THE UNIVERSITY OF TOKYO
Laboratory of Sustainable Materials Design

Marketing strategies for the forest certified wood flooring in China: examining the manufactures' and developers' perception gap

中国における森林認証木質床材の市場戦略: 床材生産業者とデベロッパーの意識の違い

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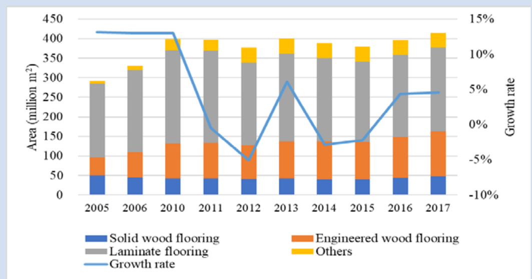
Introduction① Overview of the wood flooring industry in China

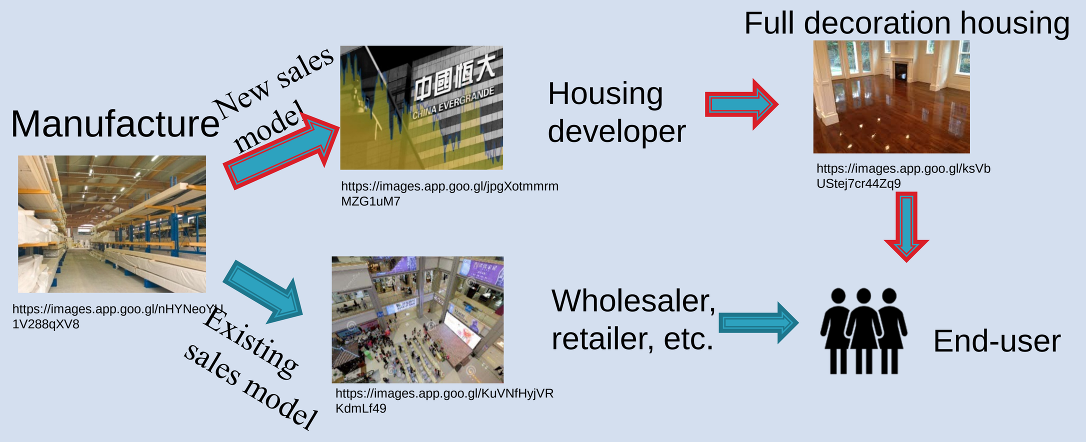
□ Development of wood flooring (2005-2017)

Period	Growth rate	Reason
Before 2010	High (10%~)	High growth of real estate market
2011-2015	Low (-5%~5%)	Housing saturation
2016~	Comparatively high (5%~)	Implement of full decoration housing policy across the country.



- **The development of housing market offers a high potential demand for flooring products.**

□ A change in flooring market: housing developer play a major role in the consumption

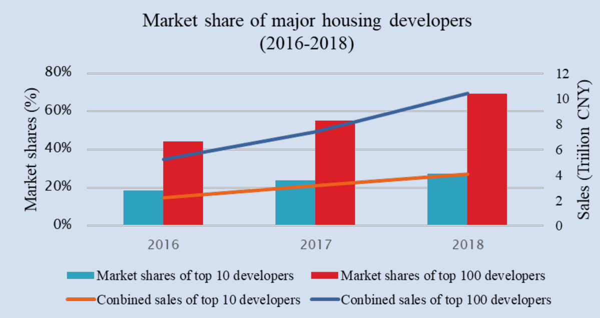


- **With an expand of full decoration housing, developers are becoming major purchasers of flooring.**

Introduction ②Wood flooring manufacture and housing developers in China

□ Major housing developers

- the top10 companies took over 25% of market shares in 2018.
- Sold areas of full decoration house was 14% in the whole house sold by the top10 developers.



Name	碧桂园集团 Country Garden	万科企业股份有限公司 China Vanke	恒大地产集团 China Evergrande	融创中国控股有限公司 Sunac China	保利房地产(集团)股份有限公司 Poly Real Estate	绿地控股集团有限公司 Greenland Group	中海地产集团有限公司 COLI	新城控股集团股份有限公司 Seazen Holdings	华润置地有限公司 China Resources Land	龙湖地产有限公司 Longfor Properties
Revenue of 2018 (Billion yuan)	715	607	582	460	407	386	295	220	211	201
Sold area (Million m²)	75	40	55	30	27	36	16	18	12	12

□ Major wood flooring manufacture

	大亚圣象	德尔未来	宜华生活	兔宝宝	菲林格尔	大自然	升达林业
Turnover of 2018 (Billion yuan)	7.3	1.8	7.4	4.3	0.8	2.9	1.0
Floor revenue	5.0					2.4	

Aims

1) Examine Chinese wood flooring manufactures' perceived importance and challenges of forest certification adoption.
2) Evaluate Chinese housing developers' perceptions of benefits and barriers on the purchase of forest certified wood flooring.
3) Try to apply strategies to expand certified flooring in the full decoration housing market, according to the findings on the perception gap between manufacturers and developers.

Method

□ Questionnaire design

Part 1	Basic information of company
Part 2	Forest certified wood flooring
Part 3	Motivations for forest certified wood flooring
Part 4	Barriers for forest certified wood flooring

□ Mail survey (Oct.2019--Jan.2020)

□ Data analysis:

- Cronbach's alpha was adopted to estimate the reliability of the perception scales.
- Mann-Whitney u-test was used to examine the significant difference on the perceptions between developers and manufacturers.

□ Profiles of 10 survey companies (manufacture)

Observation	Location	Respondent's position	No. of employees	Turnover in 2018 (million RMB)	Percentage of revenue from exports	Top 3 exported countries (% of exports)	Top 3 origins of wood for flooring (%)	Main products
Manufacturer A	Jilin	Sales manager	301-1000	Over 4	90%	Europe (70%), USA (20%)	Europe (60%), Russia (30%), China (10%)	Wood flooring, wooden furniture
Manufacturer B	Shanghai	Sales manager	301-1000	Over 4	0%	None	China	Wood flooring, wooden furniture
Manufacturer C	Shanghai	Sales manager	301-1000	Over 4	40%	USA (60%), Others (40%)	Russia	Wood flooring, others
Manufacturer D	Shanghai	CEO	20-300	20-40	30%	Philippines, Korea, Canada	Russia, China, USA	Wood flooring
Manufacturer E	Zhejiang	Sales manager	20-300	Over 4	60%	Europe, USA, Southeast Asia, Japan	China, Russia, USA	Wood flooring, wood door, others
Manufacturer F	Zhejiang	Sales manager	20-300	Over 4	0%	None	China (60%), USA (20%), Canada (20%)	Wood flooring, wood door
Manufacturer G	Liaoning	Marketing manager	20-300	Prefer not to say	100%	Japan (100%)	Russia (40%), China (55%), Canada (5%)	Wood flooring
Manufacturer H	Guangdong	Executive Assistant	301-1000	Over 4	20%	USA, Europe	Peru, Cambodia	Wood flooring
Manufacturer I	Shanxi	Sales manager	20-300	Over 4	0%	None	Unanswered	Wood flooring, panels, wooden furniture, wood door, others
Manufacturer J	Zhejiang	Sales manager	Over 1000	Over 4	20%	USA, Canada, Germany	Unanswered	Wood flooring, wood door, others

□ Profiles of 17 survey companies (developer)

Variables		Total (n=17)	Purchase experience of forest certified flooring: Have (n=6)	Not yet (n=11)
FDH history	Less than 5 years	3	0	3
	5<y<=10	8	4	4
	10<y<=15	3	1	2
	More than 15 years	1	0	1
Purchase decisions	Developer	11	4	7
	Others	6	2	4
Contract to flooring manufactures	Have	13	4	9
	Don't have	4	2	2
Purchase from	Flooring manufacturers	16	6	10
	Building material market	1	0	1
Type (most used in the FDH)	Solid	2	1	1
	Engineer	8	4	4
	Laminate	2	0	2
	Ceramic	3	1	2
	Stone	2	0	2
% covered by wood flooring	0%	2	1	1
	10%	3	0	3
	20%	4	2	2
	30%	4	3	1
	40%	1	0	1
	50%	1	0	1
	60%	1	0	1
	70%	1	0	1

Results and discussion

□ Manufacturers' perception

Benefits (n=10)	Mean	S.D.
Meet foreigner consumers' purchasing requirements	6.30	1.252
Support sustainable forestry and protect the environment	6.10	1.197
Meet CSR goals	6.00	1.247
Gain access to new market (e.g. EU, USA)	6.00	1.247
Build an environmentally friendly corporate image and attract more investors	5.40	1.713
Gain financial aids (e.g. tax, loan)	5.40	1.430
Achieve price premiums from export market	5.40	1.075
Maintain or gain domestic market shares	5.40	1.713
Meet domestic consumers' purchasing requirements	5.10	1.449
Meet business partners' purchasing requirements (e.g. developers)	5.10	1.663
Achieve product differentiation	5.10	1.524
Reduce operating costs through developing green technologies	4.80	1.874
Achieve price premiums from domestic market	4.50	1.900
Barriers	**Mean**	**S.D.**
Lack of technical support for obtaining certification	3.80	1.033
Low price premiums	3.50	0.707
Little government support	3.50	0.850
High cost of certified products	3.40	1.075
Little guidance to adopt certification	3.40	0.966
Low public awareness of the FSC or PEFC label	3.20	0.919

Results of reported benefits indicated:
① Demands from overseas market and market access have been and will be still the most incentives for manufactures to adopt forest certification. Those consistent with previous research in China (Durst et al. 2006; Huang et al. 2009; and Yan et al. 2003).
② Sustainability and CSR contribution were also key drivers of FC development.
③ Weak demands and low-price premiums from domestic market might weaken intention of FC adoption among none export-oriented manufacturers.
Results of barriers indicated:
① Lack of education on forest certification adoption among manufactures in China. Related instructions are necessarily held by industry associations and local governments in the future.
② Low public awareness was the least consideration on forest certification adoption, which was different with previous findings of Wang et al. (2005) and Huang et al. (2009). This revealted an increasing awareness of forest certification or eco-labels among Chinese consumers.

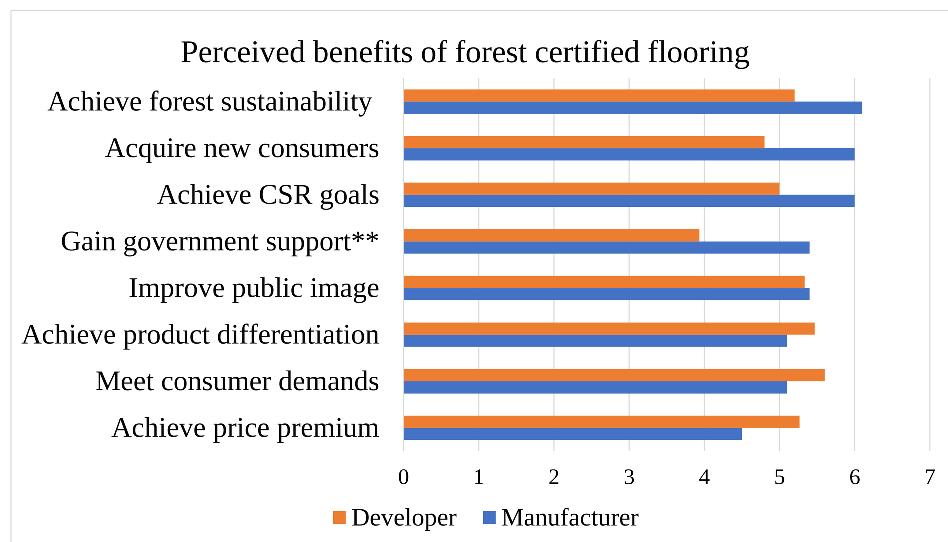
□ Developers' perception

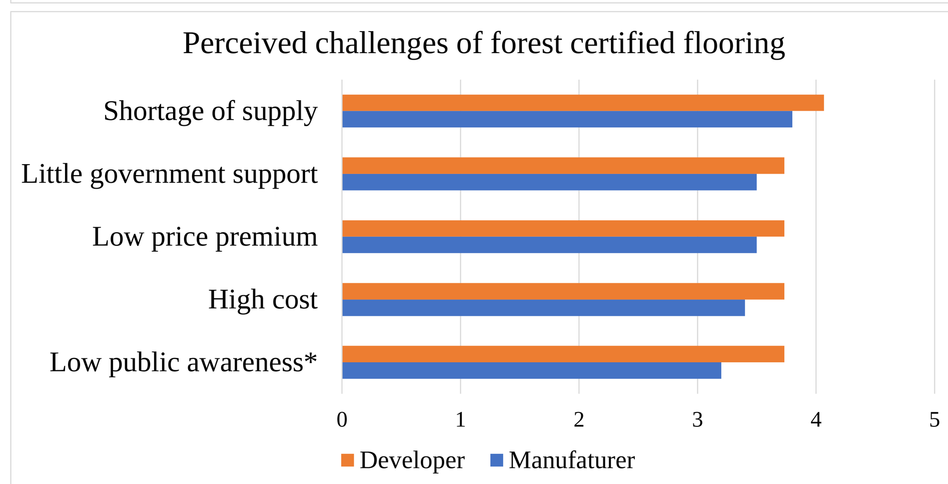
Benefits (n=17)	Mean	S.D.
Acquire new consumers (e.g. green consumer)	5.60	0.986
Brand the house with high-end image	5.53	1.302
Achieve product differentiation	5.47	0.990
Improve company's public image	5.33	1.633
Achieve price premiums	5.27	1.335
Support sustainable forestry and protect the environment	5.20	1.568
Meet CSR goals	5.00	1.890
Achieve green building certification (e.g. LEED)	4.80	1.935
Obtain government's affordable housing project	4.13	1.187
Gain tax support from government	3.80	1.207
Obtain a longer payable period	3.47	0.834
Gain loan aids from banks.	3.33	1.113
Barriers (n=15)	**Mean**	**S.D.**
Shortage of forest certified wood flooring supply	4.07	0.799
High cost of certified products	3.73	0.961
Low public awareness of the FSC or PEFC label	3.73	1.280
Low price premiums	3.73	1.163
Little support from government	3.73	1.223
Shortage of certified products from cooperative manufacturers	3.40	1.183
Low forest certification awareness among company's managing groups	3.33	1.047

Results from developers regarding benefits:
- Enhance competition in the housing market was the key driver of the purchase of forest certified products among developers. Through an install of forest certified products, developers intended to brand the house with green image to win green consumers or to build a high-end image to gain price premiums.
- Contribution for social and environmental sustainability was an incentive for such purchase.

Results regarding barriers:
- Shortage of certified products supply in Chinese market was the most challenge for expanding forest certified products in the housing market. Especially some developers indicated their cooperative flooring manufacturers did not supply such products to them.
- Low public awareness of forest certification was concerned by developers, however, they considered themselves with a high awareness of certification.

□ Perception gaps





- Results of Mann-Whitney u-test showed significant differences between manufacturers and developers on the benefit of "gain government support" (p=0.042) and the challenge of "low public awareness of forest certification" (p=0.088).
- This indicated that government support was an important incentive for manufacturers to adopt forest certification. However, developers did gain little support on the purchase by the government.
- The difference of ratings on the "low public awareness" showed that manufacturers considered their customers, in terms of retailers, wholesalers, oversea consumers, developers, and end-user, with high knowledge of forest certification. While, developers hold a different opinion, who considered end-users had little knowledge of certification, which weakened their purchase intention for certified products.