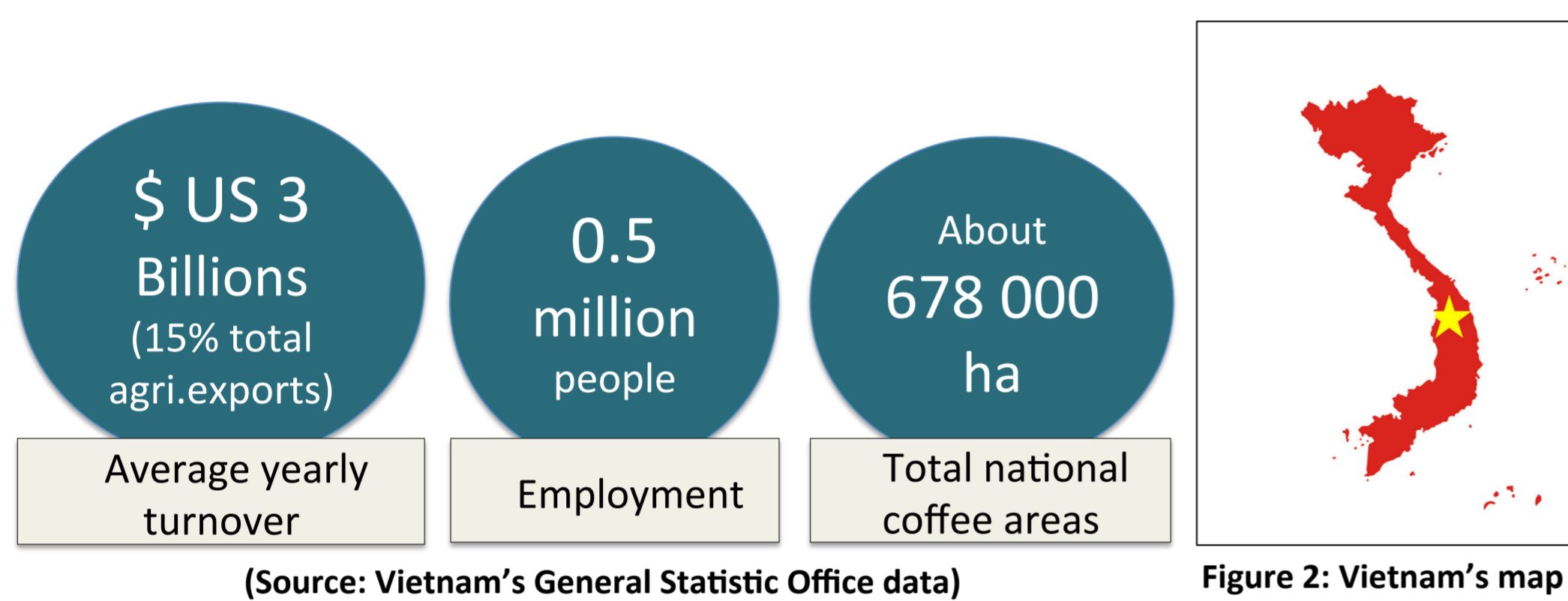
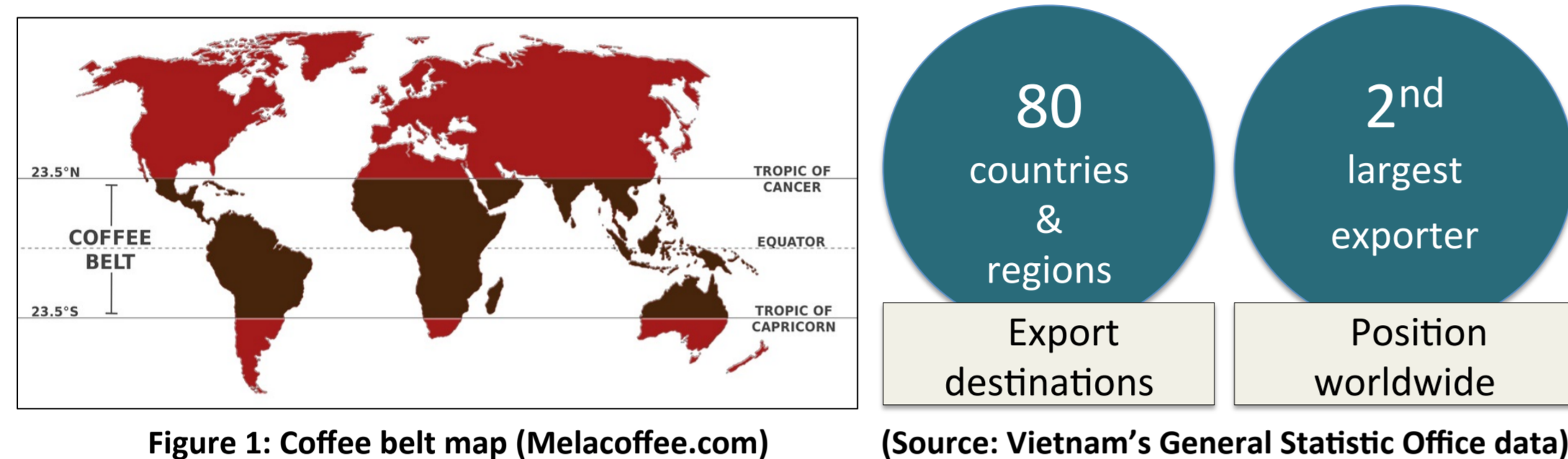




## Introduction

- Vietnamese coffee sector has been of great significance to the global coffee market, contributing substantially to the socio-economic growth of Vietnam.



- The climate change has been seriously threatening the coffee sector, which calls Vietnam for taking actions to support smallholder farmers to adapt.
- For most coffee farmers in Vietnam, small-scale households with livelihoods primarily reliant on coffee-growing activities, expenses associated with the adaptation measures might be beyond their financial reach.

→ The **impact of credit** on the use of adaptation strategies (**water-saving techniques** and **multi-cropping practices**) in coffee production will be investigated in the Central Highlands (CH) of Vietnam.

## Methodology

- **Objective 1:** To identify the significance level of credit access in how smallholder coffee farmers response to climate change adaptation
- **Objective 2:** To identify factors affecting credit access to coffee farmers
- The use of social, cultural, and psychological factors in studying farmers' adaptive response remains relatively limited (Dang et al. 2019).
- Developing research is based on economic and psychological theories
- Selecting variables is inspired by earlier studies, e.g. Dressa et al. (2009), Gebrehiwot & Van der Veen (2013), P.K Chauke et al. (2013), and Mutyasira et al. (2018).

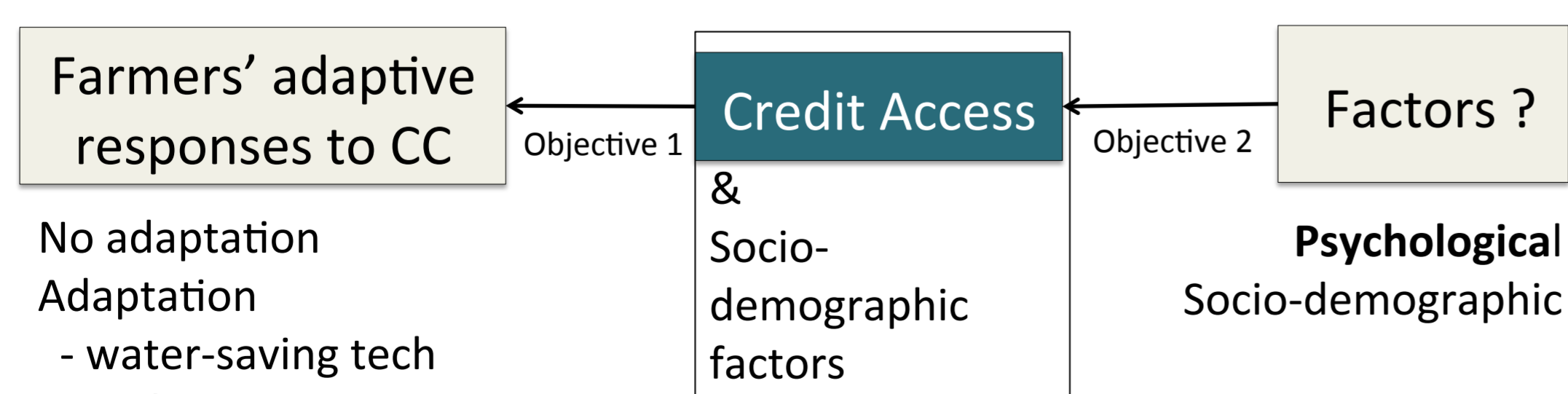


Figure 3: Illustration of the relationship between objectives in the research

### Acknowledgement:

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- Data collection:
  - Time: from Feb-May 2022
  - Areas: Dak Lak & Lam Dong provinces in the CH
  - Data:
    - Quantitative data (questionnaires): ≈ 300 coffee farmers
    - Qualitative data (interview): 15-20 experts

### Objective 1:

$$\log \left( \frac{\text{Prob}(\text{Take adaptation})}{\text{Prob}(\text{No take adaptation})} \right) = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \dots + \beta_h X_{ih} + \epsilon_i$$

- Explanatory variables (X) : contain h variables from
  - \* socio-demographic variables (e.g. age, gender, etc...)
  - \* institutional variable (credit access)
- Dependent variables (log of odds ratio): indicate the probability of farmers' adaptive response to climate change with
  - Model 1:** i = 1 ( Adapt water-saving techniques)  
i = 0 ( No adapt)
  - Model 2** i = 1 ( Adapt multi-cropping practices)  
i = 0 ( No adapt)

### Objective 2:

$$\log \left( \frac{\text{Prob}(\text{Take credit})}{\text{Prob}(\text{No take credit})} \right) = \beta_0 + \beta_1 X_{j1} + \beta_2 X_{j2} + \dots + \beta_h X_{jk} + \epsilon_j$$

- Dependent variables (log of odds ratio): indicate the probability of farmers taking credit
  - j = 1 ( Take credit)
  - j = 0 ( No take credit)
- Explanatory variables (X):
  - \* psychological variables (e.g. perception of loan repayment and loan procedures, attitude over credit risk)
  - \* socio-demographic variables (e.g. income, education)

## Expected outcomes

- The drivers and barriers impacting the choice of Vietnamese coffee farmers' adaptation measures, especially the importance of credit access will be identified
- Factors hindering the accessibility of credit to coffee farmers in Vietnam will be revealed

## Conclusions

- The research attempts to extend the knowledge in adaptation to climate change in Vietnam's coffee sector by:
  - Promoting the drivers and moderating the barriers of climate change adaptation process
  - Possible policy support to solve problems preventing coffee farmers from taking credit

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