Examining to what extent the country of origin and signaling theory influence the selection process between EU and transcontinental sourcing.

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ABSTRACT

Recent research showed that there has been a shift within global sourcing that has led to a higher level of transcontinental and a lower level of intra-EU sourcing. To further investigate this shift in sourcing preference from a European standpoint, this research investigates if, and to what extent, the country of origin and the signaling theories influence this selection process. The research aims to extent the literature on the motives of buying firms to choose a supplier outside of their own continent. With the help of empirical findings deducted from 25 interviews with companies from Germany and the Netherlands, which source either on an EU or transcontinental scale, these effects will be investigated. The analysis of the results shows, that while there can be a rather positive influence on this trend based on the country of origin construct, the signaling model proved to support intra-EU sourcing. The perceived price advantages that come from sourcing trans-continentally are supported by a perceived growing quality and technology in non-EU countries. This was underlined by the fact that China posed to be one of the strongest countries in terms of country image. On the other hand, customer loyalty with EU suppliers sees advantages for sourcing from the same continent, as signaling mechanisms proved to be more influential with continental suppliers.

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1. INTRODUCTION: THE SHIFT TOWARDS TRANSCONTINENTAL SOURCING

Global sourcing and the growing importance of it has been one of the main trends over the last years and decades (Giunipero et al., 2019, p.10; Quintens et al., 2006, p.1). The decision of a company to be involved in global sourcing is important to stay competitive as a company. Further, it is recognized to help achieve a competitive advantage (Jin, 2005, p.277). There are several factors that can influence the decision for a company to be involved in global sourcing and that determine the sourcing location. Next to already discovered advantages such as e.g., cost savings, higher availability, or the higher level of quality (Cho & Kang, 2001, p.544), there are also some drawbacks when sourcing globally. Main sources for complications include political, cultural, or legal problems. Additionally, there can also be complications due to the long distance (Cho & Kang, 2001, p.546). Additionally, it is found to be easier to not just form but also maintain close collaborations with local suppliers (Bohnenkamp et al, 2020, p. 87). Nevertheless, over the last two decades global sourcing has still been widely practiced, and production activities are still being outsourced to China in most of the cases ((Jin, 2005, p.277; Cohen et al., 2018, p. 389). Therefore, this research will focus on examining the impact of two further hypotheses on the shift in sourcing location selection. These are on the one hand the country-of-origin and on the other hand the signaling hypotheses.

When looking at global sourcing, it is important to keep in mind that there is a difference between sourcing continentally and trans-continentally, which are both parts of global sourcing. While European sourcing is a kind of continental sourcing, transcontinental sourcing refers to suppliers being situated on a different continent than the sourcing company (Schiele et al., 2020, p.2; Koerber and Schiele, 2021, p.4). Apart from two countries, namely the UK and Cyprus, the formation of the EU led to its' member states as a whole trading more with the countries that are also part of the EU, than with those countries not belonging to the EU (Eurostat, 2021). Nevertheless, the last 15 years have shown a shift of this trading behavior, as most of the countries have seen a decline in their intra-EU trade. The difference can also be seen when looking at the percentage of trade that was done within the EU, as in 2003 there was on average still a 69.1% share of trade happening with the EU member states, this number has declined over the past to only 63.8% in the year 2019. The trend can be identified in a wide range of product categories across all other countries, except for Malta, Bulgaria, and Romania, that are part of the EU (Eurostat, 2021). All this underlines that there has been a recent trend that shows the stagnation of European sourcing while transcontinental sourcing has been increasing (Koerber and Schiele, 2021, p.11).

The trend away from continental and towards a higher level of transcontinental sourcing has multiple factors and the aim of the research will be to further examine the main driving forces that cause this shift away from continental and further towards transcontinental sourcing, which underlines the academic relevance of this topic. This research is therefore intended to analyze the extent of influence that the country of origin, as well as signaling have on the shift in sourcing location preference. Hence, the research project's objective is to find empirical support for this current trend by conducting expert interviews with buying firms and investigating potential motives for the shift in sourcing location preference. The research aims to contribute both in terms of literature as well as in practice. Therefore, it will add a new layer of empirical data, that can be utilized for related research in the future. The paper is designed to further close the empirical gap that exists when analyzing the differences within global sourcing. It is important to divide between continental and transcontinental sourcing, and while in this research the differences with local sourcing are not analyzed, this leaves the possibility for further research regarding the different reasons for the sourcing location decision. The differences between EU and non-EU countries have so far not been analyzed in relation to the country of origin and signaling theories, which offer two new perspectives into the different motives in choosing a supplier. In relation to practical relevance, 25 purchasers from different industries were interviewed. This offers insights on the perceptions of country image and relationships they face with different EU or transcontinental suppliers. The companies may benefit from the findings on how to improve their supplier selection process as well as the relationships to their suppliers, based on the location of the supplier.

Therefore, to investigate the effects of both theories to a greater extent, the research question was divided into two smaller sub-questions, that will be answered in the following research. Firstly, when investigating the country of origin effects on this trend, the question arises that will form

RQ1: Does the country image of transcontinental countries have a positive influence on the trend towards more transcontinental sourcing? In addition to this, due to the signaling mechanisms and differences among them, this leads to the composition of

RQ2: To what extent do signaling practices influence the trend towards more transcontinental sourcing?

These questions will be investigated in this research in order to answer the main research question of this paper, namely:

Examining to what extent the country of origin and signaling theory influence the selection process between EU and transcontinental sourcing.

To answer the research questions, first there will be a distinction made between sourcing on a local, EU and transcontinental sourcing, based on a literature review in the second section. Following, in section three there will be a further literature review that will focus on topics surrounding the two applied theories, country of origin and signaling theory. The methodological approach including the data gathering method for the following qualitative research can be found in chapter 4. The following chapter describes the empirical findings, which will be divided into two parts, to answer each research question separately. A discussion and conclusion will be conducted in the subsequent chapter, to conclude this research. After that, there will be some appendices as well as figures and tables related to the research.

2. THE DISTINCTION BETWEEN CONTINENTAL AND TRANSCONTINENTAL SOURCING

Over the last few decades there has been a steady trend towards global sourcing. Global sourcing is considered to be any type of sourcing outside of the domestic market. This means, that global sourcing includes both continental sourcing, meaning sourcing from the same continent as the company is located in, as well as transcontinental sourcing, so sourcing from a different continent. In this research the differentiation will be made between continental sourcing and transcontinental sourcing. This means that local or domestic sourcing, is considered as continental sourcing. The same goes for sourcing from a different country within the same continent, which is also considered as continental sourcing. In terms of continental

sourcing, this research will refer to European sourcing, as all the companies that were included in the research are European companies as well. This refers to the European Union (EU) and not to the geographical division of the European continent, as the EU has a shared market in which trade is easier and does not have restrictions. Therefore, in this research we distinguish between sourcing from countries that are part of the EU or sourcing from countries that do not belong to the EU and therefore become transcontinental.

2.1 Continental Sourcing: Sourcing from the same continent

Continental sourcing refers to sourcing from the same continent as the buyer is located. This includes two types of sourcing, local sourcing and an example for continental sourcing which will be used for this research, namely European sourcing. Continental sourcing is differentiated from local sourcing by the fact that it includes all the countries from the EU, apart from the domestic market of the buying firm. During this research, local sourcing is identified as sourcing from Germany or the Netherlands, as this is where the companies used for this research are located. Continental sourcing in this research will relate to sourcing from within the EU member states, since a European perspective is adapted for this sourcing type (Koerber and Schiele, 2021, p.4). While the trade within the EU has been high over the past years, there is a trend that can be identified which shows that EU sourcing has started to decline over the last one and a half decades (Eurostat, 2021).

2.1.1 Local Sourcing: Sourcing domestically

Local or domestic sourcing is considered as the most straightforward approach of any type of sourcing, as it stands for sourcing within the domestic market (Bohnenkamp et al., 2020, p. 84). This proximity of location of the supplier and the buyer leads to multiple advantages, including e.g., lower costs, a higher reliability in terms of delivery as well as an increased flexibility (Wei et al., 2012, p. 367). In addition to this, sourcing on a local scale can gain a company multiple advantages which originate from shorter distances between the parties involved, having the same currency, cultural background and language, and a lower risk regarding supply chain disruptions (Ivanov et al., 2019, pp. 122-123). An additional factor influencing the decision to decide for local supply chains is the fact that they, in general, are considered to be more agile and responsive (Jin, 2004, p. 1292). Nevertheless, the more companies develop, the more they will start looking for opportunities in regions outside the domestic borders (Bohnenkamp et al., 2020, p. 84). Furthermore, local sourcing can be utilized when there is a need for a close collaboration between the different parties that are involved (Sorenson and Baum, 2003, pp. 7-8). While domestic sourcing is regarded to be the easiest way of sourcing, there can be some disadvantages as e.g., the fact that it is very likely for production costs to increase. The focus of local sourcing is to be able to procure products from within a certain geographical proximity. This relates not just to commodities and resources but also concerns the supplier decision (Körber and Schiele, 2021, p. 4). The positive effects of sourcing locally though are not just restricted to the company utilizing this sourcing type, but also positively influence the country in which the buyer and supplier are located. This is due to the fact that local sourcing can play a significant role in developing local economies (Wei et al., 2012, p. 365). Furthermore, sourcing locally can create new employment opportunities for the domestic market as well as stimulate local entrepreneurship (Wei et al., 2012, pp. 364-365; Xing, 2015, p. 33).

2.1.2 European Sourcing: A form of continental sourcing

EU sourcing is identified as a global sourcing variant, which includes suppliers that are from one of the EU members states, but not from the same domestic market. It is therefore a synonym for continental sourcing but refers to sourcing from countries that are part of the EU and does therefore not include all the countries that would be considered European on a geographical basis. Sourcing from within the EU can have multiple advantages, which mainly originate from the fact that the EU has established "the principle that goods, services, capital and labor can move freely between the member states" (Kox et al., 2004, p.9). Further advantages of intra-EU sourcing can be found when looking at the similar legal aspects and time zones that exist between these countries. Hanf and Soetendorp have stated that the many similarities between EU-members in terms of political and legal systems lead to the fact that it becomes more attractive to cooperate for the members of the EU (Hanf and Soetendorp, 2014, p.2). Adding to this is the fact that there are less currency fluctuations as the same currency is used when sourcing within the EU (Koerber and Schiele, 2021, p.4). In addition to that, sourcing from the EU can support supply chains as they become both more flexible and more responsive (Gadde and Jonsson, 2019, pp.6-7). Furthermore, it was mentioned by Aslan and Cinar that the satisfying quality of European suppliers is an additional factor for companies to decide for EU sourcing. The option for companies to not just stay in close contact with the supplier but also have regular on-site visits help building a personal contact with the supplier that can help to enhance performance (Aslan and Çınar, 2012, p.955). These relationships between suppliers and buyers can further be enhanced within the EU by the fact that there is a common language, English, used for most of the interactions within the EU (Kużelewska, 2020, p.1419). These advantages have been underlined by studies that show the effects the formation of the European Union had on the trade among the members of the EU. On the one hand, since the EU has been founded, there has been an increase of 70% in intra-EU trade (Glick, 2017, p. 197). Furthermore, this is supported by the fact that after the Euro was introduced as the shared currency among most of the EU member states, trade within the EU has increased by a further 14% (Kunroo et al., 2016, p. 408). On the other hand, we can observe a decline in European sourcing over the last 15 years, as mentioned earlier. Overall, 25 out of 28 countries within the EU have seen a decrease in intra-EU trade, over all kinds of product categories (Eurostat, 2021).

The definition used for EU sourcing during this research will therefore be the sourcing of resources and commodities within countries that are part of the European Union.

2.2 Transcontinental Sourcing: Utilizing other continents

The other part of global sourcing next to EU sourcing is transcontinental sourcing. This, in general, describes the concept that a company's suppliers are from other continents than the company itself (Schiele et al., 2020, p.2). In general, companies are faced with more difficulties when deciding to use transcontinental sourcing when compared to continental or local sourcing. Transcontinental sourcing can lead to some difficulties in the sourcing process, as there can be differences not just in time zones but also in the culture or legal frameworks (Koerber and Schiele, 2021, p.4). In addition to this, MacCarthy and Atthirawong stated that there will be more difficulties arising when dealing with transcontinental supply chains (MacCarthy and Atthirawong, 2003, pp. 811-812). Christopher and Peck underlined this, stating that supply chains become

more complex due to the widened length of the supply chains and the fact that more partners are involved (Christopher and Peck, 2004, p. 5-6).

Nevertheless, transcontinental sourcing also has a fair number of upsides. One major driver for companies to choose transcontinental sourcing is the fact that it can gain access to new markets as well as new technologies (Ettlie and Sethuraman, 2002, p. 351). Alguire added that transcontinental sourcing often includes a superior quality and higher technology inputs. Furthermore, the right usage of location can lead to a decrease in costs. All of this helps the company engaging in this type of sourcing towards gaining a competitive advantage (Alguire et al., 1994, pp. 62-63).

In relation to this research, this means that transcontinental sourcing refers to sourcing from a continent other than Europe. In more detail, it includes any country that is not part of the European Union itself. Hence, examples for transcontinental sourcing do not only include sourcing from locations like North America or China, but also countries like e.g., Turkey or Norway.

3. THEORETICAL FRAMEWORK: SIGNALING AND COUNTRY OF ORIGIN THEORY

3.1 Country of origin theory

3.1.1 History: Country image construct

The country of origin was mentioned in relation to an organizational studies article published by Hofstede, in which he argued that the company's country of origin shapes the management practices of a company (Hofstede, 1996, p.531). The research on the country of origin effect originated when researchers asked which and why a customer chooses a certain product when the price and composition of the product are the same and there is not the full information available to the customer when making the decision. The theory is based on the country image construct, which defines country image as "the overall perception consumers form of products from a particular country based on their prior perceptions of the country's production and marketing strengths and weaknesses" (Roth and Romero, 1992, p.480). In general, most of the research especially in the early stages has focused on the quality perception of consumers in relation to the country of origin and tried to show the effect it has on the decision-making process. Nevertheless, several studies have shown that the country of origin effect is not as influential on the decision making process as it was previously perceived. This was caused by the fact that the purchase intention was used as the dependent variable, as opposed to before, where the quality perceptions were used. This describes the fact that country of origin has "significantly lesser impact as consumers move closer to the actual purchase situation from belief formation regarding the relative quality of brands" (Agrawal and Kamakura 1999, p. 256).

3.1.2 Key mechanisms: Country of origin as information cue

There are different interpretations for the country of origin in different relations. Noorderhaven and Harzing e.g., defined country of origin effects as "that part of the differences in [. . .] strategies of MNCs that can be ascribed to the different national origins of these MNCs" (Noorderhaven and Harzing, 2003, p.54). As mentioned before, the theory is mentioned in the context of "the overall perception consumers form of products from a particular country based on their prior perceptions of the country's production and marketing strengths and weaknesses", which is considered as the country image (Roth and Romero, 1992, p.480). An additional definition was given in which it refers the country of origin to the country in which the products are manufactured and assembled, and the manufacturer's brand or product is associated with (Mohd et al., 2007, pp.44-45).

The country of origin of a supplier can be helpful as an extrinsic informational cue that can influence not just the perception but also the evaluation of a product by the customers (Verlegh and Steenkamp 1999, pp. 537-538). Furthermore, the research on country of origin effects have underlined the fact that the country a product or company originates from can act as a signal for product quality. In addition to this, it can directly influence the perception by consumers and affect the likelihood of a purchase being made. Additionally, Jaffe and Nebenzahl stated that "intuitively, it should be self-evident that, ceteris paribus, a country having a better image than others, especially as a source for a product, has a comparative advantage that should translate to economic value" (Jaffe and Nebenzahl 2006, p. 59).

3.1.3 Current findings: Different drivers of the country of origin

Current findings on country of origin theory presented by Yang, Ramsaran-Fowdar and Wibowo (2016), implied that country of origin can be driven by different factors. These factors include the country image, cultural differences, involvement, consumer ethnocentrism and consumers' knowledge on the product (Yang et al., 2016, p.37).
Further findings support the fact that there is a significant main effect of country of origin on the willingness to pay for a product. It is described that there is "a higher WTP for a product from a country of origin with a more favorable country image than for the same product from a country of origin with a less favorable country image" (Koschate-Fischer et al., 2012, p.23). In a different study it was claimed that consumers will view local brands as also being psychologically closer. Opposed to this, foreign brands are considered to be more distant, from a psychological perspective. (De Vries and Fennis, 2019, p.12). Adding to this it was suggested that consumers have a greater tendency to exclude brands from their evaluation list in case they lack information about the country of the product or brand (Esmaeilpour and Abdolvand, 2016, pp.714-716).

3.1.4 Hypotheses on country of origin: Improving transcontinental country images

Based on the beforementioned information and insights about the country of origin theory, there were several hypotheses proposed for the effects that the country of origin has on the trend towards transcontinental sourcing. The main question in relation to this theory is whether the image of transcontinental countries has changed towards a more positive image, that can also influence the trend towards of companies going transcontinental? This would mean that the country of origin is positively influencing the shift towards transcontinental sourcing. To check how the image of transcontinental countries is directly compared to European countries, H1 claims that *transcontinental countries are perceived to have equal or lower prices than European suppliers*. This would show a price advantage in terms of transcontinental suppliers, which can help to build a competitive advantage. Nevertheless, the low price cannot be negatively influenced by a bad quality. Therefore, H2 states that *the perceived level of quality of transcontinental countries is equivalent or higher than the perceived level of quality of European countries*. Especially countries such as China or Malaysia have had a negative image connected to the quality levels perceived from their countries. A potential change in the perceived quality can be one of the reasons buyers decide

to move to transcontinental countries as there is no quality loss anymore. Lastly, global sourcing has brought the opportunity for companies to get access to more advanced technologies. H3 proposes, *that transcontinental countries are perceived to be more advanced in terms of technology than European countries*.

All these three hypotheses will support the investigation of the main hypothesis, H4, namely *that the country image of transcontinental countries is perceived to be higher than of European countries*. The hypothesis will be tested to answer the question mentioned before, whether the image of transcontinental countries has changed towards a more positive image, that can also influence the trend towards of companies going transcontinental. This would suggest that the shift in sourcing is influenced by a shift in country image perception, as transcontinental countries would be considered to have at least the same level of price, quality, and technology as European countries.

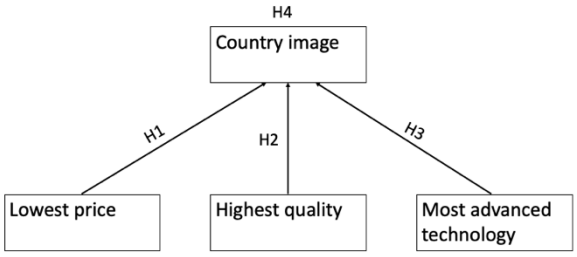

Figure 1: Hypotheses for country of origin theory

3.2 Signaling theory

3.2.1 History: Solving the information asymmetry

The reduction of information asymmetry between two parties is considered to be the main concern of the Signaling theory (Spence, 2002, p.434). In earlier research, it was demonstrated how employees can distinguish themselves from others in the selection process of prospective employers (Spence, 1973, p.356). In his work Spence found that in order to reduce the given information asymmetry, high-quality potential employees were able to separate themselves from low-quality applicants by making use of the rigorous higher education levels as a signal for the employer, which the lower-level applicants would presumably not be able to withstand (Spence, 1973, pp.358, 361-362). Clark et al. defined the signaling theory as revolving around the "judicious use of signals that are consistent with attainment or possession of a particular and valued attribute that, in the absence of the signal, would be difficult to unambiguously convey" (Clark et al. 2002, p. 26). The theory has also widely been applied in the marketing context, with the connection between the price of goods as a sign of quality being one of the main scientific progresses (Stiglitz, 1989, p.201). One can also mention the appliance of the theory in a sports event sponsorship context, where it can serve as a basis for developing successful sponsorship communication (Dean 1999, pp.9-10).

The issue of information asymmetry and the following signaling processes are also common among entrepreneurs and investors. Signaling can be an important tool to secure external financing for the enterprise. The signaling between investors and ventures originated by using dividends as a signal (John and Williams, 1985, pp.1065-1067). More recently, the reputation of top management structures has served as a signal for companies that are trying to secure external financing (Cohen and Dean, 2005, p.686). Overall, the theory of signaling has since then been applied to many different disciplines and the early work of Spence has led to an enormous volume of research applying the theory.

3.2.2 Key mechanisms: Different types of signals exist

There are certain key mechanisms concerning the signaling theory, which can be used when two parties have access to different information. As can be seen in figure 2, the signaling timeline starts by the signaler or sender choosing whether and how to signal the information to the other party. After the signal is sent, the receiver then goes on to observe and interpret the signal. After this has been done, the receiver can proceed with the decision-making process and ultimately send feedback back towards the signaler.

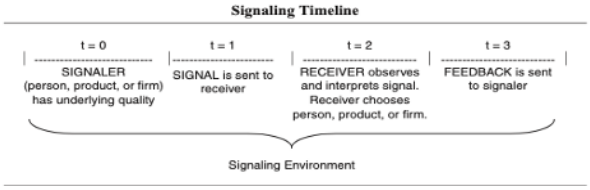

Figure 2: Signaling timeline (Connelly et al., 2011, p.44)

The principal concept on which the signaling theory builds up upon is the problem of information asymmetry. The main input for the decision-making process comes from the information that are available to the individuals. This information affects the process not just for personal decisions but also in terms of business or governments. There must be a distinction made between public and private information that individuals can use for their decision-making. Public information is freely available, and everyone can gain access to them, while private information is only available to a subset of the public. This leads to information asymmetries, as "different people know different things" (Stiglitz 2002, p.469), between the people that have access to that information and those that do not. Individuals that do not have access to all the necessary information could potentially make a better decision if they were to have the full information. An example for this can be the typical investment relationship. In this relationship, the entrepreneurs need to communicate the private information that they have to investors to be able to attract financing.

There can also be a distinction made between pre-purchase, purchasing and post-purchase signals. Signals that are used before the purchase was made include e.g., spending on features that can increase the willingness to transact of the customers and the seller tries to utilize them in the hope of recovering the expenses of these signals by increasing the future sales. The seller tries to convey information about e.g., the quality of the products or the sellers' fairness in managing private information about the buyers. Adding to this, information about the delivery date or payment mechanisms are considered to be purchasing signals. These occur before the purchase is finalized when the product selection has already been finished. Lastly, sellers can make use of post-purchase signals. There is only a small number of signals that can be utilized after the purchase has already been made. An example for such a signal can be details for tracking the product when it is being transited to the buyer (Mavlanova et al., 2012, pp.241-243).

A common setting for the information asymmetry is known as adverse selection. Adverse selection refers to the issue of high-quality suppliers to convey the level of quality by using a reliable signal that cannot be copied or transformed by a low-quality seller. This signal needs to be credible to convey the difference in quality. Most commonly, a brand name can be used as an effective signal for a high quality. This is due to the fact, that in the perception of buyers, only high-quality companies will adapt a signaling strategy. This is underlined by the fact that sellers only tend to implement the branding signal

if the benefits of offering branded products exceeds the benefits of offering unbranded products. Signaling only becomes effective for the sellers if the profits that come from selling high-quality, branded products outweighs the costs incurred of implementing the signal (Mitra and Fay, 2010, p.186).

3.2.3 Current findings: Customer loyalty as main variable

Scholars have not just worked on expanding the range of potential signals but have also looked at more contexts in which signaling occurs over the recent past. This has led to an increase in research as the theory gained momentum in management literature following the work of researchers. The theory recently has ceased to explain cross-organizational relationships in different kinds of disciplines. While Taj looked at the impacts of the construct in the international management context (Taj, 2016, pp.338-348), others have taken signaling into account in marketing, economics, and entrepreneurial financing (Bandyopadhyay et al., 2018, pp.1-19; Taoketao et al., 2018, pp.1039-1049; Kromidha and Robson, 2016, pp.605-629). Furthermore, Plummer et al. showed that to secure financing, a new way of signaling between ventures and investors can be strategic affiliations with partners (Plummer et al., 2016, p.1598).

One concept of how signaling theory is influenced was given by Boateng (see figure 3), as she inspected how the characteristics of a certain level of engagement, interactivity and online trust behaviors were influencing the customer loyalty within banks. This research has shown that signaling by the companies is important to gain a higher level of customer loyalty, as apart from the influence of engagement on online trust, all her hypotheses were supported. In relation to her article, the main concept, customer loyalty is shown as a driver for repeat purchase behavior. This is because it secures future sales from already existing customers, as the positive attitude they show towards the service provider or the product, leads to a higher level of loyalty which additionally enhances the firm's profitability (Boateng, 2018, pp.228-230).

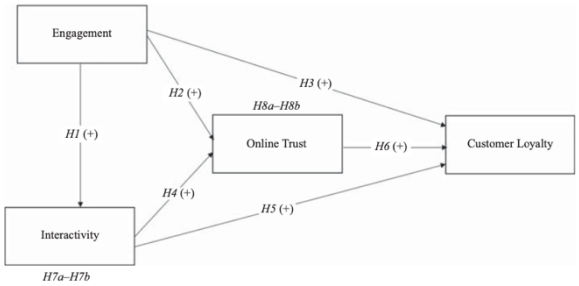

Figure 3: Signaling construct based on Boateng (Boateng, 2018, p.230)

3.2.4 Hypotheses on Signaling: Transcontinental loyalty is increasing

Based on the facts presented, there are several hypotheses that can be tested to identify whether signaling of companies influences the decision of choosing a transcontinental supplier. Firstly, to see how signaling influences the shift in global sourcing, we rely on the construct designed by Boateng (2018, p.230) in order to see whether customer loyalty based on signaling is higher with European or transcontinental suppliers. As customer loyalty is the main construct that is being tested, to identify whether loyalty, influenced by different signaling mechanisms, has increased for transcontinental suppliers, this research proposes this as the main hypothesis to be tested: H6: *The customer loyalty based on signaling mechanisms with transcontinental suppliers is higher than the loyalty with EU suppliers based on the same mechanisms.* This would indicate that the signaling mechanisms, that will be tested by the four different dimensions, have influenced the decision of buyers to choose transcontinental sellers instead of European sellers, as the level of customer loyalty is at least equal with transcontinental suppliers. To support the test of this hypothesis, there will be five hypotheses tested in relation to the constructed model. It is important to mention, that the model of Boateng was not investigated to the same extent as the original, as hypotheses H1, H7a, H7b, H8a and H8b were not tested in relation to our model. The five hypotheses chosen were tested to investigate the effect signaling mechanisms have on customer loyalty. These hypotheses will investigate the effects of the independent variables on the dependent variable and are the following:

H1: Interactivity → Trust; H2: Interactivity → Loyalty;

H3: Engagement → Trust; H4: Engagement → Loyalty;

H5: Trust → Loyalty

4. METHODOLOGY: EXPERT INTERVIEWS

4.1 Research design: Dual approach

For this study there will be a literature review conducted as well as empirical qualitative research using a set of interviews with various sub-parts. In the first part a literature review was conducted to gain the necessary theoretical insights on the existing secondary data related to both the theories used in this research and the distinctions between the different types of sourcing. Since both EU and transcontinental sourcing do not offer many original definitions, applicable assumptions from global as well as near sourcing were used to distinguish these types of sourcing. In this part the aim was to give a distinction between both sourcing types and show different positive and negative effects of deciding for either sourcing option. This was followed by an elaboration of the assumptions made about both country of origin and signaling theory in the existing scientific literature regarding these concepts. The main search database to find relevant articles was Scopus.

The interviews will be set up by a group of six people, each of which will perform a series of interviews before the results will be collected and analyzed. The three parts of the interview will consist of firstly, two experiments examining the general reasons for the decline in continental sourcing. This will be followed by two surveys about the country of origin and signaling hypotheses as well as the transcontinental model. Lastly, there will be a qualitative part of the interview which will try to examine the phenomenon of declining EU sourcing.

4.1.1 Survey

Within the interviews, there will be a survey focusing on the implications that both country of origin and signaling theory have on the recent trend towards transcontinental sourcing. The survey will therefore be divided into two smaller parts, to provide insights and investigate both the country of origin as well as the signaling theory and their effects on the trend towards transcontinental sourcing (see appendix C).

4.1.1.1 Measurements of the surveys

To identify the differences between a set of 15 countries, including both European as well as transcontinental countries, a ranking has been set up. The participants of the interview are asked to rank the 15 given countries to see the differences that arise in terms of the lowest perceived price, the highest perceived quality as well as the country that is perceived to

have the most advanced technology (see appendix C). 11 of these countries are part of the 14 countries from which the Netherlands import the most from. The additional four countries, namely India, Turkey, Brazil, and Nigeria, are also within the first 28 countries from which the Netherlands source. They were added for more variety in the countries and to get a clearer and fuller picture of the images of countries outside the EU compared to those in the EU (WITS Worldbank, 2019).

For the country of origin part, there was a simple ranking made, based on the answers given in the interviews. This was enhanced by adding a fourth ranking, which adds all the three sub-scores together and creates the ranking "country image". This construct called "country image" is therefore simply the added score of all the three smaller rankings that took place beforehand and was not answered as a separate variable by the interviewees but rather created afterwards in regard to the answers given, to give a clearer overview of the overall scores obtained in the first three rankings. The ranking positions were converted to points for each position, in the reversed order from the positions that were achieved. This means that e.g., the country that is ranked in first is getting 15 points, and the country in last is getting 1.

In addition to that, there will be a set of items distributed among four main categories to identify different characteristics in the relationships between the buyers and European and the buyers and transcontinental suppliers (see appendix C). The items used for trust and loyalty in this construct as well as the four main categories under which they are divided are based on the previous work of Boateng (Boateng, 2018, p.230). The construct designed by Boateng gives the four main influences on signaling, namely the trust, engagement, interactivity and ultimately the loyalty that the buyer has towards his supplier. The items used for interactivity and engagement were adjusted to meet the requirements of this research. For the interactivity part of the survey, the items were adapted from the previous research performed by Murphy and Sashi, in which they investigated B2B relationships in terms of communication, interactivity as well as satisfaction (Murphy and Sashi, 2018, pp.10-11). To complete the survey about signaling, the items used in relation to engagement were adapted from three previous research projects which investigated the purchase and customer engagement in B2B relationships (Yu et al., 2015, p.354; Casidy et al., 2018, p.32; Nyadzayo et al., 2019, p.7)

The interviewees are asked to give their opinion on each of the items using the 5-point Likert scale as a range, with "strongly agree" and "strongly disagree" serving as anchors.

4.2 Data collection via interviews

All the approx. 24 companies that took part in the data collection interviews are located in the Netherlands or in Germany. These companies come from different sectors which include anything from pharma and automotive over plastic as well as mining or food sectors. There was only one selection criteria for the participating companies, namely that they need to either source on an EU or transcontinental scale as this research focuses on identifying changes in the sourcing behavior between local, EU and transcontinental sourcing. Thus, the companies that took part in this research utilize either a mixed sourcing strategy between transcontinental and intra-EU sourcing or rely on mainly intra-EU or only intra-EU trading. The exception is given by company O, which sources only on a transcontinental scale. A further detailed overview of the companies that cooperated in this research can be found in appendix part D.

Companies were approached via email, in person or via phone calls, in order to make appointments for the interviews, which were conducted in May and June 2022. The language of the interviews differed according to the participating company, between either Dutch or German. The data was collected using a mixture of both face-to-face as well as online interviews, which were conducted via Microsoft Teams or Zoom meetings. For meetings that were held online, the surveys were created as an online version in addition to the normal version, to gain a better overview of the results. For this, the website Qualtrics was used, and the results were afterwards exported into an excel sheet. All the interviews that took place were recorded and transcribed using the software Amberscript. This software reliably converts spoken language into a text, which was further checked following the transcription. To make the analysis of the data possible, all the interviews were translated to a common language, namely English, using DeepL as a reliable translator, before being checked for mistakes and, if needed, corrected again.

4.3 Analysis and evaluation of data

From this interview, implications can be drawn to what extent the trend towards transcontinental sourcing is influenced by the two beforementioned theories. Next to the qualitative part of the research, there will be some quantitative research conducted to find supporting arguments and theories for the research. This was done to, on the one hand, define a clear distinction between local, but mainly between EU and transcontinental sourcing. Furthermore, the literature part was utilized to give a clear picture and explanations about the two theories in use.

For this research project, only the research results in relation to the country of origin and signaling surveys were used. After the interviews were conducted, the results were exported to Excel. To analyze the signaling construct used and the correlations between the four variables, the program SmartPLS was used. Here, the model was constructed and then the results of the interviews were added, to gain insights on the correlations between the variables, which were calculated using the previously mentioned program. In terms of the country of origin, the scores of the three rankings added up to the overall score shown in the "country image" results. The scores that were given in the interviews were converted in the manner that was mentioned previously (see 4.1.1.1). Following the conversion, the results were ordered in a descending order to have a clear ranking for each category, using Excel. Lastly, these results were analyzed with the help of these rankings, once on a separate scale for each of the three indicators, as well as in terms of the overall score obtained in the "country image" ranking.

5. RESULTS

5.1 Influence of country of origin on the sourcing decision

5.1.1 Price advantages remain for transcontinental countries

First, when looking at the ranking results (Table 1) in terms of the lowest price, it is noticeable that there is an existing price advantage for most of the transcontinental countries. This can be seen by the fact that the seven countries with the perceived lowest price are all transcontinental countries. Especially the Asian market seems to still be seen as the cheapest option, with the three cheapest countries all being from Asia. While Germany is recognized as the country with the highest prices, China can be found at the other end of the ranking, as the cheapest country. There is also a noticeable gap between Poland and Italy. Poland is the only country from the EU in this upper part, which is seen as cheaper countries, while the other EU

countries rank more towards a higher perceived price. Within these EU countries, we can find the UK, Japan, and the USA, which are all very close to each other, showing that there are some transcontinental countries with a higher price compared to most EU countries. Overall, we can say that transcontinental countries are perceived to still be lower in price than EU countries, with some exceptions. The only EU country that is close to as cheap as the included transcontinental countries is Poland. This leads to the confirmation of H1, as we can see that transcontinental countries have a lower price than EU countries.

Table 1: Price rankings

Lowest Price	Country	Score	EU/TC
1	China	13,130	TC
2	India	13,043	TC
3	Malaysia	12,652	TC
4	Nigeria	11,913	TC
5	Brazil	10,652	TC
6	Turkey	9,652	TC
7	Russia	9,261	TC
8	Poland	9,217	EU
9	Italy	5,522	EU
10	Belgium	5,304	EU
11	France	5,043	EU
12	UK	3,826	TC
13	Japan	3,826	TC
14	USA	3,565	TC
15	Germany	3,391	EU

5.1.2 Quality advantages still exist for EU countries

In table 2 it can be noticed that three out of the four countries that have the highest perceived quality are from the EU. On the other hand, the six countries with the lowest perceived quality are all transcontinental countries. Apart from Poland, which is ranked in 9th, all the EU countries can be found in the upper half of the quality ranking. Similar to the price ranking, where Japan, the UK and the USA were considered to be more expensive than the other transcontinental countries, it can be seen that these countries are perceived to have a higher quality than the other countries outside of the EU. Interestingly, China is considered as the country with the lowest price but is ranked in 8th in terms of quality. The result shows that the quality in China is increasing. This must be relativized to a certain extent, as it depends on the industry in which the buyer is operating, since some results showed China with very good and some with very poor quality. In addition to that, it should be mentioned that China is still closer to countries such as Poland or Turkey than Italy or the UK, as one can notice a small gap to the countries above China in this ranking. These results indicate that H2 cannot be supported through the ranking. In general, the level of quality is still perceived to be at a higher level in the EU when compared to the quality outside the EU.

Table 2: Quality ranking

Highest Quality	Country	Score	EU/TC
1	Germany	14,304	EU
2	Japan	13,174	TC
3	Belgium	11,043	EU
4	France	10,826	EU
5	USA	10,130	TC
6	UK	9,652	TC
7	Italy	9,478	EU
8	China	7,261	TC
9	Poland	7,087	EU
10	Turkey	6,957	TC
11	Malaysia	5,565	TC
12	Brazil	4,957	TC
13	India	4,130	TC
14	Russia	4,043	TC
15	Nigeria	1,391	TC

5.1.3 Technological Advancement – An equal playing field

In the last performed ranking (table 3), it can be noted again that the lower six countries are all transcontinental countries. The fact that Japan is considered as the most technologically advanced country underlines the fact that technological developments can also originate in transcontinental countries. This is further supported by the fact that four out of the top six countries are from outside the EU. Opposed to the quality ranking, China can also be found among the leading five countries. Therefore, China does not only still have the lowest perceived price, but they score good on quality and in the upper third in technology advancement. This leads to the conclusion that H3 can be confirmed but also rejected to some extent. In relation to technology, it seems like most of the leading countries are from outside the EU. Nevertheless, also the bottom six countries are transcontinental countries. Therefore, it depends on the required technology and the country that a company is sourcing from. In general, technological advancements can be found in transcontinental countries just as much as in EU countries, whereby it seems that the gap between the transcontinental countries seems much higher when compared to the gap between EU countries.

Table 3: Technology ranking

Technology	Country	Score	EU/TC
1	Japan	13,696	TC
2	Germany	13,609	EU
3	USA	12,217	TC
4	France	10,522	EU
5	China	10,435	TC
6	UK	9,739	TC
7	Belgium	9,087	EU
8	Italy	8,652	EU
9	Poland	6,174	EU
10	Turkey	5,913	TC
11	Malaysia	4,870	TC
12	Russia	4,783	TC
13	Brazil	4,522	TC
14	India	4,522	TC
15	Nigeria	1,261	TC

5.1.4 Country images: China as a leading country

When looking at the combined scores of all three categories, named “country image” (table 4), we can see that due to the high price advantage and progress in quality and technology, China is ranked 2nd in terms of country image, only behind Germany. Two out of the first three and three out of the first five are transcontinental countries. Only the last four countries

are transcontinental countries, while Poland is ranked in the bottom third as 11th. Therefore, it can be said that it is very dependent, not just on the industry or resources that are considered or needed, but also on the country where the sourcing is supposed to take place. While some transcontinental countries, such as Japan, the USA and the UK are among the leading countries in quality and technology, also China has ranked in 2nd in terms of country image. Therefore, we can see that the decision to source on a transcontinental scale can also come from the perceived country image and therefore the resulting expectations of the products or resources sourced from those countries. While some countries such as India, Nigeria and Brazil mainly show an advantage in terms of price and not in terms of quality or technological advancements compared to EU countries, it also becomes obvious that there are transcontinental countries that are perceived to be on the same level as EU countries in all three aspects. Nevertheless, the gap among the TC countries is quite large and visible, which shows that in some transcontinental countries there are still perceived deficits, at least in some respects, as opposed to EU countries, which can be seen in the ranking results of quality and technology. Of course, in these countries there can also be a good quality or much advanced technology, but it does not seem to be the norm like in most EU countries or some of the transcontinental countries such as Japan, the UK, and the USA, partly also China.

Table 4: Country image

Country image	Country	Score	EU/TC
1	Germany	31,304	EU
2	China	30,826	TC
3	Japan	30,696	TC
4	France	26,391	EU
5	USA	25,913	TC
6	Belgium	25,435	EU
7	Italy	23,652	EU
8	UK	23,217	TC
9	Malaysia	23,087	TC
10	Turkey	22,522	TC
11	Poland	22,478	EU
12	India	21,696	TC
13	Brazil	20,130	TC
14	Russia	18,087	TC
15	Nigeria	14,565	TC

To answer the research question and H4, the country image of transcontinental countries can, but does not have to influence the trend positively. According to the results, pricewise the trend can be explained by transcontinental countries offering price advantages. When it comes to technology and quality, it depends on the sourcing location. Some locations will offer the desired quality and technology for buyers to decide for the transcontinental choice. Some transcontinental countries still have a more negative country image compared to the EU countries, that would prove to be negatively influencing the trend towards more transcontinental sourcing. When focusing on the country that is the business partner of most EU countries, and of the companies that participated in the interviews, China, we can see that in terms of overall country image the country is perceived in second place. This can explain, to some extent, the rising level of transcontinental sourcing, as we can see that the main transcontinental trading partner country is perceived to be better in the combination of price, quality, and technology than nearly all the other included countries.

5.2 Influence of signaling theory on the sourcing decision

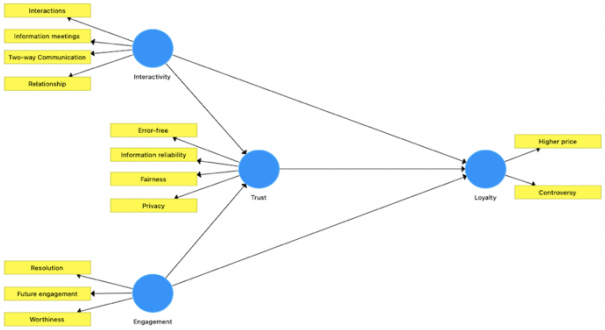

Figure 4: Adapted signaling construct used for analysis

The constructed model is based on the model used by Boateng (Boateng, 2018, p.230). The items in this model were adjusted to fit the topic of this research, as can be seen in figure 4.

Table 5: Results of Smartpls 3.0 analysis

Variable	Item	Loading	R-squared adjusted	CR	AVE	Loading (EU)	R-squared adjusted	CR	AVE	Loading (TC)	R-squared adjusted	CR	AVE
Interactivity	Q1_1	0.829		0.852	0.592	0.830		0.846	0.586	0.797		0.864	0.614
	Q1_2	0.686				0.555				0.742			
	Q1_5	0.837				0.903				0.816			
	Q1_6	0.715				0.731				0.779			
Engagement	Q2_3	0.853		0.907	0.766	0.664		0.829	0.621	0.912		0.936	0.830
	Q2_4	0.881				0.898				0.897			
	Q2_5	0.891				0.785				0.923			
Trust	Q3_1	0.749	0.503	0.892	0.674	0.624	0.517	0.861	0.616	0.813	0.517	0.901	0.696
	Q3_2	0.831				0.607				0.933			
	Q3_4	0.856				0.932				0.776			
	Q3_5	0.845				0.916				0.807			
Loyalty	Q4_1	0.891	0.275	0.744	0.599	0.939	0.301	0.664	0.530	0.837	0.247	0.789	0.652
	Q4_2	0.635				0.423				0.777			

To analyze the results of the PLS algorithm analysis, this research project will consider the composite reliability (CR) values, the average variance extracted (AVE), which explains the convergent reliability, as well as the item loadings and the adjusted r-squared values. In addition to that, there will be a significance test performed using the bootstrapping feature which will help to identify whether the hypotheses used in this study is significant or not. This analysis will take place by using the necessary features in the PLS 3.0 software. To investigate the effect that signaling has on the trend towards transcontinental sourcing, we will consider three models. The first is based on all the answers given in the survey for both the EU and transcontinental suppliers (n=41). The same model will be used twice again, once for the answers that were given in relation to the EU suppliers (n=22) and once for the answers in relation to the transcontinental suppliers (n=19).

Firstly, the item loadings will be considered. Here, Hair et al. stated that any loading value between 0.4 and 0.7 should be considered for deletion (Hair et al., 2017, p.137). The items that are between 0.4 and 0.7 and lead to a higher value of composite reliability when being deleted, were left out. In addition to that, each item with a value below 0.4 should be deleted. If the value of the loading factor is higher or equal to 0.7 than they can be declared as valid. This led to the fact that seven items were left out due to an insufficient loading value (Q1_3; Q1_4; Q2_1; Q2_2; Q3_3; Q4_3; Q4_4). After the removal, the algorithm analysis was performed and led to the values that can be seen in table 5.

Following, we look at the average variance extracted (AVE). This explains the average percentage variation that can be explained by the items in the construct. The AVE value should be higher than 0.5 to show that the indicator represents the developed variable. As can be seen in table 5, the AVE for all variables is higher than 0.5, for all the three models. This means, that the convergent validation requirements are fulfilled. Therefore, the model is appropriate and feasible to use. An additional test for the outer model was performed, in which the

composite reliability (CR) was investigated. The value for this should be higher than 0.7 to prove valuable for the research. As can be seen in table 5, the CR values for all the variables exceeded 0.7, apart from the loyalty variable in the EU model (0.664). Nevertheless, the model was used, as in the general sample with a higher number of respondents (n>30), this CR value proved to be higher than 0.7, namely 0.744, which shows the reliability of the test. Due to a small sample size in the EU and transcontinental model, small deviations can occur.

Next up, the inner model, so the r-square value was investigated to determine the relationship between the independent and the dependent variable. Since trust is seen as a mediating factor for engagement and interactivity towards loyalty, the adjusted r-squared test was performed regarding both trust and loyalty. When looking at the value for trust in the general model, we can see that about 50,3% of the dependent variable is influenced by the independent variables. This shows that the level of trust towards a supplier can be partially explained by the level of interactivity and engagement shown. Furthermore, for both the EU as well as the transcontinental model, the r-square value for trust was equal to 51,7%. This underlines the fact that the trust towards the supplier can be explained nearly exactly half by the interactivity and engagement between buyer and supplier. The rest can be explained from other variables originating from outside the model. In relation to the level of customer loyalty, we can see that the dependent variable is influenced by the independent variable far less than when looking at the level of trust. In the general model, the dependent variable, loyalty, is influenced only by 27,5% by the trust, interactivity and engagement between buyer and supplier. In relation to the EU model, we can see that it is influenced by 30,1%, so slightly more than in the general model. The opposite can be seen with the transcontinental model, where the independent variables influence the level of loyalty by about 24,7%. Again, the rest can be explained by other variables from outside the model, which shows that these signaling practices do not have the most impact on the level of loyalty towards a supplier.

Lastly, figure 5 shows the path coefficients including the results of the bootstrapping test, where in the general model it was found that there are two variables with a p-value < 0.05. These were the effect of engagement on trust as well as interactivity on trust. This underlines the fact that these hypotheses have a significant effect to performance. The other three tested hypotheses all had a value of p > 0.05 and therefore did not prove to have a significant effect on the performance. The same results can be seen in the EU model, where also these two hypotheses can be seen to have a significant effect, while in the transcontinental model, only the effect of engagement towards trust proved to be significant.

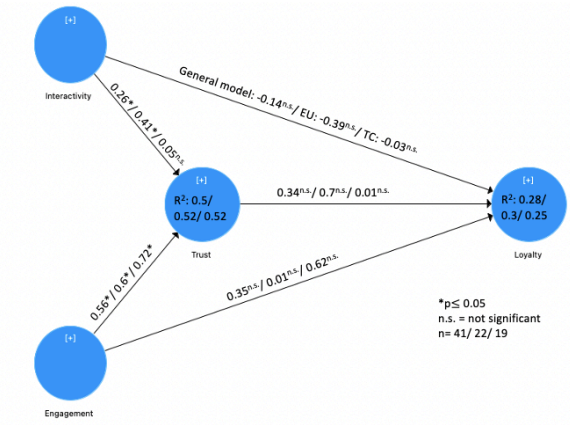

Figure 5: Research model with results

Therefore, we can conclude that the signaling methods regarding interactivity, engagement and trust have a higher influence on the level of loyalty with EU suppliers than with transcontinental suppliers. Due to the small sample size, the results must be relativized, as both samples were under the standardized amount of n=30. Nevertheless, we can see that the customer loyalty with EU suppliers can be explained slightly more by the signaling practices that were investigated than the loyalty with transcontinental suppliers (30,1% > 24,7%). In addition to that, in the transcontinental model the level of interactivity did not prove to have a significant effect on the level of trust, while this hypothesis was proven to be significant in the EU model. This leads to the conclusion that either the customer loyalty with transcontinental suppliers is built by different measures than the proposed signaling mechanisms, or the level of customer loyalty in general is lower with transcontinental suppliers than with EU suppliers. Therefore, our hypothesis, that the customer loyalty based on signaling mechanisms with transcontinental suppliers is higher than the loyalty with EU suppliers, can be rejected. This leads to the impression that signaling methods do not play a significant role in the shift towards less EU sourcing, as actually the levels of loyalty and signaling seem to be higher between buyers and EU suppliers as compared to transcontinental suppliers. In relation to RQ2, we can say that signaling practices do not seem to have any major influence on the trend towards more transcontinental sourcing. Based on the results presented previously, it can be claimed that the signaling mechanisms tested in the construct in relation to customer loyalty rather influence the trend negatively, as it shows a higher level of loyalty that is built with EU supplier instead of non-EU suppliers.

6. DISCUSSION AND CONCLUSION

6.1 Key findings: Opposite effects of the theories

All in all, it can be said that the country image of some transcontinental countries can influence the decision to go for a transcontinental supplier. Especially, if price is the main criteria for the sourcing location, transcontinental countries have an advantage opposed to EU countries. Nevertheless, the more quality and technology play a role, the more people tend to believe that EU countries are further developed in these areas. Especially, countries like Germany and France show that EU countries, when willing to pay a higher price, are perceived to be advantageous compared to transcontinental countries. As can be seen from the country image ranking in the end when a country has a significant price advantage, such as Malaysia when compared to Poland, even the lower level of technological advancement and quality can be offset due to the high price advantage. This makes Malaysia rank higher than Poland, even though it is perceived to be lower in two out of the three categories. In addition to that, the country that is perceived to be the cheapest, China is also ranking among some EU countries in the other two categories which makes the country an overall second in the country image construct. This shows that China's country image has improved in a lot of areas, and it is not just seen as a cheap country anymore, but also one that can serve with a solid quality and a high level of technological advancement. This can also influence the decision to go for a transcontinental, or Chinese supplier, as the country is not only perceived to be very cheap, but also good enough in terms of quality and technology to meet the standards expected. One can compare these results with some of the findings mentioned in the earlier part of this research. Here, it was claimed that "a higher WTP for a product from a country of origin with a more favorable country image than for the same product from a

country of origin with a less favorable country image" (Koschate-Fischer et al., 2012, p.23). While this paper did not investigate the effects of the country image on the willingness to pay, one can see that the countries with a better score in the country image ranking also in general rank higher in terms of imports to the Netherlands (WITS Worldbank, 2019). The first place in both imports and country image is Germany, while China is not just second place in terms of country image but also is the third biggest exporter to the Netherlands. Nigeria, the country with the lowest perceived country image in this research, is also the country that the Netherlands imports from the least, compared to the other countries that were included in the ranking. Russia, in 2019 still seventh place in terms of imports, has dropped to the 14th place in terms of country image and shows the exception together with Japan, which scores third in country image but only 13th in terms of exports to the Netherlands (WITS Worldbank, 2019). In general, it can be said that the countries that score higher in the country image construct are also used to import from more by the companies in the Netherlands. This also underlines previous statements by Jaffe and Nebenzahl, who claimed that "intuitively, it should be self-evident that, ceteris paribus, a country having a better image than others, especially as a source for a product, has a comparative advantage that should translate to economic value" (Jaffe and Nebenzahl 2006, p. 59).
Nevertheless, it all depends on the needs of the buyer as well as the industry or resources that are needed. Drawn from this country image ranking construct can be the fact that some transcontinental countries are only perceived to have a price advantage, while others are also perceived to be on a similar, or even higher, level than EU countries in not only price but also technology and quality.

In terms of signaling, this research showed that the level of customer loyalty can be explained at least to some extent by the signaling mechanisms that exist between the buyer and seller. In relation to this, it was shown that signaling has more of an effect on the relationship between EU suppliers and their customers, rather than on the relationship with non-EU suppliers. As previously mentioned, the level of loyalty as well as signaling mechanisms seems to be higher when the supplier is, like the buyer, situated within the EU. Furthermore, it can be seen that the level of customer loyalty is not influenced to a great effect by the relation of buyer and supplier in terms of interactivity, engagement and trust. While in two of the three models it was shown that interactivity and engagement have a significant influence on the level of trust that is shown in the relationship, there was not a significant impact noticeable towards the level of loyalty in any of the tested models. When comparing the EU and the transcontinental model with each other, one can see that with EU suppliers, signaling has more of an influence, especially on the level of trust between buyer and supplier. Interestingly, when comparing these results to the results of Boateng's research, one can see some differences and similarities. In terms of loyalty, Boateng found an adjusted R-squared value of 0.27, while the general model in this research found a value of 0.28, with the EU model having 0.3 and the transcontinental one having a score of 0.25. This shows, especially in terms of loyalty, a high level of similarity between the two papers' results. In both the level of loyalty that can be explained by the signaling mechanisms investigated was 27% and 25-30% respectively. This leads to the small conclusion that the level of loyalty is either not generally influenced to a great extent by signaling mechanisms, or it is influenced by different types of signaling. An additional similarity between the two results comes from the fact that the only path that proved to have negative coefficients in all four analyses of the construct was the influence of interactivity on loyalty. This demonstrates that interactivity does not seem to influence the level of loyalty positively to any extent. On the other hand, in the previous research by Boateng there were significant effects concluded for every hypothesis apart from the influence of engagement on trust. In this research though, the only hypothesis that was proven to be positive in all three models was this effect of engagement on trust. It shows that there can be differences in the significance of this model depending on the industry the respondents are in (Boateng, 2018, p.233).

To put it in a nutshell, it can be said that the perceived country image by the customer can, but does not necessarily have to, influence the shift towards transcontinental sourcing, while the signaling mechanisms rather support the sourcing from within the EU than from outside the EU.

6.2 Discussion and conclusion: No clear effects on the trend

The main purpose of this research was to further investigate the reasons behind, and the extent of the current trend that guides companies to prefer transcontinental sourcing over continental, or in this case EU, sourcing. To help this, the research focused on two theories that were identified as potential driving sources for buyers to decide against intra-EU sourcing. To answer the question, whether or not this trend is in fact influenced by these two proposed theories, the main research question was split into two parts, one for each theory respectively. After analyzing the results, RQ1 proved to be of rather positive significance for the trend, while RQ2 showed the opposite effect. This leads to the following conclusion: The country image of transcontinental countries can, but must not, have a positive effect on this trend. Main aspects to differentiate between a positive or negative influence of this construct, are the importance of the price as well as the question in which transcontinental country the resources or products are supposed to be sourced from. Also, the industry of the buying firm changes the perception of price, quality, and technology, which makes it harder to generalize the results. Nevertheless, especially China has improved on their country image and does not only offer a price advantage compared to all the other countries in the ranking, but also offers high level technology and decent quality ratings. On the other hand, many non-EU countries seem to still be perceived as offering only a price advantage to EU countries, which makes the influence of this theory even more marginal. All in all, RQ1 still offers a positive effect towards the trend, underlined by the fact that most of the interviewed companies also use China as a sourcing location and the country ranked in second place in terms of country image. The reach of the influence has to be further investigated, as EU countries still scored rather high in the country image variable, which shows that the country image can also have the opposite effect.

When looking at RQ2, the difference between the two models that were analyzed was not immense, nevertheless it can be seen that signaling mechanisms and the loyalty that is built by utilizing those, is rather giving a negative effect on the trend. The construct shows that loyalty and trust are rather built with suppliers from the same continent and not with transcontinental ones. Since the gap between the results is not big and therefore might not be too influential, it can be said that signaling mechanisms can also support the decision to go with a supplier that is situated outside of the EU, but looking at the greater picture, this construct rather proves to have little or no effect on the existing trend.

Lastly, to answer this research's main question, to what extent the country of origin and signaling theory influence the selection process between EU and transcontinental sourcing, it can be said that both the theories seem to only have a small

influence on this trend. While the country of origin rather supports than opposes this trend, the signaling construct shows the opposite effect. As previously mentioned though, both theories can also influence the sourcing selection in the other direction. Therefore, answering this question in a general sense, also due to the small sample size, is nearly impossible. But implications of this research are that the country images of non-EU countries are rising and lead to a positive effect towards this trend, while customer loyalty built through signaling rather opposes the trend and pushes buyers back towards EU suppliers. The extent of the influence is dependent on the company, the resources needed to source as well as the country that is planned to be sourced from.

6.3 Limitations and implications for further research

The main limitation of this research is the fact that with a total of 25 interviews, and some of them not answering all the parts of the interview, the sample size is relatively small. This makes it hard to generalize the results of this research and shows the necessity to further investigate the effect of the theories on the trend with the help of more samples. In relation to the country of origin theory, there were 23 interviewees that ranked the countries according to their perceptions. Thus, the results cannot simply be generalized, but can give an implication of what the effects of this theory are on the analyzed shift in preference. These results can give a guideline and implications for further research into this topic. The same goes for the signaling theory part of the survey. Here, in the general model there were 41 answers given, which means that for this model the results can rather be generalized and give hints to the actual effect of this theory. Nevertheless, the results of the EU as well as the transcontinental model must be relativized again, since they only consisted of a sample size of 22 and 19 respectively. Hence, here the same counts as for the country of origin results, which can give implications but not a clear answer to the research, due to a small sample size. Further, the companies included in this research are operating in different industries, and the perceptions about quality, price, and technology can differ from industry to industry, since some countries might be more focused on a certain industry or one of the aspects in a country is significantly higher than it is in a different industry in the same country. The same goes for the relationships with companies in general that can differ between industries, as in some industries close relationships between partners are not needed or not in focus as much.

In addition to that, a further limitation comes from using the bootstrapping feature in the Smartpls 3.0 application, in which the outcomes of the hypotheses testing can vary between different runs of the test. When doing the bootstrapping test multiple times, it will give different results so therefore it has to be relativized to a certain extent. In relation to the items that were used for the evaluation of signaling mechanisms, due to using qualitative data, there is the risk that the researcher interprets statements differently than how they were meant. Also, not all the participating companies had a transcontinental supplier, which might influence their perceptions for the country images of those non-EU countries. Furthermore, differences within the EU countries and differences within the transcontinental countries can also be seen. Therefore, it cannot be generalizable that all EU or all transcontinental suppliers share the same characteristics and there must be distinctions made.

However, this paper further extended the research on the shift in sourcing preferences, from EU to transcontinental sourcing and deepened the insights on the differentiation between these types of global sourcing. So far, there has not been any study conducted that focused on the relevance of country of origin and signaling in relation to EU sourcing and the differences within global sourcing that were investigated in this research. Subsequently, this research project gave insights on the effects of both country of origin and signaling theory on this existing trend and helped to find an influence for this trend. As a result, companies can use this research as an additional information cue when choosing a supplier or location of a supplier to source from. Also, country image and signaling results can further be analyzed in the future in a broader scope. Further research can be made investigating the effect of the theories when additionally considering perceptions about the country image and relationships with local suppliers, which would add another layer of research. Moreover, it makes sense to further analyze the importance of country of origin and signaling mechanisms for purchasing managers and their companies. This can help to understand if and how they affect the sourcing decision. In addition to that, the effect of the theories can also be analyzed from the suppliers' point of view to see whether there are any differences in that regard. This can help to improve the attractiveness of the supplier for current and new customers.

6.4 Managerial implications

Further managerial implications include the fact that the results of the country of origin research can be used to gain an overview of the perception people have over certain countries. This helps the companies to realize the impression over their products that customer could also have when knowing a product or resource is sourced from that part of the world. Purchasing firms might also use this paper to compare some countries in terms of perceived characteristics, before or when deciding about which supplier to choose. The research on relationships influenced by signaling mechanisms can give implications about the differences in managing a business relationship with EU and non-EU partners. In addition, it can help suppliers to see in which parts of the relationship more focus should be invested in to gain a higher level of customer loyalty. One can also imply, that purchasers can look for alternatives within the EU, as it seems that supplier-buyer relationships within this market are running smoother and a price or competitive advantage can also be derived from this fact.

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9. APPENDICES

9.1 Appendix A – Figures

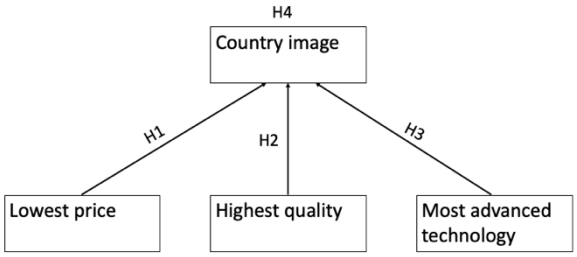

Figure 2: Hypotheses for country of origin theory

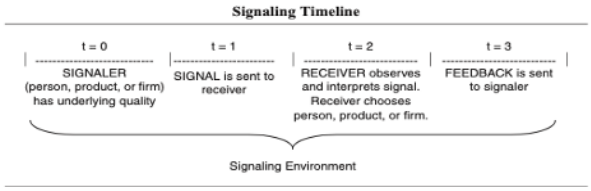

Figure 2: Signaling timeline (Connelly et al., 2011, p.44)

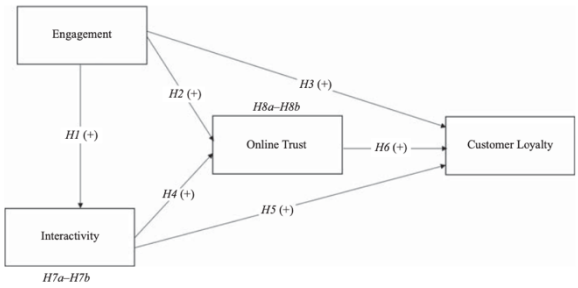

Figure 3: Signaling construct based on Boateng (Boateng, 2018, p.230)

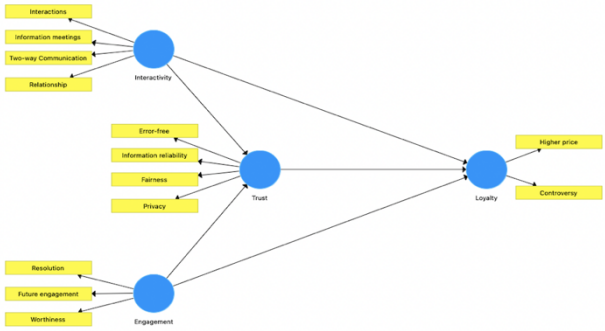

Figure 4: Adapted signaling construct used for analysis

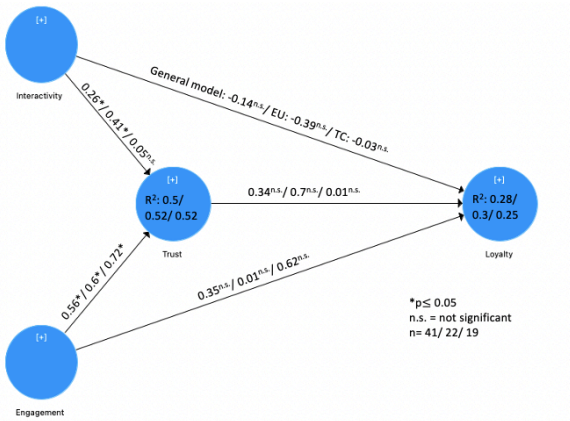

Figure 5: Research model with results

9.2 Appendix B – Tables

Table 1: Price rankings

Lowest Price	Country	Score	EU/TC
1	China	13,130	TC
2	India	13,043	TC
3	Malaysia	12,652	TC
4	Nigeria	11,913	TC
5	Brazil	10,652	TC
6	Turkey	9,652	TC
7	Russia	9,261	TC
8	Poland	9,217	EU
9	Italy	5,522	EU
10	Belgium	5,304	EU
11	France	5,043	EU
12	UK	3,826	TC
13	Japan	3,826	TC
14	USA	3,565	TC
15	Germany	3,391	EU

Table 2: Quality ranking

Highest Quality	Country	Score	EU/TC
1	Germany	14,304	EU
2	Japan	13,174	TC
3	Belgium	11,043	EU
4	France	10,826	EU
5	USA	10,130	TC
6	UK	9,652	TC
7	Italy	9,478	EU
8	China	7,261	TC
9	Poland	7,087	EU
10	Turkey	6,957	TC
11	Malaysia	5,565	TC
12	Brazil	4,957	TC
13	India	4,130	TC
14	Russia	4,043	TC
15	Nigeria	1,391	TC

Table 3: Technology ranking

Technology	Country	Score	EU/TC
1	Japan	13,696	TC
2	Germany	13,609	EU
3	USA	12,217	TC
4	France	10,522	EU
5	China	10,435	TC
6	UK	9,739	TC
7	Belgium	9,087	EU
8	Italy	8,652	EU
9	Poland	6,174	EU
10	Turkey	5,913	TC
11	Malaysia	4,870	TC
12	Russia	4,783	TC
13	Brazil	4,522	TC
14	India	4,522	TC
15	Nigeria	1,261	TC

Table 4: Country image

Country image	Country	Score	EU/TC
1	Germany	31,304	EU
2	China	30,826	TC
3	Japan	30,696	TC
4	France	26,391	EU
5	USA	25,913	TC
6	Belgium	25,435	EU
7	Italy	23,652	EU
8	UK	23,217	TC
9	Malaysia	23,087	TC
10	Turkey	22,522	TC
11	Poland	22,478	EU
12	India	21,696	TC
13	Brazil	20,130	TC
14	Russia	18,087	TC
15	Nigeria	14,565	TC

Table 5: Results of Smartpls 3.0 analysis

Variable	Item	Loading	R-squared adjusted	CR	AVE	Loading (EU)	R-squared adjusted	CR	AVE	Loading (TC)	R-squared adjusted	CR	AVE
Interactivity	Q1_1	0.829		0.852	0.592	0.830		0.846	0.586	0.797		0.864	0.614
	Q1_2	0.686				0.555				0.742			
	Q1_5	0.837				0.903				0.816			
	Q1_6	0.715				0.731				0.779			
Engagement	Q2_3	0.853		0.907	0.766	0.664		0.829	0.621	0.912		0.936	0.830
	Q2_4	0.881				0.898				0.897			
	Q2_5	0.891				0.785				0.923			
Trust	Q3_1	0.749	0.503	0.892	0.674	0.624	0.517	0.861	0.616	0.813	0.517	0.901	0.696
	Q3_2	0.831				0.607				0.933			
	Q3_4	0.856				0.932				0.776			
	Q3_5	0.845				0.916				0.807			
Loyalty	Q4_1	0.891	0.275	0.744	0.599	0.939	0.301	0.664	0.530	0.837	0.247	0.789	0.652
	Q4_2	0.635				0.423				0.777			

9.3 Appendix C – Interview questions

Questionnaire

Survey Country of Origin and Signaling

1. Where is your company from? _____
2. Which are the main sourcing locations (in terms of countries) (1-3)? _____
3. Does your company use transcontinental sourcing? If yes, in which countries and (how much of the sourcing volume is sourced trans continentally (roughly))? _____

COO Survey:

Rank the following 15 countries based on their perceived characteristics in terms of the lowest price: (1 being the lowest price, 15 the highest price)

Country	Low Price
Belgium	
Brazil	
China	
France	
Germany	
India	
Italy	
Japan	
Malaysia	
Nigeria	
Poland	
Russia	
Turkey	
UK	
USA	

Rank the following 15 countries based on their perceived characteristics in terms of the highest quality: (1 being the highest quality, 15 the lowest quality)

Country	High Quality
Belgium	
Brazil	
China	
France	
Germany	
India	
Italy	
Japan	
Malaysia	
Nigeria	
Poland	
Russia	
Turkey	
UK	
USA	

Rank the following 15 countries based on their perceived characteristics in terms of the most advanced technology: (1 being the country with most advanced technology, 15 with the least advanced technology)

Country	Advanced Technology
Belgium	
Brazil	
China	
France	
Germany	
India	
Italy	
Japan	

Malaysia	
Nigeria	
Poland	
Russia	
Turkey	
UK	
USA	

Signaling survey:

For each of the following sentences state your opinion using the 5-point Likert scale, starting from "strongly disagree" until "strongly agree".

1 Strongly disagree

2 Disagree

3 Neither agree nor disagree

4 Agree

5 Strongly Agree

Consider the last situation in which you decided to reject a transcontinental supplier and stayed loyal to your current continental supplier/ and chose a continental supplier.

Interactivity	1 Strongly disagree	2	3	4	5 Strongly agree
We have frequent interactions with the supplier.	☐	☐	☐	☐	☐
We frequently share information with this supplier in regular meetings.	☐	☐	☐	☐	☐
This supplier is in contact with several individuals at our company.	☐	☐	☐	☐	☐
This supplier provides us with a lot of feedback on our performance.	☐	☐	☐	☐	☐
This supplier has frequent two-way communication with us.	☐	☐	☐	☐	☐
We have close personal relationships with members of this supplier.	☐	☐	☐	☐	☐

Engagement	1 Strongly disagree	2	3	4	5 Strongly agree
We provide suggestions for improving the performance of the supplier.	☐	☐	☐	☐	☐
We provide suggestions/feedbacks about the new services offered by the supplier.	☐	☐	☐	☐	☐
If a problem arises, I can always count on the supplier to reach a fair and satisfactory resolution.	☐	☐	☐	☐	☐
My company will continue engaging with the supplier in the near future.	☐	☐	☐	☐	☐
The money/time spent to engage with the supplier is worth its value.	☐	☐	☐	☐	☐

Trust	1 Strongly disagree	2	3	4	5 Strongly agree
I can count on my supplier to ensure that transactions are carried out without error.	☐	☐	☐	☐	☐
I think that the information presented by my supplier are reliable.	☐	☐	☐	☐	☐
My supplier keeps customers' best interests in mind.	☐	☐	☐	☐	☐
I think that my supplier would not do anything intentional that would be unfair to customers.	☐	☐	☐	☐	☐
I feel like the company's privacy is protected while transacting with the supplier.	☐	☐	☐	☐	☐

Loyalty	1 Strongly disagree	2	3	4	5 Strongly agree

I would be willing to pay a higher price for my supplier's services/products over other suppliers.	☐	☐	☐	☐	☐
I would be willing to defend my supplier in the face of any controversy.	☐	☐	☐	☐	☐
I would consider my supplier as my first choice in the commodity field.	☐	☐	☐	☐	☐
I prefer my supplier to other suppliers.	☐	☐	☐	☐	☐

Now, if applicable, consider the opposite case: Consider the last situation in which you decided to reject a local/continental supplier and stayed loyal to your current transcontinental supplier/ and chose a transcontinental supplier.

Interactivity	1 Strongly disagree	2	3	4	5 Strongly agree
We have frequent interactions with the supplier.	☐	☐	☐	☐	☐
We frequently share information with this supplier in regular meetings.	☐	☐	☐	☐	☐
This supplier is in contact with several individuals at our company.	☐	☐	☐	☐	☐
This supplier provides us with a lot of feedback on our performance.	☐	☐	☐	☐	☐
This supplier has frequent two-way communication with us.	☐	☐	☐	☐	☐
We have close personal relationships with members of this supplier.	☐	☐	☐	☐	☐

Engagement	1 Strongly disagree	2	3	4	5 Strongly agree
We provide suggestions for improving the performance of the supplier.	☐	☐	☐	☐	☐
We provide suggestions/feedbacks about the new services offered by the supplier.	☐	☐	☐	☐	☐
If a problem arises, I can always count on the supplier to reach a fair and satisfactory resolution.	☐	☐	☐	☐	☐
My company will continue engaging with the supplier in the near future.	☐	☐	☐	☐	☐
The money/time spent to engage with the supplier is worth its value.	☐	☐	☐	☐	☐

Trust	1 Strongly disagree	2	3	4	5 Strongly agree
I can count on my supplier to ensure that transactions are carried out without error.	☐	☐	☐	☐	☐
I think that the information presented by my supplier are reliable.	☐	☐	☐	☐	☐
My supplier keeps customers' best interests in mind.	☐	☐	☐	☐	☐
I think that my supplier would not do anything intentional that would be unfair to customers.	☐	☐	☐	☐	☐
I feel like the company's privacy is protected while transacting with the supplier.	☐	☐	☐	☐	☐

Loyalty	1 Strongly disagree	2	3	4	5 Strongly agree
I would be willing to pay a higher price for my supplier's services/products over other suppliers.	☐	☐	☐	☐	☐
I would be willing to defend my supplier in the face of any controversy.	☐	☐	☐	☐	☐
I would consider my supplier as my first choice in the commodity field.	☐	☐	☐	☐	☐
I prefer my supplier to other suppliers.	☐	☐	☐	☐	☐

9.4 Appendix D – Company overview

	Interviewed company; Country of origin	Sourcing strategy; Intra-EU or Transcontinental?	Interviewed company; Operating industry
A	Netherlands	Intra-EU	Building
B	Netherlands	Mainly Intra-EU	Plastics
C	Germany	Mainly Intra-EU	Mining
D	Germany	Mainly Intra-EU	EM tyre re-treading
E	Germany	Both	Food
F	Germany	Mainly Intra-EU	Plastic
G	Germany	Both	Automotive
H	Netherlands	Intra-EU	packaging
I	Netherlands	Intra-EU	Building
J	Netherlands	Both	Food
K	Netherlands	Both	Software and technology
L	Netherlands	Both	interlining
M	Netherlands	Both	Rubber and Silicone
N	Netherlands	Intra-EU	Engineering industry
O	Netherlands	Transcontinental	Chemicals industry
P	Netherlands	Intra-EU	Enrichment technology
Q	Netherlands	Both	Pharma
R	Netherlands	Both	Pharma
S	Netherlands	Both	Telecommunication
T	Netherlands	Mainly Intra-EU	Plastics
U	Netherlands	Mainly Intra-EU	Plastics
V	Netherlands	Both	Automotive
W	Germany	Both	Automotive
X	Germany	Both	Automotive
Y	Germany	Both	Telecommunication