Cultural Preference in International Trade: Evidence from the Globalization of Korean Pop Culture

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My Knowledge of Korean Cultural Exports

Dances With Horses?

Economists + Korean Drama

Uwe Reinhardt: 1937-2017

Health economist:
It's the prices, stupid!

After the near-collapse of the world's financial system has shown that we economists really do not know how the world works, I am much too embarrassed to teach economics anymore... I will teach Modern Korean Drama instead

Should We Care About Cultural Exports?

Share of Exports By Region

Region	All goods	Cultural Goods
North America & Europe	49	49
South & East Asia	31	45
Central Asia & Eastern Europe	5	3
Latin America	6	1
Middle East	5	1
Sub Saharan Africa	2	0.5
Rest	2	0.5

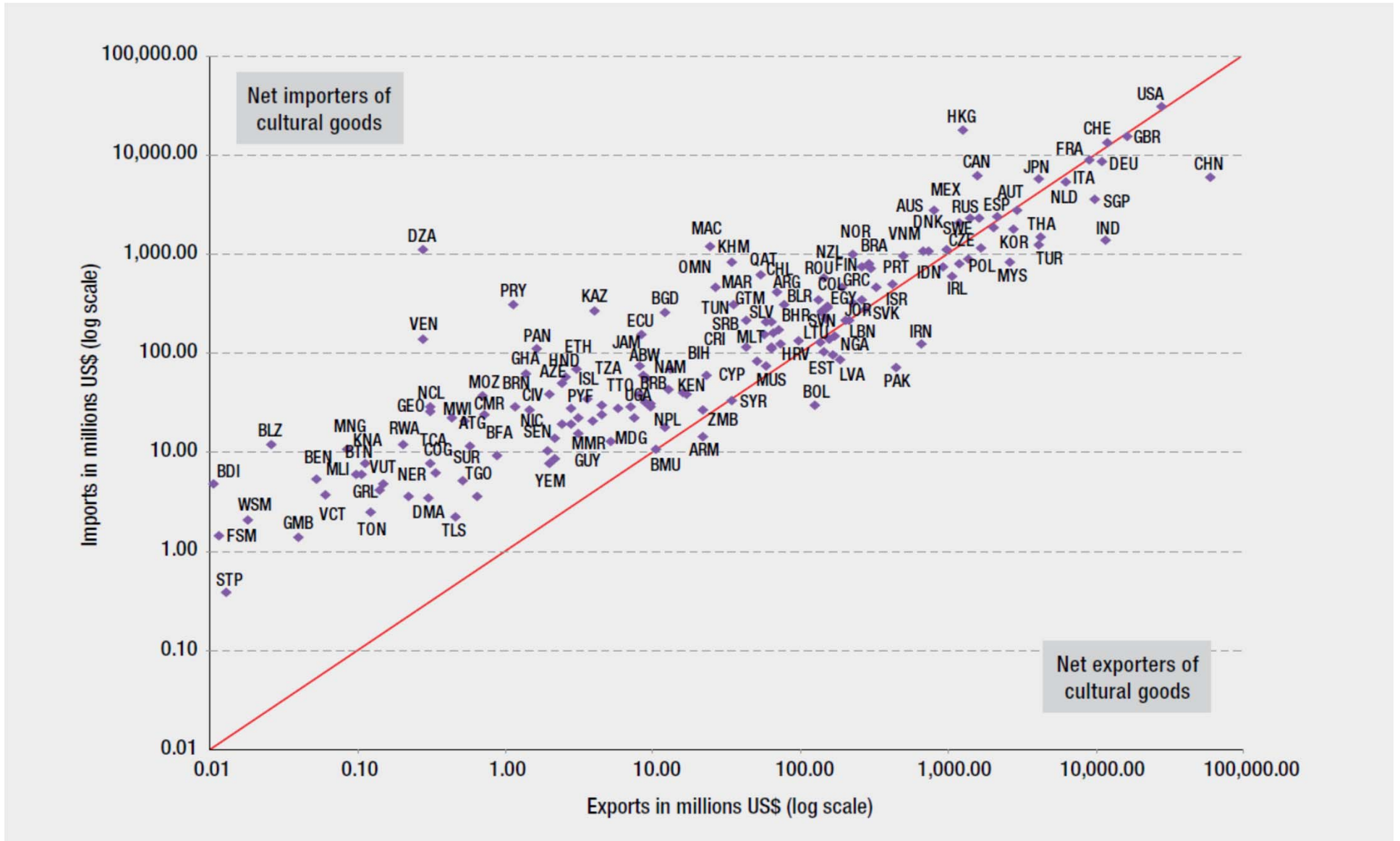■ All goods   ■ Cultural Goods

Biggest share

Cultural & national heritage; Performance & celebration; Visual arts & crafts
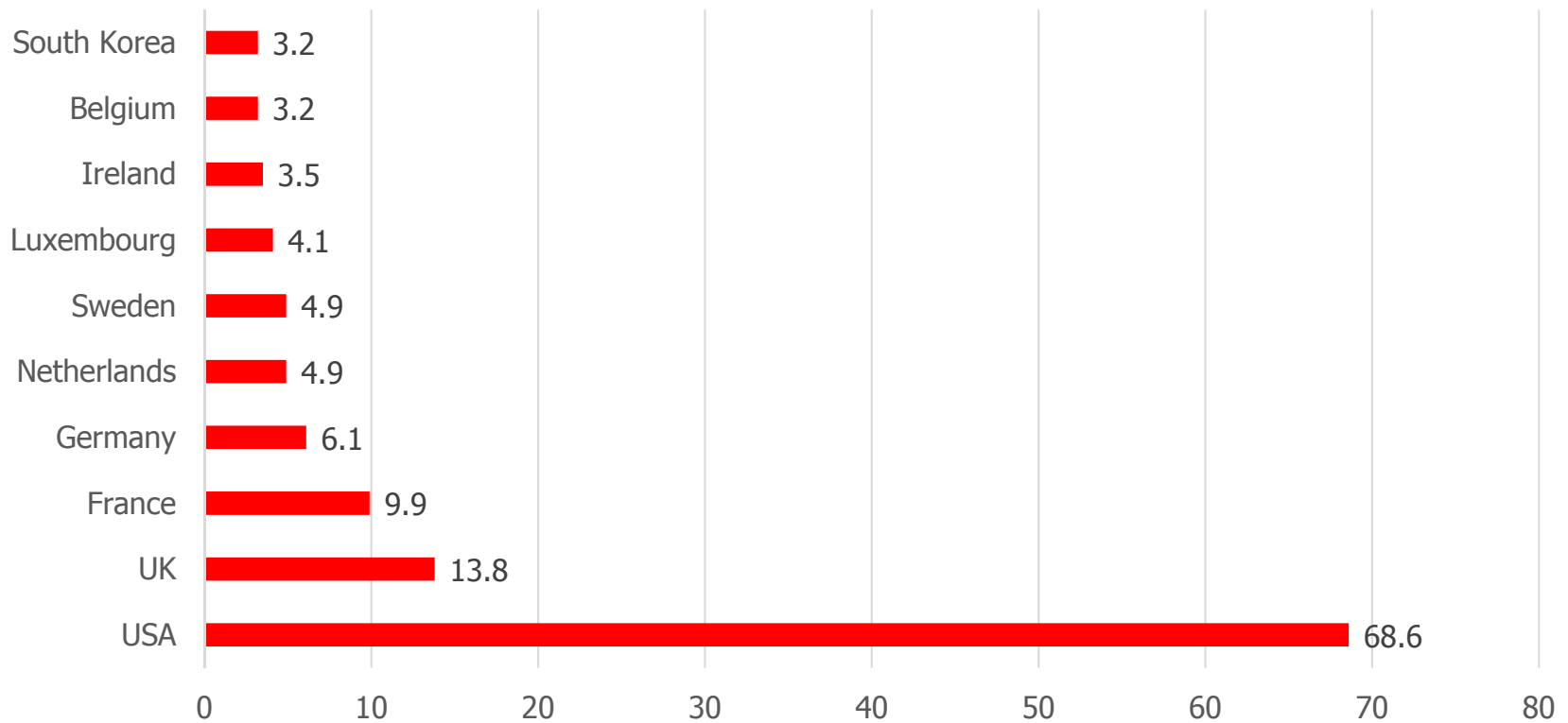Books & press; Audiovisual & interactive media; Design & creative services

Biggest growth (71% increase 2004-2013)

Exports and Imports of Cultural Goods

Paper Focus: TV Show Exports...Trade in Services

Exports of Top 10 Exporters of Cultural Services
(Billions $US)

Country	Exports
South Korea	3.2
Belgium	3.2
Ireland	3.5
Luxembourg	4.1
Sweden	4.9
Netherlands	4.9
Germany	6.1
France	9.9
UK	13.8
USA	68.6

Source: UNCTAD & WITS

Situating Work In A Larger Context

- Microfoundations of gravity model by Anderson (1979), Anderson & Van Wincoop, 2004

  – Armington model with CES preferences yields a gravity equation

  – Endowment, perfect competition, monopolistic competition

- Later models focused on…

  – Heterogenous industries (Eaton & Kortum, 2002)

  – Heterogenous firms (Chaney, 2008;Melitz, 2003)

  – Heterogenous mark-ups (Melitz & Ottaviano, 2008)

First Paper to Emphasize Cultural Preferences

- Traditional work on culture starting with Rauch (1995) looked at effect of cultural on bilateral trade but..
  - Handwaves trade-cost declines from cultural affinity vs. induced preference shifts
    - Trust (Guiso, Sapeinze, Zingales, 2009)
    - Information flows (Rauch and Trindade, 2002; Allen, 2014)
    - Networks in international trade (Chaney, 2014)

- Provides evidence for preference-based mechanisms at industry level

- Explosion in popularity of Korean dramas and K-pop music…
  - induces preferences for Korean products
  - stronger effect in certain industries; by gender
  - in tourism; in consumer goods vs. capital/intermediate goods
  - in goods that are rarely advertised

Why I Like The Paper

- Ego test

  – Why did I not write the paper?

- Great setting

  – Rapid increase in exports of Korean TV shows

- Very plausible + believable results

  – Gender effects (first time we observe the gravity of gender in trade)

  – By consumer vs. non-consumer goods

  – Falsification tests

Simplify & Focus

- Choices, choices…

  - Two measures of exposure to Korean culture (exports of TV shows; Popularity)

  - Tourism, Exports, FDI

  - Estimating equation in Levels and in Differences

  - By industry; Pool data then interact with industry dummy

  - Definition of Korean wave sectors

  - OLS for exports; PPML for FDI

  - Many different types of fixed effects

- I would prefer a consistent stance

  - Exports of Korean TV shows
  - Levels
  - By industry
  - PPML for Exports & FDI

Key Concern

- Structural gravity model at the sectoral level requires two multilateral trade resistance terms (Anderson va Wincoop, 2004)

- One is the inward multilateral resistance (CES price index of the demand system)

  – Note this varies at the industry-destination-year level and requires destination-year fixed effects when estimating by industry

  – But this is collinear with TV exports term

- Second is the outward multilateral resistance (diversion of Korean exports from India to Singapore)

  – Note this varies at the Korea-industry-year level and is collinear with year dummies when estimated by industry

- Consistent estimation requires estimation by industry a la Anderson-Yotov (2010,2012) with destination-year dummies & year dummies

Secondary Concern

- Identification relies on choice of functional form for the destination industry parameter shifter $b_{ci,t}$

  - Equations (5) and (6) allow taste parameter to vary with TV show exports in a log-linear fashion – strong functional form assumption on preference parameter

  - Equations (7)-(9) allows elasticity of the taste parameter with respect to TV exports to take two values for consumer vs. non-consumer industries (or Korean wave goods vs. not) but imposes homogeneity within each industry

Two Options

- Theory-consistent gravity specification
  - Estimate multilateral resistance terms (non-linear estimation of Anderson-Van Wincoop, 2004)
  - Baier-Bergstrand (2009) bonus vetus OLS approach
  - Add other exporting countries to obtain pair-specific time-varying measure of TV exports

- Abandon theory and focus on empirics and identification
  - Identify "treated" destinations & "susceptible" industries
    - Winter Sonata effect in Japan in 2004
    - Banning of Bollywood dramas in Manipur, India
    - Hallyu term coined in China in 1997

Examples of Cultural Exports

- British dramas

- Japanese anime

- Bollywood movies

- Turkish dramas in Middle Eastern countries

- Data Sources
  - Eurostat has cultural goods exports
  - IMF new dataset on 66 categories of services exports for 192 countries based on the Balance of Payments Manual 6 (BPM6)
  - Statistia on movie sales across countries
  - Eurodata TV for TV shows

Placebo Tests & Dynamics

- Replace Korean exports of TV shows with

  – Korean service exports less TV show exports

  – Randomly chosen industry; Alphabetical neighbour of industry

  – Japanese TV show exports

- Are Korean imports affected by export of Korean TV shows?

- Short-run vs. Long-run effects

  – More complex functional form for taste parameter

  – Habit formation

Very Minor: Clarifications on Measures

- Details on how TV exports are measured
  - Number of shows vs. viewership vs. licensing fees
  - Modes of supply (1-5): Cross-border; Consumer goes to Korea; K-pop concert in another country; foreign affiliate of TV production country

- Popularity
  - More details on coding
  - Measure is ordinal and then converted to a dummy
  - Used in three regressions; raises more questions than needed
  - Recommendation: Drop it

Conclusion

- Fascinating question, great context, plausible results, first evidence on diffusion of preferences

- Referees are likely to quibble about

  - Identification

  - Structural Gravity

  - Choice of Korean wave goods/services

  - Formulation of preference parameter