CONSUMER CONFIDENCE IN FOOD ATTRIBUTES: TWO-PHASE APPROCH TO STRUCTURAL EQUATION MODELLING

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1. Introduction

The agrifood industry has undergone a plethora of changes in recent years that have contributed to the emergence of **trust and distrust issues** in food markets. Much of the work on trust in the social science disciplines has focused on how **institutional trust** and its dimensionalities contribute to consumer confidence in credence attributes. However, the question of "How **brand trust** builds into consumer confidence in credence attributes?" has not yet received as much attention.

Motivated by this question, the study attempts to explore the factors that may affect consumer confidence in credence qualities by developing a comprehensive model of trust that enables a systematic assessment of the effects of **system-based trust**, **product-based trust** and **personal-based trust** on consumer confidence in food, and in turn on the purchase decision.

2. Objectives

1. Identify the factors which build into Canadian consumers' **trust in food system** regarding food safety and quality attributes.

2. Identify how a **brand** as a means of signaling quality builds into consumer confidence in credence attributes.

3. Determine how **individual factors** (e.g. perceived risk, past experiences) impact consumer confidence in relation to other determinants.

4. Determine the **causal effect** of each of these factors in shaping consumer confidence in credence qualities and in turn the **purchase intentions and brand loyalty** exhibited by consumers.
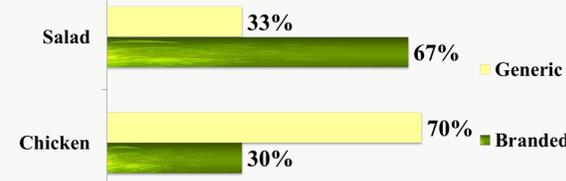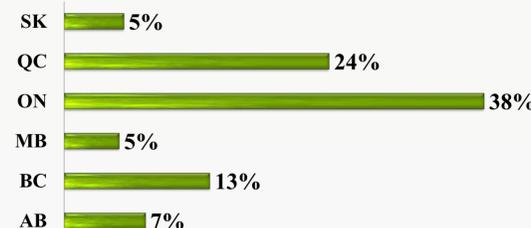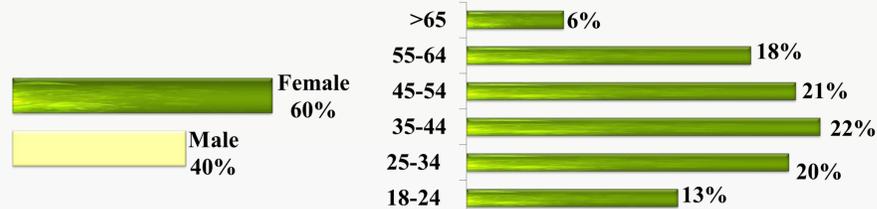
3. Theoretical background

Inspired from a thorough synthesis of the literature on consumer trust, consumer confidence in food attributes is predicted to be jointly determined by **the trust in food system** and **brand trust**, and it is moderated by **consumer characteristics**. As well, consumers are assumed to perceive an actor or a brand as trustworthy through the **credibility**, **competence**, **benevolence** and **reputation** dimensions that are among the well accepted antecedents of trust in the context of food products.

System-based trust	Product-based trust	Personal factors
• Perceived food system **competence** (expertise, knowledge of standards)	• Perceived brand **competence** (quality, safety)	• **Risk perception**: concerns about food-related hazards
• Perceived food system **credibility** (truthfulness, transparency)	• Perceived brand **credibility** (truthfulness. transparency)	• **Past experience**: product experience or frequent interactions with a particular food actor.
• Perceived food system **benevolence** (public care, CSR)	• Perceived brand **benevolence** (public care, CSR)	• **Ethical involvement**: interest in food production and processing practices.
• Perceived food system **reputation** (image, word of mouth)	• Perceived brand **reputation** (brand image)	

Determinants of consumer confidence in food attributes

4. Conceptual model

The underlying principles of the causal relationships that feed into consumer confidence are:

▪ Perceived competence, credibility, benevolence and reputation are the features that lead consumers to trust the food system and brands;

▪ Individual factors including past experience, perceived risk and ethical involvement moderate the relationship between trust and confidence;

▪ Purchase intentions and brand loyalty are consequences of consumer confidence in credence attributes.

Proposed path model for consumer confidence in food attributes
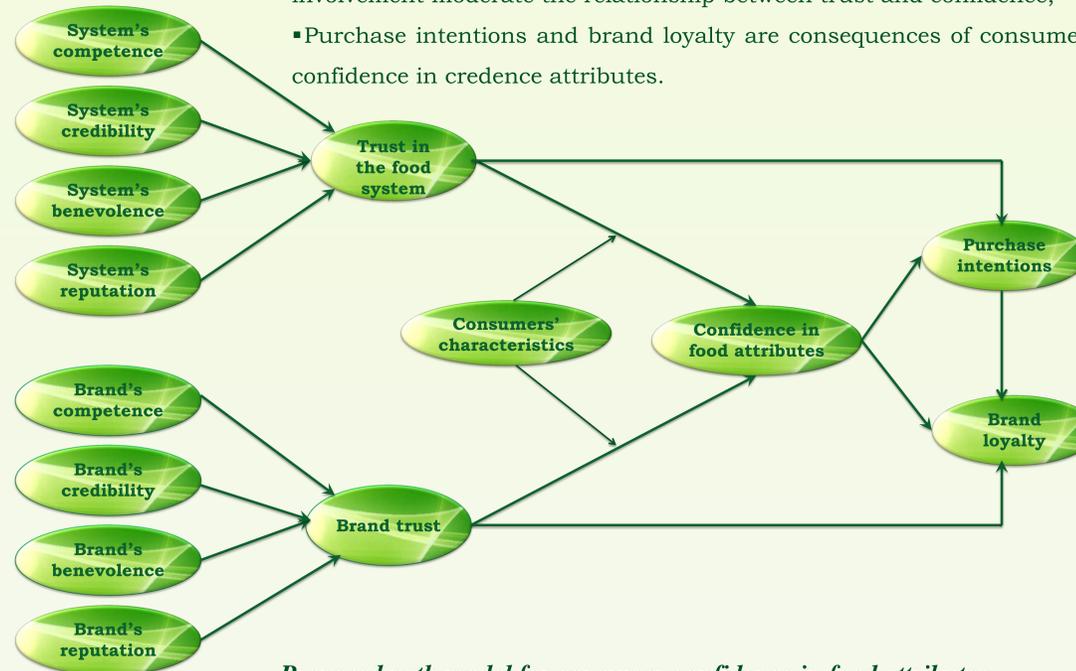
5. Methodology

Data collection

• Data were gathered through an **online survey** administered **nationally** in Canada in 2012. The survey was designed to measure (observed) items for the causal factors that have been empirically established to affect consumer confidence in credence qualities. The survey focused on two products: **fresh chicken meat** and **packaged green salad**. A total of **926** usable questionnaires were retained for the final dataset of the study.

Data analysis

• A two-phase **Structural Equation Modelling** (**SEM**) is used to examine the posited relationships between the factors underlying consumer confidence in food attributes. Phase 1 represents **the measurement component** of the model which consists of several latent (unobserved) variables while phase 2 consists of a **path analysis** where the posited relationships are tested for significance. The central point in analyzing structural models is the extent to which the hypothesized model fit or adequately describes the sample data.

## 6. Respondents' demographic profile

Respondents **gender**, **age** and **location** are given in the charts below. In terms of product purchase, 70% of respondents buy **generic fresh chicken** while 67% buy **branded packaged salad**.

7. Preliminary results

In order to test the hypothesized structural relationships, a path analysis was conducted. Initial results from the chicken sample show that the outcome of the relationship between the perceived reputation of the food system and the system-based trust is **positive** and **statistically significant** (β=.926, p=.004), as expected. While the perceived credibility of the food system (β=.136, p=.701) **positively** affects trust in the food system, perceived competence has a **negative** and **non-significant** effect (β= -.005, p=.926). Both perceived credibility and competence of the food system are **statistically insignificant** at the .05 level. Furthermore, about 97% of the variance of the trust in food system is accounted for by its three dimensions.

For brand trust, each of perceived brand competence (β=.369, p=.422), credibility (β=.002, p=.997) and reputation (β=.656, p=.074) have a **positive** effect on brand trust, as expected. However, the three relationships with brand trust are **insignificant**. Furthermore, the predictors of brand trust explain about 32% of its variance. The results indicate that system-based trust has a **positive and significant** (p=.01) effect on consumer confidence in credence attributes, while the effect of product-based trust, although **positive** is **insignificant** (p=.87).

As to the moderation effects, only interactions involving risk perceptions are **statically significant**. Finally, the outcome of the relationships between loyalty and each of brand trust (β=.276, p=<.001) and purchase intentions (β=.739, p=.009) is **positive** and **statistically significant**. Improvement of the model fit is ongoing.

8. Conclusion

The co-existence of **public and private** standards for food safety and food quality attest to the fact that confidence in food attributes is a **collective** outcome. Thus, an understanding of the complex interactions that comprise **system-based trust, brand-based trust** and **personal-based trust** is the main goal of this work.

Drawing together insights from a broad range of literature on trust and utilizing the two-step approach to SEM proposed by Anderson and Gerbing (1988)[1], the paper develops a holistic model that simultaneously assesses multiple drivers of consumer confidence in credence attributes. Initial findings show that system-based trust is more important than product-based trust in the context of fresh chicken. Results from salad analysis are pending and will provide an opportunity to see whether this result differs across product categories.

By combining institutional and individual components, the conceptual model contributes to the literature on trust by offering a comprehensive, multidimensional treatment of trust from a Food Economics perspective. Additionally, it provides a clearer understanding of the concept of trust that should be of relevance for **policy makers** and **the food industry**.

REFERENCES
[1] Anderson JC & Gerbing DW. (1988). Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach. *Psychological Bulletin*, 103 (3), 411–423