

# A Study of the Collaborative Market Driving Model -Shetou Hosiery Manufacturers as the example



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Kaili Yieh

Professor, Ph.D.

Department of Business Administration,  
National Changhua University, Taiwan



## Introduction

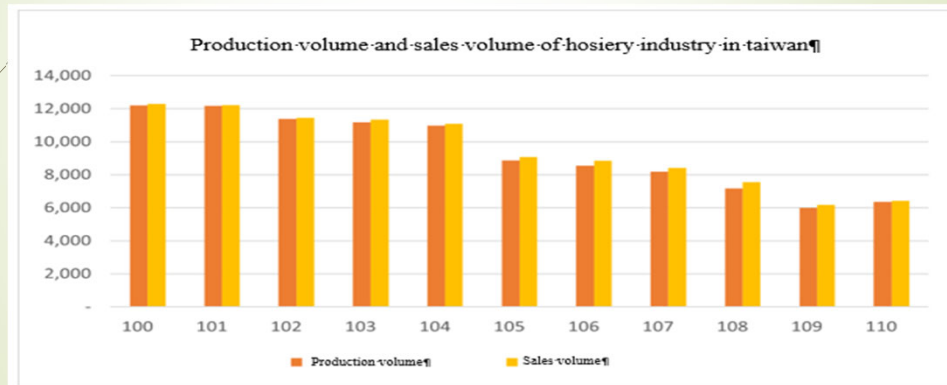
- The young and middle-aged population in the shetou area has migrated out, resulting in a shortage of industrial talent and insufficient local cultural identity. This has led **to a lack of competitiveness of sock manufacturers**
- The expansion and development of new markets are the key points in enterprise strategic planning. Existing literature mostly emphasizes how enterprises can surpass their competitors to increase competitiveness and achieve market development goals, thereby **neglecting the possibility of strength in collaborative actions among peer firms.**





## Facts

The annual output of socks has decreased by 17% from the year 2011 to 2020, and the annual sales volume has also decreased by 18%. Shetou township is facing a problem where "as socks production decreases, people are moving away".



Statistics Department, Ministry of Economic Affairs, 2021

## Research Questions

- According to the three stages of the collaborative market driving model, **which stage do the manufacturers belong to?**
- What are the **operational limitations** faced by the manufactures?
- Do the manufactures participate any **hosiery related organizations?**
- Do the manufactures make **good use of external resources** such as government, legislators, consumers etc. ?
- Do the manufactures **will to engage in collaborative actions with peer firms?**
- What are the **decision-making process** of shetou hosiery manufacturers using based on the collaborative market driving model?



## Taiwan's hosiery industry related research

- OH9 brand (2019)
- Integration of internal and external resources in Changhua hosiery industry (2019)
- Key success factors in Taiwan's hosiery industry (2016)
- Development analysis of Shetou hosiery industry development association (Xiao Jin Ling, 2012)



## Hosiery Related Organizations

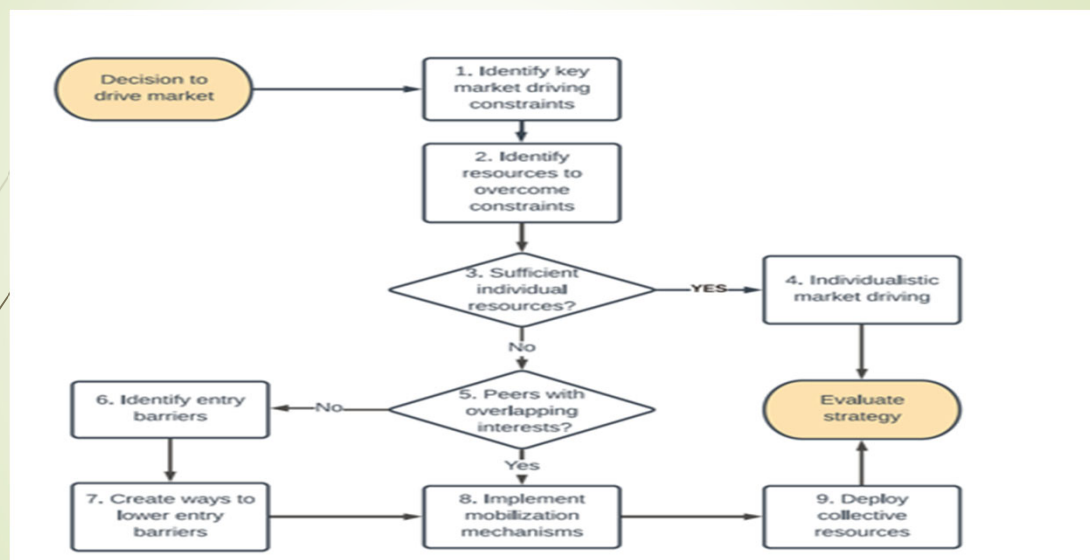
- Taiwan Hosiery Manufacturers' Association
- Changhua Shetou Hosiery Industry Development Association
- Shetou Hosiery Industry park Manufacturers Development & Promotion Association



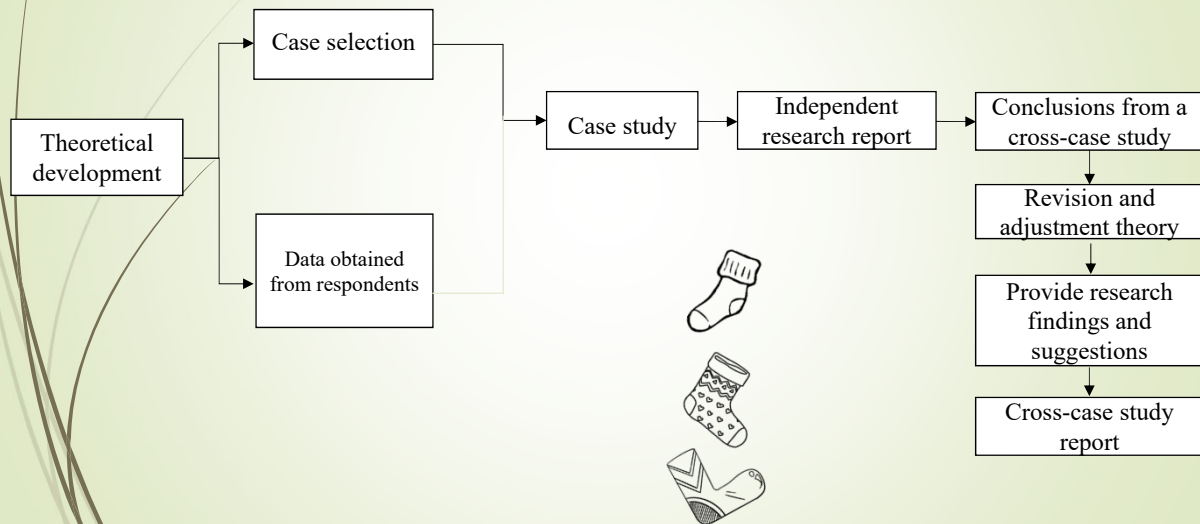
# Collaborative Market Driving Model



## Collaborative Market Driving Decision-Making Flowchart



## Research Method



## Sampling criteria

- Made in Shetou and government-registered
- Selected manufactures produce diverse products such as five-toe socks, silk stockings, functional socks, and ankle socks.
- The selected manufactures operate **different business models** including OEM vs. Own-brand, Export vs. Domestic sales.



## Selected Manufacturers (1)

Manufacturers	Age	Established	generation	Production capacity/year (Million pairs)	Proportion of domestic and foreign sales	Main products
1	47	1971	2	1.2	Domestic 30% export 70%	Fashion socks No-show socks
2	56	1991	1	0.4	Domestic 100%	Function socks Medical treatment socks
3	41	1981	2	3	Domestic 99% export 1%	Pantyhose
4	59	1985	2	4.32	Domestic 100%	Antibacterial deodorant socks
5	63	1994	2+3	2	Domestic 100%	Combed cotton socks
6	50	1989	1+2	0.6	Domestic 100%	Machine socks
7	48	1999	1	6	Domestic 100%	Arch Air Cushion socks Deodorant socks

## Selected Manufacturers (2)

Manufacturers	Age	Established	Current operator	Production capacity/year (Million pairs)	Proportion of domestic and foreign sales	Main products
8	36	1997	2	3	Domestic 100%	Sport socks
9	42	1979	2	1.2	Domestic 70% export 30%	Functional socks Women's casual socks
10	47	1962	2	6.48	Domestic 30% export 70%	Deodorant l socks
11	58	1966	3	36	Domestic 10% export 90%	Pantyhose
12	37	1993	2	0.58	Domestic 99% export 1%	Toe Socks
13	40	1984	2	0.4	Domestic 10% export 90%	Military socks Student socks
14	27	1991	1+2	0.1	Domestic 90% export 10%	Sport socks

## Interview outline (1)

**Stage I** Enterprises take their own actions to develop the market, but they face internal and external constraints

1. Is your company currently acting alone in developing new market? Or has a partner?

2. Does your company face any internal or external constraints in developing the market?

(1) Internal restrictions (finance, professional technology, talent, supply)

(2) External restrictions (regulations, consumers, waste recycling)

3. Does your company have sufficient resources to overcome these constraints?



## Interview outline(2)

**Stage II** Producers turn to solidarity while recruiting other market participants (ex. consumers) as alliance partners and analyze how associations trigger the mobilization of market participants and develop markets together.

4. Does your company have any cooperative peers with the same philosophy?

5. Is your company involved in any hosiery related organizations? If not, why?

(1) What is the philosophy of the organization which you participate?

(2) Any actions do the organizations you participate take to promote the shared vision among the members (such as books, magazines or websites)?

(3) What are the main activities of the organization your company is involved in and the norms for its members? (Such as attending meetings, handling activities, requesting Taiwan-made, legal raw materials)



## Interview outline(3)

**Stage II** Peer firms and allies engage in economics and political conversions

6. Whether the organizations your company participates in do anything to facilitate the entry and growth of new firms?(Such as associations or experienced hosiery mills volunteering to assist new producers with expertise)

7. Whether the organizations your company participates in will rely on consumers to assist in innovation and help hosiery manufacturers shape consumer preferences?

8. Whether the organizations your company is involved in have relationships with political elites ? How to build the relationship? (For example, invite politicians to participate in activities and establish good relations)

9. Whether the organization your company participates in has ever (alone, with politicians or consumers) successfully or attempting to advance a legislative agenda favorable to the hosiery industry?

**Summarize**

10. Would your company be open to collaborating with peer firms or other market participants (such as consumers, governments, regions) to develop the market in order to improve the overall competitiveness? Why?



## Findings



### All selected manufacturers **drive the market independently.**

manufacturers	drive the market independently	Collaborate with others to drive the market
1	✓	
2	✓	
3	✓	
4	✓	
5	✓	
6	✓	
7	✓	
8	✓	
9		✓ (Limited cooperation)
10	✓	
11		✓ (Limited cooperation)
12	✓	
13	✓	
14	✓	



### Internal Constraints and External limits (1)

Manufacturers	Internal restrictions	External restrictions
1	The second generation of machine masters is unwilling to take over. No Expertise to deal with the machine problems.	There is too much external competition, and it is difficult to gain an advantage in price. To import 100% for pure cotton, a project application is required, but the procedure is cumbersome.
2	None	According to the needs of the company, it is necessary to apply for the medical equipment, but the regulations are becoming more and more restrictive.
3	Insufficient manpower makes it impossible to design or develop by ourselves.	There is no land in the industrial zone, making development difficult.
4	The tenter setting factory is understaffed.	The bureau of standards, inspection and quarantine's washing and testing tests are often changed, resulting in frequent reprints.
5	Insufficient manpower in market development and production.	Changes in consumption patterns lead to different acceptance of socks prices by everyone, and more education is needed for consumers.
6	None	Change label names on ingredients, resulting in the need for reprinting and increased costs.

## Internal Constraints and External limits (2)

Manufacturers	Internal restrictions	External restrictions
7	Serious shortage of labor	Labeling changes from time to time, requiring reprinting. Consumption with the change of pattern, consumers buy goods online instead, and the price competition becomes more intense.
8	Lack talent in marketing	None
9	lack of labor and equipment. Lack professional and technical talents, and the second generation of master is unwilling to take over.	There are many competitors. Taiwan smile badge policy in the past, but few people push it anymore.
10	Design or the business part is all in charge by self	None.
11	Insufficient labor	The new labor rule has led to the need to find more employees to fill vacancies. The environmental protection regulations make the production process more difficult.
12	It is not easy to find a person who can repair the maching.	There is too little land, and the investment does not meet the cost.
13	Because the equipment is special, and the talents need to be trained by themselves, and it is not easy to train. Not easy recruiting for the position of "technician", and may be poached by other companies.	Taiwan tariffs, making it difficult to import and export.
14	Lack talents in publicity design.	Government policies restrict foreign migrant workers to work in Taiwan

## Manufacturers do not have enough resources to overcome the external restrictions

Manufacturers	Are there sufficient resources to address internal constraints	Are there sufficient resources to address external constraints
1	✓	✗
2	No internal limit	✗
3	✓	✓
4	✓	✓
5	✓	✗
6	No internal limit	✗
7	✓	✗
8	✓	No external restrictions
9	✓	✗
10	✓	No external restrictions
11	✓	✗
12	✓	✗
13	✓	✗
14	✓	✗



## Manufacturers lack of collaborative peers with same vision

Manufacturers	Colleagues with a common concept of cooperation	Partners with no common vision
1		✓
2		✓
3		✓
4	✓ Upstream and downstream manufacturers of peer OEM or stereotypes factory	
5	✓ The upstream and downstream manufacturers of the stereotypes factory	
6		✓
7		✓
8	✓ Upstream and downstream manufacturers of peer OEM or stereotypes factory	
9	✓ Peer OEM	
10		✓
11	✓ The upstream and downstream manufacturers of the stereotypes factory	
12		✓
13	✓ Peer OEM	
14		✓

## 80% manufacturer participate in relevant hosiery organizations

Manufacturers	Taiwan Hosiery Manufacturers' Association	Changhua Shetou Hosiery Industry Development Association	Shetou Hosiery Industry park Manufacturers Development & Promotion Association
1	✓		✓
2	✓	✓	
3	✓	✓	
4	✓	✓	
5		✓	
6	✓	Once joined and then quit	
7		Once joined and then quit	
8	Once joined and then quit	Once joined and then quit	
9	✓	✓	
10	✓	Once joined and then quit	
11	✓	✓	
12	✓		
13	Once joined and then quit	Once joined and then quit	
14	✓		

### Less than 60% Manufacturers are Willingness to Collaborate with Peer Firms

Manufacturers	Willing to cooperate with peers	Less likely to collaborate with peers
1	✓	
2		✓
3		✓
4		✓
5	✓	
6	✓	
7		✓
8	✓	
9	✓	
10		✓
11	✓	
12		✓
13		✓
14		✓



## Conclusions (1)

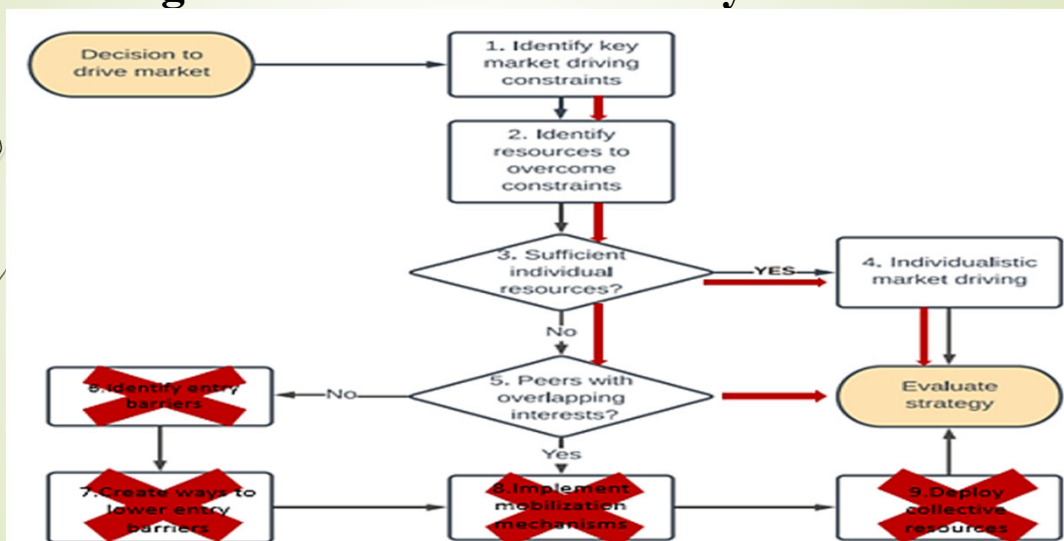
- The hosiery organization has **not taken actions to promote the entry or growth of new firms.**
- The hosiery organization **did not leverage consumer help** to shape consumer preferences for hosiery manufacturers.
- Case manufacturers and the hosiery organizations **keep distance from political figures.**
- The hosiery organizations **did not actively promote regulations** that would benefit the hosiery industry.

## Conclusion (2)

- Taiwanese sock manufacturers are still **in the first stage of a collaborative market driving model**.
- The biggest internal and external constraints faced by Taiwan hosiery manufacturers are **talent shortages and regulatory changes**.
- 80%** of sock manufacturers participating in related organizations have **low expectations for the organizations**. Most hosiery manufacturers and the related organizations are **not able to make good use of external resources**.
- Only **40%** of hosiery manufacturers willing to engage in **peer collaboration**.
- Independent market driving decision-making** is the only choice for manufacturers driving the market forward.



## Market Driving Collaborative Decision-Making Model for Shetou Hosiery Manufacturers





## Managerial implications

- It is urgent to **strengthen the trust relationship** among hosiery manufacturers.
- **Hosiery organizations should enhance their functions** and strive to promote cooperation among manufacturers.
- The **government** should attach importance to the significance of the sock industry and create opportunities and environment for manufacturer collaboration.
- **Expand the market vision** of hosiery manufacturers.
- **Make good use of consumer resources.**

## Suggestions for Future Research

- The **quantity of research samples** can be further increased.
- **Variables acquisition** should be more diverse.
- The **secondary data** in the hosiery industry is very limited.
- The correlation between collaborative model among manufacturers and individual manufacturers' competitiveness in the industry needs to be explored.



Thank you

