



The U.S. Advantage in Retail and Wholesale Trade: How Can Europe Catch-up?

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Overview of the Paper

- Distribution services big contributor to EU-US productivity gap
 - ◆ large sector in both EU and U.S.
 - ◆ U.S. productivity accelerated while EU stood still or declined
- Information is the key ingredient to distribution services
- ICT technology transformed trade from low- to high-tech sector
- Organization change was essential to process and took time
- European adoption of business model lags
- U.S. more conducive to exploiting technology
- Regulatory environment a key factor in slowing diffusion of
 - ◆ differences across countries matter
 - ◆ country specific regulations important



U.S. trade productivity accelerates, Europe stalls

<i>Retail Trade</i>	<i>1990-95</i>	<i>1995-2001</i>	<i>Acceleration 1995-01/1990-95</i>
U.S.	2.0%	6.5%	4.5%
EU-14	1.7%	1.3%	-0.3%
<i>Wholesale Trade</i>			
U.S.	3.5%	8.2%	4.7%
EU-14	3.6%	1.5%	-2.1%

Source: GGDC 60-Industry Database. EU-14 includes all of the original EU-15 countries except for Greece.



Distribution is a big industry in the U.S. and Europe (employment)

U.S.

Sector	Employees, thousands	Rank In Economy
Retail trade	17,015	1
Health and social work	15,002	2
Education	13,305	3
Public administration and defense	10,619	4
Hotels & catering	9,458	5
Other business activities, nec	7,711	6
Construction	7,038	7
Wholesale trade	6,832	8
Other community, social and personal services	6,259	9
Legal, technical and advertising	4,508	10

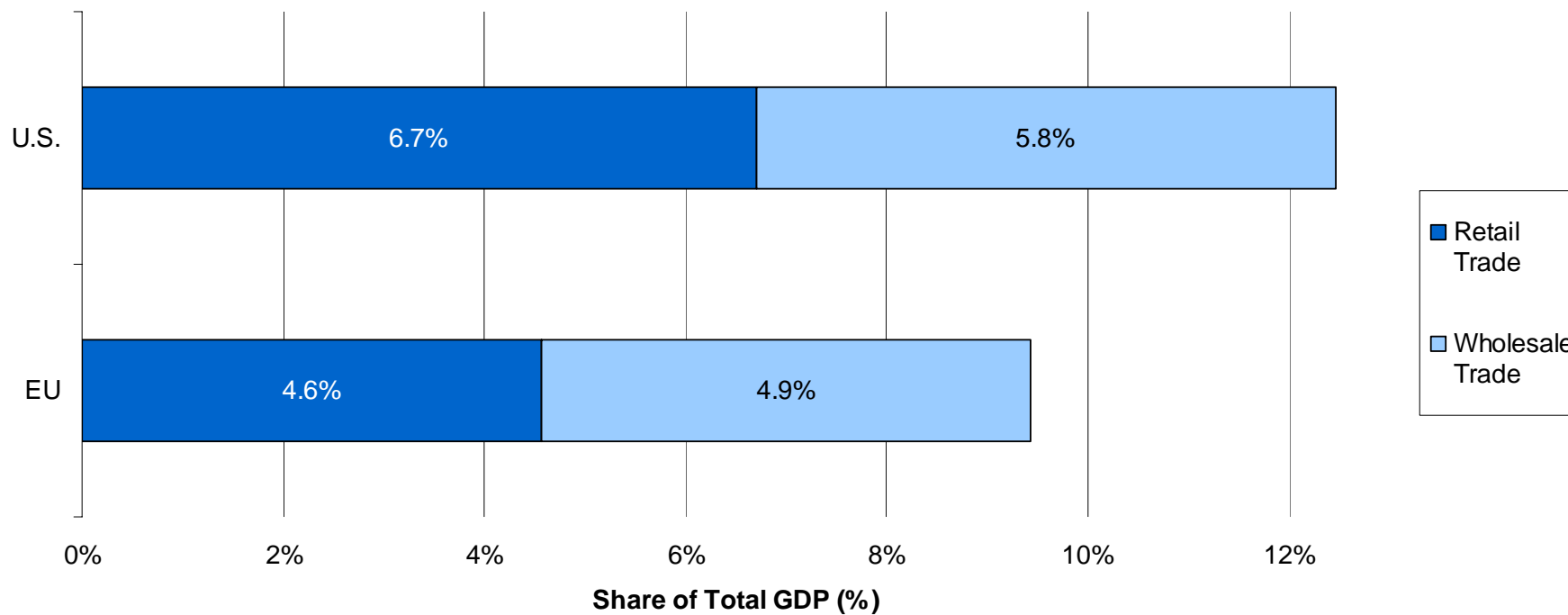
EU-15

Sector	Employees, thousands	Rank in Economy
Health and social work	15,360	1
Retail trade	15,166	2
Public administration and defense	11,826	3
Construction	11,697	4
Education	10,787	5
Other community, social and personal services	9,486	6
Hotels & catering	8,053	7
Other business activities, nec	7,805	8
Wholesale trade	7,113	9
Legal, technical and advertising	6,894	10

Source: GGDC 60-Industry Database. Data are for the year 2001.



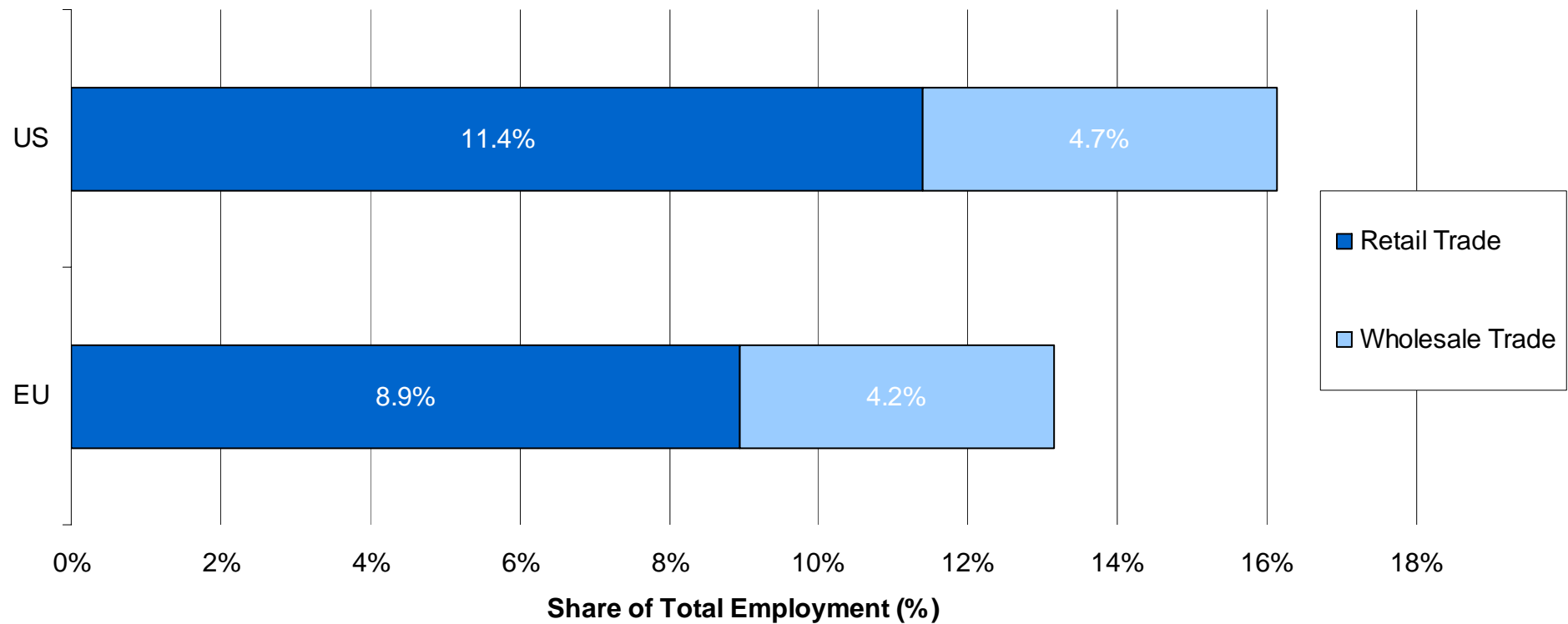
Shares are larger in the U.S. for value-added...



Source: GGDC 60-Industry Database. Data are for the year 2001.



...and for employment as well



Source: GGDC 60-Industry Database. Data are for the year 2001.



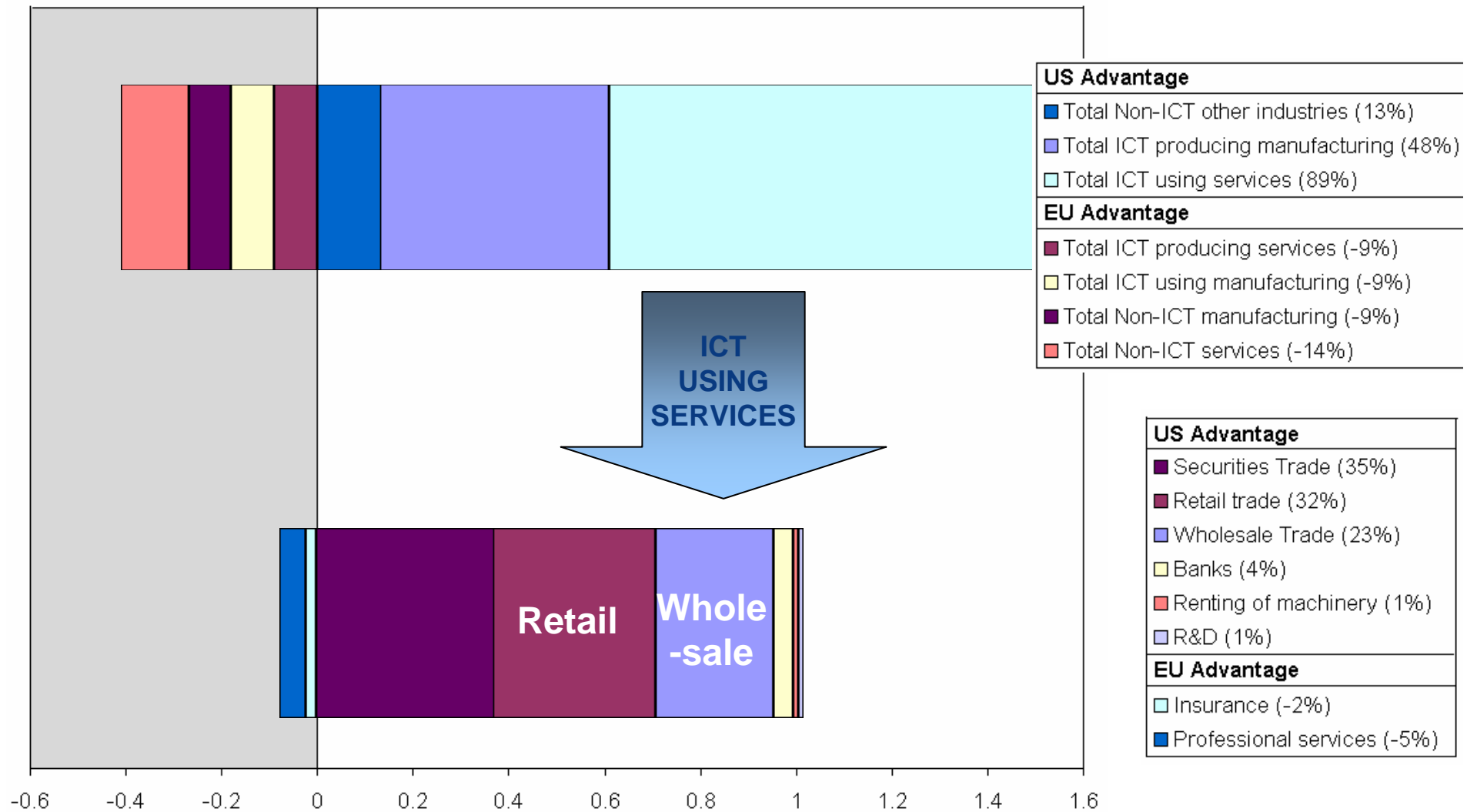
U.S. had largest acceleration in retail trade, but productivity growth positive in most countries, great heterogeneity in country experiences

	1980-90	1990-95	1995-2001	Acceleration 1995-01/1990-95
U.S.	3.0	2.0	6.5	4.5
EU-14*	2.4	1.7	1.3	-0.3
Germany	3.1	2.8	0.7	-2.2
France	4.2	2.1	1.9	-0.3
U.K.	3.3	1.2	3.7	2.6
Netherlands	3.3	0.7	1.2	0.5
Austria	2.1	1.3	3.8	2.5
Belgium	-0.2	2.3	-1.5	-3.8
Canada	0.2	1.6	5.6	4.0
Denmark	2.0	2.3	2.4	0.1
Finland	4.0	4.1	1.4	-2.7
Ireland	3.4	-2.9	3.1	6.0
Italy	0.9	1.3	1.1	-0.2
Japan	3.4	4.7	-0.3	-5.0
Luxembourg	2.8	0.2	2.7	2.5
Norway	2.6	4.6	8.1	3.5
Portugal	1.1	1.6	1.2	-0.4
South Korea	7.6	3.5	5.0	1.5
Spain	2.0	0.3	0.2	-0.1
Sweden	2.4	3.7	3.8	0.1
Taiwan	5.9	6.8	7.5	0.7

Source: GGDC 60-Industry Database. EU-14 includes all the original EU-15 members except Greece.



Distribution accounts for a large part of the EU-U.S. productivity gap



Source: GGDC 60-Industry Database. Data are for the year 2001.



Total factor productivity growth accounts for most of U.S. acceleration, much smaller in EU

<i>Retail Trade</i>	1980-90	1990-95	1995-00/1*	Acceleration 1995-00/1* over 1990-95
U.S.	1.9%	1.0%	5.4%	4.4%
EU-4	1.8%	0.8%	0.8%	0.0%
Germany	1.2%	2.1%	0.2%	-1.9%
France	3.5%	0.8%	0.9%	0.1%
U.K.	1.0%	-1.1%	1.2%	2.3%
Netherlands	2.9%	0.0%	0.5%	0.5%
<i>Wholesale Trade</i>	1980-90	1990-95	1995-00/1*	Acceleration 1995-00/1* over 1990-95
U.S.	0.8%	0.5%	3.5%	3.0%
EU-4	2.0%	2.1%	1.2%	-0.9%
Germany	1.7%	2.2%	0.6%	-1.6%
France	3.8%	1.5%	-0.3%	-1.8%
U.K.	0.8%	4.2%	2.3%	-1.9%
Netherlands	2.3%	-0.6%	2.7%	3.3%

* Due to data availability issues, total factor productivity (TFP) for France, U.K. and the EU-4 is calculated for 1995-2000, while the other countries are for 1995-2001

Source: GGDC 60-Industry Database.



Trade is a business of information

- Matching goods and services to customer demands is highly information-intensive
- Output of trade is bundle of services that accompany the sale of a product (Oi, 1992)
- Services fall into 5 categories (Betancourt and Gautschi, 1993)
 - ◆ Assortment (provide mix of products consumer wants)
 - ◆ Delivery (products available for purchase at consistent location and times)
 - ◆ Information (offer consumers information about use)
 - ◆ Accessible location
 - ◆ Ambiance of store
- Efficiency linked to managing inventory, product mix, promotion and product introduction and product replenishment



ICT technology transforms trade industry (1)

- UPC adopted by some manufacturers and retailers (1970s)
 - ◆ Goals limited; checkout speed and reduce labeling costs (hard savings)
 - ◆ Supermarkets led way
 - ◆ Needed 75% of products to justify scanners
 - ◆ Promise of “soft” savings to come, better matching inventory to customer demand, more responsive pricing changes, better use of shelf space, improved evaluation of ad campaigns, improved trucking and shipping
- Linkage of UPC (barcodes) to computer inventory databases (1980s)
 - ◆ UCS became published standard (1982)
 - ◆ EDI implemented standard shortly after
 - ◆ Wal-Mart and Kmart pioneers
 - ◆ By 1992, few firms outside general merchandisers were using EDI to replenish inventory
 - ◆ Efficient Consumer Response (ECR) initiative launched 1992 (Shift from “push” to “pull”)
 - ◆ Specialized version of QR in apparel and JIT in autos

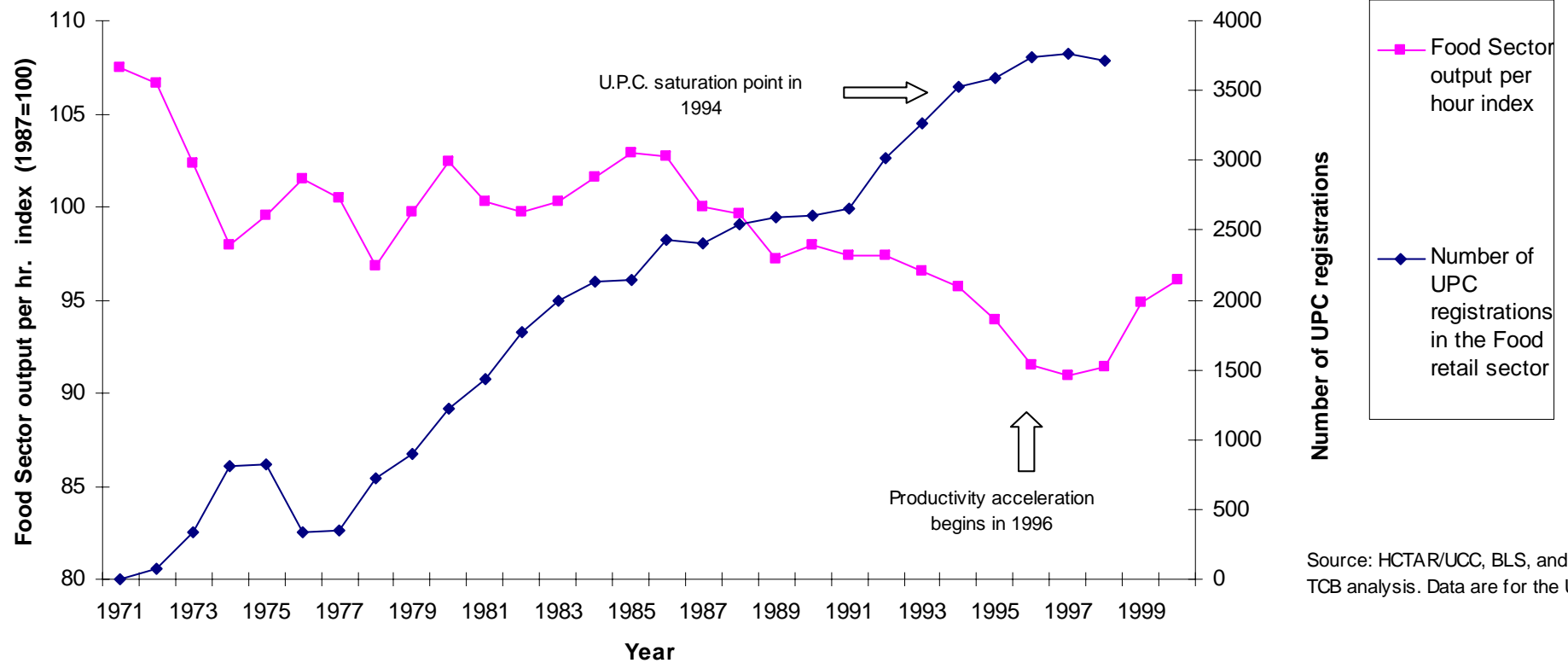


ICT transforms trade industry (2)

- UPC codes reach saturation point on “S” diffusion curve (1994-1995)
- Benchmarking study in 1997 found just one-third of ECR practices adopted in 1997
 - ◆ Suppliers had difficulty analyzing data
 - ◆ Software not off-the-shelf
 - ◆ Lack of cooperation
- “Lean” retailing still not completely adopted
- Hudson just introduced system in 2003-4 and still limited use of information



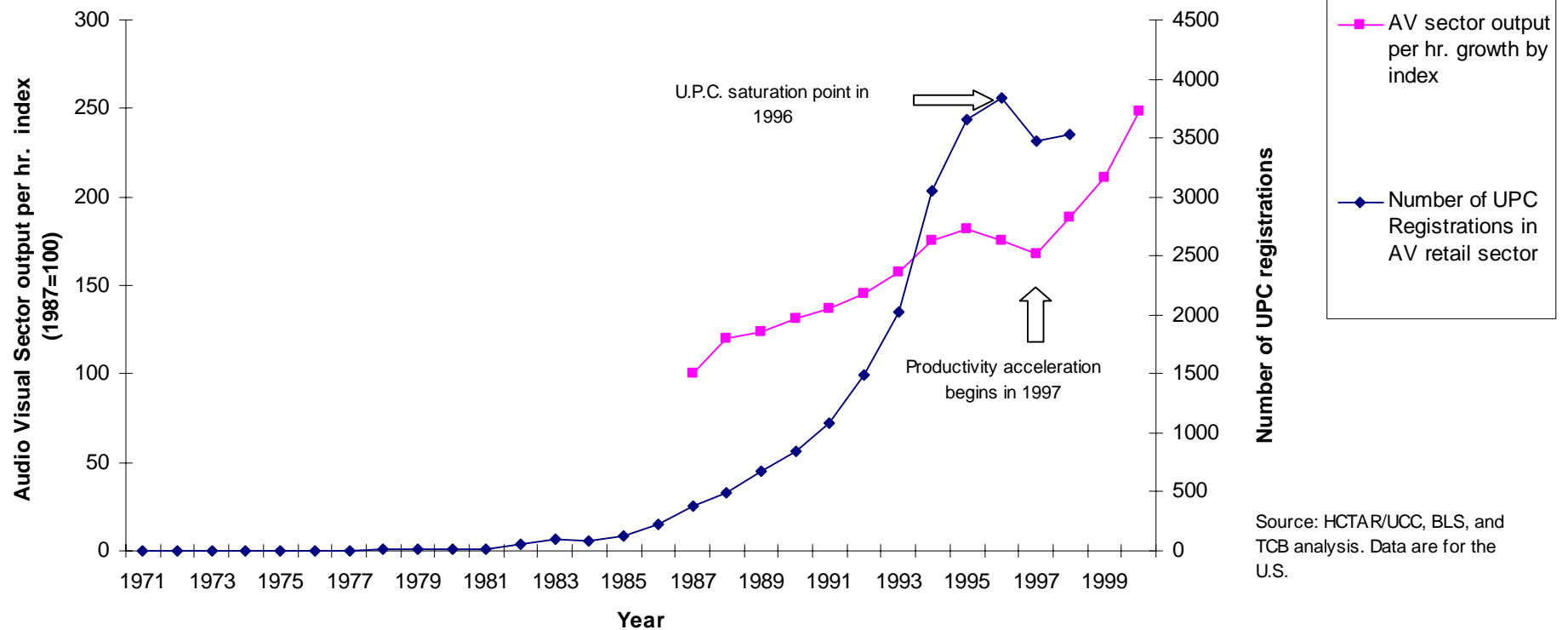
Food retail; UPC diffusion



Source: HCTAR/UCC, BLS, and TCB analysis. Data are for the U.



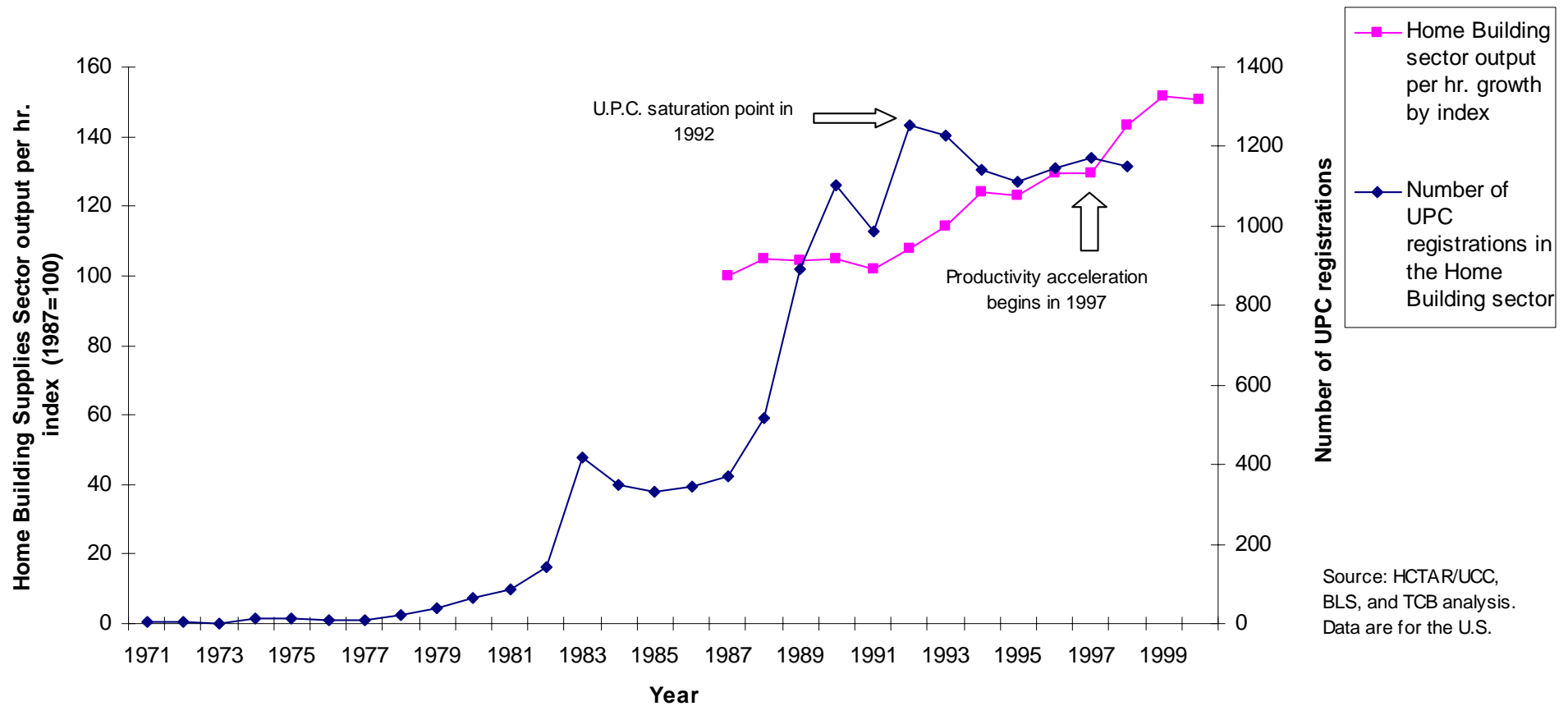
Audio-visual retail: UPC diffusion



Source: HCTAR/UCC, BLS, and TCB analysis. Data are for the U.S.



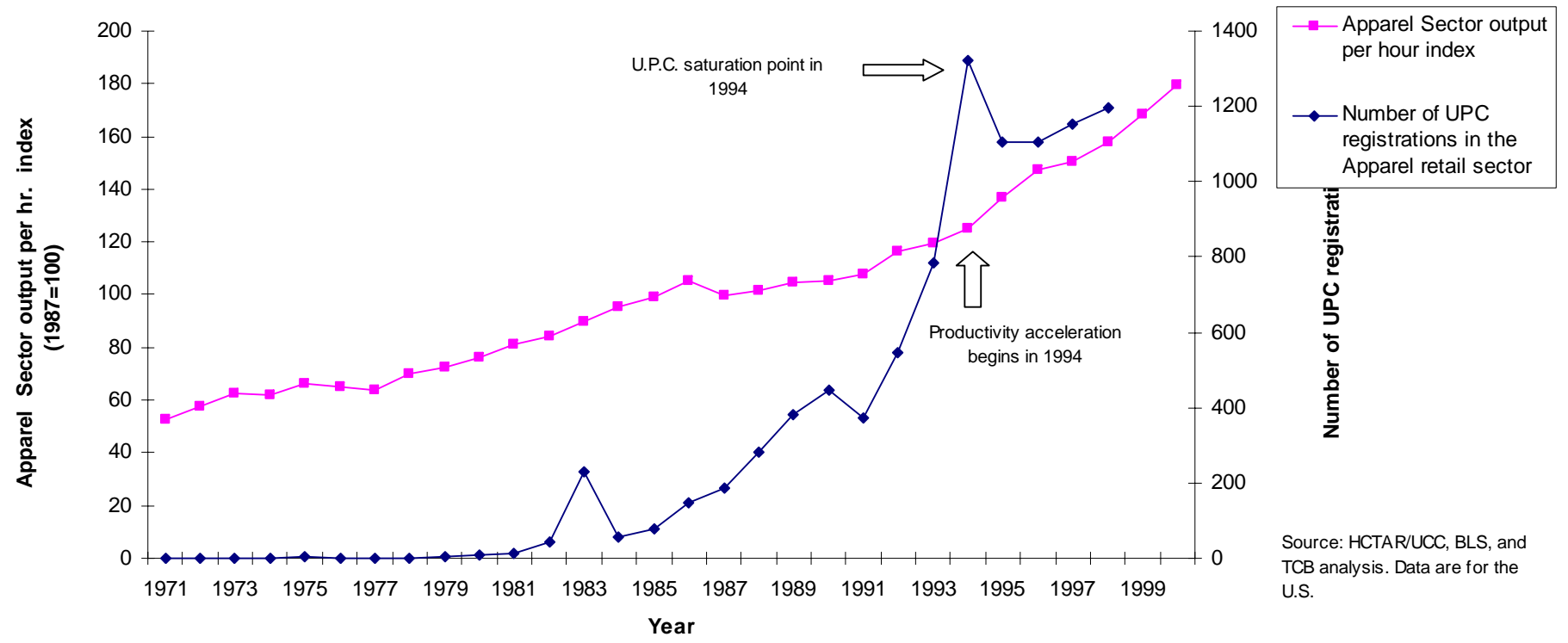
Home building retail: UPC diffusion



Source: HCTAR/UCC, BLS, and TCB analysis. Data are for the U.S.



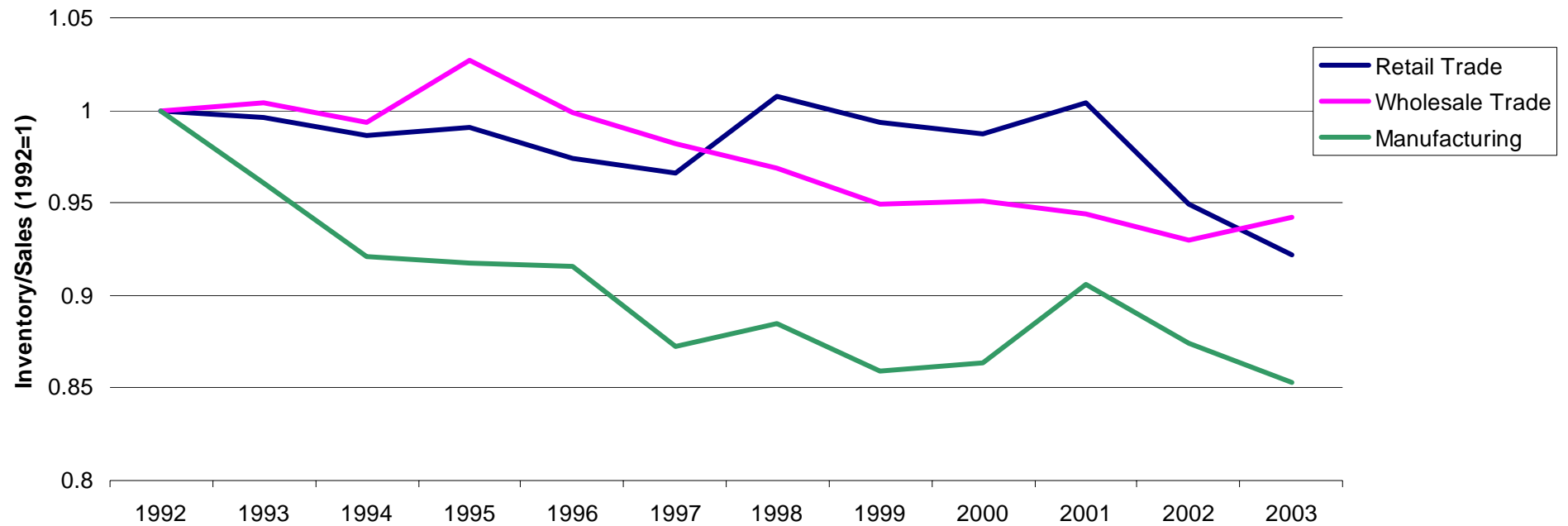
Diffusion of UPC: Apparel



Source: HCTAR/UCC, BLS, and TCB analysis. Data are for the U.S.



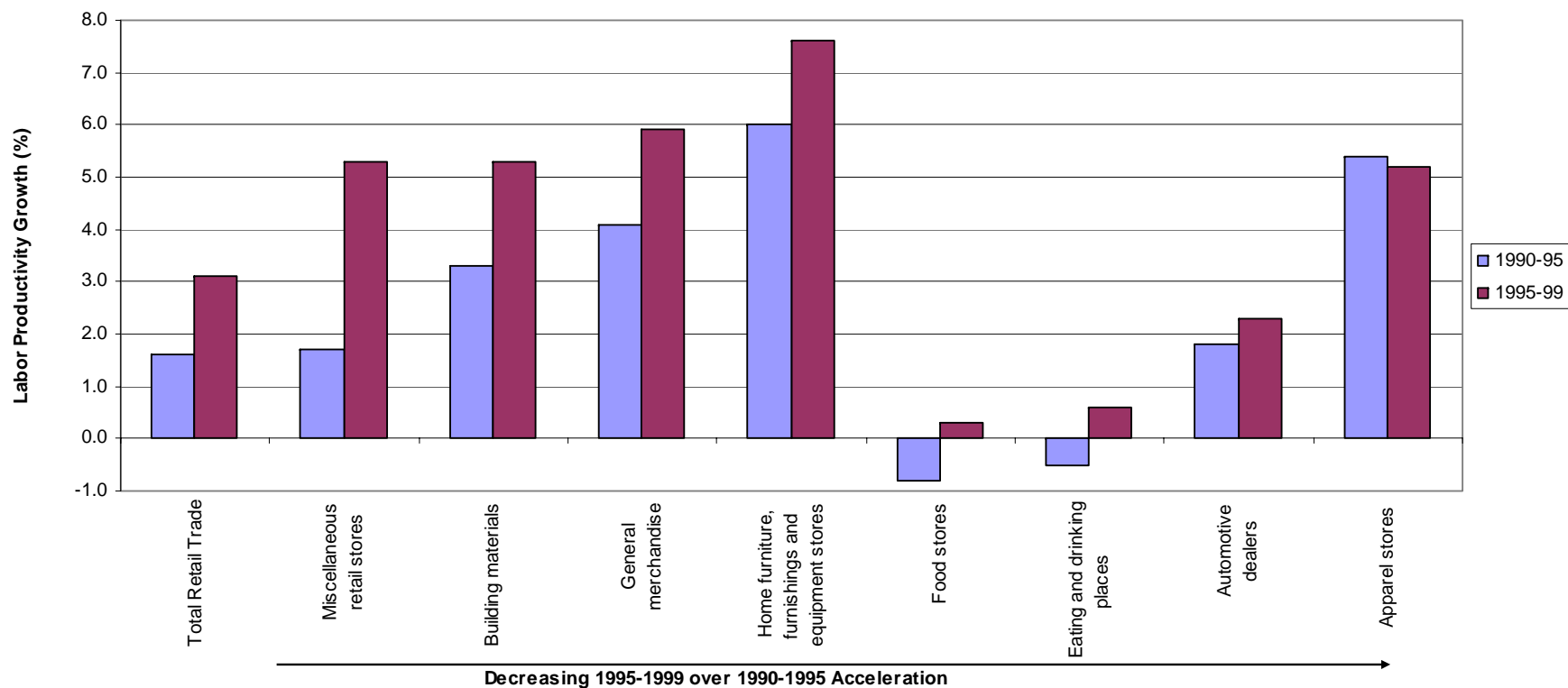
U.S. inventory to sales ratios have declined sharply, especially for manufacturers



Source: U.S. Census Monthly Trade Inventories and Sales Program



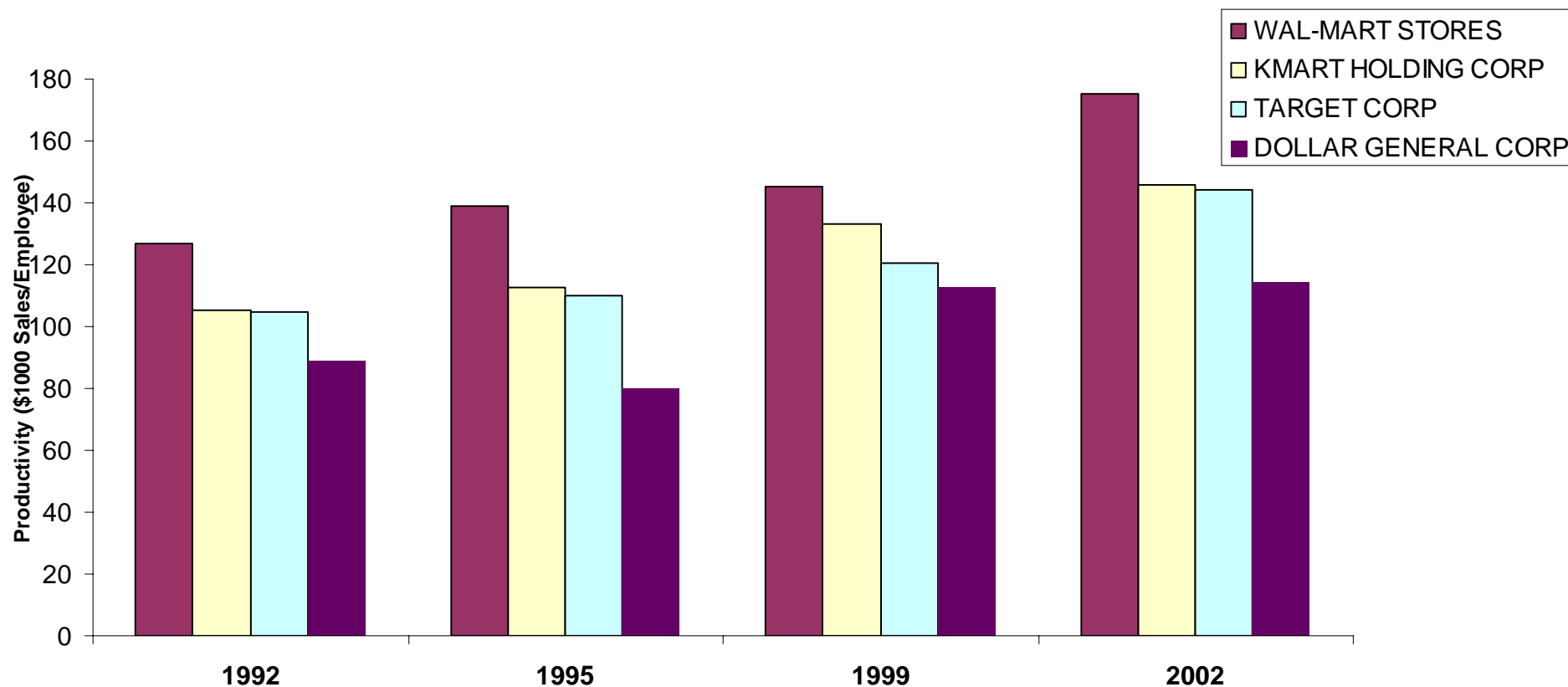
U.S. Retail productivity acceleration was broad-based



Source: Sieling, Mark, Brian Friedman, Mark Dumas. "Labor Productivity in the retail trade industry, 1987-99." Monthly Labor Review (December 2001): 3-14. Labor productivity is in output per hour.



Wal-Mart remains one step ahead of its competitors



Source: S&P Computstat database, values were deflated using a deflator for the general merchandise sector computed by the BLS.

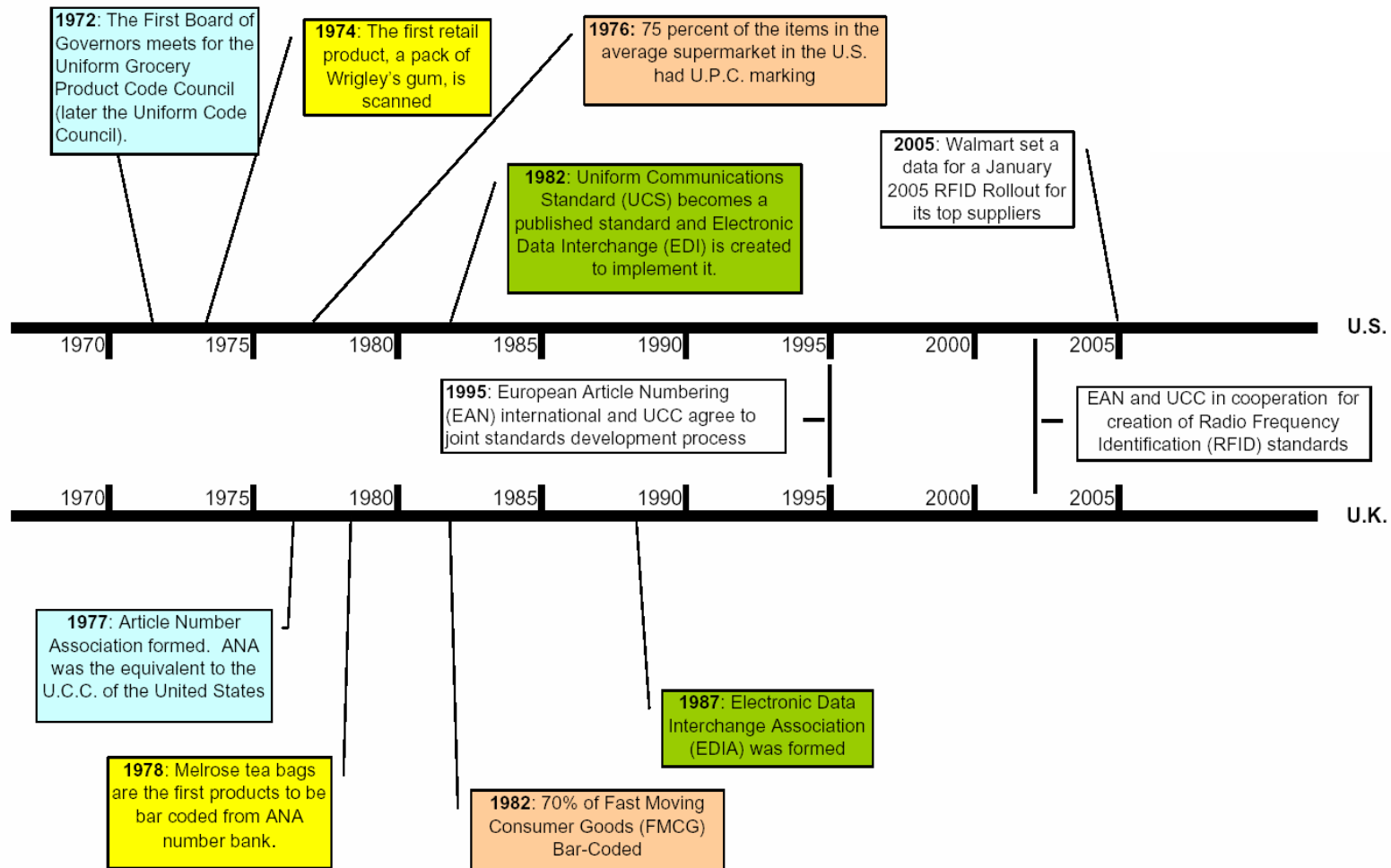


European diffusion much slower

- European Article Numbering System (EAN) association formed
- This was 6 years behind U.S. and scanning had begun 2 years earlier in U.S.
- UK provides illustrative comparisons of early years and lag still evident with newest technology RFID
- EDI association 5 years later in 1987
- Complimentary trucking services came later in Europe. 1997 compared to the 1980s for US



U.K. lags behind the U.S. in barcode adoption



U.S. takes an early lead in ICT spending

Average annual ICT capital services growth (%)						
	<i>U.S.</i>	<i>EU</i>	<i>Germany</i>	<i>Netherlands</i>	<i>France</i>	<i>U.K.</i>
Retail Trade						
1980-85	45.8	18.7	12.7	27.9	17.0	29.0
1985-90	16.6	20.4	26.6	18.8	12.7	20.5
1990-95	11.9	12.4	17.2	16.4	4.6	11.9
1995-00	17.6	14.8	17.8	33.3	13.3	11.1
Wholesale Trade						
1980-85	32.2	20.8	7.3	24.5	17.6	37.4
1985-90	9.9	16.7	16.6	20.9	13.2	16.5
1990-95	16.2	12.7	16.1	9.7	6.2	12.4
1995-00	22.5	22.2	17.7	23.9	18.1	24.8

Source: O'Mahony and van Ark (2003) CD-ROM

THE CONFERENCE BOARD

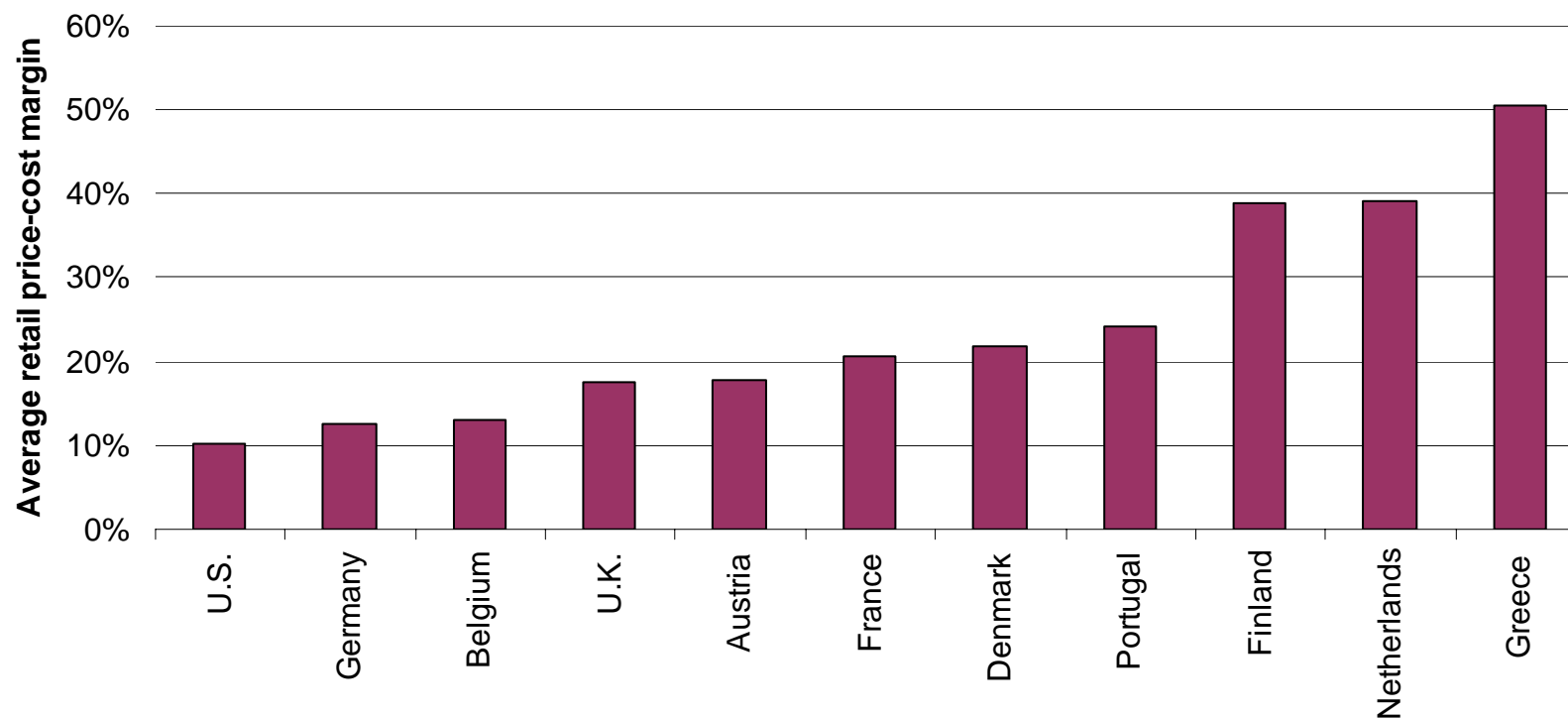


Why the slower pace in Europe

- U.S. head start
- Europe less competitive (existing firms protected)
- Regulatory obstacles
 - ◆ Hours opening
 - ◆ Labor policies
 - ◆ Land-use
- Scale (reduced opportunities for cross-border operations)
- Note Europe is not one harmonized regulatory environment
- Slower complementary change in trucking
- Culture and taste



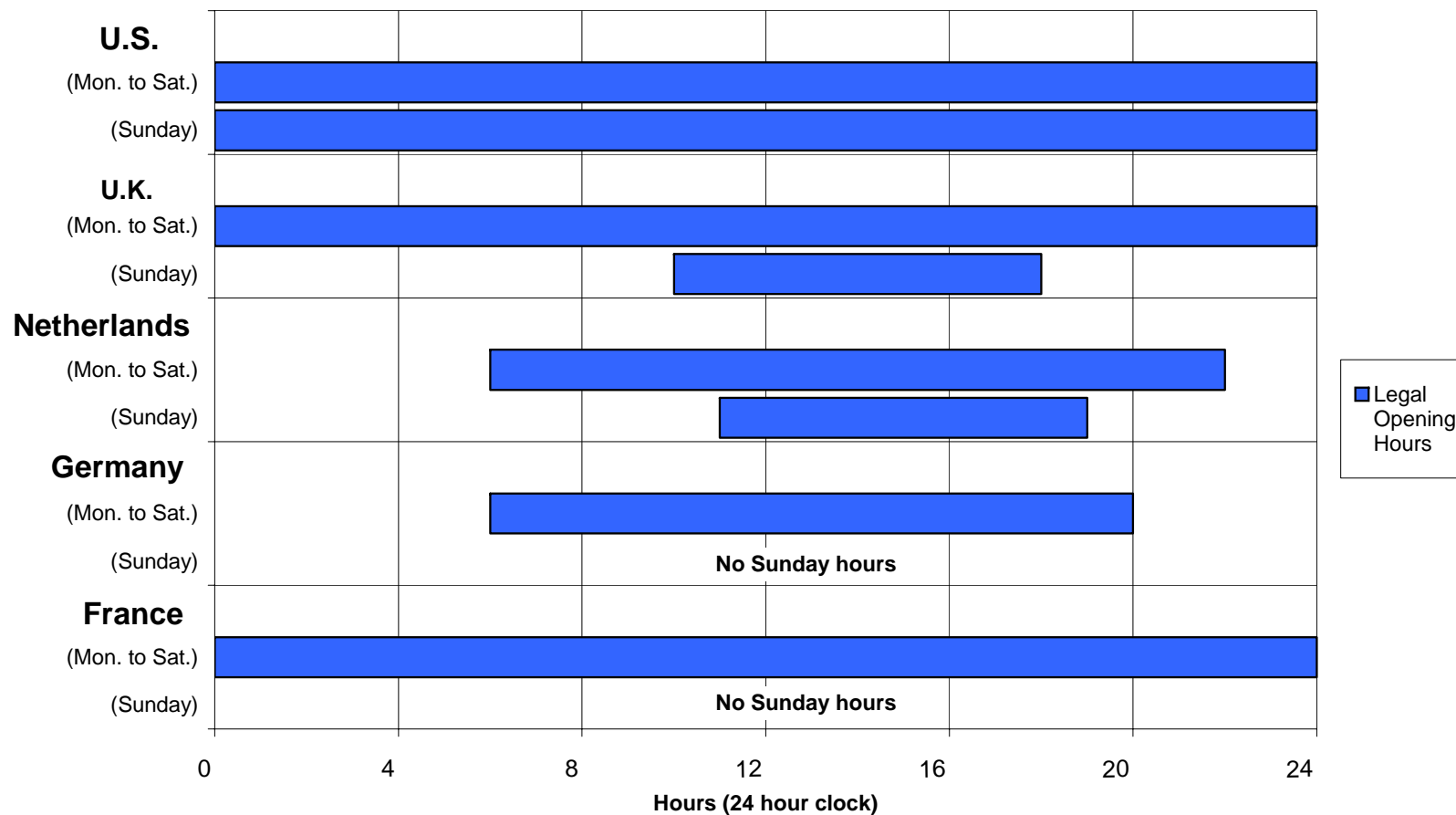
Low retail margins in U.S. suggest greater competitiveness



Source: OECD STAN database. Data are for the year 1996 and use an operating surplus concept to derive price-cost margins.



Large store opening hours more restricted in Europe



Source: Netherlands: Breedveld et al (2002); Germany: US dept. of Commerce; France and UK: KPMG report on German Grocery Retailing 2004
 Note: The hours indicate Store opening hours Monday to Saturday. Netherlands allows shops to open from 11 to 7pm on 12 Sundays a year



France: Land usage regulation

Key Legislation	<ul style="list-style-type: none"> • 1973 Loi Royer - created strict retail planning controls and local commissions for regulating retail developments. Local commissions were ineffective. • 1996 the stricter Loi Raffarin - made the regulation size 300 sq. meters and a necessary public economic environment inquiry for projects over 6000 sq. feet. • Retail businesses need to obtain a building license <i>and</i> a usage license to carry out a retail activity
Relevant Store Size	Above 300 square meters
Extent of out of town center restriction	In the late 1990s and today very few licenses have been given for major out of town supermarkets.
Result	Many hypermarkets were established before the stricter Raffarin Law came into effect.
Overall law strictness	Previously Liberal, now Very strict



Germany: Land usage regulation

Key Legislation	<ul style="list-style-type: none"> • Building law is fairly uncomplicated for up to 1200 square meter buildings or freestanding super markets. • On the other hand it is extremely difficult to obtain licenses for retail above 1200 square meters. • Local authorities write a non-binding land zoning plan and a binding development plan. The development plan specifies where retail is allowed.
Relevant Store Size	Above 1200 square meters
Extent of out of town center restriction	The availability of out of town retail licenses that are beyond 1200 square meters is very limited because of the authorities' wish to spur town center business.
Result	It is because of the 1200 square meter rule that Aldi the small discount store chain has become a great success.
Overall law strictness	Somewhat Strict



Netherlands: Land usage regulation

Key Legislation	<ul style="list-style-type: none"> Planning policy rules are divided into three administrative levels: kingdom, province and municipality. The municipalities draw up non-binding plans for the future and binding plans for deciding how to use the land. This split between plans is similar to Germany.
Relevant Store Size	All sizes
Extent of out of town center restriction	<p>Out of town restrictions are subject to a two-tier system.</p> <ol style="list-style-type: none"> Locations allowing for a large-scale retail concentration Locations for peripheral retail. The peripheral retail locations are reserved for specific product categories like Do-it-yourself (DIY), furniture, kitchen appliances, cars, boats and materials that present fire risk.
Result	Large-scale retail centers in existence
Overall law strictness	Liberal

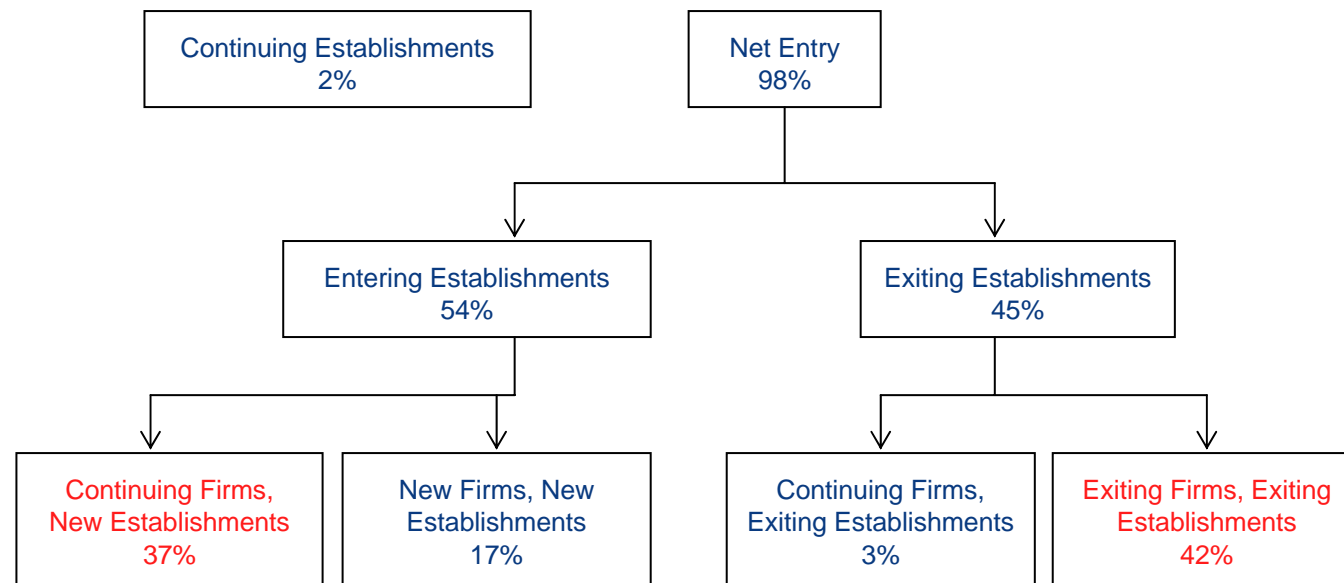


U.K.: Land usage regulation

Key Legislation	<ul style="list-style-type: none"> • The U.K. regions have a “plan-led approach” to zoning. The local planning authorities chart out the zones for business beforehand and give permission to build accordingly. • The planning policy is set out in the Planning Policy Guidelines (PPG6). The zoning bodies are very strict and do not give out licenses unless the area needs development
Relevant Store Size	All sizes
Extent of out of town center restriction	The Legislation is heavily skewed toward town centers. Then edge of center sites, district centers and out of center sites are followed in that order of preference. Thus there are very few large out of town hypermarkets in the UK.
Result	Very few rural hypermarket centers
Overall law strictness	Very strict



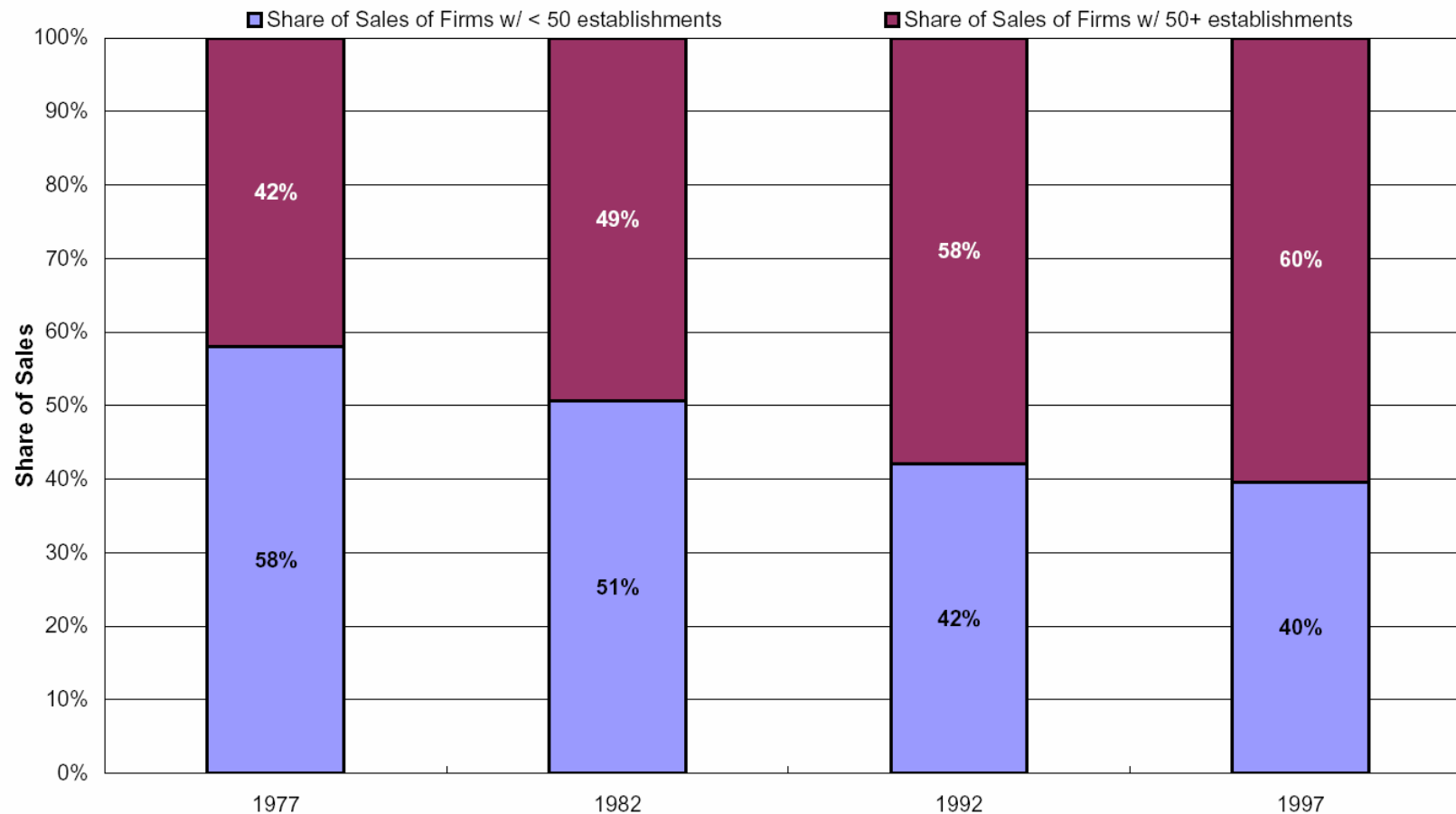
Dominant source of U.S. retail productivity growth: New establishments of existing chains displace old firms



Source: Foster, Haltiwanger, Krizan (2002). Data are labor productivity for 1987-1997.



The case of drugstores: Large firms are increasing their share of sales...



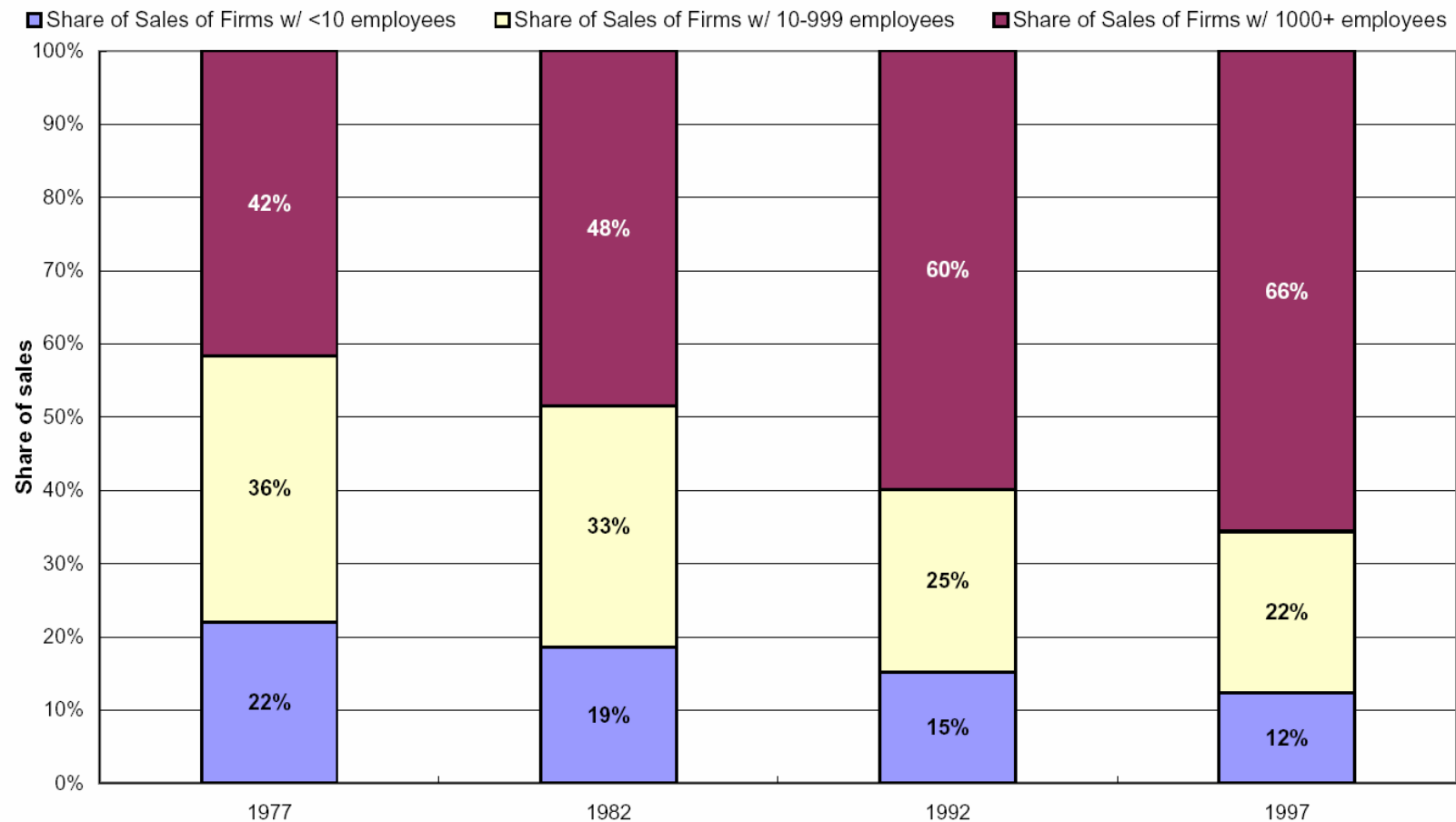
Sources: Census of Retail Trade

Notes: 1982 and 1977 do not include firms not in business at end of year; Sales in current year 1,000 USD and not adjusted for inflation;

NAICS code 446110 used to match SIC code 591; 1977 categories slightly different



The case of drugstores: ...as small firms become less significant



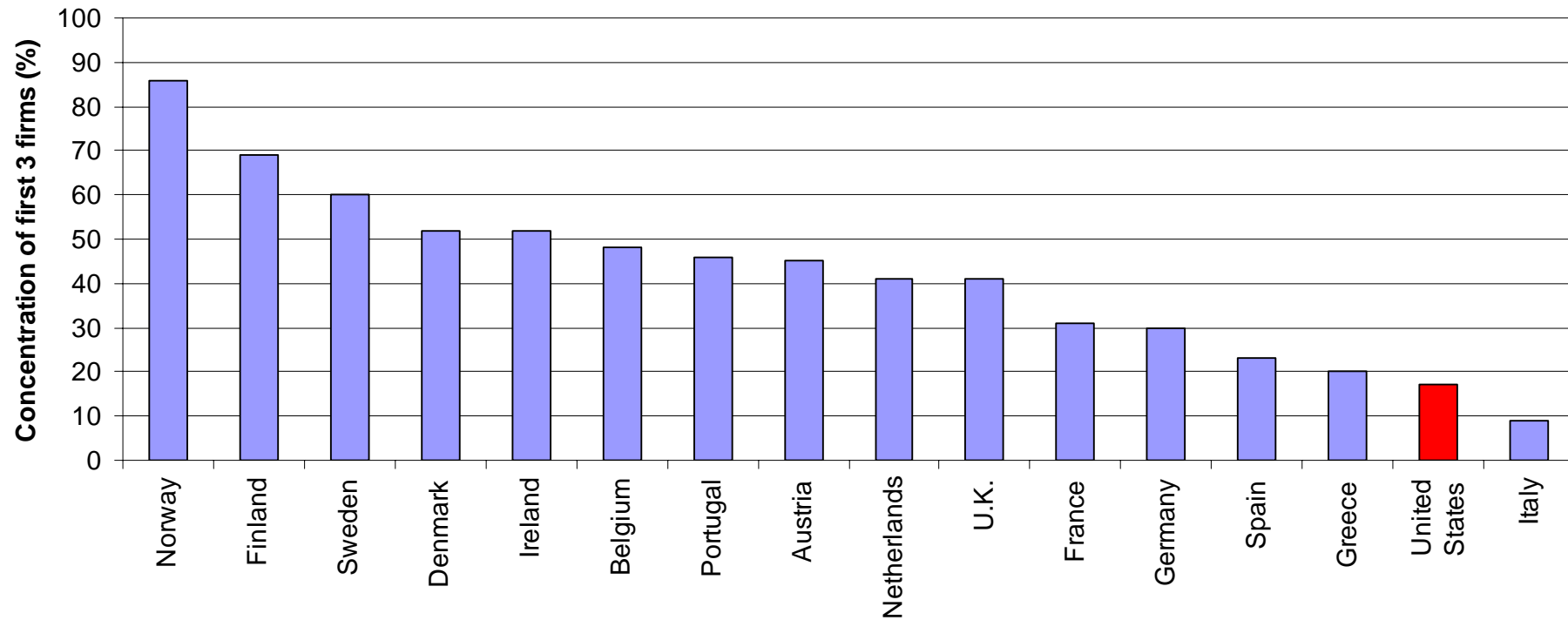
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EU retailers have scale in their home country markets...

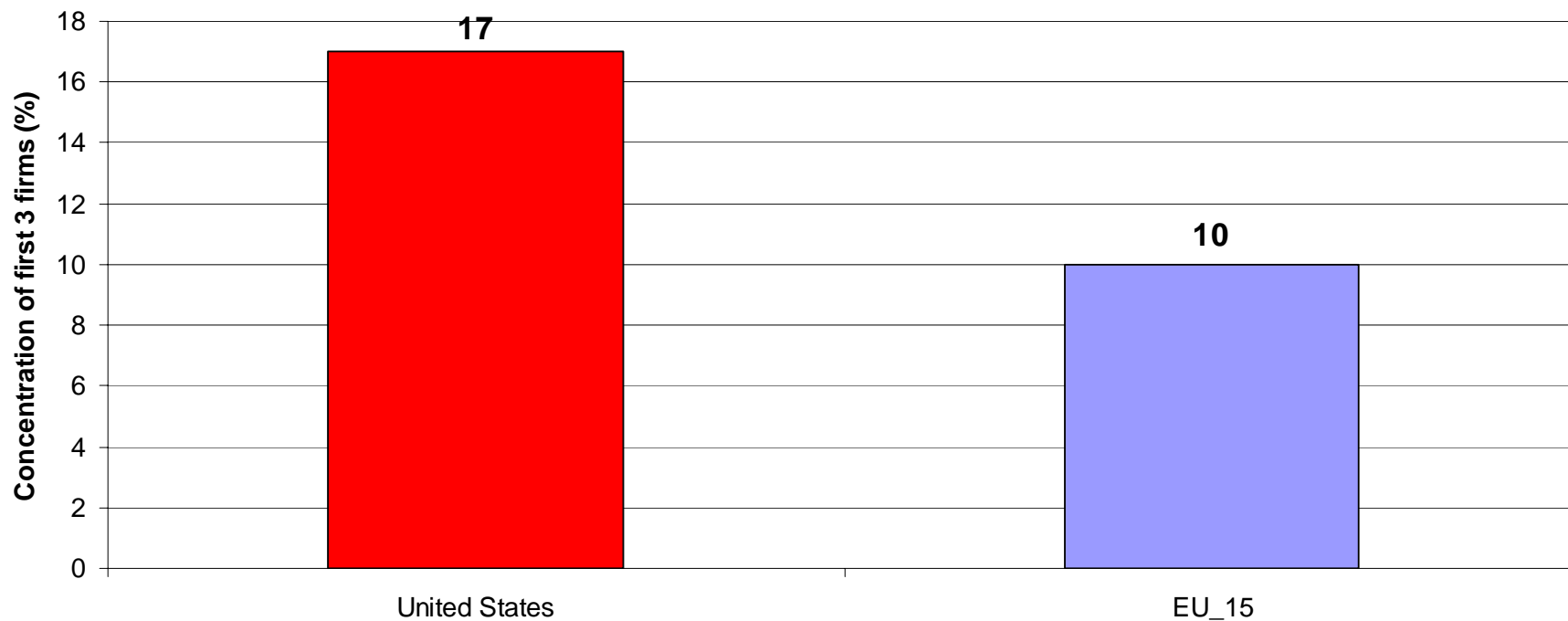


Source: Boylaud, Olivier, "Regulatory Reform in Road Freight and Retail Distribution", OECD, 2000.

Note: Data are for food retail in 1996.



But lack of cross-border activity means U.S. retailing more concentrated economy-wide



Source: Boylaud, Olivier, "Regulatory Reform in Road Freight and Retail Distribution", OECD, 2000.

Note: Data are for food retail in 1996.



Thank you



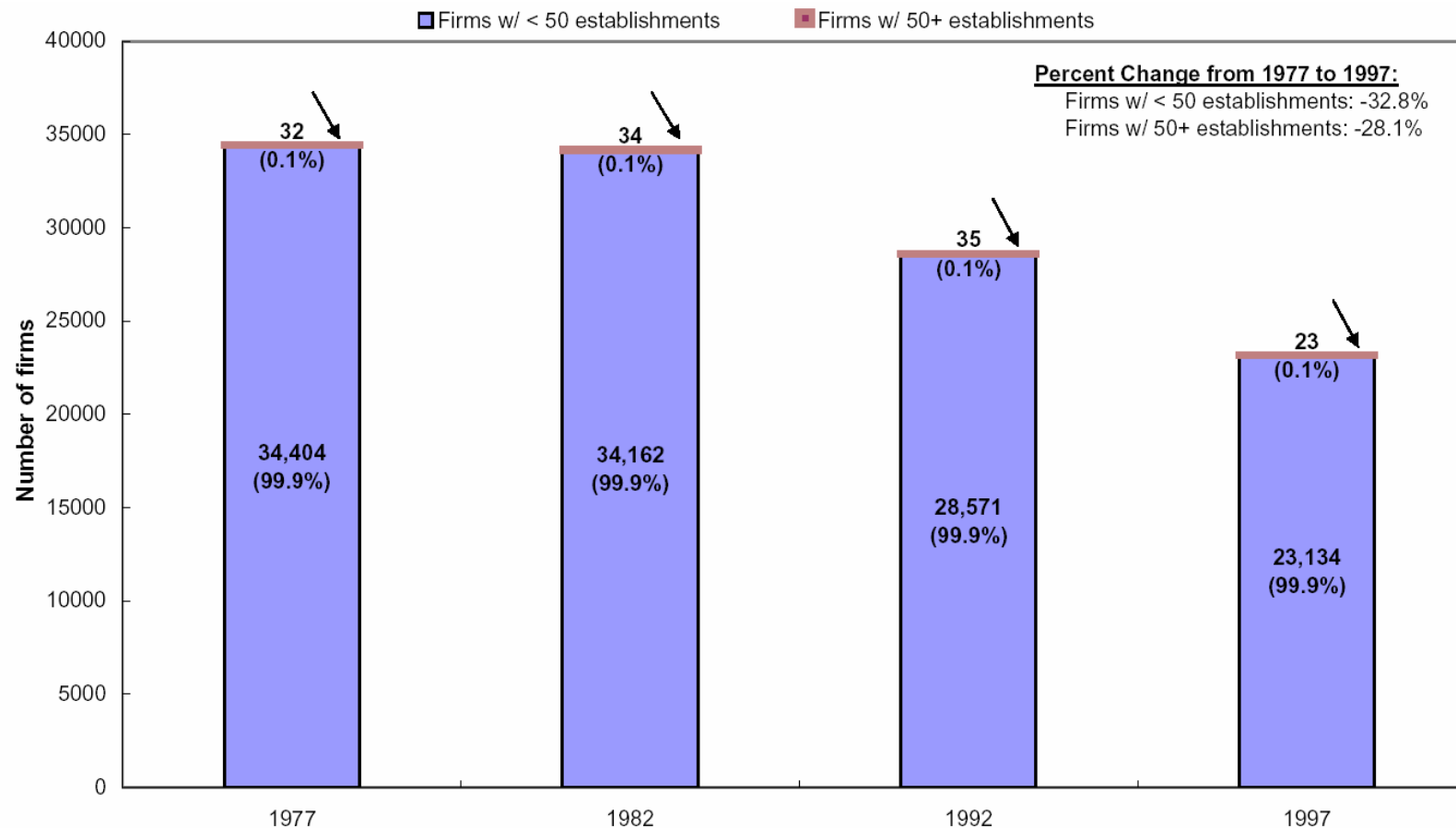
...and for wholesale

	1980-90	1990-95	1995-2001	Acceleration 1995-01/1990-95
U.S.	3.0	3.5	8.2	4.7
EU-14*	0.02	3.6	1.5	-2.1
Germany	4.4	4.3	1.9	-2.4
France	5.2	3.9	1.4	-2.5
U.K.	2.9	5.7	3.6	-2.2
Netherlands	3.3	-0.2	4.0	4.2
Austria	4.2	3.2	1.1	-2.1
Belgium	-0.2	2.2	0.1	-2.1
Canada	2.5	2.8	8.2	5.4
Denmark	2.1	2.1	4.7	2.6
Finland	3.8	-2.4	2.7	5.1
Ireland	5.0	-5.5	4.2	9.7
Italy	0.9	4.6	0.1	-4.6
Japan	4.2	7.6	0.3	-7.3
Luxembourg	4.4	2.9	6.7	3.8
Norway	2.6	4.6	6.8	2.2
Portugal	1.1	1.6	3.8	2.2
South Korea	7.6	3.5	5.0	1.5
Spain	-0.6	2.0	-0.2	-2.2
Sweden	2.4	3.7	1.1	-2.6
Taiwan	6.2	7.4	10.3	2.9

Source: GGDC 60-Industry Database. EU-14 includes all the original EU-15 members except Greece.



The case of drugstores: Chains displace individual firms...

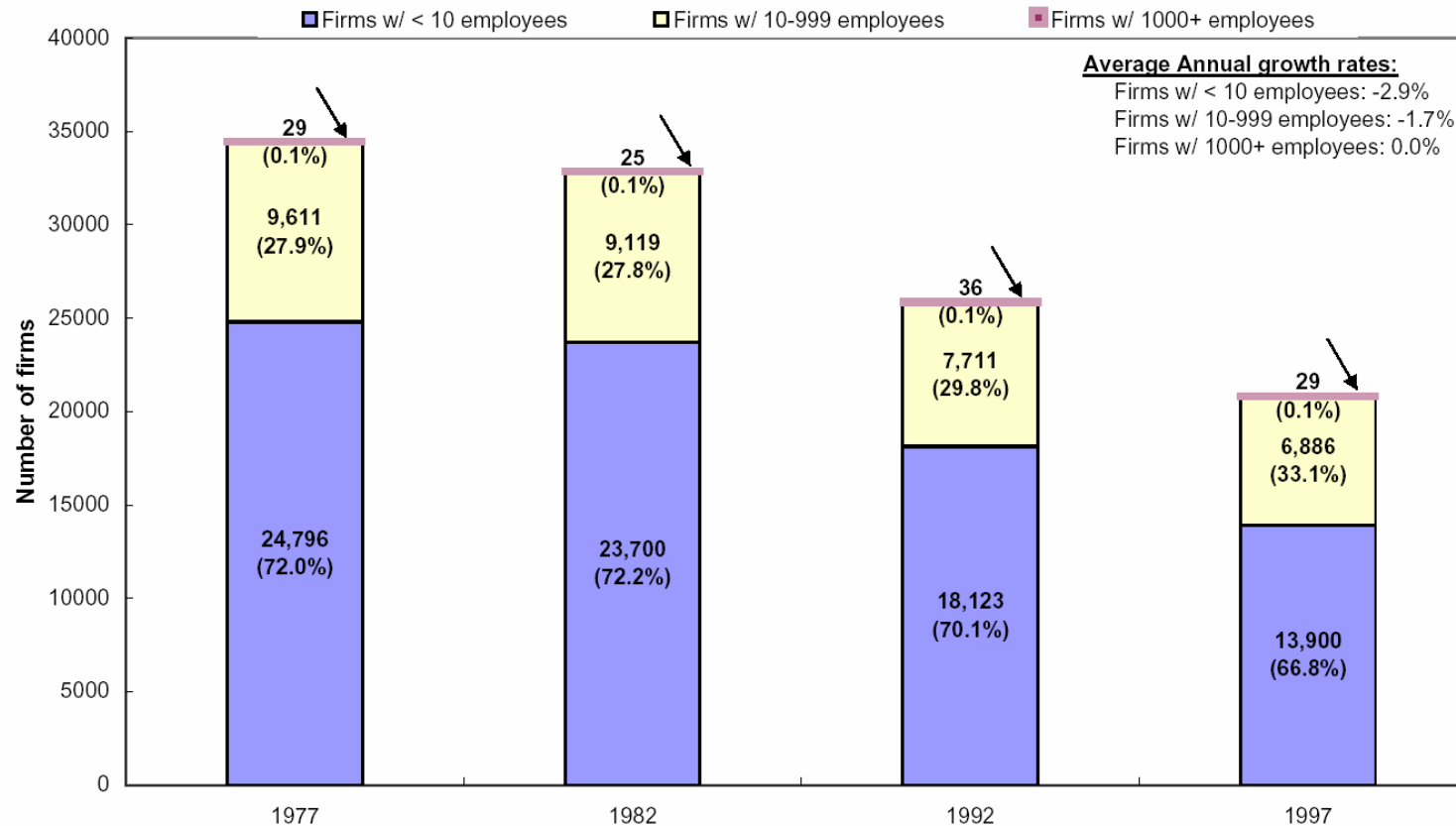


Sources: Census of Retail Trade

Notes: 1982 and 1977 do not include firms not in business at end of year; NAICS code 446110 used to match SIC code 591; 1977 categories slightly different



The case of drugstores: ...and smallest stores are impacted the most



Sources: Census of Retail Trade

Notes: 1982 and 1977 do not include firms not in business at end of year; NAICS code 446110 used to match SIC code 591; 1977 categories slightly different

