.62.

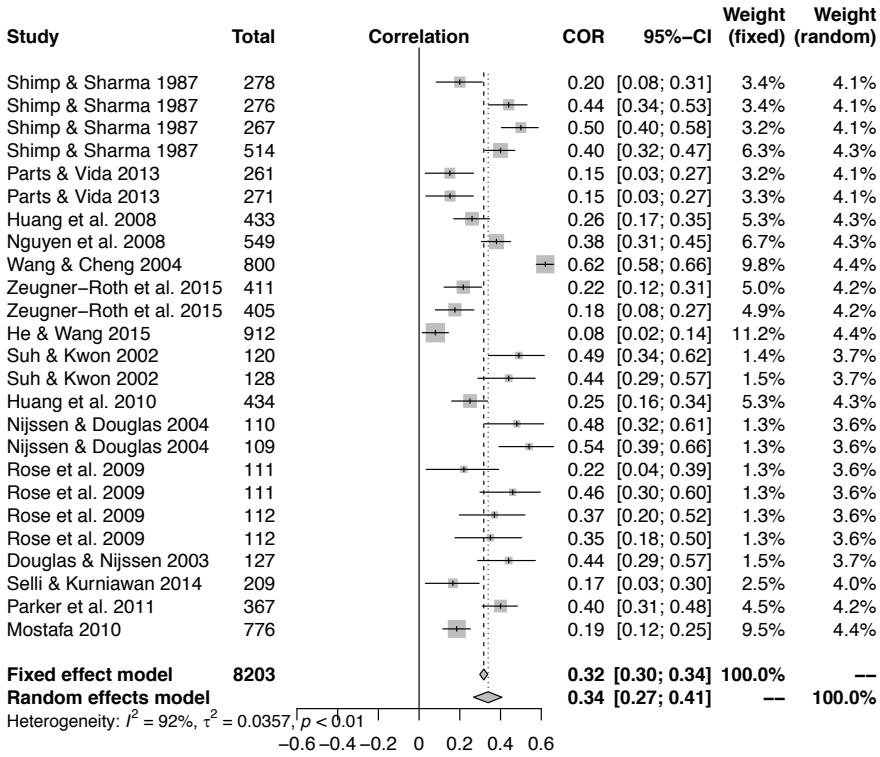


Figure 5.22 *Forest plot of PIWTB domestic*

Distribution of the z transformed correlations in the funnel plots further depicts the scattered correlations and shows that there are quite a few studies with very low standard errors.

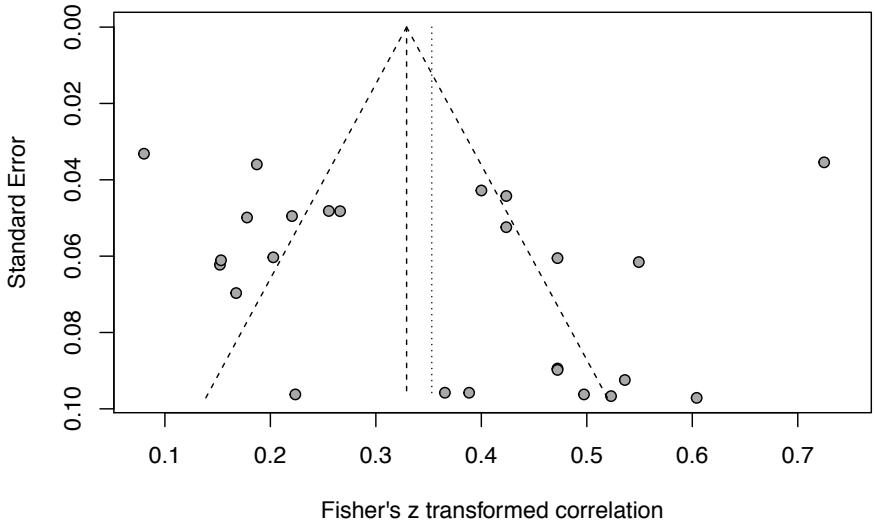


Figure 5.23 *Funnel plot of PIWTB domestic*

The Trim-and-Fill Method reveals that missing studies lie on the lower spectrum of the observed correlations. These studies could be left unpublished, as low results are less likely to be published. If missing values were retrieved, the overall weighted average effect size would therefore be lower.

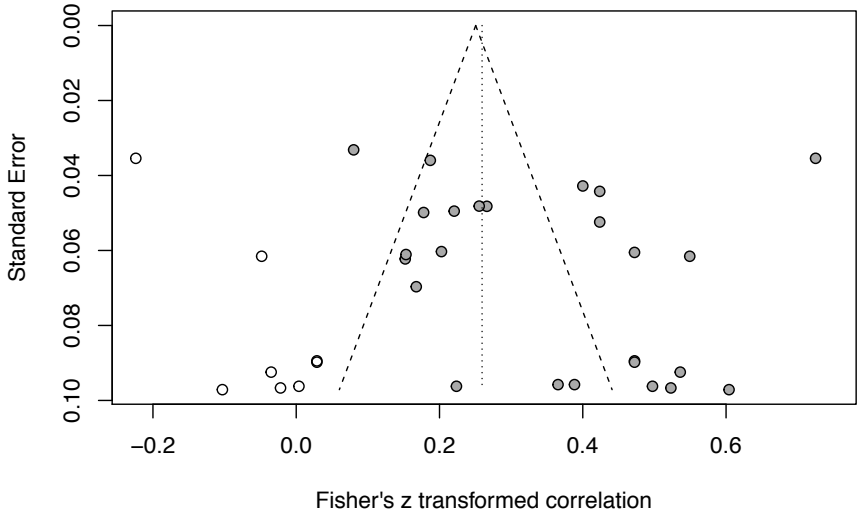


Figure 5.24 *Filled funnel plot of PIWTB domestic*

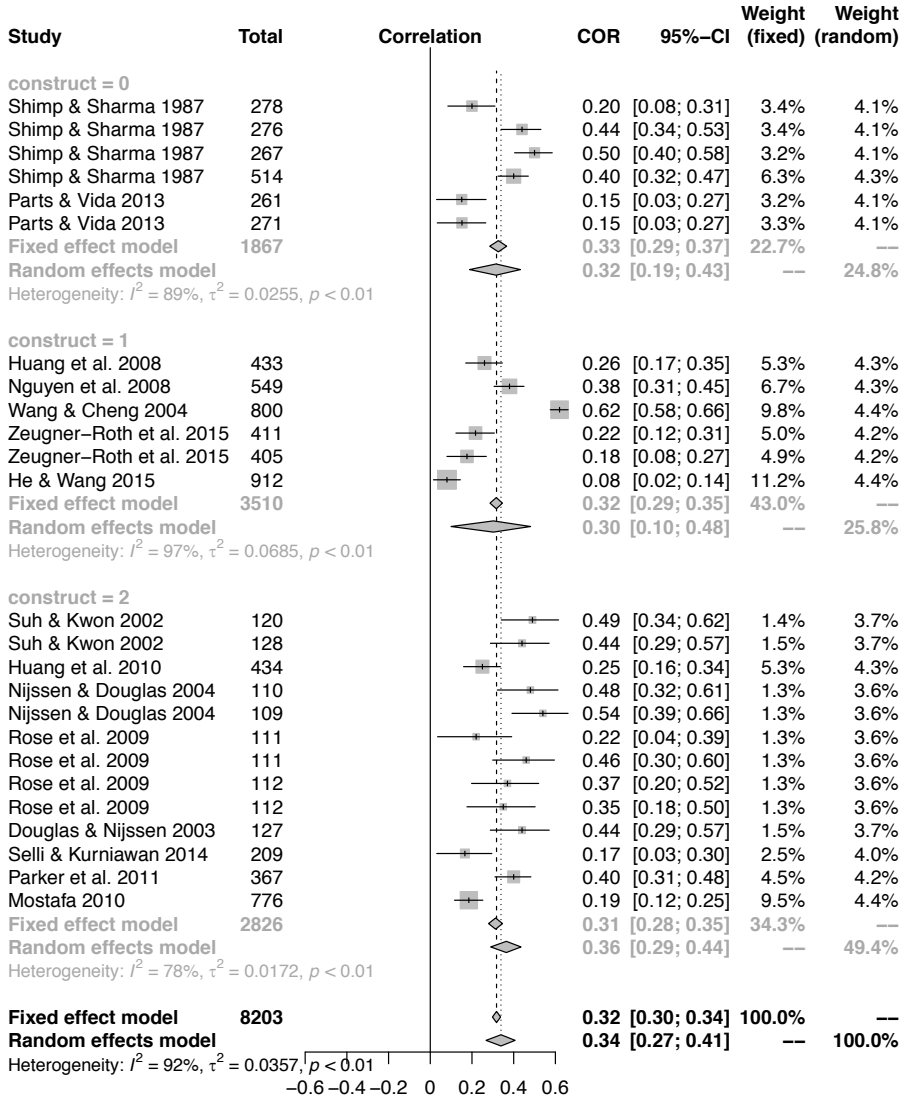
Since the PIWTB domestic construct consists of the three measures purchase intention domestic, willingness to buy domestic, and reluctance to buy foreign, moderator analysis on the type of construct was performed next. Overall, reluctance to buy foreign produced higher effect sizes than the other two constructs, which were relatively the same. This can be explained due to the definition of the construct, which may evoke stronger sentiments than the other two constructs simply asking for preference. Nevertheless, between group differences in

the random effects model were not significant, and the constructs will therefore continue to be analyzed as a whole in the following.

Table 5.38 *Analysis of PIWTB domestic for moderator construct*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Construct = 0	6	0.3155	[0.1884; 0.4322]	43.55	88.5%
Construct = 1	6	0.3024	[0.0995; 0.4812]	199.71	97.5%
Construct = 2	13	0.3647	[0.2897; 0.4352]	53.42	77.5%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	0.69	2	0.7069		

Notes: construct=0: purchase intention domestic, construct=1: willingness to buy domestic, construct=2: reluctance to buy foreign



Notes: construct=0: purchase intention domestic, construct=1: willingness to buy domestic, construct=2: reluctance to buy foreign

Figure 5.25 *Forest plot of PIWTB domestic with moderator construct*

When analyzing the moderators, the year the study was conducted was able to account for significant between group differences. Especially recent studies have shown relatively uniform effect sizes and effect sizes lower than what has previously been found. This could indicate a trend to lower levels of ethnocentric consumers' preference for domestic products, and could to be further examined in future research.

Table 5.39 *Analysis of PIWTB domestic for moderator year*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Yearcoded = 0	4	0.3901	[0.2702; 0.4982]	18.08	83.4%
Yearcoded = 2	9	0.1984	[0.1344; 0.2607]	33.95	76.4%
Yearcoded = 1	12	0.4280	[0.3348; 0.5129]	82.28	86.6%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	19.19	2	< 0.0001		

Notes: Yearcoded=0: study from 1987-1999; Yearcoded=1: study from 2000-2010; Yearcoded=2: study from 2010-2017

As in other studies, the selection method used was also a significant between group moderator. In the case of selection, this is in part due to the relatively high number of different methods used. Quota samples, which are often chosen to reflect the total population (Zeugner-Roth et al. 2015), report the lowest weighted average effect size, followed by random sampling. Other sampling methods employed showed higher results, but were also less frequently employed, and founded assumptions about a systematic difference can therefore not be made.

Table 5.40 *Analysis of PIWTB domestic for moderator selection*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Selection = 2	4	0.3901	[0.2702; 0.4982]	18.08	83.4%
Selection = 5	6	0.2275	[0.1486; 0.3035]	19.71	74.6%
Selection = 0	9	0.3202	[0.2156; 0.4174]	58.68	86.4%
Selection = 4	1	0.6200	[0.5754; 0.6609]	0.00	-
Selection = 1	3	0.4263	[0.3590; 0.4892]	1.16	0.0%
Selection = 9	2	0.3046	[0.0162; 0.5463]	7.19	86.1%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	92.09	5	< 0.0001		

Notes: Selection=0: Random sampling, Selection=1: Convenience sampling, Selection=2: Mail list, Selection=3: Panel, Selection=4: Semi-random sampling, Selection=5: Quota-sampling; Selection=9: N/a

Interestingly, when looking at the CETSCALE score, the effect size was highest for studies with lower scores, and lowest for the highest scores, although only one study fell in this cluster. High effect sizes were also reported for studies with medium-high CET scores, which falls into what is expected.

Table 5.41 *Analysis of PIWTB domestic for moderator CETtype*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
CETtype = 0	7	0.4027	[0.2676; 0.5223]	92.98	93.5%
CETtype = 4	6	0.1955	[0.0947; 0.2923]	36.23	86.2%
CETtype = 3	10	0.3755	[0.2856; 0.4588]	41.32	78.2%
CETtype = 2	2	0.3369	[0.1388; 0.5091]	4.53	77.9%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	9.43	3	0.0241		

Notes: CETtype=0: 17 items, CETtype=2: 11-16 items, CETtype=3: 6-9 items, CETtype=4: 2-5 items, CETtype=9: N/a

In addition, characteristics of participants and the number of items used in the CETSCALE also explained between group variance, at a lightly wider significance level of $p<0.05$. Hereby, students showed higher weighted average effect sizes than the general population, and the full 17-item scale also produced the highest weighted average effect sizes. Since high positive correlations of consumer ethnocentrism and willingness to buy foreign are expected as per definition of consumer ethnocentrism, these findings undermine the reliability of CETSCALEs with fewer items. Exact results of these moderator analyses can be found in Appendix D8.

5.2.9 Product Judgements Foreign

Judgements, or also called evaluations, about foreign products was the most frequently measured construct across all studies, and a total of 46 studies were included. The resulting weighted average effect size is negative, with an exact value of $r=-0.1985$ in the random effects model. Analysis of heterogeneity in terms of I^2 and Q value showed high heterogeneity, but considering the large amount of studies included, the Q value is still quite low.

Table 5.42 *Weighted average effect sizes of PIWTB domestic*

	COR	95%-CI	z	p-value
Fixed effect model	-0.2129	[-0.2265; -0.1993]	-29.84	< 0.0001
Random effects model	-0.1985	[-0.2427; -0.1534]	-8.48	< 0.0001

Table 5.43 *Analyzing heterogeneity of PIWTB domestic*

Quantifying heterogeneity		
I^2	90.1% [87.6%; 92.0%]	
Test of heterogeneity		
Q	d.f.	p-value
453.22	45	< 0.0001

The forest plot shows that the studies are relatively equally distributed, but still have a number extreme outliers. The most negative effect size was found by the study conducted by Fernández-Ferrín et al. (2015). This case is quite special, since their sample was collected in Yugoslavia in the year 2000, only 9 months after the war. Strong negative feelings towards foreign products could therefore to some extent be explained by the war and subsequent embargo. The two most positive effect sizes come from studies conducted in either China or Taiwan with the foreign country being Japan (Ishii, 2009; Huang et al., 2010). Whether these judgements are generalizable remains questionable, especially since more studies using the same countries (China or Taiwan as sample and Japan as foreign product origin) found negative correlations for the relationship between consumer ethnocentrism and foreign product judgements (Klein et al., 1998; Cai et al., 2012; Cheah et al., 2016; Ma et al., 2012).

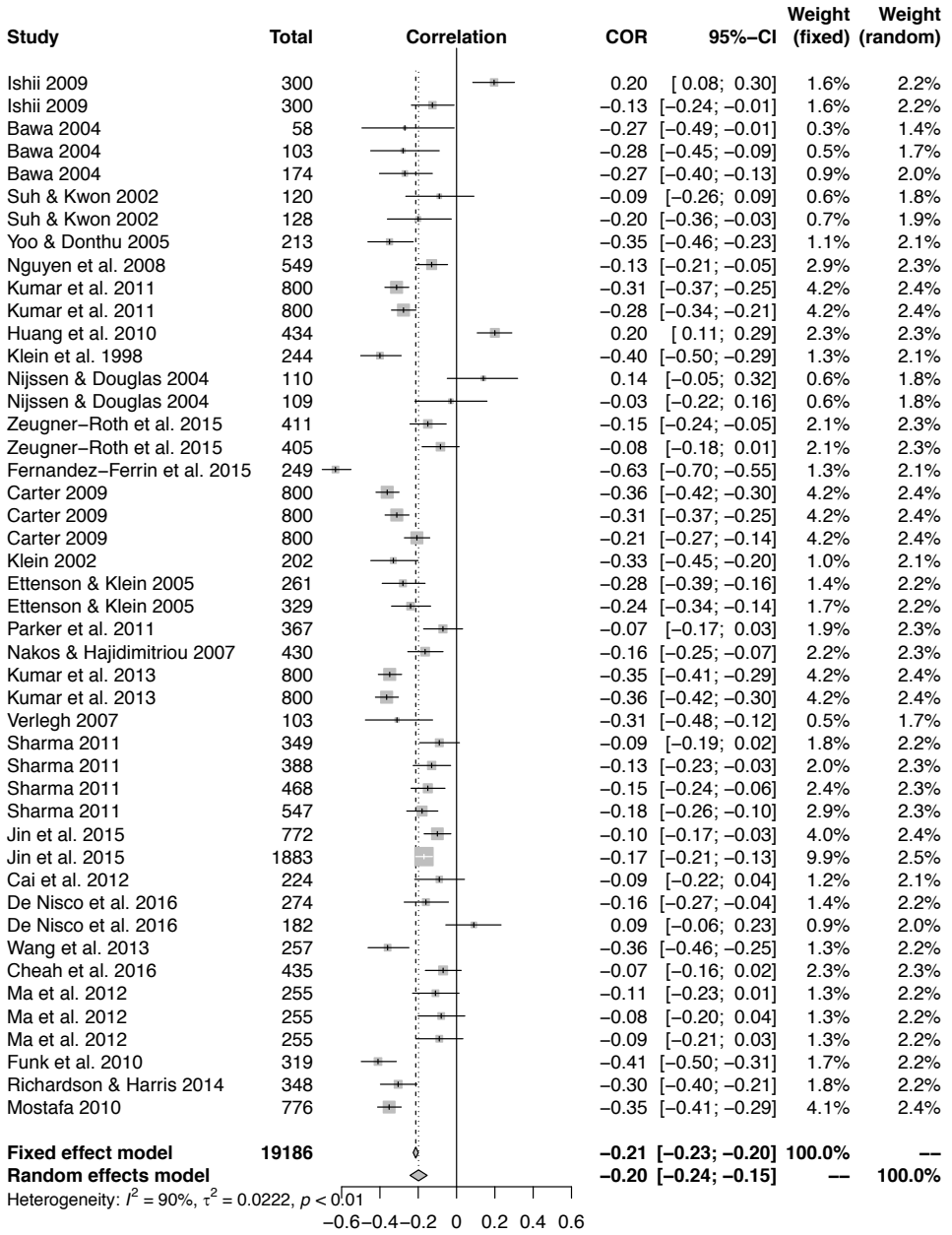


Figure 5.26 F*orest plot for product judgements foreign*

The funnel plot further shows that many studies lie in the range of 0 to -0.4, with a few outliers at the upper and lower end.

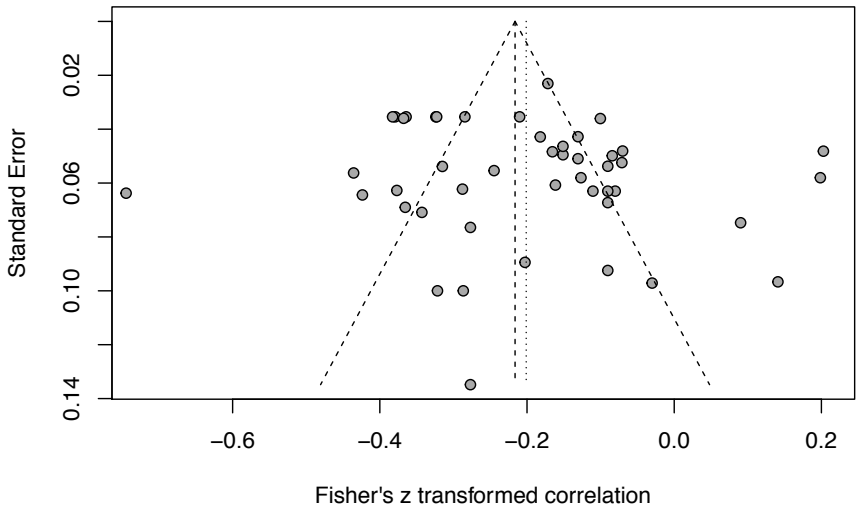


Figure 5.27 *Funnel plot of product judgements foreign*

Using the Trim-and-Fill Method, missing values are identified. These lie on the lower end of the spectrum. Since these studies would show a strong negative correlation, it is rather unlikely that they are unpublished. They could most likely be found when comparing products from countries with high animosity, and where domestic products are of higher quality than foreign products.

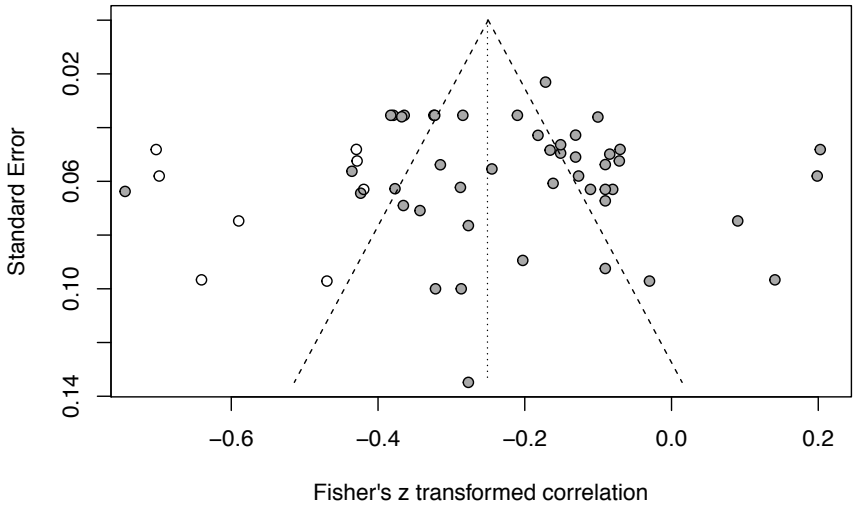


Figure 5.28 *Filled funnel plot of product judgements foreign*

Next, a moderator analysis showed that many moderators were able to explain a significant amount of between group variance. As found with other constructs, the moderators selection of participants and the CETSCALE items used were able to explain most heterogeneity.

For selection of participants, the highest effect sizes were found in random selection and participants from a panel. This again points in a direction of these samples having the lowest response bias.

Table 5.44 *Analysis of foreign product judgement for moderator selection*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Selection = 4	8	-0.1017	[-0.1849; -0.0171]	37.63	81.4%
Selection = 1	13	-0.1173	[-0.1600; -0.0742]	21.33	43.7%
Selection = 0	13	-0.2663	[-0.3212; -0.2095]	47.49	74.7%
Selection = 5	6	-0.1522	[-0.3141; -0.0183]	126.99	96.1%
Selection = 3	6	-0.3803	[-0.4805; -0.2703]	57.49	91.3%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	32.51	4	< 0.0001		

Notes: Selection=0: Random sampling, Selection=1: Convenience sampling, Selection=3: Panel, Selection=4: Semi-random sampling, Selection=5: Quota-sampling

The number of items used in the CETSCALE showed that higher numbers of items used had generally higher effect sizes, which could point out to the higher reliability of the construct consumer ethnocentrism measured with more items.

Table 5.45 *Analysis of product judgement for moderator CETtype*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
CETtype = 4	13	-0.1349	[-0.2057; -0.0626]	89.34	86.6%
CETtype = 0	12	-0.2911	[-0.3366; -0.2444]	40.85	73.1%
CETtype = 3	15	-0.1438	[-0.2056; -0.0809]	63.18	77.8%
CETtype = 2	1	0.2000	[0.1079; 0.2887]	0.00	-
CETtype = 1	4	-0.4005	[-0.5680; -0.2011]	40.37	92.6%
CETtype = 9	1	-0.3050	[-0.3974; -0.2065]	0.00	-
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	98.38	5	< 0.0001		

Notes: CETtype=0: 17 items, CETtype=1: 10 items, CETtype=2: 11-16 items, CETtype=3: 6-9 items, CETtype=4: 2-5 items, CETtype=9: N/a

In addition, the year of when the study was conducted and the continent of where the study was conducted were also able to explain between group variance significant at the $p<0.01$ level. Looking at the subgroups of the year of the study, it becomes evident that this is due to only one study being conducted in the years from 1987-1999, having a relatively high effect size. Nevertheless, it is interesting to see that the effect sizes have overall been stable since 2000 until now.

Table 5.46 *Analysis of product judgment foreign for moderator year*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Yearcoded = 1	19	-0.1956	[-0.2620; -0.1274]	119.72	85.0%
Yearcoded = 2	26	-0.1927	[-0.2526; -0.1313]	322.42	92.2%
Yearcoded = 0	1	-0.4000	[-0.5004; -0.2889]	0.00	-
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	10.93	2	0.0042		

Notes: Yearcoded=0: study from 1987-1999; Yearcoded=1: study from 2000-2010; Yearcoded=2: study from 2010-2017

Analysis of the continent of the study shows that negative correlations between consumer ethnocentrism and foreign product judgements are higher in Northern America and Australia.

Table 5.47 *Analysis of foreign product judgement for moderator continent*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Continent = 2	23	-0.1776	[-0.2475; -0.1059]	261.23	91.6%
Continent = 0	10	-0.2913	[-0.3458; -0.2348]	31.78	71.7%
Continent = 1	9	-0.1437	[-0.2818; 0.0002]	109.08	92.7%
Continent = 5	2	-0.2578	[-0.3318; -0.1806]	0.27	0.0%
Continent = 9	2	-0.1405	[-0.2074; -0.0722]	2.78	64.0%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	14.96	4	0.0048		

Notes: Continent=0: Northern America, Continent=1: Europe, Continent=2: Asia, Continent=5: Australia, Continent=9: Mix of continents

5.2.10 Purchase Intention and Willingness to Buy Foreign

Finally, the combination of the constructs purchase intention foreign and willingness to buy foreign into one overall WTB foreign construct produced 33 included studies and a weighted average effect size of r=-0.3783 in the random effects model. Analysis of heterogeneity showed that both the I^2 and Q value indicate high heterogeneity, eliminating the possibility of random chance for the results.

Table 5.48 *Weighted average effect sizes of PIWTB foreign*

	COR	95%-CI	z	p-value
Fixed effect model	-0.3778	[-0.3928; -0.3627]	-44.41	< 0.0001
Random effects model	-0.3783	[-0.4525; -0.2989]	8.69	< 0.0001

Table 5.49 *Analyzing heterogeneity of PIWTB foreign*

Quantifying heterogeneity		
I^2	96.1% [95.3%; 96.8%]	
Test of heterogeneity		
Q	d.f.	p-value
823.75	32	< 0.0001

As portrayed in the forest plot, the weighted effect sizes vary from -0.86 (Fernández-Ferrín et al., 2015) to 0.09 (Suh and Kwon, 2002). As discussed in the previous chapter about foreign product judgements, Fernández-Ferrín et al. (2015) use a very specific case of data collection in Yugoslavia shortly after the end of the war, which explains the participants' strong negative feelings towards foreign products.

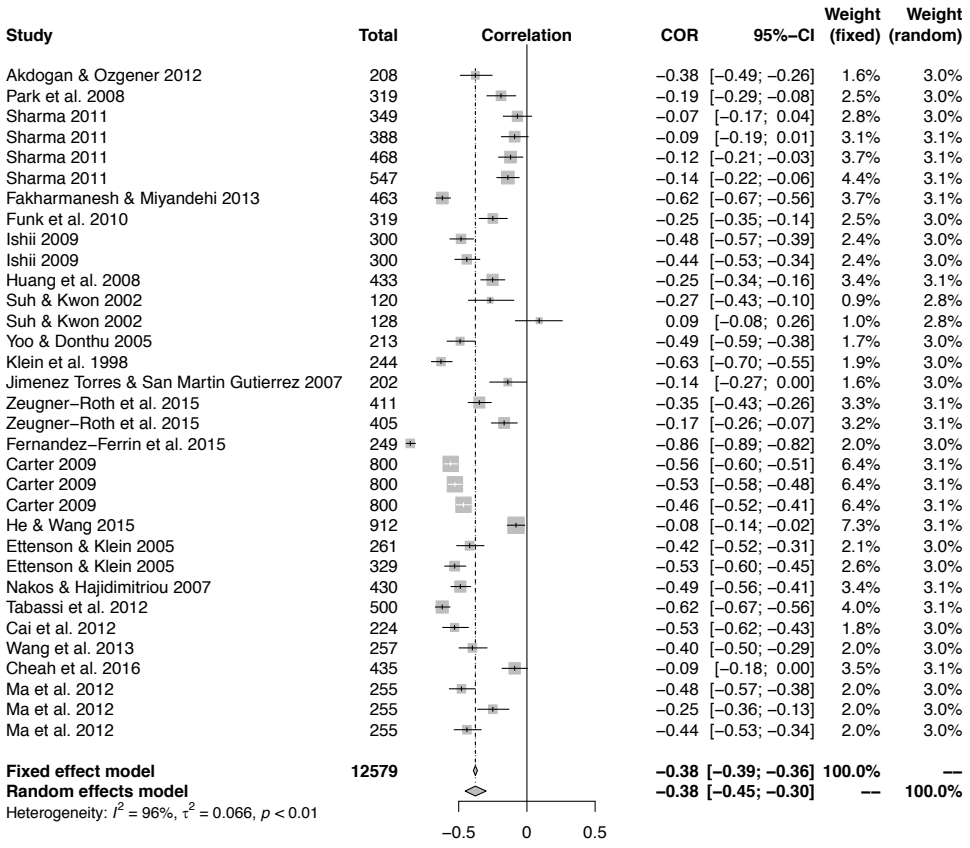


Figure 5.29 *Forest plots for PIWTB foreign*

The funnel plot shows more graphically that the study by Fernández-Ferrín et al. (2015) is an extreme outlier, and the other correlations are closer together, but do still not quite follow the triangle distribution. This is due to their high heterogeneity, which was already portrayed with

the I^2 and Q value. Using the Trim-and-Fill Method to detect missing studies did not add any values, showing that no studies are missing that could significantly change the result.

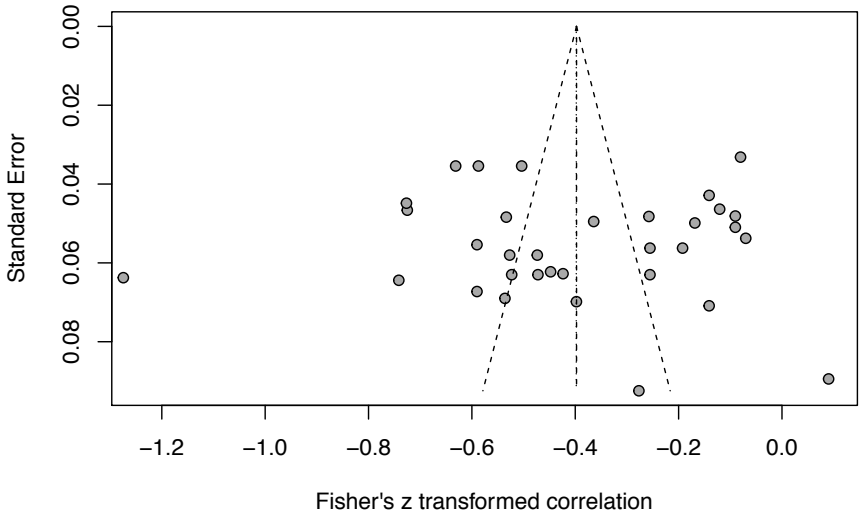


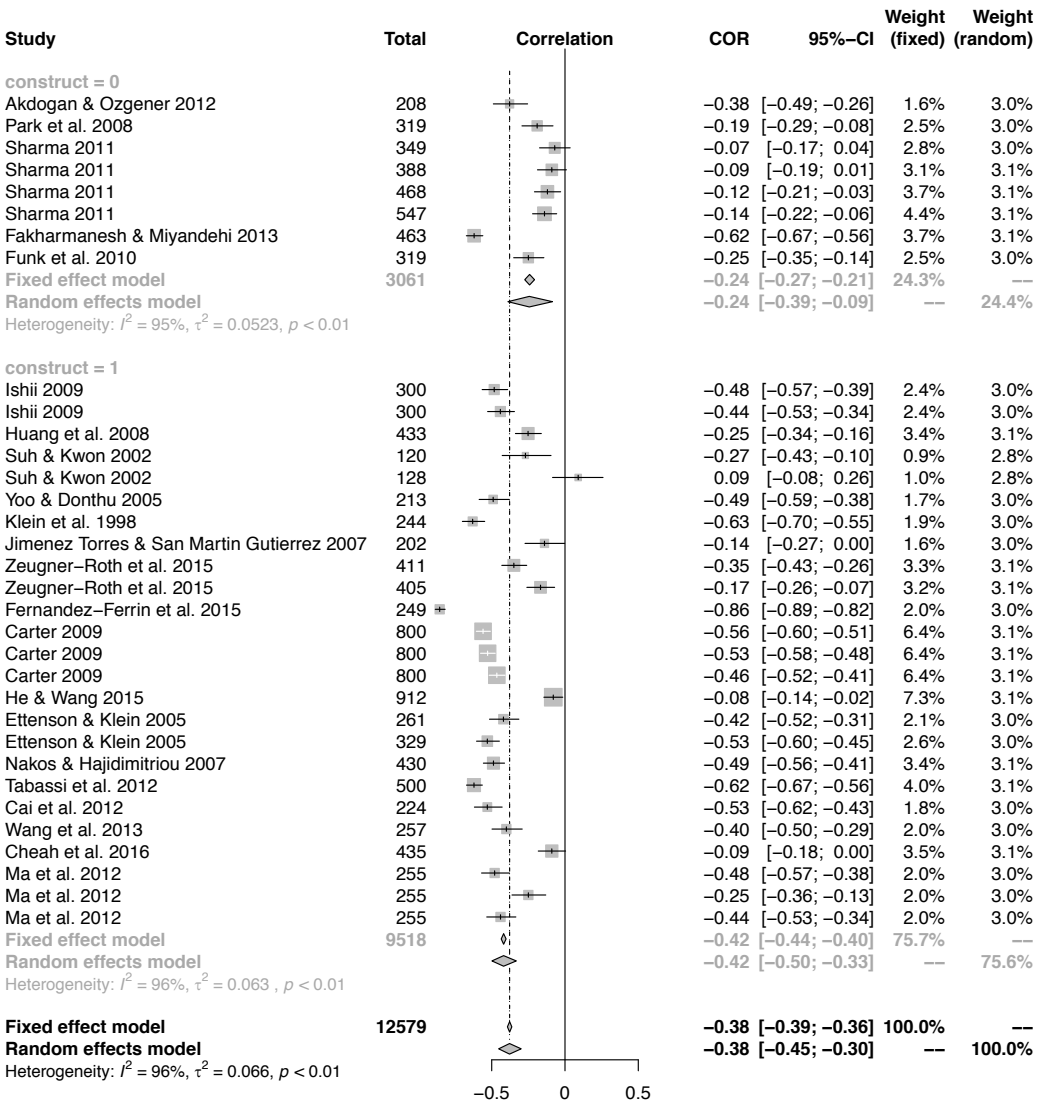
Figure 5.30 *Funnel plot PIWTB foreign*

Next, moderator analysis was performed on the two constructs combined, namely purchase intention and willingness to buy. The analysis showed that the two constructs were indeed different from each other and explained between group variance at the $p<0.05$ level. As can be seen in Table 5.50 and the following forest plot, willingness to buy has a significantly higher weighted average effect size than purchase intention. This could be due to willingness to buy being a stronger construct than purchase intention, and often being measured with more items than simple purchase intention.

Table 5.50 *Analysis of PIWTB foreign for moderator construct*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Construct = 0	8	-0.2436	[-0.3896; -0.0857]	0.0523	95.2%
Construct = 1	25	-0.4189	[-0.4986; -0.3322]	0.063	95.9%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	4.09	1	0.0431		

Notes: Construct=0: purchase intention foreign, Construct=1: willingness to buy foreign



Notes: Construct=0: purchase intention foreign, Construct=1: willingness to buy foreign

Figure 5.31 *Forest plot of PIWTB foreign with moderator construct*

Subsequent analysis of examining the two constructs separately showed that while purchase intention has a less negative effect sizes than willingness to buy, both constructs are still very heterogeneous. This can be seen in the following funnel plots as well as in comparing the I^2 values, which are almost the same with 95.2% for PI and 95.9% for WTB, and the resulting funnel plots, where the correlations are scattered in both constructs. For analyzing other moderators, the two constructs were therefore still left combined.

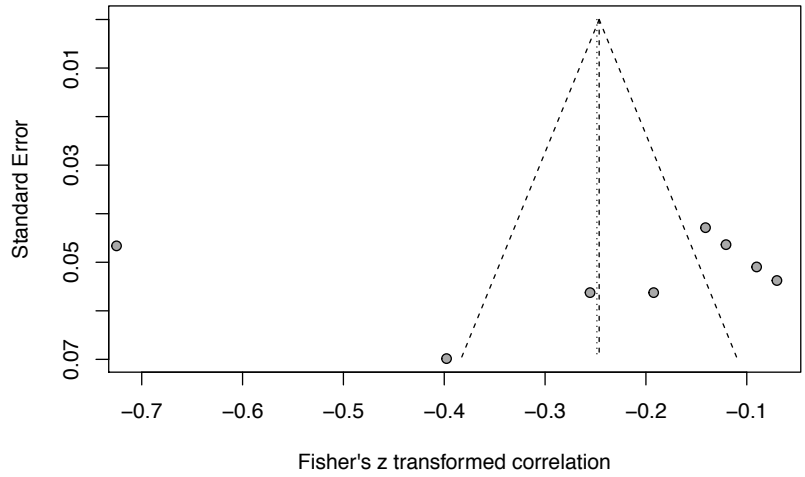


Figure 5.32 *Funnel plot of purchase intention foreign*

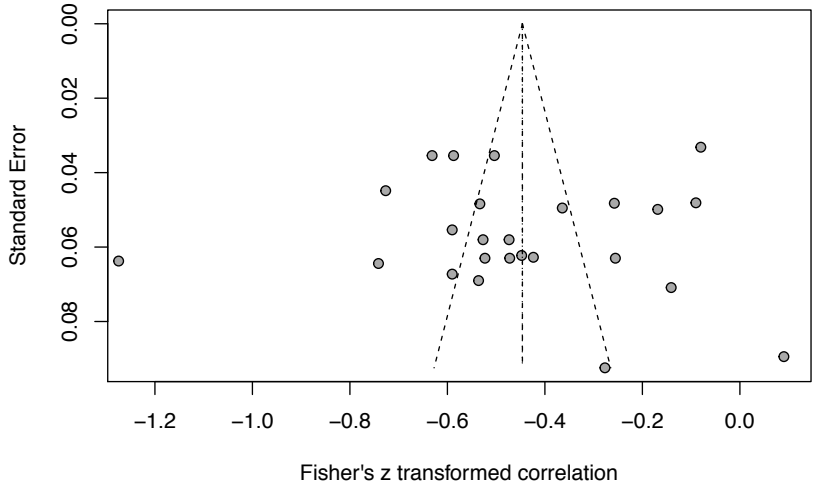


Figure 5.33 *Funnel plot for willingness to buy foreign*

Three moderators were able to explain significant between group variance at the $p<0.0001$ level. These were the year when the study was conducted, the characteristics of the participants, and the number of items used for the CETSCALE. For the year of the study, this is a result of only one study falling into the range of 1987-1999, and with this study having a high effect size, as can be seen in Table 5.55.

Table 5.51 *Analysis of PIWTB foreign for moderator year*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Yearcoded = 2	18	-0.358	[-0.4734; -0.2306]	582.98	97.1%
Yearcoded = 1	14	-0.388	[-0.4643; -0.3061]	149.99	91.3%
Yearcoded = 0	1	-0.630	[-0.7002; -0.5478]	0.00	-
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	20.71	2	< 0.0001		

Notes: Yearcoded=0: study from 1987-1999; Yearcoded=1: study from 2000-2010; Yearcoded=2: study from 2010-2017

For the characteristics of the participants, the general population had the most negative weighted average effect size, while it was less negative for student samples, and even less negative for employees of a multinational firm. This could be due to students and employees of a multinational firm being more oriented towards and exposed to internationalism and therefore showing less negative preferences for foreign products.

Table 5.52 *Analysis of PIWTB foreign for moderator characteristics*

Test for subgroups (random effects model)					
	K	COR	95%-CI	Q	I^2
Characteristics = 0	25	-0.4372	[-0.5132; -0.3543]	590.07	95.9%
Characteristics = 1	4	-0.2406	[-0.4724; 0.0223]	40.78	92.6%
Characteristics = 3	4	-0.1098	[-0.1559; -0.0631]	1.27	-
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	41.83	2	< 0.0001		

Notes: Characteristics=0: General population; Characteristics=1: Students: Characteristics=3 managers/ employees from a firm

Analysis of selection of participants shows is able to explain a significant amount of between group variance due to its many subgroups. Similar to results found in other constructs, random sampling and samples from panels show the strongest expected relationship, namely a high negative correlation between consumer ethnocentrism and purchase intention and willingness to buy foreign. Semi-random, convenience sampling and quota sampling, however, have less negative effect sizes, pointing towards a possible response bias.

Table 5.53 *Analysis of PIWTB foreign for moderator selection*

Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Selection = 0	10	-0.4399	[-0.5568; -0.3059]	205.93	95.6%

Selection = 1	7	-0.3111	[-0.4467; -0.1615]	58.95	89.8%
Selection = 4	7	-0.2105	[-0.3323; -0.0818]	74.23	91.9%
Selection = 9	2	-0.4098	[-0.7648; 0.1361]	47.39	97.9%
Selection = 3	5	-0.5701	[-0.7065; -0.3928]	157.72	97.5%
Selection = 5	2	-0.2604	[-0.4287; -0.0746]	7.76	87.1%

Test for subgroup differences (random effects model)

	Q	d.f.	p-value
Between groups	13.69	5	< 0.0001

Notes: Selection=0: Random sampling, Selection=1: Convenience sampling, Selection=3: Panel, Selection=4: Semi-random sampling, Selection=5: Quota-sampling; Selection=9: N/a

5.2.11 General Influence of Moderators

A general trend can be seen when examining the influence of moderators for between group variance, of which an overview is given in Table 5.54.

Table 5.54 *Significance of moderators explaining between group variance in the different constructs*

	Year	Continent	Developed	Urban	Selection	Characteristics	Items	Score
National Values	<0.0001	0.0043	0.0089	0.0840	<0.0001	0.0086	0.0048	n.s.
Animosity	<0.0001	0.0699	0.0986	n.s.	<0.0001	<0.0001	0.0004	n.s.
Int. Values	n.s.	0.0015	0.0011	n.s.	n.s.	n.s.	0.0016	n.s.
Collectivism	n.s.	n.s.	n.s.	n.s.	0.0239	*	0.0022	n.s.
Materialism	n.s.	0.0002	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
PJ Domestic	n.s.	<0.0001	n.s.	n.s.	<0.0001	0.0004	<0.0001	<0.0001
WTB Domestic	<0.0001	n.s.	0.0821	n.s.	<0.0001	0.0481	0.0241	0.0010
PJ Foreign	0.0042	0.0048	n.s.	n.s.	<0.0001	0.0532	<0.0001	0.0216
WTB Foreign	<0.0001	n.s.	n.s.	n.s.	0.0177	<0.0001	<0.0001	n.s.

*Notes: moderator analysis was not performed for conspicuous consumption, n.s. = not significant, *all participants from the general population*

The most powerful moderator is found in number of items used in the CETSCALE, which was able to explain a significant part of between group variance in all constructs for which moderator analysis was conducted except for one. It was often found that less CETSCALE items showed less correlations in the proposed direction, and more CETSCALE items showed stronger correlations in the proposed direction. Meaning that, for example, the influence of consumer ethnocentrism for willingness to buy foreign products was more negative for studies using CETSCALEs consisting of only 2-9 items. While this trend was also shown for animosity, domestic product judgements, domestic willingness to buy, and foreign product judgements, other constructs such as national values or international values did not confirm it. Therefore, these findings cannot be completely generalized. Another factor influencing this

trend could also be that more studies in recent years used shortened CETSCALEs, and relationships were less strong in recent years, which will also be discussed.

Next, the selection of the participants also played an important part for determining the relationship between consumer ethnocentrism and a related construct. Random samples, samples from panels, and quota samples often showed different results than convenience samples, semi-random samples or samples from a mail list. This could indicate that response bias exists, where respondents do not answer completely truthfully when they are recruited through convenience samples or semi-random samples. It needs to be kept in mind though that the high amount of significant between group differences in this moderator is also due to the larger amount of different approaches used through which participants were recruited. This results in more sub-categories with fewer number of studies, explaining more variance.

Furthermore, participant characteristics were also frequently found to be significant moderators. Student samples only differed slightly from samples drawn from the general population, confirming assumptions that have been made in previous research for being able to use student samples indifferently from a general population (Wong, Polonsky, & Garma, 2008). Differences were most commonly found between the latter two sample characteristics and high-school students or managers. While high-school students showed stronger relationships between consumer ethnocentrism and its related constructs, managers showed smaller relationships. These groups were less frequently used though, so caution needs to be taken when considering their influence.

In addition, the year of the study was also a significant moderator for five of the examined constructs. In four of these, studies in recent years (2010-2017) showed less strong relationships between consumer ethnocentrism and another construct, and only for foreign product judgements this trend was not found.

Lastly, the continent of the study explained significant between group variance for six constructs. However, findings are less generalizable here, and the high amount of studies finding significant explanatory power by this moderator was also due to the relatively large amount of categories in this moderator.

Interestingly, the CET score did only explain between group variance for three outcomes of consumer ethnocentrism, and not for antecedents. This could imply that the CET score does

not play a role when determining the influence of socio-psychological antecedents on consumer ethnocentrism.

5.3 Summary of Results

Overall, the results of the meta-analysis confirm findings of previous research and strengthen the understanding of the relationship between consumer ethnocentrism and its related constructs. For the socio-psychological antecedents, national values, animosity and collectivism positively influence consumer ethnocentrism, meaning that consumers tend to be more ethnocentric if they hold national values, animosity, or are more collectivistic. International values, on the other hand, negatively influence consumer ethnocentrism, meaning that a person who holds international values tends to be less ethnocentric. Findings for materialism and collectivism are less clear-cut. While still significant, materialism only has very limited influence on consumer ethnocentrism, with materialism influencing consumer ethnocentrism slightly positively. The relationship between conspicuous consumption and consumer ethnocentrism proved not to be significant, indicating that the two constructs are independent from each other. This stems from research having found conflicting results, some pointing towards a positive influence, while others point towards a negative influence.

Table 5.55 *Overview of meta-analysis results for socio-psychological antecedents of CE*

Antecedents	k	N	Min	Max	r	Sig.	95%-CI	Q	I^2
National Values	69	22,157	-0.20	0.67	0.3649	0.000	[0.3156; 0.4122]	1183.49	94.3%
Animosity	63	20,467	0.02	0.61	0.3293	0.000	[0.2863; 0.3710]	719.27	91.4%
International Values	69	24.431	-0.55	0.19	-0.1908	0.000	[-0.2282; -0.1528]	628.58	89.2%
Collectivism	14	5,841	-0.21	0.40	0.2038	0.000	[0.1244; 0.2807]	123.56	89.5%
Materialism	21*	6,000	-0.20	0.36	0.0586	0.024	[0.0079; 0.1090]	77.71	74.3%
CC	5*	2,613	-0.16	017	-0.0319	0.598	[-0.1494; 0.0865]	35.71	88.8%

*Notes: *the study by Alden et al. (2006) was excluded, N=number of participants, Min and Max=minimum and maximum of weighted effect sizes; r=weighted average effect size, CC=Conspicuous Consumption*

For the outcomes of consumer ethnocentrism, the meta-analysis revealed effect sizes in the expected direction, with domestic product judgements and willingness to buy for domestic products being positively influenced by consumer ethnocentrism, while foreign product judgements and willingness to buy foreign products were negatively influenced. Interestingly, WTB foreign is more negative than foreign product judgements, indicating that even though

foreign products might be perceived as having good quality, they are still not bought, which is exactly in line with how Shimp and Sharma initially defined consumer ethnocentrism.

Table 5.56 *Overview of meta-analysis results for outcomes of CE*

Outcomes	k	N	Min	Max	r	Sig.	95%-CI	Q	I²
PJ Domestic	20	10,522	0.09	0.66	0.2838	0.000	[0.2193; 0.3458]	222.92	91.5%
PIWTB Domestic	25	8,203	0.08	0.62	0.3391	0.000	[0.2675; 0.4069]	296.92	91.9%
PJ Foreign	46	19,186	-0.63	0.20	-0.1985	0.000	[-0.2427; -0.1534]	452.22	90.1%
PIWTB Foreign	33	12,579	-0.86	0.09	-0.3783	0.000	[-0.4525; -0.2989]	823.75	96.1%

Notes: N=number of participants; Min and Max=minimum and maximum of weighted effect sizes; r=weighted average effect size; PJ: product judgement; PIWTB domestic: purchase intention domestic, willingness to buy domestic, and reluctance to buy foreign; PIWTB foreign: purchase intention and willingness to buy foreign

6. Discussion and Conclusion

6.1 Main Insights

The goal of this thesis was to synthesize the current literature on the relationship between consumer ethnocentrism and its socio-psychological antecedents and outcomes, and to estimate the size of these relationships.

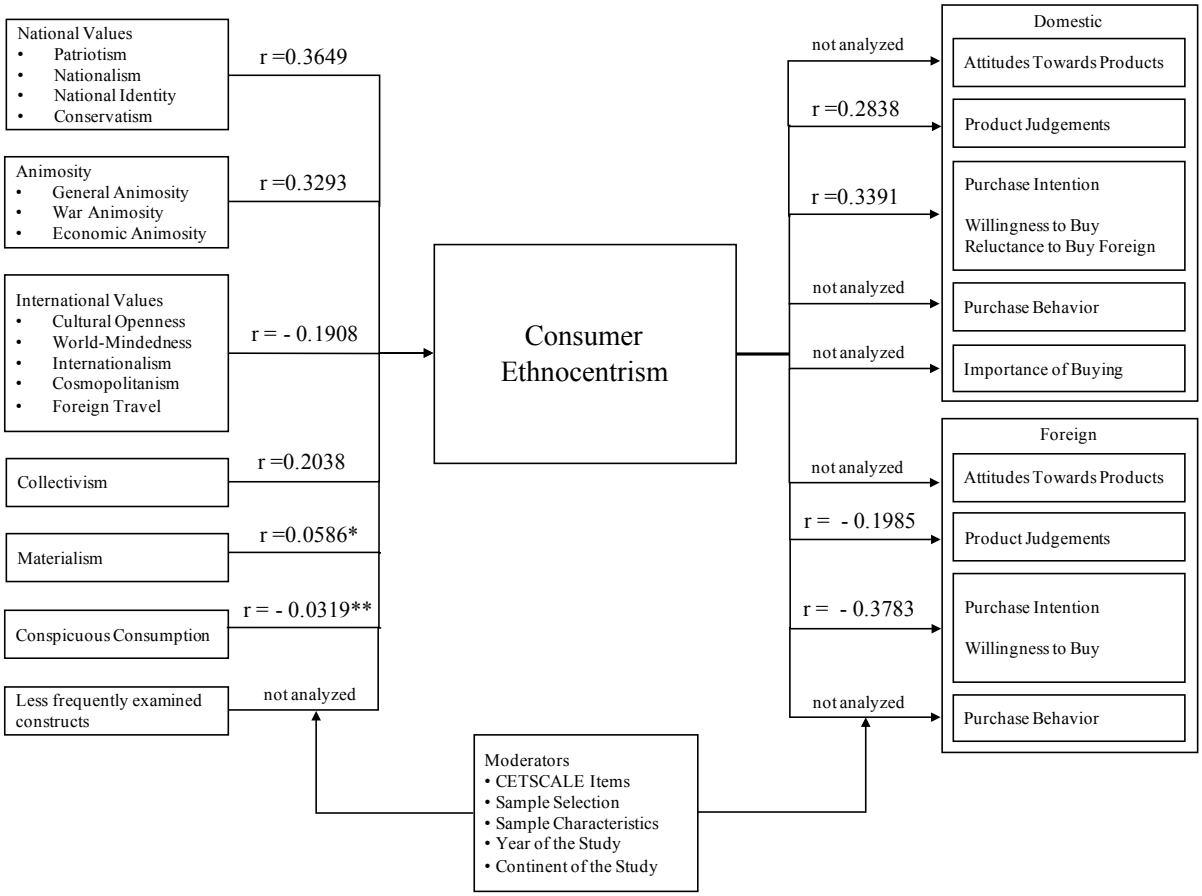
The following research questions had been defined:

3. What are the main socio-psychological antecedents and the main outcomes of consumer ethnocentrism?
4. To what extent do the main socio-psychological antecedents influence consumer ethnocentrism, and to what extent does consumer ethnocentrism influence its outcomes?

The first research question is answered by the research synthesis. National values (patriotism, nationalism, national identity, conservatism), animosity (general animosity, war animosity, economic animosity), international values (cultural openness, world-mindedness, internationalism, cosmopolitanism, foreign travel), collectivism, materialism, and conspicuous consumption were identified as main socio-psychological antecedents of consumer ethnocentrism. Other less frequently examined constructs were also examined briefly. Consumer ethnocentrism influences the perception and purchase behavior of domestic and foreign products. Outcomes identified for domestic products were attitudes towards products, product judgements, purchase intention, willingness to buy, reluctance to buy foreign, purchase behavior, and importance of buying domestic. Outcomes identified for foreign products were attitudes towards products, product judgements, purchase intention, willingness to buy, and purchase behavior.

The second research question is answered by the meta-analysis. Hereby, the size of the relationship between consumer ethnocentrism and its main socio-psychological antecedents and outcomes was determined. An analysis was only performed on constructs which had been examined by more than three separate research papers, in order to reveal significant and unbiased findings. Therefore, several outcomes were not analyzed further.

A graphical overview of the answers to the research questions, and therefore the results of this thesis, is given in the following conceptual model (Figure 6.1). the magnitude of the relationship between consumer ethnocentrism and its socio-psychological antecedents and outcomes can now be identified with the results of the meta-analysis. In addition, important moderators influencing these findings were identified, and the model was therefore extended to show these.



*Notes: *significant at p<0.05, **not significant, all other relationships: significant at p<0.0001*

Figure 6.1 *Conceptual model with effect sizes of analyzed constructs and most important moderators*

The findings are also comparable to the recent meta-analysis of Shoham et al. (2016), which identified the effect sizes for the relationship between consumer ethnocentrism and animosity, foreign product judgement, and willingness to buy foreign. The average weighted correlations for animosity and willingness to buy foreign found in their analysis, however, are a bit higher for animosity (0.39) to considerably higher for WTB foreign (-45). For foreign product judgements, on the other hand, the results are exactly the same (-0.20) as in this thesis. An explanation for the more negative relationship between consumer ethnocentrism and willingness to buy could lie in their sample, which only included studies of consumer

animosity. The countries for which willingness to buy was measured were mostly likely selected due to strong animosity, which causes strong negative feelings towards this specific foreign country, and therefore the relationship between consumer ethnocentrism and WTB could be more negative for these countries than for less biased foreign countries. The findings of this thesis are therefore more generalizable, as they encompass the assessment of outcomes of more diversified studies.

6.2 Contribution to Current Literature

Overviews of the socio-psychological antecedents of consumer ethnocentrism and the outcomes of consumer ethnocentrism have been outdated, and the size of the relationship between consumer ethnocentrism and its related constructs has never been estimated. Therefore, this thesis contributes to the current literature by updating the socio-psychological antecedents and outcomes of consumer ethnocentrism, and by quantifying these relationships. It is the first meta-analysis performed on the antecedents of consumer ethnocentrism, while outcomes have recently been examined by Shoham et al. (2016). Nevertheless, this study is much larger in scope and also less restricted. Shoham et al. (2016) only searched for the related construct animosity to reveal articles included in their analysis, and this thesis searched for all socio-psychological antecedents.

The research synthesis revealed several shortcomings of the frequently cited literature review by Shankarmahesh (2006). Firstly, it misses several important socio-psychological antecedents, such as nationalism, national identity, or cosmopolitanism. And secondly, it includes research that has been conducted prior to the introduction of the consumer ethnocentrism and its uniform measurement with the CETSCALE by Shimp and Sharma (1987). This makes some implications much vaguer, as for example his assessment of collectivism, in which three of the four articles do not even mention consumer ethnocentrism. The research synthesis conducted in this thesis therefore gives a much more precise picture of the current ethnocentrism literature, as it has clearly defined criteria, and only includes articles that use the CETSCALE as a well-established measurement of consumer ethnocentrism, and quantify the relationship between consumer ethnocentrism and its related constructs.

The most important contribution of this thesis to the current literature is the answer of the question “how much?” – how much do socio-psychological antecedents influence consumer ethnocentrism, and how much does consumer ethnocentrism influence product judgements

and willingness to buy? With the results of the meta-analysis, researchers looking for a quick introduction into the field can now easily identify the most important socio-psychological antecedents and outcomes of consumer ethnocentrism, and how large the average correlations between consumer ethnocentrism and these related constructs are. From this, they can plan more targeted marketing plans, which will be further discussed in the implications for practice.

6.3 Implications for Research

Through the quantification of the relationship between consumer ethnocentrism and its main socio-psychological antecedents and outcomes, this thesis quickly shows researchers overall findings of previous studies, as well as where additional examinations should be made. The latter lie especially in less frequently studied constructs, which could not be included in the meta-analysis.

The research synthesis also brought to attention the problem of inconsistent measurements used to assess the different constructs. This makes it harder to compare findings across different studies. For example, Vida and Reardon (2008) said they measured cosmopolitanism, when in fact they measured foreign travel. Balabanis et al. (2001) point out that the way patriotism is frequently measured, it is more closely related to nationalism. Purchase intention and willingness to buy are also not clearly distinguished in the literature. Many researchers use the terms interchangeably. This made it necessary to combine similar constructs which are conceptually different from each other, but could not clearly be distinguished from each other in the analysis because the measurements used were not uniform. Therefore, this synthesis has emphasized the need for consistent measures. The CETSCALE is already a well-established measurement, and a myriad of studies have proven its reliability, internal consistency, and application across countries. This allows for a comparable assessment of consumer ethnocentrism across different countries. Other attempts at establishing well-founded scales are the COSMO-Scale by Riefler et al. (2012) and the AGCC construct introduced by Cleveland and Laroche (2007).

6.4 Implications for Practice

It is important for managers of multi-nationally as well as nationally operating firms to understand consumer ethnocentrism and its antecedents and outcomes in order to adjust their

management and marketing activities accordingly. This has already been pointed out by existing consumer ethnocentrism literature (e.g. Shimp and Sharma, 1987; Feurer et al., 2016), however this meta-analysis eases identification of key relationships between consumer ethnocentrism and its socio-psychological antecedents and outcomes for practitioners.

The results of the meta-analysis confirmed that consumer ethnocentrism positively influences domestic product judgements and willingness to buy, and negatively influences foreign product judgements and willingness to buy. A local company should therefore appeal to consumers' ethnocentric tendencies in order to increase their judgements of the product and their willingness to buy it.

As Feurer et al. (2016) pointed out, it is also important to be able to identify ethnocentric consumers, since they can then be segmented and individually targeted. Marketing programs could then be adjusted to specially appeal to these consumers (Shimp and Sharma, 1987). This is where the understanding of the influence of socio-psychological antecedents on consumer ethnocentrism plays a crucial role. All consumers hold certain value systems that influence their purchasing behavior (Sharma et al., 1995). Such values are identified with the socio-psychological antecedents, which in turn influence a consumer's ethnocentric tendencies. As shown by the meta-analysis, strong patriotism, for example, positively influences a consumer's ethnocentric tendencies. This finding becomes more relevant in today's world with technological advancements making it easier to target specific consumer groups. Especially through the use of Big Data, companies can identify consumers' value systems and adjust their marketing activities accordingly. It is for example possible to make quite accurate inferences about a person's personality through his activities on Facebook (Grassegger, & Krogerus, 2016), which is said to even have influenced the presidential election in the USA. If companies can access this information through the help of Big Data, they can for example detect whether a consumer holds national values or international values, whether he is collectivistic or places importance on material possessions. This knowledge can then be used to customize targeting for certain consumers. An example is presented in the following. As the meta-analysis revealed, international values negatively influence consumer ethnocentrism. International firms can then target consumers holding international values, such as frequent travelling or interest in foreign cultures, as they will most likely be less ethnocentric. In addition, by appealing to international values in their advertisements, international firms could suppress or at least reduce a consumer's ethnocentric tendencies in the given situation and therefore positively influence his willingness to buy a foreign product.

6.5 Limitations

Several limitations need to be considered, of which several are commonly found in meta-analysis. Firstly, many different studies from different countries measuring slightly different constructs were combined to show an overall effect size. Critics say this is like "mixing apples and oranges" (Borenstein et al., 2009, p. 379). Great care has been applied when dividing the studies into the construct categories, but nevertheless, they still come from different studies which often apply different measures. Thus, heterogeneity is given, but it needs to be kept in mind that a meta-analysis only aims at quantifying a general direction for the relationship between two constructs. Secondly, some possibly relevant articles were not retrievable, while other unpublished studies have not been found at all. These studies could influence the findings, but the analysis of the constructs showed where missing values could lie and how likely they were to be found. Thirdly, not all studies reported the values needed for conducting a meta-analysis, and were therefore excluded. In addition, regression results were re-calculated to correlations using a simplified formula, which only represents an approximation of the exact correlation coefficient. With more time, researches would have been contacted in order to retrieve such missing values and to increase the accuracy of the analysis. Fourth, only outcomes of consumer ethnocentrism from studies that examined socio-psychological antecedents were included in the meta-analysis, which does not represent the whole amount of research available on outcomes of consumer ethnocentrism. Results could therefore differ if more studies were included. Nevertheless, the large amount of studies used allows for relative robustness of the findings as they were found in this analysis, which is also represented in the high significance levels. Fifth, moderators could have been more nuanced. The moderator developed vs. developing countries, for example, was rather poorly defined by characterizing Western countries (such as the U.S., Western Europe, and Australia) as developed and all others as developing (such as Eastern European countries, Asian countries or countries is Southern America), although some countries might have changed their status depending on the time when the study was conducted. In addition, other moderators, such as the quality of the study, would have been interesting to include. Finally, the analysis of the moderators was restricted to simple comparisons, while a regression analysis could have shown the influence and interplay of more than one moderator.

6.6 Future Research

Future research should continue quantifying the magnitude of the relationship between consumer ethnocentrism and related constructs. Research synthesis and meta-analyses could focus on demographic antecedents, or moderators, which encompass for example product necessity and perceived economic threat.

More research is also needed for less frequently examined constructs, such as the relatively new AGCC construct, purchase behavior, or actual ownership. Even though conspicuous consumption was included in the meta-analysis, its findings were mixed, and revealed that effects found in studies vary greatly. Through increased research in these areas, it will be possible to draw generalizable conclusions in future meta-analyses.

Longitudinal studies or more exact replication of previous studies could also be an interesting area for future research. Moderator analysis has shown that the magnitude of the relationship between consumer ethnocentrism and the examined related constructs has decreased in recent years. Such studies could add to the understanding of these findings.

In addition, it could be interesting for future research to examine the influence of consumer ethnocentrism on willingness to pay, which is generally a stronger construct than willingness to buy. If willingness to pay were significantly higher for domestic products than for foreign products, this could influence a company's location decisions.

Finally, as pointed out earlier, future research should focus on using standardized scales in order to measure constructs and pay great attention to the definition of those constructs. This allows for clearer distinction between the examined constructs.

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*Note: Articles marked with * were included in the meta-analysis.*

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Appendix A

CETSCALE Items (Shimp & Sharma, 1987)

1. American people should always buy American-made products instead of imports.
2. Only those products that are unavailable in the U.S. should be imported.
3. Buy American-made products. Keep America working.
4. American products, first, last, and foremost.
5. Purchasing foreign-made products is un-American.
6. It is not right to purchase foreign products, because it puts Americans out of jobs.
7. A real American should always buy American-made products.
8. We should purchase products manufactured in America instead of letting other countries get rich off us.
9. It is always best to purchase American products.
10. There should be very little trading or purchasing of goods from other countries unless out of necessity.
11. Americans should not buy foreign products, because this hurts American business and causes unemployment.
12. Curbs should be put on all products.
13. It may cost me in the long-run but I prefer to support American products.
14. Foreigners should not be allowed to put their products on our markets.
15. Foreign products should be taxed heavily to reduce their entry into the U.S.
16. We should buy from foreign countries only those products that we cannot obtain within our own country.
17. American consumers who purchase products made in other countries are responsible for putting their fellow Americans out of work.

Appendix B

Search Terms

EBSCO Business Resource Complete Search Terms

Search Term 1	Search Term 2	Restriction
consumer ethnocentrism	CETSCALE	English
consumer ethnocentrism	antecedents	English
consumer ethnocentrism	patriotism	English
consumer ethnocentrism	nationalism	English
consumer ethnocentrism	national identity	English
consumer ethnocentrism	conservatism	English
consumer ethnocentrism	collectivism	English
consumer ethnocentrism	animosity	English
consumer ethnocentrism	cultural openness	English
consumer ethnocentrism	world-mindedness	English
consumer ethnocentrism	mindedness	English
consumer ethnocentrism	internationalism	English
consumer ethnocentrism	materialism	English
consumer ethnocentrism	cosmopolitanism	English
consumer ethnocentrism	conspicuous consumption	English
consumer ethnocentrism	dogmatism	English
consumer ethnocentrism	salience	English
consumer ethnocentrism	ethnic pride	English
consumer ethnocentrism	xenophobia	English

Appendix C

Coding Scheme

Report Characteristics	
RC1 Report ID number	
RC2 Name of the author(s)	
RC3 Year of publication	
RC4 Type of report	
RC5 Name of journal (if applicable)	
RC6 Was the journal peer-reviewed? (if applicable)	
RC7 What kind of organization produced this report?	
RC8 Was the research conducted using funds from a grant or another sponsor?	

Experimental Conditions	
E1 Study ID number	
E2 What type of study was conducted? (Experiment, survey, etc.)	
E3 How was it conducted? (online, in person, …)	
E4 Product type	
E5 Country of product origin	

Setting	
S1 Continent of the participants	
S2 Country of the participants	
S3 Was the study collected in an urban area?	

Participant and Sample Characteristics	
P1 Sample ID number	
P2 When was the data collected?	
P3 Number of participants	
P4 How were the participants selected?	
P5 Characteristics of participants (students, general population, …)	
P6 Representative of target population	

Measurement		
M1	CETSCALE?	
M2	Type of CETSCALE	
M3	Likert Scale	
M4	Number of participants reflected in CETSCALE	
M5	CETSCALE score mean	
M6	CETSCALE score standard deviation	
M7	CETSCALE Cronbach’s Alpha	
M8	General Animosity Measurement	
M9	Animosity Cronbach's Alpha	
M10	War Animosity Measurement	

M11	War Animosity Cronbach's Alpha	
M12	Economic Animosity Measurement	
M13	Economic Animosity Cronbach's Alpha	
M14	Patriotism Measurement	
M15	Patriotism Cronbach's Alpha	
M16	Conservatism Measurement	
M17	Conservatism Cronbach's Alpha	
M18	Dogmatism Measurement	
M19	Dogmatism Cronbach's Alpha	
M20	Cultural Openness Measurement	
M21	Cultural Openness Cronbach's Alpha	
M22	World-mindedness Measurement	
M23	World-mindedness Cronbach's Alpha	
M24	Collectivism Measurement	
M25	Collectivism Cronbach's Alpha	
M26	Nationalism Measurement	
M27	Nationalism Cronbach's Alpha	
M28	Internationalism Measurement	
M29	Internationalism Cronbach's Alpha	
M30	Cosmopolitanism Measurement	
M31	Cosmopolitanism Cronbach's Alpha	
M32	Materialism Measurement	
M33	Materialism Cronbach's Alpha	
M34	Conspicuous Consumption Measurement	
M35	Conspicuous Consumption Cronbach's Alpha	
M36	National identity Measurement	
M37	National Identity Cronbach's Alpha	
M38	Salience Measurement	
M39	Salience Cronbach's Alpha	
M40	Global Citizenship Measurement	
M41	Global Citizenship Cronbach's Alpha	
M42	Travel Measurement	
M43	Travel Cronbach's Alpha	
M44	Purchase Intention Foreign Measurement	
M45	Purchase Intention Foreign Cronbach's Alpha	
M46	Purchase Intention Domestic Measurement	
M47	Purchase Intention Domestic Cronbach's Alpha	
M48	WTB Foreign Measurement	
M49	WTB Foreign Cronbach's Alpha	
M50	WTB Domestic Measurement	
M51	WTB Domestic Cronbach's Alpha	
M52	Reluctance to buy foreign Measurement	

M53	Reluctance to buy foreign Cronbach's Alpha	
M54	Purchase Behavior Measurement	
M55	Purchase Behavior Cronbach's Alpha	
M56	Attitudes towards foreign products measurement	
M57	Attitudes towards foreign products Cronbach's Alpha	
M58	Attitudes towards domestic products measurement	
M59	Attitudes towards domestic products Cronbach's Alpha	
M60	Product Judgements Foreign Measurement	
M61	Product Judgements Foreign Cronbach's Alpha	
M62	Quality Perception Domestic Measurement	
M63	Quality Perception Domestic Cronbach's Alpha	
M64	Ownership of Foreign Products Measurement	
M65	Ownership of Foreign Products Cronbach's Alpha	
M66	Attitudes towards home country Measurement	
M67	Attitudes towards home country Cronbach's Alpha	
M68	Importance of buying domestic Measurement	
M69	Importance of buying domestic Cronbach's Alpha	

Results

R1	Correlation Coefficient Patriotism - CET	n	r
R2	Correlation Coefficient Cultural Openness - CET	n	r
R3	Correlation Coefficient World Mindedness - CET	n	r
R4	Correlation Coefficient Collectivism - CET	n	r
R5	Correlation Coefficient Conservatism - CET	n	r
R6	Correlation Coefficient Nationalism - CET	n	r
R7	Correlation Coefficient National Identity - CET	n	r
R8	Correlation Coefficient Inter-nationalism - CET	n	r
R9	Correlation Coefficient Cosmopolitanism - CET	n	r
R10	Correlation Coefficient Materialism - CET	n	r
R11	Correlation Coefficient Conspicuous Consumption - CET	n	r
R12	Correlation Coefficient Dogmatism - CET	n	r
R13	Correlation Coefficient Travel - CET	n	r
R14	Correlation Coefficient Global Citizenship - CET	n	r
R15	Correlation Coefficient Animosity - CET	n	r
R16	Correlation Coefficient War Animosity - CET	n	r
R17	Correlation Coefficient Economic Animosity - CET	n	r
R18	Correlation Coefficient CET - Ownership of foreign product	n	r
R19	Correlation Coefficient CET - Attitudes towards foreign products	n	r
R20	Correlation Coefficient CET - Attitudes towards domestic products	n	r
R21	Correlation Coefficient CET - Importance of buying domestic products	n	r
R22	Correlation Coefficient CET - Product Judgements forgein	n	r

R23	Correlation Coefficient CET - Product Judgements domestic	n	r
R24	Correlation Coefficient CET - Purchase Behavior foreign	n	r
R25	Correlation Coefficient CET - Purchase Behavior domestic	n	r
R26	Correlation Coefficient CET - Purchase Intention foreign	n	r
R27	Correlation Coefficient CET - Purchase Intention domestic	n	r
R28	Correlation Coefficient CET - Willingness to buy foreign	n	r
R29	Correlation Coefficient CET - Willingness to buy domestic	n	r
R30	Correlation Coefficient CET - Reluctance to buy foreign	n	r

Appendix D

Detailed Meta-Analysis Results

General explanations for Appendix D:

Year	Year=0	1987-1999
	Year=1	2000-2009
	Year=2	2010-2017
Continent	Continent=0	Northern America
	Continent=1	Europe
	Continent=2	Asia
	Continent=3	Southern America
	Continent=4	Africa
	Continent=5	Australia
	Continent=9	Mix of continents
Developed	Developed=0	Developed (Western) countries
	Developed=1	Developing countries
Urban	Urban=0	Not urban or not specified
	Urban=1	Urban area
Selection	Selection=0	Random sampling
	Selection=1	Convenience sampling
	Selection=2	Mail list
	Selection=3	Panel
	Selection=4	Semi-random sampling
	Selection=5	Quota-sampling
	Selection=9	N/a
Characteristics	Characteristics=0	General population
	Characteristics=1	Students
	Characteristics=2	High-school students
	Characteristics=3	managers/ employees from a firm
	Characteristics=9	N/a
CETtype	CETtype=0	17 items
	CETtype=1	10 items
	CETtype=2	11-16 items
	CETtype=3	6-9 items
	CETtype=4	2-5 items
	CETtype=9	N/a
CETcoded	CETcoded=0	Low (3-4)

CETcoded=1 Medium (5)
CETcoded=2 Medium-high (6)
CETcoded=3 High (7-8)
CETcoded=9 N/a

D1 National Values

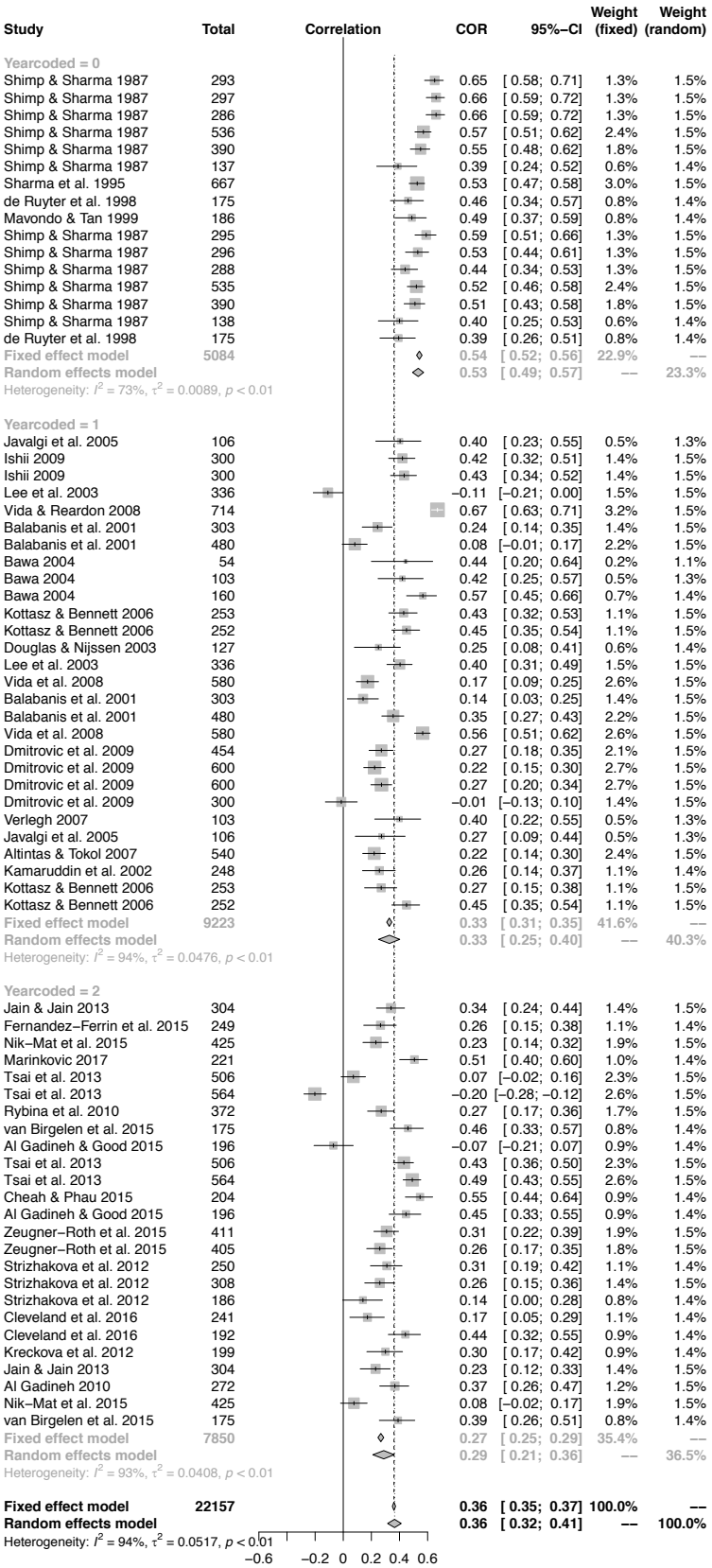
D1.1 Analysis of national values for moderator construct

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Construct = 0	31	0.3836	[0.3662; 0.4008]	817.33	96.3%
Construct = 1	8	0.3674	[0.3368; 0.3973]	72.04	90.3%
Construct = 2	14	0.2939	[0.2678; 0.3196]	116.48	88.8%
Construct = 3	16	0.3765	[0.3515; 0.4009]	142.44	89.5%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	35.21	3	< 0.0001		
Within groups	1148.29	65	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Construct = 0	31	0.3900	[0.2958; 0.4767]	817.33	96.3%
Construct = 1	8	0.3785	[0.2769; 0.4718]	72.04	90.3%
Construct = 2	14	0.2844	[0.2031; 0.3619]	116.48	88.8%
Construct = 3	16	0.3780	[0.2984; 0.4524]	142.44	89.5%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	4.26	3	0.2347		

Notes: construct=0: patriotism, construct=1: nationalism, construct=2: national identity, construct=4: conservatism

D1.2 Analysis of national values for moderator year

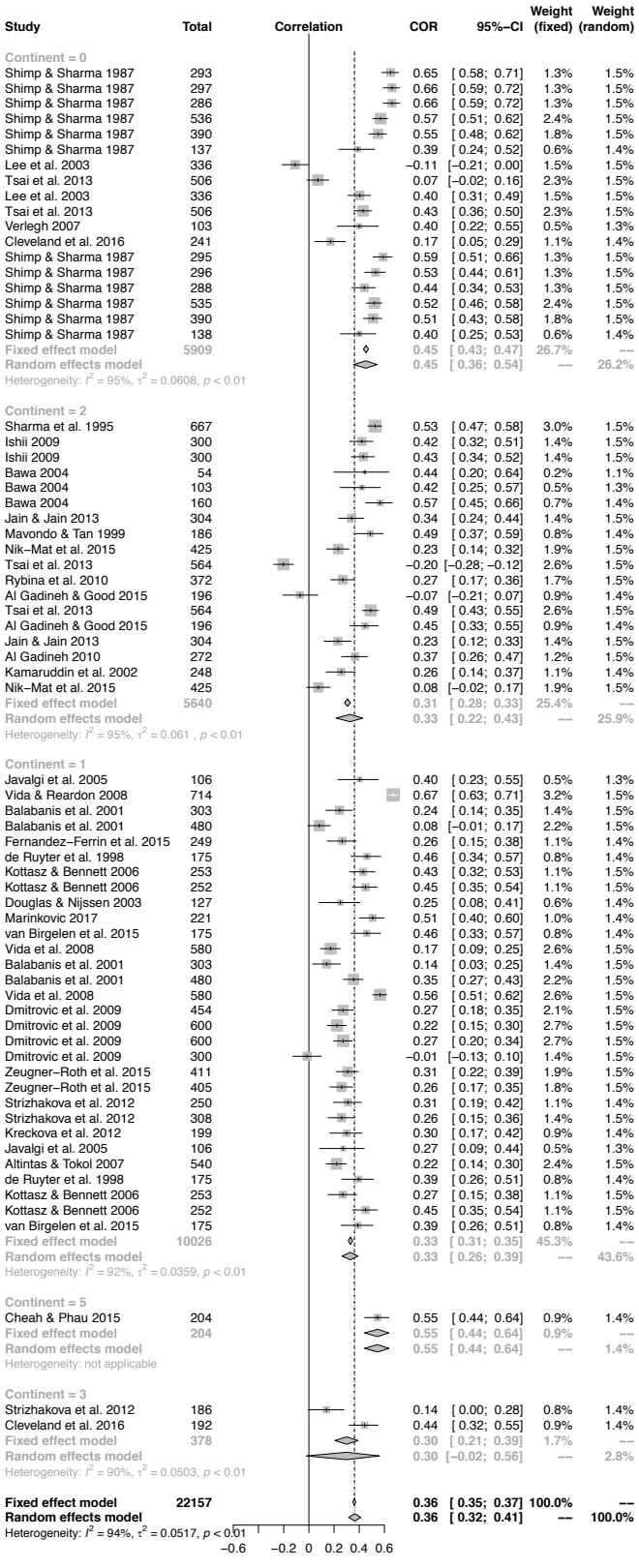
Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Yearcoded = 0	16	0.5413	[0.5215; 0.5606]	56.26	73.3%
Yearcoded = 1	28	0.3275	[0.3091; 0.3457]	441.41	93.9%
Yearcoded = 2	25	0.2674	[0.2467; 0.2879]	326.78	92.7%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	359.04	2	< 0.0001		
Within groups	824.45	66	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Yearcoded = 0	16	0.5333	[0.4929; 0.5715]	56.26	73.3%
Yearcoded = 1	28	0.3285	[0.2511; 0.4017]	441.41	93.9%
Yearcoded = 2	25	0.2881	[0.2106; 0.3621]	326.78	92.7%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	45.62	2	< 0.0001		



D1.2.1 Forest plot of national values for moderator year

D1.3 Analysis of national values for moderator continent

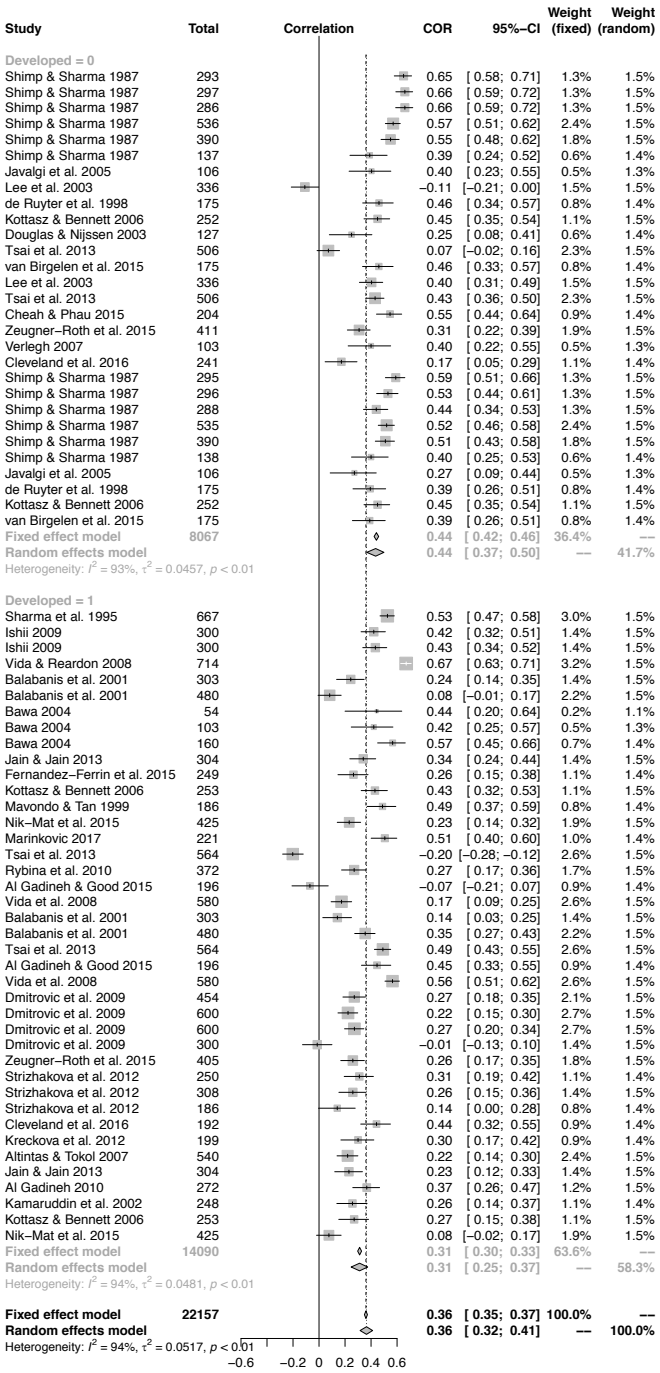
Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Continent = 0	18	0.4540	[0.4334; 0.4741]	350.27	95.1%
Continent = 2	18	0.3069	[0.2830; 0.3305]	333.56	94.9%
Continent = 1	30	0.3306	[0.3130; 0.3480]	371.03	92.2%
Continent = 5	1	0.5460	[0.4418; 0.6357]	0.00	-
Continent = 3	2	0.3009	[0.2059; 0.3903]	10.36	90.3%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	118.28	4	< 0.0001		
Within groups	1065.22	64	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Continent = 0	18	0.4535	[0.3554; 0.5416]	350.27	95.1%
Continent = 2	18	0.3269	[0.2176; 0.4281]	333.56	94.9%
Continent = 1	30	0.3287	[0.2636; 0.3908]	371.03	92.2%
Continent = 5	1	0.5460	[0.4418; 0.6357]	0.00	-
Continent = 3	2	0.2987	[-0.0190; 0.5616]	10.36	90.3%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	15.20	4	0.0043		


Study
Total
Correlation
COR
95%–CI
Weight (fixed)
Weight (random)
Continent = 0
Shimp & Sharma 1987 293 0.65 [0.58; 0.71] 1.3% 1.5%
Shimp & Sharma 1987 297 0.66 [0.59; 0.72] 1.3% 1.5%
Shimp & Sharma 1987 286 0.66 [0.59; 0.72] 1.3% 1.5%
Shimp & Sharma 1987 536 0.57 [0.51; 0.62] 2.4% 1.5%
Shimp & Sharma 1987 390 0.55 [0.48; 0.62] 1.8% 1.5%
Shimp & Sharma 1987 137 0.39 [0.24; 0.52] 0.6% 1.4%
Lee et al. 2003 336 −0.11 [−0.21; 0.00] 1.5% 1.5%
Tsai et al. 2013 506 0.07 [−0.02; 0.16] 2.3% 1.5%
Lee et al. 2003 336 0.40 [0.31; 0.49] 1.5% 1.5%
Tsai et al. 2013 506 0.43 [0.36; 0.50] 2.3% 1.5%
Verlegh 2007 103 0.40 [0.22; 0.55] 0.5% 1.3%
Cleveland et al. 2016 241 0.17 [0.05; 0.29] 1.1% 1.4%
Shimp & Sharma 1987 295 0.59 [0.51; 0.66] 1.3% 1.5%
Shimp & Sharma 1987 296 0.53 [0.44; 0.61] 1.3% 1.5%
Shimp & Sharma 1987 288 0.44 [0.34; 0.53] 1.3% 1.5%
Shimp & Sharma 1987 535 0.52 [0.46; 0.58] 2.4% 1.5%
Shimp & Sharma 1987 390 0.51 [0.43; 0.58] 1.8% 1.5%
Shimp & Sharma 1987 138 0.40 [0.25; 0.53] 0.6% 1.4%
Fixed effect model 5909 0.45 [0.43; 0.47] 26.7% –
Random effects model 0.45 [0.36; 0.54] – 26.2%
Heterogeneity: I^2 = 95%, τ^2 = 0.0608, p < 0.01
Continent = 2
Sharma et al. 1995 667 0.53 [0.47; 0.58] 3.0% 1.5%
Ishii 2009 300 0.42 [0.32; 0.51] 1.4% 1.5%
Ishii 2009 300 0.43 [0.34; 0.52] 1.4% 1.5%
Bawa 2004 54 0.44 [0.20; 0.64] 0.2% 1.1%
Bawa 2004 103 0.42 [0.25; 0.57] 0.5% 1.3%
Bawa 2004 160 0.57 [0.45; 0.66] 0.7% 1.4%
Jain & Jain 2013 304 0.34 [0.24; 0.44] 1.4% 1.5%
Mavondo & Tan 1999 186 0.49 [0.37; 0.59] 0.8% 1.4%
Nik–Mat et al. 2015 425 0.23 [0.14; 0.32] 1.9% 1.5%
Tsai et al. 2013 564 −0.20 [−0.28; −0.12] 2.6% 1.5%
Rybina et al. 2010 372 0.27 [0.17; 0.36] 1.7% 1.5%
Al Gadineh & Good 2015 196 −0.07 [−0.21; 0.07] 0.9% 1.4%
Tsai et al. 2013 564 0.49 [0.43; 0.55] 2.6% 1.5%
Al Gadineh & Good 2015 196 0.45 [0.33; 0.55] 0.9% 1.4%
Jain & Jain 2013 304 0.23 [0.12; 0.33] 1.4% 1.5%
Al Gadineh 2010 272 0.37 [0.26; 0.47] 1.2% 1.5%
Kamaruddin et al. 2002 248 0.26 [0.14; 0.37] 1.1% 1.4%
Nik–Mat et al. 2015 425 0.08 [−0.02; 0.17] 1.9% 1.5%
Fixed effect model 5640 0.31 [0.28; 0.33] 25.4% –
Random effects model 0.33 [0.22; 0.43] – 25.9%
Heterogeneity: I^2 = 95%, τ^2 = 0.061 , p < 0.01
Continent = 1
Javalgi et al. 2005 106 0.40 [0.23; 0.55] 0.5% 1.3%
Vida & Reardon 2008 714 0.67 [0.63; 0.71] 3.2% 1.5%
Balabanis et al. 2001 303 0.24 [0.14; 0.35] 1.4% 1.5%
Balabanis et al. 2001 480 0.08 [−0.01; 0.17] 2.2% 1.5%
Fernandez–Ferrin et al. 2015 249 0.26 [0.15; 0.38] 1.1% 1.4%
de Ruyter et al. 1998 175 0.46 [0.34; 0.57] 0.8% 1.4%
Kottasz & Bennett 2006 253 0.43 [0.32; 0.53] 1.1% 1.5%
Kottasz & Bennett 2006 252 0.45 [0.35; 0.54] 1.1% 1.5%
Douglas & Nijssen 2003 127 0.25 [0.08; 0.41] 0.6% 1.4%
Marinkovic 2017 221 0.51 [0.40; 0.60] 1.0% 1.4%
van Birgelen et al. 2015 175 0.46 [0.33; 0.57] 0.8% 1.4%
Vida et al. 2008 580 0.17 [0.09; 0.25] 2.6% 1.5%
Balabanis et al. 2001 303 0.14 [0.03; 0.25] 1.4% 1.5%
Balabanis et al. 2001 480 0.35 [0.27; 0.43] 2.2% 1.5%
Vida et al. 2008 580 0.56 [0.51; 0.62] 2.6% 1.5%
Dmitrovic et al. 2009 454 0.27 [0.18; 0.35] 2.1% 1.5%
Dmitrovic et al. 2009 600 0.22 [0.15; 0.30] 2.7% 1.5%
Dmitrovic et al. 2009 600 0.27 [0.20; 0.34] 2.7% 1.5%
Dmitrovic et al. 2009 300 −0.01 [−0.13; 0.10] 1.4% 1.5%
Zeugner–Roth et al. 2015 411 0.31 [0.22; 0.39] 1.9% 1.5%
Zeugner–Roth et al. 2015 405 0.26 [0.17; 0.35] 1.8% 1.5%
Strizhakova et al. 2012 250 0.31 [0.19; 0.42] 1.1% 1.4%
Strizhakova et al. 2012 308 0.26 [0.15; 0.36] 1.4% 1.5%
Kreckova et al. 2012 199 0.30 [0.17; 0.42] 0.9% 1.4%
Javalgi et al. 2005 106 0.27 [0.09; 0.44] 0.5% 1.3%
Altintas & Tokol 2007 540 0.22 [0.14; 0.30] 2.4% 1.5%
de Ruyter et al. 1998 175 0.39 [0.26; 0.51] 0.8% 1.4%
Kottasz & Bennett 2006 253 0.27 [0.15; 0.38] 1.1% 1.5%
Kottasz & Bennett 2006 252 0.45 [0.35; 0.54] 1.1% 1.5%
van Birgelen et al. 2015 175 0.39 [0.26; 0.51] 0.8% 1.4%
Fixed effect model 10026 0.33 [0.31; 0.35] 45.3% –
Random effects model 0.33 [0.26; 0.39] – 43.6%
Heterogeneity: I^2 = 92%, τ^2 = 0.0359, p < 0.01
Continent = 5
Cheah & Phau 2015 204 0.55 [0.44; 0.64] 0.9% 1.4%
Fixed effect model 204 0.55 [0.44; 0.64] 0.9% –
Random effects model 0.55 [0.44; 0.64] – 1.4%
Heterogeneity: not applicable
Continent = 3
Strizhakova et al. 2012 186 0.14 [0.00; 0.28] 0.8% 1.4%
Cleveland et al. 2016 192 0.44 [0.32; 0.55] 0.9% 1.4%
Fixed effect model 378 0.30 [0.21; 0.39] 1.7% –
Random effects model 0.30 [−0.02; 0.56] – 2.8%
Heterogeneity: I^2 = 90%, τ^2 = 0.0503, p < 0.01
Fixed effect model 22157 0.36 [0.35; 0.37] 100.0% –
Random effects model 0.36 [0.32; 0.41] – 100.0%
Heterogeneity: I^2 = 94%, τ^2 = 0.0517, p < 0.01
−0.6 −0.2 0 0.2 0.4 0.6

D1.3.1 Forest plot of national values for moderator continent

D1.4 Analysis of national values for moderator developed

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Developed = 0	29	0.4411	[0.4233; 0.4586]	377.00	92.6%
Developed = 1	40	0.3121	[0.2971; 0.3270]	691.06	94.4%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	115.43	1	< 0.0001		
Within groups	1068.06	67	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Developed = 0	29	0.4354	[0.3670; 0.4991]	377.00	92.6%
Developed = 1	40	0.3118	[0.2468; 0.3741]	691.06	94.4%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	6.84	1	0.0089		



D1.4.1 Forest plot of national values for moderator developed

D1.5 Analysis of national values for moderator urban

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Developed = 1	31	0.3933	[0.3747; 0.4116]	0.0355	90.2%
Developed = 0	38	0.3414	[0.3266; 0.3560]	859.29	95.7%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	18.40	1	< 0.0001		
Within groups	1165.09	67	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Developed = 1	31	0.4093	[0.3490; 0.4663]	0.0355	90.2%
Developed = 0	38	0.3277	[0.2536; 0.3979]	859.29	95.7%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	2.99	1	0.0840		

D1.6 Analysis of national values for moderator selection

Results of subgroups (fixed effect model)

	k	COR	95%-CI	Q	I^2
Selection = 2	11	0.5602	[0.5392; 0.5805]	34.47	71.0%
Selection = 1	13	0.3017	[0.2660; 0.3365]	64.50	81.4%
Selection = 4	7	0.3935	[0.3481; 0.4371]	25.56	76.5%
Selection = 0	23	0.3395	[0.3196; 0.3591]	415.42	94.7%
Selection = 5	8	0.2445	[0.2125; 0.2761]	27.22	74.3%
Selection = 3	5	0.2162	[0.1776; 0.2542]	198.65	98.0%
Selection = 9	2	0.4201	[0.3292; 0.5034]	7.21	86.1%

Test for subgroup differences (fixed effect model)

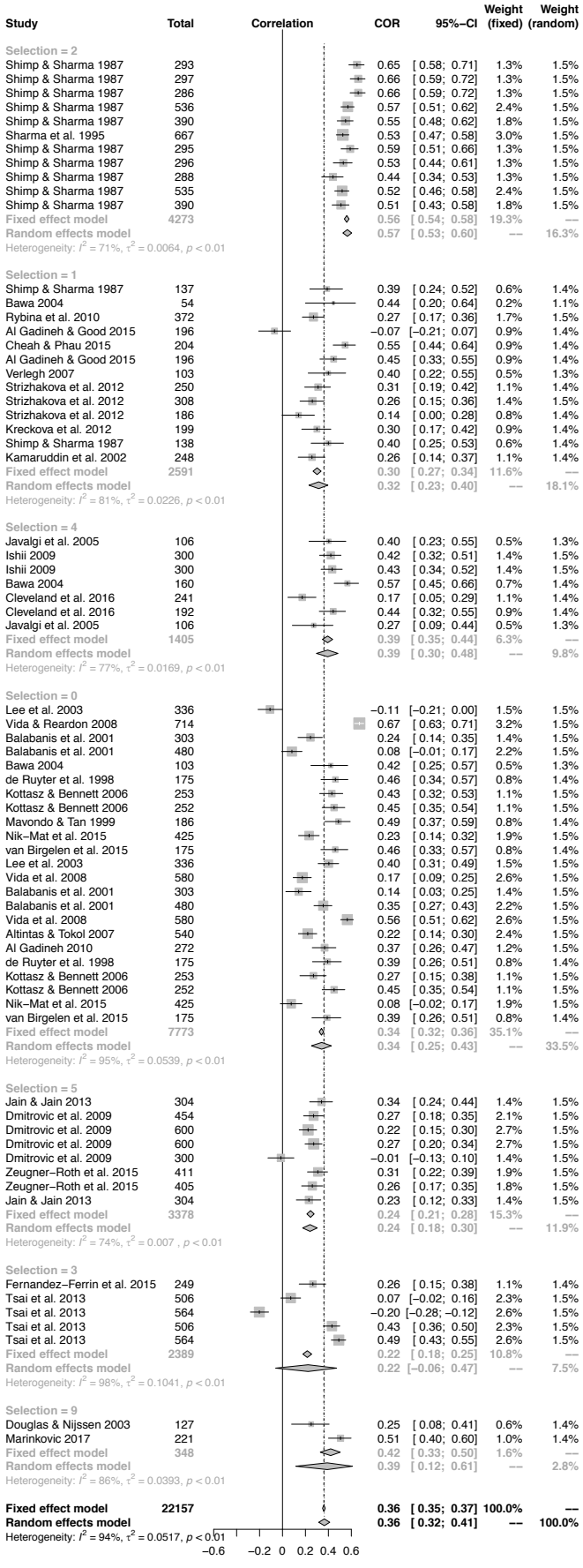
	Q	d.f.	p-value
Between groups	410.48	6	< 0.0001
Within groups	773.01	62	< 0.0001

Test for subgroups (random effects model)

	k	COR	95%-CI	Q	I^2
Selection = 2	11	0.5659	[0.5262; 0.6032]	34.47	71.0%
Selection = 1	13	0.3156	[0.2305; 0.3959]	64.50	81.4%
Selection = 4	7	0.3940	[0.2959; 0.4838]	25.56	76.5%
Selection = 0	23	0.3416	[0.2523; 0.4252]	415.42	94.7%
Selection = 5	8	0.2401	[0.1756; 0.3026]	27.22	74.3%
Selection = 3	5	0.2234	[-0.0586; 0.4724]	198.65	98.0%
Selection = 9	2	0.3903	[0.1159; 0.6093]	7.21	86.1%

Test for subgroup differences (random effects model)

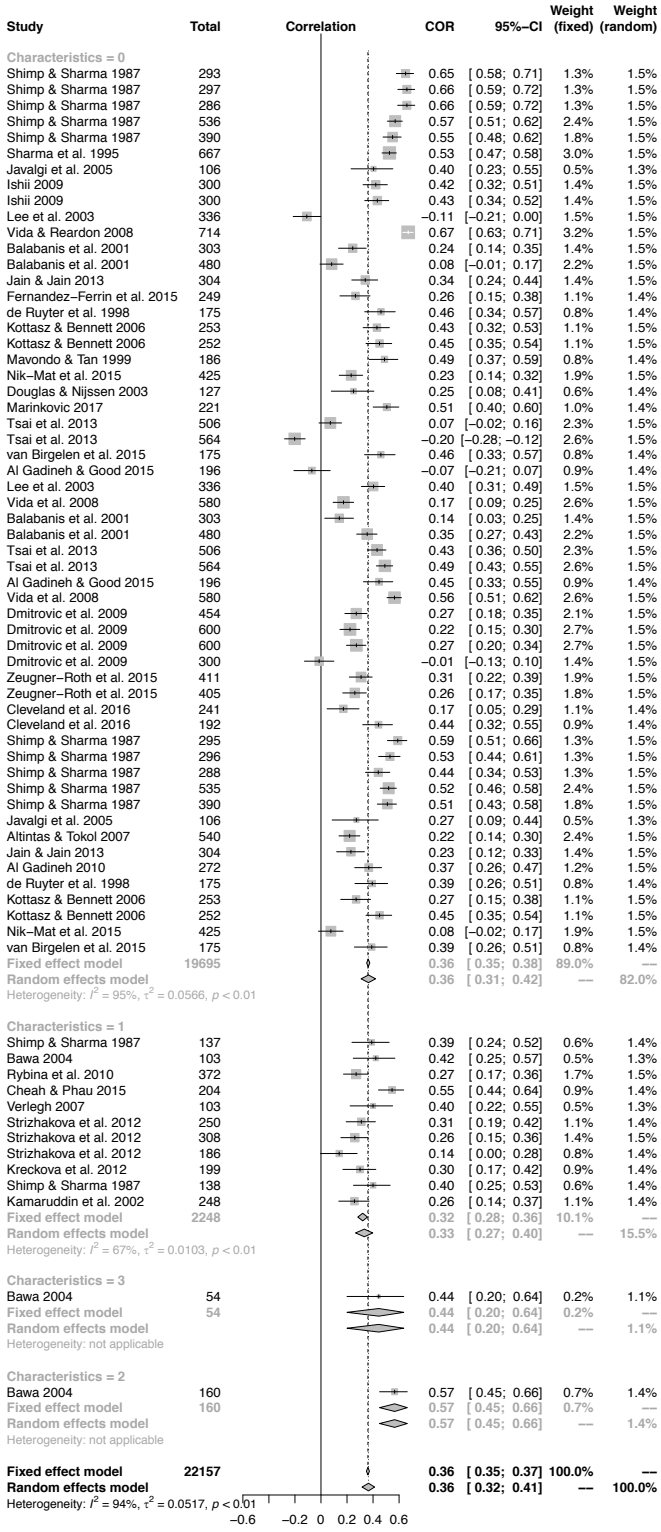
	Q	d.f.	p-value
Between groups	91.45	6	< 0.0001



D1.6.1 Forest plot of national values for moderator selection

D1.7 Analysis of national values for moderator characteristics

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Characteristics = 0	56	0.3631	[0.3509; 0.3752]	1136.89	95.2%
Characteristics = 1	11	0.3206	[0.2828; 0.3575]	30.46	67.2%
Characteristics = 3	1	0.4440	[0.2000; 0.6361]	0.00	-
Characteristics = 2	1	0.5660	[0.4504; 0.6629]	0.00	-
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	16.15	3	0.0011		
Within groups	1167.35	65	< 0.0001		
Test for subgroups (random effects model)					
	K	COR	95%-CI	Q	I^2
Characteristics = 0	56	0.3650	[0.3080; 0.4193]	1136.89	95.2%
Characteristics = 1	11	0.3332	[0.2655; 0.3977]	30.46	67.2%
Characteristics = 3	1	0.4440	[0.2000; 0.6361]	0.00	-
Characteristics = 2	1	0.5660	[0.4504; 0.6629]	0.00	-
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	11.67	3	0.0086		



D1.7.1 Forest plot of national values for moderator characteristics

D1.8 Analysis of national values for moderator CEType

Results of subgroups (fixed effect model)

	k	COR	95%-CI	Q	I^2
CEType = 0	33	0.4032	[0.3867; 0.4195]	740.84	95.7%
CEType = 4	18	0.3518	[0.3306; 0.3726]	309.53	94.5%
CEType = 1	7	0.2540	[0.2140; 0.2931]	38.87	84.6%
CEType = 3	5	0.2636	[0.2189; 0.3072]	3.99	0.00%
CEType = 9	4	0.4023	[0.3491; 0.4530]	7.56	60.3%
CEType = 2	2	0.2547	[0.1570; 0.3473]	0.00	0.00%

Test for subgroup differences (fixed effect model)

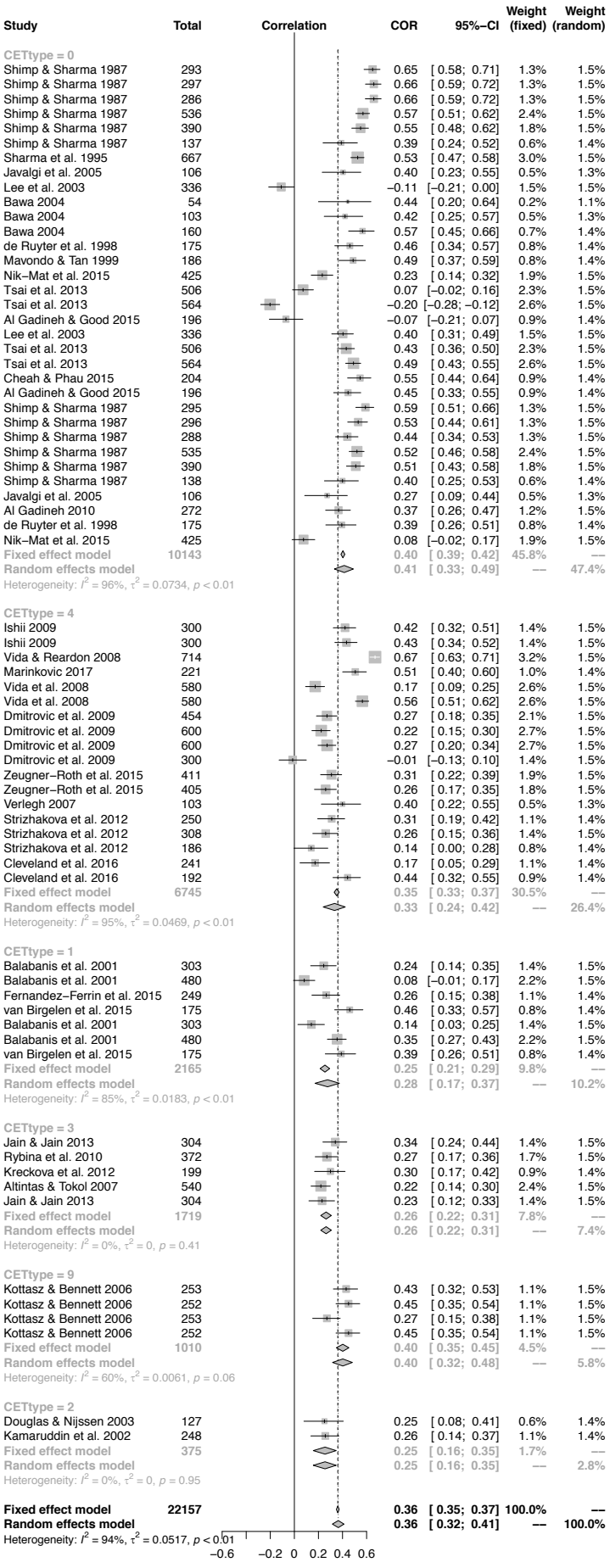
	Q	d.f.	p-value
Between groups	82.69	5	< 0.0001
Within groups	1100.80	63	< 0.0001

Test for subgroups (random effects model)

	k	COR	95%-CI	Q	I^2
CEType = 0	33	0.4142	[0.3323; 0.4899]	740.84	95.7%
CEType = 4	18	0.3341	[0.2392; 0.4228]	309.53	94.5%
CEType = 1	7	0.2760	[0.1716; 0.3742]	38.87	84.6%
CEType = 3	5	0.2636	[0.2189; 0.3072]	3.99	0.00%
CEType = 9	4	0.4024	[0.3167; 0.4816]	7.56	60.3%
CEType = 2	2	0.2547	[0.1570; 0.3473]	0.00	0.00%

Test for subgroup differences (random effects model)

	Q	d.f.	p-value
Between groups	16.86	5	0.0048


Study
Total
Correlation
COR
95%–CI
Weight (fixed)
Weight (random)
CETtype = 0
Shimp & Sharma 1987 293 0.65 [0.58; 0.71] 1.3% 1.5%
Shimp & Sharma 1987 297 0.66 [0.59; 0.72] 1.3% 1.5%
Shimp & Sharma 1987 286 0.66 [0.59; 0.72] 1.3% 1.5%
Shimp & Sharma 1987 536 0.57 [0.51; 0.62] 2.4% 1.5%
Shimp & Sharma 1987 390 0.55 [0.48; 0.62] 1.8% 1.5%
Shimp & Sharma 1987 137 0.39 [0.24; 0.52] 0.6% 1.4%
Sharma et al. 1995 667 0.53 [0.47; 0.58] 3.0% 1.5%
Javalgi et al. 2005 106 0.40 [0.23; 0.55] 0.5% 1.3%
Lee et al. 2003 336 −0.11 [−0.21; 0.00] 1.5% 1.5%
Bawa 2004 54 0.44 [0.20; 0.64] 0.2% 1.1%
Bawa 2004 103 0.42 [0.25; 0.57] 0.5% 1.3%
Bawa 2004 160 0.57 [0.45; 0.66] 0.7% 1.4%
de Ruyter et al. 1998 175 0.46 [0.34; 0.57] 0.8% 1.4%
Mavondo & Tan 1999 186 0.49 [0.37; 0.59] 0.8% 1.4%
Nik–Mat et al. 2015 425 0.23 [0.14; 0.32] 1.9% 1.5%
Tsai et al. 2013 506 0.07 [−0.02; 0.16] 2.3% 1.5%
Tsai et al. 2013 564 −0.20 [−0.28; −0.12] 2.6% 1.5%
Al Gadineh & Good 2015 196 −0.07 [−0.21; 0.07] 0.9% 1.4%
Lee et al. 2003 336 0.40 [0.31; 0.49] 1.5% 1.5%
Tsai et al. 2013 506 0.43 [0.36; 0.50] 2.3% 1.5%
Tsai et al. 2013 564 0.49 [0.43; 0.55] 2.6% 1.5%
Cheah & Phau 2015 204 0.55 [0.44; 0.64] 0.9% 1.4%
Al Gadineh & Good 2015 196 0.45 [0.33; 0.55] 0.9% 1.4%
Shimp & Sharma 1987 295 0.59 [0.51; 0.66] 1.3% 1.5%
Shimp & Sharma 1987 296 0.53 [0.44; 0.61] 1.3% 1.5%
Shimp & Sharma 1987 288 0.44 [0.34; 0.53] 1.3% 1.5%
Shimp & Sharma 1987 535 0.52 [0.46; 0.58] 2.4% 1.5%
Shimp & Sharma 1987 390 0.51 [0.43; 0.58] 1.8% 1.5%
Shimp & Sharma 1987 138 0.40 [0.25; 0.53] 0.6% 1.4%
Javalgi et al. 2005 106 0.27 [0.09; 0.44] 0.5% 1.3%
Al Gadineh 2010 272 0.37 [0.26; 0.47] 1.2% 1.5%
de Ruyter et al. 1998 175 0.39 [0.26; 0.51] 0.8% 1.4%
Nik–Mat et al. 2015 425 0.08 [−0.02; 0.17] 1.9% 1.5%
Fixed effect model 10143 0.40 [0.39; 0.42] 45.8% —
Random effects model 0.41 [0.33; 0.49] — 47.4%
Heterogeneity: I^2 = 96%, τ^2 = 0.0734, p < 0.01
CETtype = 4
Ishii 2009 300 0.42 [0.32; 0.51] 1.4% 1.5%
Ishii 2009 300 0.43 [0.34; 0.52] 1.4% 1.5%
Vida & Reardon 2008 714 0.67 [0.63; 0.71] 3.2% 1.5%
Marinkovic 2017 221 0.51 [0.40; 0.60] 1.0% 1.4%
Vida et al. 2008 580 0.17 [0.09; 0.25] 2.6% 1.5%
Vida et al. 2008 580 0.56 [0.51; 0.62] 2.6% 1.5%
Dmitrovic et al. 2009 454 0.27 [0.18; 0.35] 2.1% 1.5%
Dmitrovic et al. 2009 600 0.22 [0.15; 0.30] 2.7% 1.5%
Dmitrovic et al. 2009 600 0.27 [0.20; 0.34] 2.7% 1.5%
Dmitrovic et al. 2009 300 −0.01 [−0.13; 0.10] 1.4% 1.5%
Zeugner–Roth et al. 2015 411 0.31 [0.22; 0.39] 1.9% 1.5%
Zeugner–Roth et al. 2015 405 0.26 [0.17; 0.35] 1.8% 1.5%
Verlegh 2007 103 0.40 [0.22; 0.55] 0.5% 1.3%
Strizhakova et al. 2012 250 0.31 [0.19; 0.42] 1.1% 1.4%
Strizhakova et al. 2012 308 0.26 [0.15; 0.36] 1.4% 1.5%
Strizhakova et al. 2012 186 0.14 [0.00; 0.28] 0.8% 1.4%
Cleveland et al. 2016 241 0.17 [0.05; 0.29] 1.1% 1.4%
Cleveland et al. 2016 192 0.44 [0.32; 0.55] 0.9% 1.4%
Fixed effect model 6745 0.35 [0.33; 0.37] 30.5% —
Random effects model 0.33 [0.24; 0.42] — 26.4%
Heterogeneity: I^2 = 95%, τ^2 = 0.0469, p < 0.01
CETtype = 1
Balabanis et al. 2001 303 0.24 [0.14; 0.35] 1.4% 1.5%
Balabanis et al. 2001 480 0.08 [−0.01; 0.17] 2.2% 1.5%
Fernandez–Ferrin et al. 2015 249 0.26 [0.15; 0.38] 1.1% 1.4%
van Birgelen et al. 2015 175 0.46 [0.33; 0.57] 0.8% 1.4%
Balabanis et al. 2001 303 0.14 [0.03; 0.25] 1.4% 1.5%
Balabanis et al. 2001 480 0.35 [0.27; 0.43] 2.2% 1.5%
van Birgelen et al. 2015 175 0.39 [0.26; 0.51] 0.8% 1.4%
Fixed effect model 2165 0.25 [0.21; 0.29] 9.8% —
Random effects model 0.28 [0.17; 0.37] — 10.2%
Heterogeneity: I^2 = 85%, τ^2 = 0.0183, p < 0.01
CETtype = 3
Jain & Jain 2013 304 0.34 [0.24; 0.44] 1.4% 1.5%
Rybina et al. 2010 372 0.27 [0.17; 0.36] 1.7% 1.5%
Kreckova et al. 2012 199 0.30 [0.17; 0.42] 0.9% 1.4%
Altintas & Tokol 2007 540 0.22 [0.14; 0.30] 2.4% 1.5%
Jain & Jain 2013 304 0.23 [0.12; 0.33] 1.4% 1.5%
Fixed effect model 1719 0.26 [0.22; 0.31] 7.8% —
Random effects model 0.26 [0.22; 0.31] — 7.4%
Heterogeneity: I^2 = 0%, τ^2 = 0, p = 0.41
CETtype = 9
Kottasz & Bennett 2006 253 0.43 [0.32; 0.53] 1.1% 1.5%
Kottasz & Bennett 2006 252 0.45 [0.35; 0.54] 1.1% 1.5%
Kottasz & Bennett 2006 253 0.27 [0.15; 0.38] 1.1% 1.5%
Kottasz & Bennett 2006 252 0.45 [0.35; 0.54] 1.1% 1.5%
Fixed effect model 1010 0.40 [0.35; 0.45] 4.5% —
Random effects model 0.40 [0.32; 0.48] — 5.8%
Heterogeneity: I^2 = 60%, τ^2 = 0.0061, p = 0.06
CETtype = 2
Douglas & Nijssen 2003 127 0.25 [0.08; 0.41] 0.6% 1.4%
Kamaruddin et al. 2002 248 0.26 [0.14; 0.37] 1.1% 1.4%
Fixed effect model 375 0.25 [0.16; 0.35] 1.7% —
Random effects model 0.25 [0.16; 0.35] — 2.8%
Heterogeneity: I^2 = 0%, τ^2 = 0, p = 0.95
Fixed effect model 22157 0.36 [0.35; 0.37] 100.0% —
Random effects model 0.36 [0.32; 0.41] — 100.0%
Heterogeneity: I^2 = 94%, τ^2 = 0.0517, p < 0.01
−0.6 −0.2 0 0.2 0.4 0.6

D1.8.1 Forest plot of national values for moderator CETtype

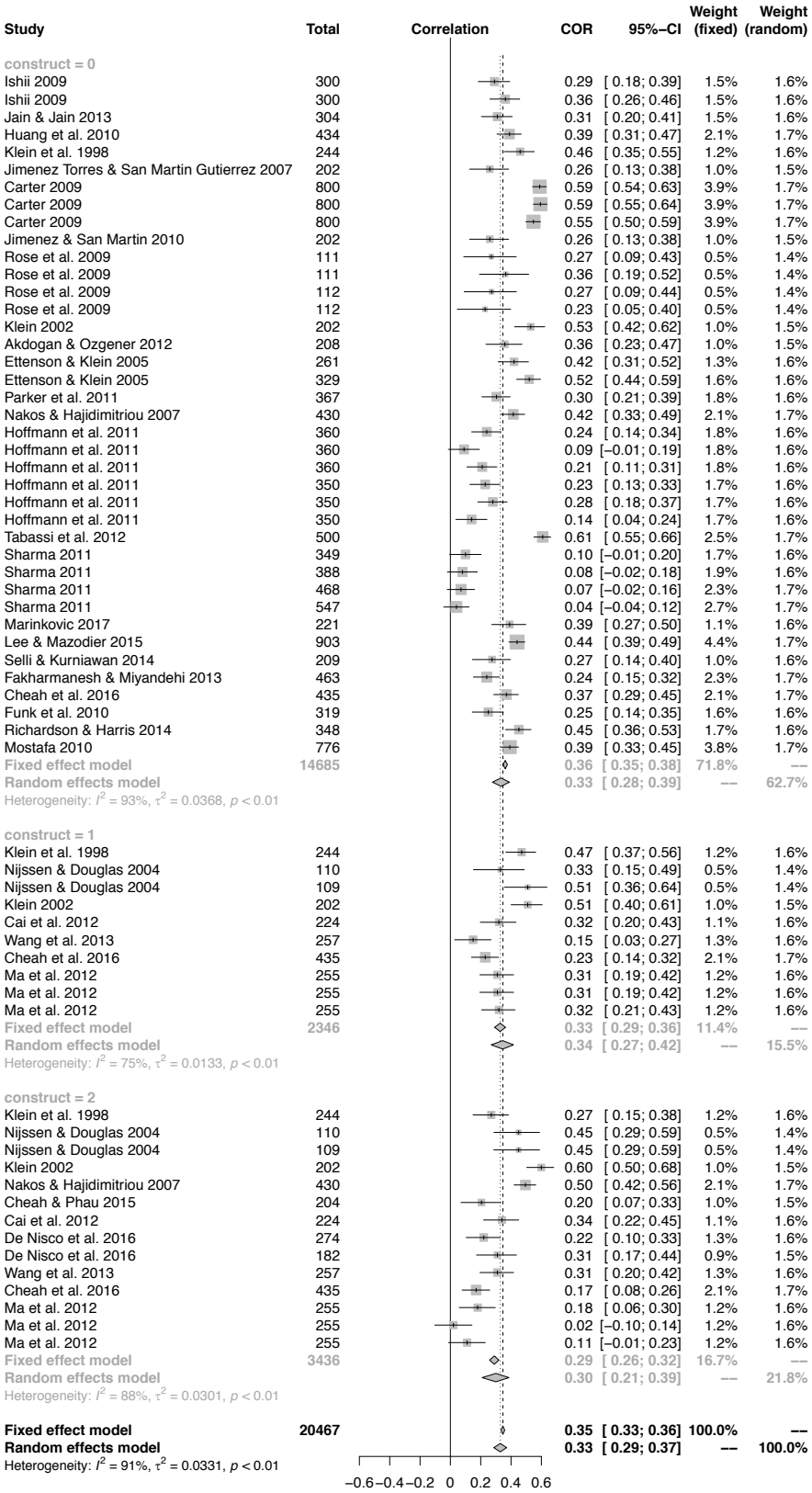
D1.9 Analysis of national values for moderator CETcoded

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
CETcoded = 2	14	0.3320	[0.3072; 0.3563]	195.30	93.3%
CETcoded = 1	28	0.3650	[0.3466; 0.3832]	587.16	95.4%
CETcoded = 0	5	0.3015	[0.2393; 0.3612]	9.85	59.4%
CETcoded = 3	5	0.4099	[0.3662; 0.4518]	78.45	94.9%
CETcoded = 9	17	0.3745	[0.3525; 0.3961]	296.98	94.6%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	15.76	4	0.0034		
Within groups	1167.73	64	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
CETcoded = 2	14	0.3585	[0.2616; 0.4482]	195.30	93.3%
CETcoded = 1	28	0.3740	[0.2853; 0.4564]	587.16	95.4%
CETcoded = 0	5	0.3201	[0.2202; 0.4133]	9.85	59.4%
CETcoded = 3	5	0.3633	[0.1380; 0.5528]	78.45	94.9%
CETcoded = 9	17	0.3654	[0.2655; 0.4575]	296.98	94.6%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	0.75	4	0.9446		

D2 Animosity

D2.1 Analysis of animosity for moderator construct

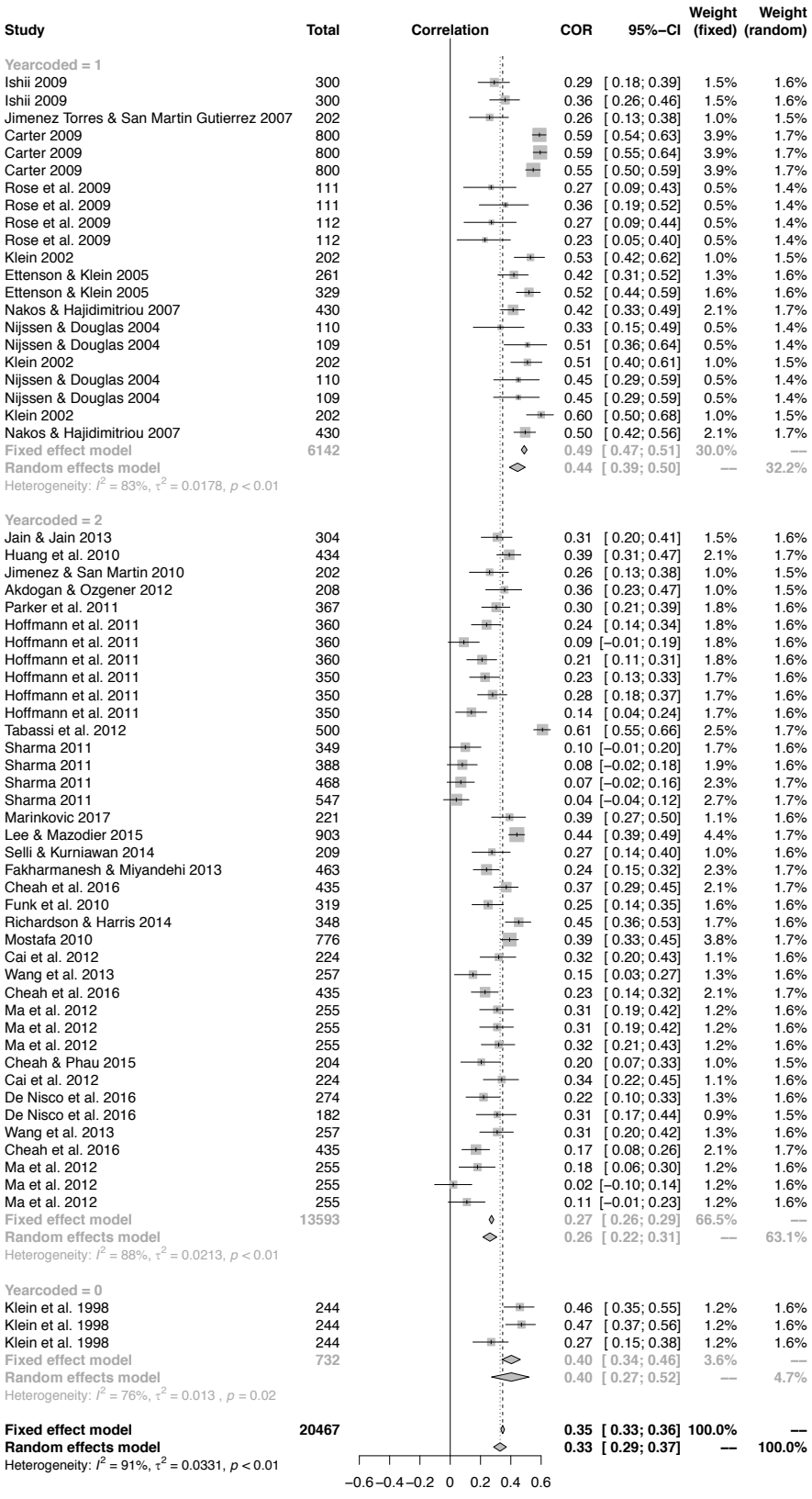
Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I²
Construct = 0	39	0.3620	[0.3478; 0.3760]	557.06	93.2%
Construct = 1	10	0.3282	[0.2914; 0.3640]	36.22	75.2%
Construct = 2	14	0.2896	[0.2585; 0.3201]	106.83	87.8%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	19.15	2	< 0.0001		
Within groups	700.11	60	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I²
Construct = 0	39	0.3343	[0.2772; 0.3891]	557.06	93.2%
Construct = 1	10	0.3450	[0.2695; 0.4162]	36.22	75.2%
Construct = 2	14	0.3004	[0.2091; 0.3865]	106.83	87.8%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	0.62	2	0.7352		



D2.1.1 Forest plot of animosity for moderator construct

D2.2 Analysis of animosity for moderator year

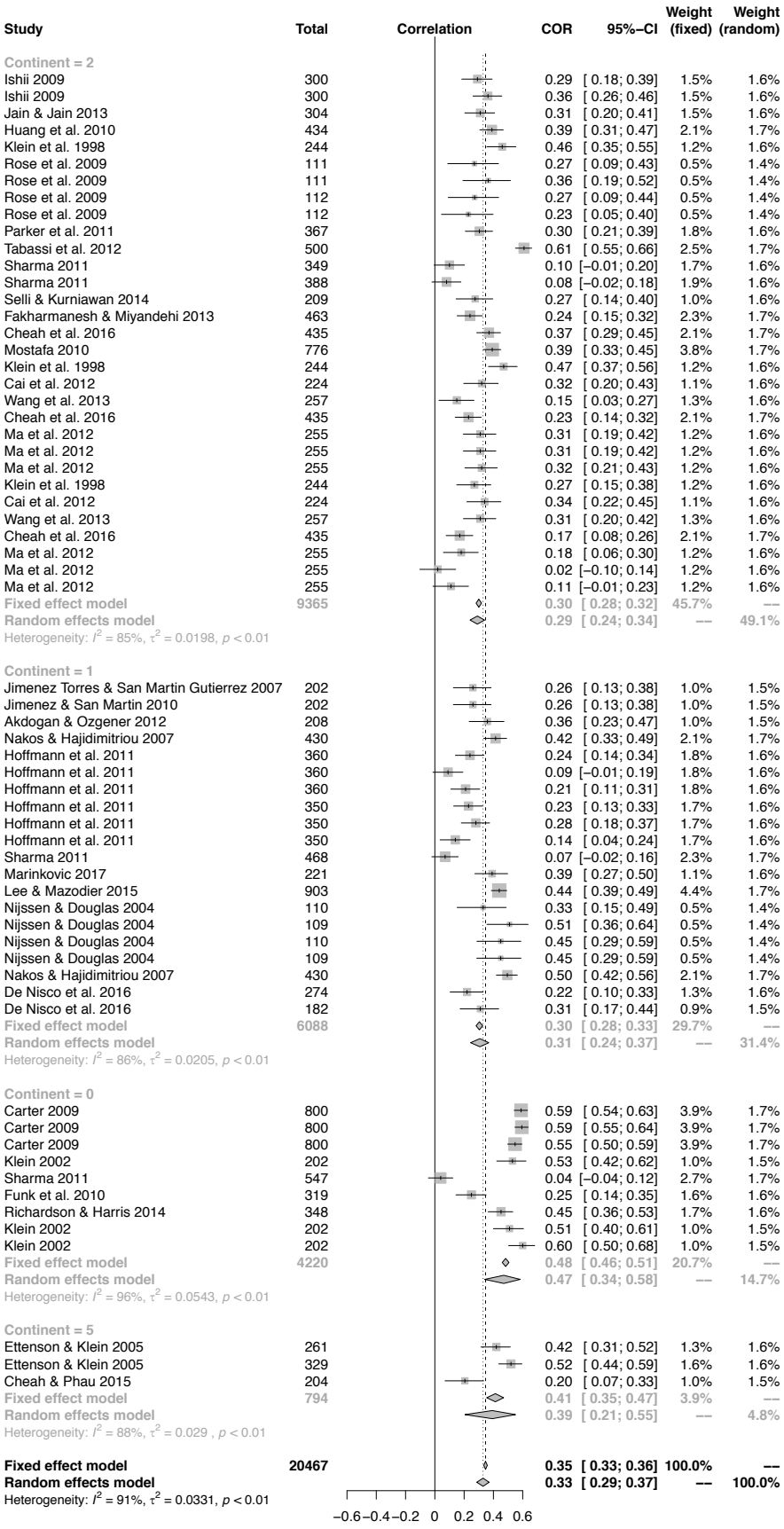
Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Yearcoded = 1	21	0.4885	[0.4692; 0.5074]	119.99	83.3%
Yearcoded = 2	39	0.2726	[0.2569; 0.2881]	316.28	88.0%
Yearcoded = 0	3	0.4037	[0.3410; 0.4629]	8.29	75.9%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	274.72	2	< 0.0001		
Within groups	444.55	60	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Yearcoded = 1	21	0.4447	[0.3912; 0.4952]	119.99	83.3%
Yearcoded = 2	39	0.2622	[0.2158; 0.3074]	316.28	88.0%
Yearcoded = 0	3	0.4037	[0.2726; 0.5201]	8.29	75.9%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	26.62	2	< 0.0001		



D2.2.1 Forest plot of animosity for moderator year

D2.3 Analysis of animosity for moderator continent

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Continent = 2	31	0.3003	[0.2817; 0.3187]	206.23	85.5%
Continent = 1	20	0.3043	[0.2812; 0.3270]	134.44	85.9%
Continent = 0	9	0.4836	[0.4600; 0.5064]	202.97	96.1%
Continent = 5	3	0.4134	0.3538; 0.4697]	16.90	88.2%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	158.73	3	< 0.0001		
Within groups	560.54	59	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Continent = 2	31	0.2906	[0.2402; 0.3394]	206.23	85.5%
Continent = 1	20	0.3076	[0.2438; 0.3688]	134.44	85.9%
Continent = 0	9	0.4707	[0.3404; 0.5832]	202.97	96.1%
Continent = 5	3	0.3921	[0.2058; 0.5509]	16.90	88.2%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	7.06	3	0.0699		



D2.3.1 Forest plot of animosity for moderator continent

D2.4 Analysis of animosity for moderator developed

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Developed = 1	38	0.3081	[0.2915; 0.3245]	251.21	85.3%
Developed = 0	25	0.3955	[0.3776; 0.4131]	418.50	94.3%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	49.56	1	0.0385		
Within groups	669.71	61	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Developed = 1	38	0.2991	[0.2547; 0.3422]	251.21	85.3%
Developed = 0	25	0.3750	[0.2955; 0.4494]	418.50	94.3%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	2.73	1	0.0986		

D2.5 Analysis of animosity for moderator urban

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Developed = 1	12	0.3015	[0.2717; 0.3308]	39.90	72.4%
Developed = 0	51	0.3558	[0.3425; 0.3690]	668.31	92.5%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	11.06	1	0.0009		
Within groups	708.21	61	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Developed = 1	12	0.3072	[0.2495; 0.3626]	39.90	72.4%
Developed = 0	51	0.3342	[0.2832; 0.3834]	668.31	92.5%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	0.49	1	0.4827		

D2.6 Analysis of animosity for moderator selection

Results of subgroups (fixed effect model)

	k	COR	95%-CI	Q	I^2
Selection = 4	9	0.1812	[0.1495; 0.2125]	58.51	86.3%
Selection = 5	9	0.2917	[0.2621; 0.3207]	62.03	87.1%
Selection = 0	22	0.4149	[0.3929; 0.4364]	101.19	79.2%
Selection = 9	4	0.2818	[0.2261; 0.3357]	4.36	31.3%
Selection = 3	7	0.5456	[0.5212; 0.5691]	49.47	87.9%
Selection = 1	12	0.2472	[0.2131; 0.2807]	30.36	63.8%

Test for subgroup differences (fixed effect model)

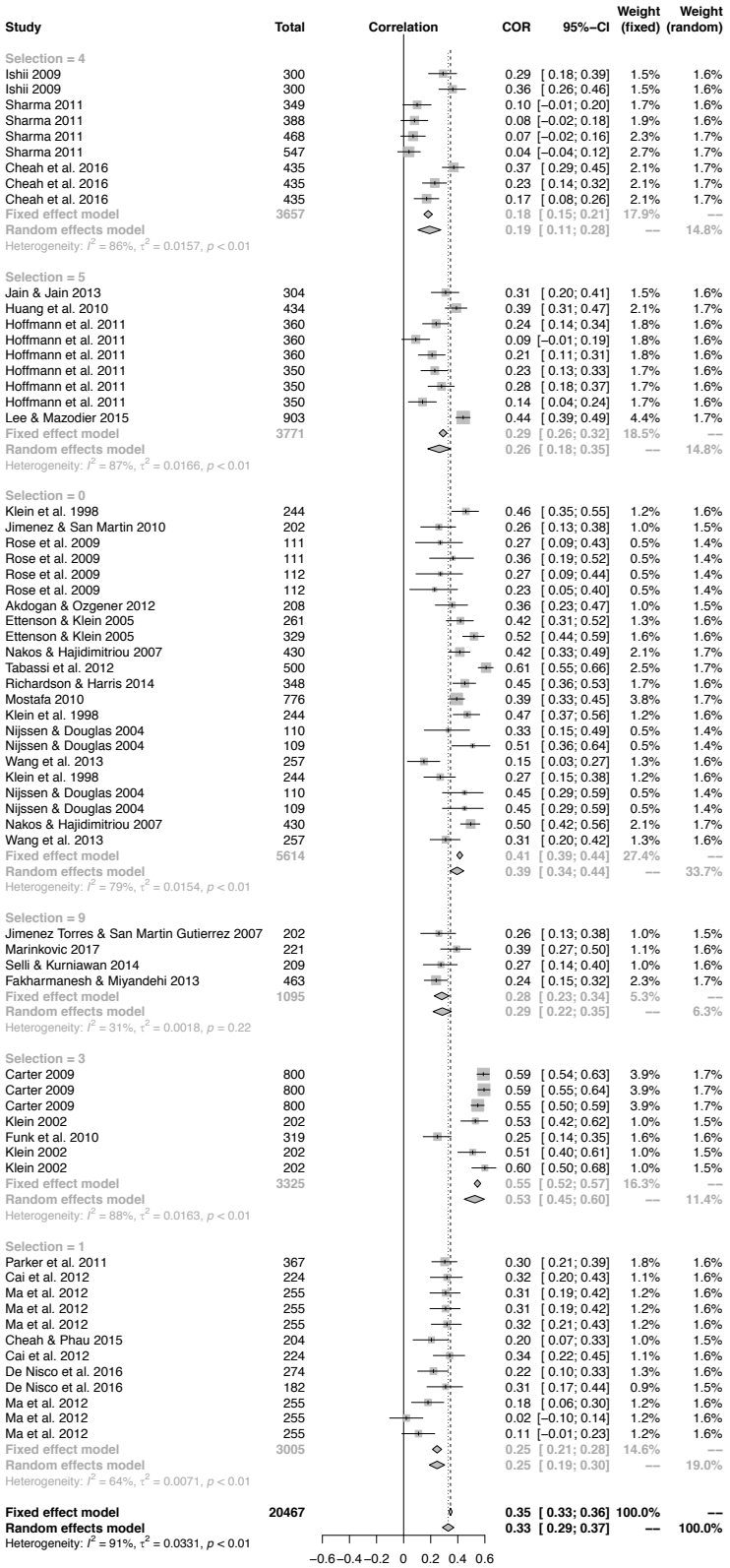
	Q	d.f.	p-value
Between groups	413.34	5	< 0.0001
Within groups	305.93	57	< 0.0001

Test for subgroups (random effects model)

	k	COR	95%-CI	Q	I^2
Selection = 4	9	0.1918	[0.1055; 0.2753]	58.51	86.3%
Selection = 5	9	0.2644	[0.1783; 0.3465]	62.03	87.1%
Selection = 0	22	0.3950	[0.3432; 0.4444]	101.19	79.2%
Selection = 9	4	0.2863	[0.2173; 0.3524]	4.36	31.3%
Selection = 3	7	0.5261	[0.4476; 0.5965]	49.47	87.9%
Selection = 1	12	0.2473	[0.1902; 0.3027]	30.36	63.8%

Test for subgroup differences (random effects model)

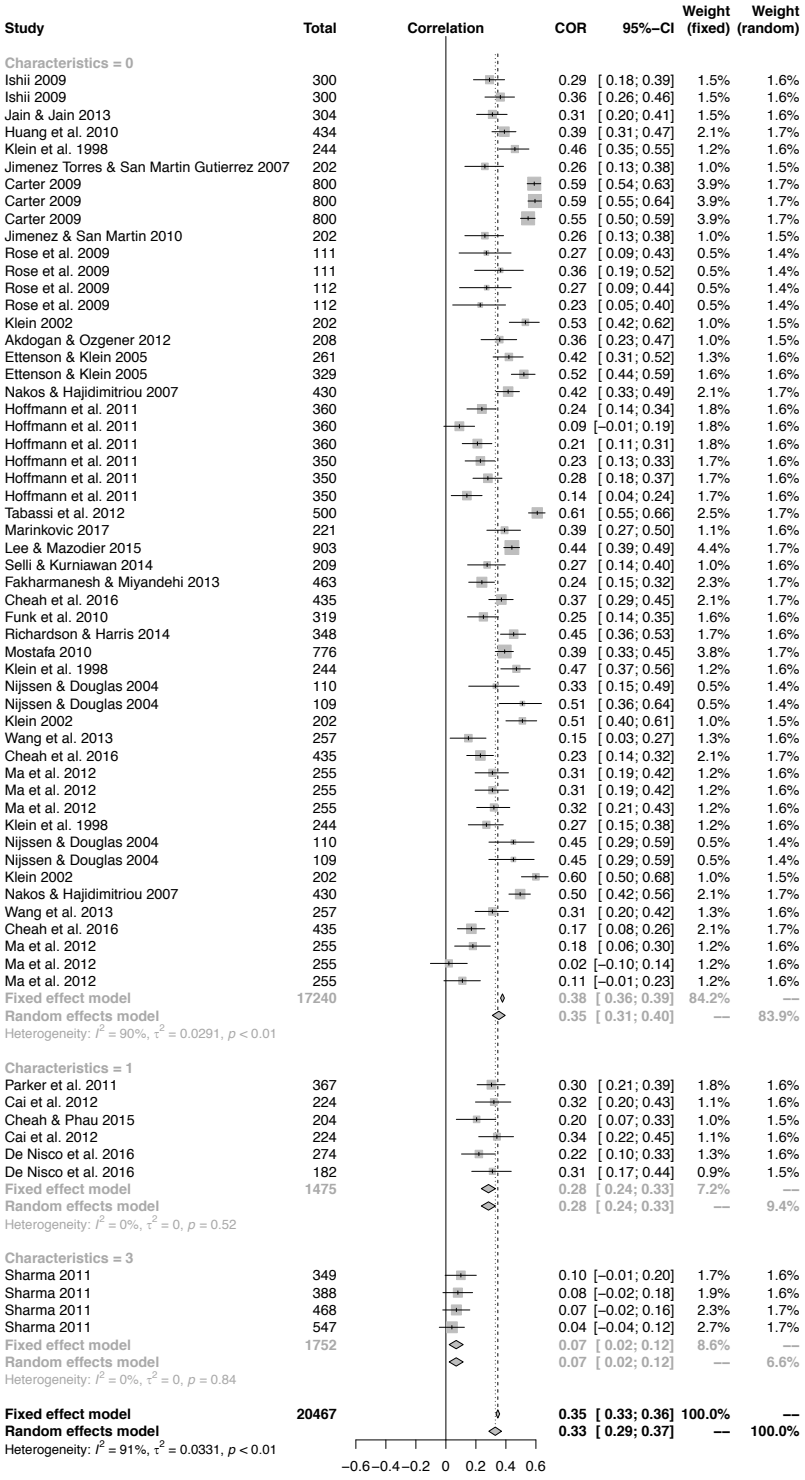
	Q	d.f.	p-value
Between groups	49.65	5	< 0.0001



D2.6.1 Forest plot of animosity for moderator selection

D2.7 Analysis of animosity for moderator characteristics

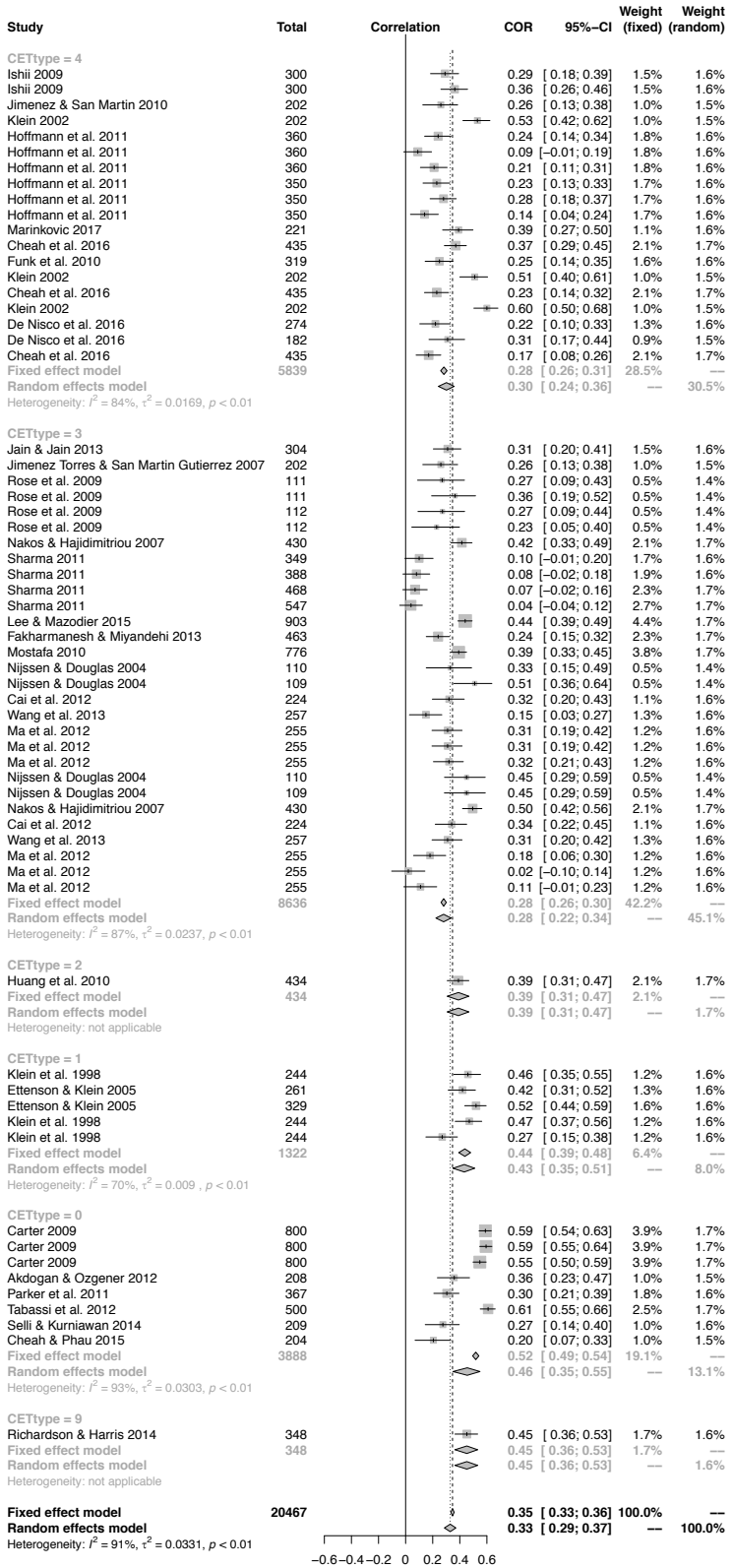
Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Characteristics = 0	53	0.3773	[0.3643; 0.3901]	536.88	90.3%
Characteristics = 1	6	0.2841	[0.2362; 0.3306]	4.21	0.0%
Characteristics = 3	4	0.0688	[0.0220; 0.1154]	0.85	0.0%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	177.33	2	< 0.0001		
Within groups	541.93	60	< 0.0001		
Test for subgroups (random effects model)					
	K	COR	95%-CI	Q	I^2
Characteristics = 0	53	0.3532	[0.3096; 0.3953]	536.88	90.3%
Characteristics = 1	6	0.2841	[0.2362; 0.3306]	4.21	0.0%
Characteristics = 3	4	0.0688	[0.0220; 0.1154]	0.85	0.0%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	81.45	2	< 0.0001		



D2.7.1 Forest plot of animosity for moderator characteristics

D2.8 Analysis of animosity for moderator CETtype

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
CETtype = 4	19	0.2826	[0.2587; 0.3062]	110.13	83.7%
CETtype = 3	29	0.2811	[0.2614; 0.3005]	220.42	87.3%
CETtype = 2	1	0.3900	[0.3071; 0.4670]	0.00	-
CETtype = 1	5	0.4373	[0.3925; 0.4801]	13.37	70.1%
CETtype = 0	8	0.5182	[0.4947; 0.5408]	105.28	93.4%
CETtype = 9	1	0.4520	[0.3642; 0.5319]	0.00	-
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	270.07	5	< 0.0001		
Within groups	449.19	57	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
CETtype = 4	19	0.3015	[0.2421; 0.3587]	110.13	83.7%
CETtype = 3	29	0.2806	[0.2233; 0.3360]	220.42	87.3%
CETtype = 2	1	0.3900	[0.3071; 0.4670]	0.00	-
CETtype = 1	5	0.4330	[0.3489; 0.5102]	13.37	70.1%
CETtype = 0	8	0.4551	[0.3495; 0.5492]	105.28	93.4%
CETtype = 9	1	0.4520	[0.3642; 0.5319]	0.00	-
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	22.42	5	0.0004		



D2.8.1 Forest plot of animosity for moderator CETtype

D2.9 Analysis of animosity for moderator CETcoded

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
CETcoded = 2	13	0.3651	[0.3392; 0.3904]	113.64	89.4%
CETcoded = 1	9	0.4400	[0.4155; 0.4638]	227.73	96.5%
CETcoded = 0	15	0.3070	[0.2748; 0.3386]	67.65	79.3%
CETcoded = 9	21	0.3112	[0.2888; 0.3333]	170.97	88.3%
CETcoded = 3	5	0.2701	0.2306; 0.3087]	53.53	92.5%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	85.74	4	< 0.0001		
Within groups	633.52	58	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
CETcoded = 2	13	0.3808	[0.2987; 0.4572]	113.64	89.4%
CETcoded = 1	9	0.3648	[0.2156; 0.4973]	227.73	96.5%
CETcoded = 0	15	0.3229	[0.2511; 0.3912]	67.65	79.3%
CETcoded = 9	21	0.2964	[0.2283; 0.3617]	170.97	88.3%
CETcoded = 3	5	0.2686	[0.1156; 0.4091]	53.53	92.5%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	3.40	4	0.4927		

D3 International Values

D3.1 Analysis of product international values for moderator construct

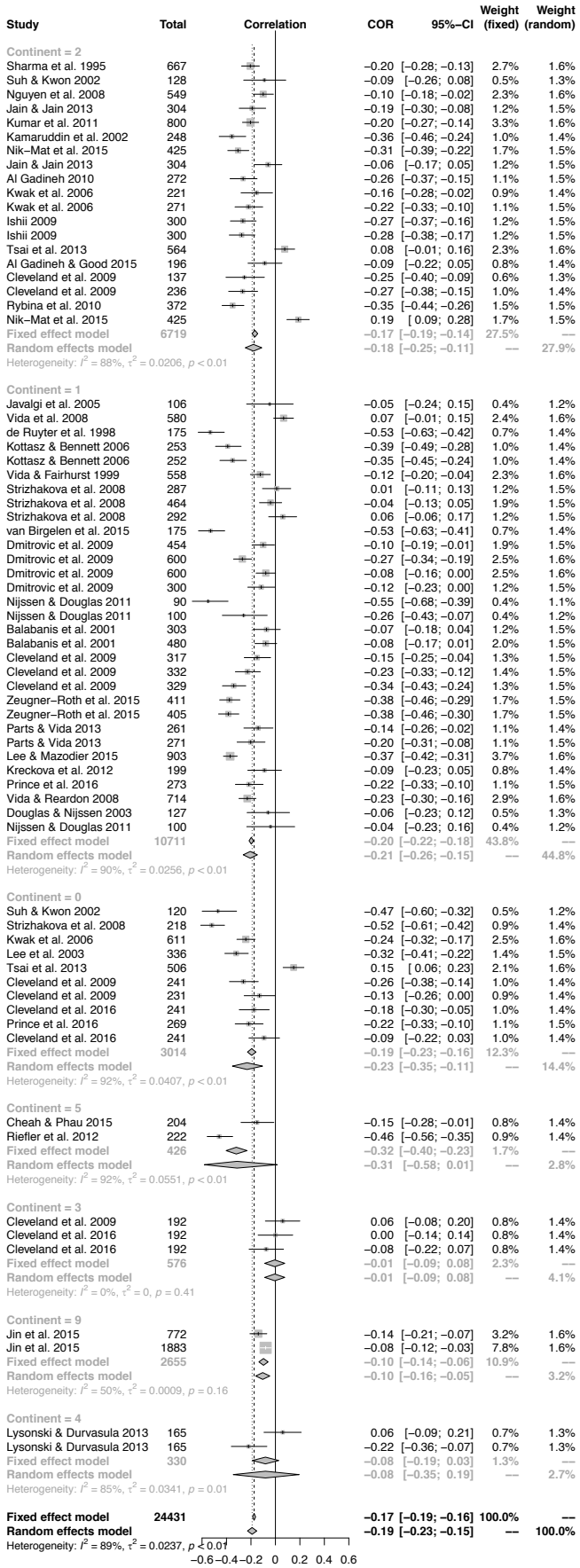
Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Construct = 0	19	-0.1911	[-0.2144; -0.1677]	222.97	91.9%
Construct = 1	12	-0.1827	[-0.2125; -0.1525]	43.13	74.5%
Construct = 2	8	-0.0789	[-0.1146; -0.0431]	84.90	91.8%
Construct = 3	23	-0.2084	[-0.2283; -0.1883]	170.37	87.1%
Construct = 4	7	-0.0877	[-0.1316; -0.0434]	50.96	88.2%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	56.25	4	< 0.0001		
Within groups	572.33	64	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Construct = 0	19	-0.2338	[-0.3144; -0.1499]	222.97	91.9%
Construct = 1	12	-0.1951	[-0.2560; -0.1328]	43.13	74.5%
Construct = 2	8	-0.1101	[-0.2330; 0.0163]	84.90	91.8%
Construct = 3	23	-0.2123	[-0.2694; -0.1536]	170.37	87.1%
Construct = 4	7	-0.0765	[-0.2116; 0.0615]	50.96	88.2%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	5.91	4	0.2058		

D3.2 Analysis of international values for moderator year

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Yearcoded = 0	3	-0.2189	[-0.2683; -0.1683]	29.24	93.2%
Yearcoded = 1	34	-0.1764	[-0.1944; -0.1583]	227.13	85.5%
Yearcoded = 2	32	-0.1671	[-0.1846; -0.1495]	368.52	91.6%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	3.79	2	0.1573		
Within groups	624.88	66	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Yearcoded = 0	3	-0.2899	[-0.4717; -0.0845]	29.24	93.2%
Yearcoded = 1	34	-0.1880	[-0.2356; -0.1394]	227.13	85.5%
Yearcoded = 2	32	-0.1843	[-0.2455; -0.1216]	368.52	91.6%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	0.99	2	0.6108		

D3.4 Analysis of international values for moderator continent

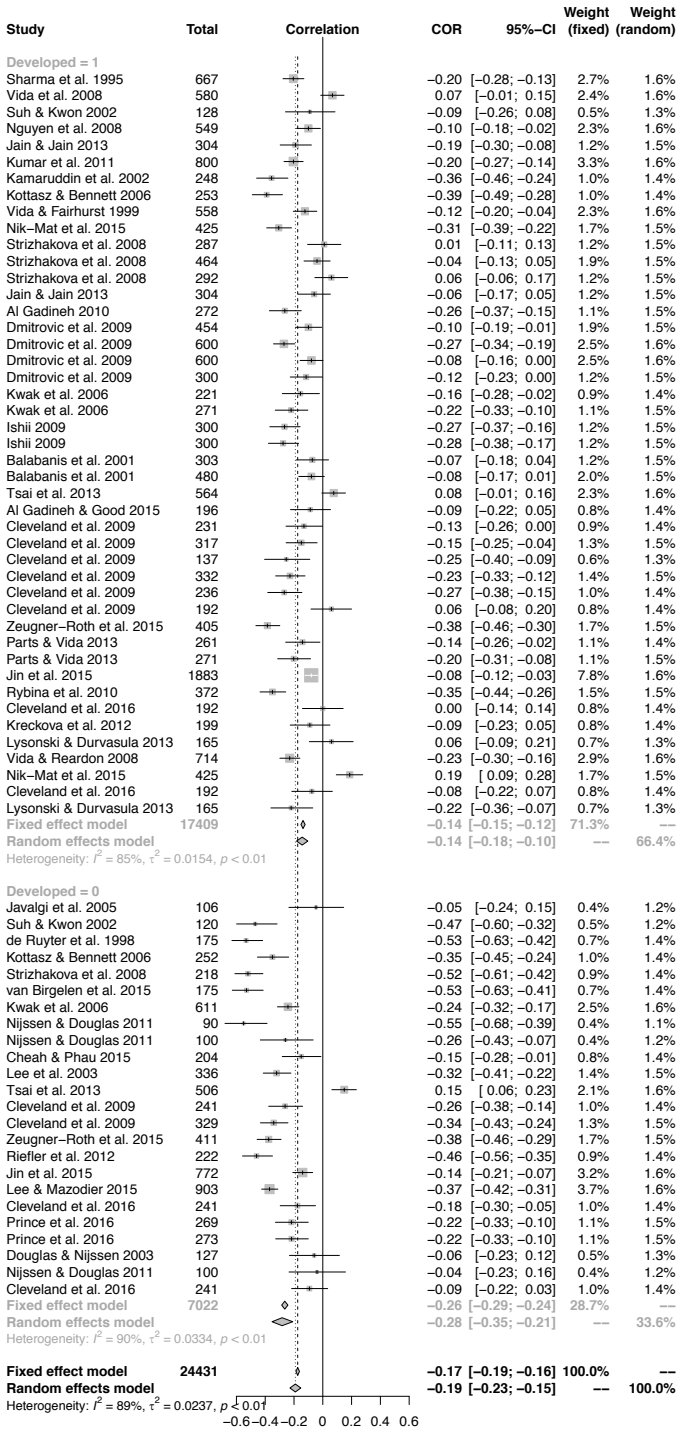
Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Continent = 2	19	-0.1679	[-0.1912; -0.1445]	146.27	87.7%
Continent = 1	31	-0.1973	[-0.2155; -0.1790]	290.43	89.7%
Continent = 0	10	-0.1940	[-0.2283; -0.1593]	115.65	92.2%
Continent = 5	2	-0.3200	[-0.4030; -0.2317]	12.56	92.0%
Continent = 3	3	-0.0054	[-0.0874; 0.0768]	1.76	0.0%
Continent = 9	2	-0.0975	[-0.1351; -0.0597]	2.01	50.4%
Continent = 4	2	-0.0816	[-0.1884; 0.0271]	6.52	84.7%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	53.37	6	< 0.0001		
Within groups	575.21	62	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Continent = 2	19	-0.1796	[-0.2462; -0.1113]	146.27	87.7%
Continent = 1	31	-0.2059	[-0.2631; -0.1473]	290.43	89.7%
Continent = 0	10	-0.2322	[-0.3518; -0.1050]	115.65	92.2%
Continent = 5	2	-0.3139	[-0.5811; 0.0144	12.56	92.0%
Continent = 3	3	-0.0054	[-0.0874; 0.0768]	1.76	0.0%
Continent = 9	2	-0.1038	[-0.1610; -0.0460]	2.01	50.4%
Continent = 4	2	-0.0816	[-0.3451; 0.1938]	6.52	84.7%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	21.42	6	0.0015		



D3.4.1 Forest plot of international values for moderator continent

D3.5 Analysis of international values for moderator developed

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Developed = 1	45	-0.1372	[-0.1518; -0.1226]	300.88	85.4%
Developed = 0	24	-0.2642	[-0.2859; -0.2422]	240.71	90.4%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	87.00	1	< 0.0001		
Within groups	541.59	67	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Developed = 1	45	-0.1433	[-0.1822; -0.1039]	300.88	85.4%
Developed = 0	24	-0.2824	[-0.3528; -0.2089]	240.71	90.4%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	10.60	1	0.0011		



D3.5.1 Forest plot of international values for moderator developed

D3.6 Analysis of international values for moderator urban

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Urban = 0	42	-0.1672	[-0.1822; -0.1521]	511.10	92.0%
Urban = 1	27	-0.1884	[-0.2092; -0.1673]	114.90	77.4%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	2.58	1	0.1083		
Within groups	626.00	67	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Urban = 0	42	-0.1882	[-0.2417; -0.1336]	511.10	92.0%
Urban = 1	27	-0.1949	[-0.2391; -0.1499]	114.90	77.4%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	0.03	1	0.8524		

D3.7 Analysis of international values for moderator selection

Results of subgroups (fixed effect model)

	k	COR	95%-CI	Q	I^2
Selection = 2	1	-0.2050	[-0.2766; -0.1311]	0.00	-
Selection = 4	17	-0.1781	[-0.2085; -0.1474]	54.54	70.7%
Selection = 0	18	-0.2063	[-0.2305; -0.1818]	238.71	92.9%
Selection = 1	17	-0.1499	[-0.1728; -0.1269]	127.74	87.5%
Selection = 5	12	-0.2196	[-0.2450; -0.1939]	92.71	88.1%
Selection = 3	3	0.0446	[-0.0092; 0.0980]	25.00	92.0%
Selection = 9	1	-0.0600	[-0.2318; 0.1154]	0.00	-

Test for subgroup differences (fixed effect model)

	Q	d.f.	p-value
Between groups	89.88	6	< 0.0001
Within groups	538.70	62	< 0.0001

Test for subgroups (random effects model)

	k	COR	95%-CI	Q	I^2
Selection = 2	1	-0.2050	[-0.2766; -0.1311]	0.00	-
Selection = 4	17	-0.1648	[-0.2214; -0.1070]	54.54	70.7%
Selection = 0	18	-0.2584	[-0.3472; -0.1651]	238.71	92.9%
Selection = 1	17	-0.1808	[-0.2477; -0.1122]	127.74	87.5%
Selection = 5	12	-0.2041	[-0.2785; -0.1272]	92.71	88.1%
Selection = 3	3	0.0061	[-0.1862; 0.1980]	25.00	92.0%
Selection = 9	1	-0.0600	[-0.2318; 0.1154]	0.00	-

Test for subgroup differences (random effects model)

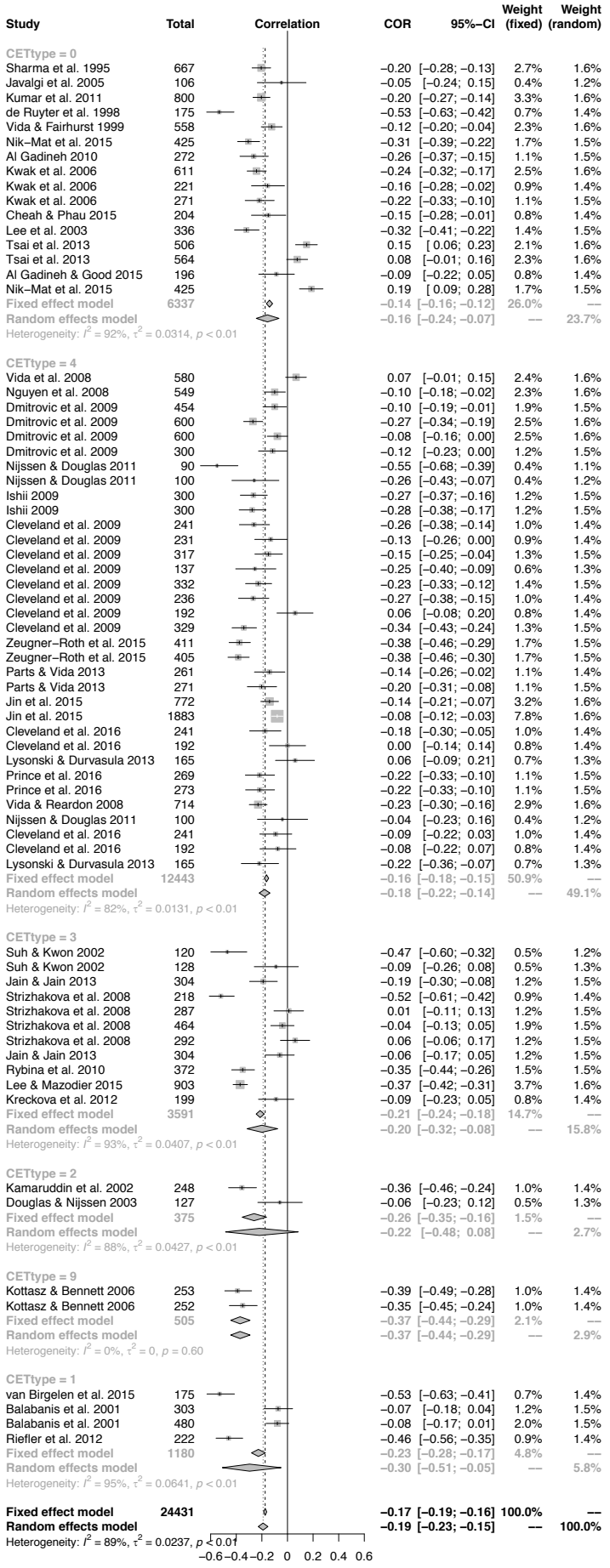
	Q	d.f.	p-value
Between groups	9.21	6	0.1621

D3.8 Analysis of international values for moderator characteristics

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Characteristics = 0	53	-0.1831	[-0.1974; -0.1687]	496.54	89.5%
Characteristics = 1	16	-0.1517	[-0.1748; -0.1284]	126.93	88.2%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	5.11	1	0.0238		
Within groups	623.47	67	< 0.0001		
Test for subgroups (random effects model)					
	K	COR	95%-CI	Q	I^2
Characteristics = 0	53	-0.1920	[-0.2365; -0.1466]	496.54	89.5%
Characteristics = 1	16	-0.1863	[-0.2560; -0.1148]	126.93	88.2%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	0.02	1	0.8949		

D3.9 Analysis of international values for moderator CETtype

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
CETtype = 0	16	-0.1405	[-0.1646; -0.1162]	196.91	92.4%
CETtype = 4	34	-0.1641	[-0.1812; -0.1468]	186.79	82.3%
CETtype = 3	11	-0.2134	[-0.2446; -0.1819]	136.40	92.7%
CETtype = 2	2	-0.2612	[-0.3535; -0.1639]	8.03	87.5%
CETtype = 9	2	-0.3702	[-0.4434; -0.2922]	0.27	0.00%
CETtype = 1	4	-0.2272	[-0.2809; -0.1722]	56.19	94.7%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	43.99	5	< 0.0001		
Within groups	584.59	63	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
CETtype = 0	16	-0.1563	[-0.2439; -0.0662]	196.91	92.4%
CETtype = 4	34	-0.1792	[-0.2212; -0.1365]	186.79	82.3%
CETtype = 3	11	-0.1995	[-0.3161; -0.0770]	136.40	92.7%
CETtype = 2	2	-0.2190	[-0.4841; 0.0830]	8.03	87.5%
CETtype = 9	2	-0.3702	[-0.4434; -0.2922]	0.27	0.00%
CETtype = 1	4	-0.2963	[-0.5088; -0.0499]	56.19	94.7%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	19.38	5	0.0016		


Study
Total
Correlation
COR
95%–CI
Weight (fixed)
Weight (random)
CETtype = 0
Sharma et al. 1995 667 −0.20 [−0.28; −0.13] 2.7% 1.6%
Javalgi et al. 2005 106 −0.05 [−0.24; 0.15] 0.4% 1.2%
Kumar et al. 2011 800 −0.20 [−0.27; −0.14] 3.3% 1.6%
de Ruyter et al. 1998 175 −0.53 [−0.63; −0.42] 0.7% 1.4%
Vida & Fairhurst 1999 558 −0.12 [−0.20; −0.04] 2.3% 1.6%
Nik–Mat et al. 2015 425 −0.31 [−0.39; −0.22] 1.7% 1.5%
Al Gadineh 2010 272 −0.26 [−0.37; −0.15] 1.1% 1.5%
Kwak et al. 2006 611 −0.24 [−0.32; −0.17] 2.5% 1.6%
Kwak et al. 2006 221 −0.16 [−0.28; −0.02] 0.9% 1.4%
Kwak et al. 2006 271 −0.22 [−0.33; −0.10] 1.1% 1.5%
Cheah & Phau 2015 204 −0.15 [−0.28; −0.01] 0.8% 1.4%
Lee et al. 2003 336 −0.32 [−0.41; −0.22] 1.4% 1.5%
Tsai et al. 2013 506 0.15 [0.06; 0.23] 2.1% 1.6%
Tsai et al. 2013 564 0.08 [−0.01; 0.16] 2.3% 1.6%
Al Gadineh & Good 2015 196 −0.09 [−0.22; 0.05] 0.8% 1.4%
Nik–Mat et al. 2015 425 0.19 [0.09; 0.28] 1.7% 1.5%
Fixed effect model 6337 −0.14 [−0.16; −0.12] 26.0% –
Random effects model −0.16 [−0.24; −0.07] – 23.7%
Heterogeneity: I^2 = 92%, τ^2 = 0.0314, p < 0.01
CETtype = 4
Vida et al. 2008 580 0.07 [−0.01; 0.15] 2.4% 1.6%
Nguyen et al. 2008 549 −0.10 [−0.18; −0.02] 2.3% 1.6%
Dmitrovic et al. 2009 454 −0.10 [−0.19; −0.01] 1.9% 1.5%
Dmitrovic et al. 2009 600 −0.27 [−0.34; −0.19] 2.5% 1.6%
Dmitrovic et al. 2009 600 −0.08 [−0.16; 0.00] 2.5% 1.6%
Dmitrovic et al. 2009 300 −0.12 [−0.23; 0.00] 1.2% 1.5%
Nijssen & Douglas 2011 90 −0.55 [−0.68; −0.39] 0.4% 1.1%
Nijssen & Douglas 2011 100 −0.26 [−0.43; −0.07] 0.4% 1.2%
Ishii 2009 300 −0.27 [−0.37; −0.16] 1.2% 1.5%
Ishii 2009 300 −0.28 [−0.38; −0.17] 1.2% 1.5%
Cleveland et al. 2009 241 −0.26 [−0.38; −0.14] 1.0% 1.4%
Cleveland et al. 2009 231 −0.13 [−0.26; 0.00] 0.9% 1.4%
Cleveland et al. 2009 317 −0.15 [−0.25; −0.04] 1.3% 1.5%
Cleveland et al. 2009 137 −0.25 [−0.40; −0.09] 0.6% 1.3%
Cleveland et al. 2009 332 −0.23 [−0.33; −0.12] 1.4% 1.5%
Cleveland et al. 2009 236 −0.27 [−0.38; −0.15] 1.0% 1.4%
Cleveland et al. 2009 192 0.06 [−0.08; 0.20] 0.8% 1.4%
Cleveland et al. 2009 329 −0.34 [−0.43; −0.24] 1.3% 1.5%
Zeugner–Roth et al. 2015 411 −0.38 [−0.46; −0.29] 1.7% 1.5%
Zeugner–Roth et al. 2015 405 −0.38 [−0.46; −0.30] 1.7% 1.5%
Parts & Vida 2013 261 −0.14 [−0.26; −0.02] 1.1% 1.4%
Parts & Vida 2013 271 −0.20 [−0.31; −0.08] 1.1% 1.5%
Jin et al. 2015 772 −0.14 [−0.21; −0.07] 3.2% 1.6%
Jin et al. 2015 1883 −0.08 [−0.12; −0.03] 7.8% 1.6%
Cleveland et al. 2016 241 −0.18 [−0.30; −0.05] 1.0% 1.4%
Cleveland et al. 2016 192 0.00 [−0.14; 0.14] 0.8% 1.4%
Lysonski & Durvasula 2013 165 0.06 [−0.09; 0.21] 0.7% 1.3%
Prince et al. 2016 269 −0.22 [−0.33; −0.10] 1.1% 1.5%
Prince et al. 2016 273 −0.22 [−0.33; −0.10] 1.1% 1.5%
Vida & Reardon 2008 714 −0.23 [−0.30; −0.16] 2.9% 1.6%
Nijssen & Douglas 2011 100 −0.04 [−0.23; 0.16] 0.4% 1.2%
Cleveland et al. 2016 241 −0.09 [−0.22; 0.03] 1.0% 1.4%
Cleveland et al. 2016 192 −0.08 [−0.22; 0.07] 0.8% 1.4%
Lysonski & Durvasula 2013 165 −0.22 [−0.36; −0.07] 0.7% 1.3%
Fixed effect model 12443 −0.16 [−0.18; −0.15] 50.9% –
Random effects model −0.18 [−0.22; −0.14] – 49.1%
Heterogeneity: I^2 = 82%, τ^2 = 0.0131, p < 0.01
CETtype = 3
Suh & Kwon 2002 120 −0.47 [−0.60; −0.32] 0.5% 1.2%
Suh & Kwon 2002 128 −0.09 [−0.26; 0.08] 0.5% 1.3%
Jain & Jain 2013 304 −0.19 [−0.30; −0.08] 1.2% 1.5%
Strizhakova et al. 2008 218 −0.52 [−0.61; −0.42] 0.9% 1.4%
Strizhakova et al. 2008 287 0.01 [−0.11; 0.13] 1.2% 1.5%
Strizhakova et al. 2008 464 −0.04 [−0.13; 0.05] 1.9% 1.5%
Strizhakova et al. 2008 292 0.06 [−0.06; 0.17] 1.2% 1.5%
Jain & Jain 2013 304 −0.06 [−0.17; 0.05] 1.2% 1.5%
Rybina et al. 2010 372 −0.35 [−0.44; −0.26] 1.5% 1.5%
Lee & Mazodier 2015 903 −0.37 [−0.42; −0.31] 3.7% 1.6%
Kreckova et al. 2012 199 −0.09 [−0.23; 0.05] 0.8% 1.4%
Fixed effect model 3591 −0.21 [−0.24; −0.18] 14.7% –
Random effects model −0.20 [−0.32; −0.08] – 15.8%
Heterogeneity: I^2 = 93%, τ^2 = 0.0407, p < 0.01
CETtype = 2
Kamaruddin et al. 2002 248 −0.36 [−0.46; −0.24] 1.0% 1.4%
Douglas & Nijssen 2003 127 −0.06 [−0.23; 0.12] 0.5% 1.3%
Fixed effect model 375 −0.26 [−0.35; −0.16] 1.5% –
Random effects model −0.22 [−0.48; 0.08] – 2.7%
Heterogeneity: I^2 = 88%, τ^2 = 0.0427, p < 0.01
CETtype = 9
Kottasz & Bennett 2006 253 −0.39 [−0.49; −0.28] 1.0% 1.4%
Kottasz & Bennett 2006 252 −0.35 [−0.45; −0.24] 1.0% 1.4%
Fixed effect model 505 −0.37 [−0.44; −0.29] 2.1% –
Random effects model −0.37 [−0.44; −0.29] – 2.9%
Heterogeneity: I^2 = 0%, τ^2 = 0, p = 0.60
CETtype = 1
van Birgelen et al. 2015 175 −0.53 [−0.63; −0.41] 0.7% 1.4%
Balabanis et al. 2001 303 −0.07 [−0.18; 0.04] 1.2% 1.5%
Balabanis et al. 2001 480 −0.08 [−0.17; 0.01] 2.0% 1.5%
Riefler et al. 2012 222 −0.46 [−0.56; −0.35] 0.9% 1.4%
Fixed effect model 1180 −0.23 [−0.28; −0.17] 4.8% –
Random effects model −0.30 [−0.51; −0.05] – 5.8%
Heterogeneity: I^2 = 95%, τ^2 = 0.0641, p < 0.01
Fixed effect model 24431 −0.17 [−0.19; −0.16] 100.0% –
Random effects model −0.19 [−0.23; −0.15] – 100.0%
Heterogeneity: I^2 = 89%, τ^2 = 0.0237, p < 0.01
−0.6 −0.4 −0.2 0 0.2 0.4 0.6

D3.9.1 Forest plot of international values for moderator CETtype

D3.10 Analysis of international values for moderator CETcoded

Results of subgroups (fixed effect model)

	k	COR	95%-CI	Q	I^2
CETcoded = 3	3	-0.2197	[-0.2751; -0.1628]	9.17	78.2%
CETcoded = 1	17	-0.1917	[-0.2186; -0.1645]	203.42	92.1%
CETcoded = 9	26	-0.1686	[-0.1884; -0.1486]	163.40	84.7%
CETcoded = 0	7	-0.1647	[-0.2047; -0.1242]	20.30	70.4%
CETcoded = 2	14	-0.1583	[-0.1815; -0.1348]	208.10	93.8%
CETcoded = 4	2	-0.4076	[-0.5206; -0.2805]	5.69	82.4%

Test for subgroup differences (fixed effect model)

	Q	d.f.	p-value
Between groups	18.50	5	0.0024
Within groups	610.08	63	< 0.0001

Test for subgroups (random effects model)

	k	COR	95%-CI	Q	I^2
CETcoded = 3	3	-0.2207	[-0.3483; -0.0851]	9.17	78.2%
CETcoded = 1	17	-0.2230	[-0.3178; -0.1238]	203.42	92.1%
CETcoded = 9	26	-0.1695	[-0.2209; -0.1171]	163.40	84.7%
CETcoded = 0	7	-0.1690	[-0.2451; -0.0908]	20.30	70.4%
CETcoded = 2	14	-0.1729	[-0.2681; -0.0744]	208.10	93.8%
CETcoded = 4	2	-0.4141	[-0.6560; -0.0951]	5.69	82.4%

Test for subgroup differences (random effects model)

	Q	d.f.	p-value
Between groups	3.48	5	0.6264

D4 Collectivism

D4.1 Analysis of collectivism for moderator year

Results of subgroups (fixed effect model)

	k	COR	95%-CI	Q	I^2
Yearcoded = 0	3	0.2066	[0.1577; 0.2545]	0.78	0.0%
Yearcoded = 1	4	0.0941	[0.0372; 0.1505]	65.04	95.4%
Yearcoded = 2	7	0.2548	[0.2217; 0.2873]	34.16	82.4%

Test for subgroup differences (fixed effect model)

	Q	d.f.	p-value
Between groups	23.58	2	< 0.0001
Within groups	99.98	11	< 0.0001

Test for subgroups (random effects model)

	k	COR	95%-CI	Q	I^2
Yearcoded = 0	3	0.2066	[0.1577; 0.2545]	0.78	0.0%
Yearcoded = 1	4	0.1588	[-0.1184; 0.4131]	65.04	95.4%
Yearcoded = 2	7	0.2329	[0.1488; 0.3136]	34.16	82.4%

Test for subgroup differences (random effects model)

	Q	d.f.	p-value
Between groups	0.44	2	0.8022

D4.2 Analysis of collectivism for moderator continent

Results of subgroups (fixed effect model)

	k	COR	95%-CI	Q	I^2
Continent = 2	10	0.2065	[0.1802; 0.2326]	120.28	92.5%
Continent = 1	3	0.2566	[0.1681; 0.3409]	2.12	5.9%
Continent = 0	1	0.2100	[0.0778; 0.3350]	0.00	--

Test for subgroup differences (fixed effect model)

	Q	d.f.	p-value
Between groups	1.15	2	0.5628
Within groups	122.41	11	< 0.0001

Test for subgroups (random effects model)

	k	COR	95%-CI	Q	I^2
Continent = 2	10	0.1867	[0.0875; 0.2823]	120.28	92.5%
Continent = 1	3	0.2573	[0.1659; 0.3443]	2.12	5.9%
Continent = 0	0	0.2100	[0.0778; 0.3350]	0.00	--

Test for subgroup differences (random effects model)

	Q	d.f.	p-value
Between groups	1.13	2	0.5685

D4.3 Analysis of collectivism for moderator continent, friends excluded

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Continent = 2	9	0.2429	[0.2158; 0.2696]	37.67	78.8%
Continent = 1	3	0.2566	[0.1681; 0.3409]	2.12	5.9%
Continent = 0	1	0.2100	[0.0778; 0.3350]	0.00	--
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	0.35	2	0.8405		
Within groups	39.80	10	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Continent = 2	9	0.2322	[0.1715; 0.2912]	37.67	78.8%
Continent = 1	3	0.2573	[0.1659; 0.3443]	2.12	5.9%
Continent = 0	0	0.2100	[0.0778; 0.3350]	0.00	--
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	0.39	2	0.8234		

D4.4 Analysis of collectivism for moderator developed

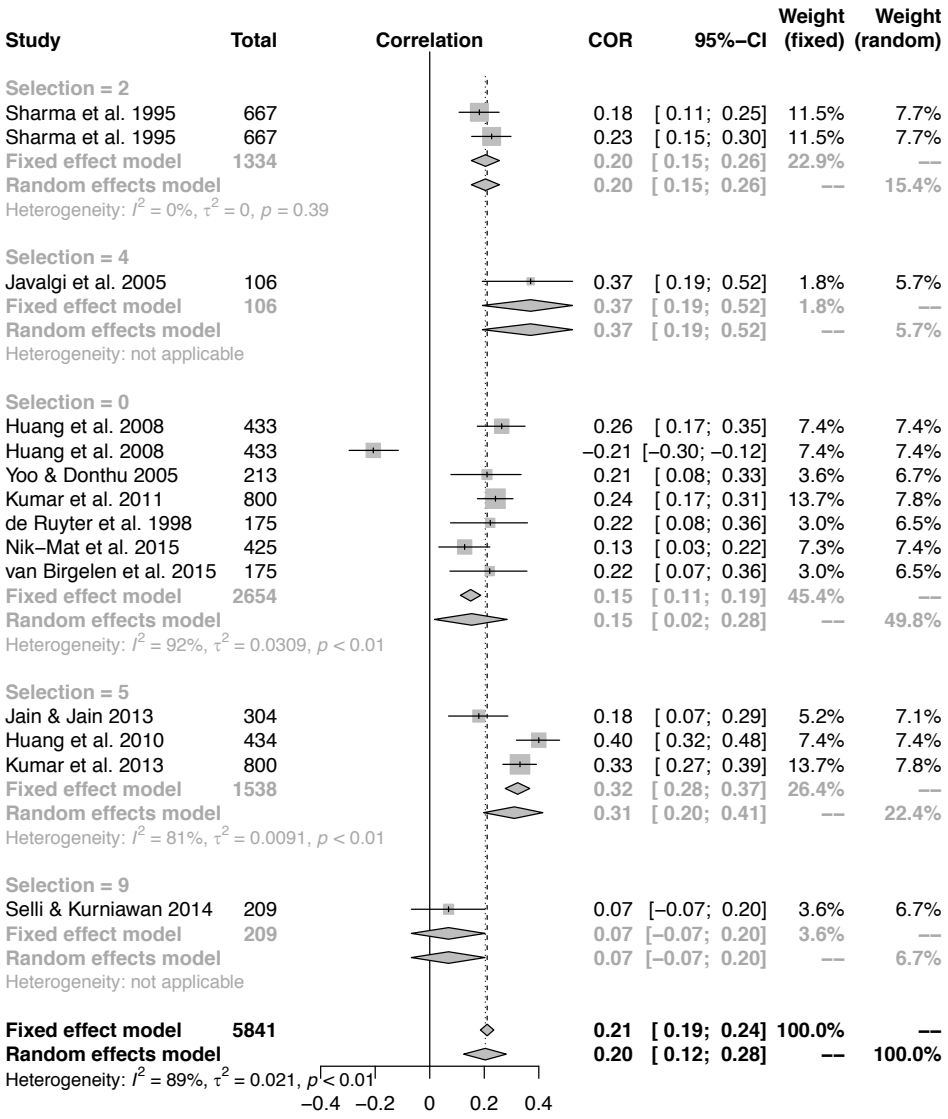
Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Developed = 1	10	0.2065	[0.1802; 0.2326]	120.28	92.5%
Developed = 0	4	0.2418	[0.1686; 0.3124]	2.47	0.0%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	0.80	1	0.3702		
Within groups	122.76	12	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Developed = 1	10	0.1867	[0.0875; 0.2823]	120.28	92.5%
Developed = 0	4	0.2418	[0.1686; 0.3124]	2.47	0.0%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	0.80	1	0.3725		

D4.5 Analysis of collectivism for moderator urban

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Urban = 0	8	0.2569	[0.2255; 0.2877]	31.18	77.6%
Urban = 1	6	0.1402	[0.1003; 0.1797]	71.75	93.0%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	20.62	1	< 0.0001		
Within groups	102.93	12	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Urban = 0	8	0.2572	[0.1866; 0.3251]	31.18	77.6%
Urban = 1	6	0.1294	[-0.0291; 0.2816]	71.75	93.0%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	2.20	1	0.1381		

D4.6 Analysis of collectivism for moderator selection

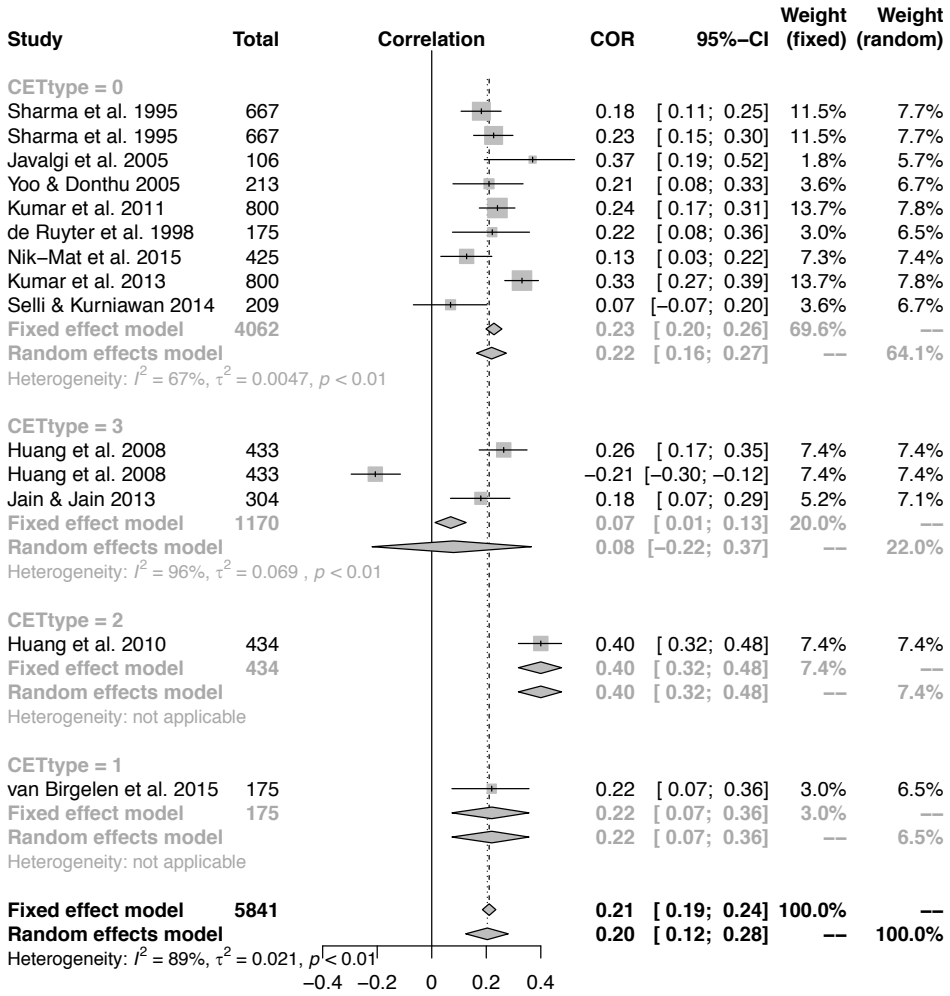
Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Selection = 2	2	0.2046	[0.1526; 0.2555]	0.73	0.0%
Selection = 4	1	0.3700	[0.1929; 0.5238]	0.00	--
Selection = 0	7	0.1501	[0.1126; 0.1872]	72.24	91.7%
Selection = 5	3	0.3226	[0.2770; 0.3667]	10.50	80.9%
Selection = 9	1	0.0690	[-0.0673; 0.2028]	0.00	--
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	40.09	4	< 0.0001		
Within groups	83.47	9	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Selection = 2	2	0.2046	[0.1526; 0.2555]	0.73	0.0%
Selection = 4	1	0.3700	[0.1929; 0.5238]	0.00	--
Selection = 0	7	0.1535	[0.0175; 0.2840]	72.24	91.7%
Selection = 5	3	0.3105	[0.1979; 0.4150]	10.50	80.9%
Selection = 9	1	0.0690	[-0.0673; 0.2028]	0.00	--
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	11.25	4	0.0239		



D4.6.1 Forest plot of collectivism for moderator selection

D4.7 Analysis of collectivism for moderator CETtype

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
CETtype = 0	9	0.2283	[0.1989; 0.2574	24.24	67.0%
CETtype = 3	3	0.0694	[0.0120; 0.1264]	54.76	96.3%
CETtype = 2	1	0.4000	[0.3178; 0.4762]	0.00	--
CETtype = 1	1	0.2200	[0.0741; 0.3567]	0.00	--
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	44.56	3	< 0.0001		
Within groups	79.00	10	< 0.0001		
Test for subgroups (random effects model)					
	K	COR	95%-CI	Q	I^2
CETtype = 0	9	0.2197	[0.1645; 0.2736]	24.24	67.0%
CETtype = 3	3	0.0801	[-0.2190; 0.3655]	54.76	96.3%
CETtype = 2	1	0.4000	[0.3178; 0.4762]	0.00	--
CETtype = 1	1	0.2200	[0.0741; 0.3567]	0.00	--
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	14.58	3	0.0022		



D4.7.1 Forest plot of collectivism for moderator CETtype

D4.8 Analysis of collectivism for moderator CETcoded

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
CETcoded = 3	2	0.2046	[0.1526; 0.2555]	0.73	0.0%
CETcoded = 1	5	0.3066	[0.2518; 0.3594]	10.62	62.3%
CETcoded = 9	5	0.1895	[0.1526; 0.2259]	95.97	95.8%
CETcoded = 2	5	0.1498	[0.0778; 0.2201]	0.50	0.0%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	15.74	3	0.0013		
Within groups	107.82	10	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
CETcoded = 3	2	0.2046	[0.1526; 0.2555]	0.73	0.0%
CETcoded = 1	5	0.2895	[0.1939; 0.3796]	10.62	62.3%
CETcoded = 9	5	0.1450	[-0.0455; 0.3252]	95.97	95.8%
CETcoded = 2	2	0.1498	[0.0778; 0.2201]	0.50	0.0%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	5.69	3	0.1278		

D5 Materialism

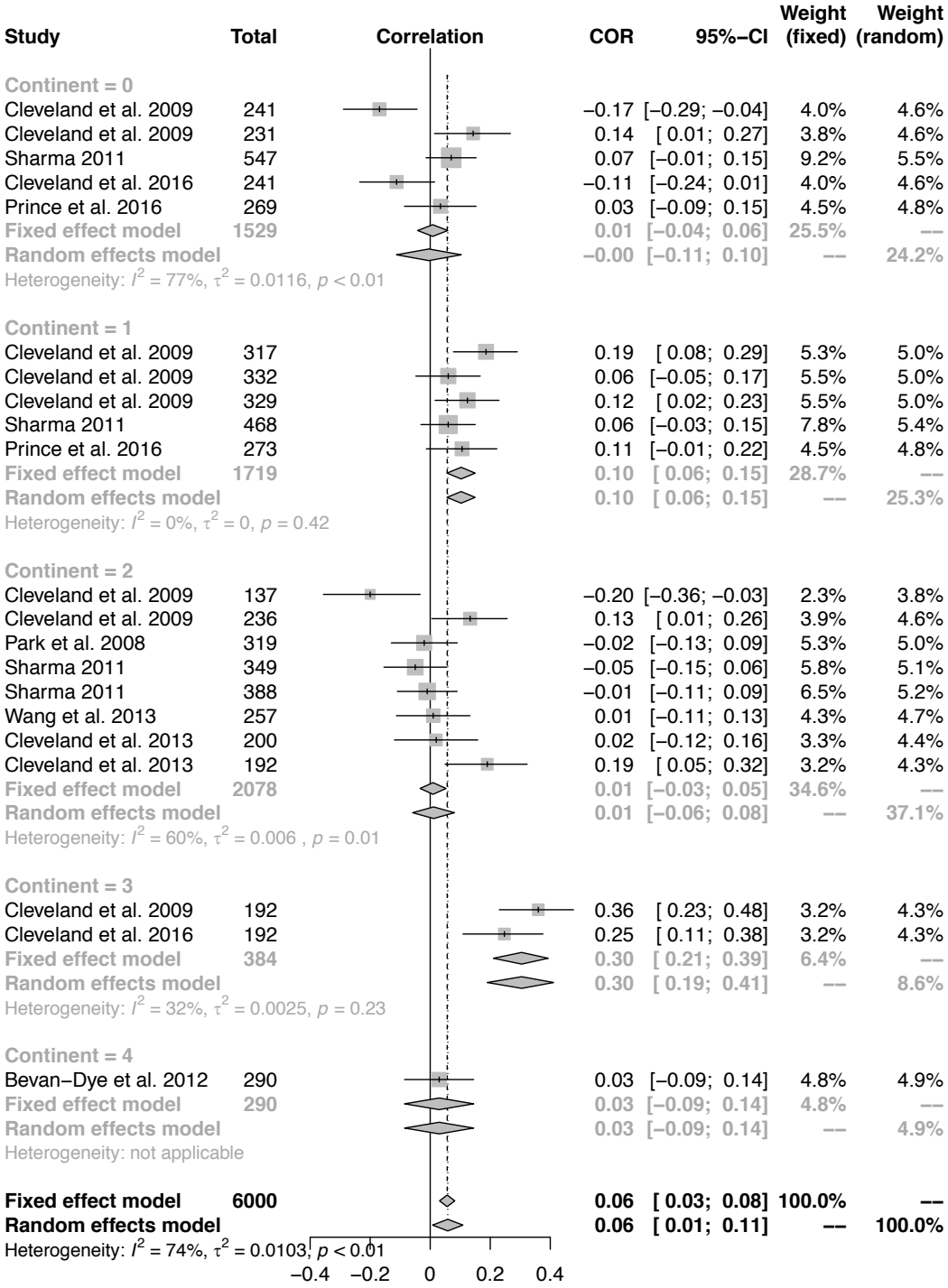
D5.1 Analysis of materialism for moderator year

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Yearcoded = 1	9	0.0781	[0.0375; 0.1185]	51.54	84.5%
Yearcoded = 2	12	0.0427	[0.0102; 0.0751]	24.39	54.9%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	1.79	1	0.1814		
Within groups	75.93	19	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Yearcoded = 1	9	0.0726	[-0.0317; 0.1754]	51.54	84.5%
Yearcoded = 2	12	0.0456	[-0.0037; 0.0946]	24.39	54.9%

Test for subgroup differences (random effects model)			
	Q	d.f.	p-value
Between groups	0.21	1	0.6454

D5.2 *Analysis of materialism for moderator continent*

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Continent = 0	5	0.0083	[-0.0420; 0.0587]	17.54	77.2%
Continent = 1	5	0.1030	[0.0558; 0.1497]	3.90	0.0%
Continent = 2	8	0.0094	[-0.0338; 0.0526]	17.62	60.3%
Continent = 3	2	0.3046	[0.2105; 0.3930]	1.47	31.9%
Continent = 4	1	0.0300	[-0.0855; 0.1447]	0.00	--
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	37.18	4	< 0.0001		
Within groups	40.53	16	0.0007		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Continent = 0	5	-0.0045	[-0.1123; 0.1034]	17.54	77.2%
Continent = 1	5	0.1030	[-0.0558; 0.1497]	3.90	0.0%
Continent = 2	8	0.0112	[-0.0585; 0.0808]	17.62	60.3%
Continent = 3	2	0.3046	[0.1900; 0.4109]	1.47	31.9%
Continent = 4	1	0.0300	[-0.0855; 0.1447]	0.00	--
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	21.88	4	0.0002		



D5.2.1 *Forest plot of materialism for moderator continent*

D5.3 Analysis of materialism for moderator developed

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Developed = 0	7	0.0328	[-0.0076; 0.0732]	20.19	70.3%
Developed = 1	14	0.0719	[0.0393; 0.1044]	55.35	76.5%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	2.18	1	0.1401		
Within groups	75.54	19	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Developed = 0	7	0.0213	[-0.0541; 0.0965]	20.19	70.3%
Developed = 1	14	0.0793	[0.0113; 0.1466]	55.35	76.5%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	1.26	1	0.2625		

D5.4 Analysis of materialism for moderator urban

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Urban = 1	12	0.0682	[0.0324; 0.1038]	66.80	83.5%
Urban = 0	9	0.0446	[0.0085; 0.0805]	10.08	20.6%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	0.83	1	0.3618		
Within groups	76.88	19	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Urban = 0	12	0.0663	[-0.0225; 0.1541]	66.80	83.5%
Urban = 1	9	0.0451	[0.0042; 0.0859]	10.08	20.6%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	0.18	1	1 0.6706		

D5.5Analysis of materialism for moderator selection

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Selection = 4	14	0.0607	[0.0304; 0.0909	70.48	81.6%
Selection = 1	2	0.0038	[-0.0759; 0.0834]	0.38	0.0%
Selection = 0	4	0.0785	[0.0137; 0.1426]	4.53	33.7%
Selection = 3	1	0.0340	[-0.0859; 0.1530]	0.00	--
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	2.33	3	0.5065		
Within groups	75.38	17	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Selection = 4	14	0.0621	[-0.0096; 0.1332]	70.48	81.6%
Selection = 1	2	0.0038	[-0.0759; 0.0834]	0.38	0.0%
Selection = 0	4	0.0795	[-0.0004; 0.1585]	4.53	33.7%
Selection = 3	1	0.0340	[-0.0859; 0.1530]	0.00	--
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	1.98	3	0.5761		

D5.6 Analysis of materialism for moderator characteristics

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Characteristics = 0	15	0.0801	[0.0475; 0.1125]	67.90	79.4%
Characteristics = 1	2	0.0038	[-0.0759; 0.0834]	0.38	0.0%
Characteristics = 3	4	0.0258	[-0.0212; 0.0727	4.10	26.8%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	5.34	2	0.0692		
Within groups	72.37	18	< 0.0001		
Test for subgroups (random effects model)					
	K	COR	95%-CI	Q	I^2
Characteristics = 0	15	0.0781	[0.0058; 0.1495]	67.90	79.4%
Characteristics = 1	2	0.0038	[-0.0759; 0.0834]	0.38	0.0%
Characteristics = 3	4	0.0236	[-0.0315; 0.0786]	4.10	26.8%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	2.12	2	0.3467		

D5.7 Analysis of materialism for moderator CETtype

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
CETtype = 4	14	0.0854	[0.0516; 0.1190]	66.55	80.5%
CETtype = 3	7	0.0192	[-0.0193; 0.0576]	4.17	0.0%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	6.45	1	0.0111		
Within groups	71.26	19	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
CETtype = 4	14	0.0830	[0.0059; 0.1590]	66.55	80.5%
CETtype = 3	7	0.0192	[-0.0193; 0.0576]	4.17	0.0%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	2.11	1	0.1459		

D5.8 Analysis of materialism for moderator CETcoded

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
CETcoded = 0	3	-0.0333	[-0.1022; 0.0358]	14.11	85.8%
CETcoded = 2	6	0.0647	[0.0161; 0.1129	16.55	69.8%
CETcoded = 1	7	0.0784	[0.0339; 0.1226]	33.28	82.0%
CETcoded = 9	3	0.0369	[-0.0302; 0.1037]	2.33	14.1%
CETcoded = 3	2	0.1013	[0.0292; 0.1723]	2.10	52.3%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	9.34	4	0.0531		
Within groups	68.37	16	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
CETcoded = 0	3	-0.0502	[-0.2311; 0.1340	14.11	85.8%
CETcoded = 2	6	0.0505	[-0.0403; 0.1404]	16.55	69.8%
CETcoded = 1	7	0.1037	[-0.0022; 0.2073]	33.28	82.0%
CETcoded = 9	3	0.0374	[-0.0351; 0.1095]	2.33	14.1%
CETcoded = 3	2	0.1166	[0.0006; 0.2295]	2.10	52.3%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		

Between groups	3.36	4	0.4996	

D6 Product Judgements Domestic

D6.1 Analysis of product judgment domestic for moderator yearcoded

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Yearcoded = 1	10	0.3212	[0.2902; 0.3515]	68.73	86.9%
Yearcoded = 2	10	0.2382	[0.2162; 0.2599]	135.88	93.4%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	18.30	1	< 0.0001		
Within groups	204.61	18	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Yearcoded = 1	10	0.3246	[0.2307; 0.4124]	68.73	86.9%
Yearcoded = 2	10	0.2475	[0.1586; 0.3324]	135.88	93.4%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	1.43	1	0.2320		

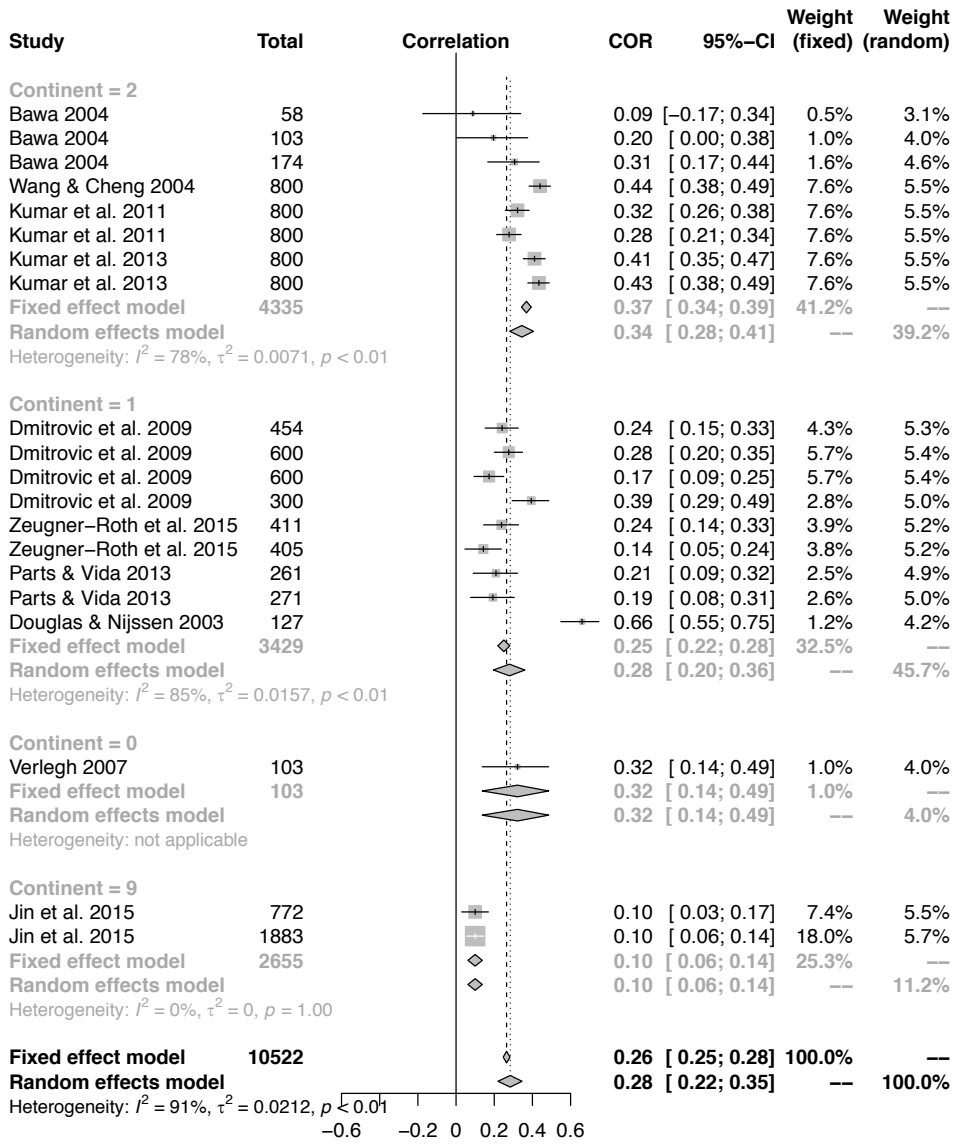
D6.2 Analysis of product judgement domestic for moderator continent

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Continent = 2	8	0.3686	[0.3425; 0.3941]	32.34	78.4%
Continent = 1	9	0.2504	[0.2187; 0.2816]	54.42	85.3%
Continent = 0	1	0.3220	[0.1370; 0.4853]	0.00	-
Continent = 9	2	0.1000	[0.0622; 0.1375]	0.00	0.0%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	131.16	3	< 0.0001		
Within groups	86.76	16	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Continent = 2	8	0.3448	[0.2812; 0.4053]	32.34	78.4%
Continent = 1	9	0.2799	[0.1955; 0.3602]	54.42	85.3%
Continent = 0	1	0.3220	[0.1955; 0.3602]	0.00	-

Continent = 9	2	0.1000	[0.0622; 0.1375]	0.00	0.0%

Test for subgroup differences (random effects model)

	Q	d.f.	p-value
Between groups	49.62	3	< 0.0001



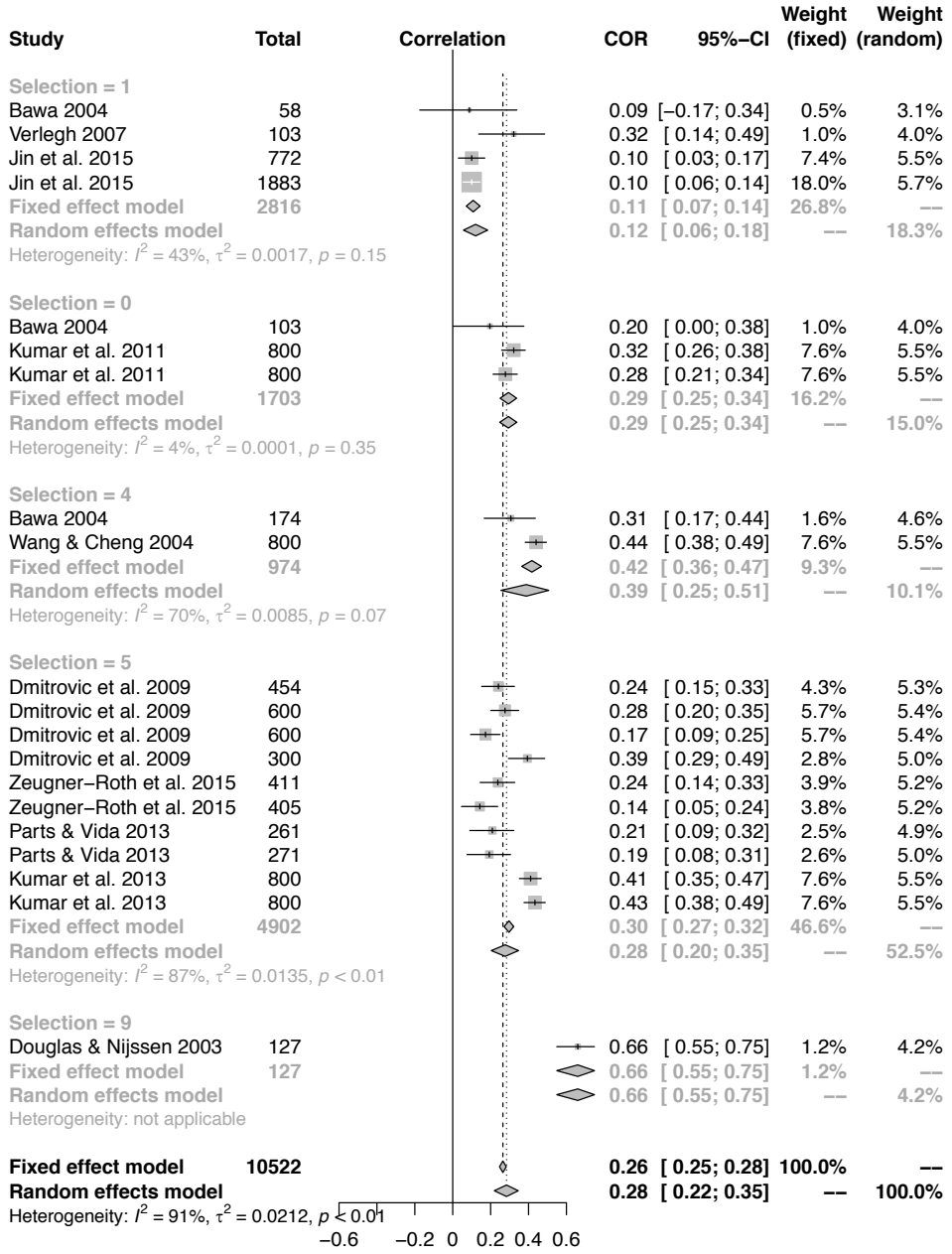
D6.2.1 Forest plot of product judgement domestic for moderator continent

D6.3 Analysis of product judgement domestic for moderator developed

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Developed = 1	16	0.2721	[0.2529; 0.2911]	165.43	90.9%
Developed = 0	4	0.2163	[0.1658; 0.2656]	53.20	94.4%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	4.28	1	0.0385		
Within groups	218.64	18	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Developed = 1	16	0.2733	[0.2055; 0.3384]	165.43	90.9%
Developed = 0	4	0.3433	[0.1078; 0.5423]	53.20	94.4%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	0.34	1	0.5589		

D6.4 Analysis of product judgement domestic for moderator selection

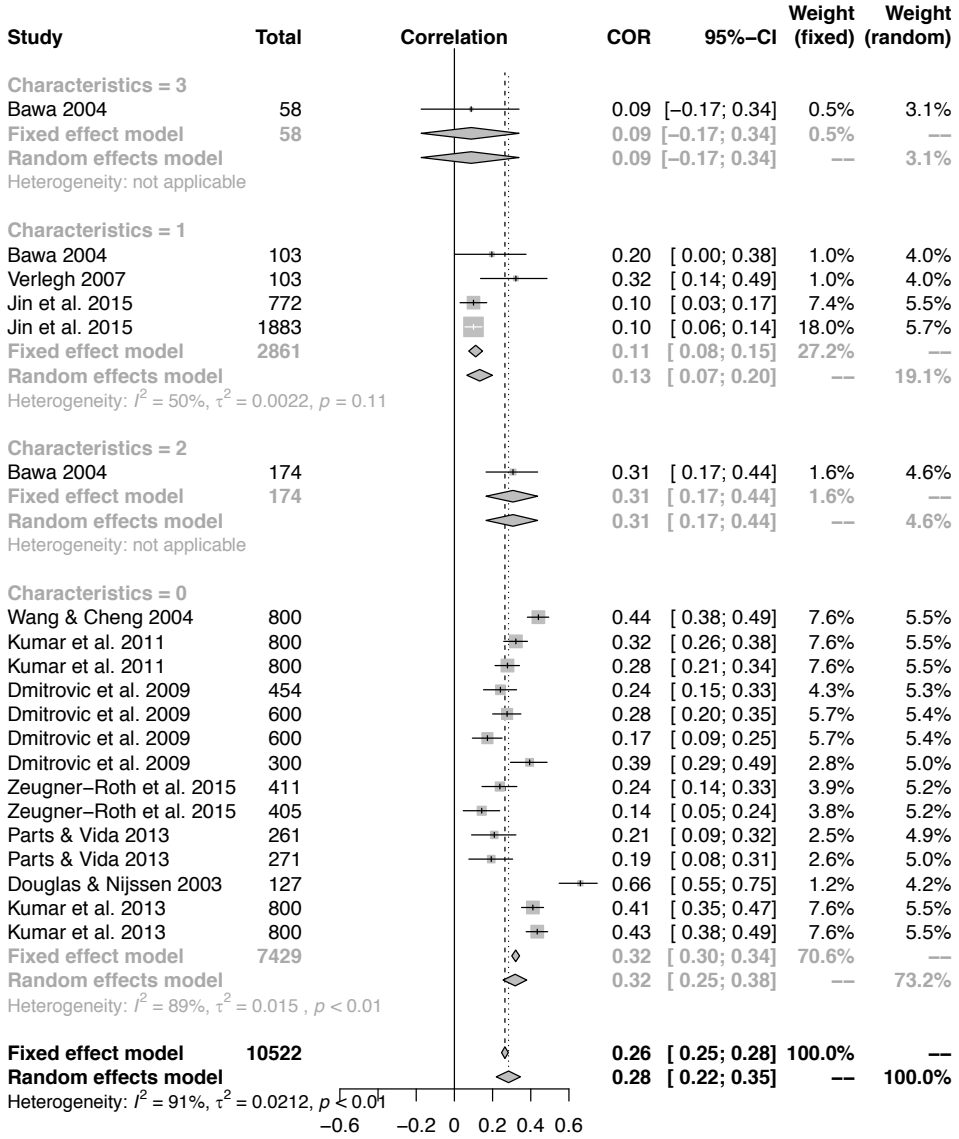
Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Selection = 1	4	0.1080	[0.0713; 0.1444]	5.28	43.2%
Selection = 0	3	0.2942	[0.2501; 0.3370]	2.09	4.5%
Selection = 4	2	0.4177	[0.3643; 0.4683]	3.38	70.4%
Selection = 5	10	0.2968	[0.2709; 0.3222]	67.33	86.6%
Selection = 9	1	0.6600	[0.5489; 0.7482]	0.00	-
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	144.84	4	< 0.0001		
Within groups	78.08	15	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Selection = 1	4	0.1209	[0.0566; 0.1843]	5.28	43.2%
Selection = 0	3	0.2938	[0.2480; 0.3382]	2.09	4.5%
Selection = 4	2	0.3881	[0.2547; 0.5070]	3.38	70.4%
Selection = 5	10	0.2769	[0.2033; 0.3473]	67.33	86.6%
Selection = 9	1	0.6600	[0.5489; 0.7482]	0.00	-
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	59.12	4	< 0.0001		



D6.4.1 Forest plot of product judgement domestic for moderator selection

D6.5 Analysis of product judgement domestic for moderator characteristics

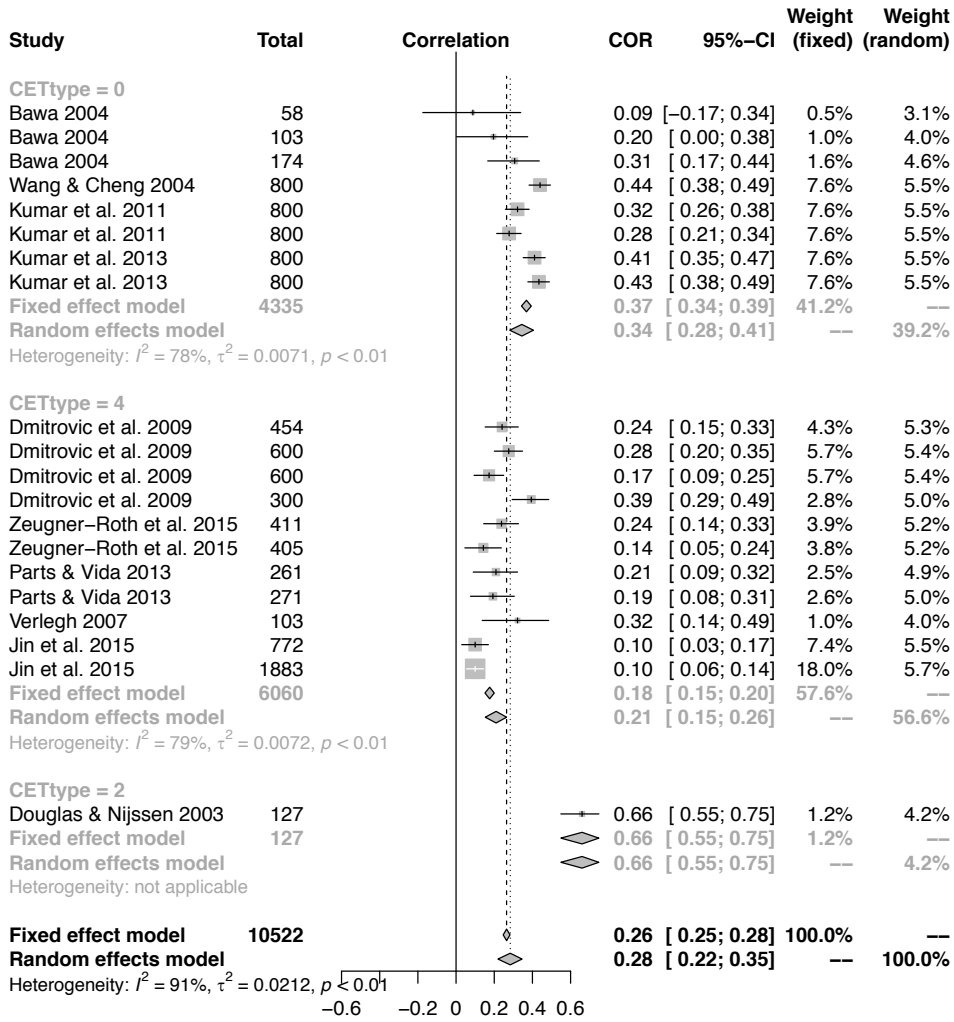
Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Characteristics = 3	1	0.0880	[-0.1743; 0.3386]	0.00	-
Characteristics = 2	4	0.1115	[0.0751; 0.1476]	6.03	50.3%
Characteristics = 1	1	0.3070	[0.1658; 0.4359]	0.00	-
Characteristics = 0	14	0.3211	[0.3005; 0.3414]	114.35	88.6%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	102.53	3	< 0.0001		
Within groups	120.39	16	< 0.0001		
Test for subgroups (random effects model)					
	K	COR	95%-CI	Q	I^2
Characteristics = 3	1	0.0880	[-0.1743; 0.3386]	0.00	-
Characteristics = 2	4	0.1327	[0.0650; 0.1992]	6.03	50.3%
Characteristics = 1	1	0.3070	[0.1658; 0.4359]	0.00	-
Characteristics = 0	14	0.3183	[0.2549; 0.3790]	114.35	88.6%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	18.02	3	0.0004		



D6.5.1 Forest plot of product judgement domestic for moderator characteristics

D6.6 Analysis of product judgement domestic for moderator CETtype

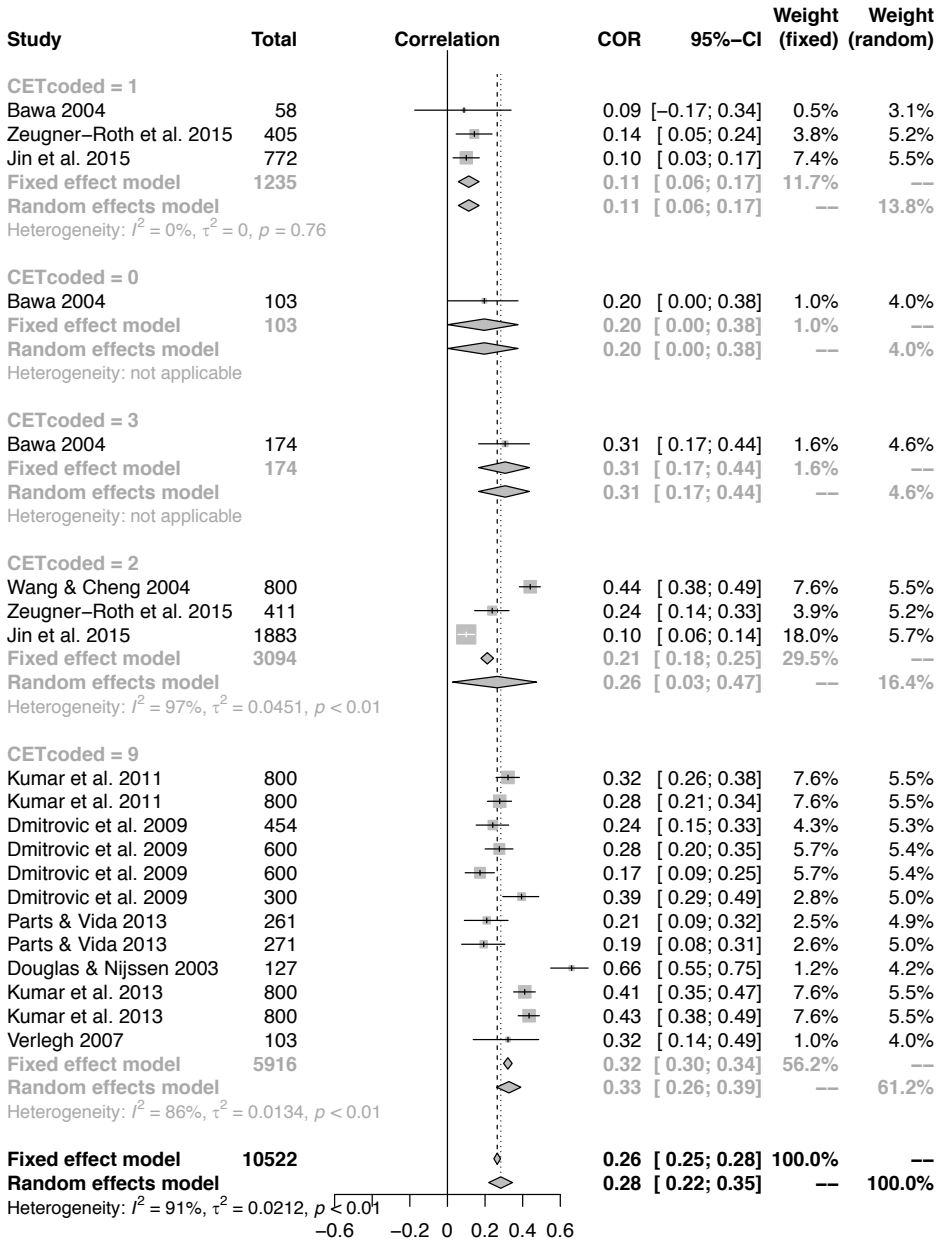
Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
CETtype = 0	8	0.3686	[0.3425; 0.3941]	32.34	78.4%
CETtype = 4	11	0.1759	[0.1513; 0.2002]	46.57	78.5%
CETtype = 2	1	0.6600	[0.5489; 0.7482]	0.00	-
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	144.01	2	< 0.0001		
Within groups	78.91	17	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
CETtype = 0	8	0.3448	[0.2812; 0.4053]	32.34	78.4%
CETtype = 4	11	0.2097	[0.1531; 0.2648]	46.57	78.5%
CETtype = 2	1	0.6600	[0.5489; 0.7482]	0.00	-
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	41.34	2	< 0.0001		



D6.6.1 Forest plot of product judgement domestic for moderator CETtype

D6.7 Analysis of product judgement domestic for moderator CETcoded

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
CETcoded = 1	3	0.1136	[0.0581; 0.1685]	0.54	0.00%
CETcoded = 0	1	0.1960	[0.0026; 0.3753]	0.00	-
CETcoded = 3	1	0.3070	[0.1658; 0.4359]	0.00	-
CETcoded = 4	3	0.2120	[0.1780; 0.2454]	77.77	97.4%
CETcoded = 9	12	0.3214	[0.2983; 0.3441]	81.21	86.5%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	63.40	4	< 0.0001		
Within groups	159.52	15	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
CETcoded = 1	3	0.1136	[0.0581; 0.1685]	0.54	0.00%
CETcoded = 0	1	0.1960	[0.0026; 0.3753]	0.00	-
CETcoded = 3	1	0.3070	[0.1658; 0.4359]	0.00	-
CETcoded = 4	3	0.2646	[0.0270; 0.4739]	77.77	97.4%
CETcoded = 9	12	0.3272	[0.2613; 0.3901]	81.21	86.5%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	25.88	4	< 0.0001		



D6.7.1 Forest plot of product judgement domestic for moderator CETcoded

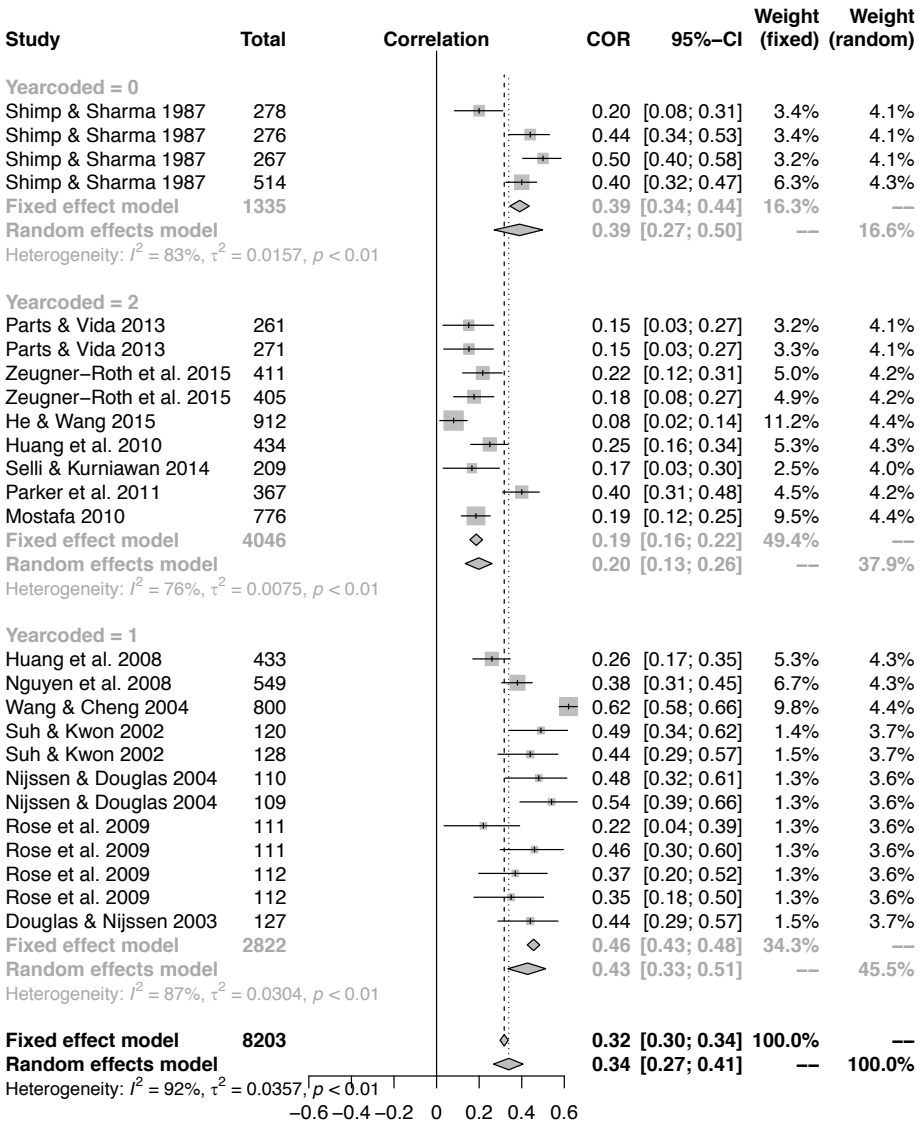
D8 PIWTB Domestic

D8.1 Analysis of PIWTB domestic for moderator construct

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Construct = 0	6	0.3264	[0.2851; 0.3665]	43.55	88.5%
Construct = 1	6	0.3166	[0.2865; 0.3462]	199.71	97.5%
Construct = 2	13	0.3134	[0.2795; 0.3465]	53.42	77.5%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	0.24	2	0.8851		
Within groups	296.68	22	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Construct = 0	6	0.3155	[0.1884; 0.4322]	43.55	88.5%
Construct = 1	6	0.3024	[0.0995; 0.4812]	199.71	97.5%
Construct = 2	13	0.3647	[0.2897; 0.4352]	53.42	77.5%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	0.69	2	0.7069		

D8.2 *Analysis of PIWTB domestic for moderator year*

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Yearcoded = 0	4	0.3909	[0.3443; 0.4355]	18.08	83.4%
Yearcoded = 2	9	0.1864	[0.1564; 0.2161]	33.95	76.4%
Yearcoded = 1	12	0.4559	[0.4260; 0.4848]	82.28	86.6%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	162.60	2	< 0.0001		
Within groups	134.32	22	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Yearcoded = 0	4	0.3901	[0.2702; 0.4982]	18.08	83.4%
Yearcoded = 2	9	0.1984	[0.1344; 0.2607]	33.95	76.4%
Yearcoded = 1	12	0.4280	[0.3348; 0.5129]	82.28	86.6%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	19.19	2	< 0.0001		



D8.2.1 *Forest plot of PIWTB domestic for moderator year*

D8.3 Analysis of PIWTB domestic for moderator continent

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Continent = 0	5	0.3993	[0.3550; 0.4418]	19.71	79.7%
Continent = 1	7	0.2461	[0.2006; 0.2905]	34.82	82.8%
Continent = 2	13	0.3169	[0.2918; 0.3416]	219.59	94.5%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	22.80	2	< 0.0001		
Within groups	274.12	22	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Continent = 0	5	0.4069	[0.3032; 0.5012]	19.71	79.7%
Continent = 1	7	0.3009	[0.1881; 0.4059]	34.82	82.8%
Continent = 2	13	0.3283	[0.2142; 0.4336]	219.59	94.5%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	2.15	2	0.3421		

D8.4 Analysis of PIWTB domestic for moderator developed

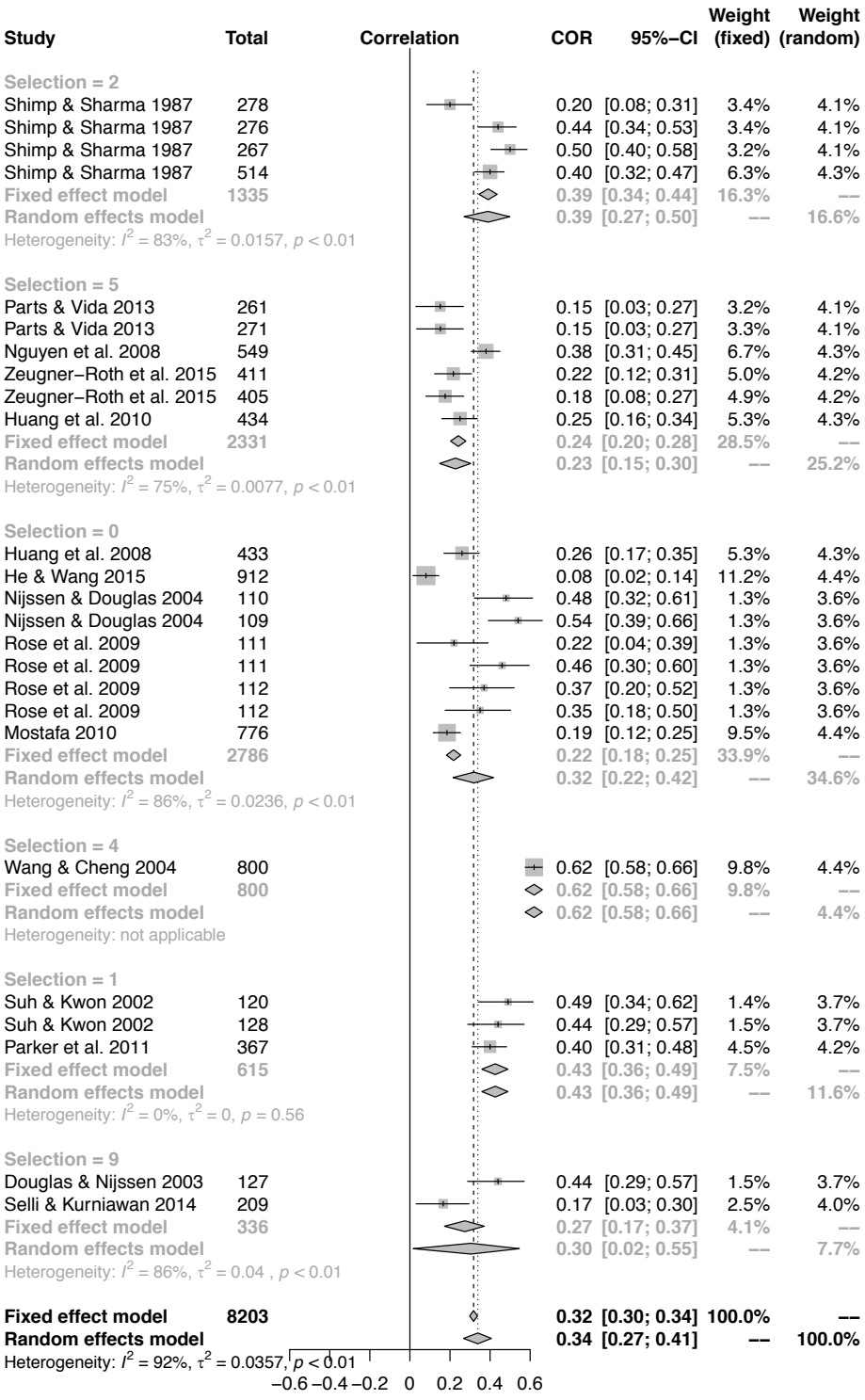
Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Developed = 0	9	0.3813	[0.3449; 0.4165]	40.29	80.1%
Developed = 1	16	0.2936	[0.2702; 0.3167]	240.96	93.8%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	15.67	1	< 0.0001		
Within groups	281.25	23	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Developed = 0	9	0.4088	[0.3239; 0.4872]	40.29	80.1%
Developed = 1	16	0.2971	[0.1983; 0.3899]	240.96	93.8%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	3.02	1	0.0821		

D8.5 Analysis of PIWTB domestic for moderator urban

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Developed = 1	8	0.3490	[0.3204; 0.3769]	209.29	96.7%
Developed = 0	17	0.2911	[0.2640; 0.3179]	79.25	79.8%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	8.37	1	0.0038		
Within groups	288.55	23	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Developed = 1	8	0.3439	[0.1760; 0.4923]	209.29	96.7%
Developed = 0	17	0.3303	[0.2674; 0.3904]	79.25	79.8%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	0.02	1	0.8765		

D8.6 *Analysis of PIWTB domestic for moderator selection*

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Selection = 2	4	0.3909	[0.3443; 0.4355]	18.08	83.4%
Selection = 5	6	0.2417	[0.2029; 0.2797]	19.71	74.6%
Selection = 0	9	0.2183	[0.1824; 0.2535]	58.68	86.4%
Selection = 4	1	0.6200	[0.5754; 0.6609]	0.00	-
Selection = 1	3	0.4263	[0.3590; 0.4892]	1.16	0.0%
Selection = 9	2	0.2748	[0.1724; 0.3713]	7.19	86.1%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	192.10	5	< 0.0001		
Within groups	104.82	19	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Selection = 2	4	0.3901	[0.2702; 0.4982]	18.08	83.4%
Selection = 5	6	0.2275	[0.1486; 0.3035]	19.71	74.6%
Selection = 0	9	0.3202	[0.2156; 0.4174]	58.68	86.4%
Selection = 4	1	0.6200	[0.5754; 0.6609]	0.00	-
Selection = 1	3	0.4263	[0.3590; 0.4892]	1.16	0.0%
Selection = 9	2	0.3046	[0.0162; 0.5463]	7.19	86.1%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	92.09	5	< 0.0001		



D8.6.1 Forest plot of *PIWTB domestic for moderator selection*

D8.7 Analysis of PIWTB domestic for moderator characteristics

Results of subgroups (fixed effect model)

	k	COR	95%-CI	Q	I^2
Characteristics = 0	22	0.3086	[0.2880; 0.3289]	285.32	92.6%
Characteristics = 1	3	0.4263	[0.3590; 0.4892]	1.16	0.0%

Test for subgroup differences (fixed effect model)

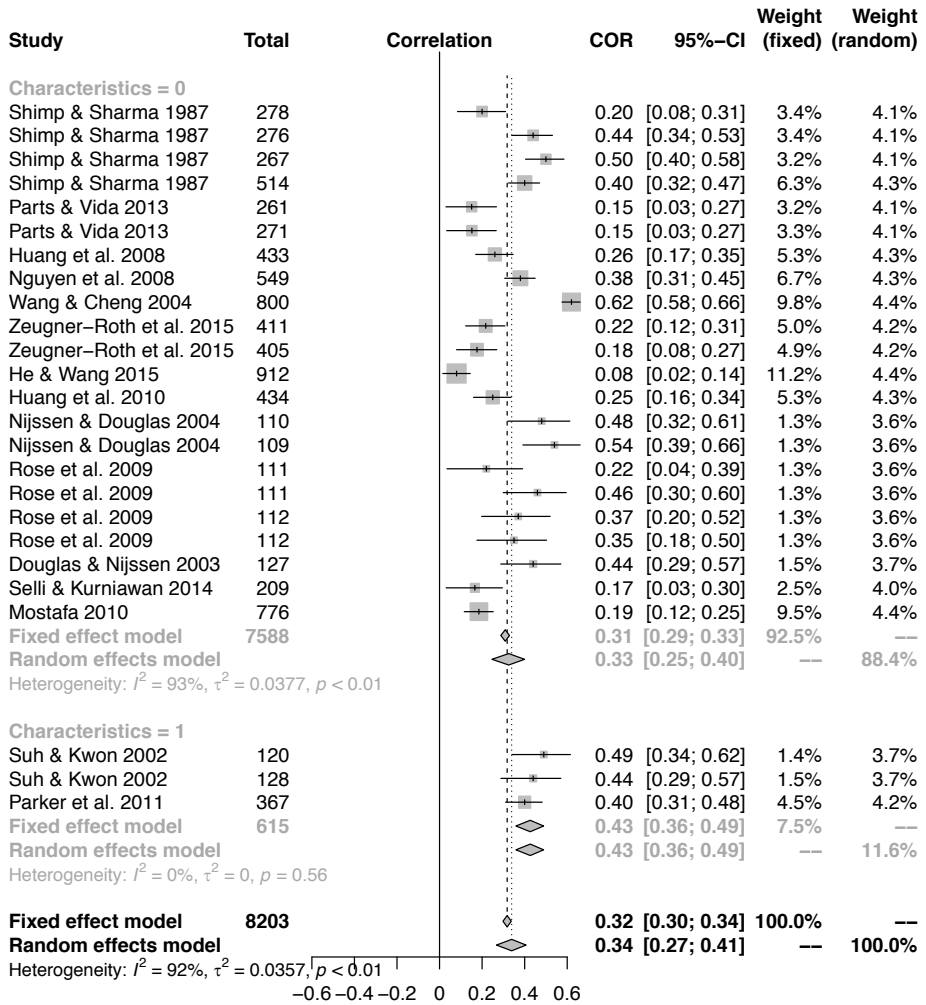
	Q	d.f.	p-value
Between groups	10.43	1	0.0012
Within groups	286.49	23	< 0.0001

Test for subgroups (random effects model)

	K	COR	95%-CI	Q	I^2
Characteristics = 0	22	0.3251	[0.2463; 0.3996]	285.32	92.6%
Characteristics = 1	3	0.4263	[0.3590; 0.4892]	1.16	0.0%

Test for subgroup differences (random effects model)

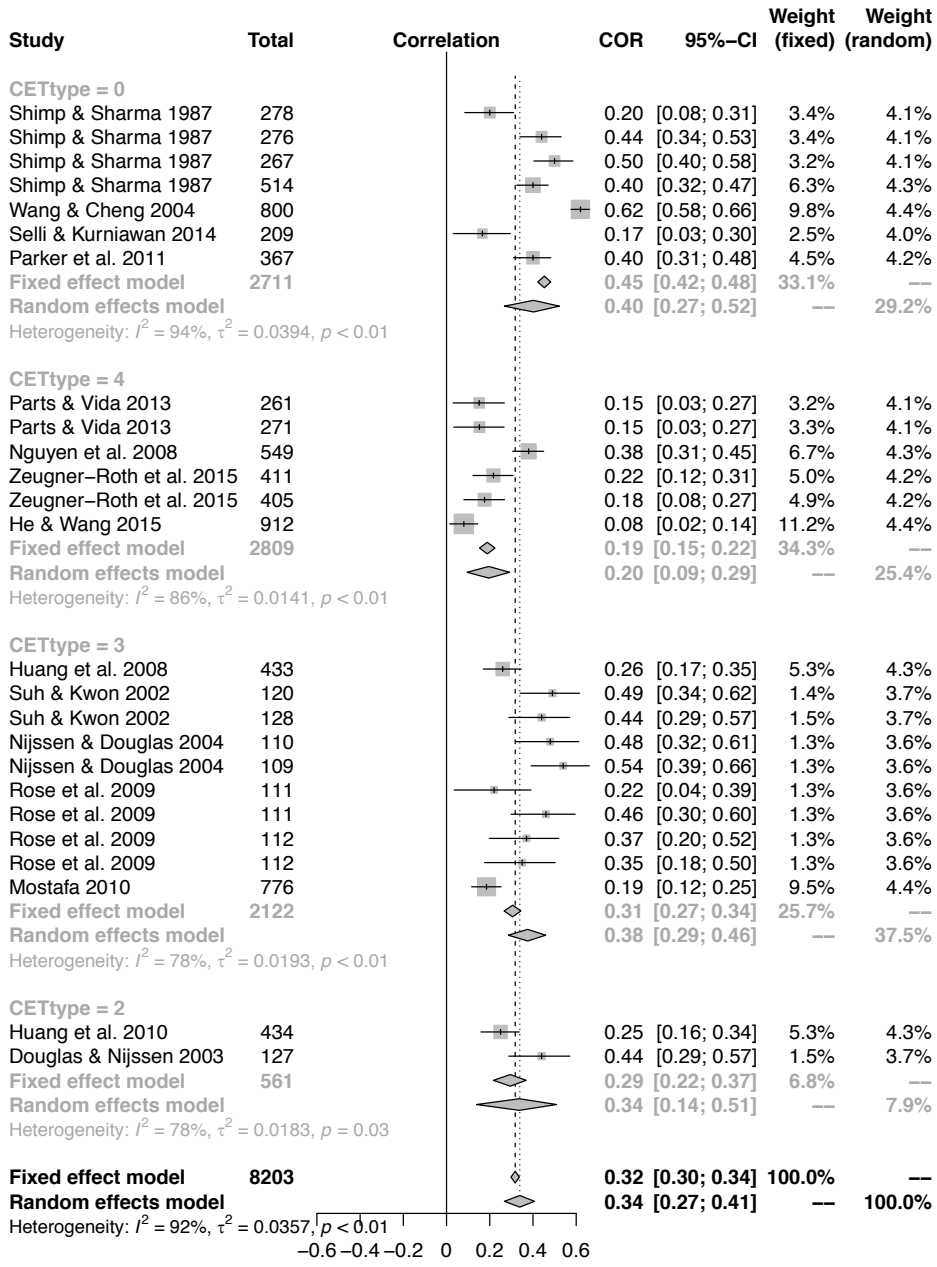
	Q	d.f.	p-value
Between groups	3.91	1	0.0481



D8.7.1 Forest plot of PIWTB domestic for moderator characteristics

D8.8 Analysis of PIWTB domestic for moderator CETtype

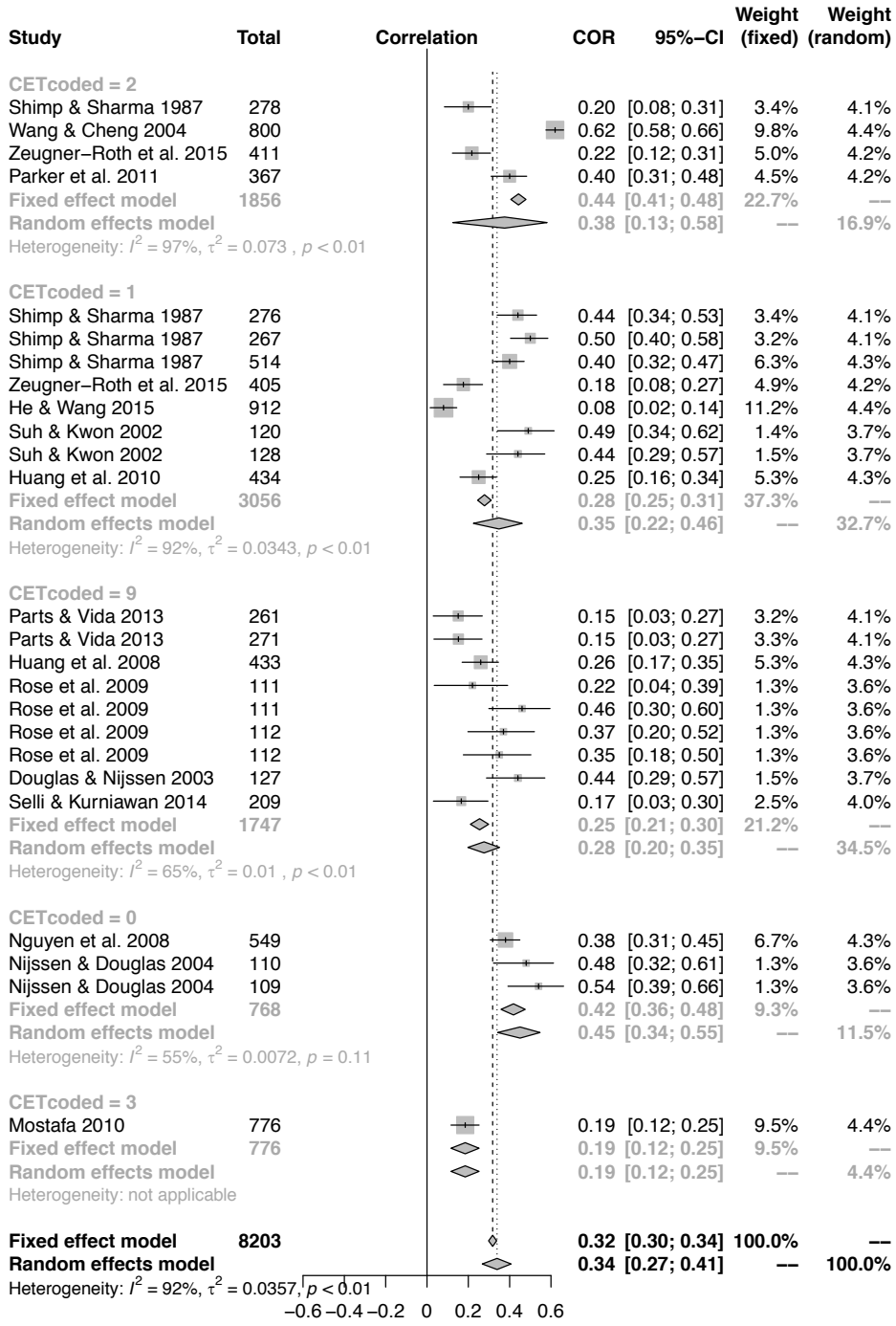
Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
CETtype = 0	7	0.4526	[0.4221; 0.4822]	92.98	93.5%
CETtype = 4	6	0.1887	[0.1527; 0.2242]	36.23	86.2%
CETtype = 3	10	0.3058	[0.2665; 0.3441]	41.32	78.2%
CETtype = 2	2	0.2948	[0.2171; 0.3688]	4.53	77.9%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	121.87	3	< 0.0001		
Within groups	175.05	21	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
CETtype = 0	7	0.4027	[0.2676; 0.5223]	92.98	93.5%
CETtype = 4	6	0.1955	[0.0947; 0.2923]	36.23	86.2%
CETtype = 3	10	0.3755	[0.2856; 0.4588]	41.32	78.2%
CETtype = 2	2	0.3369	[0.1388; 0.5091]	4.53	77.9%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	9.43	3	0.0241		



D8.8.1 Forest plot of PIWTB domestic for moderator CETtype

D8.9 Analysis of PIWTB domestic for moderator CETcoded

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
CETcoded = 2	4	0.4430	[0.4056; 0.4790]	97.58	96.9%
CETcoded = 1	8	0.2783	[0.2451; 0.3108]	92.72	92.5%
CETcoded = 9	9	0.2546	[0.2099; 0.2983]	22.65	64.7%
CETcoded = 0	3	0.4185	[0.3581; 0.4754]	4.44	54.9%
CETcoded = 3	1	0.1850	[0.1161; 0.2521]	0.00	-
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	79.53	4	< 0.0001		
Within groups	217.39	20	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
CETcoded = 2	4	0.3757	[0.1251; 0.5812]	97.58	96.9%
CETcoded = 1	8	0.3483	[0.2244; 0.4611]	92.72	92.5%
CETcoded = 9	9	0.2761	[[0.1979; 0.3509]	22.65	64.7%
CETcoded = 0	3	0.4505	[0.3419; 0.5473]	4.44	54.9%
CETcoded = 3	1	0.1850	[0.1161; 0.2521]	0.00	-
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	18.55	4	0.0010		

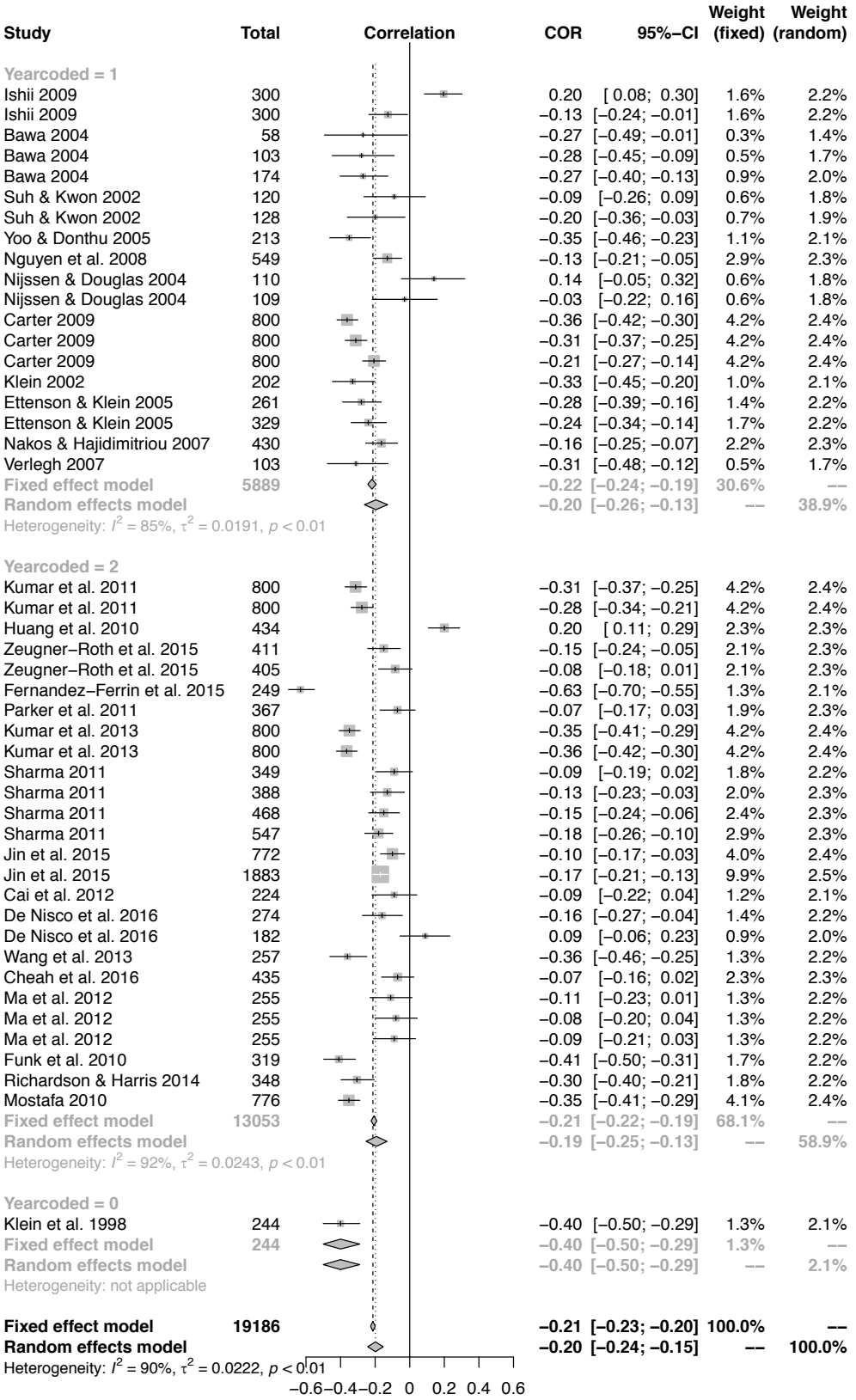


D8.9.1 Forest plot of PIWTB domestic for moderator CETcoded

D9 Product Judgements Foreign

D9.1 Analysis of foreign product judgment for moderator year

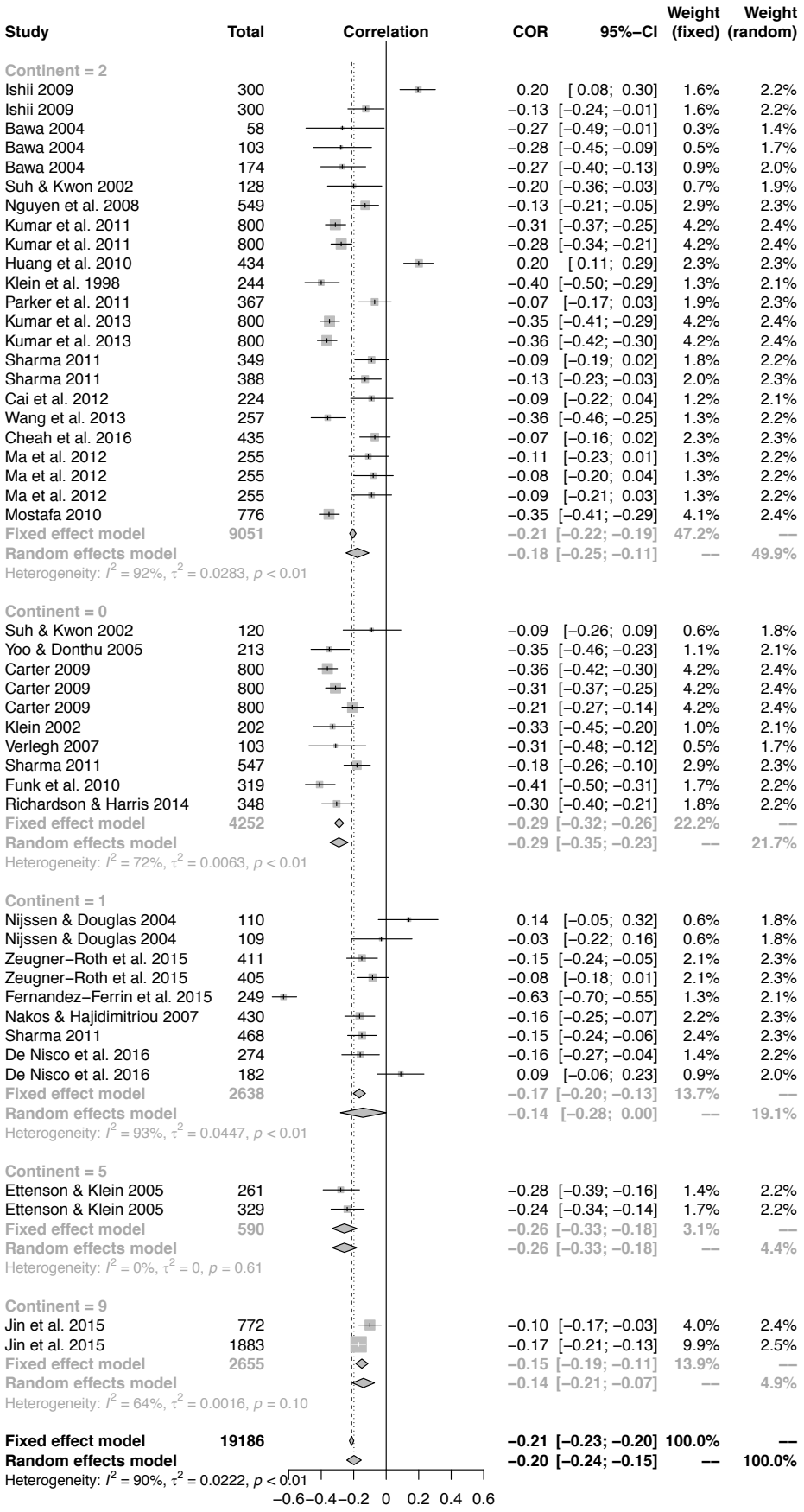
Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Yearcoded = 1	19	-0.2183	[-0.2426; -0.1937]	119.72	85.0%
Yearcoded = 2	26	-0.2068	[-0.2232; -0.1903]	322.42	92.2%
Yearcoded = 0	1	-0.4000	[-0.5004; -0.2889]	0.00	-
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	11.08	2	0.0039		
Within groups	442.14	43	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Yearcoded = 1	19	-0.1956	[-0.2620; -0.1274]	119.72	85.0%
Yearcoded = 2	26	-0.1927	[-0.2526; -0.1313]	322.42	92.2%
Yearcoded = 0	1	-0.4000	[-0.5004; -0.2889]	0.00	-
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	10.93	2	0.0042		



D9.1.1 Forest plot of product judgement foreign for moderator year

D9.2 Analysis of foreign product judgement for moderator continent

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Continent = 2	23	-0.2052	[-0.2249; -0.1853]	261.23	91.6%
Continent = 0	10	-0.2899	[-0.3172; -0.2620]	31.78	71.7%
Continent = 1	9	-0.1652	[-0.2023; -0.1277]	109.08	92.7%
Continent = 5	2	-0.2578	[-0.3318; -0.1806]	0.27	0.0%
Continent = 9	2	-0.1498	[-0.1868; -0.1124]	2.78	64.0%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	48.09	4	< 0.0001		
Within groups	405.13	41	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Continent = 2	23	-0.1776	[-0.2475; -0.1059]	261.23	91.6%
Continent = 0	10	-0.2913	[-0.3458; -0.2348]	31.78	71.7%
Continent = 1	9	-0.1437	[-0.2818; 0.0002]	109.08	92.7%
Continent = 5	2	-0.2578	[-0.3318; -0.1806]	0.27	0.0%
Continent = 9	2	-0.1405	[-0.2074; -0.0722]	2.78	64.0%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	14.96	4	0.0048		



D9.2.1 Forest plot of product judgement foreign for moderator continent

Analysis of foreign product judgement for moderator developed

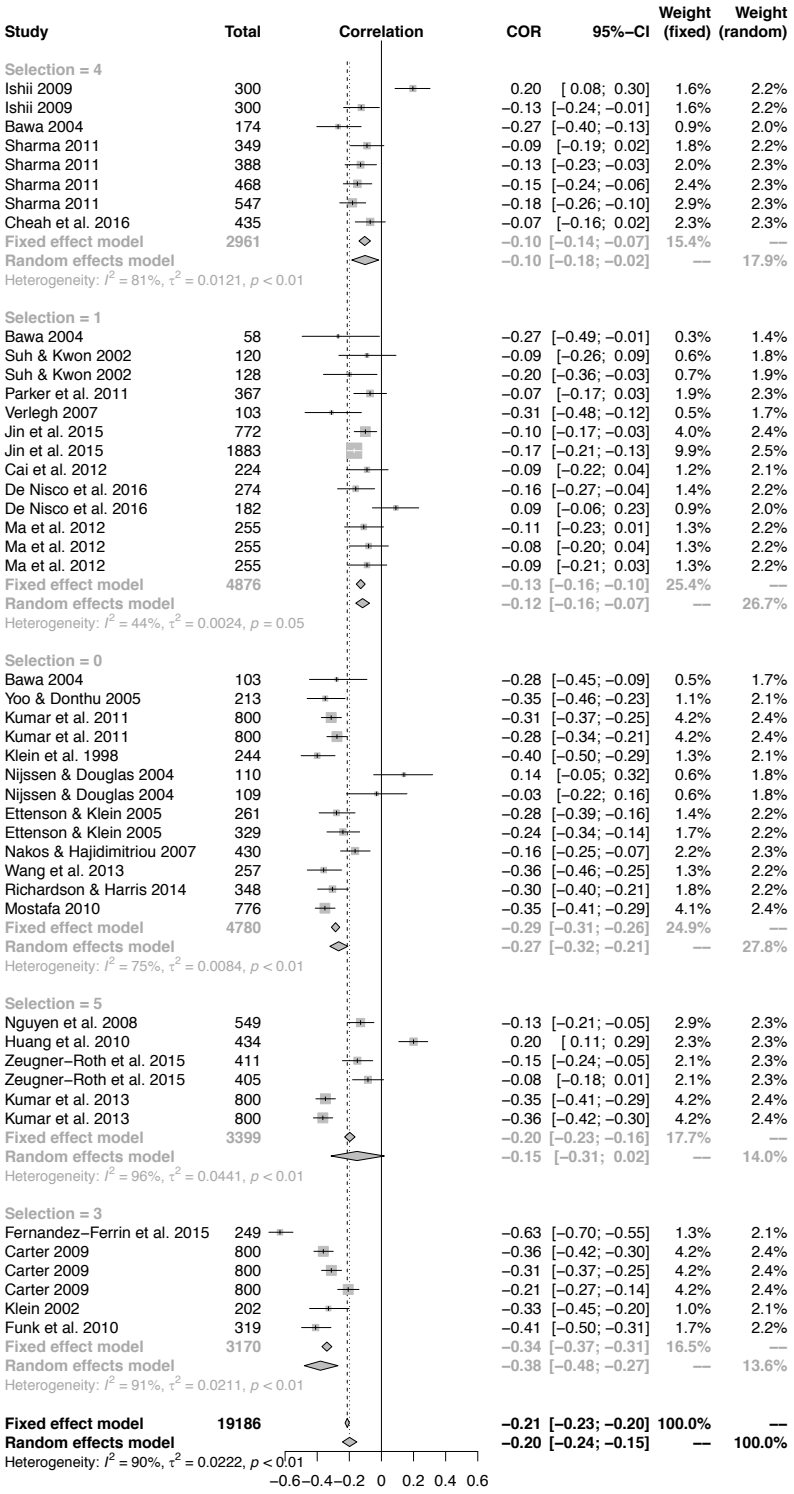
Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Developed = 1	27	-0.2048	[-0.2220; -0.1876]	341.52	92.4%
Developed = 0	19	-0.2264	[-0.2484; -0.2043]	109.41	83.5%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	2.29	1	0.1304		
Within groups	250.93	44	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Developed = 1	27	-0.1932	[-0.2569; -0.1278]	341.52	92.4%
Developed = 0	19	-0.2087	[-0.2652; -0.1508]	109.41	83.5%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	0.12	1	0.7244		

D9.3 Analysis of foreign product judgement for moderator urban

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Developed = 1	12	-0.2403	[-0.2685; -0.2117]	163.08	93.3%
Developed = 0	34	-0.2051	[-0.2204; -0.1896]	285.61	88.4%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	4.52	1	0.0334		
Within groups	448.69	44	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Developed = 1	12	-0.2525	[-0.3615; -0.1366]	163.08	93.3%
Developed = 0	34	-0.1809	[-0.2280; -0.1331]	285.61	88.4%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	1.28	1	0.2581		

D9.4 Analysis of foreign product judgement for moderator selection

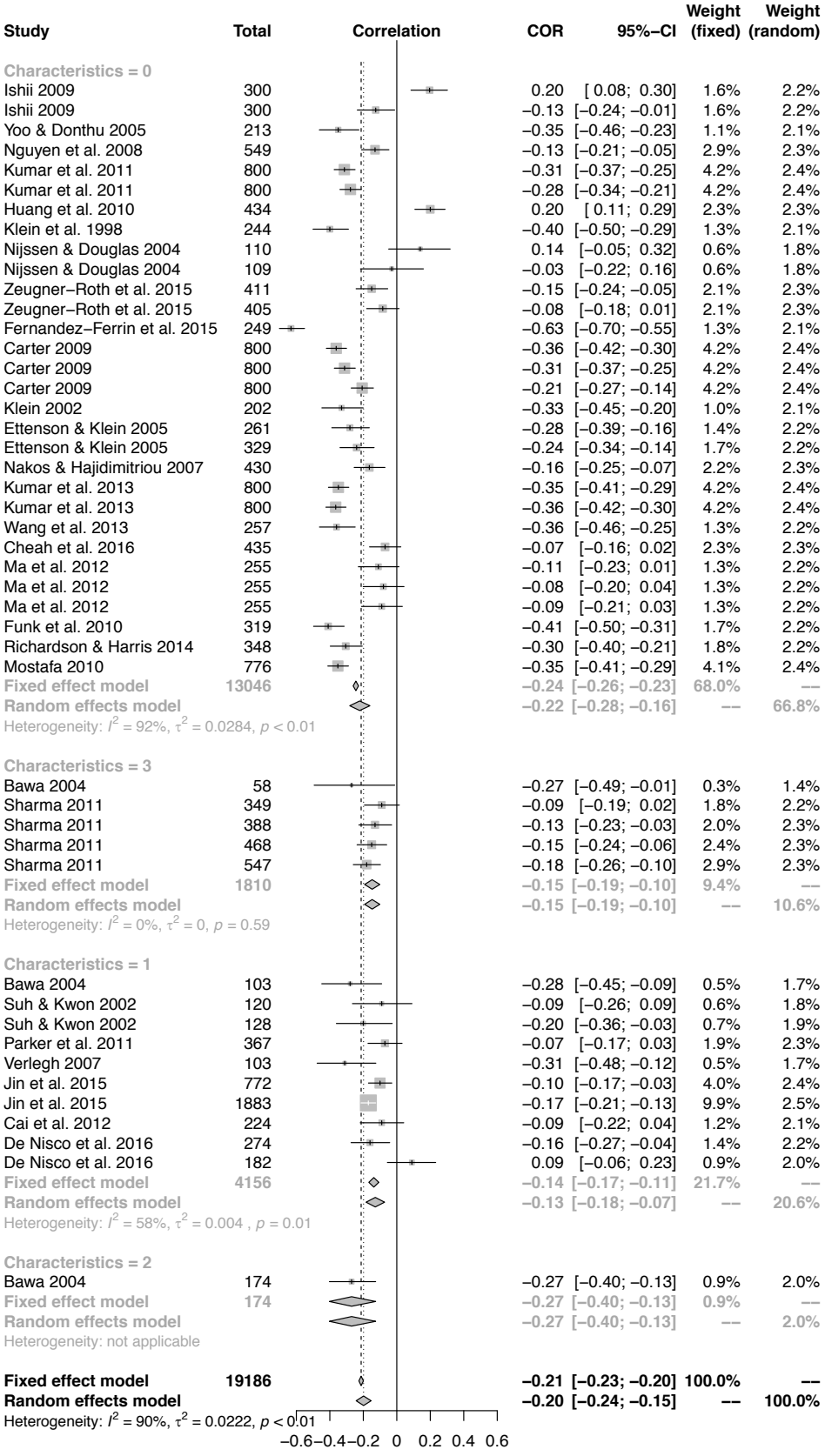
Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Selection = 4	8	-0.1042	[-0.1398; -0.0683]	37.63	81.4%
Selection = 1	13	-0.1290	[-0.1566; -0.1012]	21.33	43.7%
Selection = 0	13	-0.2858	[-0.3117; -0.2594]	47.49	74.7%
Selection = 5	6	-0.1970	[-0.2292; -0.1644]	126.99	96.1%
Selection = 3	6	-0.3400	[-0.3705; -0.13087]	57.49	91.3%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	162.29	4	< 0.0001		
Within groups	290.93	41	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Selection = 4	8	-0.1017	[-0.1849; -0.0171]	37.63	81.4%
Selection = 1	13	-0.1173	[-0.1600; -0.0742]	21.33	43.7%
Selection = 0	13	-0.2663	[-0.3212; -0.2095]	47.49	74.7%
Selection = 5	6	-0.1522	[-0.3141; -0.0183]	126.99	96.1%
Selection = 3	6	-0.3803	[-0.4805; -0.2703]	57.49	91.3%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	32.51	4	< 0.0001		



D9.4.1 Forest plot of foreign product judgement for moderator selection

D9.5 Analysis of foreign product judgement for moderator characteristics

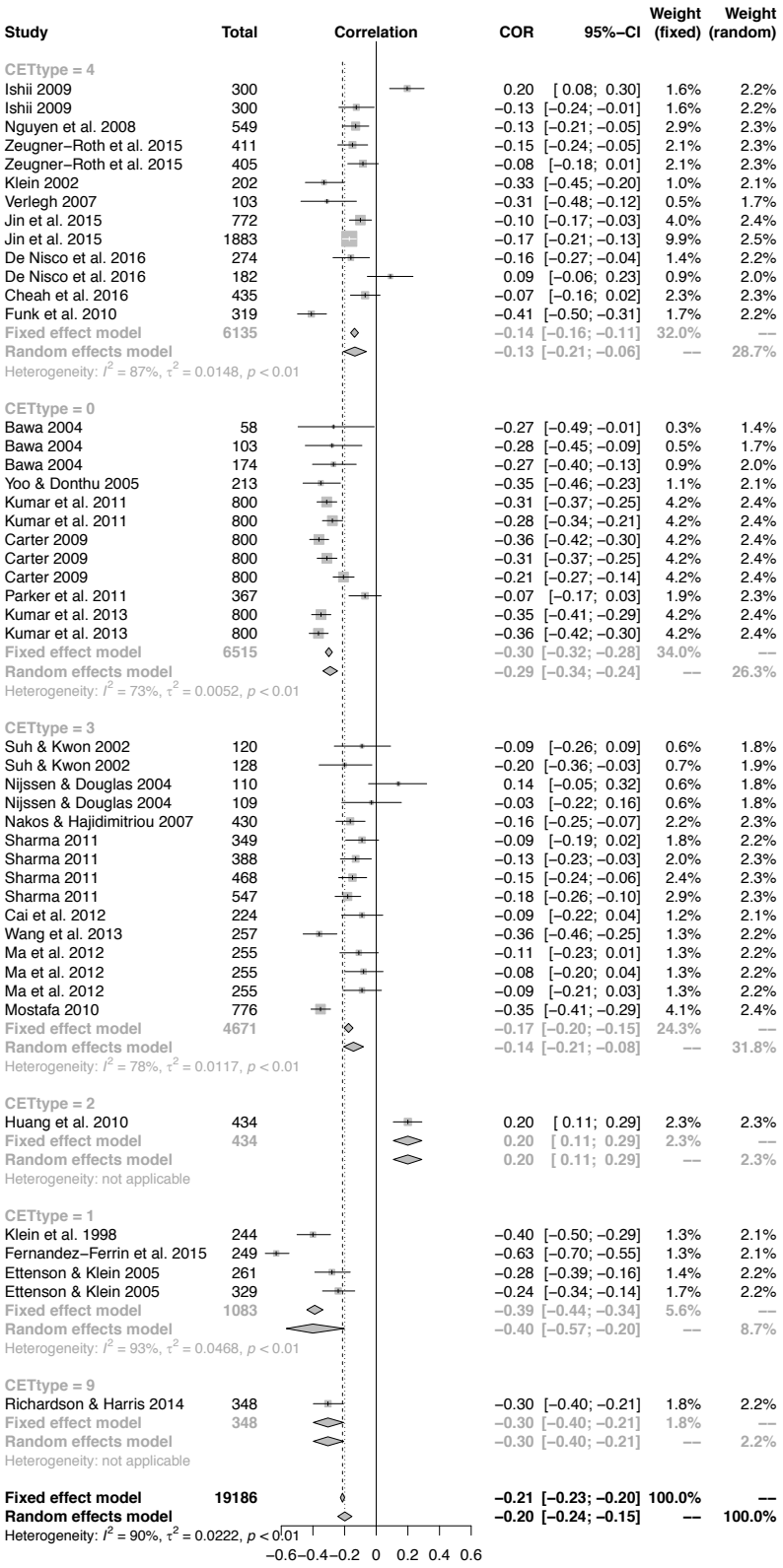
Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Characteristics = 0	30	-0.2447	[-0.2608; -0.2284]	380.58	92.4%
Characteristics = 3	5	-0.1471	[-0.1921; -0.1016]	2.81	0.0%
Characteristics = 1	10	-0.1373	[-0.1671; -0.1072]	21.20	57.5%
Characteristics = 2	1	-0.2700	[-0.4026; -0.1268]	0.00	-
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	48.63	3	< 0.0001		
Within groups	404.59	42	< 0.0001		
Test for subgroups (random effects model)					
	K	COR	95%-CI	Q	I^2
Characteristics = 0	30	-0.2217	[-0.2811; -0.1606]	380.58	92.4%
Characteristics = 3	5	-0.1473	[-0.1921; -0.1016]	2.81	0.0%
Characteristics = 1	10	-0.1285	[-0.1834; -0.0729]	21.20	57.5%
Characteristics = 2	1	-0.2700	[-0.4026; -0.1263]	0.00	-
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	7.63	3	0.0532		



D9.5.1 Forest plot of foreign product judgement for moderator characteristics

D9.6 Analysis of foreign product judgement for moderator CEType

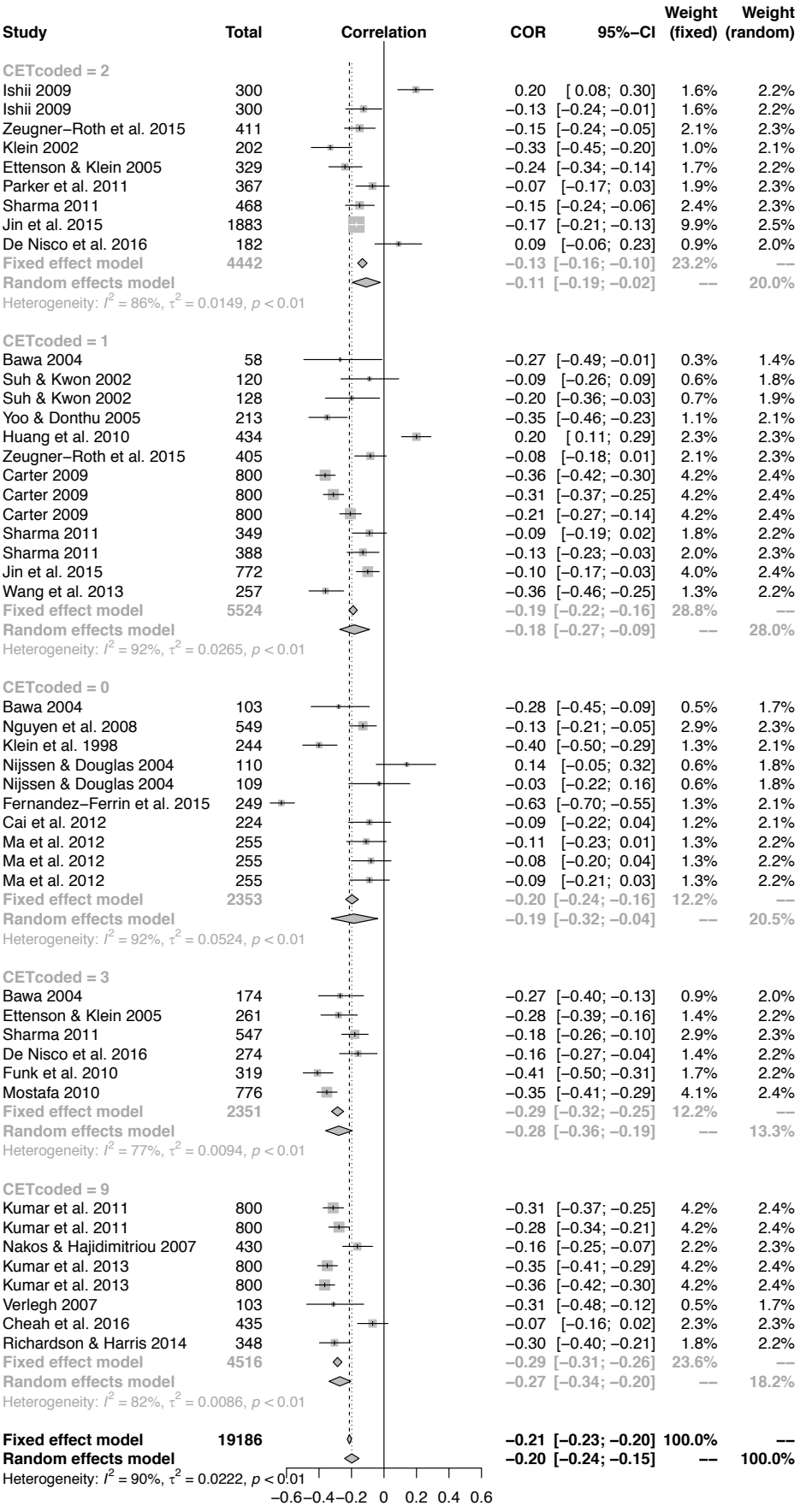
Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
CEType = 4	13	-0.1371	[-0.1617; -0.1124]	89.34	86.6%
CEType = 0	12	-0.2994	[-0.3214; -0.2770]	40.85	73.1%
CEType = 3	15	-0.1746	[-0.2024; -0.1466]	63.18	77.8%
CEType = 2	1	0.2000	[0.1079; 0.2887]	0.00	-
CEType = 1	4	-0.3886	[-0.4383; -0.3367]	40.37	92.6%
CEType = 9	1	-0.3050	[-0.3974; -0.2065]	0.00	-
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	219.47	5	< 0.0001		
Within groups	233.74	40	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
CEType = 4	13	-0.1349	[-0.2057; -0.0626]	89.34	86.6%
CEType = 0	12	-0.2911	[-0.3366; -0.2444]	40.85	73.1%
CEType = 3	15	-0.1438	[-0.2056; -0.0809]	63.18	77.8%
CEType = 2	1	0.2000	[0.1079; 0.2887]	0.00	-
CEType = 1	4	-0.4005	[-0.5680; -0.2011]	40.37	92.6%
CEType = 9	1	-0.3050	[-0.3974; -0.2065]	0.00	-
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	98.38	5	< 0.0001		



D9.6.1 Forest plot of foreign product judgement for moderator CETtype

D9.7 Analysis of foreign product judgement for moderator CETcoded

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
CETcoded = 2	9	-0.1331	[-0.1619; -0.1040]	58.91	86.4%
CETcoded = 1	13	-0.1901	[-0.2155; -0.1645]	141.75	91.5%
CETcoded = 0	10	-0.1972	[-0.2360; -0.1578]	115.26	92.2%
CETcoded = 3	6	-0.2859	[-0.3227; -0.2483]	22.19	77.5%
CETcoded = 9	8	-0.2861	[-0.3127; -0.2590]	39.92	82.5%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	75.19	4	< 0.0001		
Within groups	378.03	41	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
CETcoded = 2	9	-0.1096	[-0.1950; -0.0225]	58.91	86.4%
CETcoded = 1	13	-0.1823	[-0.2723; -0.0892]	141.75	91.5%
CETcoded = 0	10	-0.1854	[-0.3245; -0.0385]	115.26	92.2%
CETcoded = 3	6	-0.2790	[-0.3593; -0.1947]	22.19	77.5%
CETcoded = 9	8	-0.2722	[-0.3381; -0.2037]	39.92	82.5%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	11.48	4	0.0216		



D9.7.1 Forest plot of foreign product judgement for moderator CETtype

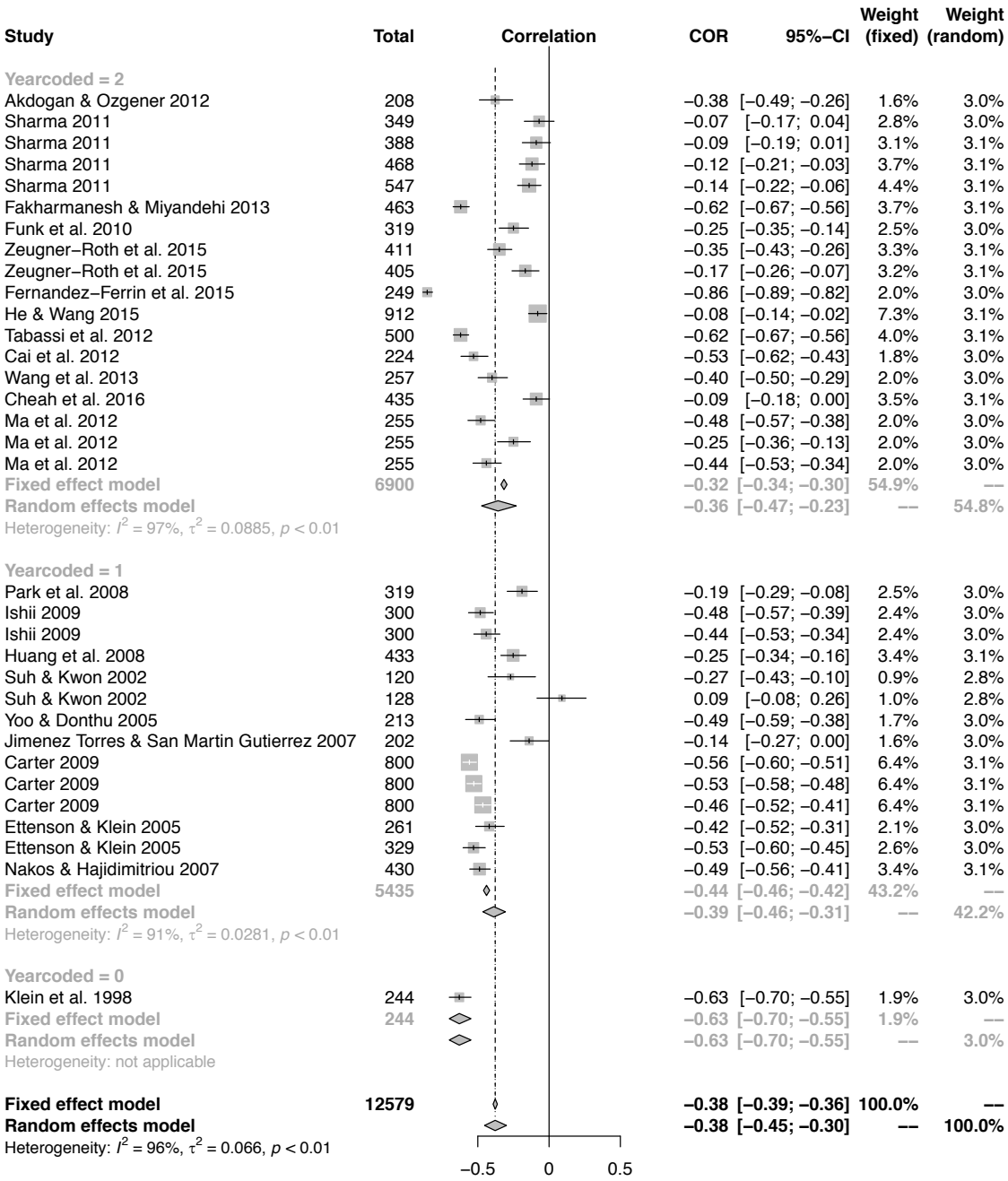
D10 PIWTB Foreign

D10.1 Analysis of product judgment foreign for moderator construct

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Construct = 0	8	-0.2415	[-0.2747; -0.2077]	0.0523	95.2%
Construct = 1	25	-0.4187	[-0.4352; -0.4019]	0.063	95.9%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	91.69	1	< 0.0001		
Within groups	732.07	31	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Construct = 0	8	-0.2436	[-0.3896; -0.0857]	0.0523	95.2%
Construct = 1	25	-0.4189	[-0.4986; -0.3322]	0.063	95.9%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	4.09	1	0.0431		

D10.2 Analysis of PIWTB foreign for moderator year

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Yearcoded = 2	18	-0.3165	[-0.3376; -0.2950]	582.98	97.1%
Yearcoded = 1	14	-0.4388	[-0.4601; -0.4170]	149.99	91.3%
Yearcoded = 0	1	-0.6300	[-0.7002; -0.5478]	0.00	-
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	90.78	2	< 0.0001		
Within groups	732.97	30	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Yearcoded = 2	18	-0.358	[-0.4734; -0.2306]	582.98	97.1%
Yearcoded = 1	14	-0.388	[-0.4643; -0.3061]	149.99	91.3%
Yearcoded = 0	1	-0.630	[-0.7002; -0.5478]	0.00	-
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	20.71	2	< 0.0001		



D10.2.1 Forest plot of PIWTB foreign for moderator year

D10.3 Analysis of PIWTB foreign for moderator continent

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Continent = 1	7	-0.3736	[-0.4078; -0.3383]	267.29	97.8%
Continent = 2	17	-0.3314	[-0.3538; -0.3086]	397.60	96.0%
Continent = 0	7	-0.4367	[-0.4629; -0.4098]	111.37	94.6%
Continent = 5	2	-0.4832	[-0.5429; -0.4187]	2.92	65.8%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	44.57	3	< 0.0001		
Within groups	779.18	29	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Continent = 1	7	-0.4036	[-0.6045; -0.1544]	267.29	97.8%
Continent = 2	17	-0.3472	[-0.4543; -0.2302]	397.60	96.0%
Continent = 0	7	-0.3991	[-0.5147; -0.2693]	111.37	94.6%
Continent = 5	2	-0.4791	[-0.5792; -0.3647]	2.92	65.8%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	2.75	3	0.4320		

D10.4 Analysis of PIWTB foreign for moderator developed

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Developed = 1	21	-0.3617	[-0.3816; -0.3416]	630.04	96.8%
Developed = 0	12	-0.3997	[-0.4223; -0.3767]	187.70	94.1%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	6.01	1	0.0142		
Within groups	817.74	31	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Developed = 1	21	-0.3850	[-0.4901; -0.2689]	630.04	96.8%
Developed = 0	12	-0.3674	[-0.4620; -0.2644]	187.70	94.1%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	0.05	1	0.8167		

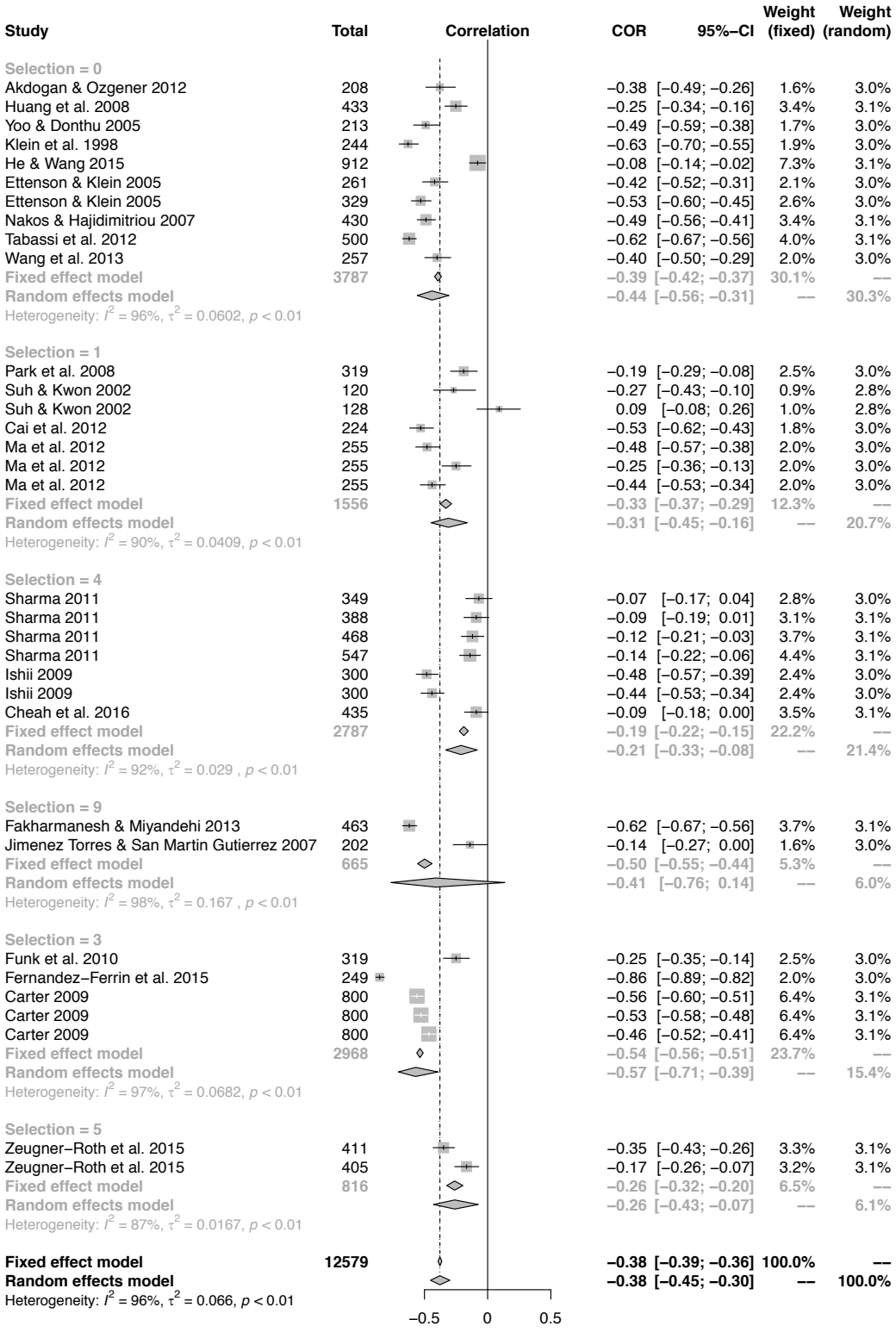
D10.5 Analysis PIWTB foreign for moderator urban

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Urban = 0	24	-0.3947	[-0.4120; -0.3772]	441.58	94.8%
Urban = 1	9	-0.3319	[-0.3613; -0.3017]	369.13	97.8%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	13.05	1	0.0003		
Within groups	810.70	31	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Urban = 0	12	-0.3628	[-0.4394; -0.2810]	441.58	94.8%
Urban = 1	34	-0.4212	[-0.5922; -0.2139]	369.13	97.8%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	0.29	1	0.5874		

D10.6 *Analysis of PIWTB foreign for moderator selection*

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Selection = 0	10	-0.3931	[-0.4198; -0.3657]	205.93	95.6%
Selection = 1	7	-0.3307	[-0.3745; -0.2854]	58.95	89.8%
Selection = 4	7	-0.1885	[-0.2242; -0.1524]	74.23	91.9%
Selection = 9	2	-0.4995	[-0.5546; -0.4400]	47.39	97.9%
Selection = 3	5	-0.5359	[-0.5611; -0.5097]	157.72	97.5%
Selection = 5	2	-0.2610	[-0.3239; -0.1957]	7.76	87.1%
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	271.77	5	< 0.0001		
Within groups	551.98	27	< 0.0001		
Test for subgroups (random effects model)					
	k	COR	95%-CI	Q	I^2
Selection = 0	10	-0.4399	[-0.5568; -0.3059]	205.93	95.6%
Selection = 1	7	-0.3111	[-0.4467; -0.1615]	58.95	89.8%
Selection = 4	7	-0.2105	[-0.3323; -0.0818]	74.23	91.9%
Selection = 9	2	-0.4098	[-0.7648; 0.1361]	47.39	97.9%
Selection = 3	5	-0.5701	[-0.7065; -0.3928]	157.72	97.5%
Selection = 5	2	-0.2604	[-0.4287; -0.0746]	7.76	87.1%
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		

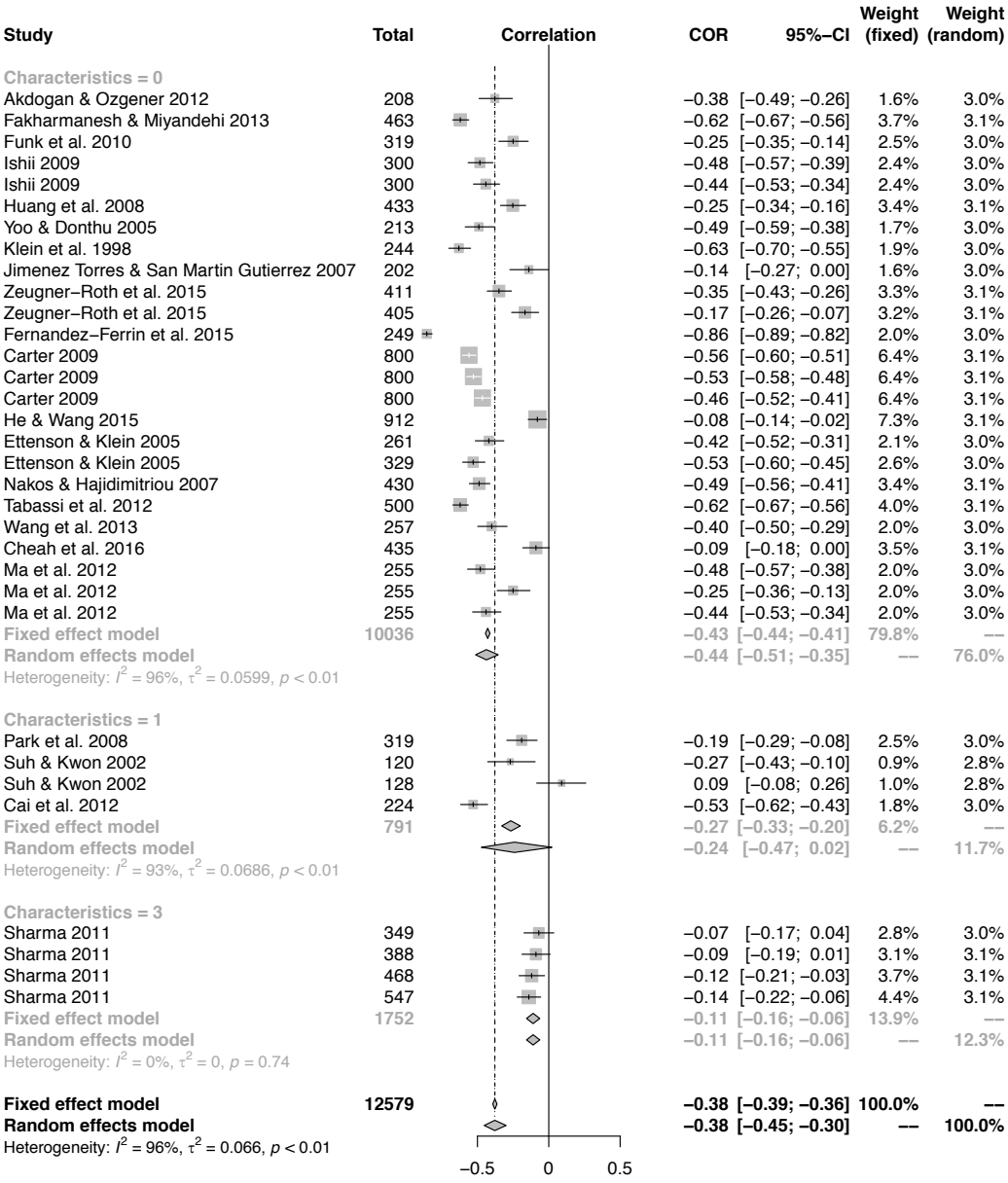
Between groups	13.69	5	< 0.0001



D10.6.1 *Forest plot of PIWTB foreign for moderator selection*

D10. 7 Analysis of PIWTB foreign for moderator characteristics

Results of subgroups (fixed effect model)					
	k	COR	95%-CI	Q	I^2
Characteristics = 0	25	-0.4280	[-0.4439; -0.4119]	590.07	95.9%
Characteristics = 1	4	-0.2660	[-0.3299; -0.1996]	40.78	92.6%
Characteristics = 3	4	-0.1098	[-0.1559; -0.0631]	1.27	-
Test for subgroup differences (fixed effect model)					
	Q	d.f.	p-value		
Between groups	191.63	2	< 0.0001		
Within groups	632.12	30	< 0.0001		
Test for subgroups (random effects model)					
	K	COR	95%-CI	Q	I^2
Characteristics = 0	25	-0.4372	[-0.5132; -0.3543]	590.07	95.9%
Characteristics = 1	4	-0.2406	[-0.4724; 0.0223]	40.78	92.6%
Characteristics = 3	4	-0.1098	[-0.1559; -0.0631]	1.27	-
Test for subgroup differences (random effects model)					
	Q	d.f.	p-value		
Between groups	41.83	2	< 0.0001		



D10.7.1 Forest plot of PIWTB foreign for moderator characteristics

D10.8 Analysis of PIWTB foreign for moderator CETtype

Results of subgroups (fixed effect model)

	k	COR	95%-CI	Q	I^2
CETtype = 0	6	-0.5254	[-0.5496; -0.5002]	24.65	79.7%
CETtype = 3	16	-0.2937	[-0.3187; -0.2683]	241.85	93.8%
CETtype = 4	7	-0.2267	[-0.2600; -0.1928]	81.71	92.7%
CETtype = 1	4	-0.6334	[-0.6679; -0.5962]	99.58	97.0%

Test for subgroup differences (fixed effect model)

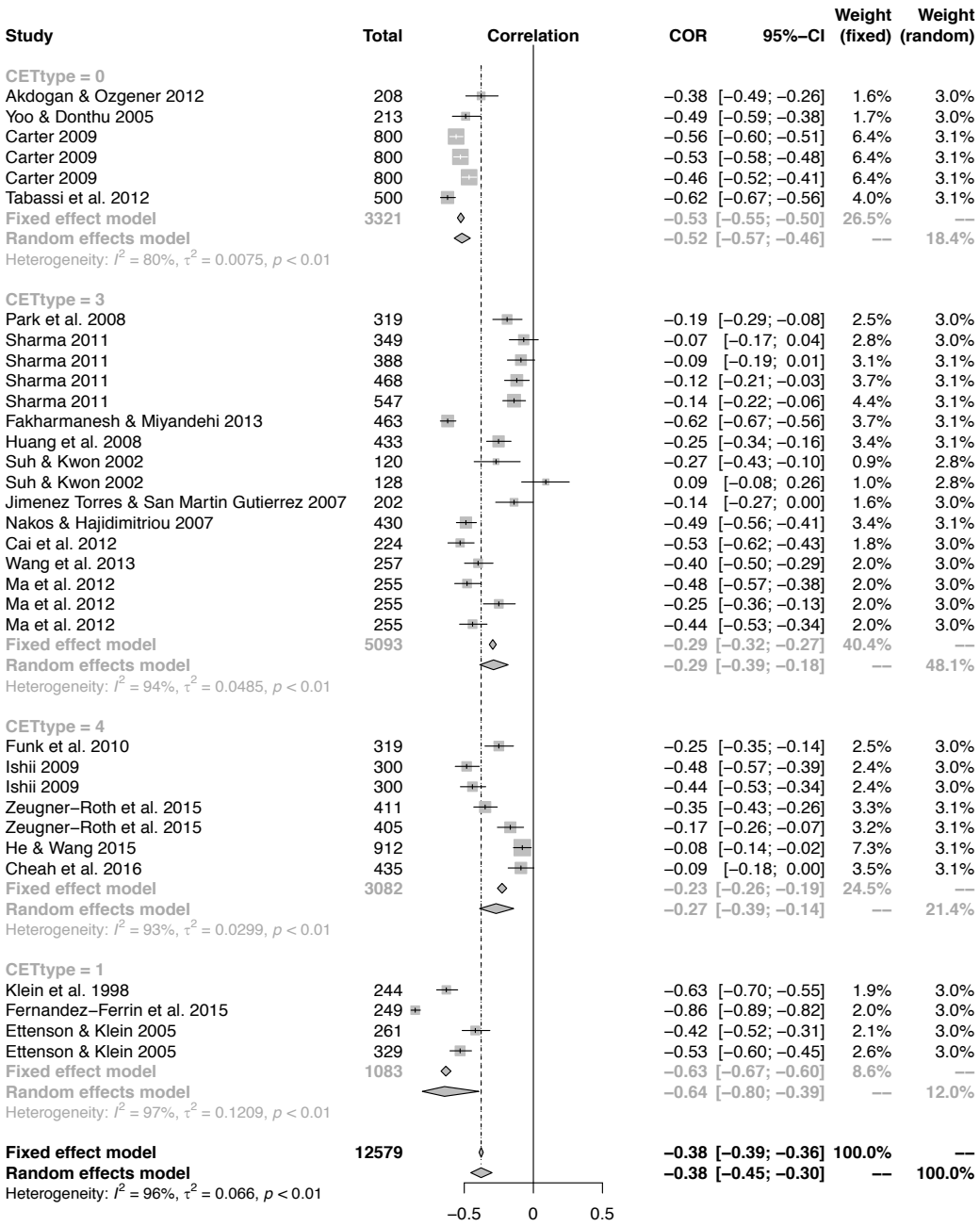
	Q	d.f.	p-value
Between groups	375.97	3	< 0.0001
Within groups	447.78	29	< 0.0001

Test for subgroups (random effects model)

	k	COR	95%-CI	Q	I^2
CETtype = 0	6	-0.5168	[-0.5725; -0.4564]	24.65	79.7%
CETtype = 3	16	-0.2883	[-0.3874; -0.1827]	241.85	93.8%
CETtype = 4	7	-0.2700	[-0.3888; -0.1424]	81.71	92.7%
CETtype = 1	4	-0.6428	[-0.8037; -0.3943]	99.58	97.0%

Test for subgroup differences (random effects model)

	Q	d.f.	p-value
Between groups	25.89	3	< 0.0001



D10.8.1 Forest plot of PIWTB foreign for moderator CETtype

D10.9 Analysis of PIWTB foreign for moderator CETcoded

Results of subgroups (fixed effect model)

	k	COR	95%-CI	Q	I^2
CETcoded = 1	12	-0.3405	[-0.3640; -0.3166]	293.17	96.2%
CETcoded = 9	6	-0.3449	[-0.3804; -0.3084]	134.03	96.3%
CETcoded = 2	6	-0.4269	[-0.4601; -0.3926]	96.48	94.8%
CETcoded = 3	3	-0.2393	[-0.2938; -0.1834]	16.53	87.9%
CETcoded = 0	6	-0.5653	[-0.5991; -0.5294]	149.87	96.7%

Test for subgroup differences (fixed effect model)

	Q	d.f.	p-value
Between groups	133.67	4	< 0.0001
Within groups	690.08	28	< 0.0001

Test for subgroups (random effects model)

	k	COR	95%-CI	Q	I^2
CETcoded = 1	12	-0.2997	[-0.4231; -0.1653]	293.17	96.2%
CETcoded = 9	6	-0.3142	[-0.4918; -0.1115]	134.03	96.3%
CETcoded = 2	6	-0.4351	[-0.5706; -0.2766]	96.48	94.8%
CETcoded = 3	3	-0.2701	[-0.4224; -0.1030]	16.53	87.9%
CETcoded = 0	6	-0.5667	[-0.7274; -0.3471]	149.87	96.7%

Test for subgroup differences (random effects model)

	Q	d.f.	p-value
Between groups	6.66	4	0.1549