

# Reaping the gains from globalization with high-end products

## Evidence from French luxury exporters

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## High-end products to escape competition from emerging countries

- Trade deficits and desindustrialization in many developed countries (US, France, UK...)
- Emergence of new key players in the developing world that supply an increasing number of manufacturing goods (Schott, 2008; Fontagné et al., 2007)
- Specialization in high-end products often seen as a way for developed countries to escape competition from developing ones. Actually, developed countries:
  - produce high quality goods (Schott, 2004; Fontagné et al., 2007)
  - increase the quality of their exports through within-plant upgrading and/or reallocations (Amiti and Khandelwal, 2011; Bloom et al., 2012; Martin and Méjean, 2012)
  - experience skill upgrading (Mion and Zhu, 2011)

# High-end products to conquer emerging markets?

- In the 2000's, world growth concentrated in emerging countries (IMF, 2010)
- Not only GDP growth, but also GDP per capita growth
- New fast growing economies characterized by:
  - surge in top incomes
  - high distance from Western developed countries
- Both income and distance are likely to impact differently high- and low-end products

⇒ **Who benefits most from these new business opportunities?**

# What we do

- Study of French firms exports from 2000 to 2007:
  - identification of high-end products exporters based on information about big names in the French luxury industry
  - cohort analysis: focus on exports dynamics of firms active on export markets in 2000
- Aggregate comparison of low- and high-end products exporters along three dimensions:
  - share in aggregate exports
  - geographic distribution of exports
  - margin decomposition of exports growth
- Estimation of firm-level gravity equations to investigate micro-determinants of observed aggregate patterns

# What we find

- Increasing share of high-end products in aggregate French exports (from 28.6% in 2000 to 35.5% in 2007)...
- ...particularly pronounced in remote and fast growing emerging countries...
- ...linked to a more favorable evolution of both the intensive and the extensive margins...
- ...explained by a higher (resp. lower) sensitivity of French luxury exporters to income per capita and inequality (resp. distance)

# Contribution to the literature (I)

- Micro determinants shaping the dynamics of aggregate exports
  - Bernard et al, 2012 (survey): importance of firm heterogeneity, focus on productivity
    - ⇒ we explore the question through the lens of quality differentiation
  - Martin & Mejean, 2012: determinants of the increase in the quality content of French aggregate exports - focus on *competition* from low-wage countries and between-firms reallocations
    - ⇒ we study the dynamics of aggregate exports and the interplay between quality and *demand* in emerging countries
- Identifying high-end/high-quality products in the data
  - Unit value = quality (Schott, 2004; Fontagné et al., 2008)
  - Parametric estimation of quality (Hallak and Schott, 2010; Khandelwal, 2010)
  - Exogenous measure of quality (Verhoogen, 2008; Crozet et al., 2011)
  - ⇒ we combine exogenous measure of quality and firm-level unit value information

# Contribution to the literature (II)

- Quality in the business cycle
  - Berthou & Emlinger, 2010. 2007 crisis → shift of exports to low-quality
  - Levchenko et al., 2011. No support for the collapse in quality during the crisis
  - ⇒ role of the geography of shocks to understand the quality content of aggregate exports (during the crisis)
  
- Different sensitivity of high-end product exports to income and distance
  - Demand for high-quality goods more sensitive to income per capita (Hallak, 2006)
    - evidence of non-homotheticity (Fieler, 2011a-2011b, Dalgin et al., 2008 )
  - Expensive products less sensitive to distance (Alchian & Allen 1964; Hummel & Skiba, 2004)
  - ⇒ we provide direct evidence on the relative impact of distance and income distribution on high-end product exports

# Outline of the talk

- Data
- Aggregate descriptive statistics
- Econometric analysis: firm-product level gravity equations



# Database

- Merge of two main data sources:
    - *French customs*: Export data at the firm, product (nc8) and destination country level, from 2000 to 2009
    - *Comité Colbert members*: export promotion and lobbying association of French luxury firms. Currently, 75 members, including Baccarat, Cartier, Champagne Bollinger, Chanel, Christian Dior, Hermès, Louis Vuitton or Yves Saint-Laurent
  - Luxury industries = HS4 product lines that represent a significant share of exports of at least one Colbert firm:
    - On average, 39 HS4 per Colbert firm
    - Very skewed distribution of exports across HS4 at the firm level: top product represents at least a bit less than 20% and on average 63% of firm-level total exports
    - Luxury industries = HS4 product lines representing at least 5% of overall exports of at least one Colbert firm
- ⇒ 70 luxury industries in total, representing 60% of export flows, but 94% of total exports of Colbert firms

# Identification of high-end products exporters

- Colbert firms: 0.07% of French firms only
- ⇒ too narrow definition
- Alternative: high-end products exporters = firms exporting the same HS6 products as Colbert firms at the same price :
  - *High-end products export flows*: at the firm-HS6 level, high-end product export flow if flow with  $uv > 1$ st quartile of the  $uv$  observed for this same hs6 product among Colbert firms
  - *High-end products exporters*: firms for which at least 85% of overall exports correspond to high-end products exports
- ⇒ In 2000, 2,976 high-end products exporters identified among more than 100,000 exporters
- add Hennessy, Moët et Chandon, Lalique, Kenzo Perfumes, Thierry Mugler...
- Cohort analysis: Focus on the dynamics of exporters active in luxury industries in 2000
- ⇒ Firms of the cohort = 74.79% of export flows and 79.56% of overall exports in 2009

## Price premium of high-end product exporters

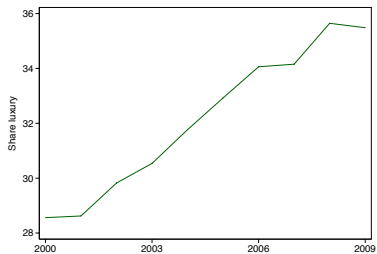
Industry	Ratio wrt the avg
Miscellaneous	6.5
Apparel and footwear	4.7
Clocks & watches	4.0
Jewels	3.8
Food	3.6
Beverages	3.6
Leather articles	3.6
Home art	2.9
Cosmetics	2.8
Textile	2.2
Paper - books	1.8
Wood articles	1.6

Table: High-end exporters price premium (ratio wrt the average)

# Share of high-end products exporters in luxury industries

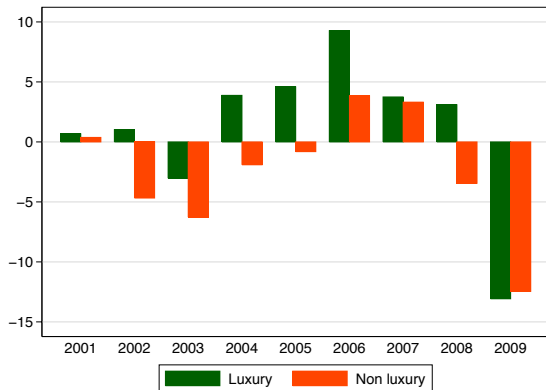


Value of exports

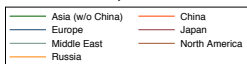
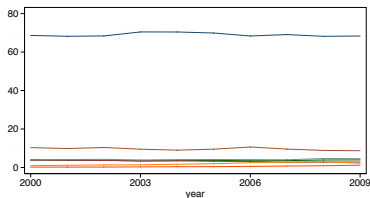


Share of high-end products (in %)

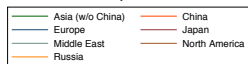
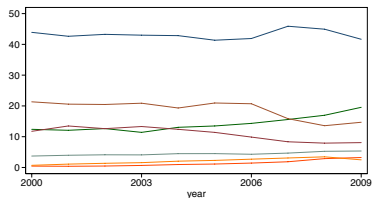
# Growth of high-end products exports



# Geographic distribution of high-end products exports (1)



Low-end products



High-end products

# Geographic distribution of high-end products exports (2)

## Share of regions in overall exports, by category (in %)

	Europe		Mid. East		North America	
	Low-end	High-end	Low-end	High-end	Low-end	High-end
2000	68.65	43.91	3.91	3.71	10.33	21.33
2009	68.36	41.66	4.57	5.35	8.71	14.69

	Asia		China		Japan	
	Low-end	High-end	Low-end	High-end	Low-end	High-end
2000	3.96	12.40	0.19	0.45	3.72	11.75
2009	3.94	19.55	1.18	3.24	2.84	8.08

## 2000-07: exports per firm increased steeply for luxury

	All firms		Stayers	
	Non-Lux.	Luxury	Non-Lux.	Luxury
Tot. exports (billions)	20.5	10.8	16.4	9.7
growth 00-07	-6%	+16%	+17%	+30%
X/firm'00	-	-	106,819	268,448
growth 00-07	-	-	+12%	+23%
# dest.'00	-	-	3.7	5.7
difference 00-07	-	-	+0.8	+0.7
# HS4'00	-	-	2.9	2.2
difference 00-07	-	-	-0.3	-0.2

Table: Decomposition of export growth



# High-end products turning towards emerging markets

Destinations	Non-luxury		Luxury	
	Share 2000	Change 00-07	Share 2000	Change 00-07
Africa	0.25	+0.1 %	0.22	+1.5 %
America	0.07	-1.6 %	0.13	-2.0 %
Asia	0.16	-0.2 %	0.29	+4.1 %
China	0.06	+3.5 %	0.10	+6.2 %
Europe	0.74	-5.8 %	0.76	-8.6 %
Japan	0.17	-1.4 %	0.31	-1.8 %
MiddleEast	0.20	-1.7 %	0.24	+2.7 %
NorthAmerica	0.34	-1.2 %	0.57	-1.4 %
Pacific	0.19	+0.7 %	0.25	+1.9 %
Russia	0.08	+2.5 %	0.12	+3.4 %

**Table:** Share of stayers exporting to different regions of the world

# Methodology

- *Aim*: Explaining the aggregate patterns observed for our cohort using firm-level gravity equations
  - ⇒ Coefficients possibly different for high-end products exporters (interaction terms)
- Non-homothetic preferences = Key element to understand patterns of demand for high-end products
  - ⇒ Inclusion of destination country GDP per capita and Gini index in gravity equations
- Both static and dynamic analysis
  - *Static*: Determinants of the presence on a given market and of the value of (positive) exports for year 2000
  - *Dynamic*: All the dimensions of export dynamics between 2000 and 2007 taken into account:
    - Probability to completely exit international markets
    - Conditioning on staying on international markets, probability **to stay** on a particular market and probability **to enter** a particular market
    - Conditioning on staying on a particular market, exports growth

# Definition of relevant markets

- “Market” defined as an HS4-destination couple
- All regressions, either static or dynamic, run with firm-HS4 fixed effects:
  - ⇒ Coefficients based on cross-country comparisons for a given firm-HS4
- For computational reasons, restriction to the 60 most important countries for French exports, representing 97% of overall French exports
- For dynamic analysis, we drop all the firm-HS4 couples for which we observe
  - (1) no exit from the destination countries they were serving in 2000
  - (2) no entry on new destination countries in 2000
- Data on distance and income distribution from CEPII, World Bank and CIA

# Luxury exporters more likely to stay in foreign markets

	(1)	(2)	(3)	(4)	(5)	(6)	
Dummy LUX	0.14*** (6.589)	0.09*** (5.718)	0.05** (2.285)	0.05*** (2.766)	0.13*** (8.394)	0.04*** (4.799)	
Export (log)		0.04*** (8.329)	0.02*** (4.325)	0.01*** (5.087)	0.03*** (13.559)	0.01*** (2.987)	
Sales (log)						0.03*** (12.427)	
Productivity (log)						0.06*** (10.690)	
# dest.			0.01*** (37.520)	0.01*** (29.362)		0.01*** (19.175)	
# HS4			0.01*** (17.890)	0.01*** (20.572)		0.01*** (14.524)	
Dummy Europe				0.11*** (5.133)		0.08*** (6.654)	
Dummy Outside Europe				0.06** (2.373)		0.05*** (6.890)	
Sample		All firms				Info firms	
Observations	91,118	91,118	91,118	91,118	28,990	28,377	
R-squared	0.007	0.035	0.132	0.137	0.027	0.147	
HS Fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	

Table: Probability to keep on exporting ('00-'07)

# More likely to be present in richer/more unequal/more distant markets

	(1) Present in '00 LP	(2) clogit	(3) Stay in a market LP	(4) clogit	(5) Enter new market LP	(6) clogit
GDP/cap. (log)	0.01*** (108.897)	0.55*** (126.987)	0.07*** (30.374)	0.39*** (28.895)	0.02*** (98.079)	0.53*** (95.284)
- ×LUX	0.02*** (38.354)	0.34*** (29.350)	0.03*** (5.640)	0.21*** (7.036)	0.02*** (26.041)	0.32*** (20.641)
POP (log)	0.01*** (112.650)	0.31*** (121.304)	0.05*** (37.263)	0.25*** (36.721)	0.01*** (108.009)	0.33*** (106.444)
- ×LUX	0.01*** (34.149)	0.09*** (15.170)	0.00 (1.156)	0.03** (2.249)	0.01*** (18.558)	0.08*** (10.063)
Distance (log)	-0.01*** (-108.878)	-0.69*** (-115.249)	-0.09*** (-36.030)	-0.50*** (-36.971)	-0.03*** (-96.624)	-0.80*** (-109.037)
- ×LUX	-0.00*** (-9.814)	0.21*** (16.178)	0.04*** (7.567)	0.17*** (6.719)	0.01*** (10.559)	0.36*** (22.172)
GINI	-0.00*** (-16.469)	-0.01*** (-15.594)	0.00*** (6.596)	0.01*** (5.707)	0.00*** (44.367)	0.02*** (26.243)
- ×LUX	0.00*** (10.414)	0.02*** (14.223)	0.00* (1.895)	0.01** (2.275)	-0.00** (-2.169)	0.00 (1.074)
Obs. (×1000)	9,850	8,165	155	154	3,326	3,249
Euro dummy	Yes	Yes	Yes	Yes		
Colony dummy	Yes	Yes	Yes	Yes		
Firm-Prod. FE	Yes	Yes	Yes	Yes	Yes	Yes

Table: Probability to enter/stay in a market ('00-'07)

# More sensitive to GDP/cap., inequality and distance

	Level	Level	Level	Growth
GDP/cap. (log)	0.24*** (8.881)	0.26*** (8.975)	0.36*** (6.782)	0.61*** (4.643)
- ×LUX	0.33*** (11.850)	0.33*** (10.815)	0.29*** (6.527)	0.29*** (2.721)
POP (log)	0.22*** (7.062)	0.23*** (7.218)	0.29*** (7.898)	1.00*** (3.964)
- ×LUX	0.07*** (3.308)	0.08*** (3.297)	0.08*** (3.509)	0.03 (0.078)
Distance (log)	-0.27*** (-4.953)	-0.28*** (-5.063)	-0.28*** (-3.545)	
- ×LUX	0.06 (1.591)	0.07* (1.781)	0.10** (2.123)	
GINI	0.00 (0.254)	0.00 (0.235)	0.01 (1.610)	0.01*** (3.271)
- ×LUX	0.01*** (3.352)	0.01*** (3.400)	0.01** (2.140)	-0.00 (-0.505)
Euro dummy	Yes	Yes	Yes	Yes
Colony dummy	Yes	Yes	Yes	Yes
Firm-Prod. FE	Yes	Yes	Yes	Yes
Observations	275,051	187,745	193,141	81,429
Sample	'00	Stay'00	'07	'00-'07

# High-end products to reap the gains from globalization

## ● China

- +64% for GDPC  $\Rightarrow$  +19% of exports for low-end prod. exporters, +34% of exports for high-end prod. exporters
- +5 points for Gini  $\Rightarrow$  +0% of exports for low-end prod. exporters, +5% of exports for high-end prod. exporters

## ● US

- +31% for GDPC  $\Rightarrow$  +9% of exports for low-end prod. exporters, +17% of exports for high-end prod. exporters
- +4 points for Gini  $\Rightarrow$  +0% of exports for low-end prod. exporters, 4% of exports for high-end prod. exporters

## High-end products to reap the gains from globalization

- High-end producers benefits more from emerging countries growth
- ⇒ increasing share of luxury products in aggregate exports - in particular in emerging countries
- Micro underpinnings explain this aggregate trend
- ⇒ luxury products more sensitive to income per capita
- ⇒ luxury products more sensitive to income inequality, and thus to top incomes
- ⇒ luxury products less sensitive to distance
  
- What's next?
  - Counterfactual exercise
  - Focus on the 2008-crisis
  - Implications for the labor market