

The Rural Context of Restructuring from Globalization

Timothy R. Wojan

Economic Research Service, USDA

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Strong Priors on Rural Context

Put simply, rural America's claim to low-cost land and labor is being challenged by foreign locations that are even *less* expensive.

--Main Street Economist, Kansas City Federal Reserve Bank , March 2003

Inevitably, the low wage, low skill manufacturing jobs that once located in rural areas will be drawn towards even lower wage opportunities overseas.

- Crafting a Competitive Future, Des Moines Federal Home Loan Bank /SRI 2005



Rural Context

- What do rural workers make?
 - Trade Orientation
 - Technology Orientation
- What do rural workers do?
 - Skill Requirements
- How do rural workers do their work?
 - Work Organization



In Comparison to What?

Stylized Rural Context $\overset{?}{\longleftarrow} \overset{?}{\longrightarrow} \overset{?}{}$ Urban Context

Low cost land and labor

Routinized work

Low tech commodities

Declining comparative advantage

Innovative capacity

Complex work

Differentiated products

Competitive advantage

- Are rural locations way stations for production destined for overseas or are rural plants viable high-wage competitors?



Findings

- Trade orientation of rural and urban areas similar, but 10% of counties highly import sensitive
- Rural low-tech specialization contains both insular and import sensitive industries
- Lower skill requirements overall, but some rural industries are highly skilled
- Rural plants as likely as urban peers to adopt high-performance management practices
- Stylized facts misrepresent both the current rural context and the nature of international competition



What Do Rural Workers Make?

- Trade Orientation by 6-digit NAICS

$$\text{Import Orientation} = \frac{\text{Value of Imports}}{\text{Shipments} + \text{Imports} - \text{Exports}}$$

$$\text{Export Orientation} = \frac{\text{Value of Exports}}{\text{Value of Shipments}}$$

$$\text{Surplus Orientation} = \frac{\text{Exports} - \text{Imports}}{\text{Value of Shipments}}$$

Data from International Trade Administration/Dept. of Commerce, 2000

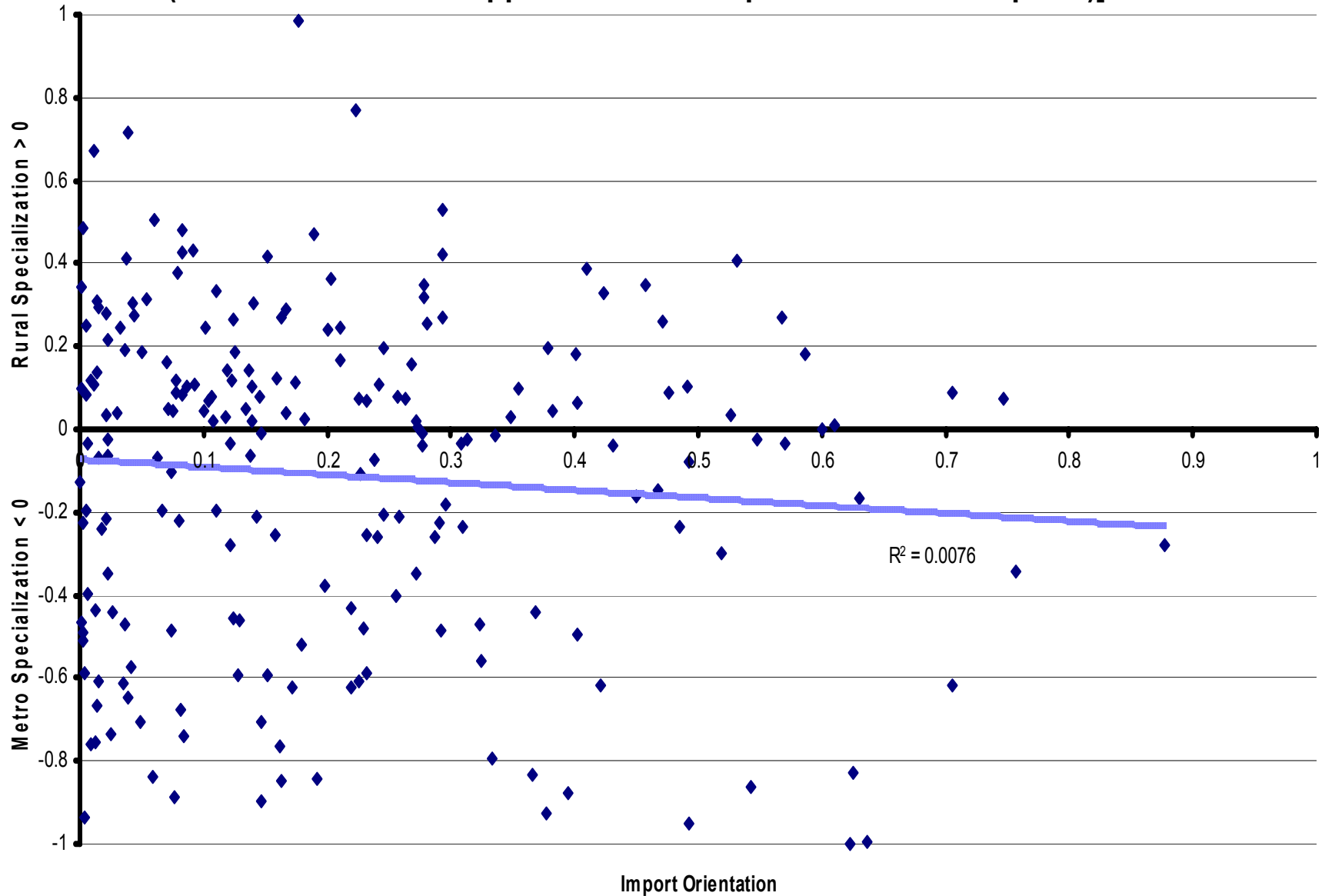
- Technology Orientation

- OECD Classification of High Tech, Medium High Tech, Medium Low Tech and Low Tech Industries based on Research and Development spending.



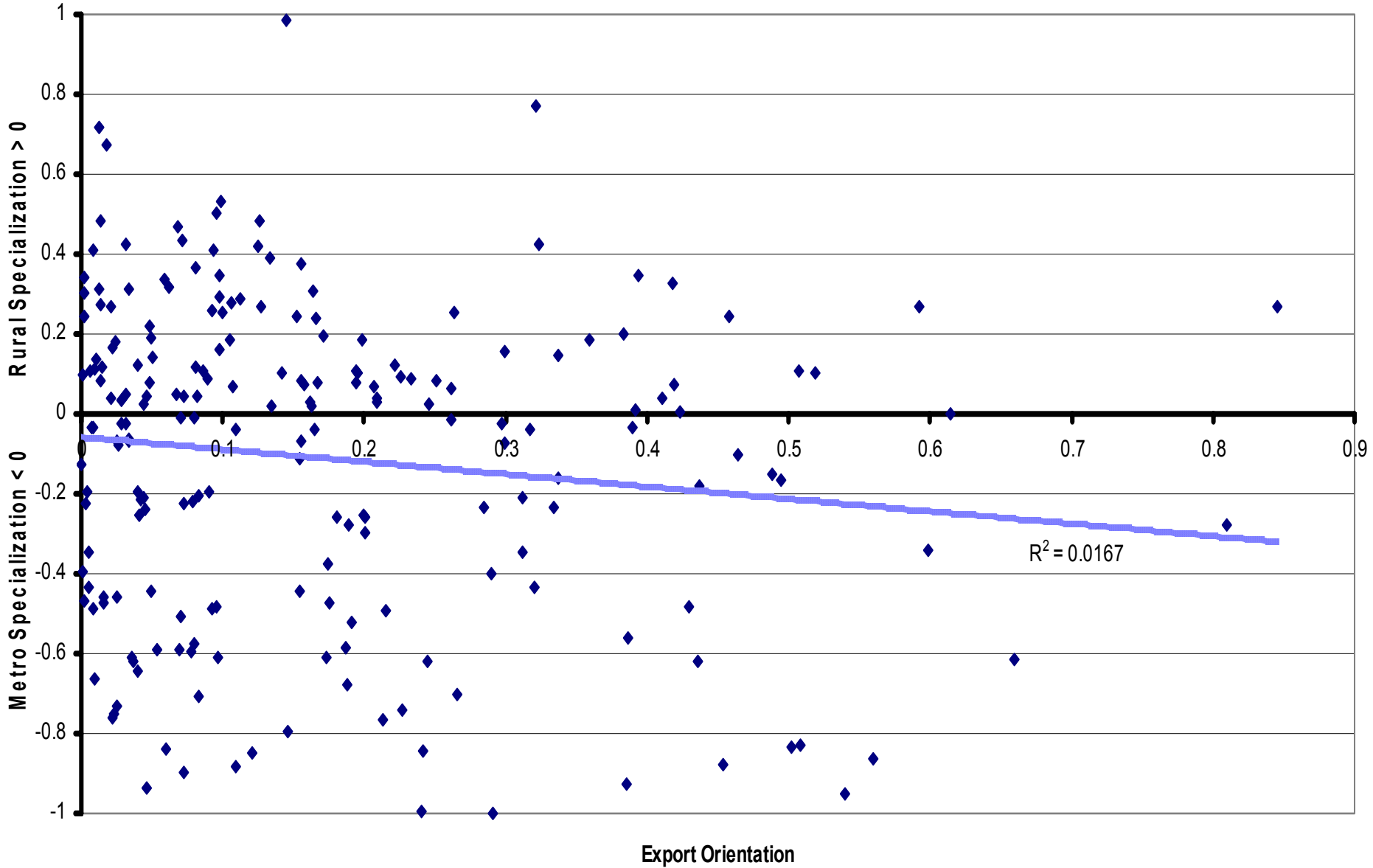
Import Orientation by Rural Specialization

(Value of Imports/
(Value of Products Shipped - Value of Exports + Value of Imports))



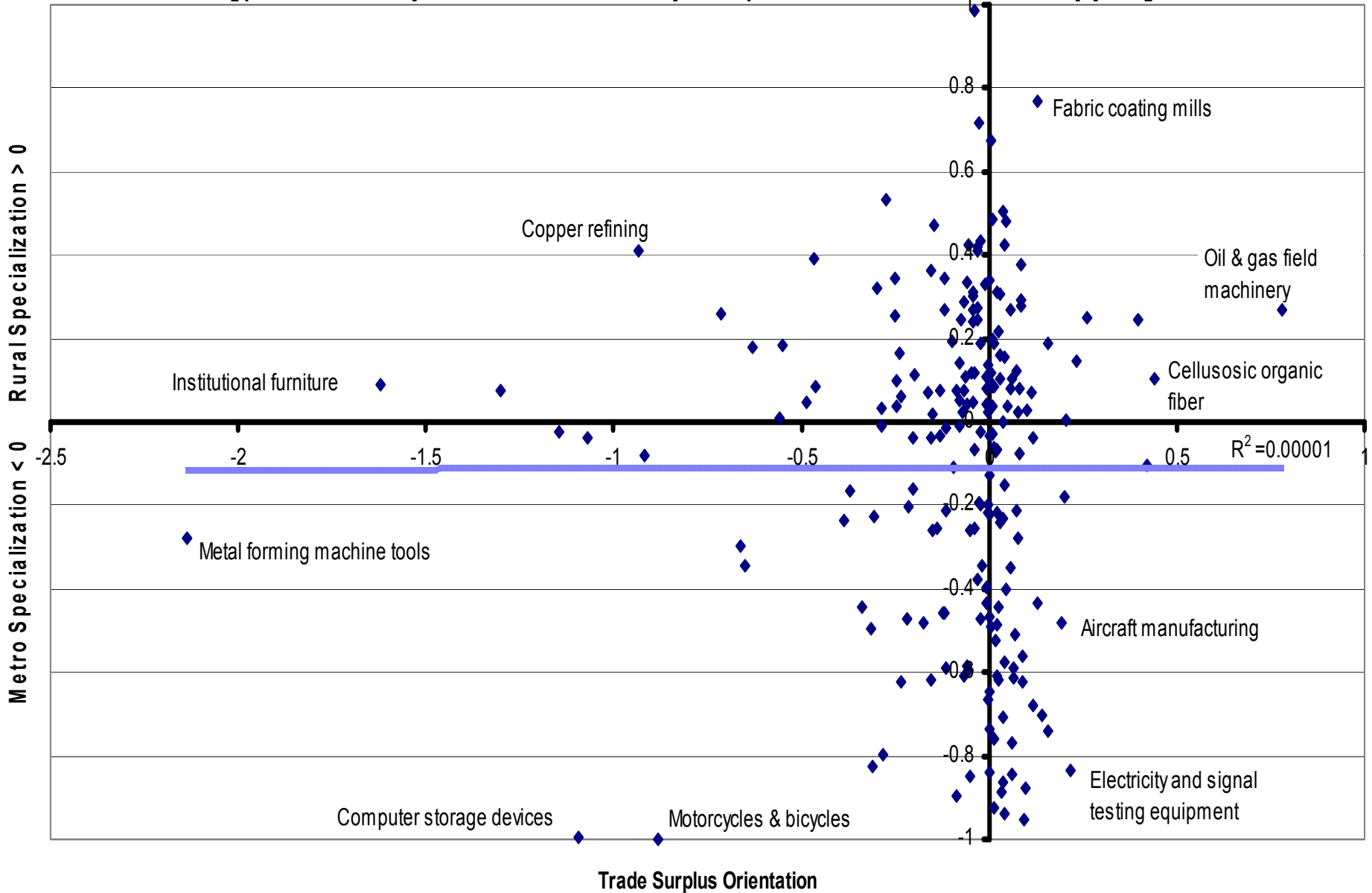
Export Orientation by Rural Specialization

[Value of Exports/Value of Products Shipped]



Trade Surplus Orientation by Rural Specialization

[(Value of Exports - Value of Imports)/Value of Products Shipped]

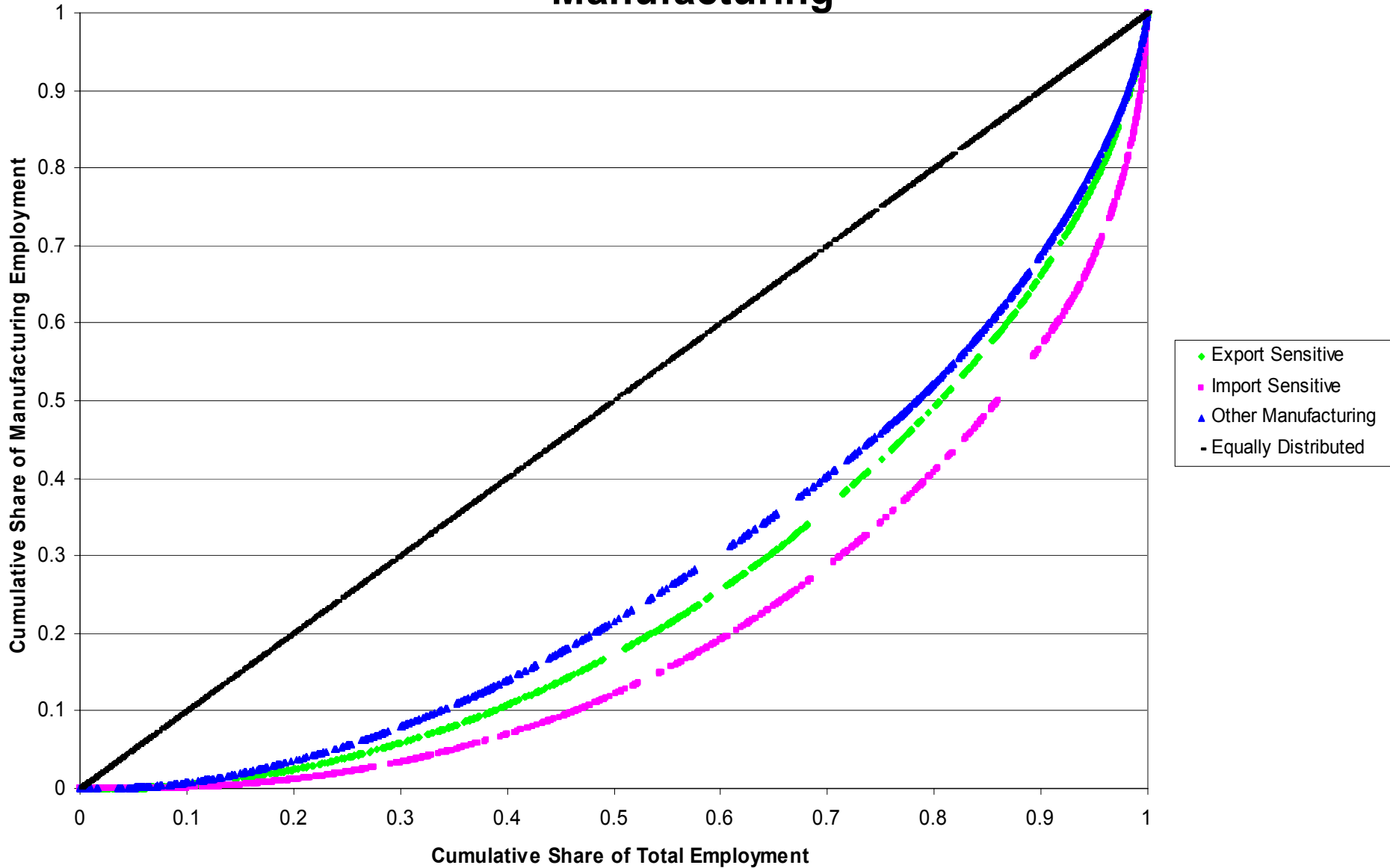


But Are Rural Counties More Vulnerable to Import Competition?

- Median import orientation:
Nonmetro Counties = 17.6% Metro Counties = 18.5%
- But manufacturing makes up 19% of earnings in nonmetro counties vs. 13% in metro counties
- Roughly 10% of nonmetro counties are highly import sensitive (import orientation > 30%) compared with roughly 5% of metro counties
- Greater geographic concentration of import sensitive industries means that some local adjustment much more difficult than national adjustment

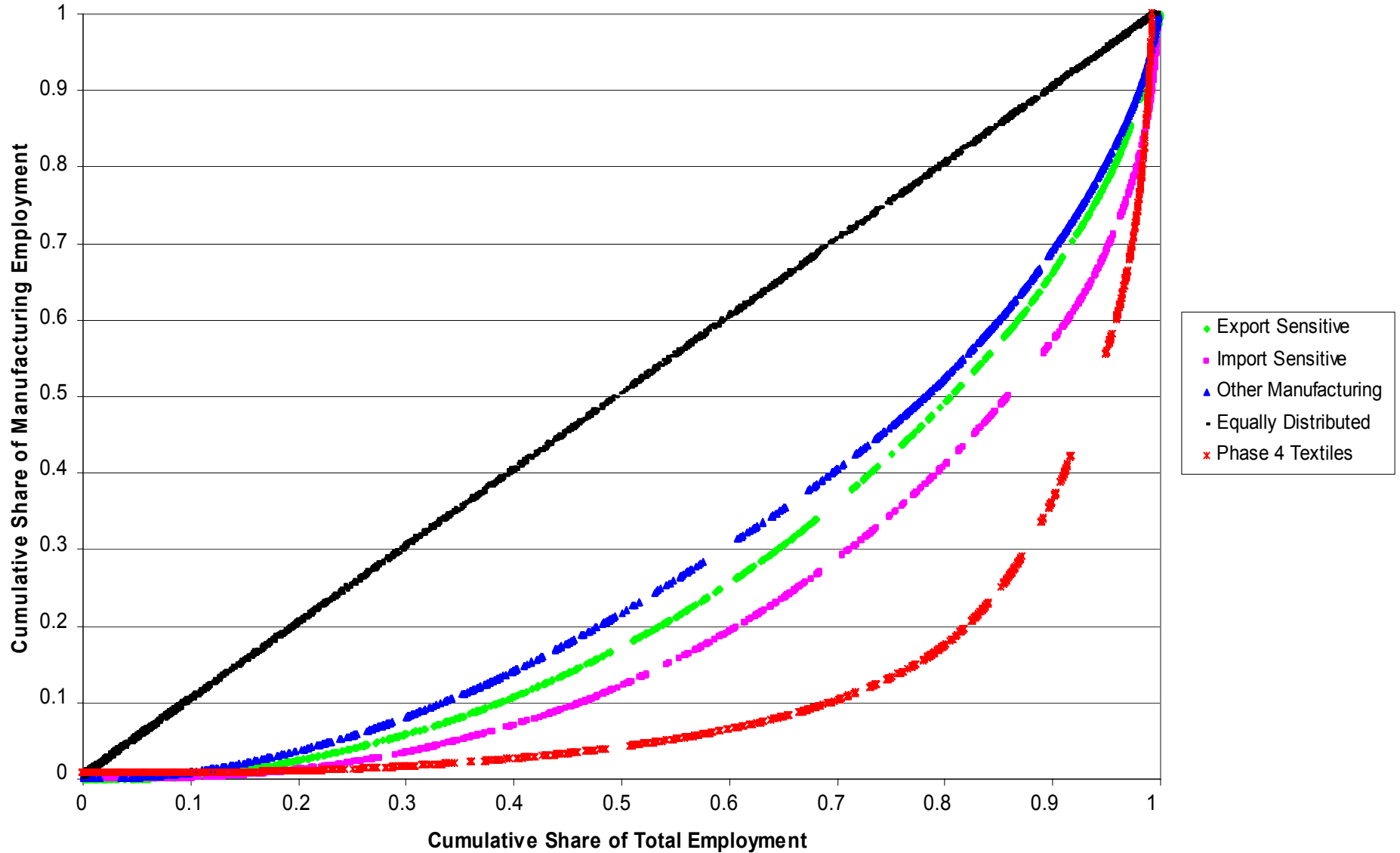


Geographic Concentration of Import and Export Sensitive Manufacturing



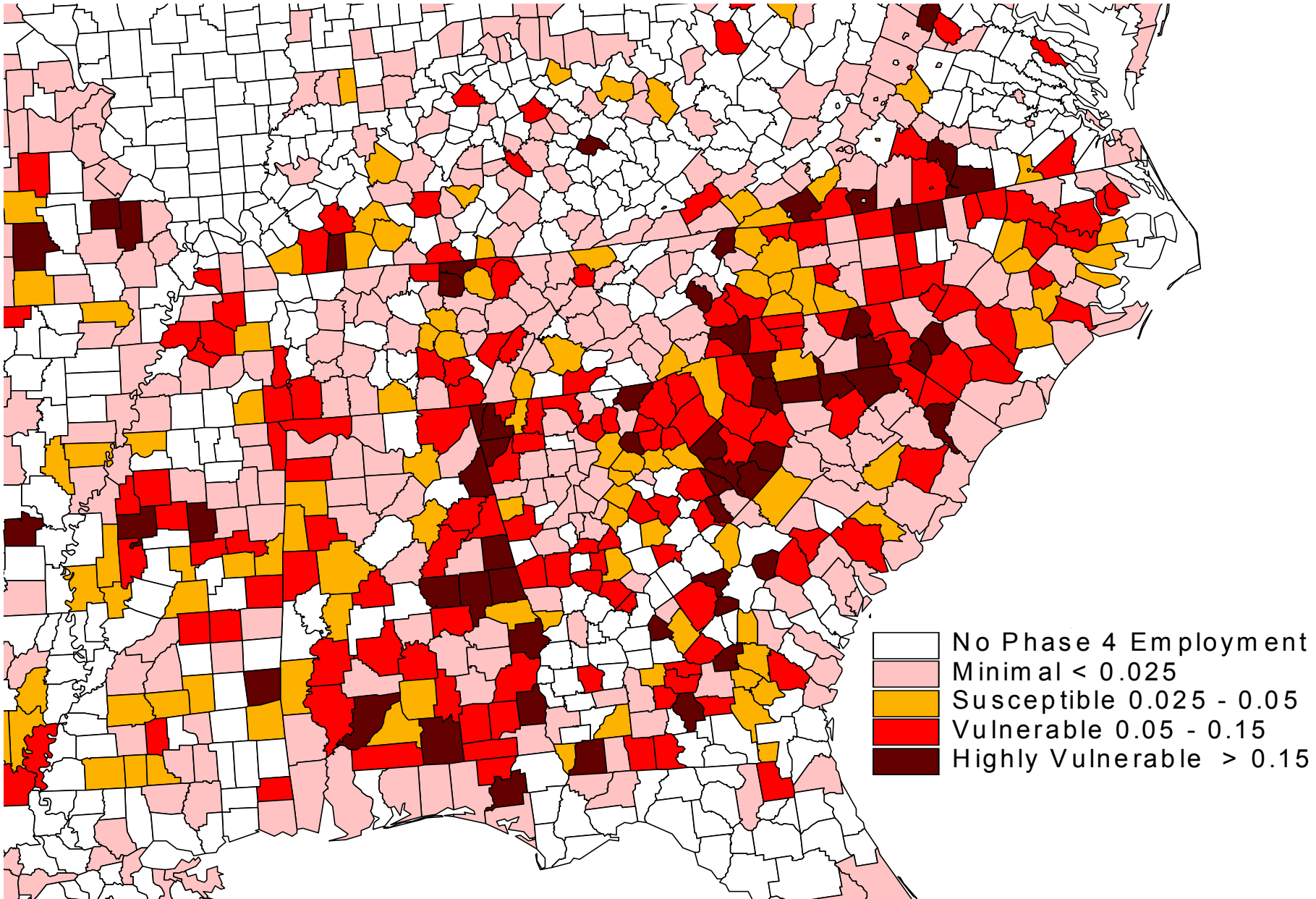
Source: 2001 Census of Employment and Wages, BLS

Geographic Concentration of Textile and Apparel Industries Losing Quota Protection in 2005

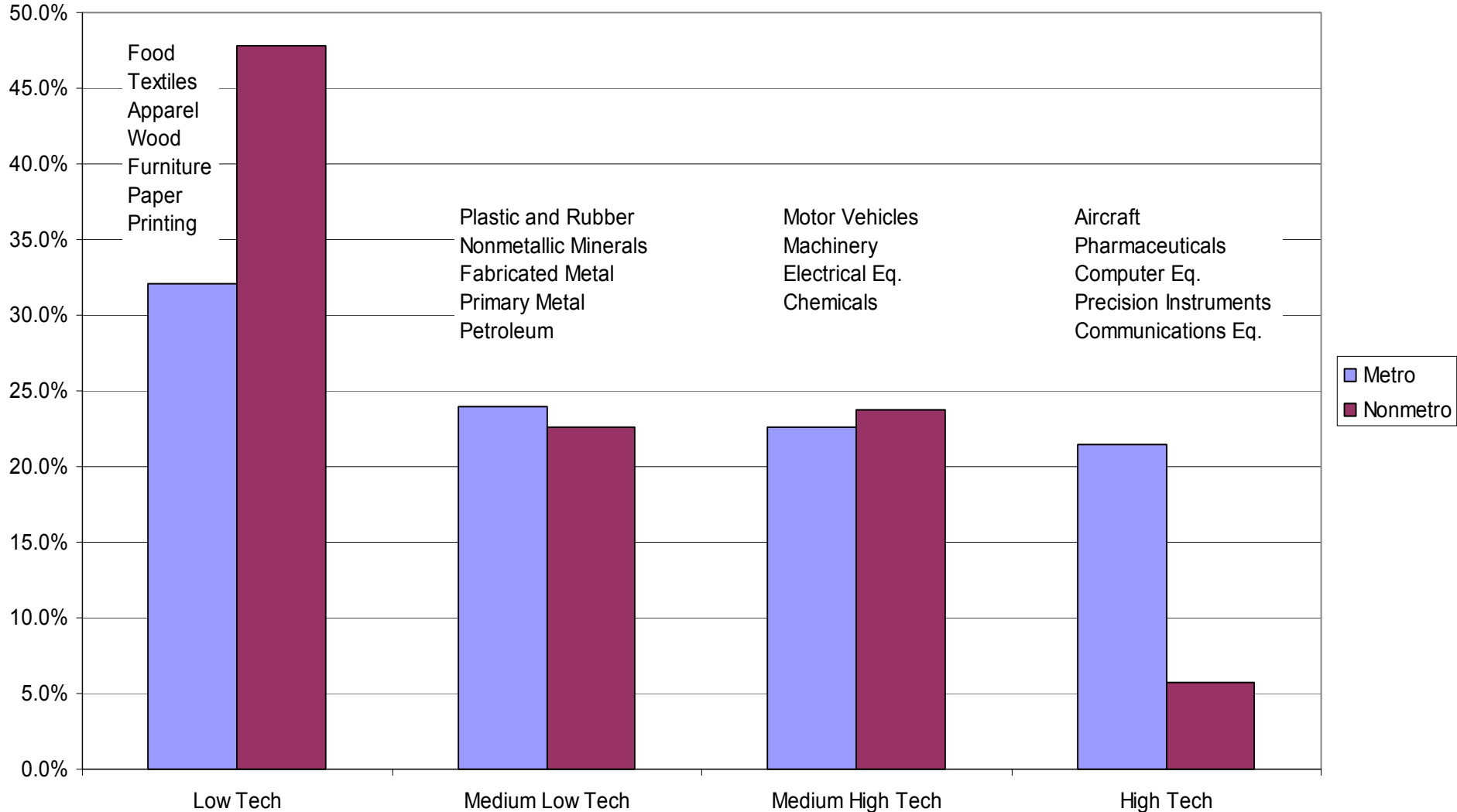


Source: 2001 Census of Employment and Wages, BLS

Employment Share of Textile and Apparel Industries Losing Quota Protection in 2005 (Phase 4)



Technology Orientation of Metro and Nonmetro Manufacturing by Employment Shares, 2001



Source: Census of Employment and Wages, BLS

Low Tech Contains Both Import Sensitive and Relatively Insular Industries

- A quarter of low-tech employment is in industries with very little import penetration
- Less than a sixth of low-tech employment is in industries that are import sensitive
- Rural specialization in low tech industries may provide some insulation to job loss as was true in the 2000-2003 downturn
- Does rural specialization in low-skill *functions* pose a greater threat of job loss?

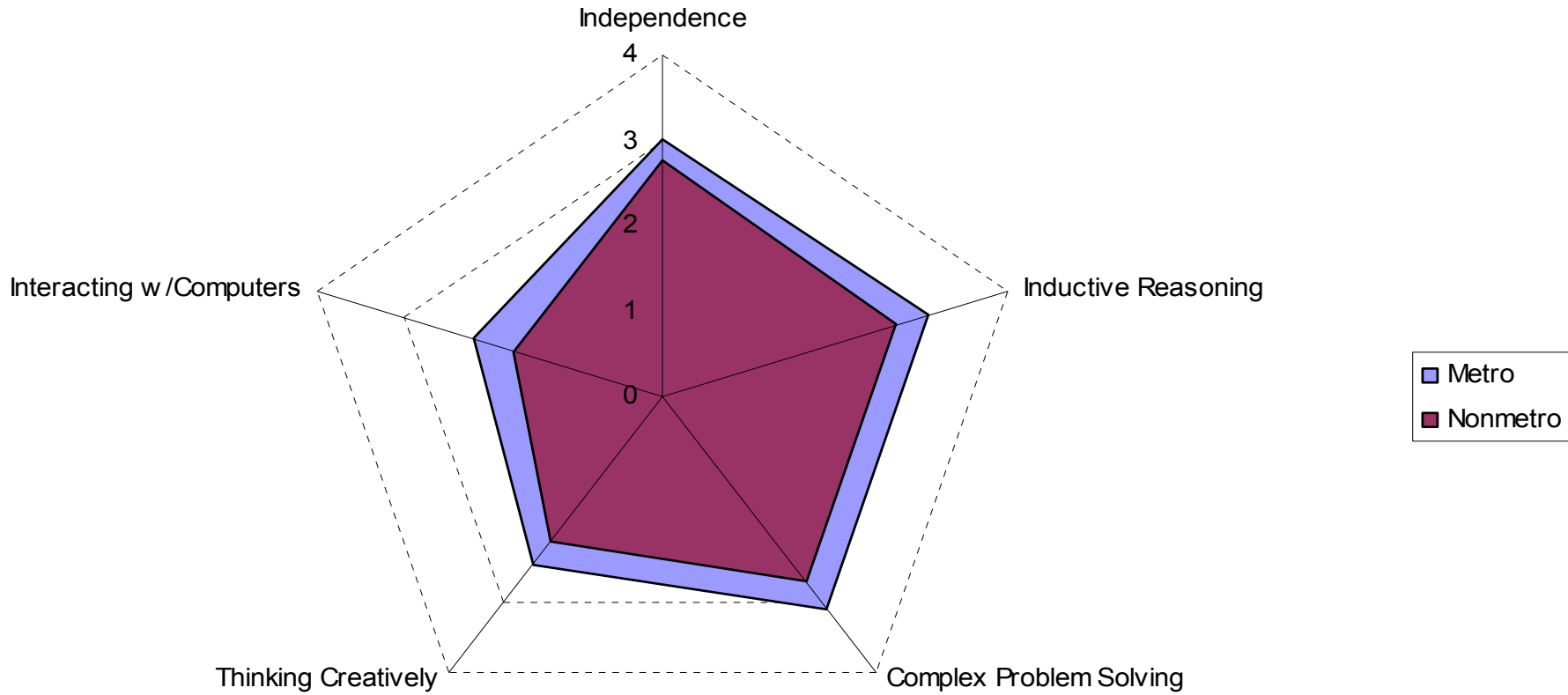


What Do Rural Workers Do?

- Summarize 5 skill dimensions
 - Independence
 - Inductive Reasoning
 - Complex Problem-Solving
 - Thinking Creatively
 - Interacting with Computers
- ...for 472 detailed occupations
- ...by Metro and Nonmetro place-of-work

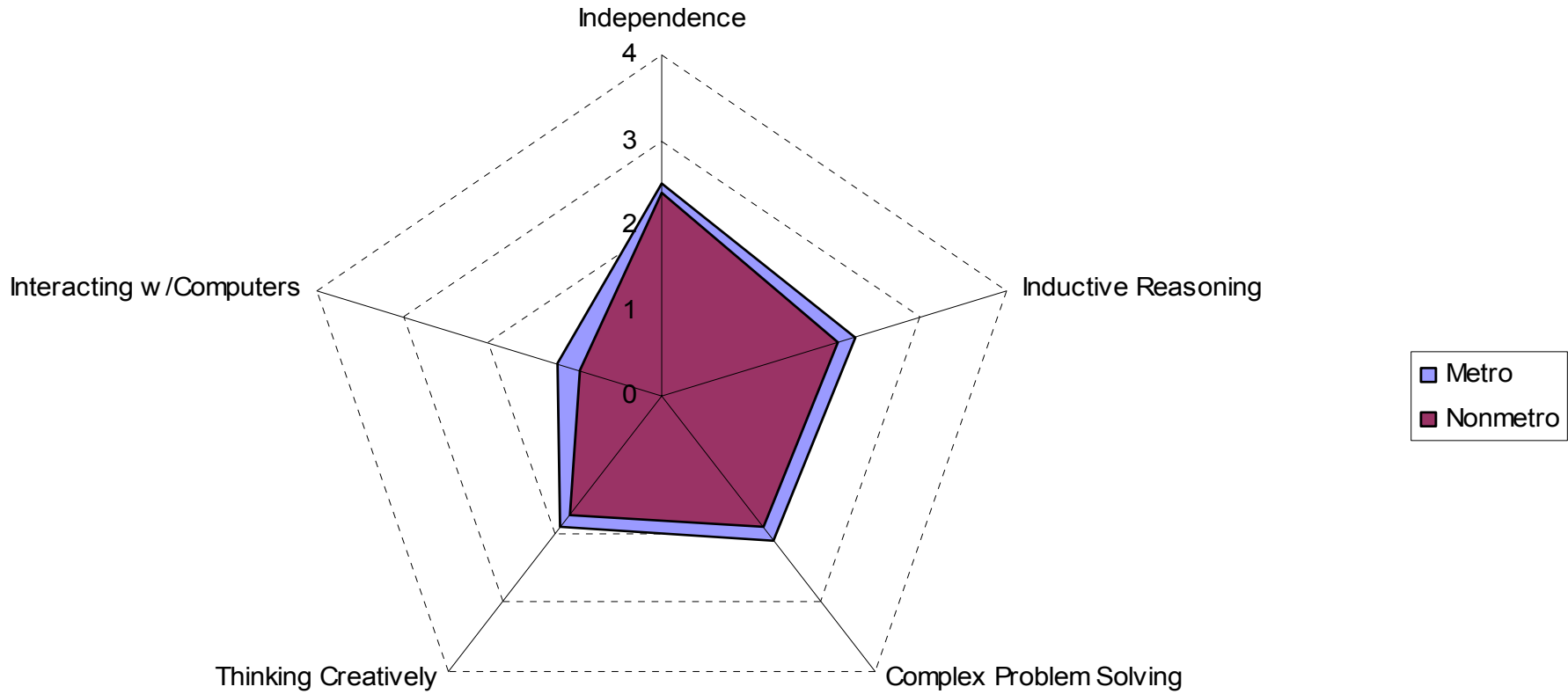


Skill Profile of Metro and Nonmetro Manufacturing Employment



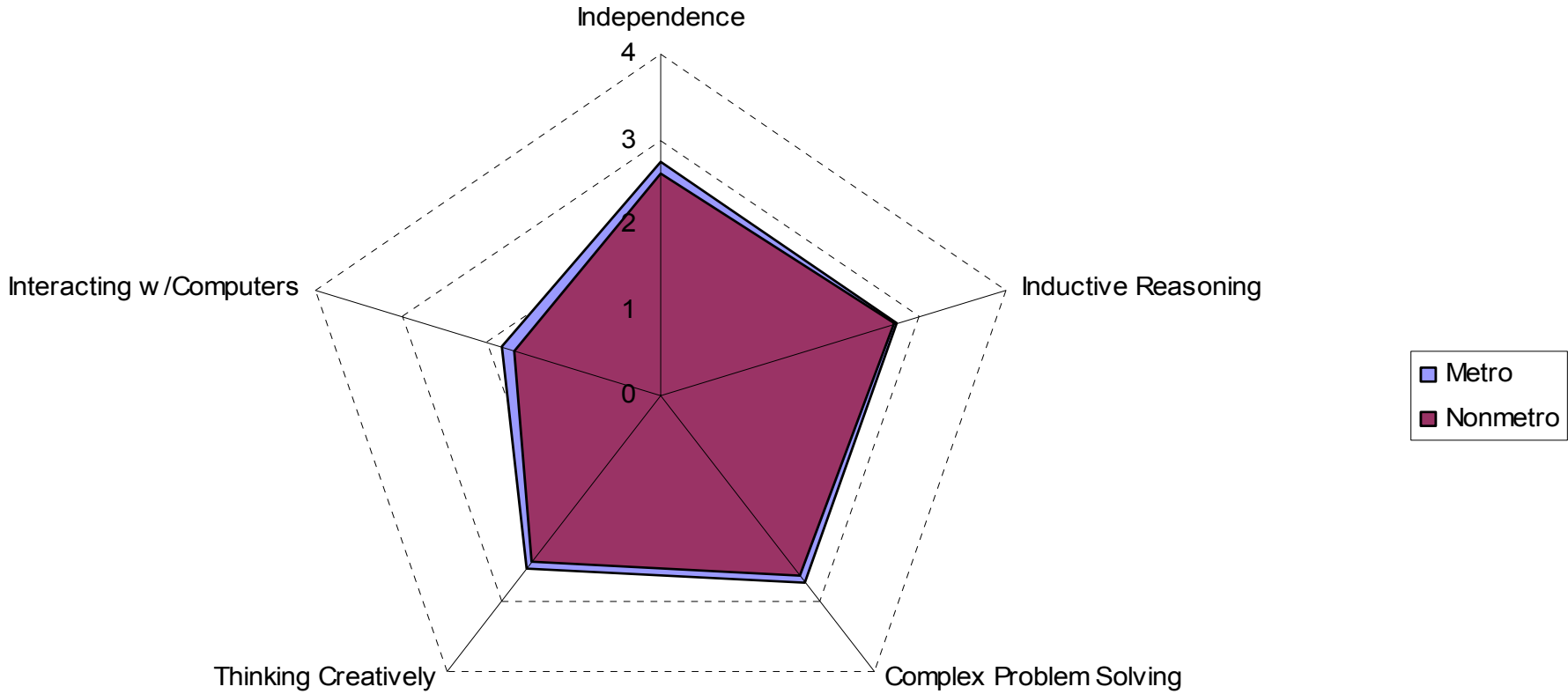
Source: O*NET 7.0 Database (ETA) and EEOC Special Tabulation of the 2000 Census of Population and Housing

Skill Profile of Apparel Industry Employment



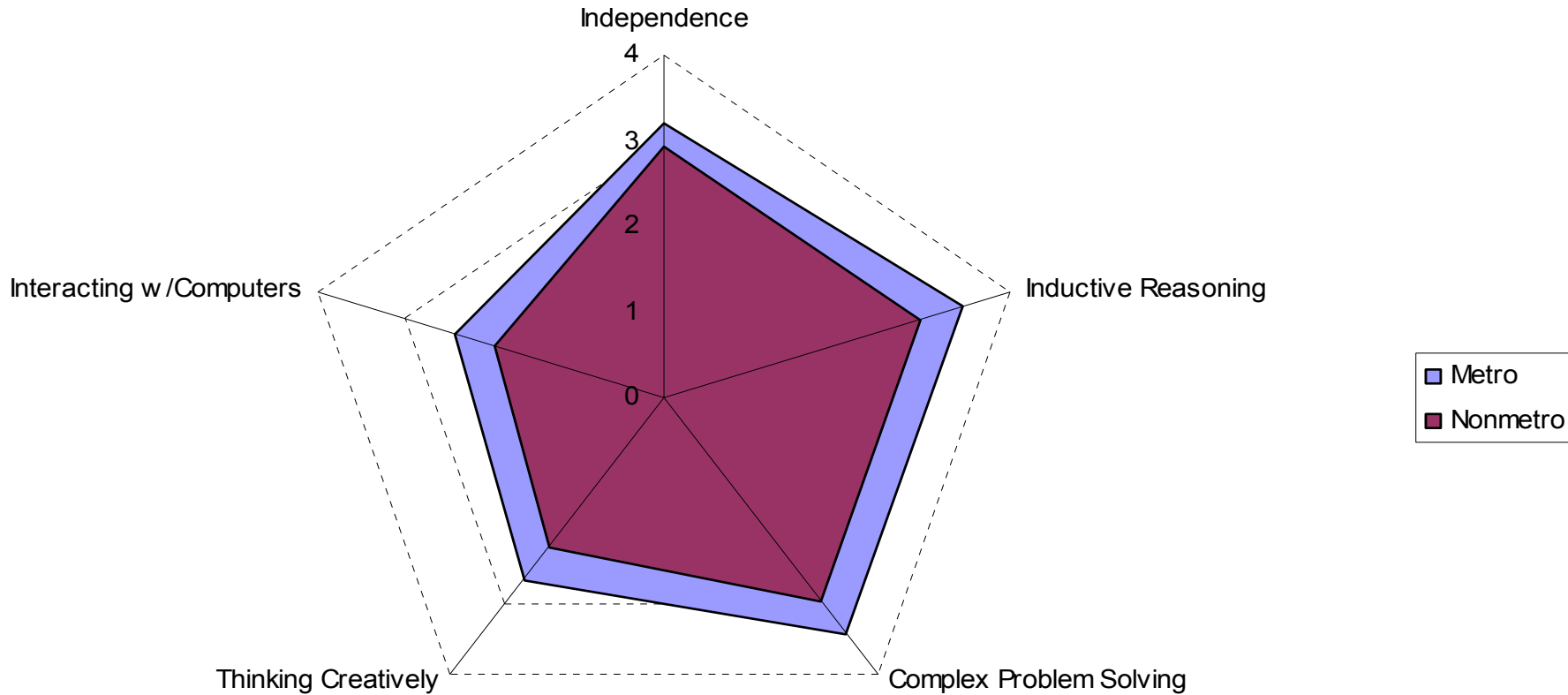
Source: O*NET 7.0 Database (ETA) and EEOC Special Tabulation of the 2000 Census of Population and Housing

Skill Profile of Food Industry Employment



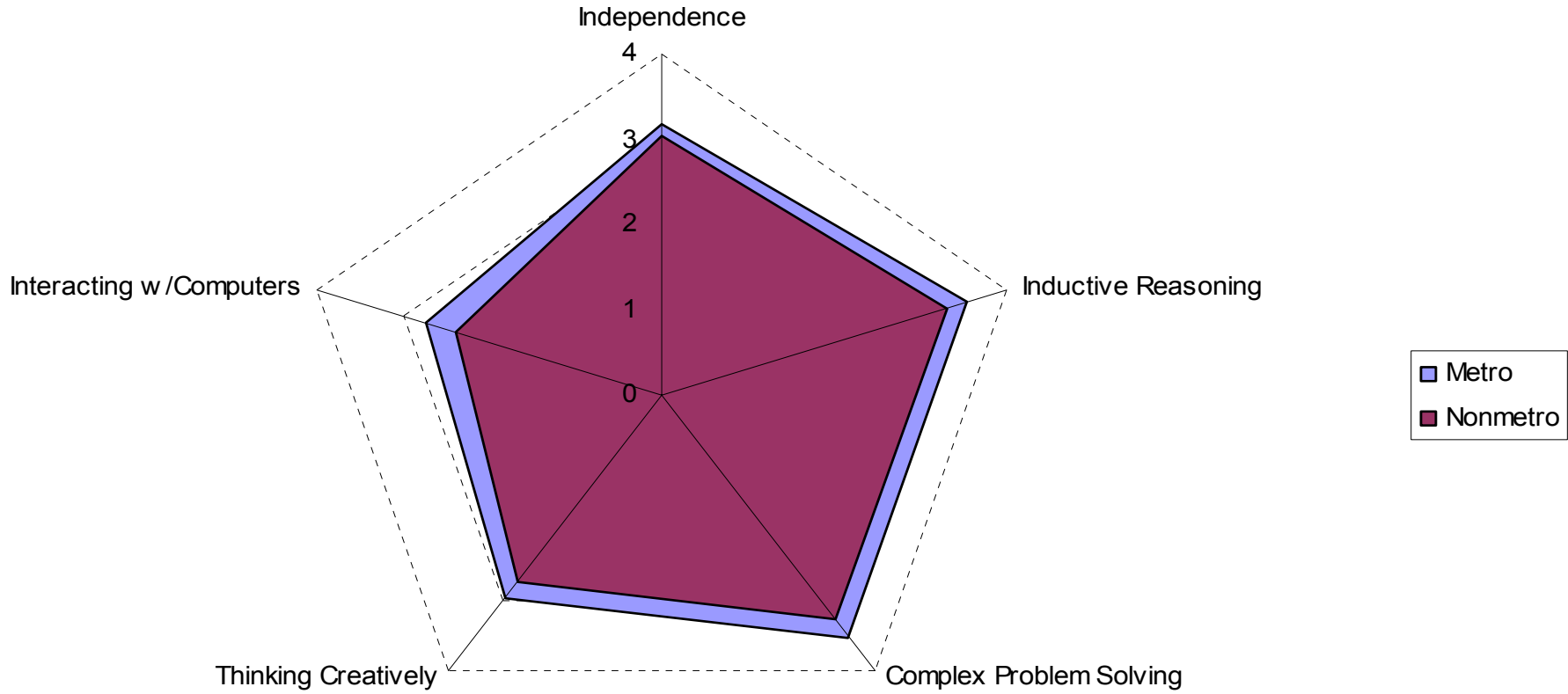
Source: O*NET 7.0 Database (ETA) and EEOC Special Tabulation of the 2000 Census of Population and Housing

Skill Profile of Transportation Equipment Manufacturing Employment



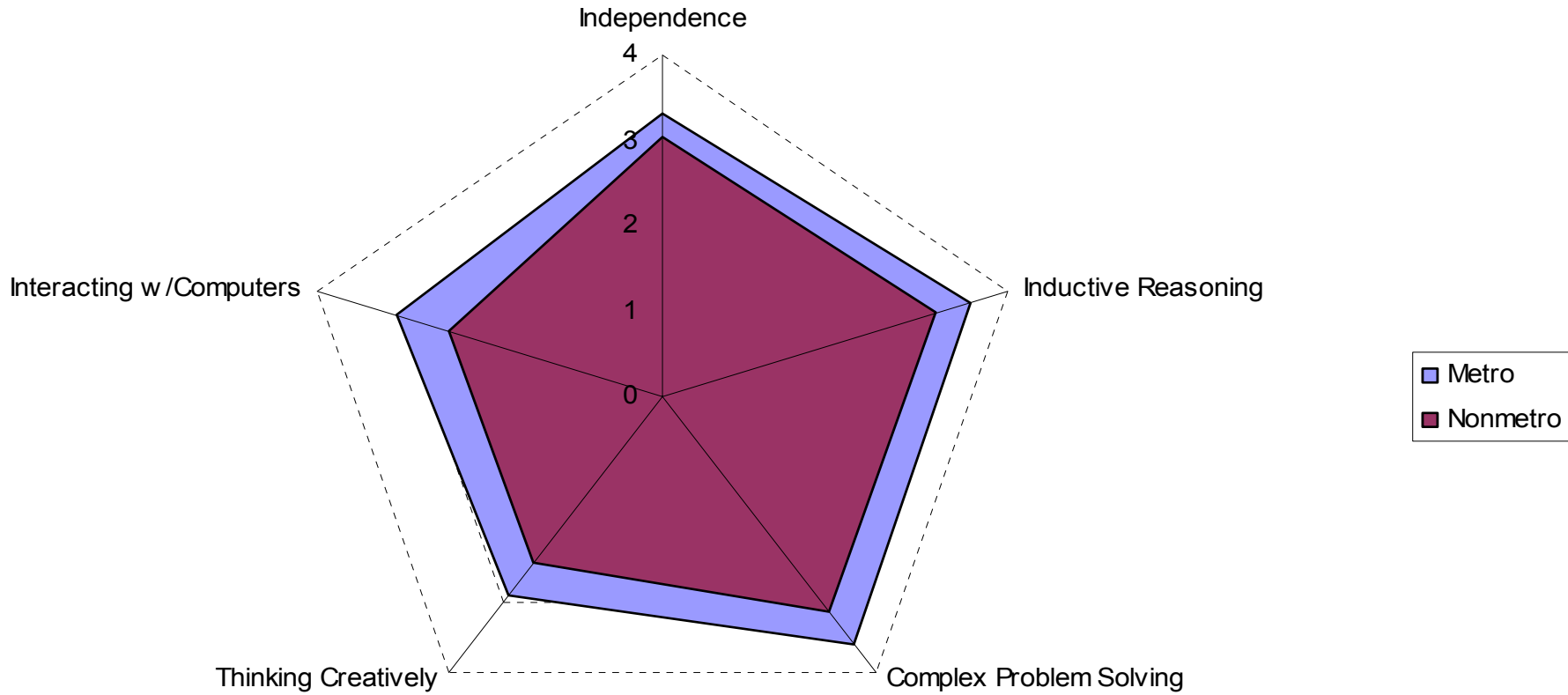
Source: O*NET 7.0 Database (ETA) and EEOC Special Tabulation of the 2000 Census of Population and Housing

Skill Profile of Chemical Industry Employment



Source: O*NET 7.0 Database (ETA) and EEOC Special Tabulation of the 2000 Census of Population and Housing

Skill Profile of Computer Industry Employment



How Do Rural Workers Do Their Work?

- There are no low tech industries, only low tech firms
--Council on Competitiveness
- Presumption that innovative management practices much more prevalent in metro firms
- Refuted by empirical evidence
- In fact, rural plants are more likely to be registered to the ISO 9000 Quality Assurance Standards than comparable metro plants



High-Wage Competitiveness and ISO 9000

- Perform exactly as promised
 - Contract review
- Delight the customer
 - Corrective and preventive action
- Exploit organizational learning to drive higher efficiencies
 - Continuous improvement

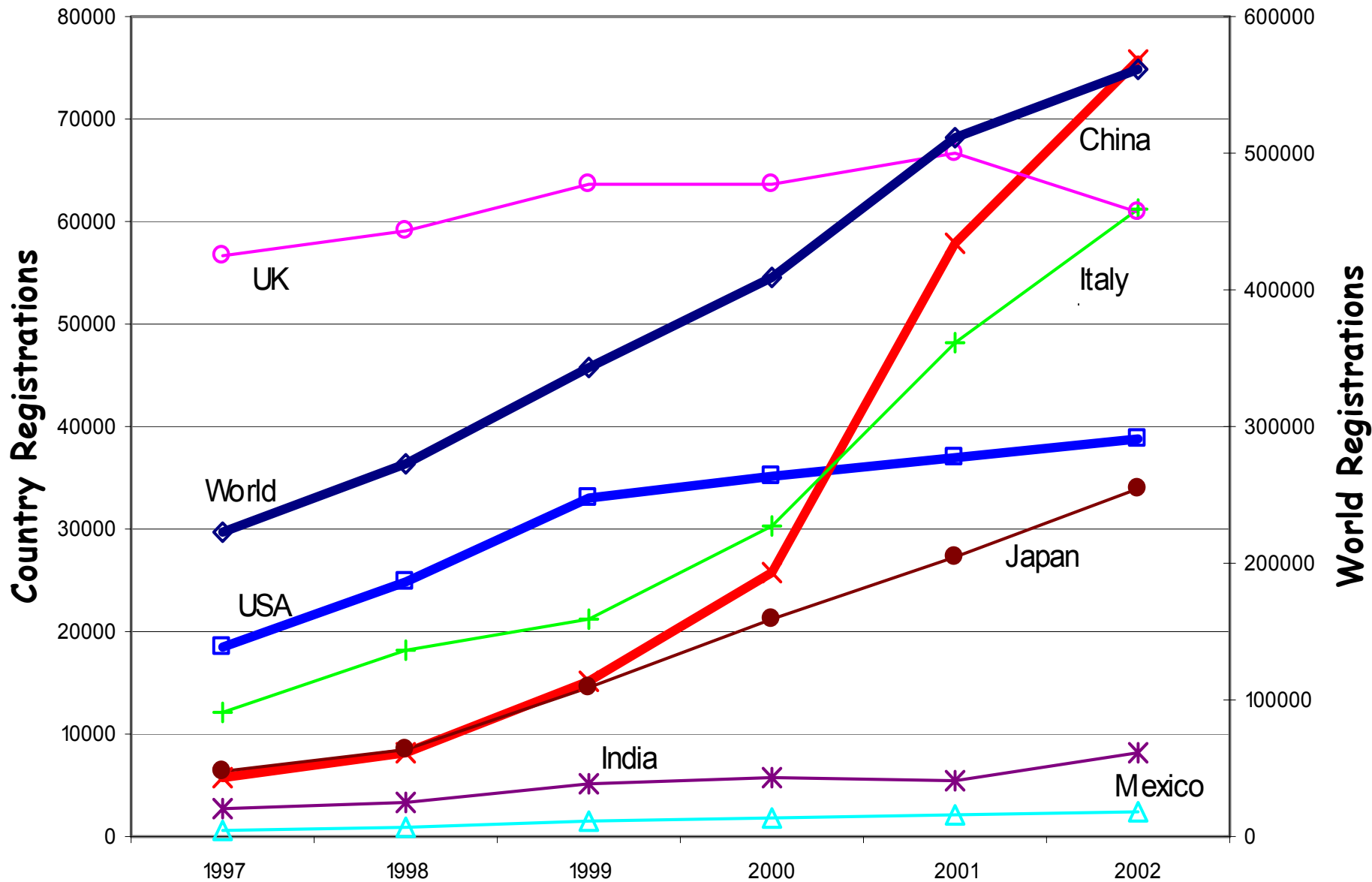


ISO 9000 Adoption Rates in US

- Varies greatly by industry—license to compete in some, virtually absent in others
- Overall, roughly 20% of establishments with more than 10 employees are registered
- After controlling for industry, nonmetro establishments are more likely to be registered than metro peers
- The same signaling function valuable to rural firms may also be valuable to offshore firms



ISO 9000 Registrations in World and Selected Countries: 1997 - 2002



Good news, bad news and a caveat

- Rural areas are not merely way stations for low-wage work headed overseas—viable high wage competitors
- Import sensitive manufacturing is geographically concentrated, with 10% of rural counties dependent on industry vulnerable to job loss
- Restructuring is not an event but a process: heightened capability of rural manufacturers parallels progress in some low-wage countries

