

Chinese consumers, blockchain, and Nordic furniture

Perceptions and attitudes towards blockchain use for
transparency, traceability, and sustainability



EXECUTIVE SUMMARY

- This report is one of the outputs of the **Advancing Blockchain for Danish Design (ABCD)** project, supported by the Danish Industry Foundation in close cooperation between Copenhagen Business School, DI Handel and Lifestyle & Design Cluster;
- The report presents results of **689 survey** responses, and **46 in-depth interviews**;
- Findings show that the majority of Chinese consumers have **no knowledge** of Nordic furniture brand, and that the brands consumers are most familiar with is IKEA;
- The most important factor influencing the decision to purchase is related to the **safety of materials**, regardless of the use of blockchain;
- Consumers value **traceability** more than transparency and sustainability, regardless of the use of blockchain;
- The most trusted source of information for a purchase decision is considered the **official product certificates**, regardless of the use of blockchain;
- The use of blockchain makes a difference in attitudes when it allows consumers to independently retrieve information about the product;
- Respondents **trust information** they scanned by themselves from codes on the furniture **more**, and are willing to pay a price that is up to 30% higher;
- Interviewees who have an **IT-related job** have a more positive attitude towards using blockchain, and would like to pay for the use of blockchain.

KORT OM PROJEKTET

Industriens Fond har gennem temaindkaldelsen ”Konkurrencekraft i blockchainteknologien” bevilget midler til projektet ”Blockchain i Business og Dansk Design”. Projektet er et samarbejde mellem Copenhagen Business School, Lifestyle & Designcluster og DI Handel.

Formålet med projektet er at afdække, hvordan blockchainteknologi kan understøtte øget effektivitet, gennemsigtighed og en troværdig global forsyningskæde i handel- og designindustrien. Blockchainteknologi skal være med til at autentificere produktets ægthed og verificere, at råmaterialet kommer fra en bæredygtig kilde. Projektet ønsker at give danske virksomheder, deres leverandører og kunder kompetencer til at tage strategiske beslutninger om valg, implementering og inkorporering af blockchainteknologi i deres hovedaktiviteter. Derfor har projektet til hensigt at udvikle praktiske værktøjer til danske handels- og designvirksomheder til implementering af blockchain og IoT.

Følg med i projektet på www.blockchainbusiness.dk



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1 Introduction

Blockchain technology is swiftly expanding its scope of potential use beyond the financial sector (e.g., cryptocurrencies, such as Bitcoin), to include an increasing array of new areas of business value, such as in supply chain. This report aims to understand how Chinese consumers perceive transparency, traceability, and sustainability in purchasing Nordic furniture with blockchain. By *transparency* in the supply chain, we refer to providing sourcing information to different stakeholders. For example, a furniture supply chain is transparent when it gives all stakeholders (e.g., consumers, public authorities, competitors) access to all information on manufacturing materials, workers' welfare, etc. By *traceability* in the supply chain, we refer to the capability of tracking product origin and travel from suppliers to end-users. For example, a furniture supply chain is traceable when it is possible to know the exact date, time, and place where the product has changed hands between companies in the supply chain. By *sustainability* in the supply chain, we refer to considerations of the impact of the supply chain on environmental and social aspects (e.g. recycling, pollution, circular economy).

We carried out an online survey and an experimental study to understand the Chinese consumers, focusing on the attitude towards the adoption of blockchain in design and furniture market. This report provides findings from an initial investigation on the knowledge of Nordic design and brands by Chinese consumers, factors influencing decisions to purchase furniture, relevance of transparency, traceability and sustainability in the decision to purchase furniture, and trust in information sources used to make purchasing decisions.

2 Survey study

2.1 Methodology

An online survey was carried out to investigate how Chinese consumers perceive transparency, traceability, and sustainability in purchasing Nordic furniture with blockchain. The survey was distributed sent out in the period from July to August 2021 to Chinese consumers who had furniture purchase experience in the previous three years. Of the 1504 responses, 689 were deemed usable, and thus included in the analysis (45.8% of the total sample size). Survey data was analyzed with using SPSS Statistics, and analysis visualization was carried out with the support of the Think-cell software package. A summary of the data collection is provided in Table 1 and in Figure 1.

Table 1. Summary of the survey data collection

Actor focus	Chinese consumers of furniture	
Survey period	July to August 2021	
Method	Self-administered online questionnaire	
	Responses	1504
	Completed n	689
	% of sample size	45.8%

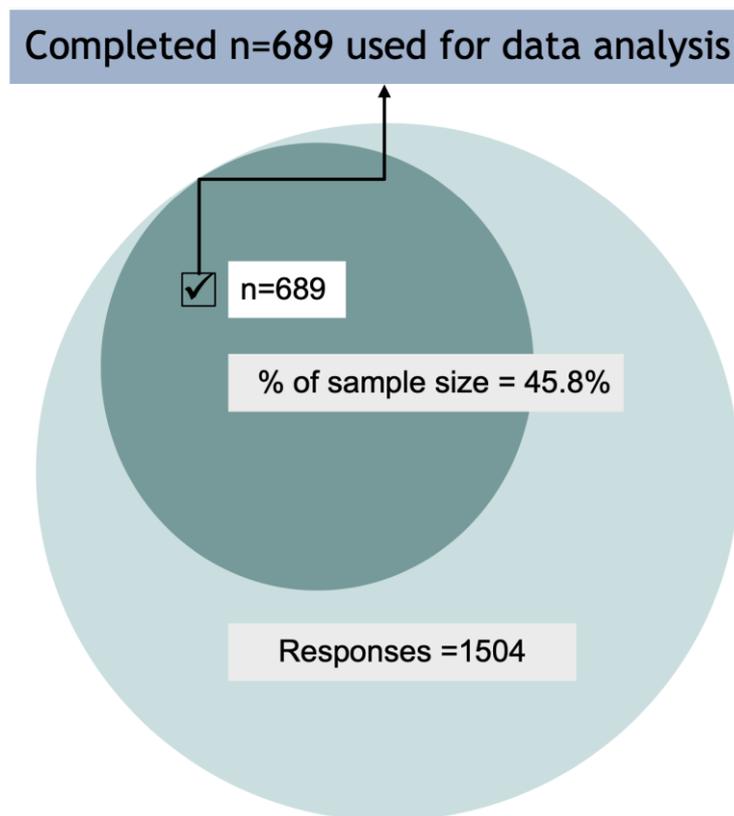


Figure 1. Survey sample size

The targeted respondents were Chinese furniture consumers, who have furniture purchase experience in the last three years, both online and offline. Figure 2 summarizes data about the channel whereby respondents purchased furniture in the past three years (online or offline), and the level of knowledge of Nordic furniture.

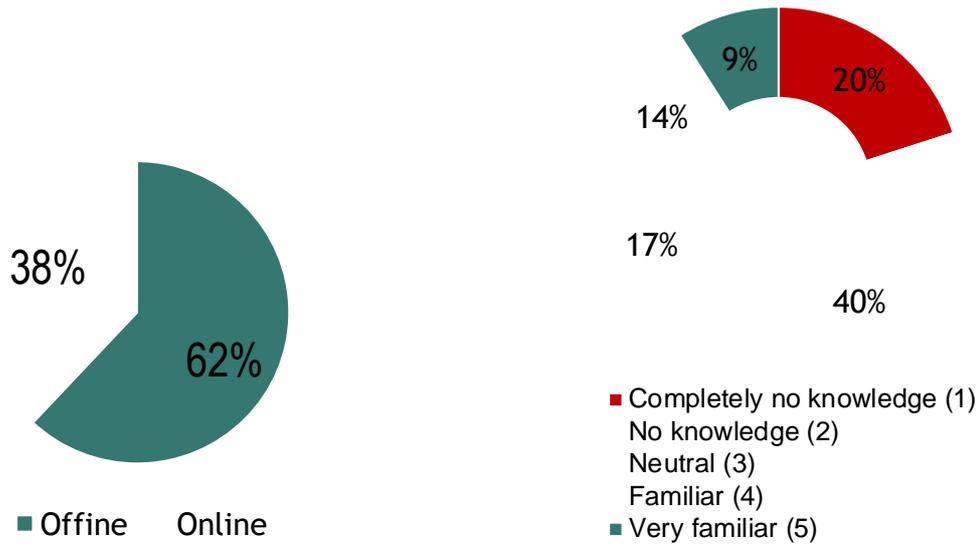


Figure 2. Respondents' furniture purchase channel and knowledge of Nordic furniture¹

Respondents are from a variety of educational background. The majority of the respondents has a bachelor degree (44%), followed by high school (24%), middle school (15%), master degree (11%), and PhD degree (7%). Figure 3 also illustrates the distribution of respondents across different working organizations. The majority of the respondents work in private Chinese companies (34%), followed by non-Chinese companies (22%), and State-owned enterprises or government organizations (21%).

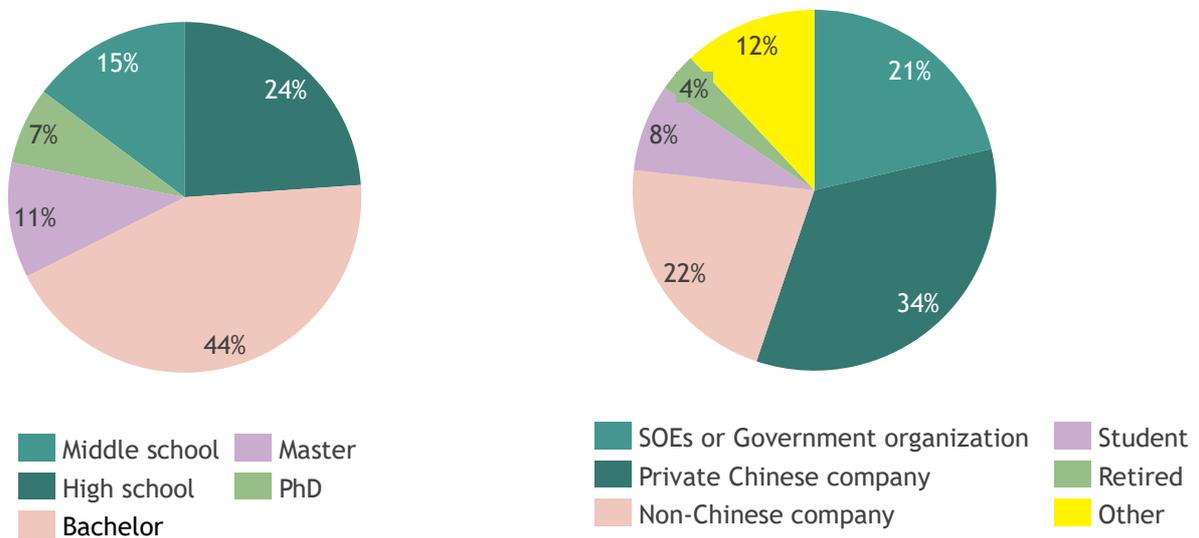


Figure 3. Educational background and job²

¹ Q2: Where did you buy your furniture last time? (online, offline); Q3: How familiar are you with Nordic design?

² Q15: What is your education level?: Q20: What is your current professional background?

Respondents are from a variety of age range. The majority of the respondents is between 26 years old and 40 years old. The gender distribution is almost even. Figure 4 presents the data of age range and gender distribution of our respondents.

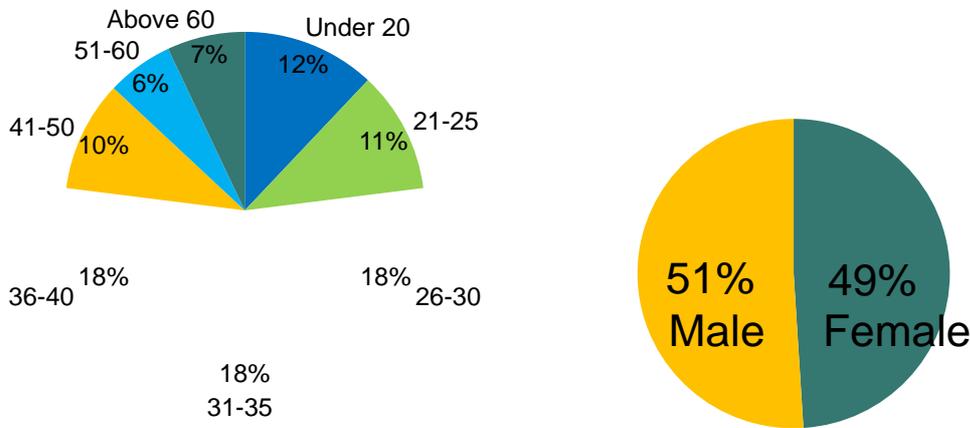


Figure 4. Age range and gender³

In the survey, we also asked about whether the informants have children. Data shows that the majority of respondents has one child (33%), followed by two children (31%), no children (23%), and three children (13%). Figure 5 summaries responses about having children.

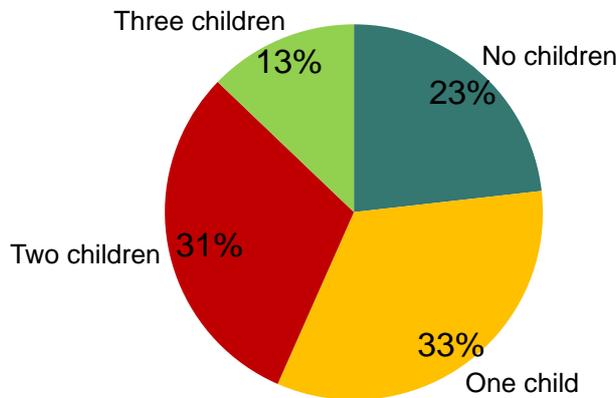


Figure 5. Responses about having children⁴

Overseas education experience was also investigated in the survey. Data shows that only 9% of informants has a study abroad experience, and this includes experiences in the U.S., Canada, Australia, UK, Germany, Denmark, and Japan. Figure 6 presents the overseas education experience data.

³ Q10: What is your age?

Q11: What is your gender?

⁴ Q13: Do you have children?

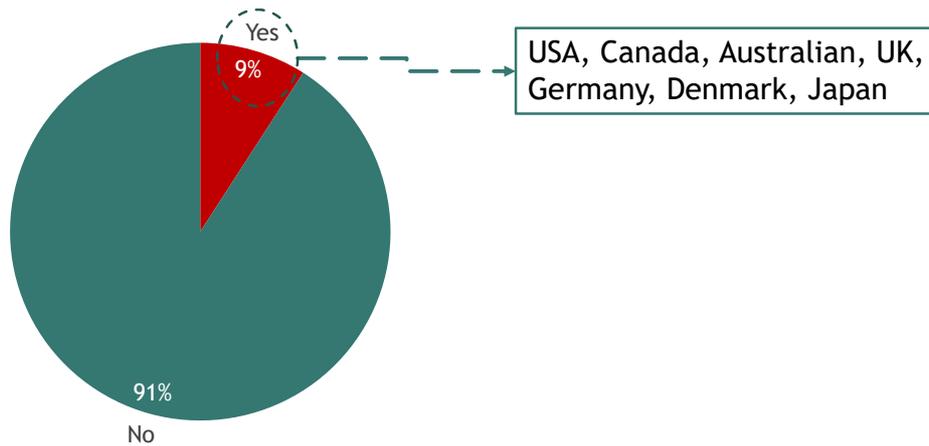


Figure 6. Overseas education experience⁵

2.2 Findings

The survey focused on four dimensions:

1. **Knowledge** of Nordic design and brands;
2. **Factors** influencing decision of purchasing furniture;
3. Relevance of **transparency, traceability** and **sustainability** in decision of purchasing furniture;
4. **Trust** in the information source.

The first two dimensions aim at understanding the level of knowledge that Chinese consumers have of Nordic design and brands, and the general factors that influence the Chinese consumers' decision making when purchasing furniture. The last two dimensions focus on understanding the importance of transparency, traceability and sustainability in consumers' decision making of purchasing furniture, and the levels of trust in the sources of information used by consumers to make the purchasing decisions.

In the following sections, we present the results of the survey in each of the four dimensions.

2.2.1 Knowledge of Nordic design and brands

Our survey data indicates that Nordic furniture brands are known by 40% of our respondents.

⁵ Q16: Do you have oversea education background?

Q17: If you have oversea education background, which country have you been stayed?

However, despite the indication that the respondents know Nordic brands, when asked to provide a Nordic furniture brand name, around 19% were unable to further specify any. A summary of the responses is provided in Figure 7.

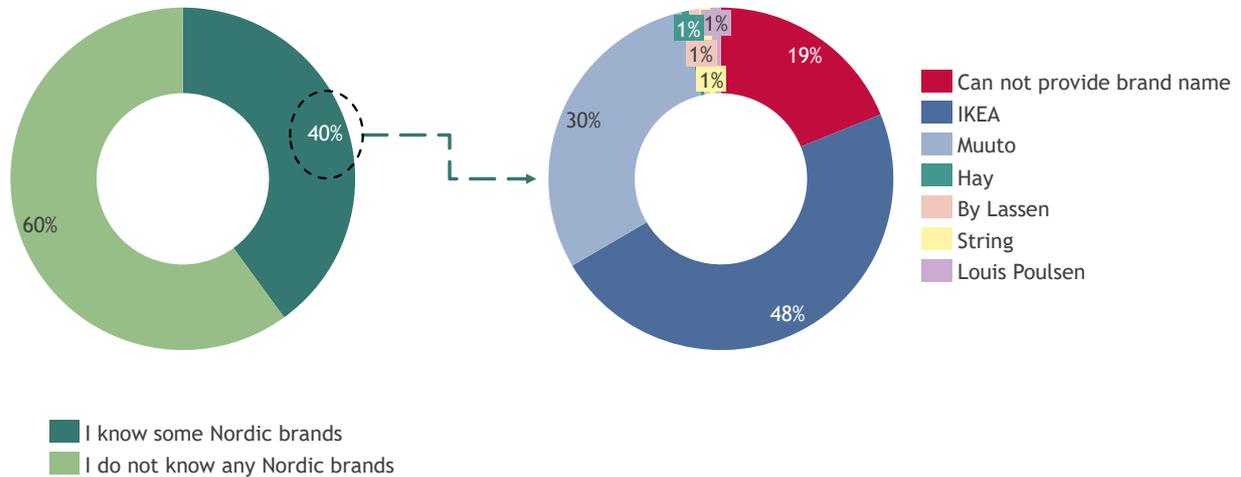


Figure 7. Knowledge about Nordic furniture brands⁶

Data shows that the most well-known Nordic furniture brand is IKEA. Among the 40% respondents who know Nordic brands, 48% of them know IKEA, and 30% know Muuto.

2.2.2 Factors influencing purchasing decisions

To develop an understanding of the general factors that influence the Chinese consumers' decision making when purchasing furniture, we focused on the extent to which consumers consider the following in their decision: international certificates (European/Chinese); traceability of production and logistics; transparency of production and logistics; sustainability of materials; safety of materials; price of the product; durability of materials; fit of the product design to home; design of the product; brand of the product. The results are summarized in Figure 8.

⁶ Q4: Do you know any furniture brands from Nordic countries?
Q5: If you know Nordic brands, please list the brand names.

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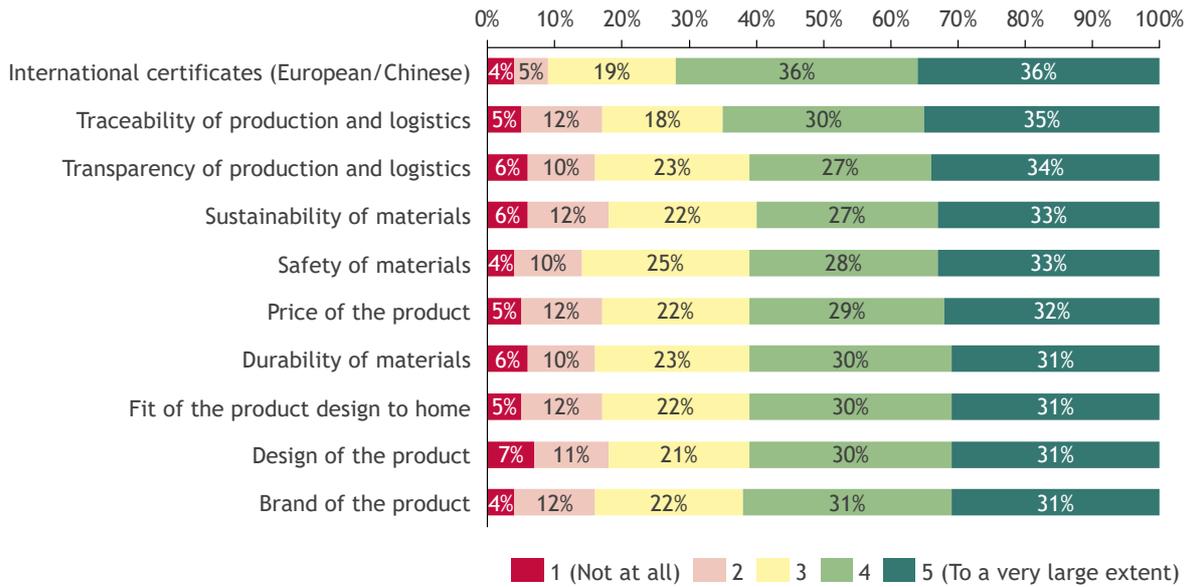


Figure 8. Factors influencing decision of purchasing furniture⁷

The majority of respondents believe that the availability of international certificates plays an important role in their decision whether to purchase furniture, closely followed by traceability and transparency of the supply chain. Interestingly, the product brand is considered the least important among the factors.

2.2.3 Trust in information sources

In this section, we investigate the levels of trust in the sources of information used by consumers to make the purchasing decisions. The question we asked was “When purchasing furniture, if you consider sustainable materials, environmentally friendly production, and product safety, to what extent do you trust the following information sources?” The information sources included: online information that consumers searched by themselves; EU certificates; information provided by furniture sales personnel; information that consumers scanned from bar codes on the furniture; and national (Chinese) certificates. The results are illustrated in Figure 9.

⁷ Q6: When you buy furniture, to what extent do you take the following into consideration? (please indicate from ‘not at all’ to ‘to a very large extent’).

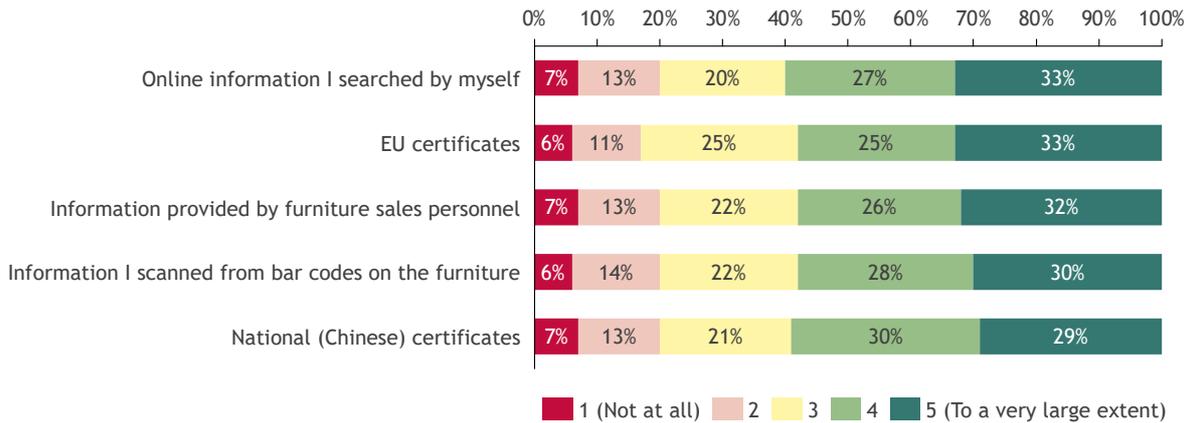


Figure 9. Trust in the information source⁸

The most trusted information source in making a decision to purchase furniture is online information searched independently by the respondents, followed by EU certificates.

3 Experimental study

3.1 Methodology

In order to better understand how blockchain can affect Chinese consumer attitudes towards transparency, traceability, and sustainability in making purchases, we carried out 46 in-depth interviews, as shown in Table 1. To half of the respondents, we showed pictures of a Danish design sofa (as shown in Figure 10), asking only questions related to sourcing, materials, and their willingness to pay for the product. To the other half of the respondents, we first introduced how blockchain can help them track the product information, and then asked the same questions about willingness to pay, and showed the same pictures to them. The purpose of the design of this study was to understand the role of the use of blockchain by comparing between the experimental group and the control group.

Table 2. Data of in-depth interviews

Experimental research	Experimental group	Control group
Number of interviews	23	23
Duration of each interview	30 minutes	30 minutes

⁸ Q9: When purchasing furniture, if you consider sustainable materials, environmentally friendly production and product safety, to what extent do you trust the following information sources?

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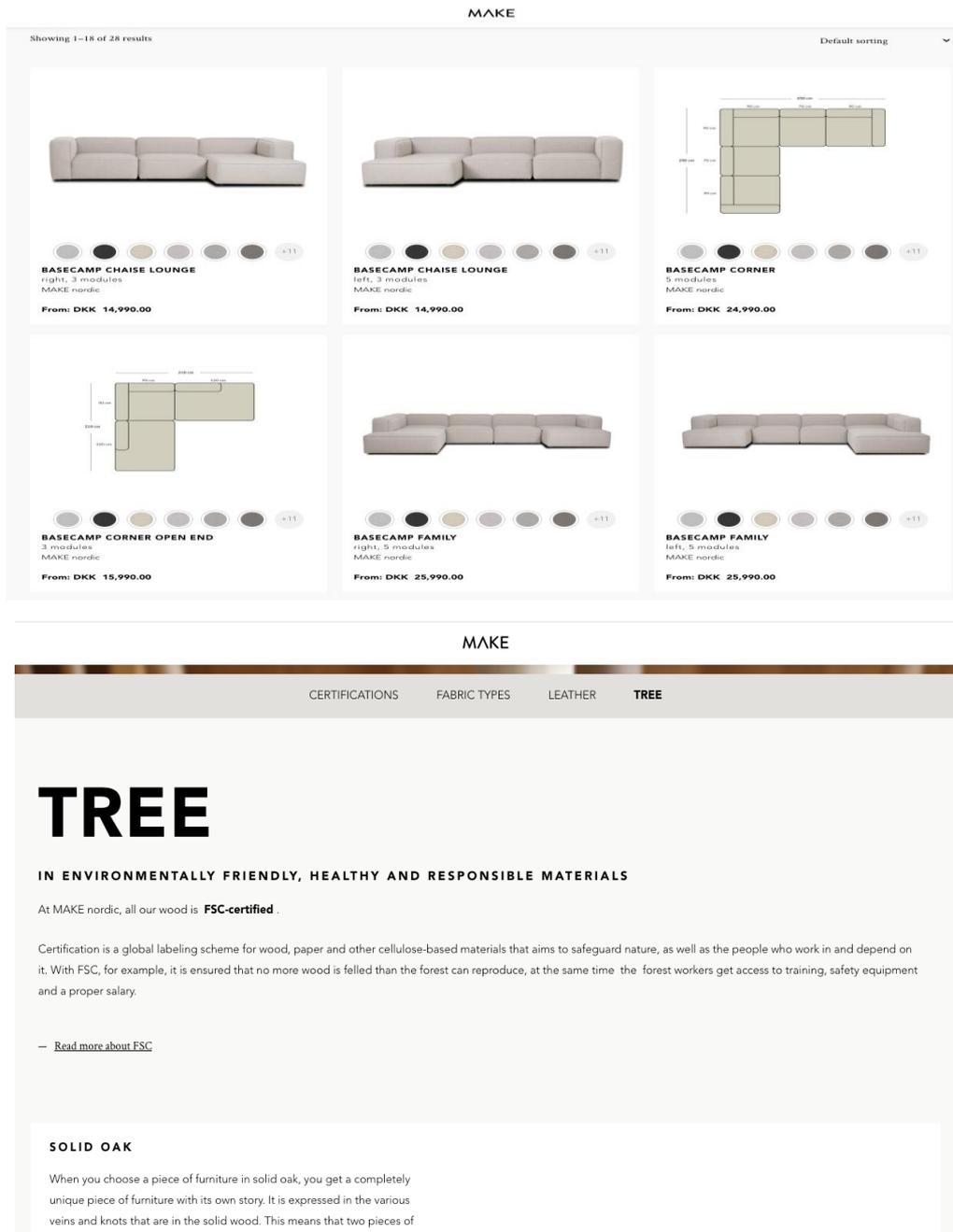
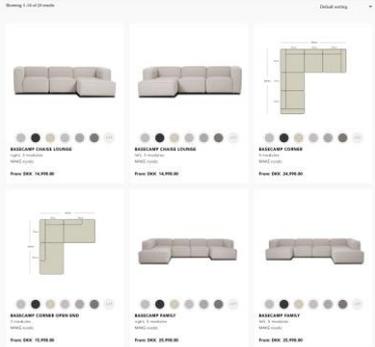
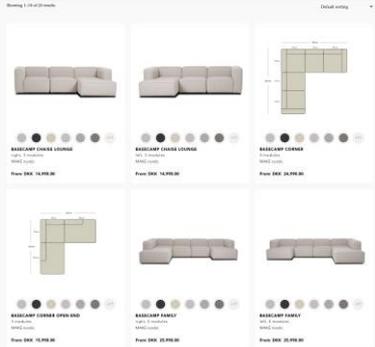
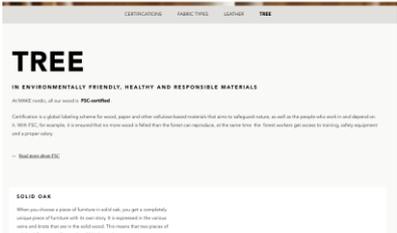
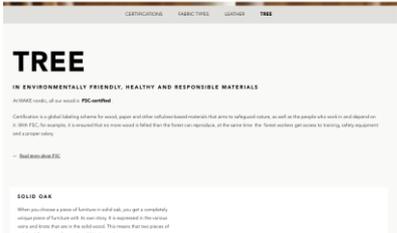


Figure 10. Pictures shown to interviewees during the interview

Table 3 shows the questions formulated to the experimental group, where blockchain is not mentioned to the interviewees, and to the control group, where blockchain is introduced to the interviewees.

Table 3. Experimental research design

Experimental design-interview questions & discussion	I. Experimental group (without mention of blockchain technology use)	II. Control group (with mention of blockchain technology use)
1	<p>Think about your last purchase of furniture for your home, or imagine that you are looking for new furniture for your home. You have the choice to purchase furniture with “green” characteristics. For example, the sofa below.</p> <p>By “green” characteristics, we mean that no water or PFC chemicals are used in the process, nor in its staining; that the material is certified according to STANDARD 100 by OEKO-TEX®, which is a guarantee that it does not contain hazardous chemicals. The fabric is made from residual products, which are 100% recyclable.</p> 	<p>Think about your last purchase of furniture for your home, or imagine that you are looking for new furniture for your home. You have the choice to purchase furniture with “green” characteristics. For example, the sofa below.</p> <p>By “green” characteristics, we mean that no water or PFC chemicals are used in the process, nor in its staining; that the material is certified according to STANDARD 100 by OEKO-TEX®, which is a guarantee that it does not contain hazardous chemicals. The fabric is made from residual products, which are 100% recyclable.</p> 
2	Would you buy this kind of sofa? Why, or why not?	Would you like to have buy kind of sofa? Why, or why not?
3	If the seller told you that the production process is also environmentally friendly, would this increase your interest in buying this sofa?	If you could track with your phone by scanning the chip to verify that the production process is also environmental friendly, would this increase your interest in buying this sofa? (<i>here we explained what is blockchain, and how blockchain works</i>)
4	Here is the price of the sofa, do you think this price is reasonable?	Here is the price of the sofa, do you think this price is reasonable?
We showed this picture to interviewees.		

5	<p>If you were told by the seller where the material comes from (such as, what kind of trees, which forest etc.), would you have more trust in this product? Would you pay the price indicated?</p>	<p>If you can see, by scanning a chip linked to a blockchain, where the material comes from, (such as, what kind of trees, which forest etc), and you could track all this information about the sofa by yourself, would you have more trust in this product? Would you pay the price indicated?</p>
<p>We translated this website into Chinese and printed it out. During the interview, we showed it to the informants.</p>		
6		<p>If the company doesn't use blockchain, but instead another technology that can also provide the information you want, will this influence your trust, judgement, and buying decision?</p>
7	<p>If all the design data, material information, logistic information are available to all stakeholders, would you feel that the price of the product is justified? Would you have a higher trust in the product? And would you to pay for it? For example, the seller would provide you with the production date, how long it takes for the production, delivery date from Denmark to China, who is the delivery company, etc.</p>	<p>If all the design data, material information, logistic information are available to all stakeholders with the use of blockchain technology, would you feel that the price of the product is justified? Would you have a higher trust in the product? And would you to pay for it? For example, you could see through blockchain technology the production date, how long it takes for the production, delivery date from Denmark to China, who is the delivery company, etc.</p>
8	<p>Would you have a stronger willingness to buy the sofa if it comes from a famous brand?</p>	<p>Would you have a stronger willingness to buy the sofa if it comes from a famous brand?</p>

An overview of all 46 interviews summaries in Table 4. All informants had furniture purchasing experience in the previous three years. We recorded the interviews with the approval of the interviewees, and transcribed them afterwards for data analysis. We used the NVivo 12 software package to carry out the data analysis.

Table 4. An overview of interview sources

Tier	Nr.	City	Name	Age	Gender	Occupation	Education Background	Marital background	Group
1	1	Shanghai	Mrs. Wang	30	F	Engineer	Master (abroad)	Married without kid	Non-B
	2	Beijing	Mr. Zhao	32	M	Engineer	Bachelor	Single	B
	3	Beijing	Flora	30	F	Foreign Company Clerk	Master (abroad)	Married without kid	B
	4	Beijing	Mr. Yang	29	M	Insurance	Master	Couple of Mrs. Wang	Non-B
	5	Shenzhen	Mr. Huang	34	M	Gaming	Bachelor	Married without kid	B
	6	Shenzhen	Mrs. Gao	34	F	Game Graphics	Bachelor	Couple of Mr. Huang	Non-B
	7	Shanghai	Mrs. Wang	31	F	Finance (Audit)	Master(HK)	Married without kid (originally from Wuhu)	Non-B
	8	Beijing	Mr. SU	37	M	Engineer	Bachelor	Married, two kid	B
	9	Beijing	Mr. Li	30	M	Coder	Master	Married, one kid	Non-B
	10	Beijing	Mrs. Meng	39	F	Real Estate	Bachelor	Married, two kid	B
	11	Beijing	MR. Zhang	32	M	Investment Manager	Master (abroad)	Engaged	B
	12	Shanghai	Mr. Yang	33	M	Enterprise Strategy	Master (abroad) + MBA	Single (Shanghai hukou, originally from Wuxi)	B
	13	Beijing	Mrs. Chen	29	F	Doctor	Master (abroad)	Single	Non-B
	14	Beijing	Mrs. Zhang	28	F	Doctor	PhD (abroad)	Married without kid	B
2	1	Hangzhou	Ms. Zhang	31	F	Education	Master	Single	Non-B
	2	Xi'an	Ms. Sun	31	F	Banking	Master	Single	Non-B
	3	Hangzhou	Mr. Meng	31	M	Education	Master	Married without kid	Non-B
	4	Xi'an	Mr. Li	30	M	Finance	College	Married, one kid	B
	5	Wuhan	Mrs. Xu	30	F	IT Enigneer	Master	Engaged	Non-B
	6	Nanjing	Ms. Dai	31	F	Foreign Company Clerk	Master (abroad)	Single	B
	7	Tianjin	Mrs. Zhang	30	F	Manager (Education Industry)	Bachelor	Married without kid	B
	8	Tianjin	Mr. Zhai	31	M	Company Clerk	Master	Couple of Mrs. Zhang	Non-B
	9	Xi'an	Mrs. Li	50	F	Admin	Bachelor	Married, one kid	Non-B
	10	Xi'an	Mrs. Guo	55	F	Retied (previously, Retail)	High-school	Married, one kid	Non-B
	11	Qingdao	Mr. Li	38	M	Banking	Master	Single	B
	12	Hangzhou	Ms. Wang	38	F	VP, Innovation Incubator	MBA (abroad)	Single	B
	13	Hangzhou	Mr. Hou	36	M	real estate agency owner	Bachelor	Married, one kid	B
	14	Hangzhou	Mr. Rong	30	M	Engineer	Bachelor	Single	B
	15	Qingdao	Mr. Chen	38	M	Banking	Bachelor	Married, one kid	B
	16	Lanzhou	Ms. Yang	30	F	Designer	Master (abroad)	Single, living in Shanghai	Non-B
	17	Changsha	Mrs. Hu	28	F	Teacher	Master	Married without kid	Non-B
	18	Hangzhou	Mrs. Ding	37	F	Designer, furniture product	Bachelor	Married with two kids	Non-B
	19	Changsha	Ms. Kai	31	F	E-business	Master	Single	Non-B
	20	Wuhan	Mr. Li	33	M	Assistant Prof.	PhD (abroad)	Single	B
3	1	Huzhou	Mr. Huang	29	M	Self-employed, Logistics	Bachelor	Single	Non-B
	2	Nanchang	Mr. Fan	31	M	Finance/Invest	Master	Married without kid	B
	3	Qinhuangdao	Mr. Kang	45	M	Finance	MBA	Married without kid, originally from Dongbei	B
	4	Xining	Ruru	32	F	Yoga Studio Owner	Bachelor	Single	B
	5	Dali	Mr. Liu	39	M	Journalist	Master (abroad)	Single	Non-B
	6	Kunming	Mrs. Yin	55	F	Retired, (previously Publishing)	Bachelor	Married, one kid, living in Shenzhen	Non-B
	7	Guiyang	Mr. Lu	27	M	IT	Bachelor	Single	B
	8	Jinan	Ms. Sun	27	F	Doctor	PhD	Single	B
	9	Jining	Mrs. Lu	58	F	Retired, (previously CFO)	High school	Married, one kid, living in Beijing	Non-B
	10	Jining	Mrs. Wang	55	F	Retired	High school	Married, one kid, living in Jining	Non-B
	11	Yancheng	Mrs. Wang	31	F	Doctor	Master	Married, one kid	B
	12	Yancheng	Mr. Jiang	32	M	Healthcare	Master	Married, one kid (couple with Mrs. Wang)	Non-B
Notes: Four-couple experimental groups have been marked with colors. F: Female; M: Male B: Blockchain group; Non-B: Non Blockchain group									

3.2 Findings

3.2.1 Knowledge of Nordic design and brands

Almost all the interviewees told us that they do not know any Nordic furniture brands except IKEA. Young interviewees (below 40) highlighted that they like Nordic design, which they understand as simple design, fitting their taste. Even interviewees who mentioned that they like Nordic design were not able provide a brand name other than IKEA. As an interviewee told us:

“I like Nordic design very much, as you can see with my sofa [shows us the sofa in her living room]. It is quite simple. I do not like design that is too complicated. But I do not know any Nordic brand names... I cannot remember any.”

The level of knowledge of Nordic design and brands is the same, regardless of whether the interviewees were in the group prompted about blockchain technology, and regardless of the education background of the interviewee.

When we showed the Danish sofa picture to our interviewees, they reacted very excitedly and told us that this is exactly what they wanted to buy. Many interviews even told us that the sofa looks similar to the sofa they bought for their own home. Here are some examples:

A (interviewee): At first glance, I am particularly satisfied with this sofa.

B (interviewer): Why?

A: Because it is very simple and looks comfortable.

B: Looks comfortable?

A: Yes, well, because we have children at home. We have two children at home. Then we parents want them to sit and lie comfortably on it.”

“B: Let's look at a sofa. The first picture I just sent you, this picture of a gray sofa. Do you think you will choose to buy such a sofa?

C (other interviewee): It's quite within the scope of my choice. It's relatively simple and atmospheric.

B: It's more in line with the style you're going to decorate your home, isn't it?

C: Yes. First of all, through the picture, I mainly look at the outlook of the sofa. From my perspective, this sofa is easy matching for other furniture. In fact, as an object which takes such a big space in the living room, the overall design style of this sofa needs to be suitable for the whole environment, to make sure the overall environment will not be particularly abrupt. This is also very important to me.”

3.2.2 Factors influencing purchasing decision

Both the group prompted about the role of blockchain and the one that was not show that the most important factor influencing the decision to purchase is related to the **safety of materials**. Product safety is considered more relevant than product design and product price. As some of the interviewees say:

“Safety of the furniture and material is my first consideration. Because I care about my family's health, especially since I have a child.”

“I care about safety over price. I know some sofa uses glue that contains unhealthy chemical elements that are harmful to our health. I visited a furniture shop one day, and when I came back home I had an allergy rash on my face.”

Besides safety of materials, also the design of the product, and the fit of the product design to one's home are two highly emphasized influencing factors, regardless of blockchain. Moreover, when we ask informants whether they pay attention to recycled material, and the environment protection of the material, most of them mentioned that they did not pay much attention. These are explained by our interviewees from different perspectives: the willingness to pay for having recycled material; trust in information they get on whether the material is recycled or not; and the balance between recycled material and durability of material. As mentioned by many interviewees:

“If the recycled material sofa has the same price of the non-recycled material sofa, I would prefer to buy the recyclable sofa. But, if the price is much higher, I would be hesitant, since I do not have enough knowledge about recycling and about this concept in general.”

“If the seller tells me this sofa uses recycled material and it is good for our environment, I would be very doubtful. I do not trust it, since I cannot judge by myself.”

“By my sofa or furniture purchase experience, I have not met any salesperson telling me that the material is recyclable. I think in general society, including the sellers, do not have enough knowledge and attention on recycling material. This is a new concept for me.”

“I have some knowledge about recycled material because my research background is in chemical materials. But I believe most Chinese have no idea about recycled materials. In my knowledge, I think compared to non-recycled material, recycled material has a low durability. For example, if a normal sofa can be used for 20 years, a recycled sofa may be used for 15 years. This is something as a consumer I need to consider as well.”

3.2.3 Relevance of transparency, traceability, and sustainability in purchasing decisions

Both groups show that consumers consider **traceability** more than transparency and sustainability. Consumers care whether they can track product information more, because they think this is directly related to their own interest. As one of the interviewees mentioned:

“If I can track materials, production, and logistics information, I would be happy to pay a slightly higher price for the sofa, maybe 10%. But the most important thing is that I can use the information to confirm that the material is safe for my health.”

Consumers believe that information sharing among stakeholders in the value chain does not directly influence the product quality. Therefore, they do not value transparency that much, as told by an interviewee during an interview:

“I don’t care about the information sharing among stakeholders in the value chain, I think this is not relevant to me.”

The comparison between the blockchain group and the non-blockchain group shows that consumers from the blockchain group are willing to pay more for traceability, compared to consumers from the non-blockchain group. One of the main reasons is that, with the knowledge of blockchain, interviewees believe that blockchain can really help them by tracing the material information, supply chain information, transportation information, etc., and they trust the information on the blockchain since it cannot be changed by others. Therefore, some of them mentioned they would like to pay a higher price for products that use blockchain:

“To support blockchain use for tracing information, I think I would be willing to pay around 10% to 30% above the original price. Because I think in the future this will help us [consumers] to better recognize high quality safe products.”

“With more and more people knowing blockchain, what is blockchain, and how can blockchain work, I believe that, when compared with products that do not use blockchain, products that use blockchain will have a bigger market... and, of course, I would like to pay for it as well.”

Some interviewees from the blockchain group argue that they do not care whether the technology that is used for tracing information is blockchain or not: as long as there is a technology that can provide the information that consumers need, they will prefer to buy that product. As emphasized by one of the interviewees from the blockchain group:

“Thanks for introducing the blockchain to me. Now I have a basic understanding about what is blockchain and what it can do... but I still believe I will not pay for “using blockchain”. If there is a sofa that used other technologies through which I can also track the logistics information or other information, I will buy that sofa.”

Consumers from the non-blockchain group show mistrust towards what the sellers tell them and lack sources to obtain information by themselves. For example, when we provide the

interviewees a scenario that if there is a technology that can provide material information, production information, and logistics information for consumers to track by themselves, the response from our interviewees is:

“I do not trust this technology. I think this is more like a marketing method used by the sellers... maybe the information I get is fake. I will not consider this function when I choose a sofa.”

3.2.4 Trust in information sources

Both groups show that the most trusted source of information for a purchase decision is considered the official product certificates, regardless of the use of blockchain. Other relevant trusted sources, however, are also personal online searches, and even own tests performed on the products. Here are some exemplary quotes highlighting these arguments:

“If one sofa has an EU certificate and the other one doesn't, I will definitely buy the one with the certificate. I trust the government or the third parties who authorized the certificates.”

“Before buying a sofa, I did some research, by talking to my friends who already bought it. I also search for online information, since I don't trust the information told by salespersons in the furniture shops.”

“I tested the level of formaldehyde myself. It is not difficult. I ordered the test equipment online.”

The use of blockchain makes a difference in attitudes when it allows consumers to independently retrieve information about the product. Respondents in the blockchain group trust information they scanned by themselves from codes on the sofa more, and are willing to pay a price that is up to 30% higher, as mentioned by one of the interviewees, compared to respondents from the non-blockchain group:

“I trust the information I obtain if the sofa used blockchain information. I would pay around 10%-30% more than the market price for the function of blockchain, not for the technology itself. It depends on what blockchain can bring to me, what is the added value, not just a concept or stunt.” (from blockchain/control group)

“I don't trust the information I obtain by scanning a code on the sofa and will not pay for it. I think this code can be fake... many people or companies can create a code.” (from non-blockchain/experimental group)

3.2.5 Role of consumer age, income, education, and job

We tried to understand the role of consumers' age, income, education background, and job on their purchase decision related to blockchain use. Our data shows that the only significant influence factor is their job. Interviewees who have an IT-related job have a more positive attitude towards using blockchain, and are willing to pay for the use of blockchain. As one of the interviewees, who is an IT engineer, told us:

Since my work is related to new technologies including blockchain, I have a basic understanding of how blockchain can help consumers to identify quality product. I know the information in the supply chain will not be changed. Therefore, I am willing to pay for furniture that uses blockchain that makes the product information more traceable and transparent.

Data shows that the willingness to pay for using blockchain in the supply chain is related to their job, but eventually it is related to the consumers' knowledge of blockchain. Here when talking about "consumers' knowledge of blockchain", we noticed from our data that this means consumers' understanding of the nature of blockchain and its adoption in practice, rather than the conceptual understanding of blockchain technology. When we asked one of the interviewees, who works in the healthcare industry, about her knowledge of blockchain, she told us that she heard that blockchain is used for cryptocurrencies, such as bitcoin. While when we asked her about what blockchain is, and how she thinks that blockchain can be used in the supply chain to help consumers, she was unable to answer. Then, when we explained to her what is blockchain and how blockchain can help transparency, traceability, and sustainability, and asked her whether she wants to pay for a sofa which used blockchain, the answer we got was negative. As she explained to us:

Now I have a better understanding about blockchain after your explanation... but I still do not trust the technology. I think maybe there are other technologies that can also help in the same way. I do not want to pay for the use of this technology.

Regarding age, our data shows that consumers below 45 years old have the most interest in Nordic design and want to purchase Nordic furniture. Consumers above 45 are more interested in Chinese furniture, since they care more about the material rather than the design – they focus on solid wood furniture. In addition, consumers above 45 have little knowledge of blockchain, and are not willing to pay extra for blockchain-enhanced products when purchasing furniture.

Consumers' income and education background does not influence the interviewees' decision making when considering blockchain use. On the other hand, consumers with an overseas

education background, regardless of their knowledge of blockchain, have a preference towards Nordic design furniture. As one of the interviewees told us:

Yes, I did my master in UK. I like Nordic design...when I was considering furniture for my apartment, I searched Nordic design sofa, table, and chairs etc. I also recommended to my friend when she bought furniture for her apartment.

4 Conclusion

This report illustrated data collected from an online survey and a set of experimental design interviews with furniture consumers in China. Findings from the study include levels of knowledge of Nordic design and brands by Chinese consumers, factors influencing decisions to purchase furniture, relevance of transparency, traceability and sustainability in the decision to purchase furniture, and trust in information sources used to make purchasing decisions.

The insights provided by findings of this study are meant to facilitate informed decisions by Danish design companies willing to explore the use of blockchain for traceability, transparency, and sustainability, and engaged (or planning to engage) in the rapidly growing Chinese market.