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Deciphering the Impact of Sustainable Practices on Consumer Choices in the Fur Industry

1. Background

Nowadays, every organization among all industries are either attempting to include or to improve the sustainability measurements within their agenda and fashion industry is indeed one of them. Environmental sustainability is considered the biggest global concern (Li et al., 2020; Cai & Choi, 2020). Since 2016 the United Nations has released a new sustainable development agenda for 2030 has urged public to follow, in which initiates 17 sustainable development goals (SDGs). Being one of the major polluters to the environment, the fashion industry is also known for being the leading industries contributing to the unsustainability culture.

Having the longest complex and richest history among all industry, the fur trading industry has over thousands of years of history and it had deeply braided with history and cultural backgrounds among various societies around the world. Until today, many aboriginals such as Canadians, Alaskans, 'Cajun' Louisianans and Siberians are still considered important as living basics (Hong Kong Fur Federation, 2024). Despite the necessity to wear fur in certain frigid countries such as Russia, Finland, Norway and northern parts of China such as Harbin and Heilongjiang, in many occasions people still chose to wear fur outerwear as a fashion trend and as display of social status. However, in recent decades, the fur sector had been targeted with its ill reputé not only causing environment contamination, with the arise of veganism, anti-fur protests, involving animal cruelty and ethics, fashion industry will not be able to survive without contributing more to environmental protection. The trend in the fashion industry was moving away from real fur due to increasing concerns about animal welfare, sustainability, and ethical considerations. Many fashion brands and designers were opting for faux fur or other alternative materials as a more ethical and environmentally friendly choice.

This inductive research employs a pragmatic approach to explore how sustainability practices implemented by fur organization stakeholders influence consumer purchase decisions in the fur products. Recognizing the complexity of consumer behavior and the multiply nature of sustainability, this study will apply a

mixed-methods strategy, aiming at exploratory perspective trying to at understanding and addressing crucial matter within the industry. Qualitative interviews will be used as one of the methods to gain in-depth understanding the involved parties within the whole supply chain from fur skin sellers to consumers. Producing fur products and consumer attitudes. On the other hand, quantitative research will involve collecting secondary data on recent market trends as well environmental status for instance pollution index, and conducting survey to quantify the influence of specific sustainability practices on customer purchasing behavior.

1.1 Research Gap

Numerous research and studies have been conducted on the awareness on sustainability within the fashion and clothing industry, however are only few that focused in the fur sector. In addition, despite the studies that claimed to have investigate the effects in improving sustainability within the fur industry and breaking down different sustainable measurements in detail, it did not provide direct correlation with consumer buying behavior, whether it has rectified consumer's buying decision.

1.2 Research objectives

Animal welfare organizations such as Furmark®, WelFur, SAGA Fur and fur garment manufacturers have contributed a significant effort to improve sustainability within the fur sector. However, there may be more than merely sustainability that contributes to the decline of fur industry. The objective of this research is to explore the sustainability within the fur industry and to examine to what extend does the correlation between sustainable fur and its consumer associate and conclude how it affects consumer's buying decision.

The main research question is defined in the following way:

How do sustainability practices implemented by fur organizations influence consumer buying decisions in the fur industry?

By answering this research question hopes to provide a clearer insight for fur industry stakeholders on the impact and making strategized decision under the notion of sustainability.

1.3 Research Limitations

One of the limitations is that there is a lack of a standard definition for the term “sustainability” and there is a variety of synonyms that are used for “sustainability” (Moore et al., 2017). This research will have to standardize the definition of “sustainability” as it could be un-clear if different stakeholders have its own definitions and measurements on sustainability.

Furthermore, although conducting mixed-method and applying grounded theory in this exploratory research could address complex phenomena providing rich details within the interviews, based on the nature of the complexity of fur fashion industry, it is assumed to be very time-consuming in data collection and analysis, a tight and carefully scheduled timeline will be required.

Moreover, according Skjold et al. (2018), result generated by interviews and surveys from fur industrial participants have shown unambiguousness in their answer due to the complexity nature of the industry (Skjold et al., 2018). Therefore, perhaps guidelines and the simpler questions in interviews and survey should be well designed for stakeholders and consumers to avoid confusion.

To add on, as conducting key informant interview with fur organization stakeholders and customer survey are the most key data collection in this research, although Wong et al. (2018) and Skjold et al. (2018) have provided similar research on this topic, the design on interview questions should still be well considered in order to generate valuable information.

3. Literature review

3.1 Fur & Anti-Fur History

There was a time when a mink coat was the ultimate status item. It was seen as an investment piece passed down through generations. According to Ramchandani, a Russian fur historian Sojuzpushnina mentioned that fur was once served as a form of currency. It was described as “soft gold” as it was used as gifts and served as bribery (Ramchandani & Coste-Maniere, 2017).

The rise of anti-fur campaigns started in the 1980s, questioning the morality of fur users (Skov, 2005). Anti-fur slogans such as “I’d rather go naked than wear fur”

and “It takes up to 40 dumb animals to make a fur coat. But only one to wear it.” can be seen in protests. In 1985 the Trans Species Unlimited (TSU) and the Coalition to Abolish the Fur Trade (CAFT) coordinated the first, non-violent civil disobedience activities protesting against fur at Macy's in New York and Sacramento, California (Faier, 2020). Gordon & Hill stated that it is impossible to use animal products responsibly and humanely, therefore “In that view, forswearing all animal products is the only true interpretation of sustainability” (Gordon & Hill, 2015).

However, despite all animal rights movements, debates, criticism and anti-fur activism on the fur industry, the use of fur has not been limited with the use of many luxury fashion brands. Until today, the use of fur products is still controversial, but it still remains a part of fashion (Wong et al., 2018).

According to International Fur Federation (IFF), until this day, the fur industry is still playing a key economic role in creating jobs and contributing to gross national product in the several countries. The IFF has estimated full-time employees in the fur industry at more than one million, with many more employees working on a part-time basis (Wong et al., 2018).

Several animal welfare organizations have setup their own certified programs to enhance the sustainability among the fur industry.

WelFur, a project initiated and funded by the fur industry in European Fur Breeders' Association (EFBA) is operated under four welfare principles: 1) Good feeding, 2) Good housing, 3) Good health and 4) Appropriate behaviour, and 12 welfare criteria: 1) Absence of prolonged hunger, 2) Absence of thirst, 3) Comfort around resting, 4) Thermal comfort, 5) Ease of movement, 6) Absence of injuries, 7) Absence of disease, 8) Absence of pain induced by management procedures, 9) Expression of social behaviours Social housing, 10) Expression of other behaviours Opportunity to use enrichment, 11) Good human-animal relationship, and 12) Positive emotional state. These principles and criteria have ensured to prevent animal cruelty and maintain ethical animal farming (Mononen et al., 2012).

Furmark® is a government certified program that operates under government policy. Its goal is to promote ethical treatment of animals emphasising the right for consumers to know its origin. The main feature of this program is the traceability

function, where consumers could search on the serial number that is printed on each issued label (Wong et al., 2018).

3.2 Sustainability and Sustainable Supply Chain Management (SSCM):

United Nations in 2015 had set forth the 2030 agenda for sustainable development. United Nations goal is to attain global prosperity and world peace for our plant and people by enduring The Sustainable Development Goals (SDGs) that includes 17 goals. These 17 goals focus on different global crisis including “poverty, hunger, good health and well-being, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth, industry, innovation and infrastructure, reduced inequalities, sustainable cities and communities, responsible production and consumption, climate action, life below water, life on land, peace, justice and strong institutions, and partnerships” and that “The textile and fashion industries are at the heart of SDGs” (Thakker & Sun, 2023). Thakker & Sun (2023) also mentioned in their study that textile and fashion industries are one of the major industries that contributes most to world pollution, and urgent action to promote world sustainability is indispensable (Thakker & Sun, 2023).

The term "sustainability" has been understood in different ways, from a philosophical perspective considering the needs of future generations, to a complex concept used in managing a business (Ahi & Searcy, 2013). Henninger et al. (2023) stated that “One of the most challenging term to define is perhaps “sustainability”, as it “is a concept that everyone purports to understand intuitively, but somehow finds very difficult to operationalize into concrete term” (Gunder, 2006:211). Another the general definition of sustainability “refers to an ecological system that is designed to main balance” (Gordon & Hill, 2015), meaning that only sufficient should only be taken from the environment unless it can be renewed. The word sustainable is usually coherent with words such as “green”, “eco” and “organic”. According to Gordon & Hill (2015) it us nearly impossible for fashion industry to be truly sustainable as fashion is usually guild by rapid change trend and replacing the old.

The concept of "sustainability" applies to various areas because it depends on the context. It is linked to how communities govern themselves, education, the use of

language, the standard of living and health, and the collective acknowledgment of some non-human entities as providers of life (Virtanen et al., 2020).

Moore (2017) has attempted to develop a comprehensive definition of sustainability in her research. In her conclusion, she stated that “Without a standard, widely accepted definition,” and “Selecting a definition can be challenging, given that sustainability can refer to the sustained delivery of a clinical intervention or individual changes in behavior and can occur at multiple levels” (Moore et al., 2017).

Therefore, it is essential to define the standard of “Sustainability” comprehensively in within the research, despite having a wide range of references.

With the complexity in fashion industry, researcher tends to categorize the sustainability within the fashion into different aspects (Wong et al., 2018; Choi et al., 2019; Skjold et al., 2018). Sustainable material process refers to produce by using more eco-friendly materials (Choi et al., 2019). Sustainable design refers to redesigning second-hand fur (Wong et al., 2018). Sustainable cultural history refers to connecting garment with emotion, in order to preserve and reuse apparel (Skjold et al., 2018).

The fashion supply chain is considered one of the longest supply chain with its complexity procedure and labor-intensive manufacturing, in which produced relatively high degree of environmental pollution from electricity overuse and water pollution in dyeing process (Choi et al., 2019). Most companies are paying special attention to SSCM as the importance of supply chains in sustainable development has been increasing (Turker & Altuntas, 2014). Turker & Altuntas (2014) identified 22 different definitions of SSCM and came up with a more comprehensive definition:

“The creation of coordinated supply chains through the voluntary integration of economic, environmental, and social considerations with key inter-organizational business systems designed to efficiently and effectively manage the material, information, and capital flows associated with the procurement, production, and distribution of products or services in order to meet stakeholder requirements and improve the profitability, competitiveness, and resilience of the organization over the short- and long-term.” (Turker & Altuntas, 2014). In other words, it is to build a sustainable supply chains (SSC) that would work together by including and balancing money, environment, and community. This definition is important and is

closely related to Triple Bottom Line theory, which will be investigated later, as it could be a benchmark when analyzing fur organization stakeholders. SSC can also be considered as the integration of corporate sustainability into supply chain management (SCM) whereby the key dimensions of corporate sustainability are combined with SCM characteristics (Ahi & Searcy, 2013).

3.2.1 Theories in relation to sustainability:

Triple Bottom Line (TBL):

Triple Bottom Line investigates how the fur industry can balance the social, environmental, and economic dimensions of sustainability. Elkington (1997) coined the term triple bottom line (TBL), which implies that sustainability is the interaction that focuses on environment, social, and economic aspects. The TBL dimensions are also commonly called the three Ps: people (social), planet (environmental) and profits (economic) (Gutowski, 2013). The performance of a company should therefore measure sustainability in taking account of these three dimensions. To breakdown, examining environmental aspects, could include the sourcing of fur, waste management, and carbon footprint. Analyzing social aspect includes the industry's social impacts, such as animal welfare, labor conditions, and community engagement. Assess the economic viability of sustainable fur production and explore potential business models (Skjold et al., 2016). Arowoshegbe & Emmanuel (2018) stated that "the three separate accounts cannot be added or combined, and must be considered separately" and therefore it could be a challenge with TBL is that it is difficult to "compare the people and planet accounts in terms of cash and the way the profit account is measured" (Arowoshegbe & Emmanuel, n.d.). Based on this idea, when a company aims to achieve sustainability, it has been suggested that it all three components: social, environmental, and economic dimensions of the TBL to every link in its supply chain (Köksal et al., 2017).

The evaluation for Triple Bottom Line according to Gutowski (2013), is to measure the three focuses, 1) To calculate the profit in triple bottom line, which includes revenues, costs, profits, and return on investment. 2) To measure the contribution towards planet, which involves measuring the ecological footprint of the company through Life Cycle Assessments (LCA). 3) Finally, to measure the social

dimensions of an organization, which is to analyze corporate social responsibility (CSR) report (Gutowski, 2013).

Life Cycle Assessment (LCA):

Another theoretical framework that would be essential to this research would be Life Cycle Assessment (LCA). LCA could be used as one the tools to “measure” sustainability, as Curran explained LCA is “an approach to compare the environmental goodness (greenness) of products has developed into a standardized method for providing a sound scientific basis for environmental sustainability in industry and government.” (Curran, 2013). She also mention in her research that Life Cycle Assessment is “an analytical tool that captures the overall environmental impacts of a product, process or human activity from raw material acquisition, through production and use phases, to waste management.” (Curran, 2013). According to US Environmental Protection Agency (USEPA 2006), Life Cycle Assessment can be useful to analyse the environmental impacts, from a product material creation to its disposal or recycling. Wong (2018) in the chapter of “Sustainability in the Fur Industry” He researched and analysed multiply evaluations that focused on the supply chain and environmental impacts by using life cycle assessment. Among the researches, he stated that research conducted by DSS Management Consultants found out that the life span of fur products can be extended through multiple generations and estimated 10% of the natural fur garments can be reusable even after the useful life of the original fur garment has ended (Wong et al., 2018). Conducting literature review on the researches that used Life Cycle Assessment confirmed it would be an essential tool for my research.

3.3 Consumer Behavior

Kumar(2013) published an article on investigating the impact in green marketing with customer. He stated that “Green marketing has high influence on the brand perception of customer” (Kumar, 2013), customer perceptions are shaped by not only different functional experiences involving “quality, reliability, ease of use” but also emotional experiences involving “Make me feel better, improve my performance, make my life/job more gratifying or easier” (Kumar, 2013). Also, level

of education has also a clear influence on purchasing behavior, stating that the higher education level is, the higher correlation is with green product (Kumar, 2013).

Groening et al. (2018) conducted a large-scale review with over 20 consumer-level theories to uncover how green marketing affects consumer purchasing behavior. They provided definition and grouped different theories into six categories based on their application. The categories are “Values and Knowledge”, “Beliefs”, “Attitudes”, “Intentions”, “Motivations” and “Social Confirmation”. Within these categories, the researchers have listed out theories on consumer behavior and suggested their theory application on current and future green marketing research. The theories included Value-Belief-Norm (Beliefs), Attitude Behavior Theory (Attitudes), Consumer Choice Theory (Intentions), Theory of Planned Behavior (Motivation) and Role Theory (Social Confirmation) and etc. (Groening et al, 2018). The research has provided a thorough guideline on the application in the use of different theories to justify consumer purchasing behavior. Groening et al. (2018) research revealed that only few customers are willing to pay more for green products and that customer’s behavior in a specific environmental setting may not necessarily correspond to have a similar behavior in a different setting. There is a great disconnection between consumer green buying intention and actual green purchasing behavior (Groening et al., 2018).

Another consumer behavior theory that was not mentioned by above study is the Cognitive Dissonance Theory. According to Cognitive Dissonance Theory (Festinger, 1957) is a psychological concept that explains how people allocate with conflicting thoughts, beliefs, or attitudes, and how these conflict influences their future behavior and decision-making processes. According to the theory, dissonance is a form of distress occurs when a person experiences psychological discomfort when dealing with contradictory beliefs, ideas, or values. Rolling et al., (2021) in her research on the studying of pro-environmental millennial consumers' responses to the fur conundrum of luxury brands, she applied the cognitive dissonance theory suggesting that dissonance can occur when a consumer is opposed to wearing fur jackets as being not environmentally friendly, yet is favor consuming animal-based product. Tanford and Montgomery (2015) stated that dissonance can be created by

social influences and alter pre-existing attitude and pro-environmental buying decision.

In figure 1, Rolling et al., (2021) has used a conceptual model to understand dissonance in relation of different main effect: consumer stance, luxury brand stance and use case in generating dissonance, thus altering the brand attitude and purchase intention. Applying this conceptual model may justify the result on specific customer behavior when examining the surveys in the second part of research.

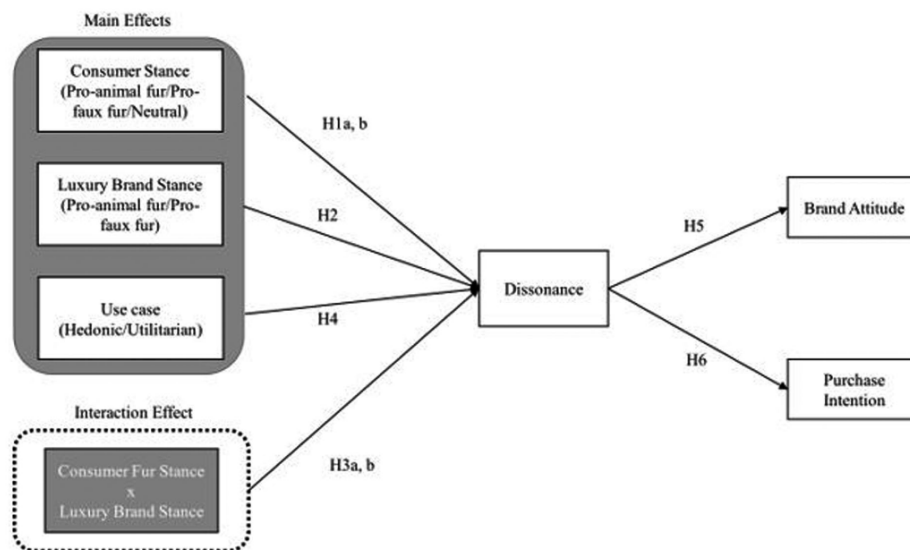


Figure 1

The Value-belief-norm (VBN) theory (Stern et al., 1999) is a conceptual framework that explains how individual values, beliefs, and norms contribute to the motivation behind pro-environmental behaviors (Stringer et al., 2020).

The VBN theory is composed three components: “Values” is principle of how an individual values environmental. “Beliefs” refers to the idea that certain actions will harm the environment and will affect oneself. “Norms” refers to the feelings of moral obligation to perform or refrain from specific actions. When individual believe that a certain situation interferes their value, these norms will be stimulated and to relieve the problem (Stringer et al., 2020). In other words, the VBN theory suggests that if a person holds strong eco-friendly values, they are likely to develop a stronger belief that the environment is in danger and therefore this danger threatens their values. These beliefs may form a development of norms about taking action to protect the environment, which in turn may lead to environmentally-friendly actions (Stringer et al., 2020).

Consumer purchasing behavior towards fur product is complex as it is influenced by a variety of psychological, social, and cultural factors. Understanding these theories can help stakeholders on different level to formulate the best strategies that align with consumer values and attitudes. This research will go through different theories on consumer behavior and apply the most appropriate theory that explain the result collected.

3.4 Relative Research

Wong, Ng & Cai in 2018 published "Sustainability in the Fur Industry", their study presents a comprehensive analysis of the sustainability of the fur industry from various perspectives. It provided an in-depth and definition connecting the fur industry and sustainability. Wong has also utilized the analysis of life cycle assessment provided a result where comparing the positive and negative impact on sustainability through life cycle scores on Natural and Faux fur.

Wong's research was conducted in a two phase study, in first stage, a systematic examination of current data on industry was performed and followed with interviewing industry key personnel. The designed questions were divided into 3 categories based on the process of supply chain: supply, process, and demand. Interviews then through coding and proposes a model for understanding and improving its sustainability, pointing potential strategies for future sustainability and growth as conclusion. Wong also addressed that the analysis in the sustainability of the fur industry is more complicated than other apparel industry because the overall apparel industry have not included fur as a raw material while studying sustainability. This study is an important framework for my research as it covers the basics of my idea and procedure.

Skjold et al. (2018), conducted research "Fur and Sustainability – a Design Perspective" between August 2014 to December 2015, focused on integrating sustainability into the fur sector through a design research perspective. Their research is divided into four sub-projects, each addressing a different aspect: cultural history, material processes, design processes, and user experiences related to fur.

The first sub-project focused on cultural history perspective as it investigated the relationship between personal and cultural memory and design. This section

drew from historical examples, including the work of William Morris and John Ruskin, to illustrate how sustainability and memory have long been connected in design cultural history.

The third sub-project focused on the design processes aspects. It suggests during the design process can enhance the sustainability of fur products. Redesigning second-hand fur can create new value and can appeal to different consumer groups, potentially opening up new markets. The report suggests that integrating sustainability into the design process can rebrand fur as an exclusive status symbol to an everyday material with long-lasting value.

Within the four sub-projects, Sub-project II and Sub-project IV provide most useful reference for my research. Sub-project II looks into the resource use and the waste generation in the production, processing, design, use, and disposal of mink fur. It applied Life Cycle Assessment to help defining the research problem. The research also suggested some of the barriers and limitations while conducting LCA in fur industry, for example partial results has shown unambiguousness. In the first part of this section, preliminary literature research was conducted to understand the evolving role of fur throughout Western history. In the second part, qualitative interviews were conducted with people about inherited fur. In Sub-project IV, it investigated how fur as material interacts within society and how fur garments are perceived by consumers. It suggested long-lasting design and high level of craftsmanship could represent values and inherent the idea of slow fashion. Sub-project IV concluded that a higher level of craftsmanship of fur garment could represents higher level of consumer awareness about quality, which enhanced awareness about animal welfare, material processes and manufacture. Based on this conclusion, it could be used as a one of the factors when analyzing consumer's response in survey.

4. Research Methods

Mixed-method research is used in this study. The first part will be collecting primary data from qualitative interview on sustainability and simultaneously collecting secondary data on current fur market and pollution data caused by fur production. These data will be analysis and justify the current situation of the industry. The

second part will be collecting quantitative data through survey on consumer purchase behavior. The study intends to unveil the correlation between sustainability in fur industry and consumer purchase behavior.

4.1 Qualitative Research

In the first stage of the research, key informant interview will be conducted with CEO/Managerial level interviewee. The reason for conducting interview with supervisory level staff is due to their decision-making role. It is particularly crucial to the interview because they are usually able to explain the reason behind each decision, in this case towards the contribution towards becoming more sustainable. They will be able to provide in-depth exploration and up-to-date information on what operations have been done or on-going strategies that their company are performing. Also, managerial levels will have an all rounded understand within their organization, therefore the information collected from them as a result will be more comprehensive.

Potential organizations/companies have been drafted and categorized as below:

Category	Region	Organization/Company Name	Number of interviewees
Animal Welfare Organizations	U.K. Denmark	Internation Fur Federation Furmark®	2
Skin Auctions Houses Skin Processors	Finland Thailand	SAGA Fur TBC	2
Fur Garment Manufacturers	China	TBC	5
Fur Garment Retailers/Sellers	Worldwide	TBC	5
Fur Garment Consumers	Worldwide	TBC	5

*Worldwide regions may include: U.K., U.S.A., Europe, Korea, Hong Kong, China, etc. (will refine in final research)

An estimation of not more than 20 interviewees will be chosen to participate in the interview.

Prevalent questions such as the what their definition on sustainability, their company background such as their customer geographic distribution and what are

their general observations on current fur industry are. These questions could help to compare the consumers' geographical variations.

According to study conducted by Wong, Ng & Cai (2018), the interview questions are categorized as Product, Industry and Demand. It allows the nature of questions to be clearer as it provided explanation on each question. Based on the structure of their interview. The research questions in this study will be categorized based on the 3Ps of Triple Bottom Line theory: People (social), planet (environmental) and profit (economic). As Triple Bottom Line theory focusing on People (social), planet (environmental) and profit (economic) more profound questions will be asked. To investigate their current and future strategic in contributing in sustainability within their organization (planet), their anticipated outcome towards consumer (people) and profit (profit) if sustainable measurements are applied within the their organization and their barrier and challenges in order to achieve a higher level of sustainability within their organization (profit), their perspective of the fur industry's future if or if not more sustainable and what is their prediction with their clients if they learns more about the sustainability within the fur industry – will they be more incline to purchase fur made items? Or will there be no effect towards their buying decision? The interview results will proceed to a coding process in order to provide a more explicit set of data for analyze.

First part of the interview will generalize the basic of the organization, the defining the meaning of their perspective of being “sustainable”. It will also give a geographic customer if there may be a difference among the geographic difference from their customer base. Second part of the interview will provide specific data fitting in the category of Triple Bottom Line Theory. The result should create an overview of the whole supply chain within the fur industry. To combine data collected from interview and the secondary data collection, involving recent market sales report, an outline of the whole current situation of the fur industry will be generated.

The potential research questions will be listed according to below categories based on the Triple Bottom Line Theory.

General perspective:

- 1) How do you define/understand sustainability?
- 2) Why do you think sustainability is important towards the society?

3) How have you seen the fur industry change in the past decade?

Environmental perspective (Planet):

- 1) How does sustainability affects the fur industry
- 2) How does your company/organization ensure the sustainability of its fur products?
- 3) Can you discuss any innovations or technologies that have been introduced to make the fur industry more sustainable?
- 4) How do you measure and report on sustainability in your operations?

Society perspective (People):

- 5) How are animal welfare considerations integrated into your supply chain management?
- 6) How do you perceive the fur industry in terms of ethical and sustainable practices?
- 7) How does legislative policies applies with the operation within your company/organization?
- 8) How might changes in consumer behaviour impact the future of the fur industry?

Economic perspective (Profit):

- 9) How do you anticipate the strategies contribute to the sales in your organization?
- 10) What challenges does your company/organization face in executing sustainable practices within the fur industry?
- 11) Can you speculate on how legislative changes might affect the future of the fur industry?

Evolution and Future Prospects:

- 1) What do you think are the most significant factors driving change in the fur industry?
- 2) Where do you see the fur industry heading in the next 10 years, especially with regards to sustainability?
- 3) In your opinion, what would be the most effective strategies for the fur industry to remain viable and sustainable in the long term?

Comparing to the above two research in literature review, the number of interviews in this research has exceeded the numbers compare to them. Therefore, it is justified that the number of research participants are sufficient.

Secondary data on recent environment index, which includes various pollution (i.e. water pollution and air pollution) created by the fur industry will be collected through government reports and environmental organizations. These sets of data will be compared with the original set of data from interview and sales report to

determine whether they have any correlation, for example if the increase/decrease in sustainable strategies have increased/decreased the pollution and if the increase/decrease in sustainable strategies have reflected any positive/negative impact in market sales.

In the second part of the research, surveys will be distributed to consumers to collect their purchasing behavior and perspective in the fur industry in relate to sustainability.

Consumer Perspectives:

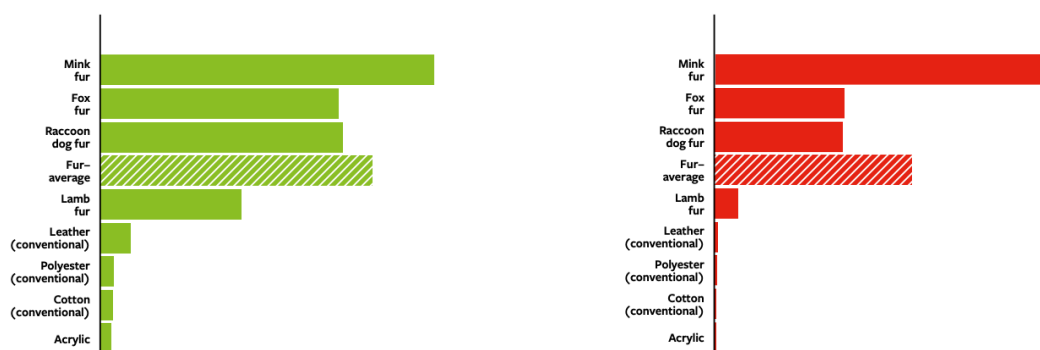
- 1) What factors influence your decision to purchase or not purchase fur products?
- 2) Have your attitudes towards fur changed over time? If so, what prompted this change?
- 3) How important is the origin and production process of fur products to you as a consumer?
- 4) Can you describe any experiences that shaped your perspective on fur?
- 5) What information do you look for when making a purchase decision about fur products?

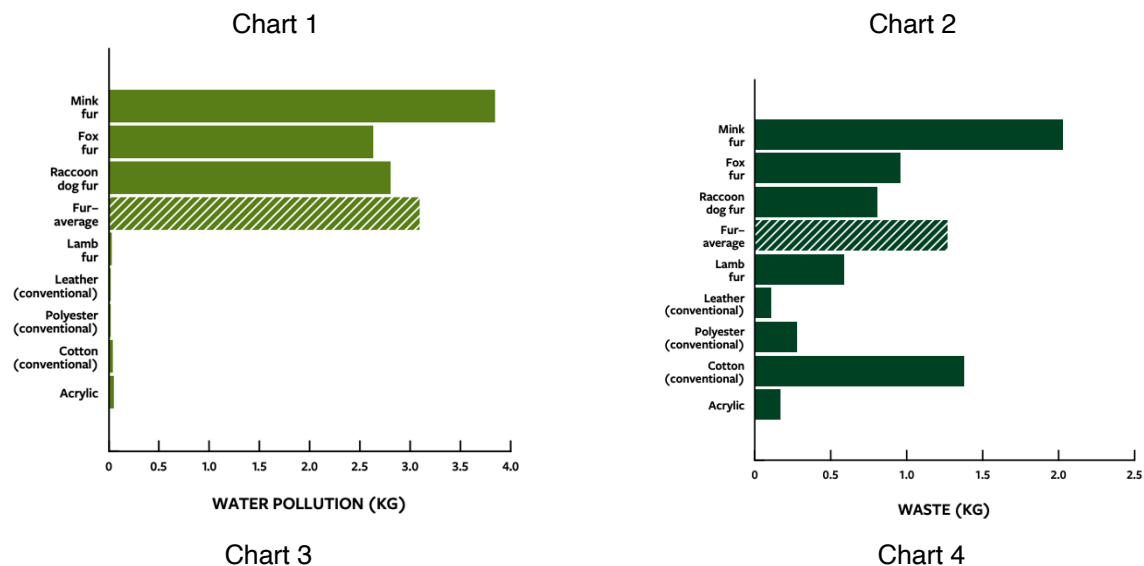
As this research is still in a proposal stage, the questions are still yet to be modified based on different theoretical framework.

5. Possible Expected Contributions

Early research has shown that despite multiple fur organizations has initiated various of sustainability measurement actions, including Furmark® and Internation Fur Federation (IFF), according to numbers provided by the Humane Society International based in United Kingdom, both carbon foot prints and greenhouse gas emissions are still extremely higher when comparing to other ingredients such as polyester, cotton and acrylic when producing garments.

According to below results provided by Humane Society International showed a substantially higher impact from carbon footprint and air emissions (greenhouse gas emissions) relative to other materials.





In chart 1, Humane Society International compares the results of carbon footprint for mink fur, raccoon dog fur and fox fur, showing the result of 309.91 kilograms CO₂-eq, 225.24 kilograms CO₂-eq and 221.21 kilograms CO₂-eq respectively, which was found to be 31 times worse for the climate than cotton and 23 times worse for both raccoon dog fur and fox fur for the climate than cotton. Mink fur is also 25 times worse for the climate than polyester, and raccoon dog fur and fox fur is 18 times worse for the climate than polyester.

In chart 2, greenhouse gas emissions results shows that mink fur produced the greatest impact, at 13.34 kilograms air emissions per kilogram of fur, the number is almost 215 times higher than cotton and 150 times higher than polyester. Both fox and raccoon dog fur at air emissions at 5.16 kilograms and 5.08 kilograms air respectively emissions per kilogram of fur respectively, which were roughly 57 times than polyester and 83 times than cotton.

In chart 3, the average water consumption of the mink, fox and raccoon dog furs was found at five times higher than cotton, 91 times higher than polyester, and 104 times higher than acrylic.

In chart 4, the average waste produced per kilogram of fur was found at 1.26 kilograms, although it is similar to cotton that was found at 1.37 kilograms produced by cotton but they are found to be considerably higher than that produced by the other material types.

In short, the reports done by Humane Society International showed all three main fur ingredients have shown a higher carbon footprint, polluted air emission, water consumption and amount of waste produced when comparing to other non-fur materials.

According to U.S. Department of Agriculture (USDA, 2023), in chart 5, the production of mink pelts has dropped 15% from 1.56 million pelts in 2021 to 1.33 million pelts in 2022. When compared within 5 years span, it showed a drastic decline of 61% from 2017 to 2022.

Pelts Produced – United States

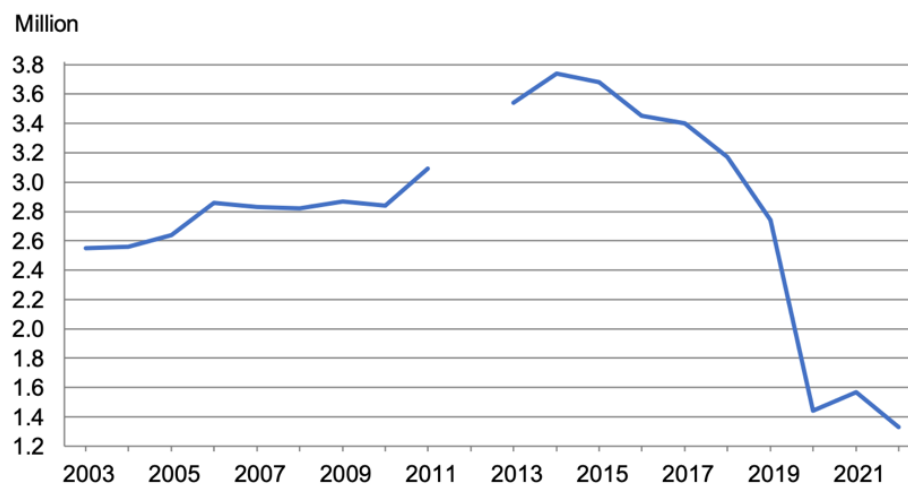


Chart 5

The decline of fur pelts produced could implicate the decrease in demand. It is to further investigate if there is any reason correlate with government policy or social events that contribute this phenomenon.

6. Conclusion

This research aims to investigate the complex relationship between sustainability practices within fur industry and consumer purchasing behavior. Using a pragmatic, mixed-methods approach, the study aims to provide useful insights into how sustainable measures within the fur sector correlation with consumer behavior.

By combining qualitative and quantitative research methods, which includes key informant interviews and conducting consumer surveys, the purpose is to collect comprehensive data that reflects the complex nature of the fur industry's supply chain and to reveal recent market situation.

A brief history and recent situation of fur industry has been explored and connecting to the key terminologies sustainability and sustainable supply chain, provided an overview of the research background.

Theories such as Triple Bottom Line theory and Life Cycle Assessment will be used to measure and determine the contribution of sustainability within the involved organizations, whereas Cognitive Dissonance Theory and Value-Belief-Norm Theory will be used to identify the consumer perception on fur products.

To conclude, this research proposal serves as a foundation for a further detailed exploratory research on global sustainability frameworks correlating with consumer purchasing behavior. The outcome for this study could offer critical insight benefiting business operators and policy makers not only within the fur industry but could extend to other market such as luxury market.

References

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