Analysis of the Potential of Environmental and Social Standards for Strategy and Economic Performance of Food Processing SMEs in Central Asia

Emil Begimkulov, Dietrich Darr

Rhein-Waal University of Applied Sciences, Marie-Curie-Str. 1, D-47533 Kleve, Germany

1. Introduction

Natural forests of Central Asia (CA) play an essential role for surrounding populations[1]:

Harvested NTFP (e.g., walnuts, wild fruits, medicinal plants, etc.) are a primary source of income and livelihood for locals societies[2].

This leads to overexploitation and destruction of forests[3].

Traditionally, the harvests have been collected and processed for internal consumption only.

Commercialization of NTFP is financially more beneficial than crop production[4].

2. Problem Statement

Smallholder farmers and Food processing SMEs of CA are slowly adopting sustainable practices due to limited:

- Financial resources;
- Access to solvent markets;
- Knowledge of harvesting and processing practices.

As a result - losing potential opportunities.

No prior studies conducted in the region.

3. Research Objectives

Based on the above the following objectives were established:

- To conduct a literature review.
- To develop a comprehensive conceptual framework for research.
- To study consumer behavior to understand their willingness to pay premiums for certified NTFP and AF products in Kyrgyzstan, Tajikistan, and Uzbekistan.
- To analyze and compare AF and NTFP food producing and processing SMEs in Central Asia with and without, environmental and social standards (ESS).
- To study the effects of certification schemes on socio-economic outcomes for small and medium agri-food producers of Central Asia.

4. Hypotheses & Literature Review

ESS operate in the interests of different stakeholder groups within food value chains, from consumers to producers:

- The demand for certified food is driven by changing consumer preferences[5].
- Food companies can control the quality and safety requirements of inputs[6].
- Small and medium food SMEs obtain higher benefits by charging higher market premiums[7].

Aknowledgements:
Emil Begimkulov's participation was made possible by the Deutsche Akademische Austauschdienst – German Academic Exchange Service (DAAD).

Contacts:
Emil Begimkulov
Guest researcher & Ph.D. Candidate, Rhein-Waal University of Applied Sciences, Marie-Curie-Str. 1, D-47533 Kleve, Germany. emil.begimkulov@hochschule-rhein-waal.de

ESS are differentiated between public-private and mandatory-voluntary stadards[8] :

	Public	Private
Mandatory	Regulations	Legally-mandated private standards
Voluntary	Public voluntary standards	Private voluntary standards

Table 1. Primary Forms of ESS

Private voluntary standards are driven by civil society and supported by growing consumer awareness of sustainability issues and mistrust in organizations[7].

Central Asia:

- Organic certification
- Fairtrade
- FairWild
- Concept of Local food

5. Conceptual Framework

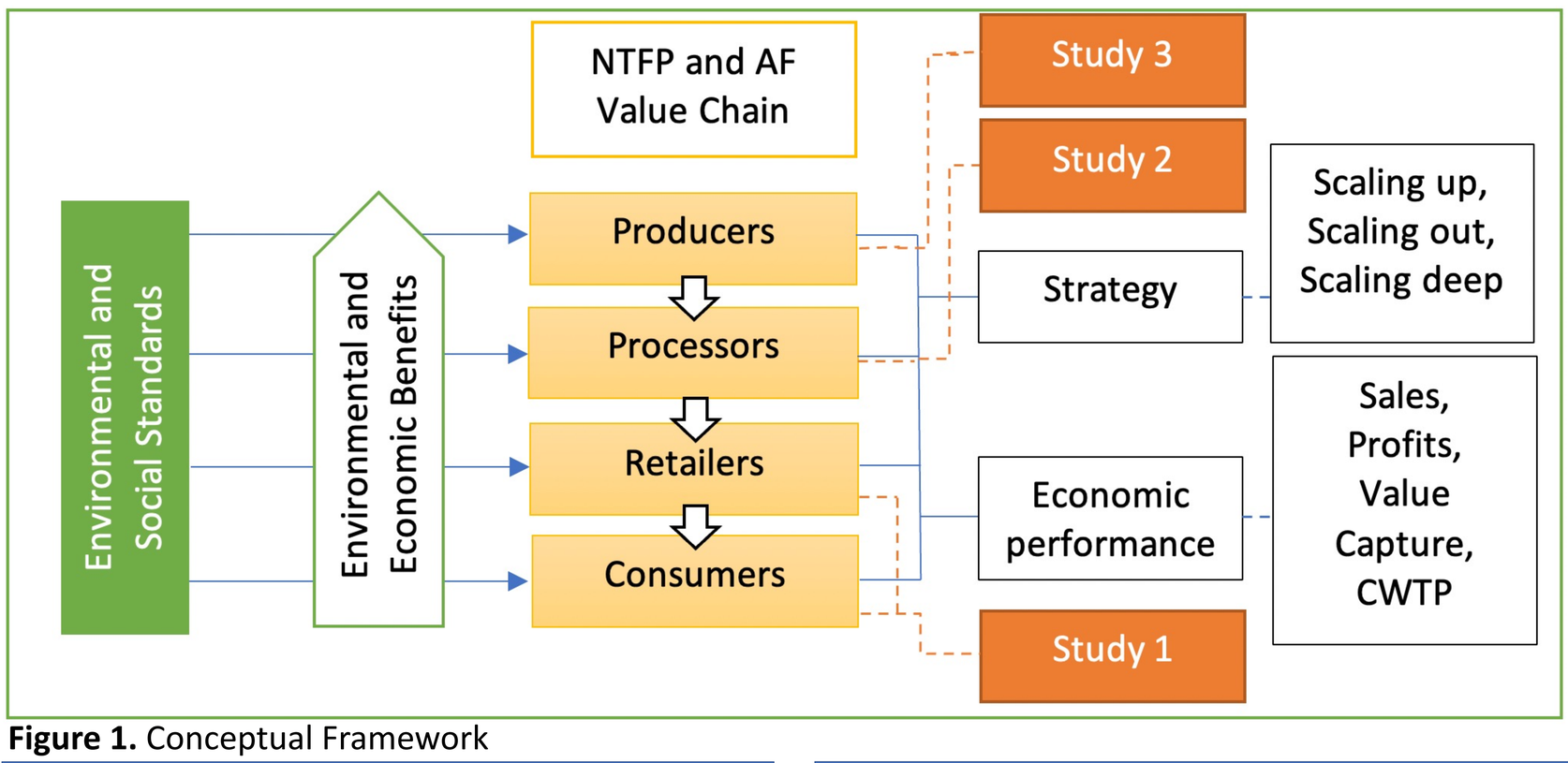

Figure 1. Conceptual Framework

6. Methods

Study 1. Study of consumer preference and willingness to pay for certified food in Central Asia.

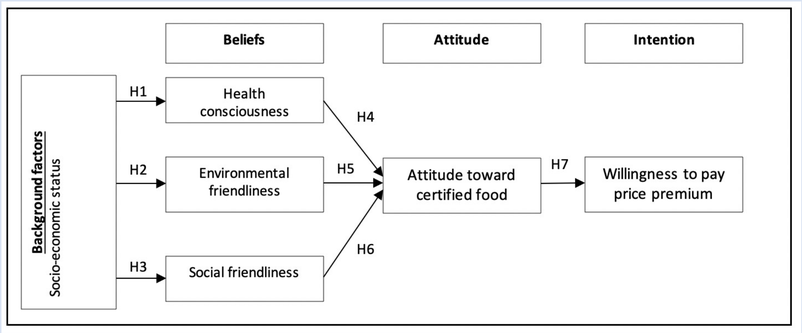

Figure 2. Research Framework

The framework is based on the Reasoned Action Approach[9] .

Sampling: combination of simple random sampling + snowball sampling.

Dependent variables:

- Socio-demographic variables;
- Dietary choice factors[10];
- Ethically-minded consumer factors[11];

Data collection: Consumer survey, Online tools (Google forms platform)

Data processing: SPSS and R

Analytic tools:

- Sampling adequacy: Kayser-Meyer-Olkin test, Barlett sphericity test, etc.
- Reliability: Cronbach's alpha, Pearson chi square test, etc.
- Relationship between variables: Ordinary least square method, Oblique oblimin rotation, etc.

Study 2. Analysis and comparison of NTFP and Agroforestry food processing SMEs in Central Asia with and without environmental and social standards.

- **Method:** Case study method (Qualitative);

Study 3. Effects of certification schemes on socio-economic outcomes for small and medium agri-food producers of Central Asia.

- **Method:** Farm-household survey (Quantitative);

Variables: Economic and Social indicators based on SAFA [12].

Analysis of variables[13]:

$$x^*_{i,j} = \frac{x_{i,j}}{\max(x_j)}$$

$$h_{i,v} = \min\left(x^*_{i,j}\right) + \left(1 - e^{-\left(x^*_{i,j} - \min\left(x^*_{i,j}\right)\right)}\right)$$

$$CI_i = \sum_v h_{i,v}$$

7. Expected Outcomes

Current research is expected to provide a 360 degree analysis of the potential of environmental and social standards for strategy and economic performance of food SMEs in Central Asia and fulfill the existing research gap.

Based on the findings of the study, practical and theoretical implications are expected in the form of:

- A model for the certification of producer groups and/or SMEs according to selected environmental, economic, and social standards.
- Development of the basis for monetizing selected socio-economic standards and environmental performance of the AF systems.

8. References

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