

DONALD S. FITCH

# **INCREASING PRODUCTIVITY**

**IN THE  
MICROCOMPUTER  
AGE**

The background of the lower half of the cover features a series of diagonal stripes in red and grey, creating a sense of depth and movement. The stripes are of varying widths and colors, with some appearing as solid red and others as a dark grey or charcoal. They radiate from the top edge of the title area, creating a perspective effect that draws the eye downwards.

# **INCREASING PRODUCTIVITY IN THE MICROCOMPUTER AGE**

**DONALD S. FITCH**

*Well-Being Skills*



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I would like to convey much appreciation to my parents, both models of productivity and well-being.

This book is dedicated, with love and appreciation, to Christie.

# PREFACE

Productivity growth is essential to the economic health and well-being of the United States and of its citizens. The productivity of the American economic system has, however, stagnated dangerously.

The efficiency of the American economy in providing goods and services for its citizens has been nearly static for almost a decade. This dismal trend is in marked contrast to the robust productivity gains of many of America's trading partners, especially of Japan. Such diminished economic vigor is a basic national sickness, the symptoms of which include inflation and the hemorrhaging of American dollars and jobs. The primary goal in the creation of this book was the hope of contributing to the cure of this malignancy of national well-being.

Although productivity is an issue of great national and international importance, the book also explores the issue at the personal level. The federal government has a critically important role in correcting the productivity problem—but an important part of the solution is in the hands of Americans as individuals. It was, after all, the inventiveness and perseverance of individual Americans that gave the country its position of world leadership in productivity and standard of living.

Personal productivity—how people use their gifts and resources in fulfilling their goals and hopes—is intimately linked to personal well-being. Methods for managing one's own behavior and efficiency are explored in Part 2. The strong link between physical and mental well-being is outlined and guidelines for increasing the body's energy (and lifespan) are suggested. Skills for reducing mental and physical stress are also covered in this behavior self-management section. The goal, then, of expanding personal productivity is not to become an automaton enslaved to work; true personal productivity involves boosting the well-being of mind and body and fully using one's creative, productive capabilities.

Part 3 also focuses on behavior, this time the behavior of the human resources you may have under your direction. Your ability to effectively bring out the contribution and creativity of these people is a primary aspect of your productivity power. The section offers practical skills for increasing management effectiveness. The major emphasis in this section is in the replacement of the adversary work climate with a more cooperative, productive work relationship between management and worker. Towards this end, communication patterns, incentive structures, feedback, productivity circles, quality-of-work-life programs and a wide range of management skills and strategies are investigated.

## vi PREFACE

The emerging revolution in information processing and microelectronics is the topic of Part 4 and of much of the rest of the book. This bright spot in America's—and mankind's—productivity is extraordinarily promising. Mankind has developed a major new type of tool, one that will quite likely prove to be more important than any that has come before. In the industrial revolution, mankind made machines to boost physical strength. Now, with his computers and intelligent microcomputer chips, mankind has invented tools to boost intelligence. The impact of this watershed development will be so great as to usher in a new age of man—Micronic Man. The stunning advances in microelectronics and information processing are revolutionizing virtually every field of human endeavor. And their contribution has just begun. A neo-industrial revolution is underway, a momentous event that can take America and mankind to new heights of innovation and productivity.

Part 5 examines the adaptation process over which the U.S. must show great leadership during the next few decades. Moving into a neo-industrial revolution will require challenging but rewarding changes in the work-styles and life-styles of all Americans.

The United States is at an important turning point. If the productivity trends of the last decade continue, then nothing can stop America's fall from greatness. But America can face up to its troubles with energy, counter-productive incentive systems, and all the other problems stifling its productivity. The country retains its basic strength—the vision and innovation of its people. The U.S. stands on the brink of a new industrial revolution fueled by its promising new microelectronic technologies. The coming decades, the Microcomputer Age, can carry America to a new era to prosperity, well-being and contribution to the Earth.

*Portland, Oregon*  
*August 1981*

D.S.F.

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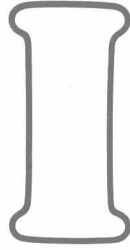
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PART



**THE  
ESSENCE  
OF PRODUCTIVITY**



CHAPTER  
1  
**PRODUCTIVITY:  
FOUNDATION OF  
WEALTH**

**PRODUCTIVITY AND WEALTH**

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***Nothing is more important for the long-run economic welfare of a country than improving productivity.***

**Milton Friedman<sup>1</sup>**

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Just as a person is only as healthy as his or her heart, so a nation is only as healthy as its productivity. Productivity is the heartbeat of a nation's economy, the efficiency with which the wealth of a people is created.

Productivity is the production of wealth, the goods and services that sustain our lives. Food for our stomachs, clothes for our bodies, heat for our homes and the homes themselves, all are produced by our labor or the labor of others. Productivity consists, in good part, in turning natural resources into the uses and belongings we find valuable and useful. Our lives are supported by this productivity, and by the output of our society as a whole. Gains in the standard of living are the result of rising productivity.

For a good deal of its history, the United States has led the world in productivity. A vast continent of bountiful natural resources has been used by an energetic and innovative people to build the planet's highest standard of living. But just as a prosperous man may find his well-being suddenly menaced by frightening symptoms of heart disease, so are the

#### 4 THE ESSENCE OF PRODUCTIVITY

American people suddenly frightened by ominous symptoms of economic feebleness. Inflation is rampant. The dollar loses half its value in less than a decade. A flood of cheaper, better imported goods send U.S. dollars—and U.S. jobs—overseas.

A root cause of the economic difficulties bedeviling the United States is a stagnation in productivity. The rising American standard of living has come to a halt because our production of the goods and services that constitute wealth has ceased its historic increase. An ever greater supply of money and spiraling wages compete for goods and services which are no longer increasing. This static productivity is also responsible for a massive overseas migration of U.S. dollars and U.S. jobs. Desirable social goals, such as extending better opportunities to disadvantaged Americans, become less and less attainable. "Sharing the wealth" depends on having wealth to share. National security is threatened; the country's productivity is a crucial measure of its ability to adapt to challenging world conditions.

Productivity is the efficiency with which an economy can produce needed goods and services from its resources of labor and materials. The rate of productivity gain is the single most telling indicator of the health of that economy. In a new and perilous situation for the United States, increases in productivity virtually came to a halt in the 1970s. Even more ominously, American productivity has actually been decreasing, as of this writing, for over a year.

A person may be said to be wealthy if he or she has much money, many dollars. This lucky individual may exchange the dollars for whatever goods or services he or she desires. But what gives dollars their capacity to be exchanged for goods and services? They are, after all, just paper. "Bathroom tissue" is also paper, but it cannot be used to pay for a meal. Yet dollars are not backed by any precious metal for which they may be redeemed. Why do they have value?

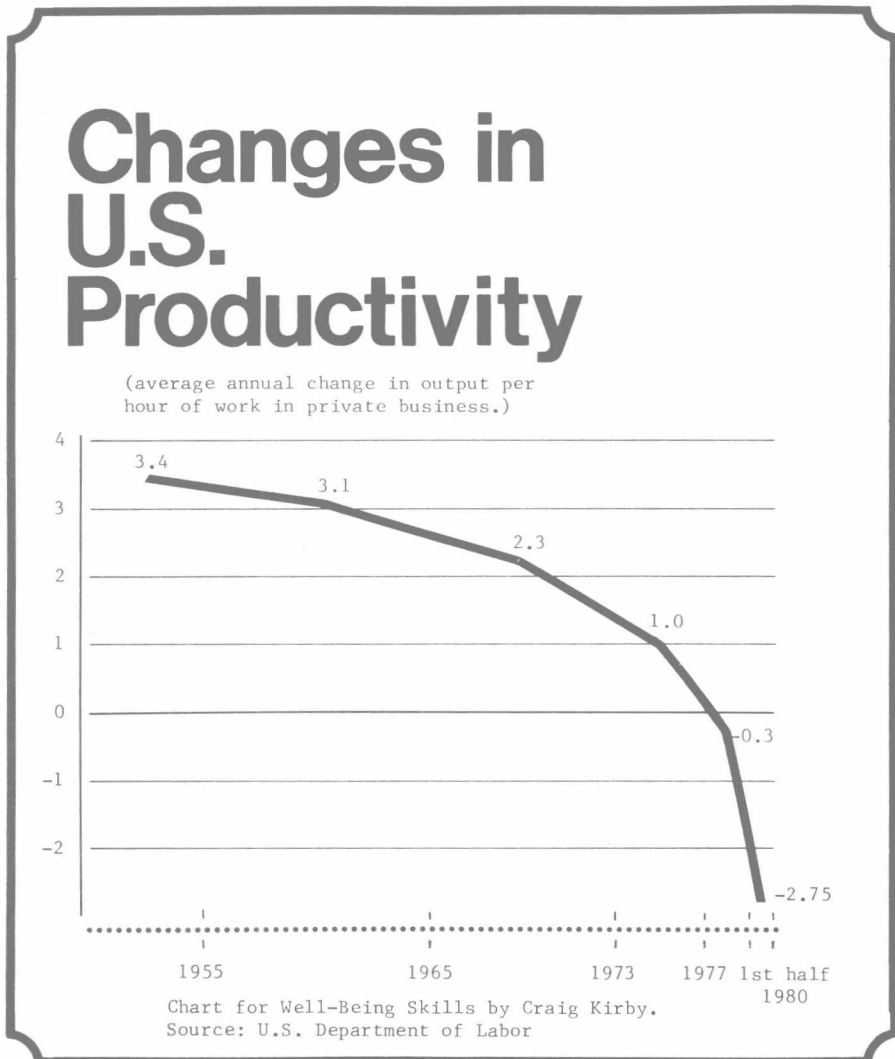
Dollars are nothing more than symbols of the productive capacity of the nation. The nation pumps out limited amounts of goods and services. Depending on how many dollars are in circulation, each one will be redeemable for so many goods or services. When there are goods and services for each dollar, the bills buy a lot—deflation. When there are a whole lot of dollars for the supply of goods and services people want, each dollar buys less—inflation. Dollars do not create wealth. Only productivity does that. Our current stagnation of productivity, therefore, is terribly serious.

Much like a heart beginning to wither because it cannot supply its own need for oxygenated blood, the U.S. economy is suffering the basic sickness of its own inability to economically provide for its people. A heart so starved will soon bring its owner to his grave; if continued, an economy so sluggish might soon bring its country to its knees.

## STATE OF U.S. PRODUCTIVITY

For well over a decade, gains in U.S. productivity have been stagnant. In the last few years, they have even come to a halt, and U.S. productivity has actually been *decreasing*. U.S. industry is requiring more time, more money, more resources to turn out less of the goods and services that make up society's wealth.

**FIGURE 1.1**



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In the two decades after World War II, U.S. productivity boomed forward at an annual rate of over three percent each year. This high productivity provided a horn of plenty, a flow of goods and services in an abundance the world had never known. The vibrant economy pulled the poorest sectors of society up with it, as an ever-expanding pie offered increased wealth to each citizen. Wage increases were soon calculated on this three percent plus increase in productivity, raising the standard of living (and expectations) of all workers.

But then, as Figure 1.1 shows, productivity gains began to slide in the mid 1960s. By the 1970s a clear stagnation was evident, and by the beginning of the 1980s, gains had ceased altogether, and the country's productivity actually began to fall. While the 1980 statistics may partially be explained by a drop in productivity normally associated with an economy in recession, the direction of the trend is ominous.

While the United States remains the most productive country in the world, other major economies are striding forward while Uncle Sam marches in place. Figure 1.2 compares labor productivity rates of change for the principal Western industrialized countries between 1967 and 1977. As the graph shows, Japan more than doubled worker output per hour in this decade, with France, Germany and Italy not far behind. The United States wrestles with Great Britain for the distinction of last place.

### PENALTIES OF PRODUCTIVITY STAGNATION

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***Adaptation: The capacity of an organism or population of organisms to fit into its environment in such a way that it is able to continue to survive and reproduce itself.***

**The Random House Encyclopedia**

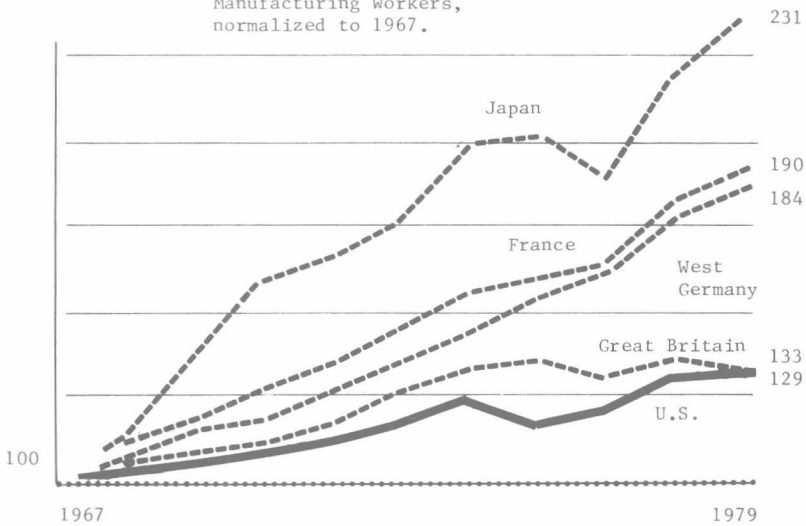
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Innovation is the source of increased productivity. In a world of constant, and often ominous change and flux, innovation is adaptation. Increases in productivity stem from the innovations which allow a society to survive and prosper. The absence of these innovations results in a stagnation which can be as fatal to societies as to any species.

As the smoke of World War II cleared away, two island nations surveyed their new worlds. Japan was the loser, a small country only one twenty-fifth the size of the United States, with only one seventh of that small area suitable for human habitation, agriculture, or industry. The

# International Indices of Labor Productivity

Output per hour of  
Manufacturing Workers,  
normalized to 1967.



Sources: U.S. Senate Joint Economic Committee and  
Bureau of Labor Statistics

**FIGURE 1.2**

occupied nation was stripped of the resource-rich lands it had earlier seized. Gone were the coal fields and ore deposits of Manchuria, the forests and petroleum of the East Indies. Droning American B-29s had shattered the country's industrial base. Entire thriving cities had been cauterized from the face of Japan in an instant. Much of the nation's manpower had fallen on far battlefields.



## 8 THE ESSENCE OF PRODUCTIVITY

On the other side of the globe, the British similarly inventoried their losses and assets. Britain, first of all, was on the winning side. No occupying troops ruled their land. Although the Battle of Britain had been horrifying, it was not on the same scale as the scourging inflicted upon Japan and Germany by high-flying Allied bombers. Britain was still one of the industrial giants of the world. It enjoyed a close relationship with the United States, the industrial colossus whose productive power had provided a torrent of planes, ships, and brains instrumental in crushing Hitler's evil strength. And while colonialism was drawing to an end, Britain would retain close connections and beneficial trade with its empire, on which, it would soon turn out, the sun was about to set. The British citizen, tired of the long war, could look forward to his country's regained prosperity and world leadership.

While every visible indication would seem to favor Britain over Japan in terms of future strength and prosperity, the people of the oriental island had one overwhelming advantage: the Japanese realized the country's stark need to adapt, to innovate, to produce. The British felt no such compelling need and did not set about aggressively adapting to the last half of the twentieth century. And now, a generation later, Britain is a wobbly skeleton of its former self. Inflation and unemployment rage out of control. Outdated and inefficient industries (and jobs) fall before keen competition from more innovative countries.

Tiny, war-battered, resourceless Japan, however, is now an industrial giant. Buoyed on ceaseless innovation and a country-wide commitment to productivity, this Land of the Rising Sun is now the world's third largest industrial power. Unemployment is virtually nonexistent. The yen has become one of the world's strongest currencies. And Japan's adaptiveness continues unabated. On the verge of the twenty-first century, Japan is making its biggest strides in just those industries which are most adapted to the new millenium almost upon us: microelectronics, energy and resource efficiency, and pollution control.

And the United States, where does it stand in adaptation, innovation and productivity?

Some segments of U.S. industry are vitally productive and innovative and continue to lead the world. In microelectronics and computers especially, productivity and applications are leaping forward as costs are spiraling downward. But sadly, many sectors of American industrial innovation and vitality more resemble those of Britain than of Japan. "If we are to avoid going the way of Britain," warns Harvard's Ezra Vogel, "we are going to have to act fast." Vogel, author of *Japan as Number One: Lessons for America*, asserts: "We are at a turning point."<sup>2</sup> Indeed, Figure 1.2 shows that the United States is tied with Britain for last place in terms of overall productivity gain. Speaking with Vogel at the same Harvard conference on loss of U.S. competitiveness, Harvard economics professor Otto Eckstein added as follows: