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FOOD DISTRIBUTION RESEARCH PRIORITIES TO ALLOW MAJOR IMPROVEMENTS IN TOTAL SYSTEMS PRODUCTIVITY BY 1985

Overview

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Productivity is on most responsible people's minds as we seek to work our way through the current economic "inflation-recession" paradox; and look toward the "brighter day" which most assuredly is just around the corner. How to increase productivity is a paramount issue in food industry management circles today.

However, before we can increase productivity, it is necessary to understand this seemingly elemental but actually complex term. The elemental aspects of the term have to do with the fact that we are talking about basic physical input-output relationships. In economist's terms, the inputs are the factors of production; (1) Land, (2) Labor, (3) Capital, (4) Management, and (5) Entrepreneurship; while the outputs are goods and services. When considered in the most elemental situation, the proposition is relatively clear. We apply one or more factors of production in an operation and get goods and/or services in return. To increase productivity we either try to get more goods and services for the same amount of these factors of production or to get the same amount of goods and services for lesser amounts of the factors of production. Traditionally, we have moved toward the point of "optimization" in the resource combinations. From this point of view, the food industry has committed considerable effort and monies and has clearly demonstrated an ability to increase productivity.

When we move to the firm level where all the factors of production are used in varying degrees to produce a variety of goods and/or services, the problem of complexity begins to raise its ugly head. Multiply this degree of complexity by many firms in an industry; and then again by a series of industry's (or sub-systems) which make up the total food; production, processing, distribution and consumption system in this country and the mind begins "to boggle". The degree of complexity which confronts the student of productivity at this point would give Harlan Cleveland¹ reason for concern. In spite of the almost overpowering degree of complexity just introduced into the situation, the basic productivity input/output relationships still hold.

The subject of increasing productivity in the "total system" of food production, processing, distribution, and consumption raises some interesting situations which can be classified as follows:

1. Complementarity of change
A change at one stage of the system is either complementary, or at a minimum, neutral in its impact on other levels of the system.
2. Antagonistic change
A change to increase productivity in one of the levels of the system produces problems at other levels of the system.

3. Associative change

To increase productivity at one level of the system requires a change (cost or investment) at another level of the system--thus the beneficiary may not be the same entity that must bear the cost.

Each of these categories poses different problems in terms of how the improvement is introduced into the system, and the sharing of costs and benefits.

For our use here, the "total systems concept" will be defined as "the unique combination of functions, institutions and factors and industries linked together for the purpose of production, processing, distribution and ~~concepts~~ of food."

Another problem has to do with choice of appropriate criteria for measuring the productivity of such a complex system. The old favorite "units per man-hour" is totally inadequate in this technology saturated, capital intensive system. The somewhat broader measure of "units to dollar invested" offers some promise, but falls short when viewed in the total systems context. Perhaps the signal contribution of this effort will be to highlight the need for adequate criteria to measure "Total Systems Productivity". Taking account of the factors of production, specific technologies, institutions, regulations and people within and between the many subsystems as well as consideration of the total system itself; makes this at best a formidable task. However, before meaningful research on "increasing total food industry systems productivity" can be conducted; the problem of adequate measurement must be solved.

Establishing research priorities within speciality areas is never easy due to the nature of project oriented research and the differing makeup of

individual researchers. Combining many specialities at several institutional levels does nothing to alleviate the problem. In addition, we are asking individuals who have concentrated their efforts in one relatively narrow segment of the total food industry system to look at productivity problems in the entire system. To further confound the situation, we have introduced an element of futurity, normally absent unfortunately, into the problem.

In view of the rather awesome list of difficulties presented, the logical question can be raised; "Are we asking too much?" The answer must be a resounding, No!! Not only have we assembled an uniquely talented group of individuals to tackle this problem; but also even the act of trying to solve such an immense problem will produce invaluable insights into its eventual solution.

Success in this venture should not be measured entirely by the priority listings, as important as they may be, which will be developed. If we can gain a "total food industry systems perspective", this project will have been successful. If we can become aware that productivity improvements (or lack thereof) at one institutional level, maybe counter productive at another level and possibly for the total system, it is an essential lesson for us all. The key to the future self-interest motivation, which has made this food industry what it is today, may indeed be partially found in looking out for the other guy.

Will productivity in the food industry continue to decline? Will we fall eventually into Kenneth Boulding's "Entropy Trap?"^{2/} It is becoming clear to an increasing number that, if we continue with "business as usual", the answer to both questions is regrettably, Yes!! The successful completion of this exercise in no way guarantees a

reversal of this answer. However, it can be "one giant step" toward a solution to the problem of increasing "Total Food Industry Systems Productivity."

FOOTNOTES

- 1/ The Future Executive, Harlan, Cleveland, Harper & Row, New York, 1972.
- 2/ The Meaning of the Twentieth Century, Kenneth E. Boulding, Harper, Colophon Books, New York, 1965.

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