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**GAINSHARING THEORY AND RESEARCH:  
FINDINGS AND FUTURE DIRECTIONS**

**CEO PUBLICATION  
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**EDWARD E. LAWLER III**  
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### ABSTRACT

The past research on gainsharing is summarized. Gainsharing is considered in the context of what is required for participative management to work successfully. Key research needs are identified and the kinds of technical and theoretical developments which would aid the wider adoption and understanding of gainsharing are discussed.

GAINSHARING THEORY AND RESEARCH:  
FINDINGS AND FUTURE DIRECTIONS

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Gainsharing as a formal pay structure has been around for over 40 years. There is no precise definition of gainsharing, however it is agreed that most gainsharing plans involve an approach to paying bonuses based upon organizational performance and an approach to participative management (see, for example, Moore and Ross, 1978; O'Dell, 1981). The original and best-known gainsharing plan is the Scanlon Plan. Other gainsharing plans include Improshare, the Rucker Plan and according to some definitions profit sharing. Profit sharing represent a gray area because although a bonus is always involved participative management often is not present. Thus, most definitions of gainsharing do not include the typical profit sharing plan. In addition to these plans many organizations have their own gainsharing plans which are custom designed to fit their situations.

In the typical gainsharing plan, gains or improvements in organizational performance are shared on a formula basis with most or all members of the organization (Bullock & Lawler, 1984). A historical base period is established and is used as a basis for determining whether gains have occurred; hence the name "gainsharing." Unless a major organizational change takes place, the historical base stays the same during the entire history of the plan; thus performance is always compared to the time period before the gainsharing plan started. When performance is higher than it was in the base period, a bonus pool is funded; when it falls short, no bonus pool is created. In the typical plan at least half of the bonus pool is paid out to the employees while

the rest is kept by the company. Payments are typically made on a monthly basis with all employees getting equal percentage amounts.

Gainsharing plans are as much an approach to participative management as they are a pay plan. Typically, gainsharing programs use some form of suggestion program as their way of operationalizing participative management (Frost, Wakely, Ruh, 1974; White, 1979). In the Scanlon plan written suggestions are solicited and committees are established to process them. A number of Improshare organizations use quality circles as their approach to developing suggestions. In addition to suggestion systems, most gainsharing plans include a committee that is created to manage the plan and communicate the results. Table 1 lists the major plans as well as their key characteristics.

No one has an accurate estimate of how many gainsharing plans there are in the United States. There certainly are at least a thousand and there seems to be little doubt that their popularity has increased tremendously in the last ten years. One recent national survey found that thirteen percent of the firms studied had a gainsharing plan (O'Dell, 1987). They are increasingly being adopted on a location by location basis in large corporations such as Motorola, Honeywell, General Electric and TRW. Previously, gainsharing plans were typically found in smaller organizations such as Lincoln Electric, Herman Miller and Donnelly Mirrors. This increase is significant, and probably due to the fact that they are more than just pay incentive plans; they are a way of managing and an organization development technology that fits many managers' beliefs about how organizations should be managed.

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There has been a considerable amount of research on gainsharing plans. Quite a bit is known about them, particularly when they are compared to other organizational development approaches. However, when compared to what it is desirable to know, relatively little is known. A review of what is known will illustrate this point; then consideration will be given to new directions for theory, research, and practice. Before consideration is given to what is known about gainsharing plans, however, a few concepts need to be presented so that gainsharing can be put into an organizational context.

#### Key Concepts

In considering gainsharing plans, it is particularly important to focus on the organizational issue of congruence or fit (Nadler & Tushman, 1977; Nightingale, 1982). Lawler (1986) defines congruence in terms of the degree to which a particular approach to decision making and human resources management is consistently reflected in the practices, structures, policies and managerial behaviors of an organization. From the beginning Joe Scanlon, the creator of the Scanlon Plan, emphasized that the gainsharing approach to bonuses fits a participative management style. The issue of the congruence between gainsharing and other design features of an organization has continued to be a critical one. Thus, as the discussion of gainsharing unfolds it is important to address what constitutes congruence and how important it is.

Gainsharing plans are made up of both financial bonus formulas and management processes. The process side of gainsharing is more difficult to describe, but is nevertheless extremely important. The initial process issues include decisions about how the plan will be designed, what will be communicated and who will be involved in the design activities. Process issues continue throughout the life of the plan as changes, adjustments and communications are needed. The process side of gainsharing needs to be studied as does the bonus formula side.

Gainsharing plans can be used as an initial thrust in an organizational change program. In this case, it is fair to say that they lead the change effort. However, they can also be put in as a lag or later intervention in the organization. This lag/ lead distinction is important because we need to know how well gainsharing plans can operate both as lead and lag interventions.

#### WHAT DO WE KNOW?

Perhaps the most important thing known about gainsharing plans is that they work. Table 2 lists some of the common positive results that have been found in research studies of gainsharing plans (Lawler, 1971; Schuster, 1983; Schuster, 1984b; White, 1979). As can be seen, they typically produce a number of positive results and, in fact, research supporting this point has been around for quite a few years. Particularly impressive is the finding of the GAO (1981) study that firms with plans in place over 5 years averaged annual savings of 29 percent in labor costs. We know somewhat less about the frequency with which they work, but even here there is evidence to suggest that they work in 50 to 80 percent of the reported cases (Bullock & Lawler, 1984; GAO, 1981, O'Dell 1987). In most cases working means increasing labor

productivity, but there is evidence that gainsharing also can produce the other results listed in Table 2.

It is easy to criticize the research studies upon which the conclusions about the effectiveness of gainsharing are based. Unfortunately most of the studies do not meet most methodological standards; they fall more in the realm of magazine reports than research studies. Their typical failings include lack of comparison or control sites, measurement of only a few features of the organization and a lack of longitudinal data. There also is the real possibility of a tremendous under reporting of negative results, as is true with any literature that relies on case reports. Successful gainsharing companies such as Herman Miller have been written about for decades and studied many times but few seem interested in and willing to study the firms that try gainsharing but for one reason or another abandon it after a short trial. These situations certainly exist, I personally could point to a number that are not reported in the literature.

There are some important exceptions to the general point about poor research which are worth mentioning. Schuster (1984a) has done a longitudinal study of the Scanlon Plan, and White (1979) has analyzed the experience of 22 companies with the Scanlon Plan. Goodman and Moore (1976) have also done a longitudinal study of the Scanlon Plan. Bullock and Bullock (1982) have provided longitudinal data on two custom designed plans. Importantly the better studies tend to report the same results as do the less well designed ones. Because there are a large number of studies that report gain sharing plans are successful, there are some high quality research studies that document successful plans, and some gainsharing plans have been operating for over 30 years, it



seems reasonable to conclude that gainsharing plans can and do work. Of course, it is important to have better evidence, but given its absence the most appropriate conclusion is that gainsharing can work.

Bullock and Lawler (1984) in their review provide some further data on how plans are structured and installed. They report for example that the typical plan pays out monthly, focuses on labor costs, shares over 50% of the gain with the employees and is implemented by a consultant with the involvement of the employees. A more recent study by O'Dell (1987) reports similar findings as well as data which suggest the typical plan pay bonuses which range from 5 to 10 percent of base pay, cover most employees in the organization's unit where they are installed and are in organizations with less than 5,000 employees. Unfortunately no study has related features of the plan and its implementation to plan success. Thus, although we know something about how plans are structured and implemented little data exist on how these are related to success.

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Insert Table 2 About Here  
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Quite a bit has been written about how to structure gainsharing plans. There are several books and articles which describe in some detail how to put together formulas, how to introduce plans, and how to manage the process side of gainsharing plan (see, for example, Moore and Ross, 1978). "How-to do it" knowledge is particularly available with respect to the Scanlon Plan. Indeed, a careful reading of the literature on the Scanlon Plan should make it possible for the skilled practitioner to develop and install a plan without the help of a consultant.

Some writing exist that deals with the situational factors that favor gainsharing plans. Table 3 describes twenty situational factors which are hypothesized to favor the plan (Lawler 1981). White (1979) found that participation and managerial attitudes are critical to the success of gainsharing plans. Little research has been done on just how many of the conditions in Table 3 need to be present in order to have a successful gainsharing plan. In fact, gainsharing plans have been successful even though many of these conditions are not present (see e.g., Bullock and Bullock, 1982). When gainsharing is used in a lead sense, the objective often is to bring the organization toward such conditions as openness, participative management and good competent management. It is obvious, however, that some of the conditions are necessary for establishing a gainsharing plan. For example, it is virtually impossible to have a gainsharing plan without good performance measures and in organized settings union approval is needed. Thus, it seems reasonable to conclude that gainsharing cannot be put into some situations.

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Insert Table 3 About Here  
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It also seems reasonable to hypothesize that the more the conditions listed in Table 3 are present the more likely it is that a gainsharing will work. There may an interesting twist to the issue of what conditions need to be present for a gainsharing plan to work. If all the conditions in Table 3 are present it may be that there is little need for a gainsharing plan and thus although the probability of success is high when they are present the amount of gain possible is small. This certainly fit my own experience with installing gainsharing plans.

When most of the conditions listed in Table 3 are present the plans have worked but the gains have been smaller than those cited in the GAO study. On the other hand, when they haven't been present and the gainsharing plans have been used in a lead sense they haven't always worked but when they have the gains have been large (see for example, Bullock and Bullock, 1982).

Finally, as is shown in Table 4, quite a bit has been written about why gainsharing plans don't work and which obstacles they have to overcome in order for them to work (Bullock & Lawler, 1984; Lawler, 1981; White, 1979). As can be seen, they often are resisted by managers who see their authority and competence challenged. They also put people in new roles that they may not be comfortable with.

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Insert Table 4 about here  
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In summary, there is considerable information available concerning the effectiveness and suitability of gainsharing plans. Much of what is known indicates that they can improve organizational effectiveness. It is precisely because of this that it is important to learn more about them.

#### NEED TO KNOW: THEORY AND RESEARCH

There are a number of interesting theoretical and research questions that remain unanswered about the workings of gainsharing plans. The following questions, in particular, need to be answered if gainsharing plans are to be improved and if more is to be known from a theoretical point of view about why and how they affect organizations.

### Why Do They Work?

Relatively little is known about why gainsharing plans work. Their proponents cite numerous reasons, including the fact that they operate as effective pay incentive plans, they stimulate problem solving, they cause people to work smarter, they cause social pressures that encourage people to be good performers, they cause others organizational changes which contribute to organizational effectiveness, and they create organizational goals that lead to teamwork and cooperation. These may all be reasons why gainsharing plans work, but at this point, little research has been done which documents this and identifies the relative importance of the different reasons why gainsharing works. In fact, it is quite possible that they work for different reasons in different situations. Such factors as technology and organizational size may well influence why and how a plan will work. In addition, little has been done to determine if there are other reasons why gainsharing plans might have a positive or negative impact on organizational effectiveness.

Particularly interesting are questions having to do with what a bonus formula contributes to participative management and vice versa. The congruence argument, which is largely untested, suggests that either alone has little impact but that together they are quite powerful (Lawler, 1986). If this is true, it offers important support for the argument that organization change efforts should affect multiple systems. Partial support for this argument is provided by the data on the institutionalization of gainsharing plans. Most studies that have reviewed gainsharing plans have noted that some survive for many years (e.g., GAO, 1981, O'Dell 1987). This is in contrast to the relatively short term effectiveness of participative management programs such as

quality circles (Lawler, 1986) and many pay incentive systems (Lawler, 1981).

What is needed are research data which look at gainsharing plans longitudinally and track the kinds of organizational, individual motivational and normative or cultural changes which they bring about. Particular attention needs to be paid to the sequence of these changes and how important they are in influencing organizational effectiveness.

#### What Works Best: Formula

Theory and research are almost completely lacking on how an organization should go about choosing a formula and which formula is likely to work best. Proponents of different formulas (e.g., Scanlon, Rucker) and different approaches to formula construction often claim that their approaches are best. Still others sometimes claim the formula makes little difference. This point, ties back to the issue of why and how gainsharing works. Formula development ought to focus on building in features that support the reasons plans work. It probably is true that the best formula for one situation is not the best for another, but no guidelines and little relevant theory and research exist to aid the choice.

Particularly interesting are some of the issues raised by the development of custom formulas. A case can be made that the most effective approach is to develop a custom formula for each situation so that it fits the conditions existing there, the organization can learn how to develop a formula, and commitment to the chosen one is created. However, it takes longer to develop a custom formula than it does to buy an off the shelf approach like the Improshare formula. At the extreme, I have seen off-the-shelf formulas installed in a day and I have seen

custom plans take years. Thus an argument for a custom formula must deal with the issue of the extra development costs it involves.

The development of complex custom formulas raises some interesting questions about training and culture building. Little is known about just how complex a formula can be and still be understood and accepted. The key probably is that the formula be seen as fair and that awareness be developed of what individuals can do to influence the bonus payment. Unfortunately little is known about why and how formulas come to be seen as fair and influencable despite the fact that this seems to be a key to their being successful. Studying this in an organization could represent a way to learn about gainsharing and a way to learn about how organizational cultures incorporate major organizational changes.

The need for research on formulas is particularly acute in the case of service organizations. They may require very different formulas because of the importance of customer service. It is quite possible that the wrong formula could lead to a short term reduction in cost but to long term reductions in business because of a reduction in customer service. It is possible that service quality can be measured and included in the formula in order to prevent this problem but little is known about the effectiveness of this approach. At the very least work is needed on the validity of different measures of service quality and on how to include measures of it in a gainsharing formula.

#### What Works Best: Process

Little is known about the key process issues which are involved in the installation and maintenance of a gainsharing plan. The variance in how different plans are installed is considerable. The Scanlon plan typically calls for a vote by all employees while custom plans often are

developed by representative task forces. The Improshare plan on the other hand is typically developed by consultants and presented to the organization for acceptance or rejection.

It is sometimes hypothesized that particular processes are best for designing and installing a gainsharing plan, but research simply has not focused on this. For example, a theoretical case can be made for the importance of a participative design process. Among other things it is congruent with the participative philosophy of the plan, and it should help the organization if it needs to redesign the plan at a later time.

If it turns out that a participative design process is important, it would be nice to know how and why it is important. Is it because it leads to better understanding of gainsharing plans? Is it because it leads to an extra commitment to making it work? Or is it simply because when participation takes place better information is developed, and a better plan results?

#### Congruence Issues

A great deal has been written about the importance of combining gainsharing with participative management. As was noted earlier, gainsharing plans such as the Scanlon Plan in fact prescribe a particular approach to participative management. As might be expected, research does show that most gainsharing formulas are installed in conjunction with an approach to participative management (O'Dell, 1987). However, little is known from both theory and research about the best forms of participative management for use in conjunction with gainsharing plans. There is virtually no research to guide in choosing the right form of participation to fit with gainsharing. The Scanlon Plan, for example, prescribes written suggestions and problem-solving

groups, but is this in fact the most effective form of participation? It may well be in the case of simple labor only plans like the Improshare plan but it may not be in the case of more complex plans like many of the complex multi-cost plans which exist. Overall, there are a whole set of issues concerning management style and its fit with gainsharing plans that need to be sorted out both conceptually and empirically.

Relatively little also is known about the fit between gainsharing and other parts of the total compensation package in an organization. It has been speculated that it is likely to fit particularly well with such practices as skill-based pay, flexible benefits and employee ownership (Lawler, 1986). What is needed here is research and theory which help illuminate the congruence issues that are involved in creating a total reward system.

#### Lag-Lead

As was mentioned earlier, gainsharing can either lag or lead other changes that are designed to increase organizational effectiveness. Relatively little is known about what is most effective in terms of the installation of gainsharing. Should it lag? Should it lead? Or better yet, when and what should it lag or lead? Particular interesting here are questions concerned with employee involvement and organization culture. One argument is that until trust is established and employees have a chance to input their ideas having a gainsharing makes little sense because employee won't believe it is for real nor will they be able to increase organizational performance. On the other hand it can be argued that the successful development and installation of a gainsharing plan can build trust and that a suggestion system or other form of employee involvement can be installed at the same time the



financial formula is installed. Until these questions are answered and some theory is developed that can help decide the proper sequence for installing gainsharing, a large gap will continue to exist in our knowledge about the dynamics involved.

Research Needs: Conclusion

A great deal more needs to be learned about gainsharing if our understanding of it is to develop further. Research which addresses issues such as why gainsharing plans work, what is the best fit with other management practices, and what process should be used in designing gainsharing plans is critical. However, it is one thing to state that more needs to be known it is quite another to specify what type of research studies are needed. It is very difficult to do research on complex organizational changes, like gainsharing. Still, a great deal more is known now about how to do research on organizational change than has been applied by the research on gainsharing.

There clearly is a need for better case studies of successful and unsuccessful gainsharing plans. For case studies to be useful at this point in time they need to be long term studies. We do not need more after the fact reports on "successful plans." We do need studies that track plans over time and studies which collect data from a wide variety of measure. Many of the key questions about gainsharing involve how and when variables impact each other. We can only answer these questions by studying how plans are implemented and by tracking financial, attitudinal and practice measures over time (Lawler, Nadler, and Cammann, 1980). Of particular interest at this time would be multiple case studies using similar measures but focusing on gainsharing plans in different kinds of organizations and using different formulas.

There also is a need for systematic survey data on the experiences of organizations with gainsharing. This is the only way to get some sense of the frequency with which different approaches work and what organizational conditions are associated with success. This type of research typically is good at answering questions concerned with what works and where it works. None of the existing research provides definitive answers to these types of questions. Since it is based on convenience samples and/or published reports it runs the danger of seriously misrepresenting the popularity and effectiveness of gainsharing plans.

#### THEORY AND PREDICTIONS

Existing theory and research can be combined to make some testable predictions about the impact of gainsharing. The congruence argument when combined with expectancy theory suggests some specific predictions about when and how gainsharing will work. Congruence theory assumes that an organization's effectiveness is related to the degree that it consistently operate with a particular approach to decision making and power (Nightingale, 1982). This calls for a congruence among the way information, power, knowledge, and rewards are distributed in the organization (Lawler, 1986). The expectancy theory approach to motivation emphasizes the perceived relationship among effort, performance and rewards. It argues that for a pay system to be effective as a motivator individuals must believe that their effort will lead to valued rewards (Vroom 1964, Porter & Lawler, 1968).

Gainsharing plans move rewards for organizational performance downwards so that everyone's rewards depend on it. The implicit assumption is that this will change employee behavior in ways that will

increase organizational performance. The only way it can change behavior is by affecting motivation since it does little to develop new skills. It follows from what is known about motivation that gainsharing plans will increase organizational performance to the degree that they do the following:

1. Establish the belief that rewards are based on organizational performance.
2. Provide communications about organizational performance to all employees.
3. Establish ways for employees to influence organizational performance as it is measured by the reward system.
4. Create opportunities for employees to learn how to contribute to organizational performance and how to interpret measures of performance.

These four conditions can best be viewed as combining multiplicatively and varying from zero to one. Viewing them as combining in this way is critical because it means that if any of them is completely absent organizational performance will not improve as a result of installing a gainsharing type bonus. As is frequently noted, gainsharing works only when individuals are motivated to perform differently. If one or more of these is missing, the possibility of a bonus will not affect motivation because no link or line of sight and influence will exist between the bonus reward and the inputs (i.e., effort, ideas) that most people in an organization can control.

Working harder can improve individual performance but it may have a relatively small impact on organizational performance unless the organization already has good work methods and systems. Often

improvements in organizational performance require major system and method improvements, without them increased effort may be wasted and employees frustrated. It is also important to note that gainsharing may not have a major impact on effort. Particularly in large organizations it does little to increase the relationship between effort and rewards, thus, its impact on motivation may be small or nonexistent.

As is already shown by research, gainsharing in general is more effective when combined with participative management. In the absence of a participative management approach that gives employees a chance to increase organizational performance through other than working harder, it is difficult to see how most gainsharing plan will work.

Participative management can put into place two key elements: the ability to influence organizational performance through other than putting more effort into immediate job performance and an understanding and trust of the relationship between improved organizational performance and the gainsharing bonus. In the absence of these, it is unlikely that a perceived connection between improved individual performance and the gainsharing bonus will exist. The one exception to this may be the case of small relative simple organizations. There a relationship between individual effort and organizational performance may exist in the absence of a participative management style. In this case a gainsharing type bonus plan might work as an incentive much like group pay incentive plans have worked for decades.

Turning to the specifics of particular gainsharing plans, the congruence argument suggests that the participative approach used needs to be matched to the type of gainsharing formula used. Most plans advocate suggestion programs of some type. Although suggestion

approaches give employees some additional power, they are very limited in the amount of power, knowledge, and information they move downward in the organization. They are in essence a parallel structure that does little to change the core operating style of the organization (Lawler, 1986). In this respect they differ appreciably from such approaches as work teams or semi-autonomous groups which push a considerable amount of power and knowledge to the lowest levels of the organization (Hackman and Oldham, 1980). Teams can give employees a chance to influence a number of the decisions that directly influence organizational performance.

The combined congruence expectancy theory argument leads to some interesting predictions about which approach to participative management is needed to support the different gainsharing formulas. The Improshare formula is the simplest formula since it looks only at hours of work relative to units produced. Because it is so simple and straightforward it is not difficult to establish a line of sight, employees know if they produce more product by either working smarter or harder they will earn more. Little extra communication and education are needed. Further, individuals do not need to influence many of the decisions which are made in organizations in order to reduce the amount of labor that goes into a product; they can simply work harder or smarter. In short, the Improshare plan has a chance of working as an incentive plan in the absence of a great deal of participation if there is a reasonable level of trust, the organization is relatively small and the production process relatively simple. Therefore, the use of quality circles or some other suggestion type program is quite appropriate with the

Improshare formula since suggestion programs can provide a reasonable vehicle for reducing labor hours through better work methods.

The situation is quite different for gainsharing formulas that look at multiple costs and involve complex computations (e.g. Rucker, multicost custom plans). These formulas cover a number of costs and, the bonuses they produce are influenced by a wide range of factors often including such things as purchasing and pricing decisions. If the employees are to influence the bonuses in this situation a level of participation that goes far beyond quality circles and written suggestion is needed. They require at least the kind of participation that is present in teams and new design plants (Lawler, 1986).

Other congruence issues come into play with respect to formula choice. The formula needs to fit the type of work the organization does. A labor only formula, for example fits only those operations where labor costs are dominant and need improvement. Situations where other costs are important need more complex formulas which reflect all the key operating costs. In the absence of a more complex formula there is the real danger that employees will focus on reducing the measured costs and that the unmeasured costs will increase.

In summary the congruence approach doesn't argue for a particular formula. Instead it suggests that the formula must measure and reward those things that employees influence, understand, and receive communications about. The prediction is that gainsharing will work best when the formula matches the participative management approach used. Simple formulas will work with suggestion programs while more complex formulas require more participative approaches to management such as teams. This point seems consistent with the finding that gainsharing

plans generally have more impact than profit sharing plans (Lawler, 1981; O'Dell, 1987). The latter are typically based on difficult to influence measures and often are not combined with an appropriate level of participative management. This point may also help explain the success of the Scanlon Plan and the Improshare plan. They tend to combine a limited kind of participation with a formula that typically measures only one or a few directly controllable costs.

The arguments so far suggest that an organizations decision to adopt a particular approach to gainsharing needs to be based on a contingency model. It seems clear that the type of plan which is adopted needs to fit the kind of technology and effectiveness issues, which the organization faces. For example, organizations which use relatively simple manufacturing technologies and need to get their labor costs down probably can accomplish a great deal by adopting a plan like the Improshare plan. On the other hand a complex knowledge work organization that needs to focus on customer satisfaction and on a number of costs is in a different situation. It may need a custom multicost formula and a participative management approach that combines teams, an open information and task forces to study major business issues.

The congruence argument also suggests some predictions about the installation process. The effectiveness of the plan should increase if an organization uses a process which is congruent with the way the organization should operate after the plan is installed. This means that it should be a participative process with open communication and an emphasis on education. This type of process should help the plan be effective for a number of the reasons mentioned earlier. In addition,

it should help the organization learn how to be a participatively managed one. The development of the gainsharing plan in effect becomes a learning experience about how to manage participatively. Participation in the design process probably is not as important in the case of Improshare plan as it is for more complex formulas. With the Rucker plan and the complex cost approaches, participation in the design would seem to be necessary in order to develop both understanding and trust.

The congruence approach doesn't necessarily argue for either a lag or lead approach to installing gainsharing. It does argue, however, for installing both a gainsharing bonus plan and participative management since they complement each other. There is some suggestion in the research evidence that there is less tolerance for delaying participation after the formula has been installed than vice versa. A possible reason for this is that without participation there are few gains, so employees quickly become frustrated. On the other hand, the absence of a bonus plan often becomes an issue only after gains are realized and no rewards go to those who produced the gains. In my work on new high involvement plants, I have typically found that pay for organizational performance doesn't become an issue until two to four years after start up (Lawler, 1986; Perkins, Nieva, and Lawler, 1983).

One interesting prediction that was suggested earlier follows from this discussion. As compared to putting gainsharing in a participatively managed organization, if gainsharing is put into a traditionally managed organization the potential for gain is greater, but the chance of success is smaller. This prediction follows from the point that participation and a gainsharing formula are congruent and



that the greatest gain results when they are combined. On the other hand, it is difficult to install both at the same time and thus when this is done failure is more likely than when a formula is put into an organization which already has a participative management system. In the later case, however, the potential for gain is smaller because some of the gains that are possible from introducing the combination of a formula and participation may have been realized already as a result of the earlier installation of the participative management system.

Finally, skill based pay and job security guarantees would appear to be particularly important reward system features to combine with gainsharing. Skill based pay rewards individuals for learning the kind of skills that are needed to understand and influence organizational performance (Lawler, 1981). Job security is a critical issue because people are asked to participate in reducing costs (i.e., suggestions, working faster) in ways that may eliminate jobs. In the absence of some security guarantee this type of participation will be hard to obtain.

#### A Phases Model

The discussion so far suggests a possible sequential model of gainsharing plan, development, installation, and survival. Like most organizational change efforts, gainsharing has a number of phases, each with its own critical issues and activities.

During the first phase, often called investigation, the critical issues are getting good information about gainsharing and doing a good diagnosis of the situation, so that a proper decision can be made about whether to design a plan. This investigatory stage is also important because the information gathered forms the basis for the actual design. Little cultural change is expected during this period, although if it is

done in a participative manner it can signal to the organization that gainsharing is a joint participative activity.

The next phase is the design process itself. During this period, literally hundreds of small decisions need to be made including formula design, participative system design, planning for training and education, and the specifics of how the payouts will be handled including who is eligible when the payouts will be made and so forth. Critical here are good decision making and wide spread involvement in the design process. At this point, communications with people who are not directly involved in the design process can be quite useful because it makes it easier to win organizational acceptance for the plan. This phase can last for many months if a complex custom plan is being designed. It is the period during which the culture should begin to change.

The third phase is installation. At this point, the plan is presented to the organization for acceptance. Typically, this involves a vote or some demonstrative act on the part of the workforce indicating that it is willing to try the plan. It is critical that this be a strong endorsement because when broad scale acceptance is lacking it is extremely difficult to get enough organizational change to generate a bonus. Education and training are also to be critical during this period since this is the first time the organization has actually had a developed plan to present to the workforce. At the end of this period plan success depends on a large percent of the organization believing the plan can work.

The start up phase is the first time the employees can check their perceptions of the plan against the reality of how the plan operates.

Thus, it is particularly critical that during this time period the participative management activities, information sharing, and the other support activities that are committed to actually take place. Failure to match the promises that are part of the plan can lead to an early failure. Also critical here is whether a bonus is paid. The situation with the first few bonus payments is much like the socialization of a new employee. Views are quickly developed about fairness and trust, which are difficult to change because they must be unlearned and new ones learned. Some arguments suggest that at this point, if no bonuses are paid, the plan will fail. This probably is true if individuals feel that performance is improving and no bonus is paid. However, if there is a recognition that performance is not improving, particularly if it is for reasons beyond the control of the people in the organization, then a bonus need not be paid in order for the plan to succeed. Indeed, I have seen plans continue for over two years without ever paying a bonus. Everyone recognized that the organization was in a difficult business situation, and that it would be foolish to pay a bonus.

Finally, most plans enter an institutionalization and maintenance phase. It is during this phase that an oversight or a steering committee needs to consistently monitor the effectiveness of the plan and improve it as indicated. Maintenance is particularly crucial if environmental change occurs and other changes occur that outdate the old formula or the old participative management processes. It is often helpful during this period to do surveys to check on the credibility and development of the plan, and to continue to do economic analysis to see if the formula is producing as it should. The critical issue here is the credibility of the monitoring process and the individuals doing it.

If the employees are to believe in the plan, then it is very important that the maintenance and evaluation of plan be done in a trusted manner.

In some respects, gainsharing plans go through a life cycle much like an organization does. Like an organization, they do not have to die if good maintenance is done along the way. There are plans which have existed for 30-40 years but they have changed so dramatically during that time period that they bear little resemblance to the original plan. The development process is not something that ends with the initial development of a formula. It needs to be a continuing activity of the organization.

#### Conclusions

Based upon the research and theory discussed so far we can reach some interesting conclusion about what is likely to lead to a successful gainsharing plan in addition to the conditions listed in Table 3. Success should to be related to the degree to which the plans:

1. Are installed in an open participative manner
2. Give employees a chance to understand and influence the measures of organizational performance that are used to compute the bonus
3. Are combined with skill based pay and job security
4. Are managed in a way that is sensitive to the issues which arise at different phases in the development and installation of a plan
5. Are based upon comprehensive measures that fit the characteristics of the business.

The discussion also suggests some interesting conclusions about what needs to happen for organizational change to be successful.

Perhaps the most important conclusion concerns the importance of changing multiple systems in an organization. Very much related to this is the point that the effectiveness of a reward system is related to a number of situational factors including but not limited to organizational practices concerned with training, problem solving, and information.

The work on gainsharing also leads to some interesting points about motivation. Much of the research on motivation has been concerned with how organizations can motivate individuals to perform their jobs better. Research has typically concluded that it is important to relate individual rewards to individual performance (Lawler, 1973). The work on gainsharing clearly shows that individuals can be motivated by rewards based on organizational performance. This is an important point because in some situations it may be better to have individuals focus on maximizing organizational performance rather than their job performance. The work on gainsharing not only suggests this can be done it suggests one way to do it.

#### NEED TO KNOW - PRACTICE RELEVANT

There are a number of practices that need to be better developed if gainsharing is to be more widely applied. Greater theoretical understanding can help, but in addition, some technological innovation is needed so that new approaches, structures, and designs will be available. Badly needed are innovations that will allow gainsharing to be effective in situations that do not fit the traditional gainsharing plans. Previous analyses have suggested that there are some organizational characteristics and some environmental characteristics which make traditional gainsharing plans inappropriate (see Table 3).

Size, age, type of technology, product stability and management style are among the key organizational characteristics that influence the appropriateness of gainsharing (Lawler, 1981). Key environmental conditions include business cycle and product/technology life cycle.

The evidence is mixed on the effects of size (see, e.g., White, 1979) but there is little question that gainsharing usually has been installed in organizations with less than 1,000 employees and almost always in organizations with less than 5,000. This finding is consistent with the argument that a line of sight or expectancy is needed for gainsharing to be effective. One major corporation, Motorola, has attacked the line of sight problem by installing multiple gainsharing plans in their large locations (O'Toole, 1986). This approach raises many interesting theoretical and empirical questions about the effects of this type of differentiation in an organization. For example, it could lead to unfavorable competitiveness, social comparison, and subunit optimization because of the strong emphasis it places on unit performance. So far these issues are largely unresearched.

The organization's age is another constraint that needs to be overcome. Traditionally, gainsharing has only been applied to older organizations. In new organizations, using a historical base doesn't make sense because learning curve gains are likely to occur without any gainsharing plan impacts. Some plans have been installed which use an annually set target as the standard. This is counter to the historical standard principle but theoretically it could work if the level set is credible and well accepted.

So far gainsharing has been applied largely to manufacturing organizations (Graham-Moore and Ross, 1983). This fits the emphasis on labor costs and a direct line of sight between input and output. However, most organizations in the United States today are not manufacturing based. The service sector is the fastest growing area, and relatively little is known about how to install gainsharing in service and information processing organizations. There has been some experimentation in restaurants, hotels, and hospitals, but at this point a great deal of additional work needs to be done on the installation of gainsharing in service and information based organizations (Graham-Moore & Ross, 1983). As was noted earlier there is little question that if gainsharing is to be applied to these types of organizations different measures and formulas need to be developed. It is also quite possible that new, more participative design and installation processes will be needed.

There also has been relatively little installation of gainsharing in high technology organizations. They have particular problems because they tend to have unstable performance histories and their product mix changes rapidly. Particularly interesting here are organizations which are project-oriented and which do not have traditional manufacturing cycles. Experimentation is beginning with plans that last only for the life of a project. In one plan I helped design the bid price was used as the comparison standard. This appears to be a promising approach but a great deal more needs to be learned about how to design, install, and maintain this approach to gainsharing. Among other things it raises new cost effectiveness issues because the start up costs have to be recouped over a relatively short period of time.

Another example of an important constraint that must be overcome has to do with the business cycle. It seems to be best to start a gainsharing plan when there is strong demand for an organization's product or service. Typically, gainsharing is effective in producing savings because it leads to a reduction in labor for each product or service. This is relatively easy to do when there is demand for additional volume, but not easy to do when there is a decreasing demand for volume. In the latter case the best way to save is to lay off individuals. This runs completely counter to the concept of employment stability, an important part of many gainsharing plans and participative management programs.

As already noted, if gainsharing is used in settings that do not have the kind of stability and maturity that is typical of those where it has usually been successful, something must be substituted for the sacred historical base. This one feature seems to rule it out of more situations than any other. It is used because unlike engineered standards it eliminates arguments over what performance should be, establishes trust and gives performance measurement a sense of non-manipulable permanency. It also typically represents a performance level that employees feel they can improve upon, an important consideration where an attempt is being made to motivate performance.

Theoretically, the historical base approach could be abandoned if a trusted basis for establishing a standard could be developed or if a trusted process could be used to establish it. It seems unlikely in most cases that a new objective standard can be developed thus the solution probably lies in using a process which is credible and leads to the perception that performance and rewards will be fairly related over



the long term. Given what has been said so far about gainsharing, it seems that a participative process must be used to set the base if the historical standard is to be abandoned. Any other approach would be incongruent. If an organization-wide task force or some other representative group set the base then it is possible that the workforce would trust the result and that a viable gainsharing plan could be operated.

If gainsharing is to be applied to many nonmanufacturing situations, then measures need to be used which go beyond labor costs. In service situations, for example, quality as well as most costs should be covered. This leads to an interesting prediction: gainsharing will work best in service situations when multiple factors are measured and where participative approaches are used which allow individuals to influence key organizational processes and decisions.

In conclusion, there are a number of practice and social technology issues that need further research and development. The widespread adoption of gainsharing in the workplace can only occur if innovation in practice take place. In some cases, new formulas may be needed, while in others, new installation and new communication processes may be required. Overall the thrust of the arguments made here is that if gainsharing is to be more widely applied it may need to be more frequently combined with such participative processes as teams and diagonal slice task forces. It seems possible that with these more advanced forms of participation gainsharing can work even though complex measures and a standard that are not based on history are used.

## CONCLUSIONS

The promise of gainsharing is high. It has an impressive track record of producing positive results and has enjoyed relatively widespread application in the American economy. However, relatively little is known about it theoretically and empirically. So far, practice has led theory and research. Social innovators have structured gainsharing plans and installed them, leaving it to researchers and theorists to try to understand what has gone on and to document the results of their efforts. Much more can be done from a theory and research perspective. Research on the installation of gainsharing can contribute greatly to our understanding of how gainsharing works, and perhaps more importantly how organizations work. From the viewpoint of theory development, work needs to be done which tests predictions that are based on the expectancy congruence approach. This approach appears capable of helping explain when and why gainsharing works and supporting new developments in the practice of gainsharing.

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TABLE 1  
Gainsharing Plans

Plan	Basis for Formula	Recommended Participative Practice
Scanlon	$\frac{\text{Labor Costs}}{\text{Value of Goods Produced}}$	Suggestion System
Improshare	$\frac{\text{Hours Worked}}{\text{Units Produced}}$	?/Quality Circles
Rucker	$\frac{\text{Labor Costs}}{\text{Value Added}}$	Problem Solving Groups
Custom	Complex Cost Models	High Involvement

TABLE 2

POSITIVE RESULTS OF GAINSHARING (Lawler, 1971)

1. Coordination, teamwork, and sharing of knowledge are enhanced at lower levels.
2. Social needs are recognized via participation and mutually reinforcing group behavior.
3. Attention is focused on cost savings, not just quantity of production.
4. Acceptance of change due to technology, market, and new methods is greater because higher efficiency leads to bonuses.
5. Attitudinal change occurs among workers, and they demand more efficient management and better planning.
6. Workers try to reduce overtime; to work smarter, not harder or faster.
7. Workers produce ideas as well as effort.
8. More flexible administration of union-management relations occurs.
9. The union is strengthened because it is responsible for a better work situation and higher pay.

Table 3

## Conditions Favoring Gain-Sharing Plans

Organizational Characteristic	Favorable Condition
Size	Small unit, usually less than 500 employees
Age	Old enough so that learning curve has flattened and standards can be set based on performance history
Financial measures	Simple, with a good history
Market for output	Good, can absorb additional production
Product costs	Controllable by employees
Organizational climate	Open, high level of trust
Style of management	Participative
Union status	No union, or one that is favorable to a cooperative effort
Overtime history	Limited to no use of overtime in part
Seasonal nature of business	Relatively stable across time
Work floor interdependence	High to moderate interdependence
Capital investment plans	Little investment planned
Product stability	Few product changes
Comptroller/Chief financial officer	Trusteed, able to explain financial measures
Communication policy	Open, willing to share financial results
Plant manager	Trusted, committed to plan able to articulate goals and ideals of plan
Management	Technically competent, supportive of participative management style, good communication skills, able to deal with suggestions and new ideas
Corporate position (if part of larger organization)	Favorable to plan
Work force	Technically knowledgeable, interested in participation and higher pay, financially knowledgeable and/or interested
Plant support services	Maintenance and engineering groups competent, willing, and able to respond to increased demands



TABLE 4

FREQUENT PROBLEMS WITH GAIN-SHARING PLANS

1. Formula structure. The formula needs to accurately measure what is going on in the organization. Rigid formulas that do not reflect employee behavior are developed and lead to failure because employees see no relationship between performance and reward.
2. Formula change. The formula needs to change as the products, technology and activities of organizations change. Rigid plans that do not put in place a process to allow for change often fail when change is called for.
3. Payout level. It is important that some bonuses be paid, particularly at the beginning. Sometimes this does not happen because the performance level that must be achieved before a bonus is paid is set too high.
4. Management attitudes. Unless managers are favorable to the idea of participation, the plan will not fit the management style of the organization. In some organizations, the plan has been tried simply as a pay incentive plan without regard to the management style, and it has failed because of a poor fit.
5. Plan focus. Many plans focus only on labor savings. This presents problems in organizations where other costs are great and are under the control of the employees. It can lead to the other costs being ignored or even increased in order to reduce labor costs.
6. Communication. For the plan to work, employees must understand and trust it enough to believe that their pay will increase if they perform better. For this belief to occur, a great deal of open communication and education is needed. Often this is ignored and, as a result, plans fail.
7. Union cooperation. The local union must be supportive. In most of the places where it has been tried, the local union has supported it. However, some failures have occurred in situations where unions have not supported it sufficiently.
8. Threat to supervisor. The plan changes the roles of supervisors. They are forced to deal with many suggestions, and their competence is tested and questioned in new ways. Unless supervisors are prepared for and accept these changes, the plan can fail. This point goes along with the general point that management must be prepared to manage in a different way.
9. Participative structure. This requires congruent participative structures. Sometimes these are not put in place or they are poorly managed and as a result the plan fails because as an incentive plan gainsharing is a relatively weak intervention.