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# Does what you export matter? In search of empirical guidance for industrial policies

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# Why might standard price signals be deceptive in choosing goods

- Marshallian externalities related to goods
    - local externalities that lead productivity to rise with the size of the industry
    - local industry level knowledge spillovers, input-output linkages, and labor pooling, for instance.
  - Volatility externalities: Export diversification?
  - Intervention warranted to shift to good with externalities against price signals.
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# Empirical Concerns for Policy Makers

1. How do we measure these externalities?
  2. Doesn't the whole world see the same benefit and drive the price down?
    - ❑ Interindustry spillovers, asymmetries
    - ❑ Should we look for safe rents, too? Natural Resources
    - ❑ More generally, must think of demand side as well
  3. Do externalities necessarily come with a good, or does it matter how we produce it?
    - ❑ Heterogeneity, Heterogeneity, Heterogeneity
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# Practically measurement of MEs is difficult, so take shortcuts

- High productivity goods
    - Rich Country Goods (Rodrik, Hausmann)
    - High tech (Lall) high inter-industry ME
  - Natural resources
    - Low productivity (Smith, Matsuyama, Sachs), few Externalities
    - Rent seeking
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# **HIGH PRODUCTIVITY GOODS**

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# 1. Does It Matter What We Export?

## Hausmann, Hwang, Rodrik (2007)

- Model- broadly inter-industry spillover
    - Country should produce the highest productivity good *within its CA*
  - Empirics:
    - PRODY, EXPY
    - Similar to Lall (2000)
    - Find higher EXPY correlated with higher growth.
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# Caveats

- GE critique again?
  - Rents- higher where rich countries already are?
    - Not generally the case- Nokia and TVs
    - If easy to move into these goods, then barriers to entry/rents low
  - Empirical findings muddyy
    - Animals, electrical machinery same PRODY
    - Finding of an impact on growth fragile
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## 1b. A digression on Monkeys

- Being a tree in a dense area is like a ME with same GE concerns
  - If easy to jump from one tree to others, then easy to jump to, i.e, no barriers to entry and rents
  - Is past a good predictor?
    - iPhone didn't exist, Saab already does
    - Would Chilean forestry produce Saab?
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# **CURSED GOODS: NATURAL RESOURCES**

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# But, empirically, there is no resource curse

- In growth regressions
    - Minerals are good: Davis (1995), Sala-i-Martin et al. (2004), Stijns (2005), Brunnschweiler (2008, 2009)
    - Existing resource curse findings fragile: Lederman & Maloney (2007, 2009)
  - Ag has higher TFP growth than manufactures
    - Bernard & Jones (1996), Martin and Mitra (2001): (also Jacob Viner and Douglass North)
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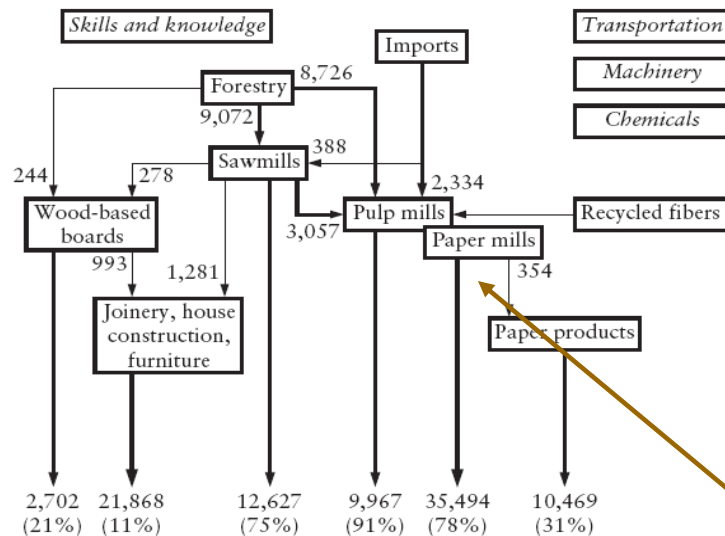
**IS IT WHAT WE PRODUCE, OR  
HOW? BEYOND GOODS**

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# Trees can be very high tech!

## Innovation policy is key

Figure 8.1 The Swedish Forest Industry Cluster



Source: Authors' calculations.

Note: Resource flows in million SEK. Figures in parentheses denote export shares.

Table 8.4 Participants in the Knowledge and Skill Cluster in the Paper and Pulp Industry (1990)

	Generation	Dissemination
Skills (Education)	Royal Technical University	Swedish Pulp and Paper Research Institute
	Chalmers Technical University	
	University of Karlstad	
	Swedish Pulp and Paper Research Institute	
Knowledge (Research)	Royal Technical University	Swedish Pulp and Paper Research Institute
	Chalmers Technical University	
	University of Karlstad	
	Swedish Pulp and Paper Research Institute	
	Institute of Surface Chemistry	
	Graphical Research Laboratory	
	Swedish Packaging Research Institute	
	Institute	
	Swedish Newspaper Mills' Research Laboratory	

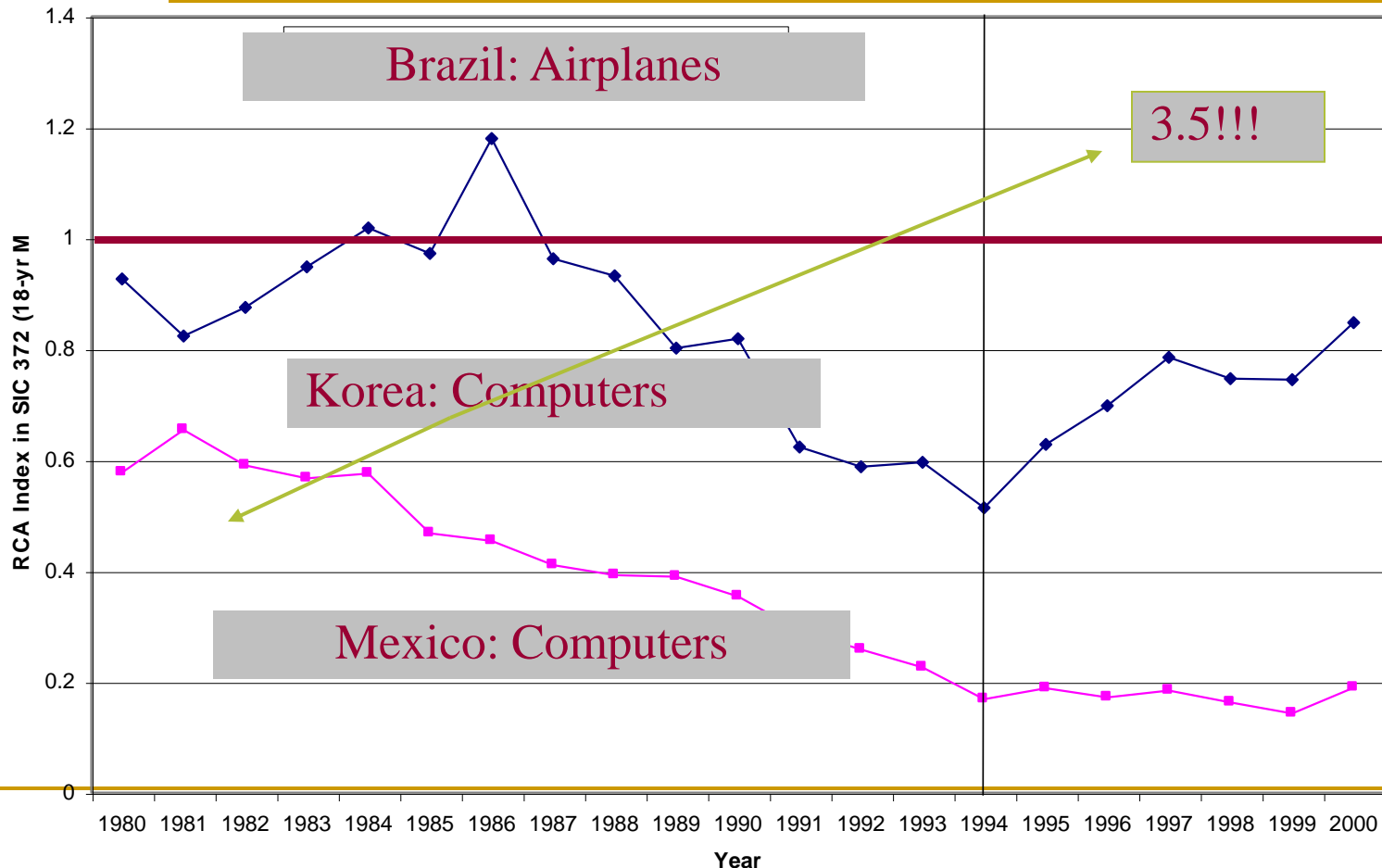
Sources: Ds 1991:62, Statistical Yearbook of Forestry 1993, Handbook of the Northern Wood Industries 1991/92.

Nokia: Site of an early  
pulp mill in Finland

Learn how to learn

# And high tech goods can be produced in a low tech ways

## Comparative Advantage in Innovation



# Does China really export the iPod?

**Table 2 China: 10 Exports with the Lowest Domestic Value Added**

Electronic computer	4.6
Telecommunication equipment	14.9
Cultural and office equipment	19.1
Other computer peripheral equipment	19.7
Electronic element and device	22.2
Radio, television, and communication equipment	35.5
Household electric appliances	37.2
Plastic products	37.4
Generators	39.6
Instruments, meters and other measuring equipment	42.2

**China: 10 Exports with the Highest Domestic Value Added**

Agriculture, forestry, animal husbandry and fishing machinery	81.8
Hemp textiles	82.7
Metalworking machinery	83.4
Steel pressing	83.4
Pottery, china and earthenware	83.4
Chemical fertilizers	84.0
Fireproof materials	84.7
Cement, lime and plaster	86.4
Other non-metallic mineral products	86.4
Coking	91.6

“..the electronic components we make in Singapore require less skill than that required by barbers or cooks, involving mostly repetitive manual operations”

Goh Keng Swee, Minister of Finance Singapore (1972)

Source: Koopmans, Wang, and Wei (2008).

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# **DIVERSIFICATION OF THE EXPORT BASKET**

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# Diversification

- Market failures inhibit diversification
    - Spillovers in product innovation, which is correlated with diversification
    - Correlation of prices and quantities across products are not internalized
  - Export concentration leads to terms of trade volatility
    - *poor, small and mining-dependent economies* have higher export-revenue concentration, and terms of trade volatility (Lederman & Xu 2010)
  - Problems of diversification policy
    - Big hits weird and associated with high concentration of (manufacturing) exports (Easterly et al. 2009)
    - Never really know where the next product comes from
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# Doing IP blindfolded

- Little guidance on what goods are good.
  - Even whether we should be focusing on goods vs. tasks
  - Leads us back to horizontalish policies that
    - Resolve market failures related to innovation in old and new goods
    - Other barriers to the emergence of new goods and improvement of old.
    - Strategic coordination policies
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