INEXPENSIVE INNOVATION AND EXPORT MARGINS

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MOTIVATION

- Export competitiveness is increasingly linked to sustainability (Latouche and Chevassus-Lozza, 2015; Henson and Jaffee, 2008)
- Traditional innovation (R&D, patents) is costly, especially for SMEs
- Trademarks are often the only affordable form of intellectual property (Crass, 2020) for SMEs
- Voluntary Sustainability Standards (VSS) offer an accessible route for quality signalling and upgrading (Henson & Jaffee, 2008; Galati et al., 2017)

- **Inexpensive innovation**: Trademarks and/or Voluntary Sustainability Standards

  ➜ Lower-cost signals of credibility, distinctiveness, and quality

BIO CRETAN OLIVE OIL LTD

WHAT ARE TRADEMARKS?

- Legally protected signs that distinguish a firm's goods or services (see e.g. Millot, 2009; Rogers et al., 2007)

  - signal brand identity, product differentiation, perceived innovation
  - widely used by SMEs to support marketing-driven innovation
  - registration is simpler and less costly
  - also **reduce uncertainty**

CRITIDA

CRETAN PREMIUM PRODUCTS

Evlogia ORGANIC EXTRA VIRGIN OLIVE OIL

CRITIDA DELICATESSEN Extra virgin olive oil

WHAT ARE VOLUNTARY SUSTAINABILITY STANDARDS (VSS)?

- Private or third-party certifications of environmental or social practices
- Signal quality and compliance to foreign buyers
- Often required by global retailers
- Examples: ISO 14001, FairTrade, FSC, GlobalG.A.P.
- Competitiveness through **trust** (Henson & Jaffee, 2008; Latouche & Chevassus-Lozza, 2015)

FOOD SAFETY SYSTEM CERTIFICATION 22000

FSSC 22000 is a global food *safety certification scheme*, recognised by the Global Food Safety Initiative (GFSI), which ensures that a company has an **effective food safety management system in place**

Allows the firm to:

- demonstrate robust food safety controls
- compete in high-standard export markets
- reduce regulatory and reputational risks

FSSC 22000

International Organization for Standardization
ISO
22000

LITERATURE GAP

- VSS can catalyse upgrading processes (Henson & Jaffee, 2008); in many sectors, certification has become a de facto requirement (Latouche & Chevassus-Lozza, 2015)
- Trademarks capture non-technological forms of innovation especially in marketing and product differentiation (Millot, 2009; Flikkema et al., 2014)
- They're also widely used by SMEs, thanks to their low cost and simplicity (Rogers et al., 2007)
- Lack of firm-level datasets
- Lack of evidence on how VSS and trademarks affect competitiveness in the form of export margins (entry, intensity, quality)
- Especially scarce in multi-industry

OUR CONTRIBUTION

Firm-level analysis of VSS & trademarks on export outcomes

- Extensive margin – entry into new markets
- Intensive margin
  - Sales growth in existing markets
  - Quality upgrading

Novel dataset for Greece:

- SME-dominated
- Combined certification, trademark, firm characteristics and trade data

DATA SOURCES

- TMview & WIPO: international trademark data for Greek firms
- 23 VSS directories: certification type, status, validity

GLOBALG.A.P., ISO 22000 (FSSC), BRCGS, GOTS, FSC, PEFC, USDA Organic, Rainforest Alliance, ASC, ISCC, RSPO, Better Cotton, EPEAT, Friend of the Sea, LEAF Marque, Nature Care Products, Bio Suisse, EFISC, REDcert, GRI, SA8000, Aluminium Stewardship Initiative, and the Alliance for Water Stewardship.

- ELSTAT trade data: export value, volume, destinations
- AMS: firm characteristics
- Merged using harmonised firm identifiers


Elite
FRIEND OF THE SEA
better cotton
CERTIFIED SUSTAINABLE PALM OIL
RSPO
ΠΑΠΑΓΑΛΟΣ
ΜΠΙΣΚΟΤΑ
ΒΡΩΜΗΣ
ΒΙΟΛΑΝΤΑ

WHAT WE KNOW SO FAR…

- Trademarks
  - 1,362 firms registered 2,911 trademarks (avg. = 2.14 per firm)
  - Most active sectors: food (NICE 29, 30)
- VSS Certifications
  - 1,540 firms with 2,182 certifications (avg. = 1.42 per firm)
  - 98% of firms hold only one certification
  - Most common: GLOBALG.A.P., FSSC 22000, BRCGS
- Overlap
  - 156 firms hold both trademarks and VSS
  - These firms are more branding-intensive (avg. 5.15 trademarks)
- Timing
  - 60% of first certifications issued in past 2–3 years
  - Surge in certifications in 2023 — likely EUDR and ESG-related

EXTENSIVE MARGIN: PROBABILITY OF ENTERING NEW MARKETS

Estimate the likelihood that a firm starts exporting to a new destination based on the prediction that **inexpensive innovators are more likely to enter new destination markets**

- Firms with ≥2 years of export history
- Entry defined as first-time exports to a destination *d* at time *t*

$$\Pr[entry_{fgndt} = 1] = \beta_1 tm_{fgdt} + \beta_2 vss_{fgdt} + \beta_3 (tm_{fgdt} \times vss_{fgdt}) + \beta_4 age_{ft} + \beta_5 assets_{ft} + \gamma_d + \gamma_g + \gamma_t + \varepsilon_{fgdt},$$

Controls:

- Firm age (foundation year)
- Capital intensity (real assets)

- Firm fixed effects to control for unobserved heterogeneity, ALSO lagged export value (to absorb persistent shocks)

MAINTAINING EXPORT MARGINS: VALUE, VOLUME, AND QUALITY

Assess how trademarks and VSS affect the export value, quantity, and product quality

$$\log(q_{fgdt}) = \beta_1 tm_{fgdt} + \beta_2 vss_{fgdt} + \beta_3 (tm_{fgdt} \times vss_{fgdt}) + \beta_4 age_{ft} + \beta_5 assets_{ft} + \gamma_d + \gamma_g + \gamma_t + \varepsilon_{fgdt},$$

Controls:

- Age (foundation year)
- Capital intensity (real assets)

- Endogeneity concern: Certification may be correlated with unobserved firm performance
- IV Strategy: Instrument for firm certification using sector-level certification activity --> extract exogenous variation in trademark/VSS behaviour across industries

CONCLUSION

Inexpensive innovation matters

- Trademarks and VSS enable SMEs to compete globally
- Together, they signal quality, ethics, and product identity

Potential policy recommendations

- Promote trademark registration for SMEs
- Support VSS adoption to reduce trade costs and improve performance
- Build frameworks that integrate IP protection with sustainability goals

Research impact

- First firm-level evidence linking trademarks, VSS, and export performance
- New dataset helps overcome fragmentation in existing data
- Contributes to trade, innovation, and sustainability policy design