

PRODUCTIVITY, PROFITABILITY AND ECONOMIC SECURITY

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For some time, social economists and conventional economists alike have taken note of a reversal in the historic rise in living standards in the United States and its serious consequences. Namely, for some persons and families, living standards of late have not improved at all and, worse yet, for others their financial fortunes have actually deteriorated. One reason commonly assigned for this economic malaise is a low rate of improvement in productivity. Wallace Peterson, for example, points to 1973 as a “watershed year” for fundamental changes in weekly earnings, family income, and productivity and has branded 20 years of sluggish economic performance the “silent depression” (1990, pp.9, 42).

Specifically, between 1973 and 1994, output per labor hour in the business sector increased at an annual rate of 1.2 percent (see Table 1). At that rate productivity doubles in 58 years. In contrast, overall output per labor-hour grew annually by 2.5 percent between 1948 and 1973 (Peterson, 1994, p.40), a rate at which productivity doubles in only 28 years.

TABLE 1. Index (1982=100) of Output per Hour of all Persons, Private Business Sector: 1973-1994

Year	Output
1973	95.1
1974	93.3
1975	95.5
1976	98.3
1977	99.9
1978	100.5
1979	99.4
1980	98.6
1981	99.9
1982	100.0
1983	102.3
1984	104.8
1985	106.3
1986	108.5
1987	109.6
1988	110.7
1989	109.9
1990	110.7
1991	121.1
1992	115.5
1993	117.0
1994	119.7

Sources: U.S. Department of Labor, 1995b, p.129; Council of Economic Advisers, 1995, p.328.

Although nominal hourly earnings for 1973-1994 grew at an annual rate of 5.6 percent (see Table 2), private-sector workers have received little increase – only about 0.5 percent per year – in real hourly compensation since 1973 (see Table 3). For the individual employee, stalled productivity has frozen his/her standard of living unless that person works longer hours, others in the family or household take up work, he/she acquires income-earning assets or adds to individual or family indebtedness.

TABLE 2. Current-Dollar Average Hourly Earnings of Production or Nonsupervisory Workers at Private Non-Farm Establishments: 1973-1994

Year	Earnings
1973	\$ 3.94
1974	4.24
1975	4.53
1976	4.86
1977	5.25
1978	5.69
1979	6.16
1980	6.66
1981	7.25
1982	7.68
1983	8.02
1984	8.32
1985	8.57
1986	8.76
1987	8.98
1988	9.28
1989	9.66
1990	10.01
1991	10.32
1992	10.57
1993	10.83
1994	11.13

Sources: U.S. Department of Labor 1909-94, pp.2 and 4, and 1995a, p.47.

Between 1973 and 1994 average hourly earnings dropped from 181 percent of the official poverty standard to 156 percent (see Table 4).¹ Thus, the living standards of more and more persons and families in the United States who are officially classified as non-poor are eroding relative to the official poverty standard, especially if their income is entirely or largely in the form of hourly earnings.

Real average family income for families in the lowest quartile was lower in 1992 than in 1980 and the income gap between the lowest quartile and the highest quartile was wider in 1992 than at any time since these data first became available in 1947 (Bernstein, 1994, p.78). A 1995 Harris poll indicated that 67 percent of adult Americans think that the American Dream had

become more difficult to achieve in the past ten years and 74 percent said they expect it to become even more difficult to achieve in the next ten years (*Business Week*, 1995).

TABLE 3. Index (1982=100) of Real Hourly Compensation of all Persons, Private Business Sector: 1973-1994

Year	Compensation
1973	98.1
1974	97.6
1975	98.3
1976	101.3
1977	102.7
1978	103.7
1979	102.3
1980	99.7
1981	99.8
1982	100.0
1983	100.6
1984	100.4
1985	101.5
1986	104.5
1987	104.6
1988	104.8
1989	103.5
1990	103.8
1991	104.4
1992	106.6
1993	106.9
1994	107.5

Sources: U.S. Department of Labor, 1995b, p.129; Council of Economic Advisers, 1995, p.328.

Productivity experts, however, have been hard-pressed to identify fully the origins of the productivity problem and to account for its persistence. Many factors, such as ageing capital plant and equipment, larger numbers and proportions of relatively inexperienced (married) women in the labor force, expanded government regulation notably in the areas of safety and the environment, a greater emphasis on making deals as opposed to producing goods and services at attractive prices² have been suggested as principal contributors to this problem. Taken together, however, they do not add up to a convincing answer to the problem of low productivity growth. Peterson, among many others, calls this slow-down in the rate of productivity improvement a “mystery” (Peterson, 1994, p.42).

For the individual employer, problems with regard to productivity translate into problems of competitiveness, profitability, and even survivability. Increased unit costs that derive from higher resource costs, including higher wages, which are not balanced by an equivalent improvement in productivity, lead inevitably to a rise in prices, a squeeze on profits, or both.

Moreover, in retailing, for instance, where comparatively low wages already make it difficult to recruit and retain the best workers in the labor supply, productivity problems further complicate personnel matters through the chilling effect of poor productivity performance on real hourly earnings, which dropped from \$6.31 in 1973 to \$4.98 in 1994 (see Table 5).

TABLE 4. Annual Earnings for Full-Time Work Compared with Poverty Threshold for a Family of Four: 1973-1994

Year	Annual Earnings	Poverty Threshold	Earnings/Threshold
1973	\$ 8195	\$ 4540	1.81
1974	8819	5038	1.75
1975	9422	5500	1.71
1976	10109	5815	1.74
1977	10920	6191	1.76
1978	11835	6662	1.78
1979	12813	7412	1.73
1980	13853	8414	1.65
1981	15080	9287	1.62
1982	15974	9862	1.62
1983	16682	10178	1.64
1984	17306	10609	1.63
1985	17826	10989	1.62
1986	18221	11203	1.63
1987	18678	11611	1.61
1988	19302	12092	1.60
1989	20093	12674	1.59
1990	20821	13359	1.56
1991	21466	13924	1.54
1992	21986	14335	1.53
1993	22526	14350	1.57
1994	23150	14800	1.56

Sources: U.S. Department of Commerce 1994, p.480, and 1991, p.462, and 1986, p.457; *Federal Register*, 1994, p.6277; 1993, p.8288.

Notes: *Current-dollar average hourly earnings (see Table 2) \times 40 hours \times 52 weeks for a family of four: **Beginning in 1981, thresholds for non-farm families are applied to all families, farm and non-farm.

The purpose of this paper is not to pursue this matter along customary lines in an attempt to unravel the “mystery” behind the sluggish productivity figures since 1973. Rather, it is to suggest three other lines of investigation. The first points to productivity data which indicate that the aggregate data on productivity conceal important differences in productivity from one industrial sector to another. The second introduces entrepreneurship, which is at the very core of the ongoing industrial revolution, as a critical factor in interpreting productivity information and in accounting for living standards which for many have been stagnant or falling since 1973. The

third calls attention to the various revolutions which centre on a redefinition of the meaning of personal rights that have swept across the United States over the past 40 years and how those revolutions have undermined the traditional social values that are foundational to the way in which economic affairs are organized and therefore how well the economy in fact performs.

TABLE 5. Constant-Dollar (1982=100) Average Hourly Earnings of Nonsupervisory Workers in Retail Trade Establishments: 1973-1994

Year	Earnings
1973	\$ 6.31
1974	6.13
1975	6.02
1976	6.05
1977	6.13
1978	6.20
1979	6.01
1980	5.70
1981	5.57
1982	5.48
1983	5.57
1984	5.49
1985	5.39
1986	5.38
1987	5.27
1988	5.23
1989	5.16
1990	5.07
1991	5.01
1992	4.99
1993	4.97
1994	4.98

Sources: U.S. Department of Labor, 1909-94, pp.883, 885, and 1990-95, p.231.

Disaggregating the Productivity Numbers: The Case of Retail Trade

The productivity picture for manufacturing is very different from that for the entire private business sector (see Table 6). Manufacturing productivity over the period 1973-1994 has increased by an annual average of 2.3 percent, comparing quite favorably to with the 2.5 percent annual average for the entire private business sector for 1948-1973 and signifying a considerably different performance than is suggested by the 1.2 percent annual rate for the entire private sector since 1973. At the same time, employment in manufacturing slipped from 20.2 million in 1973 to 18.3 million in 1994, even though overall U.S. employment climbed by 31.9 million to 94.9 million in 1994 (see Table 7).

The story is different for the retail trade where employment rose from 12.3 million to 20.4 million during the 1973-1994 period making it one of the most important sectors of the U.S.

economy and therefore a major factor in the overall U.S. productivity trend over that period (see Table 7).

**TABLE 6. Indexes (1982=100) of Output per Hour of all Persons, 1973-1994:
Private Business Sector and Manufacturing**

Year	Private Business Sector	Manufacturing
1973	95.1	89.4
1974	93.3	-----
1975	95.5	-----
1976	98.3	-----
1977	99.9	-----
1978	100.5	95.2
1979	99.4	97.3
1980	98.6	95.4
1981	99.9	97.9
1982	100.0	100.0
1983	102.3	102.2
1984	104.8	106.7
1985	106.3	106.7
1986	108.5	120.0
1987	109.6	116.6
1988	110.7	119.2
1989	109.9	119.9
1990	110.7	122.1
1991	121.1	124.9
1992	115.5	127.5
1993	117.0	132.0
1994	119.7	137.4

Sources: U.S. Department of Labor, 1995b, p.129, and 1991, p.147, and 1995b, p.129; Council of Economic Advisers, p.328.

Table 8 presents the data on output per hour of all persons in selected two-, three-, and four-digit retailing SICs (standard industrial classification) for the period 1973 to 1991.³ These data indicate that retailers in some industries such as household appliance shops and radio-TV-music dealers have fared much better than others, such as hardware outlets and furniture and home furnishings stores. Several others – variety stores, grocery outlets, retail bakeries, and eating and drinking places – experienced declines in output per labor hour over the period.

Published reports from the U.S. Bureau of Labor Statistics (BLS) (Friedman, 1988; Herman and Henneberger, 1987; Wilder, 1989; York, 1987; 1988) indicate that in general two factors, one on the supply side and the other on the demand side, have helped to increase retailing productivity. On the supply side, computer technology to manage inventories and handle customer billing and accounting, in addition to bar coding and scanning devices, have greatly changed the way retailers operate. On the demand side, consumer self-selection of

merchandise has reduced personnel requirements in such retailing operations as gasoline service stations, convenience stores, and at apparel and department stores (Haugen, 1986, p.12).

TABLE 7. Employment in Private Non-Farm Establishments, Manufacturing, and Retailing, 1973-1994 (000s)

Year	Private Non-Farm Sector	Manufacturing	Retailing
1973	63,058	20,154	12,315
1974	64,095	20,077	12,539
1975	62,259	18,323	12,630
1976	64,511	18,997	13,139
1977	67,344	19,682	13,792
1978	71,026	20,505	14,556
1979	73,876	21,040	14,972
1980	74,166	20,285	15,018
1981	75,121	21,170	15,171
1982	73,707	18,780	15,158
1983	74,282	18,432	15,587
1984	78,384	19,372	16,512
1985	80,992	19,248	17,315
1986	82,651	18,947	17,880
1987	84,948	18,999	18,422
1988	87,824	19,314	19,023
1989	90,117	19,391	19,475
1990	91,115	19,076	19,601
1991	89,854	18,406	19,248
1992	89,959	18,104	19,356
1993	91,889	18,075	19,773
1994	94,917	18,303	20,437

Source: U.S. Department of Labor, 1995a, p.46.

Another BLS report indicates that in eating and drinking places, workplace injuries and illnesses – scalding burns and serious cuts in preparing meals and disabling sprains and strains in serving customers – play a major role in productivity. According to a 1989 BLS survey, eating and drinking places have the highest number of recordable injuries and illnesses of any U.S. industry and 40 percent of those who are injured are required to take time off from work or are reassigned to other work. Most of the injured are teenagers and adult women and most have been on the job for less than one year. Injuries in eating and drinking places required 15 days recuperation compared to 12 days in 1979 (Personick, 1991, pp.19, 21). The same survey found that grocery stores ranked second in the United States in terms of recordable injuries and illnesses and department stores ranked seventh (Personick, 1991, p.20). Clearly, on-the-job safety and health are important drivers of productivity but other factors are also at work.

One difference between retailers with rising productivity and retailers with falling

productivity is that two of the latter – grocery stores and eating and drinking places – are characterized by late-night service and in some instances by 24-hour service. This difference suggests that productivity and rates of pay in the negative-growth retailing industries might have been higher and prices lower if hours had been shortened. That is, retailers were able to offer additional convenience to their customers, with its greater staffing requirements, in part by holding down wages, by passing the added cost on to their customers, or both. Another difference is that between 1985 and 1989, for example, there was an increase of 4,000 in the number of items stocked by chain grocery stores (*Progressive Grocer*, 1990, p.41).

Table 9 shows that in the four retailing industries – variety shops, grocery stores, retail bakeries, eating and drinking places – where productivity fell (1973-91), employment (1973-94) rose. Two of those industries – grocery stores and eating and drinking places – are the largest in terms of employment, accounting for nearly 50 percent of total employment in retailing in 1994.

TABLE 8. Indexes (1987=100) of Output per Hour of All Persons in Selected Retail-Trade Industries, 1973 and 1991

SIC	Industry	1973	1991
5251	Hardware	83.3	102.5
5311	Department	60.8	99.2
5331	Variety	148.9	130.2
5411	Grocery	109.1	94.0
546	Retail Bakeries	125.6	90.0
5511	New and used car dealers	85.1	105.6
553	Auto and home supply	71.1	114.6
5541	Gasoline service	59.5	102.0
5611	Men's and boy's clothing	77.6	102.0
5621	Women's ready-to-wear	58.9	110.1
5651	Family clothing	76.2	102.3
5661	Shoes	81.3	105.5
571	Furniture, home furnishings	83.9	104.2
5722	Household appliances	59.8	117.4
573	Radio, TV and music	45.6	146.2
58	Eating and drinking	110.3	104.5
5912	Drug and proprietary	92.2	105.5
592	Liquor	95.0	112.3

Source: U.S. Department of Labor, 1995b, p.131.

Elsewhere in retailing, for the most part, both employment and productivity increased. There were three exceptions – gasoline service, men's and boys' clothing, and household appliances – where productivity rose but employment fell.

TABLE 9. Productivity and Employment in Selected Retail-Trade Industries

SIC	Industry	Productivity:	Employment	
		Annual percentage change 1973 – 1991	1973 (000s)	1994
Productivity decreased				
5331	Variety	-1.0	310.6	143.2
5411	Grocery	-0.8	1,623.9	2,933.6
546	Retail bakeries	-2.0	106.1	175.0
58	Eating and drinking	-0.3	3,053.8	7,069.0
Productivity increased				
5251	Hardware	1.1	122.2	158.8
5311	Department	2.1	1,721.5	2,211.9
5511	New and used car dealers	1.1	674.0	964.4
553	Auto and home supply	2.4	205.4	360.5
5541	Gasoline service	2.4	651.4	632.5
5611	Men's and boys' clothing	1.4	134.7	88.3
5621	Women's ready-to-wear	2.8	294.1	342.7
5651	Family clothing	1.5	129.7	322.9
5661	Shoes	1.3	156.5	205.0
571	Furniture and home furnishings	1.2	339.1	472.8
5722	Household appliances	3.2	193.4	77.9
573	Radio, TV and music	5.6	103.9	339.2
5912	Drug and proprietary	0.7	460.7	601.2
592	Liquor	1.0	98.4	112.0

Sources: U.S. Department of Labor, 1995b, p.131, and 1909-90, pp.764-815, and 1990-95, pp.231-52.

Table 10 shows that in four retailing industries – variety stores, grocery stores, retail bakeries, eating and drinking places – productivity fell between 1973 and 1994, and in all but variety stores real hourly earnings also fell. Table 10 also shows that in 14 retailing sectors productivity increased over this period but in general real hourly earnings did not improve. The exceptions were auto and home supply (+\$0.06 per hour) and radio, TV and music shops (+\$0.59 per hour).

These data indicate that retail proprietors in general were able to achieve higher productivity and to turn the gains that attend greater efficiency into higher profits without paying higher real wages, possibly by hiring employees increasingly on a part-time basis, such as high-school dropouts, teenagers, single mothers, minorities and aliens who do not have access to industries with the better-paid jobs.

There is much about productivity developments during the 1973-1989 period that still remains a mystery. Even so, the data presented here lead to three general conclusions about retailing productivity. First, it is hazardous to generalize about trends across the entire retailing group. In some retailing industries productivity has risen at a rate that is well above even the 2-3 percent

TABLE 10. Productivity and Hourly Earnings in Selected Retail-Trade Industries

SIC	Industry	Productivity: Annual percentage change 1973 – 1991	Hourly Earnings			
			Nominal		Real	
			1973	1994	1973	1994
<i>Productivity decreased</i>						
5331	Variety	-1.0	2.26	7.04	4.56	4.89
5411	Grocery	-0.8	3.46	8.03	6.98	5.58
546	Retail bakeries	-2.0	2.75	7.05	5.54	4.90
58	Eating and drinking	-0.3	2.18	5.47	4.40	3.80
<i>Productivity increased</i>						
5251	Hardware	1.1	2.76	7.60	5.56	5.28
5311	Department	2.1	2.91	7.42	5.87	5.16
5511	New and used car dealers	1.1	4.05	12.67	8.27	8.80
553	Auto and home supply	2.4	2.89	8.47	5.83	5.89
5541	Gasoline service	2.4	2.69	6.79	5.42	4.72
5611	Men's and boys' clothing	1.4	2.97	8.52	5.99	5.92
5621	Women's ready-to-wear	2.8	2.47	6.80	4.98	4.73
5651	Family clothing	1.5	2.44	6.96	4.92	4.84
5661	Shoes	1.3	2.67	7.44	5.38	5.17
571	Furniture and home furnishings	1.2	3.62	9.65	7.30	6.71
5722	Household appliances	3.2	3.76	9.89	7.67	6.87
573	Radio, TV and music	5.6	3.21	10.16	6.47	7.06
5912	Drug and proprietary	0.7	2.97	8.44	5.99	5.87
592	Liquor	1.0	information not available			

Sources: U.S. Department of Labor, 1995b, p.131, and 1909-90, pp.764-815, and 1990-95, pp.231-52.

annual increase that characterizes the historical trend. At the same time, productivity has actually fallen in several major retailing industries. By implication, it is also hazardous to reduce productivity developments in the private business sector over a 20-year period to a single number. Second, with the exception of variety stores, auto and home supply stores, and radio, TV, and music shops, real hourly earnings declined in retailing even in those industries where productivity was higher in 1994 than in 1973. Third, whereas in general higher retailing productivity did not lead to higher real hourly earnings, lower productivity more often than not contributed to lower earnings. For grocery stores the decline in real hourly earnings is especially significant: \$2,900 per year for year-round, full-time employees.

Our brief investigation of productivity in retailing brings to mind five sets of questions. First, in addition to health and safety problems and extended hours of service, what factors inhibit growth in retailing productivity in spite of recent advances in computerization of operations, more rapid inventory checking, and the like? Is long-term negative growth in productivity in selected retailing industries indicative of serious management weaknesses such as problems with span of control or the development of skilled first-line managers?

Second, does price competition affect productivity in retailing in a negative fashion? Since labor costs account for a large portion of total retailing costs, do efforts to minimize wages in order to maintain or achieve a competitive price severely limit the productivity of the retailing labor force?

Third, among retailing outlets where over the long term employment has risen and productivity has fallen (i.e. grocery stores, retail bakeries, and eating and drinking places), can we expect to see in the future fewer outlets paying higher real hourly wages or smaller-size outlets paying lower real hourly wages? At the same time, will there be an increase in the number of retail outlets that have experienced higher-than-average productivity gains? How will those productivity gains be distributed – higher or lower real hourly wages, greater or smaller profit margins, more or less competitive prices?

Fourth, why did the usual connection between productivity improvement and higher real earnings break down in all but two of the retailing sectors with higher productivity in 1991 than in 1973? How long can we expect employees to contribute to greater productivity without sharing in the gains that derive from those contributions? Will retailers in general continue to provide below-average economic incentives to their employees to remain employed in the retailing industry and persist as a low-wage, high-turnover sector of the U.S. economy even when higher productivity would allow them to change that reputation?

Finally following the record-setting economic expansion of the 1980s, are retailers in the 1990s likely to continue their outward focus on expansion in the marketplace or will they instead turn inward to consolidate their gains? If they choose an inward focus on the workplace, what impact will that have on productivity, profits, real hourly earnings, and prices?

Productivity in the Context of Entrepreneurship

Though widely agreed on matters of productivity, social economists and conventional economists part company on matters relating to other fundamentals of the economic order that relate directly or indirectly to productivity.

To simplify, conventional economics fixes on competition, price, cost, automatic market clearing, and equilibrium. Markets routinely determine price and automatically achieve equilibrium between quantity supplied and quantity demanded, compelling firms to be price-takers and to reduce cost methodically through improvements in productivity in order to compete and to survive financially. Thus, in Darwinian fashion, competition means that, with the passage of time, efficient firms survive and inefficient firms expire. Furthermore, improvements in productivity engender the gains out of which higher living standards are possible. In the conventional paradigm, firms are subordinate to markets which are construed analogously according to the laws of physics and biology where objects dominate and economic security is

tenuous.

Social economics sees things quite differently. Certainly competition – a disposition on the part of the individual to undertake certain tasks for the individual reward – activates economic processes and functions, but so too does co-operation – a disposition on the part of the individual to undertake certain tasks collectively because those tasks cannot be done as well or at all by the individual acting alone. Markets determine price, but markets are seen not so much as supply and demand curves which achieve equilibrium at the point of intersection but more as flesh-and-blood human beings who reach agreement through interaction. Markets do not clear automatically, especially labor markets where uniquely the subject of the interaction between the buyers and the sellers is a human being and where economic history shows that even in unfettered markets a surplus or shortage can persist literally for years. Firms compete on the basis of price, and productivity improvements confer certain competitive advantages. In the competitive fray, big fish are known to eat little fish but it is naive to assert that, in the process, by definition, the fittest, that is the most efficient firms, survive. Size is at times sufficient for survival, for example, in a price war where the bigger, less efficient firm may have the cash reserves to outlast the smaller, more efficient firm.

Economic security, however, is even more tenuous than suggested in the conventional paradigm. Firms compete in a host of ways other than price, by:

- producing new goods and services;
- substituting different resources in the production of already established goods and services;
- producing already established goods and services by means of new production processes;
- penetrating new markets with goods and services already established in other markets;
- instituting new ways to manage and administer the workplace and to conduct routine business affairs.

At the heart of this type of competitive activity which underscores change is the entrepreneur, a human being who is different from others by virtue of his/her persistence in the face of the human resistance to change. Creative destruction means that it is change rather than permanence which is normal and for that reason the economy tends towards disequilibrium rather than equilibrium. Successful innovations, and not just improvements in productivity, engender the gains out of which higher living standards are possible. According to this unconventional paradigm, firms are real in the sense that firms are formal organizations for putting humans to work on a common set of tasks where their individual fortunes are determined by their individual and collective efforts. Markets, on the other hand, are a manner of speaking: a forum for the interaction buyers and sellers, employers and employees, producers and resourceholders, entrepreneurs and bankers, and the like. Thus, firms are not to be subordinated to markets, and firms and markets are to be construed most fundamentally according to the laws of human nature.⁴

The following hypothesis offers an unconventional way to interpret productivity developments since 1973. Competition, which increasingly has become global in scope, has stepped up the pace of entrepreneurship, which in turn means that more and more products are being introduced⁵ and, given creative destruction, more and more products (and companies) are

failing.⁶ Once a company has been successful with a new product, it attempts to protect its advantage by shifting its efforts to price competition, which calls for and evokes improvements in productivity and profits. The heightened pace of global competition based first on innovation and then on price means that products have a shorter life cycle⁷ and, given the costs of developing and bringing a new product to market, a shorter period over which to recoup the company's investment.

Thus, in short, the apparent anomaly of a booming stock market, productivity improvement which overall has been anemic but varies significantly from one industrial sector to another, profits at a 45-year high (Cooper and Bernstein, 1995, p.75),⁸ and more economic insecurity. Specifically, the creation/success side of innovation contributes to greater profits and is a driving force in the stock market. The destruction/failure side accounts for more economic insecurity. The two sides taken together contribute to changes in productivity that vary importantly from industry to industry.

Productivity in the Context of 40 Years of Revolution and Disruption

The economy is a complex system of institutions organized around the four economic processes of production, distribution, exchange and consumption of goods and services for the purpose of meeting human physical need and satisfying human wants. Three principles – competition, co-operation, and intervention – organize these processes and their associated functions. The first two, which we addressed in brief previously, activate the four processes and economic functions. The third, on the other hand, operates differently. Intervention is a disposition on the part of the individual to impose constraints collectively in order to limit the abuses or unfavorable consequences of competition or co-operation carried to an extreme.

The activating power of competition and co-operation derive from the duality of human nature. Specifically, competition utilizes energy stored in the individuality of human beings. Co-operation, in contrast, makes use of the power stored in their sociality. In the case of competition, the energy is switched on only when individual freedom is widely valued in society in much the same way as a street lamp is activated by a light sensor. Similarly, with co-operation, the energy is triggered only when teamwork or community is highly valued. Intervention is prompted when equality is socially esteemed. In other words, each one of the three organizing principles is operationalized only when a distinct social value is prized.

For more than 40 years, these three social values – individual freedom, community, and equality – have been sharply contested in several waves of revolutionary change which have redefined individual rights across a broad spectrum including civil rights, women's rights, defendants' rights, gay/lesbian rights, reproductive rights, voters' rights, victims' rights, disabled citizens' rights. Notice, for example, how the following expressions have come into common use: "separate but unequal," "equal pay for equal work," "you have a right to remain silent," "don't ask, don't tell," "it's my body," "one person, one vote," "who protects my rights?" and "physically challenged".

Additionally, since the 1950s, major federal and state government interventions have been undertaken to address abuses and to help meet human needs in such areas as the environment, health, safety, and education. We have been deeply shaken by a constitutional

crisis (Watergate), exhausted by a devastating conflict (Vietnam), numbed and outraged by political assassination, both successful (the Kennedys, King, Sadat, Rabin) and failed (John Paul II, Ford, Reagan), and terrified by civil disorder and by violence in the streets no less for its randomness than its ferocity.

Further, we are in the midst of a major industrial revolution centered on a vast number of specific innovations in the goods and services that supply us with enormous streams of information. Political power is shifting from federal government to state and local governments and from the President to the Congress which ultimately may unravel much of Roosevelt's revolutionary New Deal of the 1930s and the safety net as we know it today. On top of all that, we have been shocked especially over the past 15 years by a large number of substantial mergers, acquisitions, liquidations, and Chapter 11 filings, by deregulation, downsizing, and re-engineering, not to mention the awesome social-political-economic revolutions still underway in Eastern and Central Europe and China, and the sexual revolution.

The forces triggered by those revolutions have shaken the institutions which govern life in a modern society and help define the culture, such as family, neighborhood, church, court, school, military, media, theatre, art, compelling a reconstruction of those institutions and a redefining and rebalancing of the social values on which those institutions rest.

Similarly, the same revolutionary changes have disrupted our economic institutions, precipitating the reconstruction of those institutions including union, trade association, professional membership organization, corporation, and a redefinition of the social values of individual freedom, equality, and community on which rest the three principles – competition, co-operation, and intervention – which organize economic affairs. These upheavals, which are very much analogous to a series of powerful earthquakes, each with multiple aftershocks, have had and continue to have a significant deleterious effect on our ability to manage the workplace in a way that utilizes economic resources as efficiently as possible.

Furthermore, we hypothesize that the productivity differences noted previously from one economic sector to another reflect in part greater or lesser success in the rebuilding and rebalancing at the level of the company workplace, which in turn indicates different human skills and talents at work in those companies.

Finally, we propose that some of the mystery surrounding the low rate of productivity improvement since 1973 is that three earth-shaking turning points can be traced to that year: the dawning crisis of Watergate, the explosive moral crisis of Roe versus Wade, and the crippling political crisis of Vietnam.

Closing Remarks

Our understanding of the productivity problems of the last 20-25 years deepens and broadens when we: disaggregate the data; bring into play the role of the entrepreneur; and reckon the impact of wave after wave of revolutionary change in our society in the past 40 years. Each one of these three demands some final comment.

First, the U.S. economy is a complex system of companies in various stages of development: some are strong while others are weak, some are growing while others are

declining, some have been operating for a long time while others are just starting up, some are massive while others are tiny. A single index number to measure productivity for the entire private sector of the economy simply cannot adequately describe the ways in which economic resources are being managed.

Second, at the level of the individual firm, there is more to success than the efficient utilization of economic resources. The firm that does not innovate will probably not survive and for many firms this requires amassing and reinvesting profits. In some particularly difficult times, it may be necessary to gamble the entire future of the firm in order to ensure its survival.⁹ Creative destruction means that success and failure ensue from the same entrepreneurial activity. Fortunes are made for some companies and persons, and at the same time lost for others. Employment is rising in some workplaces at the same time that it is falling in others. As the pace of innovation quickens, anxiety about what the future might bring heightens.

Third, over the past 40 years, the United States has been hit by several revolutionary changes and crises, each one with effects similar to an earthquake. Virtually every institution in the political, social, and economic order in the United States has felt the shock waves from those disruptions and has had to reconstruct itself accordingly. For the individual business enterprise, the reconstruction effort calls for a re-examination of the principles that organize its workplace and the social values foundational to those organizing principles. Under the circumstances, it is naive to expect individual companies to continue operating as they did during a more gentle period. Revolutionary change is not free.

Notes

1. Based on a work year of 2,080 hours, private-sector annual earnings in 1973 are estimated at \$8,195 (2,080 hours × \$3.94 per hour); the poverty standard for family of four in 1973 is \$4,540. In 1994 annual earnings are estimated at \$23,150 (2,080 hours × \$11.13 per hour) and the poverty standard is \$14,800.
2. For example, by the late 1980s retailing had become more highly leveraged than at any time in its history (Hyde *et al.*, 1990, p.3).
3. Data not available for 1992-94.
4. For more on this difference, see Best (1990) and the essays in Shionoya and Perlman (1994).
5. Between 1980 and 1993 a total of 66,476 new consumer-packaged goods were introduced (not including imports) in the United States (U.S. Department of Commerce, 1995, p.553).
6. In 1975 there were 11,432 business failures in the United States; by 1992 the number of failures had risen to 97,069 (U.S. Department of Commerce, 1995, p.547).
7. Dicken (1992) identifies five stages in the life cycle of a product: initial development, growth, maturity, decline and obsolescence. He asserts that “there is growing evidence that the general length of product cycles is tending to become shorter” (p.111). See also Fowler and Thomas (1993, p.37).
8. After-tax corporate profits (including capital consumption allowances) climbed from \$321 billion in 1980 to \$708.6 billion in 1993 (U.S. Department of Commerce, 1995, p.560).
9. One company that comes to mind in this regard is John Chance and Associates in Lafayette, Louisiana which specializes in putting offshore drilling rigs at the specific position in the Gulf of Mexico which the driller’s geological studies indicate is most likely to lead to an oil strike. In the mid-1980s John Chance was threatened by the severe drop of crude oil prices which greatly curtailed drilling activities. To improve its service and thereby enhance its ability to survive, John Chance literally gambled the future of the entire company by replacing state-of-the-art positioning technology with a new technology based on geo-synchronous satellites. The company was the first in the world to employ this technology successfully in drilling for oil. (Source: author’s visit to the company in December 1989).

References

- Bernstein, A. (1994), "Inequality: how the gap between rich and poor hurts the economy," *Business Week*, 15 August, pp.78-83.
- Best, M.H. (1990), *The New Competition: Institutions of Industrial Restructuring*, Harvard University Press, Cambridge, MA.
- Chance and Associates, J. (1989), Author's visit to the company in Lafayette, LA, December.
- Cooper, J.C. and Bernstein, A. (1995), "Suddenly, the economy doesn't measure up," *Business Week*, 31 July, pp.74-6.
- Council of Economic Advisers (1995), *Economic Report of the President Transmitted to the Congress February 1995*, Washington, DC.
- Dicken, P. (1992), *Global Shift: The Internationalization of Economic Activity*, The Guildford Press, New York, NY.
- Federal Register* (1993), Vol. 58 No. 28, Friday 12 February.
- Federal Register* (1994), Vol. 59 No. 28, Thursday 10 February.
- Fowler, Jr, A.R. and Thomas, J. (1993), "Functional strategic response to progression through the product life cycle: an accommodation to marketing reality," *American Business Review*, June, pp.36-44.
- Friedman, B.L. (1988), "Productivity trends in department stores, 1967-86," *Monthly Labor Review*, March.
- Haugen, S.E. (1986), "The employment expansion in retail trade, 1973-85," *Monthly Labor Review*, August.
- Herman, A.S. and Henneberger, J.E. (1987), "Productivity trends in the furniture and home furnishings stores industry," *Monthly Labor Review*, May.
- Hyde, L.L., Steidtmann, C.E. and Sweeney, D.J. (1990), *Retailing 2000*, Management Horizons, Division of Price Waterhouse, Dublin, OH.
- Personick, M.E. (1991), "Profiles in safety and health; eating and drinking places," *Monthly Labor Review*, November.
- Peterson, W.C. (1994), *Silent Depression: The Fate of the American Dream*, W.W. Norton and Company, New York, NY.
- "Portrait of an anxious public" (1995), in Galen, M. and Vamos, M.N. (Eds), *Business Week*, 13 March, p.80.
- Progressive Grocer* (1990), "57th annual report of the grocery industry," mid-April, pp.40-49.
- Shionoya, Y. and Perlman, M. (Eds) (1994), *Innovation in Technology, Industries, and Institutions: Studies in Schumpeterian Perspectives*, The University of Michigan Press, Ann Arbor, MI.
- U.S. Department of Commerce (1986), *Statistical Abstract of the United States*.
- U.S. Department of Commerce (1991), *Statistical Abstract of the United States*.
- U.S. Department of Commerce (1994), *Statistical Abstract of the United States*.
- U.S. Department of Commerce (1995), *Statistical Abstract of the United States*.
- U.S. Department of Labor, Bureau of Labor Statistics (1991), *Monthly Labor Review*, November.
- U.S. Department of Labor, Bureau of Labor Statistics (1995a), *Employment and Earnings*, July.
- U.S. Department of Labor, Bureau of Labor Statistics (1995b), *Monthly Labor Review*, July.
- U.S. Department of Labor, Bureau of Labor Statistics, *Employment, Hours, and Earnings United States, 1909-1990, Volume II, Bulletin 2370*.

- U.S. Department of Labor, Bureau of Labor Statistics, *Employment, Hours, and Earnings United States, 1909-1994, Volume II*, Bulletin 2445.
- U.S. Department of Labor, Bureau of Labor Statistics, *Employment, Hours, and Earnings United States, 1990-1995*, Bulletin 2465.
- Wilder, P.S. (1989), "Productivity in the retail auto and home supply store industry," *Monthly Labor Review*, August.
- York, J.D. (1987), "Retail liquor stores experience flat trend in productivity," *Monthly Labor Review*, February.
- York, J.D. (1988), "Variety stores experience shifting trend in productivity," *Monthly Labor Review*, October.