



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

RESEARCH OPPORTUNITIES TO INCREASE LABOR PRODUCTIVITY

by

Willard Bishop, President
Willard Bishop Consulting Economists, Ltd.
Barrington, Illinois

"Don't worry about how much you pay a man--concentrate on what he costs you." While Mark Twain was probably not thinking about the term "productivity" when he made that observation, it seems to me that he displayed a pretty fair understanding of the concept. As you are all well aware, many in the food industry are increasingly concerned with labor costs and the fact that productivity gains have not provided much of an offset for rising wage rates.

My purpose this morning is to provide you with a perspective on labor productivity and then to focus on the needs for research in this vital field.

I'm particularly pleased to have the opportunity to discuss this topic before the members of the Food Distribution Research Society because there is a vital need for good research into many facets of this problem, and you are in an excellent position to make a contribution in this area.

Situation Analysis

Before turning to a detailed look at productivity, it may be helpful to briefly review some of the overall trends.

Minimum Productivity Growth - While productivity growth has been slowing across most sectors of the economy, real productivity in the supermarket, i.e. ,

real sales per man-hour, has failed to increase significantly over the last five years. For example, looking at the data recently published by Food Marketing Institute, real productivity increased only 3.9 percent between 1973 and 1977. That's an annual growth rate of less than one percent--not a particularly strong gain and one that appears even weaker when compared against the eight percent plus wage increases that have been common over the last couple of years.

Changing Work Ethic - No doubt, part of the decline in productivity growth can be traced to the changing work ethic in our society. There is little doubt that the typical employee who has entered the work force in the last five years is very different from his or her counterpart of twenty years ago. Since the key differences and the reasons behind these differences are well-known to most managers, there is no need to dwell on them here.

It is worthwhile to keep in mind, however, that the changes in the work ethic signal the need to review management attitudes and techniques related to dealing with this new generation of workers. Ultimately, it may prove that the essential problems related to the new work ethic can be traced to management's relatively slow response to the change.

Changing Sales Mix - Another trend that has adversely affected retail productivity in recent years is the shift in sales mix. While some stores have been reducing the level of certain customer services, others have added a number of service departments, e.g., deli, bakery, and fresh fish, that require a much larger quantity of labor per unit of sale. These departments tend to reduce traditional store level productivity measures and, in the process, dampen overall productivity growth.

State of the Art

The importance of productivity in food retailing has been recognized for a relatively long time. While recent progress has been modest, the industry has, in fact, made many strides in this area.

A look at a number of previous efforts to increase productivity suggests that there are essentially three strategies that most companies have used, either singly or in consort, in an attempt to improve productivity performance.

Engineering - The engineering approach to productivity improvement generally involves new equipment and/or procedures that are designed to increase employee productivity. As many of you could no doubt attest, there have been a number of significant accomplishments in this area over the last few years including automatic meat wrapping machines, material handling equipment, electronic ordering devices, and scanning at the checkout, just to mention a few.

Experience has taught that innovations in the engineering area are a necessary but insufficient condition for productivity growth. When paper and pencil studies and even experimentation

have demonstrated that increased productivity will result from a new piece of equipment, companies have found that it was frequently much more difficult to realize these increases in their operation. This has prompted some experts to observe that new systems and equipment alone will seldom, if ever, increase labor productivity. It appears that unless the organization can learn to exploit the new system, productivity will not increase.

Control - This is, perhaps, the most frequently used approach to increase productivity. The control approach depends on management devices, primarily work schedules, to increase productivity. Control systems are capable of providing significant increases in productivity in a relatively short period of time. This is especially true for those companies that have allowed their operations to run with a minimum demand for productivity. These systems are particularly important in those companies where the decision maker is now being moved further and further from the store.

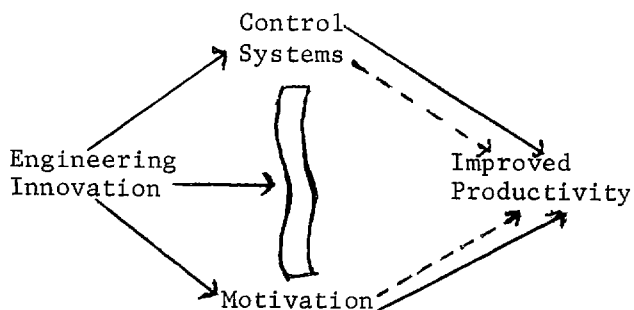
Motivation - Productivity can also be increased through employee motivation. In these situations, employees, even without the support of formal control systems, are able to increase productivity because of the "ownership" that each feels for the operation.

Unfortunately, there are not many examples where the motivation technique has worked successfully, but most of you can probably think of at least a couple of operations that fit this model. Although many are smaller and more closely held companies, this is not an essential requirement.

Reviewing the available strategies, it appears that a company can employ either a control or motivation approach

by themselves or combine either of these techniques with the engineering approach to increase the productivity. By contrast, the engineering approach cannot be used alone because it generally does not equip the company to translate potential productivity gains in real improvement.

Approaches to Improving Productivity



Shifting Functions - The Case of the Limited-Assortment Store

The limited-assortment store provides a rich illustration of the potential productivity improvements that can be realized through shifting and reorganizing functions. While there are still fewer than 200 of these little stores in operation around the country, they appear to exhibit inherent efficiencies that justify further study.

By way of definition, a limited-assortment store:

- Carries 500 or 600 dry grocery items.
- Generally carries only one brand, one size, for each product.
- Carries no refrigerated perishables.
- Operates with limited trading hours.
- Does not item price.
- Accepts only cash or food stamps.
- Offers no customer bagging.

With the reduced assortment and the elimination of some customer services,

the limited-assortment store is able to significantly increase productivity.

- Part of this advantage is related to the unitized, handling, and occasionally even display of the products that is made possible when items sell at a high velocity and do not have to be individually marked. The ordering process is also greatly simplified. In addition, there is a significant advantage in the elimination of the item-price marking function.
- At the checkout, the relatively small number of items permits the cashiers to memorize individual prices and eliminates the need for a departmental key. This last change has a dramatic effect on the number of key strokes required to register each item. In addition, the simplified tendering operation and the elimination of bagging help to increase checker productivity to levels that can exceed \$1,000.00 per hour.

The limited-assortment store may or may not prove to be a viable operation in all markets, but it does help to draw attention to those functions which might be eliminated in order to increase productivity. This, ultimately, may be of great significance in increasing productivity in conventional supermarkets.

Research Needs

With this background, it appears that there are three areas for research which may be of interest to you. These include:

1. Refining the definition of productivity.
2. Exploring the organizational aspects for productivity.

3. Evaluating the opportunities for eliminating or shifting functions from the store.

Definition of Productivity - While the abstract definition of productivity is relatively straightforward, there appear to be some significant opportunities for developing operational measures that correspond to a specific definition of productivity in service industries such as food retailing.

An important step in this direction was recently taken by Hirotaka Takeuchi of Harvard University who has developed and tested a measure of productivity that included the labor input associated with each unit sold. This research has opened up a line of inquiry which should be pursued. There is a need to test the applicability of these concepts to other situations and to explore the opportunity for a more workable approach to total factor productivity.

Organizational Aspects of Productivity - There are three research questions related to the organizational aspects of productivity that appear to warrant further study. These include:

1. Documenting the approaches that have permitted some companies to exploit the productivity inherent in engineering innovations.
2. Exploring the relationship between the organization of store-level management and the level and growth of productivity.
3. Determining what measures of productivity are most effective at raising and maintaining management interest in the productivity area.

Eliminating/Shifting Functions - Perhaps the area of greatest potential

leverage relates to the elimination or shifting of functions out of the retail store.

While great care must be exercised in evaluating the impact of the elimination of a function, it appears that some companies, particularly those involved in warehouse markets, have eliminated certain customer-service functions with no discernable negative effect. In this regard, companies have eliminated check cashing for amounts above the purchase and have eliminated the customer's request for special cuts at the meat counter.

There are even more examples involving the shifting of functions out of the store. In some of these instances, the function is transferred forward to the customer as in the case of bagging at the limited-assortment store warehouse store. In other instances, the function is shifted back to a supplier as is the case when a retailer asks a direct store delivery vendor to handle the ordering and merchandising of a particular line of products in his store. There are circumstances in which it appears to make good economic sense to shift functions in either or both directions.

Conclusion

If there is one message that I would hope to leave with you today, it is that there is much that can be done in the area of productivity research and many opportunities are at the company level.

Your challenge, if you choose to accept, is to convert some of this potential into tangible progress.