Keystone Research Center

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Stephen A. Herzenberg is the Executive Director of the Keystone Research Center (KRC) and a Ph.D. in economies from MIT.

Before joining KRC, Dr. Herzenberg taught at Rutgers and worked for the Office of Technology Assessment (OTA) and the U.S. Department of Labor (USDOL). While at the USDOL, he served as deputy chief negotiator for the labor side agreement to the North America Free Trade Agreement.

Most of Dr. Herzenberg's research analyzes the forces driving economic performance and job quality and how policy might be adapted to the broad change in economic conditions associated with the transition to a more global but also more service-oriented economy. The specific topics on which hc has written include the auto industry, international labor standards, work organization, labor markets, and industrial development

Among his many publications and contributions to policy journals and books are:

- (with John A. Alic and Howard Wial), New *Rules for a New Economy: Employment an4 Opportunity in Postindustrial America*, a Twentieth Century Fund book, (Ithaca. Cornell University Press, 1998)
- U.S.-Mexico *Trade: Pulling Together or Pulling Apart?*. an OTA study of U.S.-Mexico economic integration published in September 1992; and
- (with Harley Shaiken) *Automation and Global Production*, which compared the efficiency and quality levels of *U.S.*, Mexican, and Canadian automobile engine plants.
- *Using Industry Data to Guide Workforce Development Spending: A white Paper for Strategic Planning*, prepared for the Allegheny County Commission for Workforce Excellence, *1999.*
- (with John A. Alic and Howard Wial), *Towards a Learning Economy. Issues in Science ad Technology*, Winter 1998-1999.
- (along with Howard Wial and Leslie Nearman) The *State* of *Working Pennsylvania (various years)*, (Harrisburg, PA: Keystone Research Center.
- Stephen A. Herzenberg and David Campbell. *Productivity in U.S. Auto Suppliers*. Working Paper, MIT International Motor Vehicle Program, November 1992.
- *Continental Integration and the Future of the North American Auro Sector.* in Maureen Apptl Molot (ed.), *Driving Continentally: National Policies and the North American Auto Industry* (Ottawa, Ontario: Carleton University Press. 1993).

Dr. Herzenberg was born in Manchester, England, on May 25, *1958,* and emigrated to the United States in January 1970. He became a U.S. citizen in 1979.

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CONSTRUCTIVE VS. DESTRUCTIVE COMPETITION

Statement **of Stephen Herzenberg**
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Public Hearing of the U.S. Trade Deficit Review Commission
Pittsburgh, Pennsylvania
Museum of Art Theater, Carnegie Musem of Art
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Mr. Chairman and honorable members of the Trade Deficit Review Commission, my name is Stephen Herzenberg. I am the Executive Director of the Keystone Research Center, an economic research organization with headquarters in Harrisburg, Pennsylvania. I hold a Ph.D. in economics from MIT. Prior to joining the Keystone Research Center, I conducted research on the auto industry and on the issue of trade and international labor standards for 10 years, seven of them at the International Bureau of the U.S. Department of Labor and the U.S. Congressional Office of Technology Assessment. (During my last year at the U.S. Labor Department, I served as an assistant to the chief negotiator of the labor side agreement to the North American Free Trade Agreement.)

In my remarks today, I want first to consider the impact of trade on the metropolitan area and state that host these hearings today. In the second half of my remarks, I will use the experience of the U.S. auto industry to raise fundamental questions about current U.S. trade policy. The central question that I wish to put before the Commission is whether the ahistorical neoclassical economic framework is the most powerful way to think about trade and economic integration and thus a good guide to public policy. My own view is that it is not.

The Destruction of the Old Economy in Pennsylvania

Pennsylvania, especially the Western half anchored by the Pittsburgh metropolitan area, was almost synonymous with the post-World War II manufacturing-based U.S. economy. In 1970, manufacturing accounted for 35 percent of Pennsylvania jobs. Within the Keystone state, unions negotiated middle-class wages for blue-collar workers in steel mills, coal mines, and apparel shops (as well as non-manufacturing workers in industries such as construction, trucking, and supermarkets). Family-supporting wages enabled one parent to remain at home with young and sometimes school-age children. As a result of its concentration of middle-class manufacturing jobs, Pennsylvania in 1979 had the second most equal family income distribution in the nation (measured by the income of the middle 20 percent of families relative to the income of the richest 20 percent of families).[1]

The shrinkage of the manufacturing sector, accelerated by the trade deficits of the early 1980s, hit Pennsylvania hard. From 1970 to 1995, Pennsylvania lost 39 percent of its manufacturing jobs, the rest of the United States less than 2 percent. In absolute numbers, Pennsylvania

[1] Pennsylvania was in a virtual tie for the second most equal income distribution with two other states. Data in this and the next two paragraphs come from Stephen Herzenberg with Lesley Nearman, *The State of Working Pennsylvania 1996* (Harrisburg: Keystone Research *Center, 1996).*

lost almost twice as many manufacturing jobs as the rest of the nation put together. From 1980 to 1994, compositional changes in industry employment in the state – primarily the decline in Pennsylvania manufacturing employment -- accounted for a $1,000 decline in average annual wages. (That is, if the employment share of all industries in the state had been the same in 1994 as in 1980, Pennsylvania average annual wages would have been $850 higher.)

In the 1980s, the most difficult decade for U.S. working people since the 1930s, Western Pennsylvania saw its household income decline by more than all but two U.S. states – Louisiana and West Virginia. The state also plummeted from second in the state family income equity rankings to 26th.

When their major plants shut down, Pennsylvania places that symbolized a century of industrial development and a century of American history began to resemble ghost towns: Braddock, Aliquippa, Clairton, McKeesport, Rochester, East Pittsburgh, Duquesne, Beaver Falls, Monesson, Homestead. In Homestead, the U.S. Steel Works that Andrew Carnegie bought in 1883 closed its doors in 1986. As well as factories, a way of life and the communities they sustained disappeared.

For Pennsylvania and metropolitan Pittsburgh, the 1990s have been a better decade than the 1980s. But working people have not recovered the ground that they lost in the 1980s. For example,

in 1998, the inflation-adjusted median wage of Pennsylvania workers remained 49 cents per hour below its 1979 level (compared to 35 cents per hour lower nationally) -- $1,000 less in annual income for a full-time, full-year worker;

men in Pennsylvania (and nationally) have seen their median wage fall $1.80 per hour, while African-American Pennsylvania remain $3.21 per hour behind their 1979 earnings – some $6,420 behind for a full-time, full-year worker;'

in 1997 (the latest year for which we have computed these figures), the median wage for Pittsburgh-area workers stood $2.55 below its 1979 level. While in 1979 Pittsburgh-area workers made $1.35 per hour more than Philadelphia-area workers, by 1997 they made $2 per hour less;

job growth in Pennsylvania remains sluggish relative to the rest of the country. From 1994-97, employment expanded 7.5 percent in the United States but only 4 percent in Pennsylvania. In metropolitan Pittsburgh, job growth from 1994 to 1996 equaled 1.9 percent, compared to 2.9 percent in the state as a whole.[3]

far, Pittsburgh's efforts to redefine itself as a high-tech, post-industrial city are not expanding economic opportunity for working people or rebuilding the middle class.

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[2] This and the previous bullet come from Howard Wial, *The State of Working Pennsylvania* 1999 (Harrisburg: Keystone Research Center, 1999).

[3] This and the previous bullet come from Stephen Herzenberg and Howard Wial, The State *of Working Pennsylvania 1998* (Harrisburg: Keystone Research Center, 1998).

Others who testify before this committee will report on research that attempts to disentangle the impact of trade (and trade deficits) on the labor market from the impact of other variables (such as immigration, declining union density, the real value of the minimum wage, and skill-biased technological change). While that research is valuable, the impact of these factors is not, in fact, separable. Trade, and trade deficits, have had a lead role in the transformation of power relations and wage-setting institutions that lie behind the dramatic shifts in U.S. wage distribution *over* the past two decades.

Unnatural Selection in the Auto Parts Industry: the Survival of the Fattest

Having considered some of the social cost: of trade and trade deficits, I now turn to their economic consequences. The standard view is that the economic benefits of trade outweigh the social costs - there are net gains from trade. The economic benefits supposedly result from improvements in allocative efficiency, exploitation of increasing returns to scale (possible because trade allows companies in an integrated market to specialize in producing larger volumes of a smaller range of products), or through competition and "creative destruction."

The industry through which I want to consider the economic consequences of trade is the U.S. auto sector. As you heard earlier today, the auto industry has consistently accounted for a large share of the U.S. trade deficit. This year, the auto industry will account for a trade deficit in the neighborhood of $100 billion (see Table 1).

Since the late 1970s, production within the U.S. auto industry has been, revolutionized, in part because of rising imports from Japan and Japanese foreign direct investment. Many analysts have seen this transformation as having unambiguously positive effects. In 1990, for example, Womack and co-authors predicted that industry restructuring based on the Japanese "lean production" model would raise productivity and quality, create efficient assembler-supplier networks, and create rising wages and more rewarding jobs for production and white-collar workers.[4] It hasn't quite worked out that way.

[4] James Womack, Daniel Jones, and Dan Roos, *The Machine that Changed the World (New* York: Rawson Associates, 1990). This book also predicted that balanced North America-Asia trade in automobiles and parts would result from the emergence of a North American auto production system modeled after the one in Japan. Womack, however, backed away from this position in Congressional testimony during the debate over the North American Free Trade Agreement. Womack acknowledged that "[Japanese lean] production, *once* set up *in one* place, has no tendency to migrate," partly because firms must stay home to maintain the employment security that gives workers more incentive to contribute to performance improvement. Cited in Stephen Herzenberg, "Continental Integration and the Future of the North American Auto Sector," in *Driving Continentally: National Policies* and *the North American Auto Industry* (Ottawa: Carleton University Press, 1993).

Table 1. U.S. Imports, Exports, and Net Exports in the Motor Vehicles and Equipment Industry (billions of current dollars)

	Imports for Consumption			
	1992	1998	1998	1999
			Jan.-Aug.	Jan.-Aug.
Canada	28.9	48.5	29.8	39.0
Japan	30.0	34.7	22.8	25.5
Mexico	5.5	18.2	11.8	14.2
Germany	6.5	14.0	9.2	10.9
United Kingdom	0.8	2.4	1.6	1.7
Sweden	1.5	2.2	1.2	1.4
Korea	0.9	1.9	1.2	1.9
China	0.1	0.3	0.2	0.3
All Other	3.0	5.6	3.4	4.3
Total	77.2	127.8	81.2	99.2
	U.S. Domestic Exports			
	1992	1998	1998	1999
			Jan.-Aug.	Jan.-Aug.
Canada	18.7	31.2	20.3	22.8
Japan	1.4	2.5	1.6	1.4
Mexico	4.1	7.9	5.4	5.0
Germany	1.6	1.9	1.3	1.3
United Kingdom	0.4	1.0	0.6	1.0
Sweden				
Korea	0.3	0.3	0.2	0.2
China				
All Other	9.8	9.3	6.7	5.0
Total	36.3	54.1	36.1	36.7
	U.S. **Net** *Imports*			
	1992	1998	1998	1999
			Jan.-Aug.	Jan.-Aug.
Canada	10.2	17.3	9.5	16.2
Japan	28.6	32.2	21.2	24.1
Mexico	1.4	10.3	6.4	9.2
Germany	4.9	12.1	7.9	9.6
United Kingdom	0.4	1.4	1.0	0.7
Sweden	1.5	2.2	1.2	1.4
Korea	0.6	1.6	1.0	1.7
China	0.1	0.3	0.2	0.3
All Other	-6.8	-3.7	-3.3	-0.7
Total	40.9	73.7	45.1	62.5

Source: U.S. International Trade Commission Web Page http://dataweb.usitc.gov/

To be sure, case studies, survey data, and government statistics do indicate that U.S. auto assembly plants experienced dramatic improvements in performance in the 1980s.

- According to plant-level data, value-added per labor hour in assembly plants rose 7.5 percent from 1978-88 and 10.3 percent from 1984-1988.[5]

- In addition, quality and reliability improved measurably.

But in auto parts plants, the productivity story is quite different.

- From 1978 to 1988, plant-level data show that value-added per labor hour in the major auto parts industrial classification (SIC 3714) *fell* by 0.4 percent;[6]

- From 1988 to 1996, according to Bureau of Labor Statistics data, productivity growth in SIC 3714 picked up slightly but remained only 1.4 percent annually.'

Simultaneous with low auto parts plant productivity growth, substantial auto employment has shifted to low-wage plants. From 1978 to 1997,

- the number of United Auto Workers members in the auto industry fell from about 900,000 to about 500,000;[8]

- production worker employment in non-union U.S. parts plants mushroomed from an estimated 130,000 to roughly 500,000.[9]

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[5] Stephen Herzenberg and David Campbell, "Productivity Growth in U.S. Auto Suppliers," Working Paper, International Motor Vehicle Program, Massachusetts Institute of Technology, revised December 1993, Table 4b. This paper analyzes a Longitudinal Research Database (or LRD) extract which contains data on auto parts plants in SIC 3714 from 1972 to 1998.

[6] Herzenberg and Campbell, "Productivity Growth in U.S. Auto Suppliers," Table 4b. Analysis of LRD data for 1982-1992 by Okamoto appears *to* show much healthier productivity growth in a sample of U.S. auto suppliers. See Yumiko Okimoto, "Multinationals, Production Efficiency, and Spillover Effects: The Case of the U.S. Auto Parts Industry," *Weltwirtschaftliches Archiv* 1999 135(2), Table 2, p. 253. However, much of this finding is a result of the choice of 1982, as the starting date. 1982 was a year of very low capacity utilization and a productivity trough (see Tables 6-8 and Figures 7-8 of Herzenberg and Campbell, *Productivity Growth;* these show similar accelerations in productivity after 1982. Even so, it takes until 1988 (or beyond) for value-added labor productivity in independent parts suppliers to reach 1978 productivity levels.

[7] Unpublished U.S. Bureau of Labor Statistics data provided by Brian Friedman. In SIC 3711 over this period, BLS data show productivity growth slowing to just under 1 percent annually. This raises questions about how much even assembly plants have achieved "continuous improvement" as opposed to one-time productivity improvements based partly on work intensification.

[8] Big Three assembly and components plants account for about 400,000 of the 500,000 in UAW auto industry employment. UAW membership courtesy of the UAW Research Department.

- employment in Mexican transportation maquiladoras (that make parts for export into the United States and Canada) rose from less than 10,000 to 169,200.[10]

A major incentive for these employment shifts, within the United States as well as to Mexico, has been wage differentials.

- Wages in U.S independent auto suppliers equaled 95 percent of assembly company wages in the 1950s but only 60 percent of assembly company wages by 1989, the last time the U.S. Bureau of Labor Statistics conducted an industry wage survey.[11] In non-union independent parts suppliers, workers in 1989 earned 51 percent of what they did at assembly companies.

- From 1988 to 1998, wage dispersion within the U.S. auto industry increased further. In auto assembly plants (SIC 3711), inflation-adjusted wages fell 2 percent. In the major auto parts SIC (3714), which includes major assembly company component operations (such as engine and transmission plants), wages fell 9 percent. In SIC 3694, engine electrical equipment, a parts segment that has faced substantial competition from Mexico, wages fell 13 percent.[12]

Research by Dan Luria provides further support for the hypothesis that the expanding employment share of low-wage, low-productivity plants is dragging down U.S. economywide performance.[13] Luria analyzes a

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[9] Non-union production worker employment is estimated as total production worker employment in six auto and auto parts Standard Industrial Classification (SIC) codes (2396, 3465, 3592, 3691, 3694, and 371) minus UAW membership. Some other unions also represent auto parts workers and that is not taken into account in these estimates. Employment by SIC code available from the Bureau of Labor Statistics web page (home page www.bls.gov) at http://146.142.4.24/cgi-bin/dsrv

[10] Jorge Carrillo, "Productivity, Income and Labor in the Automotive Industry in Mexico," in Commission for Labor Cooperation, North American Agreement on Labor Cooperation, *Incomes and Productivity in North America* (Dallas: Commission for Labor Cooperation, 1998), Table 9.9, p. 218.

[11] U.S. Department of Labor, *Wage Structure: Motor Vehicles and Parts 1950,* BLS Bulletin 1015 (Washington, D.C.: Bureau of Labor Statistics, February 15, 1951). U.S. Department of Labor, *Wage Structure: Part I -- Motor Vehicles; Part II - Motor Vehicle Parts 1950,* BLS Report 126 (Washington, D.C.: Bureau of Labor Statistics, February, 1958). U.S. Department of Labor, *Industry Wage Survey: Motor Vehicles and Parts. Part I - Motor Vehicles, June 1989.* Part II *- Motor Vehicle Parts, August 1989* (Washington, D.C.: Bureau of Labor Statistics, 1991).

[12] Average hourly earnings by SIC code available from the Bureau of Labor Statistics web page (home page www.bls.gov) at http://146.142.4.24/cgi-bin/dsrv

[13] Daniel Luria, "Toward Lean or Rich? What Peformance Benchmarking Tells Us About SME Performance and Some Implications for Extension Center Services and Mission," paper prepared for the conference *Manufacturing Modernization: Learning from Evaluation Practices and Results,* Atlanta, September 11-12, 1996. Earlier versions of parts of this paper appeared as Daniel Luria, "Why We Have Mediocre Manufacturers," *Challenge,* July-August 1996. See also Daniel Luria, "Training for What? The Public Purpose in a High-Road Manufacturing Workforce," 1997.

proprietary data base containing information on 2,000 establishments employing less than 500 workers. (A disproportionate share of the establishments are auto parts plants in Michigan.) Luria finds that some 15-20 percent of his establishments have rapidly growing productivity growth, nearly 10 percent per year. About 25 percent of small shops have falling value-added and payroll per full-time equivalent employee. The remaining 55-60 percent have essentially stagnant productivity and wage growth (averaging less than 1 percent per year).

Luria's high-performing establishments have uniformly high capital per worker, pay high wages, use more technology, and spend much more per worker on technical training. The bad news is that these plants are often undercut by a combination of demand volatility (which often leaves too much of their expensive capital idle) and the ability of lower-wage shops to outcompete more productive ones on price in standardized types of production (again robbing high-performance operations of demand that enables full utilization of their capital). Whether these pressures drive the high-performing establishment out of business or lead them to abandon a high human and capital investment strategy by slashing wages – "if you can't beat 'em, join 'em" -- the effect on U.S. productivity and wages can be the same.

As in Luria's data set, wide and growing dispersion in productivity and wages across plants characterizes the industrywide auto supplier data set analyzed for the 1972-1988 period by Herzenberg and Campbell (in "Productivity Growth in U.S. Auto Suppliers (see especially Figure 11 showing dispersion in value-added labor productivity in independent parts suppliers.) Here, too, then, the possibility exists that the upper end of the productivity growth distribution may sometimes be beaten in the market by lower-wage firms.

New Trade Rules for **a New Economy**

Most neoclassical economists think of competition as a type of natural selection that automatically improves industrywide performance through the survival of the fittest, most efficient, firms. The experience of the auto parts industry suggests an alternative selection process, a kind of unnatural selection that one might call survival of the fattest – of the least "lean" and productive plants.

Trade can and does reinforce domestic pressures that create the potential of such unnatural selection. The credible threat of moving production to Mexico, or other offshore locations, facilitates the ratcheting down of wages within U.S. parts companies, while reducing the incentive to improve performance. Sharp increases in imports and the trade deficit may be particularly likely to reinforce low-wage strategies; such increases threaten capital utilization, profitability and survival at already struggling high-productivity, high-wage firms.

The conceptual point is that competition and trade can operate in constructive or destructive ways. It is only in the economic sphere that Americans appear to have trouble grasping this point. In the realm of sports, we take for granted that competition can function in different ways. The National Basketball Association's competition committee, for example, modifies the rules periodically to maintain audience appeal. Several years ago, the committee instituted severe penalties for flagrant fouls and prohibited hand checking. The new rules help ensure that fluidity and athletic skill, rather than brute

force and barely contained violence, remain the keys to success on the court. The competition committee, in other words, acted to discourage destructive competition.

The economic world and rules of trade are also human constructs, not states of nature. They lead to competition guided by rules. The issue is the type of competition that the rules encourage. Today, trade rules and domestic policy too often encourage low-wage, low-skill competition and fail to encourage widespread improvement of economic performance. The consequence is that competition, international and domestic, is more destructive and less creative than it could be. Better economic performance and superior social outcomes require better rules.

Sadly, the United States now conducts trade policy without even asking basic questions about its impact on economic development.

- What are the major trends in productivity and other performance indicators in major tradable industries?
- How do these compare with other countries?
- Does trade accelerate or retard the spread of innovative capacity and performance-improving practices that could support higher living standards in the future?

To be sure, the technical challenges and the politics of achieving better trade rules may be complex.[14] But that is no excuse for pursuing trade policy with an almost willful disregard for the economic development process in key industries.

The United States currently uses its enormous political power to manipulate trade rules in ways that serve the interests of powerful multinational corporations. It is time for the United States to use its power to promote mutually beneficial economic development at home and in our major trading partners.

[14] For one set of proposals, see Stephen Herzenberg, "Continental Integration," pp. 284-290. See also U.S. Congressional Office of Technology Assessment, *U.S.-Mexico Trade: Pulling Together or Pulling Apart?* (Washington, D.C.: U.S. Congressional Office of Technology Assessment, 1992). especially PP. 36, 40, and 50-54.