

BASEMENT



HD28

.M414

no. 1718-

85

U.S. INST.

NOV 27 1985

LIBRARY

WORKING PAPER
ALFRED P. SLOAN SCHOOL OF MANAGEMENT

REBALANCING THE WORKFORCE AT IBM:
A CASE STUDY OF REDEPLOYMENT AND REVITALIZATION

by

Leonard Greenhalgh
Robert McKersie
Roderick Gilkey

W.P. # 1718-85

October 1985

MASSACHUSETTS
INSTITUTE OF TECHNOLOGY
50 MEMORIAL DRIVE
CAMBRIDGE, MASSACHUSETTS 02139

REBALANCING THE WORKFORCE AT IBM:
A CASE STUDY OF REDEPLOYMENT AND REVITALIZATION

by

Leonard Greenhalgh
Robert McKersie
Roderick Gilkey

W.P. # 1718-85

October 1985

M.I.T. LIBRARY

NOV 27 1985

RECEIVED

REBALANCING THE WORK FORCE AT IBM:
A CASE STUDY OF REDEPLOYMENT AND REVITALIZATION

IBM Corporation opened a manufacturing plant in Essex Junction, Vermont in 1957. Known as the Burlington plant (Essex Junction is on the outskirts of Burlington--Vermont's largest city), this facility produced electromechanical relays and later evolved to develop and manufacture semiconductor memory.

The work force at the Burlington plant is primarily young, well-educated, and heavily concentrated in indirect occupations supporting the highly-automated production operation; specifically, the proportion of professional employees is large. The average age in 1982 was 36 years, with an average length of service at IBM of 9 years.

In 1982, the Burlington plant was faced with a reduction in demand for its output of memory chips. The downturn was precipitated by three major factors: a recession in the computer industry, apparent predatory pricing by Japanese manufacturers; and a strategic development that emphasized being the low-cost producer. The effect of the last factor was that IBM assembly plants were allowed to obtain components from the lowest-cost source, including outside vendors (IBM consumes approximately half the world's output of memory chips and supplies half its own needs from its manufacturing operations; the Burlington plant is the largest memory chip plant in the world).

Significant competition was emerging from the Japanese in the lucrative market for memory chips. In the early 1970s, Japanese chips were of such low quality that they were deemed suitable only for electronic games. By 1978, however, Japanese companies had achieved technological parity with the U.S., and by 1982, had captured 70 percent of the world

market for the popular 64K memory chips. The Japanese Koratsu (electronics cartel) chose pricing tactics as if the 1982 recession in the electronics industry were an opportunity to dominate world markets. Chips had been selling for \$12 (in round numbers) in the middle 1970s. By 1981, the price had dropped to \$8. Cost to produce each chip was over \$7, apparently for both IBM and the Japanese. In 1982, the Japanese dropped the price to \$5.

IBM buys half the chips it uses from several U.S. vendors, plus the Japanese Koratsu. This dependence on outside suppliers raises some strategic issues for IBM, particularly in the case of the Koratsu. The Koratsu reserves the right not to sell outside the vertically-integrated cartel. Thus, if IBM went out of the chip-manufacturing business, the Koratsu at some point in the future could withhold chips and thereby make it more difficult for IBM and other U.S. companies to compete in the computer business.

At the corporate level, IBM has addressed these strategic contingencies in several ways. First, the company has been broadening its market thrust: the 1984 merger with Rolm Corporation, for instance, permitted a major thrust into the telecommunications industry. Second, development and introduction of new products have been accelerated to cope with shorter product life-cycles in the industry. Third, economies of scale have been aggressively pursued through full-capacity manufacturing and concentration of facilities. In addition, IBM has undertaken joint research and development projects with companies such as Intel and Motorola.

When faced with the severe reduction in demand for its products, management at the Burlington plant recognized that a major strategic challenge existed. The underlying problem that engendered the symptom of reduced demand was slippage in adapting to a changing environment. In such cases, the obvious--and often erroneous-- response to reduced demand is to shrink flexible resources, particularly the work force. Reducing activity levels, however, generates less funds that are available to cover unshrinkable fixed costs and the research and development thrust the organization needs to ensure its future adaptability. A more adaptive response--the one subsequently adopted in Burlington--is to increase production while cutting costs; meet price competition; introduce new, superior products; and thereby run the plant at full capacity.

The untenability of Burlington's 1982 internal pricing levels was revealed as a result of the change in accountability practices. Prior to 1982, product managers at IBM were responsible for costs but not profits. They had to buy IBM components whenever these were available--at IBM's internal transfer price. This approach was feasible so long as IBM remained the technological leader and as a result could set prices that took into account the price elasticity of sales volume rather than having to respond directly to competitive pressures.

In 1982, IBM made a major foray into the price-sensitive consumer market, by selling personal computers. Product managers were assigned responsibility for profits and were encouraged to buy components at the most advantageous price. IBM's component manufacturing operations were thereby thrown into competition with other domestic and foreign manufacturers.

With no obligation to buy from Burlington, chip consumers within IBM bought from outside suppliers who were free to set prices on the basis of market conditions. The Burlington plant, lacking the flexibility to adjust its pricing, reduced its volume at this time in proportion to the reduced demand for chips within the IBM system. Doing so increased the unit price, since pricing still had to be done on a cost-plus basis: the reduced number of units meant that a greater burden of fixed costs needed to be allocated to each unit sold. The volume of business plummeted at Burlington.

The Burlington plant had a short-term and a long-term problem. The short-term problem was a work force that was too large for the recession-induced reduction in demand for memory chips. The long-term problem was an impaired ability to be cost-competitive with the Japanese. The managers in the Burlington plant wanted to solve the short-run problem in a way that would favorably position the plant to tackle its long-run problem. The short-term discrepancy between product demand and labor supply could have been solved expeditiously, even while adhering to IBM's practice of preserving workers' employment security. For instance, a proportion of the direct work force could somehow have been redeployed, or other types of work could have been brought into the plant (manufacturing memory chips for sale outside the IBM system was not a feasible option). These solutions by themselves would not, however, make the plant more adaptive when the forecasted recovery from the industry's recession occurred. The essence of the "Burlington Plan" was to use the pressure of the immediate situation to energize a permanent change in the efficiency of the plant. IBM was able to accomplish this because its procedures for human resources management

are much better thought-out than those that normally characterize American industry.

Current U.S. Practice in Reducing a Work Force

Work force reductions in most U.S. organizations tend to be managed in a way that creates a job security crisis. The typical scenario unfolds as follows. The manager, upon realizing that there are too many employees for the work to be performed, perceives little choice but to lay off the excess employees, never considering that layoff is only one of several tactics available for reducing the work force. Employees chosen for layoff are notified in writing of their immediate dismissal--often by a pre-printed notice in their pay packets. Usually, they are given only minimal information concerning the managerial action that would help them make sense of their sudden predicament. They leave the premises in a state of shock. The manager feels bad about doing this to the employees, but easily rationalizes the drastic actions: "These are hard times for the organization; they call for hard decisions." A few weeks later, the manager realizes that once again the staff is too large for the work to be performed, and lays off another wave of employees. The manager's attention again focuses sympathetically on the plight of the job losers. Completely overlooked is the disastrous impact on the people who have not lost their jobs, but who are paralyzed by the fear that the next wave of sudden layoffs could affect them.

Managers who create the scenario described above are not insensitive, they are merely performing their function in accordance with widely-accepted management practice. The terms layoff and reduction in

force are used interchangeably, therefore layoffs are not recognized as being only one option--and a poor one--for reducing a work force. Employees are given little advance notice because current managerial wisdom holds--though the empirical evidence does not support the view--that if employees know of impending cutbacks, they will stop working, steal whatever is stealable, or even commit acts of sabotage.¹

Generally, in U.S. organizations, managers do not think through the longer-term consequences of their work force decisions because control systems, reward structures, and planning horizons focus attention only on short-term costs and benefits.

The Work Force Problem at Burlington

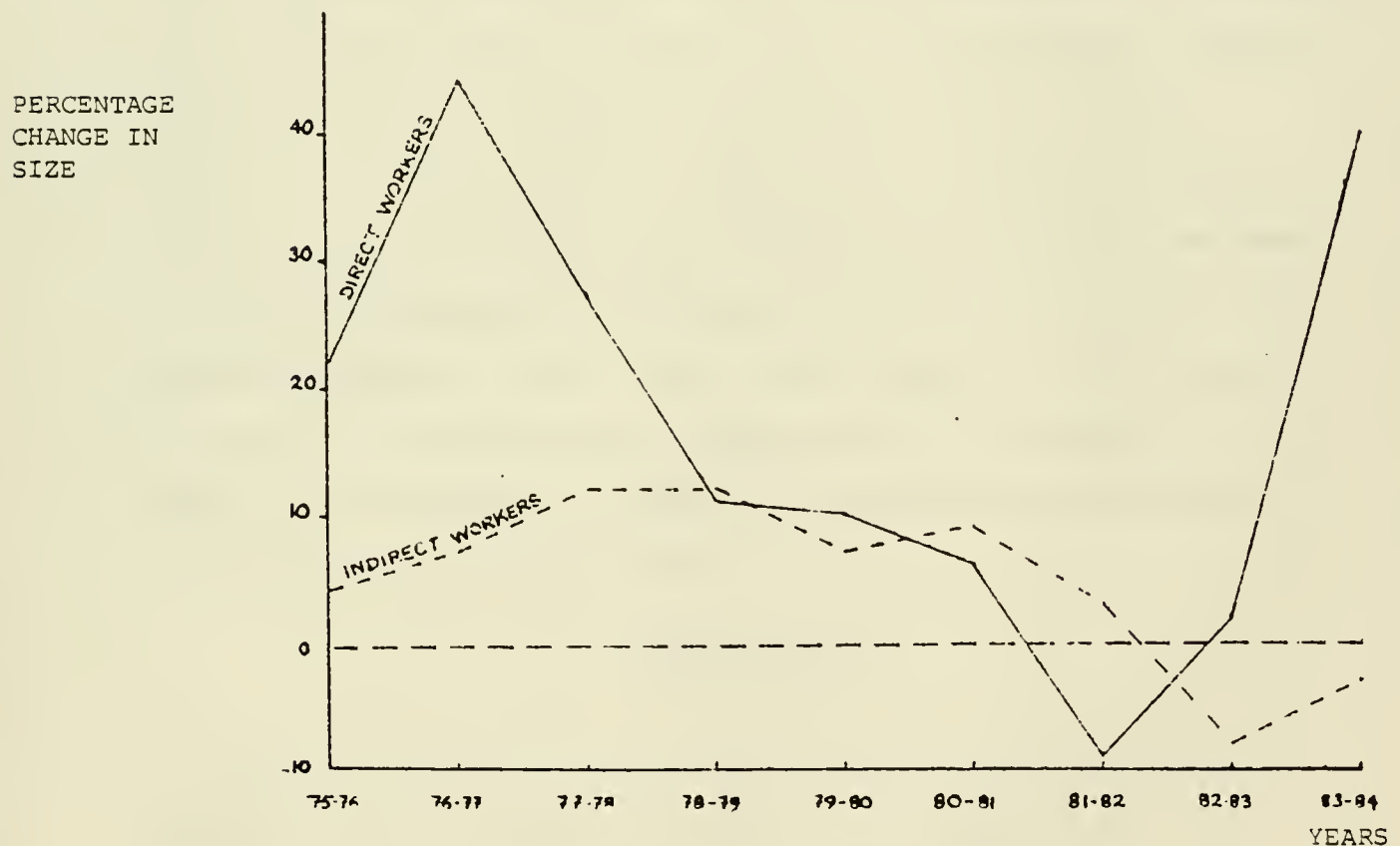
Exhibit 1 shows the growth of the work force at the Burlington plant over time. The rapid growth of the 1974-1982 period was the result of the success of IBM products well beyond even optimistic predictions. As is generally typical during periods of explosive growth, some sacrifices of efficiency occurred as management strove to be effective in increasing productive capacity. The slippage occurred in two areas: management, swamped with the demands of production, was not attentive enough in controlling the productivity of the individual employees, and the relative size of the indirect component of the work force rose above the optimum level.

The plant management's not giving full attention to these creeping inefficiencies was understandable, and even predictable. First, in a business in which gaining an adequate share of market segments is vital for recovering enormous development costs, effectiveness in producing a

sufficient volume of quality product is more important than efficiency in doing so. Second,

EXHIBIT 1

PERCENTAGE CHANGE IN THE SIZE OF THE DIRECT AND INDIRECT
WORK FORCE COMPONENTS FROM 1975 TO 1984



as price elasticity affects the technological leader more than it does later competitors, so that the consequences of moderate inefficiencies were not severe. Third, management was occupied with the logistical and technical problems of growth and development and therefore had limited time and attention to devote to maximizing efficiency — and at the same time,

experienced little pressure to achieve this. Added to this factor was the low average experience level that inevitably results from rapid growth in companies that tend to promote from within: during such growth there is a relatively large proportion of new employees (in the Burlington plant, 42 percent had less than 5 years of service in 1982), being supervised by recently-promoted managers who have been rapidly advanced to fill vacancies in the expanding hierarchy (33 percent had less than two years experience in management and 50 percent had less than three years). Fourth, experience imbalances and other irregularities in the human resource picture were not closely scrutinized because the feedback that management was receiving concerning the Burlington workforce was all positive. IBM regularly conducts an opinion survey among its workforce. The results of the most recent survey were at an all-time high for Burlington, so it was natural to give attention to other, more pressing matters—particularly meeting the surge in product demand.

IBM's Response

Respect for the individual is one of the basic beliefs of the IBM Corporation and is a foundation on which any strategy for work force adjustment is built. The belief is not a platitude, promulgated for its public relations value; rather, it is a facet of the IBM culture that is assimilated throughout the management structure and forms the basis for managerial decisions. Our interviews with managers at each level in the Burlington hierarchy revealed a remarkable similarity in the managers' accounts of how the changes were being accomplished. Managers interviewed would couch their accounts of their actions in terms of corporate

principles and how they applied to their departments and the decisions at hand.

The general belief of respect for the individual gives rise to the operating practice of full employment: Work force adjustments must be made in such a way that no employee who is performing satisfactorily loses employment (involuntarily) at IBM. The company has evolved sophisticated procedures for avoiding involuntary actions. These are centrally controlled by corporate headquarters in Armonk, N.Y., and locally administered. The procedures are powerful enough to cope with the major dislocations that can easily occur in industries as volatile as the computer industry, but are not always ideally suited to smaller-scale local work force adjustments. Thus, faced with the latter situation in Burlington, the site and divisional personnel managers wanted to avoid a "declaration of a manpower surplus" because doing so would result in a loss of "local ownership of the problem" and trigger the routinized responses. More specifically, in addition to the loss of local control to fine-tune the work force adjustments, the corporate-level intervention would pose some specific disadvantages for local managers trying to accomplish a limited reduction in force.

The most problematic aspect of the headquarters program would be declaring Burlington to be an "open plant"--with the result that other plants would have full access to recruit Burlington workers. Burlington did not want to lose too many employees, and in particular, specific employees who were too valuable to lose but who would be eagerly sought by other plants. The corporation provides some, but only limited, protection against this occurring by means of the "10-30-10 rule"--managers could opt

to retain workers who were in the top 10 percent, at least for six months; they could not use the open plant as an opportunity to transfer their least-valuable workers (the bottom 10 percent) to other sites; and the middle 80 percent were fair game to be recruited away.

The risk of runaway turnover rates would not only result from aggressive recruiting by other plants. It also could result from employees' right to choose other plants to work in. Specifically, once a manpower surplus has been officially declared, the potentially-displaced employee can rank-order his or her choice of three alternative work sites. It is then incumbent on the management of the chosen sites to accept the employee or explain satisfactorily to higher management why that interplant transfer is not feasible. Although the cost of moving is considerable (in the range of \$50,000 for the average move), cost is not a major impediment: IBM centralizes such costs when doing so is necessary to avoid creating a disincentive for the receiving sites to accept employees from other plants. Less than 10 percent of the work force typically selects interplant transfers; the range is usually 5-7 percent during rebalancing programs.

To avoid these problems, the Burlington plant declared it was "undertaking a manpower redeployment to improve cost effectiveness." Operationally, this meant that Burlington had to provide for the necessary reduction in force in its commitment plan (management commits itself to a course of action covering the current and the next year) and in its strategic plan (covering five years). Interestingly, the strategic plan provided for growth over the long term even when the current plan called for shrinkage.

The Contingency Plan

Human resource planners within the Burlington plant developed a contingency plan that rank-ordered the available work force reduction tactics from the most innocuous (cutting back on overtime and eliminating temporary workers) to the most drastic (involuntary transfer to other IBM plants). The essence of this plan is summarized in Exhibit 2. Management was able to pick target work force sizes and time frames, and immediately gauge the severity of the actions necessary to accomplish specific work force adjustments.

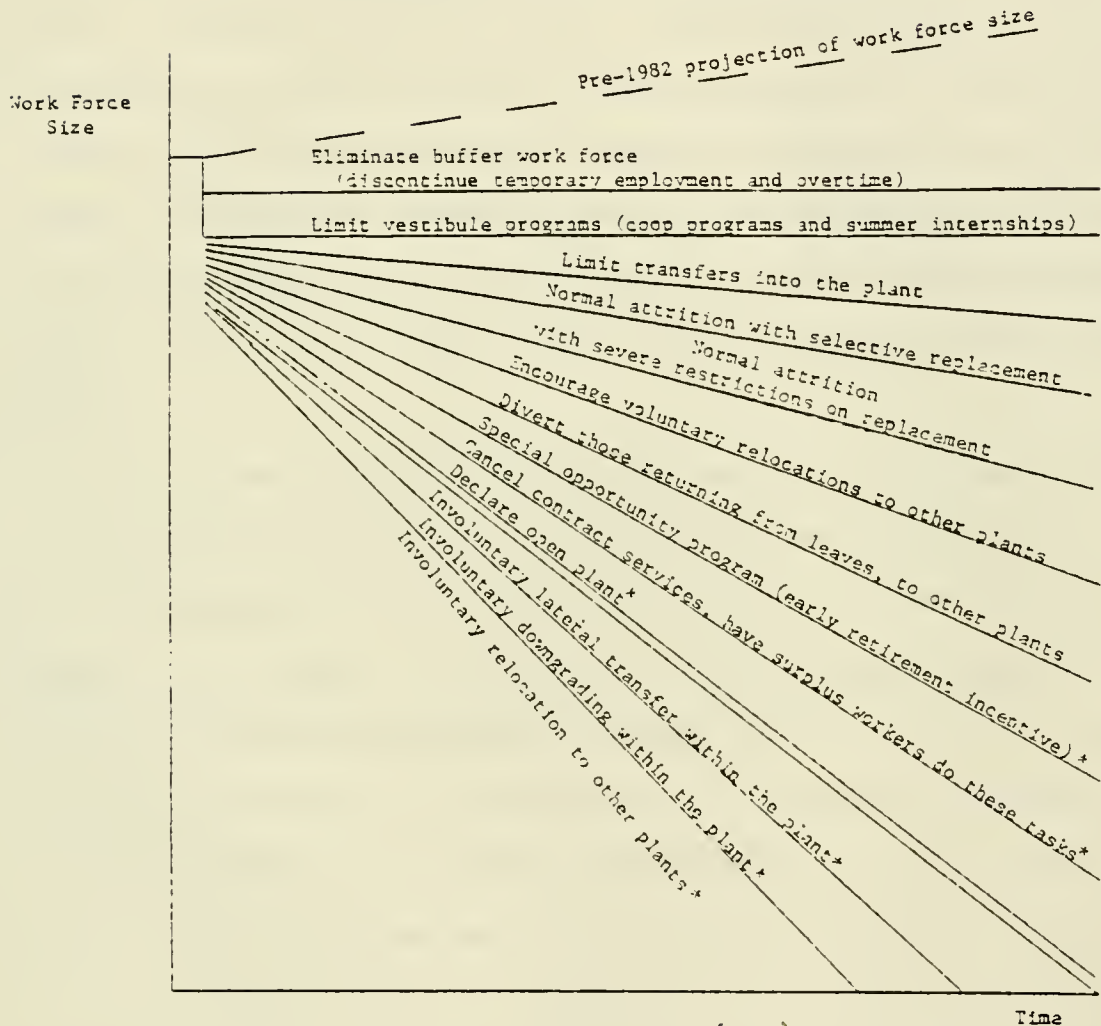
The urgency was determined by both the length of time the surplus was predicted to exist and the value to the plant of the skills involved. Specifically, highly-valued skills would be maintained in the work force if the surplus was forecast for a short period, whereas more-drastring actions would be taken in the case of a long-term predicted surplus or obsolete skills.

The most painless tactic to reduce the effective work force size would be to cut back on overtime—which represents a form of work-sharing. If doing so were insufficient to achieve the desired reduction in payroll expense, the plant could phase out its temporary workers—those who were hired for a 3-6 month period and thereby would have an explicit understanding that they were hired for work load fluctuations with a specific end date. Such workers could be eliminated immediately, by terminating temporary employment contracts, or phased out more gradually, by not renewing contracts as they expired. If deeper cuts were needed, the plant could next limit its vestibule programs—primarily co-op programs and

summer internships for college students. Management would normally prefer to phase out temporary workers rather than vestibule programs because the latter course of action could hurt future recruiting.

The next set of tactics would affect the plant's permanent work force directly. Management could institute selective controls on replacing workers who leave through normal attrition, first by limiting workers' transferring into Burlington from other IBM plants, and second, by not hiring replacements. The rate of flow into Burlington could be finely adjusted by increasing or relaxing the stringency of exceptions to the controls on hiring and transfer-in. These decisions were controlled by a committee of upper-level managers in the Burlington plant called the Human Resource Board. Managers wishing to replace or add workers had to make a convincing case to this board. Skill imbalances within the plant that resulted from differential attrition would be corrected by retraining employees in oversupplied job functions in order to fill undersupplied positions.

EXHIBIT 2

EFFECTS OF DIFFERENT WORK FORCE REDUCTION TACTICS
ON SPEED OF WORK FORCE SHRINKAGE

* Requires explicit corporate-level approval

All of the above procedures limit work force inflows. The more aggressive procedures involve increasing outflows. The first such technique would be to informally encourage workers in non-critical areas to voluntarily transfer to other plants; it is equivalent to "outplacement within IBM." This could be supplemented, to a minor degree, by encouraging those who were on leave from the plant (on educational leave, for example)

to resume their IBM employment at another plant. If greater outflows were needed, management could use a Special Opportunity Program, which provides an incentive for early retirement--usually a bonus of two extra years' pay, spread over four years. The latter system is a costly, but effective option. IBM personnel managers have had sufficient experience with early retirement options that they can predict with better than 90 percent accuracy the number of workers who will take advantage of this voluntary program.

A still less desirable technique to reduce the work force--either until demand picked up or until there had been sufficient natural attrition--would be to utilize surplus workers to perform tasks that normally are contracted out. This work might include such tasks as painting and grounds maintenance, but such work is not a fruitful way to utilize many employees in a high-technology organization. Nevertheless, it is more palatable than some other alternatives, and its use would reflect the primacy of IBM's commitment to its employees over outside contractors.

The next step would be to declare an open plant, described above, which permits active recruitment by other plants and employee-initiated relocation funded and arranged by IBM.

The last set of techniques that are available would be used only if all other tactics had failed to reduce the employee ranks to the appropriate size yet there remained a compelling business need to further shrink the work force. These techniques involve job changes that preserve continuity of employment but would not be consistent with employees' primary preferences. The first such step would be to reassign surplus employees to undersupplied job titles of similar rank and status. When such opportunities were exhausted, management could assign surplus employees to lesser jobs—in effect, downgrading or demoting them. If all else failed, the remaining surplus workers could be reassigned to positions in other plants.

Differential Planning for the Direct and Indirect Work Force

Exhibit 2, intended for illustrative purposes, treats the work force as if it were homogeneous. There are important qualitative differences, however, between direct and indirect workers. When the ratio of indirect to direct workers rises, the production operation becomes less efficient and as a result the plant becomes less competitive. Furthermore, management needs to somehow preserve the stock of human capital represented in the direct work force: experienced, highly-skilled workers are vital in this industry—in which yield rates and product reliability are vital for success in the market. At the same time, there was a historical tendency for Burlington workers to flow from the direct to the indirect work force, where the jobs are perceived as more attractive. As a result of these factors, it was necessary to develop a specific plan to adjust the direct and indirect components of the work force.

Such planning was a key component of the Burlington plant's long-term progress toward its strategic objective--to be the world's low-cost producer of high-quality memory chips. Specifically, work force adjustments were controlled in such a way that any significant staffing flows within the plant would be from the indirect to the direct work force. Known as the "I to D" (indirect to direct) program, the objective was to shrink nonvital support functions that contributed to fixed costs. In 1982, the indirect component represented 74 per cent of the work force at this highly automated plant. While the indirect work force was shrinking, the direct work force was intended to grow as part of the plant's long-term plan. This growth was possible because Burlington's management had successfully negotiated for greater freedom to set prices in response to market forces.

The I to D program was voluntary, and even had the official designation, "Voluntary Assignment in Manufacturing Program." To encourage volunteers, management initiated a program whereby cooperating workers had the option of returning to an indirect job in their career fields after 9-12 months. This option reduced the risk of volunteering, and the program came to be viewed as an opportunity for workers to broaden their experience and perhaps even take an interesting break from their normal duties. In all, 76 indirect workers volunteered for this program in the 1983-84 period, and 23 of these elected to remain in the direct work force after the one-year commitment had run its course.

The I to D program accounted for 10 per cent of the 488-person reduction in the indirect work force during 1983, the pivotal transition year. Another 59 per cent left through attrition (of this 59 percent, 24

per cent left through normal attrition and 35 per cent voluntarily transferred to other IBM plants). A further 18 per cent took advantage of the Special Opportunity Program and retired early. The remaining 13 per cent of those who left the indirect work force transferred into the plant's research and development laboratory.

The inflow of workers was not reduced to zero during this rebalancing program. This inflow reflects IBM's practice of maintaining key skills in the work force through the use of flexible controls rather than rigid "freezes." The resulting small influx of workers had the effect of replacing 29 percent of the individuals who left the plant. Twenty percent were replaced by new workers to whom a prior hiring commitment had been made and the other nine percent were replaced by people transferring into Burlington from other plants.

There was actually a net increase in the absolute number of direct workers during this period. These additional workers were needed because competitive pricing and easing of the recession had increased demand for the plant's products.

Two points are worth emphasizing concerning the Burlington plan. First, although short-term costs would be tolerated in order to achieve a competitive ratio of indirect to direct workers, Burlington managers clearly were held responsible for minimizing such transition costs. Thus, high-cost options such as early retirement and relocation were not urged unless less costly options were not feasible; furthermore, managers had to demonstrate that the skills of any surplus employees would not be required at Burlington in the foreseeable future.

Second, the redeployment was guided by a contingency plan, which was immediately adaptable to updated forecasts of work force requirements: periodic re-forecasting is necessary in high-technology industries given the rapid environmental changes that occur. By the end of 1983, it became obvious that demand for the plant's products was going to recover faster than had earlier been expected, so that relatively painless work force reduction techniques proved sufficient to achieve the necessary redeployments. On the other hand, had Burlington's plight worsened, management was fully prepared to take additional action. It is worth noting that had the Burlington plant resorted to the immediate layoffs that occur in so many other companies, doing so would have caused needless hardship and trauma in this situation. Specifically, to meet the resurgence in demand, in early 1984 the plant would have had to hire back embittered and alienated laid-off employees and have them join the almost-equally traumatized "survivors" of the layoff.

Cooperation in Burlington

The most palatable work force reduction techniques shown in Exhibit 2 are strictly voluntary in nature. Their success depends on cooperation between workers and management. The levels of cooperation evidenced at the Burlington plant were astonishing.

IBM has made a large investment over the years in developing the commitment of its work force, largely by showing workers time and again that such commitment is reciprocated by the company. The payoff to this investment is that in time of need, the company can elicit willing cooperation by its employees through open, direct communication--such as by

explaining the predicament and how the individual employee can help. Whenever possible, the employee is somehow compensated for his or her sacrifice, but when compensation is not feasible, appeals such as "this one's for the Gipper" can be successful.

As part of the Burlington Plan, the plant's house organ reported interviews with people who had voluntarily transferred from oversupplied non-manufacturing jobs to direct production jobs. One female employee's comment was "When I read about the program I felt it was an opportunity to do something good for the company.... I thought that if they really needed people, I could help out." Another volunteer saw an economic advantage because of the potential to earn overtime pay. Commitment to IBM was a secondary, but nevertheless a salient motive: "but I'm also doing it to help the company. It works hand in hand." Another worker volunteered in order to understand how his role affected production. He is quoted as believing the experience would help his career in the long run. By publicizing employees' commitment to the company as one of the motives underlying decisions to volunteer, management is, of course, using its communication channels to reinforce that commitment and shape the norms and culture.

The Communication Program

It is quite an accomplishment to create a cooperative atmosphere; however, it takes a specific communication program to channel that cooperation into the successful redeployment program that was achieved in the Burlington plant. That effort involved overcommunication, use of multiple channels, reliance on first-line managers as the key link between workers and management, and access to higher management through "the open door" in its many forms.

The biggest communication challenge was to convince workers that IBM in Burlington genuinely had a problem; a cursory glance at publicly-announced figures might indicate the opposite. IBM's corporate sales in 1982 were \$34.4 Billion, and its after-tax net income was \$4.4 Billion. Even with recession conditions, both sales and net income were growing rapidly (see Exhibit 3). Furthermore, workers had recently been praised for their performance efficiency: at the end of 1981, costs had come in five percent below the objectives the plant management had set. Thus, the message that needed to be sent was obviously quite different from, say, the one that Chrysler Corporation gave to its workers when that company was on the verge of bankruptcy.

Another communication challenge was how to explain that different parts of the work force would be called upon to make different sacrifices. The nonmanufacturing work force would bear the greatest burden, since it was slated for permanent shrinkage. This meant that there was diminished opportunity to transfer into nonmanufacturing jobs, which traditionally had been perceived as more desirable. Meanwhile, the manufacturing work force

Exhibit 3 -

IBM's Sales and Net Income Growth in
the Early 1980's

YEAR	SALES*	NET INCOME
1980	26.21	3.40
1981	29.07	3.61
1982	34.36	4.41
1983	40.18	5.49

*includes sales, rentals and services

was to remain intact initially, and eventually to grow in anticipation of the resurgence in demand that would occur when the recession abated; however, that work force would be subject to increased pressure for productivity. The laboratory was to escape without any reduction in work force size, since the company was understandably reluctant to impair its technological adaptability and thereby mortgage its future. For some, feelings of inequity arising from the laboratory's escaping cutbacks were made even more poignant by the view that the lab was somewhat responsible for the plant's predicament—that it had lost the momentum needed to ride the favorable crest of product life cycles by failing to maintain technological leadership.

The plant's management addressed these difficult problems by patiently educating the workers about the dynamics and economics of the semiconductor industry. Although current sales and profits were impressive, the company was operating in an unstable market characterized by ever-shortening and accelerating product life-cycles, companies that suddenly blossomed from nothing then vanished just as quickly, and formidable competition from an integrated Japanese cartel committed to taking over a large share of IBM's markets. To survive in this hostile environment, IBM needed to continue to be the world technological leader. The cost of maintaining such leadership from one generation of products to the next was increasing by orders of magnitude. Thus the company had to be the low-cost producer to generate the high volumes necessary to cover its own research and development investments.

The Burlington plant used many channels to communicate this message and the specifics of how Burlington workers would be affected. Management wisely erred on the side of overcommunication to be sure that everyone fully understood the subtleties of the plant's problem.

The basic communication link between workers and management at IBM is the first-line manager. Thus, a special effort was made to ensure that the managers understood the details of Burlington's predicament well enough to be able to adequately explain the situation to their subordinates. To assure this level of knowledge, a theater was rented in downtown Burlington and all managerial and technical personnel participated in an all-day session to explain the changes that were to be made and the rationale for them. Briefing packages were distributed to ensure that a uniform message was disseminated, and the deliberately "upbeat" tone of the briefing was intended to serve as a model for how managers might convey the information in their own work units. This full sharing of the details of the crisis and the company's planned strategic response was done to build the commitment of the work force to help fix the problem.

As previously mentioned, the Burlington management also communicates directly with its employees through a set of house organs. Organizational and policy changes are explained in interviews with upper-level managers reported in a rather elegant monthly Burlington plant magazine. This flagship publication is supplemented with a weekly management information review, which is intended to help managers answer employees' questions and concerns. Finally, a daily bulletin is published at the site and made available to all employees.

The Burlington plant is equally sophisticated in handling communication that is initiated by employees. This process is formalized in the "Speak-Up Program," which is found throughout IBM, whereby an employee can raise issues and concerns in a confidential manner. The individual can expect to hear within 10 working days from top management or from whomever the person requests. There are usually 400-500 speak-ups per year. The rate did not increase during the period of the 1982-1983 redeployment program, although the content of those speak-ups that were written often had to do with redeployment.

There is a similar IBM program called the open-door policy, whereby an employee can request a meeting with management at any level. Specific safeguards are built in to both this and the Speak-Up program to protect confidentiality.

Finally, in order to manage the rumor mill there is a hotline in place which consists of an answering machine on which a manager can leave a message and expect to receive a response within a very short time, usually one day. This service permitted the manager to provide prompt, accurate answers to employees' questions, filling any information vacuums with official company information.

Discussion

The approach taken by the Burlington plant to deal with sudden market adversities is instructive in a number of ways to other organizations facing similar predicaments. Perhaps the most important lesson is to note that IBM made a strategic response to the problem rather than a tactical response to the symptoms. A short-sighted statement of the problem would

have been that Burlington needed to shrink its work force concomitant with the reduction in memory chip demand. The more incisive problem definition was that Burlington was becoming increasingly maladapted to its niche in the semiconductor industry, as evidenced by reduction in demand for the plant's output, and that a short-term resource imbalance existed that needed immediate attention. The short-term rebalancing program was feasible not just because it was well thought-out, carefully planned, and expertly managed, but also because the corporation had been far-sighted enough in the past to build the loyalty, commitment, and cooperation of its work force. This investment paid back in Burlington's time of need because workers reciprocated the concern that had been shown for them by being willing to make short-term sacrifices and by striving to achieve adaptive change. In this regard, IBM stands out among typical U.S. corporations in which the work force tends to react to such upheavals with blanket opposition to management and resistance to change.

There are several ways to summarize the essence of the Burlington story. From the viewpoint of business strategy, one of the major lessons is that even a company as sophisticated as IBM can fall behind the product development curve and find itself in an uncompetitive position when competitive developments move a product through the life cycle much more rapidly than the best plans or forecasts envisioned. This is how the Burlington plant developed its "affordability" problem.

What makes this story interesting is not that a competitive problem developed (such a development is a frequent occurrence in a dynamic competitive environment), but the manner in which the company developed a multi-pronged strategy for dealing with the affordability problem. This

program achieved an effective balance between short-run and long-run considerations and between corporate and plant-level initiatives.

Balancing Objectives

First, important lessons can be learned from understanding how the Burlington plant balanced long and short-run considerations. Clearly, Burlington had developed a high-cost operation that needed to be restructured over a period that could not exceed 4-5 years. But management had to accomplish this in such a way as to maintain commitment to IBM's historic full-employment practice and also maintain the dignity of the workers involved.

Achieving the right balance of adaptability and work force stability has to be accomplished in the context of the very subtle interplay of plant-level and corporate-level initiatives. Burlington management reported that as they sat down to talk about how they wanted to produce the next generation of products, they followed the "blank piece of paper" approach, in that they specified the production technology and the work force requirements without regard to the number of people that might thereby be made surplus. They could do this because they knew ultimately that if Burlington had too many people, that corporate programs and resources would be available to help reduce the excess. In this sense the principle of decentralization of responsibility is not carried to the extent that the Burlington plant felt it was caught with both a cost problem and a commitment to somehow solve its surplus worker problem on its own.

Management at Burlington felt a primary responsibility for solving the excess-people problem locally. What emerged was a five-year plan that included the necessary reduction in indirect manufacturing personnel, and specified the vital assistance that would be needed from the corporation, especially in financing costs that would be incurred as the plant moved steadily towards profitability. The corporate level also underwrote the cost of the Special Opportunity Program (early retirement). The principle underlying the five-year plan was that the plant was held responsible for solving the problem and doing so in an economically-prudent manner. However, given the choice between an effective solution and an economically attractive one, priority is given to the effective solution.

The Role of Checks and Balances

The balance that is achieved between short-run and long-run strategic objectives and between plant-level and corporate-level initiatives is enhanced by a similar balance between operating management and personnel professionals at the plant level. One of the hallmarks of effective human resource management is an integration of line and staff responsibilities. In our interviews, we identified the concerns that were uppermost in the minds of operating people and personnel experts, and were struck by how similar were the priorities of each group. Of course, operating people placed more weight on product development and achieving full workloads in the plant, but they also recognized the importance of sustaining full employment. For example, as the organization moved through the contraction

phase into the expansion phase, it would have been easier to hire new personnel rather than retrain and redeploy those who might be surplus. Line management accepted the need to work with the existing available workers as one of the important ways of carrying out the IBM precept of "dignity of the individual."

Meanwhile, personnel took the lead for formulating the different redeployment measures. Specifically, the Manager of Personnel for Burlington facilitated teamwork between site-planning, industrial engineering, and personnel functions, and coordinated the activities of the Resource Board that guided the various options—especially the transfer from indirect to direct manufacturing jobs. This role emphasized mediation and consensus-building. A norm guiding the process of the Board's activities was that no board member was to be surprised in a meeting with another's information or position. Differences were to be reconciled outside the context of the meetings, so that the Board's vital function would not be impeded by posturing and unresolved agendas. The Personnel Manager met with interested parties before meetings to provide information, help negotiate compromises, and otherwise facilitate preparation for the meetings.

Personnel was not limited to a passive role in formulating the redeployment measures, but rather took on a new role in presenting options for line managers to decide upon. As part of this proactive posture, the Personnel Manager took as one of his responsibilities to help department heads "dig out people." By this he meant helping line managers identify areas where the operation could be performed effectively with fewer people. This assistance was especially valuable for the internal transfer program

because indirect departments had to find ways to shrink the complement of people while at the same time continuing to deliver a full array of services.

This system of checks and balances also works across hierarchical levels within an IBM plant. For example, there is pressure by higher management, delivered through first-line managers, for employees to respond cooperatively to the various options during the redeployment program. But compliance could not be achieved coercively because of the many channels for upward communication wherein individual employees can raise objections.

The Contention System

Another aspect of the IBM culture that maintains programs on a balanced course is what is called the contention system: It is considered appropriate--even desirable--for differences to be brought out in the open. Thus, for example, personnel managers contend with operating managers over issues of redeployment, and plant-level people contend with division and corporate-level people about whether to invoke a special opportunity program. This system ensures that the plan is balanced and adaptive, and that the implementation process addresses the innumerable problems that develop.

Implementation Skills

Beyond the sophisticated plan and the multiple checks and balances that keep it on course, the Burlington story illustrates the extraordinary skill with which IBM implements a transition program. Every step of the way is fraught with complexity and problems. These get solved through

discussion and adjustments. For example, at one point it became clear that individuals who were interested in transferring from indirect to direct occupations would suffer a loss of overtime because initially the indirect departments were working overtime and the workload in manufacturing had not grown sufficiently to require overtime. The solution was to delay the date of transfer until the direct workload increased and meanwhile to accelerate the improvement in productivity on the indirect side so that hours of work could be reduced and the overtime "incentive" eliminated.

Similarly, considerable judgement was required in adjusting the number of temporary employees. Generally, once a surplus situation has developed, all temporary employees are phased out. As a general rule, this makes sense, but for particular areas in which more people might have opted for transfer or special opportunity programs, severe shortages could necessitate short-term use of temporary employees. These were the kinds of issues that were discussed and resolved in the Resource Board—coordinated by personnel but with manufacturing representation.

The biggest challenge during the implementation period was to ensure a smooth transition in expectations given that the short-term and long-term work force requirements were different, and to deal with the issue of equitable contribution from all quarters. As implied above, the plant needed to execute a subtle program in that in the short run it was redeploying people in order to get its costs down, but in the long run it would be expanding the total work force as it brought new products into production. Thus, the plan called for early emphasis on redeploying people away from Burlington. Then, as production volume started to recover and grow, it became appropriate to focus attention on internal redeployment.

All of these options were offered on a voluntary basis with the right to return to the previous job (or its equivalent) so that employees did not feel that they were being coerced.

Another key dimension of implementation was to ensure that employees felt a sense of fairness in terms of equality of sacrifice. Several departments negotiated to achieve their increased efficiency targets by reducing cost more in nonlabor items, and this generated some resentment from other departments. Thus, in the later phases of the plan, several departments came under considerable pressure to cut back personnel "like the other departments had done" to ensure equity.

Potential Weaknesses of the IBM Approach

A number of questions can be asked about the generalizability to other companies of the IBM approach to human resource management. Certainly it presents short-run economic costs. For example, another company faced with the affordability problem of Burlington might have chosen to cut back personnel immediately, thereby hoping to bring it into a (short-term) cost-effective position rather quickly.² By contrast, at IBM it will take at least five years to complete the planned transition. However, the long-term benefits or advantages of redeploying the personnel rather than terminating them are substantial. It is interesting that IBM has never sought to conduct a quantitative assessment of the costs and benefits of full employment, but the belief is uniformly held that it is a very cost-effective practice when long-run costs and benefits are considered.

The biggest challenge in the years ahead for a company like IBM will be to continue to offer employment security. Considerable organizational

change and restructuring will be inevitable as the industry evolves. This implies that many people will be displaced from their present positions, yet there will be fewer openings even though there will be considerable expansion of output (to remain competitive, IBM must expand its volume with very little increase in employment). Thus, the challenge remains a big one.

Comparing the IBM Approach to Other Human Resource Developments

Currently, there is considerable interest in the subject of employment security. The need for economic restructuring continues in many industries. A number of organizations, where employment security had been a hallmark, such as Kodak and Polaroid, have resorted to large-scale involuntary separations. However, other companies that have been committed to employment security are striving harder to find ways to achieve it; like IBM, they are finding that it is more and more difficult to achieve this objective in the face of continuing change and a limited number of openings that in better times would be created by attrition and expansion. Thus, the subject has taken on considerable saliency.

As a result, a number of policy studies -- such as the Work in America Institute publication, Employment Security in a Free Economy (New York: Pergamon Press, 1984) -- have made employment security a key topic. At the same time, a number of collective bargaining settlements have made employment security a key priority. For example, Xerox Corporation has guaranteed employment security in its Webster, New York plant at least for a limited time period. In other settlements, there is a commitment to provide income support and retraining opportunities for senior workers who

are displaced due to new technology or to outsourcing (as in the case of General Motors and Ford).

By contrast, IBM unilaterally offers employment security to its workers because management believes that the benefits, though difficult to quantify, are large even in relation to the costs. For example, IBM workers appear to return the company's commitment to them in the form of loyalty, flexibility, and willingness to go along with changes that might seem inconsistent with their short-term interests. Such predispositions are invaluable in a company that must constantly adapt to changes in its environment.

System Externalities

A criticism that is frequently lodged against the IBM type of employment security practice is that it achieves internal stability but in doing so generates instability in the larger labor market: stated alternatively, companies like IBM "export" their employment fluctuations. To some extent this is a valid point in that IBM uses a series of buffers such as temporary workers and subcontracting--and these can be eliminated when a surplus situation develops and more work needs to be brought in for IBM's permanent employees. But the alternative of having IBM lay its own permanent workers off in response to product demand fluctuations would not seem to be a better result for the general labor market. The essence of the IBM approach is that it smooths out the ups and downs and engages in a variety of labor-market bridging arrangements--such as transition to other occupations and skills within IBM, and transition to other locations within the country. Thus, the internal labor market of IBM works much more effectively than do most internal labor markets.

Applicability of the IBM Approach

This study is intended to illustrate the essence of employment security in action. Too frequently, the literature prescribes the various steps that companies can take in order to achieve employment security without explaining how these steps fit into business strategy and how they are implemented in a planned and balanced manner. We hope that the IBM story has shed some light on these important aspects of administration.

Many companies simply do not have IBM's resources—such as the financial reserves to invest in a five-year plan for Burlington, or a personnel staff adequate to administer the redeployment program. But this raises a question of cause and effect. IBM may have those resources largely because the company's commitment to its work force generates a surplus that provides such resources. In any event, the key features of the IBM story—specifically, the interplay of corporate and local initiatives, the balance between short and long-run objectives, and the integration of line and staff responsibilities—are lessons from which all organizations can benefit.

FOOTNOTES

1. See L. Greenhalgh and R.B. McKersie, "Cost-Effectiveness of Alternative Strategies for Cut-back Management." Public Administration Review, Nov./Dec., 1980, 575-584.
2. The apparent economic benefit of such short-term solutions is questionable in the typical case of work force reduction, in which a relatively small percentage of the work force is surplus. See the cost-benefit analysis in the Greenhalgh and McKersie paper, cited earlier.

3504 607

4

MIT LIBRARIES



3 9080 003 065 247

3. 3. 1

2



Date Due

BASEMENT

AP 7 '89

MAR 15 1990

Lib-26-67

bar code is on back cover

