

# The Use of Inductive Methodology to Understand Incongruities in the Australian Fresh Produce Supply Chain



Tamanna Ahmed Monem  
Ray Collins

School of Natural and Rural Systems Management  
The University of Queensland  
Australia

# Rationale for this Research

---

- ◆ Horticulture sales value is increasing
  - ◆ 1992: \$ 728m
  - ◆ 1998: \$ 1135m
- ◆ Multiple reviews criticise Australian horticulture's international performance
  - ◆ it lacks professionalism in dealing with demand partners
  - ◆ it does not understand market needs
  - ◆ it lacks consumer information

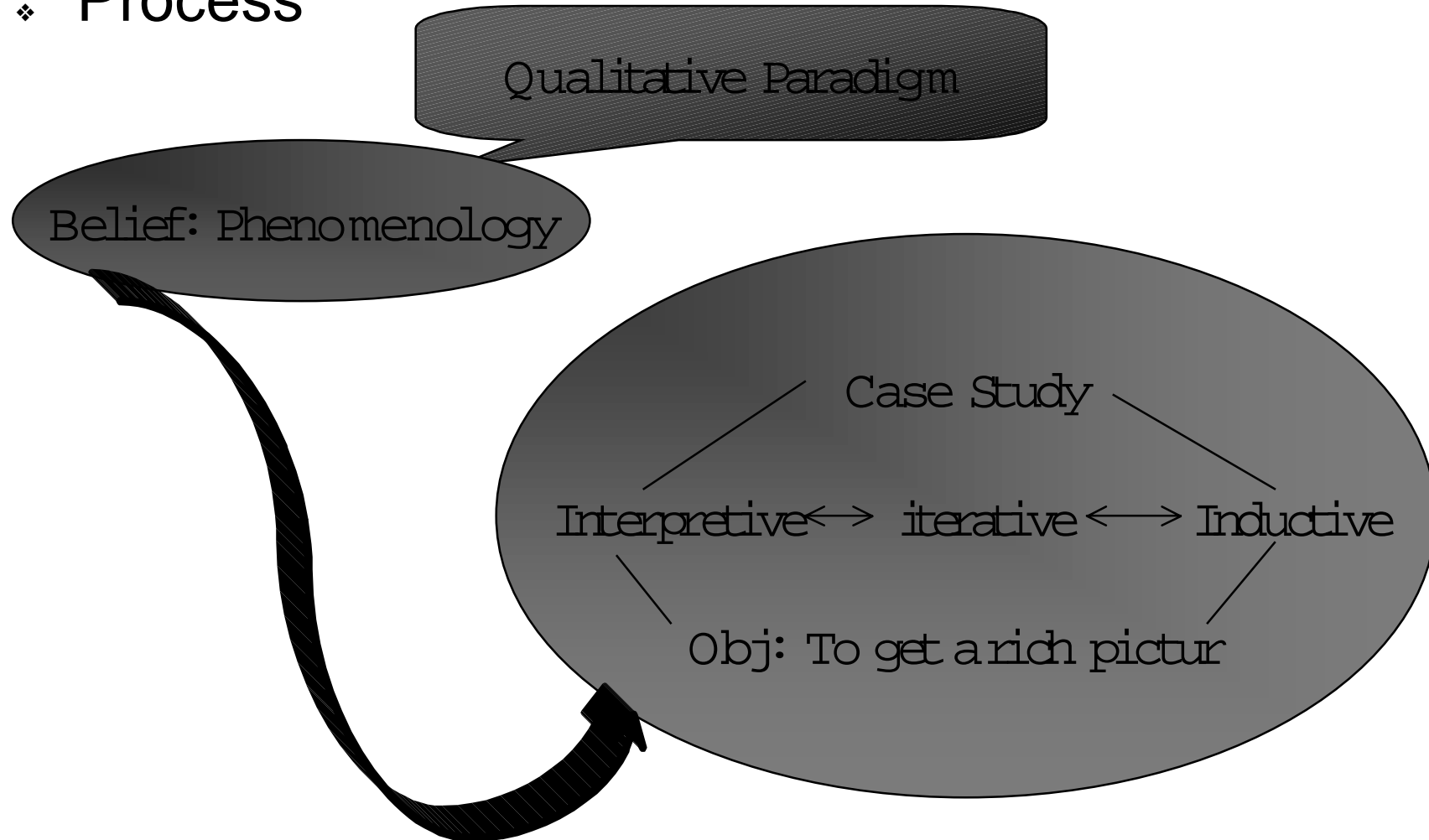
# Significance of this research

---


- ◆ horticultural exports are important to the Australian economy
- ◆ consumer information is important in every supply chain, but a gap exists in the research literature
- ◆ to sustain competitive advantage consumers need to be satisfied
- ◆ unsatisfied consumers lead to diminished international competitiveness

# Research Approach

## ❖ Process



# Research Approach



- Case stud
- Country : Malaysia - a major export market for Australian horticultural produce, changing consumer trends, emerging supermarkets and hypermarkets
- Products: Apple & Broccoli

# The Research Problem



- ◆ Are there incongruities in this fresh produce supply chain?
  - ❖ Do channel members know what consumers want?

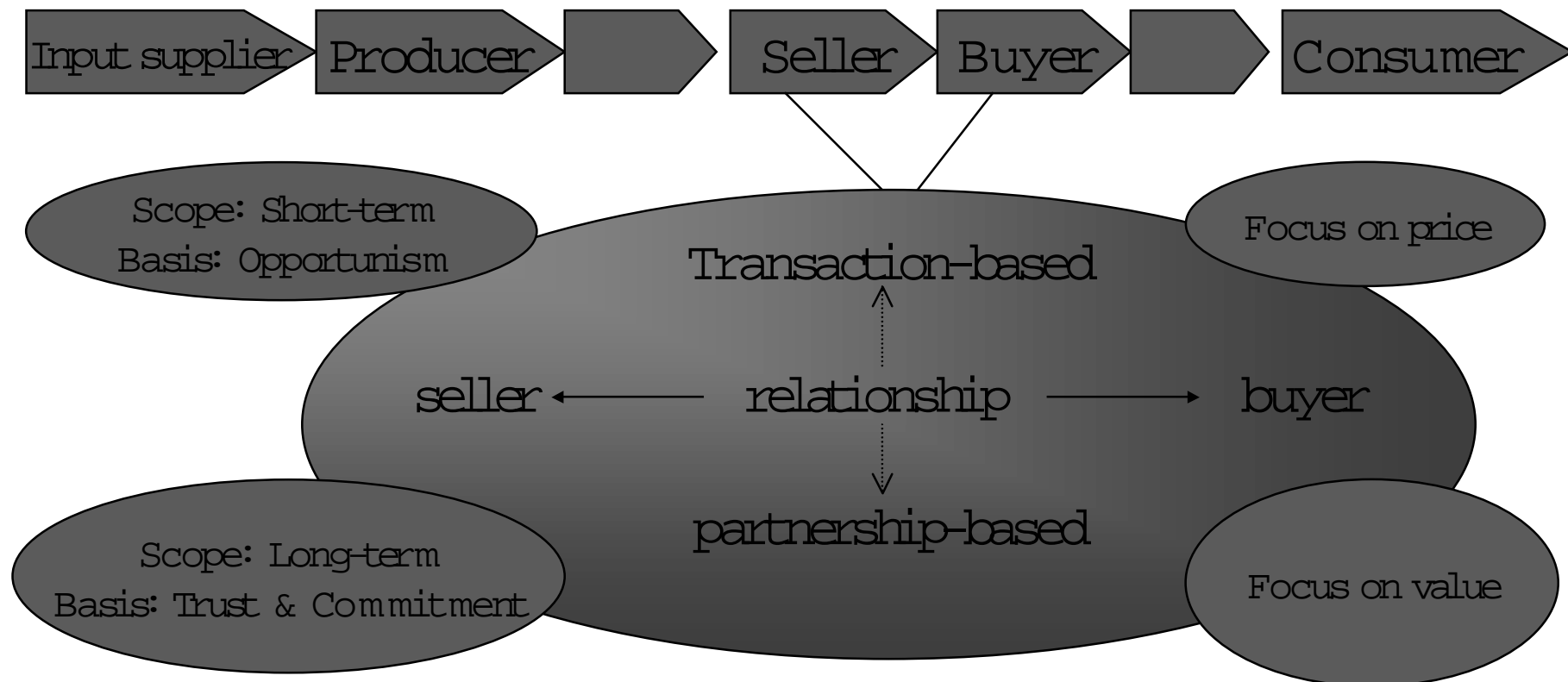
# Research Questions

---

- ◆ What are supply chain members' perceptions of consumer tastes and preferences?
- ◆ What are the determinants of consumer purchase decisions? (what are consumers' perceptions)

# Researching Supply Chain Issues

## ◆ Researching dyadic relationships



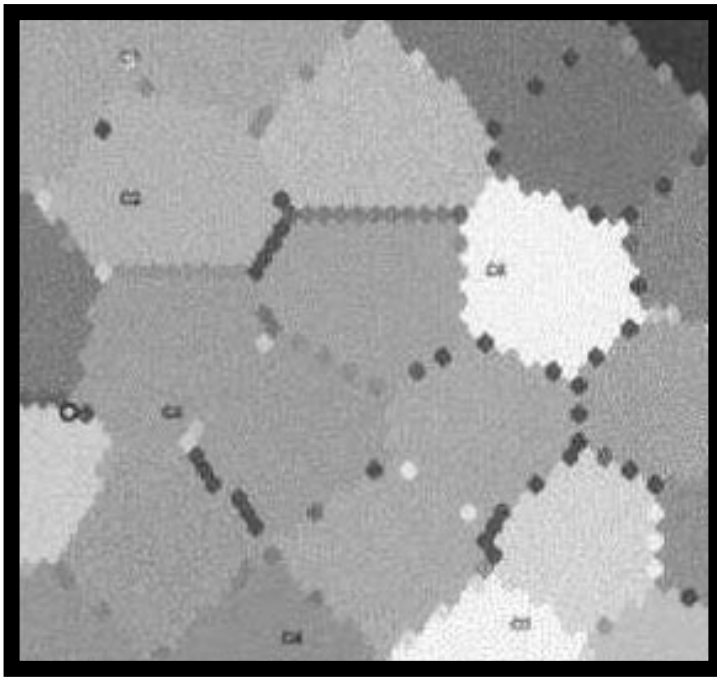


# Researching Supply Chain Issues

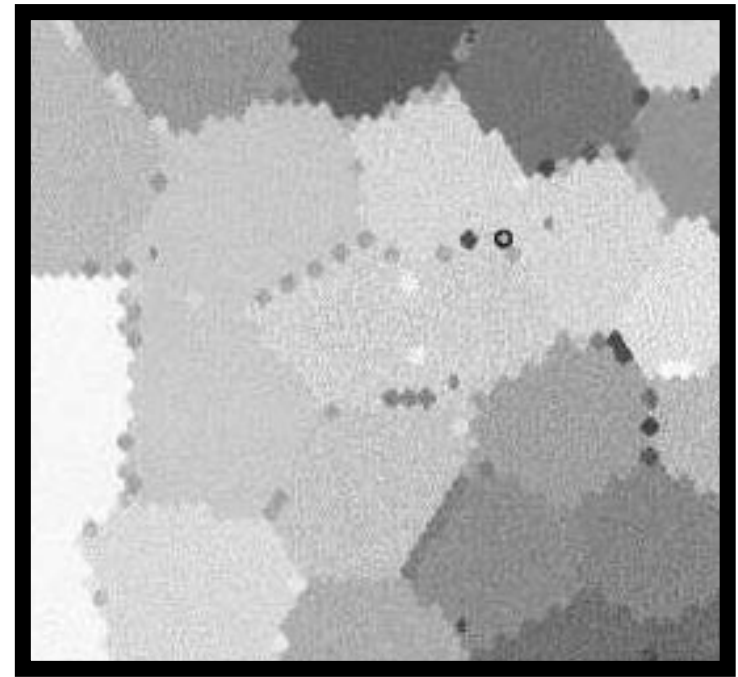
- ◆ Methodology & Methods
  - ❖ inductive
  - ❖ interview - intercept, open-ended
  - ❖ sample size
    - ❖ 1000 consumers
    - ❖ major exporter (n= 10 )
    - ❖ major importer (n= 8 )
  - ❖ research period - 1997-1999
  - ❖ analytical tools - SOMine & NUD\*IST

# Analysis: Cluster maps define consumer segments

---

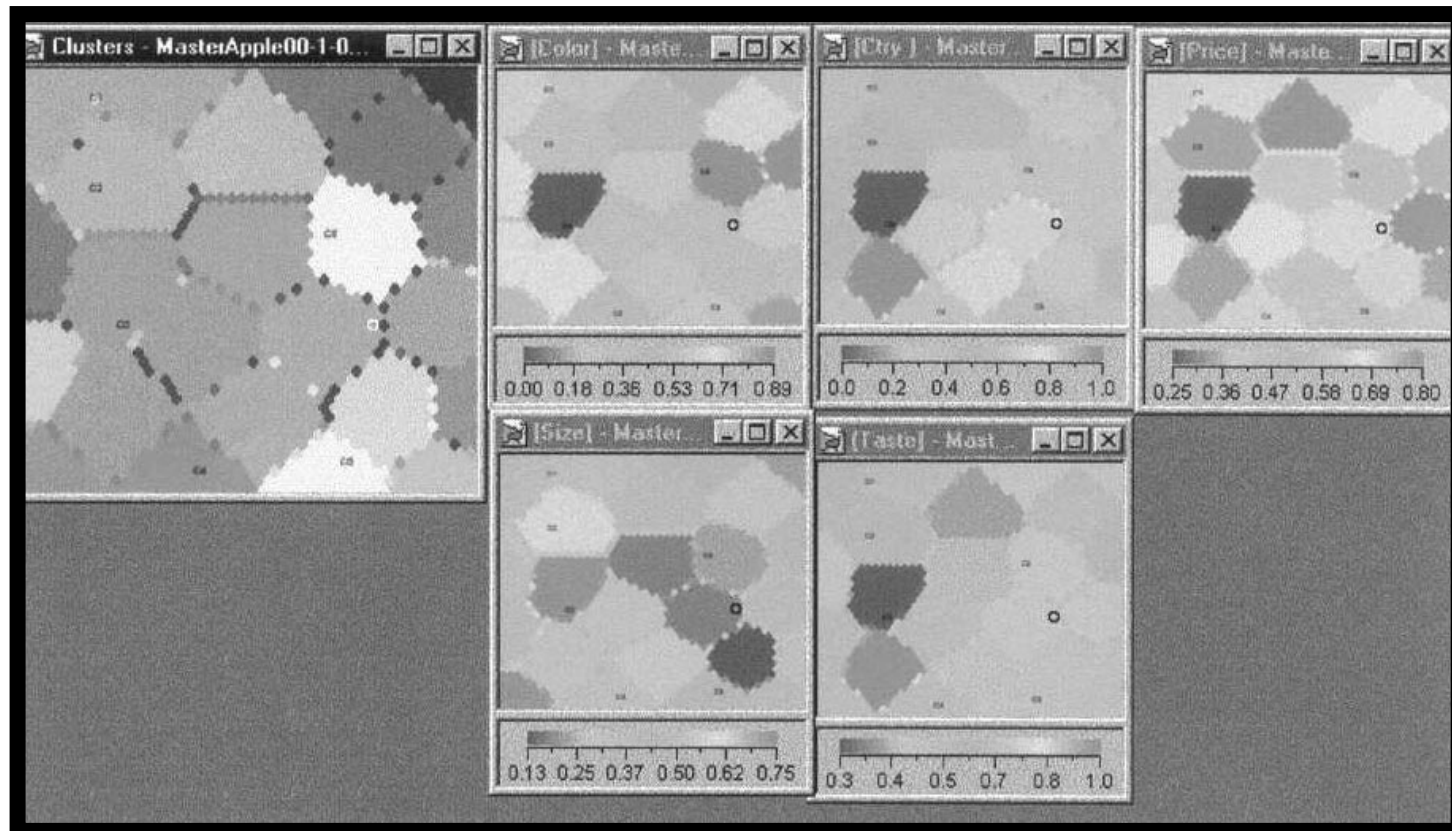


Consumer clusters: Apples



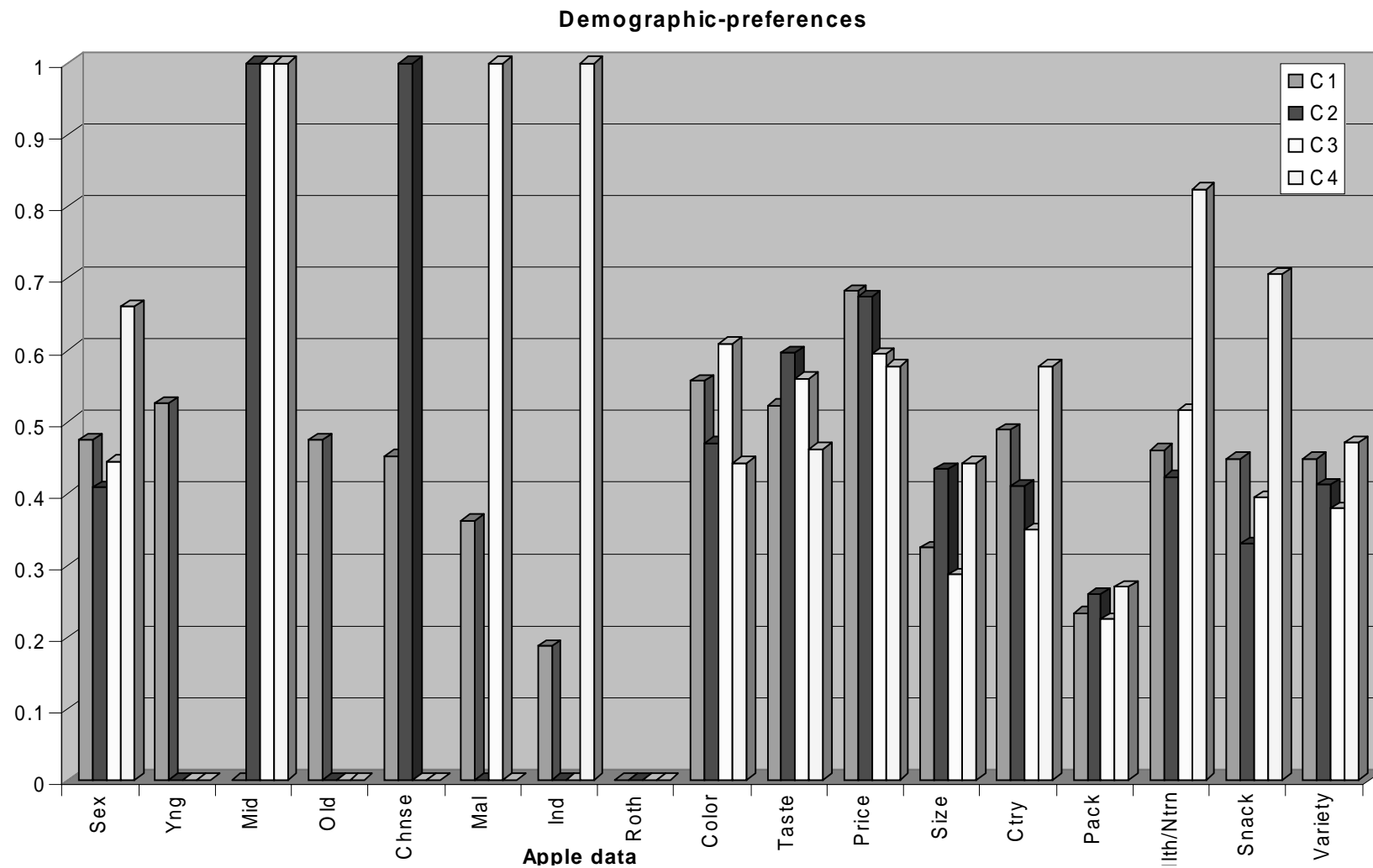
Consumer clusters: Broccoli

## Pictorial representations of consumer clusters

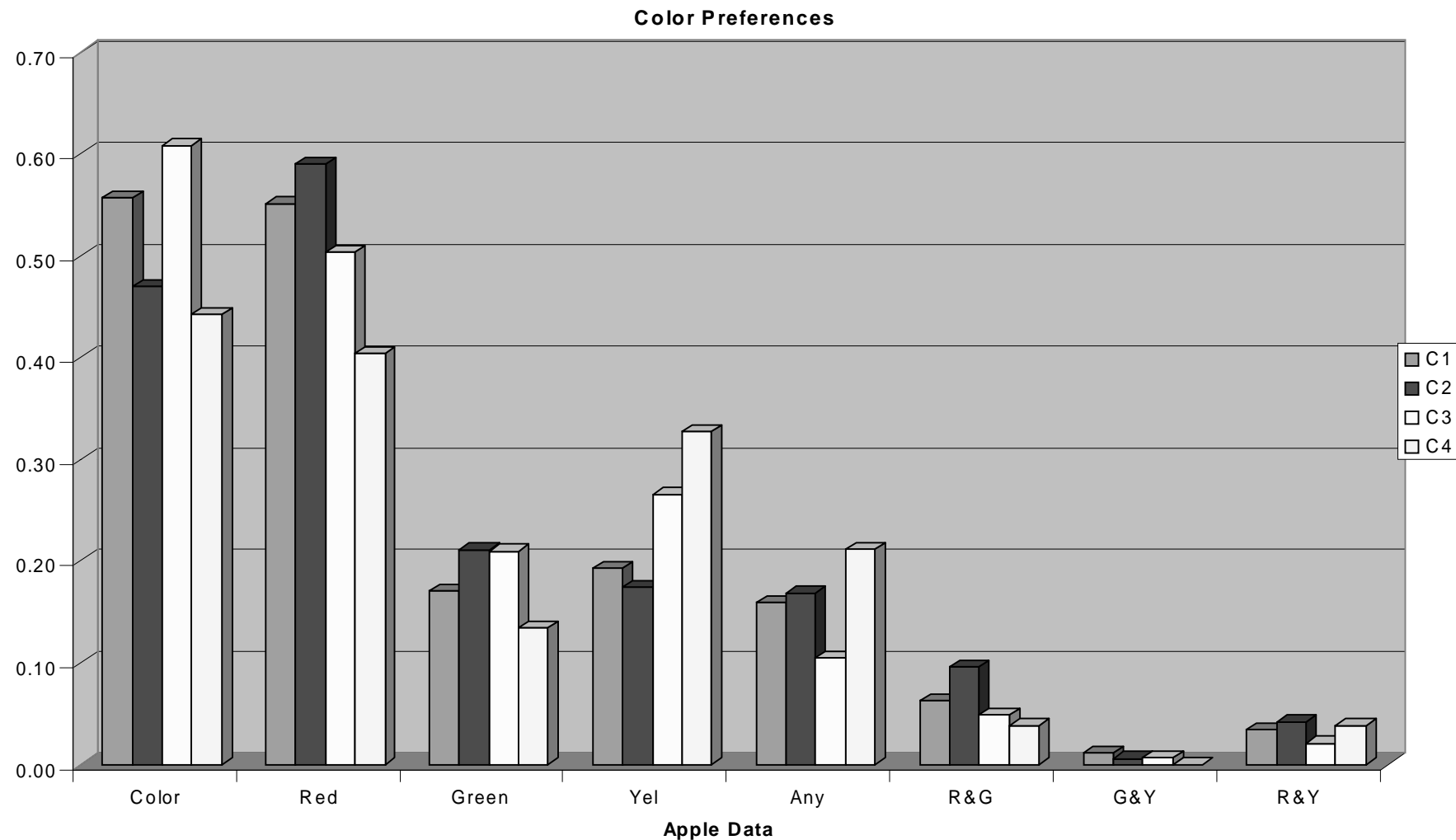


Colour maps represent consumer clusters; red represents greatest importance of that particular attribute

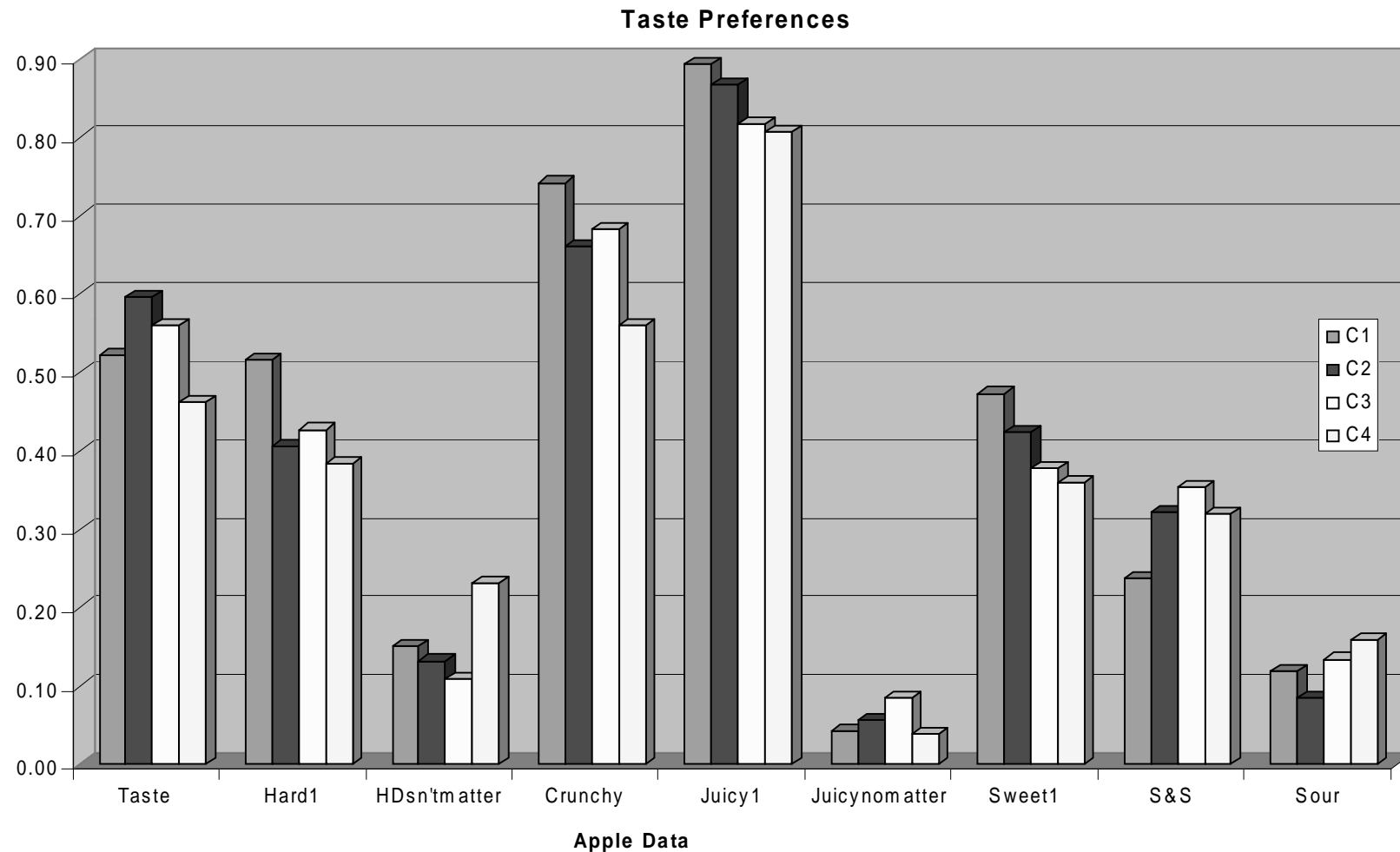
# Cluster Attributes - Apple



# Example: Cluster preference - Colour



# Example: Cluster preference - Taste



# Findings: incongruity between supply chain members' perceptions

	Importer	exporter	grower rep.	consumer
size	size important	prefer small to medium size	size is not significant	size is not significant
demog'y	red app: Mala cons			red apples are popular among mid-aged cons; hard-crunchy popular among young consumers
colour	colour doesn't matter to Chinese con's	consumers like red apples		colour matters to Chinese consumers
country of origin	Malay consumers prefer Washington Red Delicious; local for vegetables	no specific information consumers like Red Delicious veges: have to be price competitive to hold market share		country of origin differs from one segment to another Australian broccoli is most preferred, then New Zealand; no local

# Findings: incongruity between supply chain members' perceptions

---

Importer

exporter

grower rep.

consumer

stem/head

short stem;  
small head

short stem; small head

longer stem is popular  
among mid-aged and young  
consumers (nutrition)

market  
knowledge

knows what  
market wants

mostly rely on buyers for market  
information

consumers want to let  
retailers know about their  
needs



# What did I conclude?

---

- ◆ Evidence that this chain could be more effective if:
  - ◆ there was information about consumers' needs
  - ◆ information flowed back from consumers to producers in a transparent way, so that
    - ⇒ consumer needs could be fulfilled, thus
    - ⇒ international competitiveness could be enhanced

# What can we do about it?

---

- ◆ do not treat consumers as a single cluster
- ◆ focus on marketing orientation
- ◆ construct strategies that target major consumer segments
- ◆ build trust, commitment and information sharing strategies within the chain
- ◆ treat chain relationships as long-term investments

# Conclusions

- ◆ understand behavioural aspects in an international fresh produce supply chain
- ◆ supply chain members are not isolated dyads
- ◆ better alignment of objectives among chain members is necessary
- ◆ a chain is a system of multiple dyads in which consumers should play an active part
- ◆ determinants of consumer purchase decisions can be identified using data-mining approaches
- ◆ this research approach could apply elsewhere