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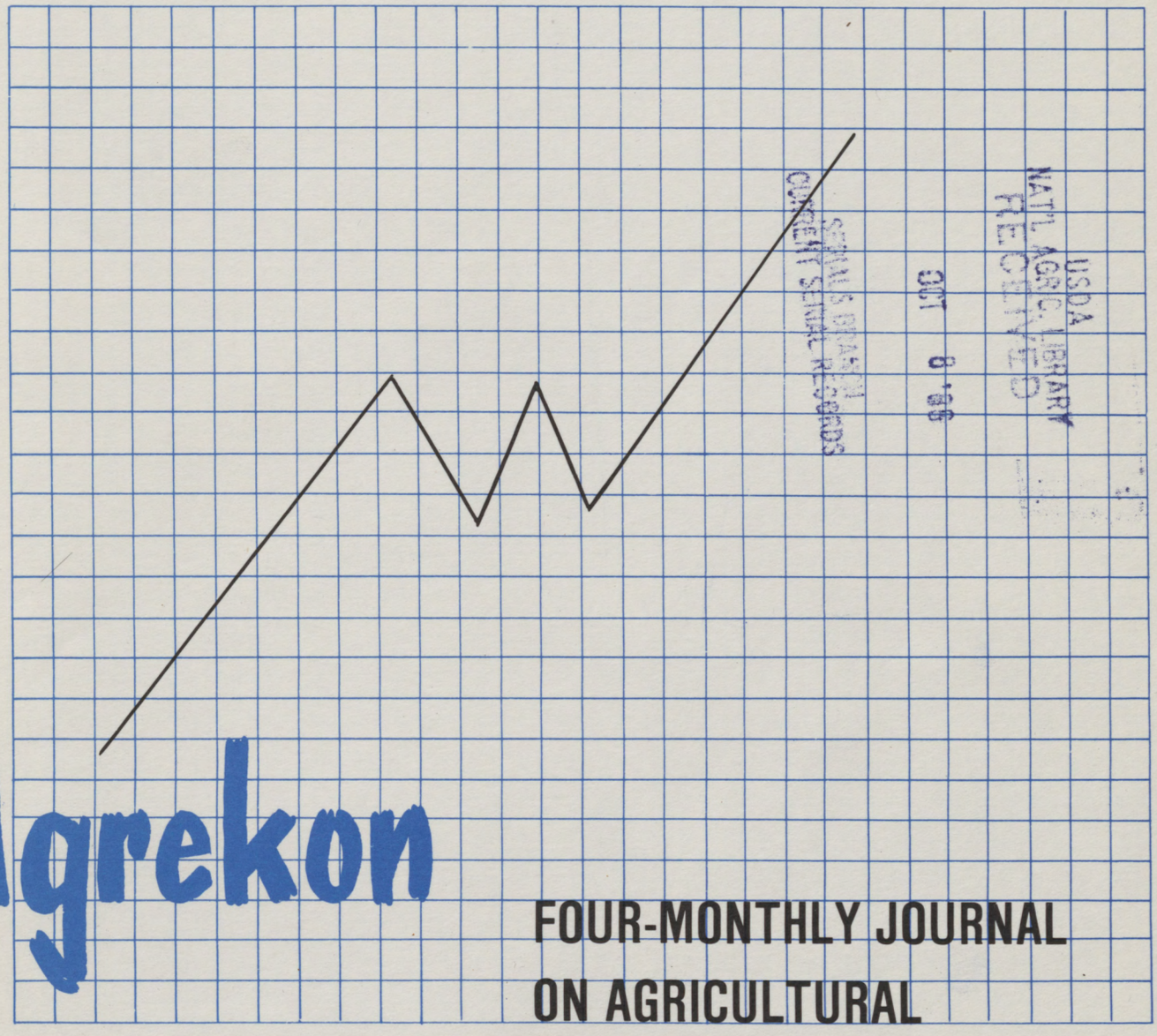



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## FOUR-MONTHLY JOURNAL ON AGRICULTURAL ECONOMICS

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# ASSESSING EFFICIENCY IN MARKETING : THE CASE FOR AN ANALYSIS OF THE PERFORMANCE OF THE SOUTH AFRICAN BEEF AND CATTLE MARKET OPENED*

by J.M. LAUBSCHER**

## ABSTRACT

Recent developments within the marketing system for cattle and beef in South Africa imply major structural changes. In view of the high level of state intervention, these changes thus point to possible policy evaluation, which in turn gives rise to a broader question, namely what the effects of organising the market in a different manner would be. Usually such proposed changes are based on ideological bias instead of economic analyses of the advantages of costs involved.

In South Africa there are two basic schools of thought on the appropriate level of official involvement in the beef and cattle market. These two viewpoints are contradictory which make it necessary to evaluate the performance of the existing marketing system in the first place. Market performance should then be judged by the criterion of what the community expects of a market. In this evaluation of the performance of a market a diagnostic framework should be developed within which a set of performance objectives and indicators, representing selected objectives, together with quantifiable measures are specified. The specified objectives and indicators are then shown as replacements for the method proposed for the empirical evaluation of the marketing system for cattle and beef.

## INTRODUCTION

Of late the efficiency of the traditional marketing system for cattle and beef in South Africa is being questioned. Structural changes within the industry necessitate analysis of this kind and much of the attention has been directed towards changing the way the market is organised. However, these efforts have as objective the improvement of the performance of the market for cattle and beef. Any evaluation of policy alternatives affecting agricultural markets should however deal with a broader question, namely, what the effects are of organising the market in different ways.

Traditionally the majority of cattle slaughtered in the Republic of South Africa is consigned to nine controlled areas, which consist of the main consumer areas. The flow of slaughter cattle to these markets is regulated by the Meat Board.

Within the South African economy there are two rather opposite viewpoints as to what should be the proper level of involvement of the Meat Board in the market place. One school of thinking shows almost unqualified support for maintaining the status quo, while on the other hand there are numerous proposals to reduce the level of statutory involvement of the Meat Board and to alter other appropriate elements of the beef marketing system.

Consequently many proposed changes have been based on ideology, rather than on economic costs and benefits. This is true because an analysis of this kind is seldom available, because it is difficult to incorporate economic criteria into the political ideology and because the parties involved have different and often conflicting goals.

Given these rather contradictory expectations of future developments within the beef-industry, it becomes appropriate and necessary to evaluate the performance of the market system. However, to do so requires that two questions be answered, namely:

- how does one conceptualise "performance"; and
- how can it be measured empirically?

Providing answers to these questions are the main objectives of this paper. Within a diagnostic framework a set of performance objectives and indicators, that can represent the selected objectives together with quantifiable measures, were specified. The specified performance indicators and measures could then serve as proxy representatives of the various performance indicators in an empirical analysis of the performance of the beef and cattle market in South Africa.

## CONCEPTUALISING MARKET PERFORMANCE

### *Efficiency in marketing*

The primary purpose of a marketing system has been assumed to be one of distribution - "to

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distribute goods from those who produce to those who consume in an orderly manner consistent with the rules and preferences of individuals, government and society." (Hill *et al.*, 1981).

Unless the producer and consumer are the same individual, it is necessary for a market to perform a basic set of functions which must be performed by the participants in the production and consumption process. Problems with any marketing system arise with respect to the efficiency with which these functions are performed.

From an analytical standpoint marketing efficiency can be divided into two different categories. This subdivision of marketing efficiency becomes necessary because in a traditional sense "efficiency" is an engineering concept relating to a certain input-output ratio. The two dimensions of marketing efficiency often referred to are: operational efficiency and price efficiency.

The operational component of marketing efficiency is analogous to the concept of "physical efficiency". It is concerned with the measurement of input-output relationships. Operational efficiency assumes the essential nature of outputs of goods and services to remain unchanged and focuses on reducing the costs of inputs necessary, or what amounts to the same thing, on a decrease in resources used in marketing without a proportional decrease in output.

In a very general sense pricing efficiency is concerned with improving the operation of the buying, selling and pricing aspects of the marketing process in order to maintain its responsiveness to consumer direction (Kohls *et al.*). According to Philips (1961): "Pricing efficiency is concerned with the price-making role of the market system. It concerns how accurately, how effectively, how rapidly and how freely the marketing system makes prices which measure product values to the ultimate consumer and reflects these values through the various stages of the marketing system to producers ...", and "Economic theory suggests that prices which reflect more accurately the preferences of consumers will do a more efficient job in allocating productive resources to maximize consumer satisfaction and producer incomes".

"Thus, pricing efficiency within any marketing system, refers to such questions as how well the system interprets changes in consumer demand, the accuracy by which prices transmit changes in demand back to producers and induce the proper allocation of resources among alternative productive uses, as well as how well income is distributed among the different participants in the marketing system". (McCoy, 1972).

The foregoing is intended to provide a broad perspective of the dimensions of the efficiency issue. Although the term itself is of engineering origin, it has been applied in marketing studies to evaluate the complex and sometimes conflicting perspectives in the market. More recently, however, the term "performance" has come into increasing use (Breimeyer, 1976). The question then remains as how to measure market performance, which in turn touches upon the organisational characteristics of a particular marketing system.

*The organisational characteristics of a market*

"Market organization is a general term embracing all aspects of a particular marketing system" (Bressler and King, 1978). Generally market organisation consists of three different components. "Market structure" is a description of the physical characteristics of the market. It refers, among other things, to the approximate definitions of industries and markets, the degree of concentration and product differentiation. Secondly "market conduct" refers to the behaviour of firms under a given market structure. Thirdly "market performance" refers to the real impact of structure and conduct, measured in terms of prices, costs, and volume of output. Performance of the market can be seen as the significant element in this classifcation of market organisation into three different components.

Since 1959, with Bain's first publication of industrial organisation, a whole body of cross-industry analyses have tried to explain the relationship between structure and performance[1]. Bain is one of the most quoted defenders of a more visible relationship between structure and various performance criteria. Strong evidence, however, exists that Bain's hypothetical flow of causality from structure to conduct to performance, is being questioned (Martin, 1980a and 1980b; Bressler and King, pp 490 - 410).

According to Bressler and King "studies of structure are of value only in so far as they explain (market) performance." Brandow (undated) has commented as follows: "The usefulness of inferences about performance obtained from studying the setting in which firms operate, should not be built up to the point where knowledge of structure and conduct is assumed to tell all one needs to know about performance. There are other determinants of performance, ..." Bressler and King, among others, urge a reverse attack "that is, to study market performance, at least in some aspects, and then, as required, to move into detailed studies of the institutional factors that might properly be called structure." (Martin, 1980a en 1980b; Bressler and King, pp 409 - 410).

With this rather brief explanation of the concepts of market structure, conduct and performance as well as the possible causal chain between then, it seems logical to examine performance first and then to search for the causes and cures where performance is found to be inefficient. Martin (1980b) even draws a non-economical parallel with the medical profession: "A medical doctor does not normally examine first the structure of the human body and suggest that because of structural weakness the body likely has disease. Rather he first diagnoses the symptoms, then sets out the cause of the symptoms and finally attempts to find a cure." Thus with regard to the

hypothetical flow of causality modern revisions of the theory (Martin, 1980b; Hill, 1979) urge simultaneous flows of causality between structure, conduct and performance. Furthermore researchers add another conceptual dimension in the form of government policy[2]. (See Figure 1.)

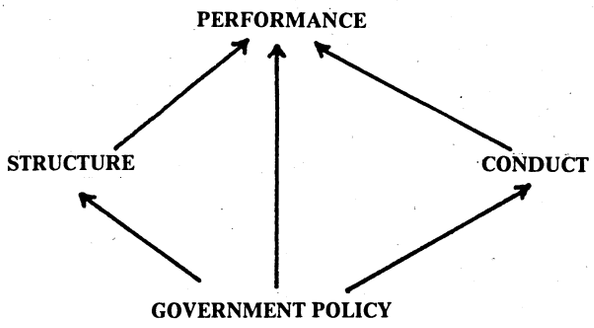


**FIG. 1 - A schematic diagram of the relations between structure, conduct, performance and government policy as revised by Hill (1979)**

Within his revised scheme the following conclusions about this proposed two-way flow of causality were drawn by Hill (1979):

- policies which regulate markets and participants in the market become the major force determining performance;
- policies may determine performance of markets through their influence on structure and conduct;
- society can affect performance by changing the rules under which market participants conduct exchanges; and
- that under the assumptions that entrepeneurs are maximising their profits to the best of their ability and knowledge subject to the existing rules, and that profit is the main motivation of business firms, then changes in their actions can be stimulated only by providing more information or by changing the rules.

Thus, as a final recapitulation, one can conclude that, although market performance appears to be an extremely broad concept, it remains the end result of what society desires from a market.

Within this revised conceptual framework (which was used in this study) certain criteria can be developed against which performance may be judged and as such deal with what the market can be expected to do. Likewise structure and conduct can be shown to affect the performance variables used as criteria (Hill, 1979).

## PERFORMANCE OBJECTIVES FOR THE SOUTH AFRICAN BEEF AND CATTLE MARKET

Throughout the historical development of the marketing system for agricultural products in South Africa as well as in the assessment of the present scheme for cattle and beef marketing some of the major objectives of government policy are noteworthy. On a value basis, nearly 86 per cent of the gross value of agricultural productions in South Africa in 1978/79 was subject to some form of statutory regulation which represents a moderate decrease from the 91 per cent in 1972/73 (Du Toit, 1980). Based on the earlier assumption of the causality between market performance and government policy, this not only provides clear evidence of the extent of government involvement in agricultural markets, but raises the following question: "To what extent were the economic consequences of the alternatives for this marketing system analysed, or was this policy based on ideology rather than economic costs and benefits?"

A cross-section of opinions of leading South African researchers (Groenewald *et al.*) in the field of the objectives of government intervention in South Africa's agriculture shows some broad generalities. From these analyses it is clear that the primary objectives have not changed since the early sixties (Groenewald *et al.*). In fact, government involvement in the marketing of agricultural products in South Africa becomes an ideology to which prominent industrial leaders still subscribe (Cilliers, 1979; Lombard, 1978; Van Biljon, 1974). This support is based on the assumption that the marketing of agricultural products in South Africa cannot be left entirely to the mechanisms of the open market, as was the case during the depression of the early thirties when farm prices of agricultural products dropped to very low levels.

With the promulgation of the Marketing Act in 1937 certain specific objectives of government-controlled marketing were specified. These are the stabilisation of producer prices and narrowing of the producer-consumer price gap. According to the Commission of Enquiry into the Marketing Act (1976) the Act also states that the aim of price stability and reduction of the producer-consumer price gap is to "improve the productivity of the farming, marketing, manufacturing and distribution industries for the general benefit of the producing and consuming communities." Lombard (1978) interprets this conclusion by the commission as "price stability and reduction of the price gap are clearly second-order objectives with the first-order objectives being increased industry productivity." These stated objectives of government intervention in agriculture in general and the marketing of agricultural products specifically are, however, at best only broad generalities. They are not specific and therefore not quantifiable but they provide the basic philosophy behind the South African government's concept of what an ideal controlled market system should accomplish.

With regard to the problem of generality, several authors have tried to lower the level of generality of the broad spectrum of objectives of government involvement in the marketing of agricultural products. Shaffer (1972) developed a performance "bill of rights" which was used in assessing the problem of the generality of the objectives of government involvement in the South

African beef and cattle market.

Referring to the applicability of the stated objectives of controlled marketing, Lombard (1978) concluded that with reference to the Meat Scheme, the objectives as specified by the Commission of Enquiry into the Marketing Act cannot be fulfilled by the present system. He based his conclusion on two ambiguities inherent in the generalised objectives.

- Firstly, the history of controlled marketing, according to Lombard, clearly proves that total price stability through a fixed price system, was not feasible because a certain degree of price variation is required to regulate livestock supplies to the market.
- Secondly, reducing the producer-consumer price gap could retard market development in terms of consumer's demand with increasingly more services built into their products. This tendency may increase marketing costs and widen the marketing margin.

Considering these factors, Lombard summarises the restated objectives of the Meat Board as:

"Balanced industry growth to ensure at least maintenance of the market share of red meat through -

- reduction of producer price uncertainty over the short and long terms to the extent required for effective production planning and supply control;
- support or development of mechanisms that would increase production and marketing efficiency."

These objectives have guided the Meat Board in developing its policy through recent years and presently the basic principles underlying the supply control policy of the Meat Board can be summarised as follows: " ... when no pressure is experienced on the markets and the facilities and services are therefore adequate .. the Board is in favour of a free marketing system, where supply and demand regulate the offer ..." *(Meat Board Focus*, 1980).

Together with supply regulation a floor-price scheme is applied. Through this scheme, producers are free to dispose of their products and only surpluses are purchased by the Meat Board at predetermined minimum prices and at terminal markets determined by the Meat Board. The basic underlying philosophy of the floor prices narrows down to the fact that it is aimed to guarantee producers at least a reasonable return.

This then provides explicit evidence of how at least some of the generalised objectives of the Marketing Act outlined earlier, can be achieved. Despite these objectives which guide the Meat Board in its regulatory functions and supportive actions, the performance of the system came under attack.

Recent criticism of the procedures followed by the Meat Board to enforce their statutory responsibilities (Groenewald, 1978; Groenewald *et al.*, 1979; Nieuwoudt, 1976; Nieuwoudt, 1978) therefore required that for any evaluation of policy, alternatives affecting the beef and cattle market not only need a clear specification of the set of criteria on which such an evaluation can be based, but also require identification of quantifiable variables which, when measured, will relate to the specified criteria. The South African market is known to be extremely complex and inextricably intertwined with the economic and political system of the country. It should be the object of any analysis of policy alternatives to help identify the advantages and disadvantages of various policy alternatives and also to advise policy makers of the economic consequences of the alternative policies. What is important, however, in any comparative evaluation of the beef and cattle marketing system in South Africa against specific alternatives, is that, the impact of respective policies in terms of their acceptability also need to be delineated. The basis for evaluation must then be that a specific policy "is an unacceptable policy only if there exists a better alternative which can be instituted" (Hill, 1982).

### *Theoretical consideration in selecting a set of performance objectives for market alternatives*

Hill (1979) commented that since agriculture lacks the size and thus the power to substitute corporate control for market forces, government is increasingly interested in providing a means to this end. The existence of a controlled market for agricultural products in South Africa is a good example of this. Theoretically, government policies place the market for every product somewhere along a continuum stretching between a free market and a controlled market.

For South Africa five major control schemes vary in terms of the degree of statutory control. As was shown earlier there are currently certain groups pressing for a movement away from the current control in the beef industry towards a free market. Suggested policy changes need an in-depth analysis of the economic consequences of the alternatives. However, most policies are not open to such analysis, mainly because of the difficulty to incorporate economic criteria into the political ideology that specifically underlies government intervention in the South African market for agricultural products. Any attempt to integrate diverse policies and alternative actions into a systematic analysis of economic consequences need to comply with certain requirements, according to Hill (1982). These requirements can be summarised as follows:

- It is not possible to compare total systems and conclude that the marketing system of one country is superior (or inferior) to the system of another country.
- The political system internally lacks the ability to make a systematic analysis of the economic consequences of different alternatives - politicians may not only put their career at stake, they may even try to use it for political gain.

What is needed for any comparative analysis of the economic consequences of alternative marketing

systems consists first of specifying the expectations of all the market participants as generalised objectives. From these objectives it is necessary to identify criteria on which the different policies would be judged. In the process of selecting a set of objectives several studies[3] were eminently useful[4].

The objectives represent largely the approaches of Jesse as furthered by Martin. Although the majority of their objectives was acceptable because of the level of generality, some modifications and additions were necessary to shape the objectives to fit the problem at hand. It was found that the evaluation procedure proposed by Hill (1982) provide a needed integration of the thoughts expressed by Martin's summary of the Shaffer-Jesse approach. Hill proposes an evaluative procedure containing three different steps. The first step is to separate a specific policy action into the marketing functions that will be affected. Secondly, criteria on which the policy would be judged need to be identified. According to Hill there may be some degree of subjectivity in establishing these criteria, but he concludes that it is "fairly easy to obtain agreement on some of the most important ones" (criteria). The third step in Hill's evaluative procedure is, according to him, the most difficult, inasmuch as the ability of a policy action to move closer or further away from each of the performance goals implied by the specified criteria, must be analysed.

### *Performance objectives applicable to the South African beef and cattle industry*

Given the foregoing, a framework for the analysis of the performance of the South African beef marketing system embraces the specifying of the expectations of market participants and performance indicators that represent the various objectives together with alternative quantifiable measures. These are summarised in Table 1. All of these objectives, the appropriate indicators and possible measures, are briefly outlined.

**TABLE 1 - Performance objectives, indicators and quantifiable measures for the South African beef and cattle market**

| OBJECTIVE | INDICATOR | QUANTIFIABLE MEASURE |
|---|---|---|
| I. To assure an abundant and reliable supply of beef at reasonable prices | A. Level and stability of available supplies | (1) Trend in available supply<br>(2) Evaluation of variables causing variation around the trend |
| | B. Growth in the beef industry | (1) Forecast demand and supply in order to evaluate the expected impact of different variables on future demand and supply<br>(2) Analysis of the market share of beef over time |
| | C. Level and stability of consumer prices | (1) Variation around the trend in consumer prices<br>(2) Consumer prices for beef relative to CPI and the prices of substitutes<br>(3) Equating seasonal supply with a more evenly spread demand |
| II. To stimulate and facilitate a system that best reflects the changes in demand and supply | A. Level and stability of producer prices | (1) Trends in producer prices<br>(2) Variation around the trend |
| | B. Marketing margin | (1) Changes in the margin over time<br>(2) Margins relative to cost indicators<br>(3) Causality between prices at different levels |
| | C. Adaptability to shifts in the demand | (1) Demand and supply relationships to determine supply response to changes in beef prices and other determinants of the demand |
| III. To be efficient in the performing of the basic marketing functions | A. Production, pricing and economic efficiency | (1) Extensive cost analysis within the industry |

| OBJECTIVE | INDICATOR | QUANTIFIABLE MEASURE |
|---|---|---|
| IV. To provide incentives for increased production responsiveness | A. Supply analysis | (1) Supply response analysis to determine what guides the producer in his decision on what and when to market |
| | B. Relative profitability of beef production | (1) Producer prices relative to production cost indicators and to the producer prices for competitive products |
| | C. Productivity within the beef production industry | (1) Turnover in the beef cattle inventory over time<br>(2) Production efficiency over time |
| V. To increase price stability | A. The impact of various Meat Board policies over time on the variability in supply and prices on retail and farm level | (1) Variation in prices during different periods of changed support policies<br>(2) Variation in floor and producer prices<br>(3) Effect of supply regulation on intra-year price and quantity variation: seasonality in supply versus more even demand throughout a year |
| VI. To ensure equal market access for all producers | A. Criteria used in allocating marketing quotas | (1) Total number of cattle available for slaughter relative to total slaughter<br>(2) Total number of cattle slaughtered relative to available slaughter capacity |

*(i) Objective 1: To assure an abundant and reliable supply of beef at reasonable prices*

With regard to the first objective, two factors come to the fore. Firstly the "abundant" implies level, while "assure" implies stability of supply. Hence, several indicators of this objective are possible. For the purpose of this discussion only three will be specified, namely:

A Level and stability of available supplies;
B growth in the beef industry; and
C level and stability of consumer prices.

For each of these performance indicators the following quantifiable measures are possible.

With regard to the first indicator (A) analysing the trend in available supply is a logical departure point. A second measure could be to evaluate the range of variables responsible for variation over time, which would be possible through a supply response analysis. By means of a statistical examination of the supply of beef over time it is postulated that certain important causal relationships within the industry will be revealed. Analysing the growth in the beef industry (Indicator B) over time appears to be in line with the stated objective of the Meat Board, namely balanced growth within the industry. The procedure for quantifying this indicator is through quantitative measures such as forecasts of demand and supply and by reconciling the expected impact of different variables on future demand and supply. A second quantifiable measure (with regard to Indicator B) will involve an analysis of the market share of beef in the market for red meat over time. A possible third indicator of performance is the level and stability of consumer prices for beef. With regard to Indicator C quantifiable measures not only have to analyse variation around the trend in consumer prices, but will also have to compare movements in consumer prices of beef over time with the consumer price index as well as with movements in the consumer prices of other meat types. The third possible quantitive measure arises from the fact that for the major part of South Africa beef production is highly seasonal.

With almost no seasonality in the demand for beef, the question arises of how to equate this seasonal supply with the more uniform distribution of demand over time. The effects of supply regulation over time need to be monitored against the developments on the demand side.

*(ii) Objective 11: To stimulate and facilitate a system that best reflects the changes in demand and supply*

When considering this performance objective three possible indicators emerged:

A The level and stability of producer prices;
B marketing margins; and

C response to changing demand and supply.

With regard to A, two quantifiable measures are possible. The first involves an analysis of the trend in producer prices and the second an analysis of the variation around the trend. The latter most likely will result in an examination of the causality between different variables in order to explain price variation over time. Within this context it may also be necessary to consider the movements in floor prices relative to those of producer prices. An analysis of the appropriate marketing margins, not only in terms of the general levels, but also in terms of variation relative to the different price levels and indices of production cost over time, may provide appropriate quantifiable measures for (B) above.

The third performance indicator (C) can be analysed through the specification and estimation of demand and supply relationships within the industry. From this it will not only be possible to estimate various elasticities, but the various determinants responsible for changes in the demand and supply, can also be detected.

*(iii) Objective III: To be efficient in the performance of the basic marketing functions (at the lowest possibled costs of resources)*

Indicators of the efficiency by which market functions are performed will most probably be measured through extensive cost-analysis within the industry.

*(iv) Objective IV: To provide incentives for increased production responsiveness*

This objective has three possible indicators of performance:

(A) Supply analysis;
(B) relative profitability of beef production; and
(C) productivity within the beef production industry.

For (A) above a supply response analysis (similar to that proposed for I.A.2, Table 1) will analyse the question as to what guides the producer in his decision making in terms of what and when to market. Included in an analysis of this kind may be an investigation of the different lead-lag relationships between various price levels and differences in the quality of beef (as determined mainly by sex, age and weight of the animals slaughtered). A supply analysis suggested in II.C.1 (Table 1) will reveal the different variables with significant influences on the supply, from which it will be possible to detect the impact of changes in the variables from outside the system on changes in the variables endogenous to the system.

An analysis of the relationships between producer prices for beef, appropriate cost indices and the producer prices for competitive agricultural products, may possibly be quantitative measures for an evaluation of the relative profitability of beef production (Indicator B).

Measurements of the productivity of beef production have to do with the operational dimension of marketing efficiency. Possible quantifiable measures in this regard (Indicator C) can be to evaluate the turnover in the beef inventory over time together with the efficiency of beef production. Because the prevention of the overtaxing of available slaughter facilities in the controlled areas forms a corner-stone of the regulatory responsibilities of the Meat Board, relating the actual number of cattle made available by producers for slaughter to available slaughter capacity, is a possible measure.

*(v) Objective V: To increase price stability*

This objective refers to the efficiency of the regulatory and support policy of the Meat Board. A possible performance indicator in this regard can be the following:

The impact of various Meat Board policies over time on the variation in supply and prices at retail and farm level.

At the root of this issue lies the question of the basis for determining the level of floor prices and to what extent changes over time in the level of floor prices, have affected the stability of market prices in general. Quantitative measures may be an analysis of the variation in prices during different periods of change in support policies. Secondly an analysis of the variation of floor, producer and consumer prices relative to each other over time may be indicative of the impact of different support policies.

The determination of the effect of supply regulation on intra-year price and quantity variation may be another quantitative measure to consider. The question is how, through supply regulation, the known seasonality in supply is matched with the more even demand. This objective most certainly is related to I.C.3, II.A.1 and 2 and II.B.1, 2 and 3 (Table 1), inasmuch as it can be assumed to play a significant role in the level and stability of the various prices and spreads.

*(vi) Objective VI: To ensure equal market access for all producers*

It remains a debatable issue whether all producers have equal access to the controlled markets, especially during times of high supply when prices on the uncontrolled markets are significantly lower than on the controlled markets. The latter is mainly the case due to the floor price system which is in force in the controlled markets. Logical performance indicators in this regard are most probably the criteria used in allocating marketing quotas. Quantifiable measures can be used to analyse the developments over time in the total number of cattle available for slaughter relative to total slaughter, together with the total number of cattle slaughtered relative to available slaughter capacity.

Despite the fact that the unobtainability of data

on these two measures may rule them out, the stated performance indicator can still be useful through the information revealed by other quantifiable measures. In this way the underlying theory of quota and minimum or floor price systems in the pricing of farm products may test the real need for these schemes in the marketing of beef and cattle in South Africa. Results obtained on the estimation of different elasticities will be eminently useful in this regard, along with a consideration of how the non-access to a controlled market could force producers into market strategies which could affect the composition of the cattle inventory.

## SUMMARY AND CONCLUSIONS

The primary objective of this paper is to develop a framework not only for use in conceptualising market performance, but also for measuring performance empirically.

With the performance of a market the primary concern, the problem of defining the market concept was briefly discussed. Marketing efficiency in turn was analysed into the two main dimensions and the transition from a narrowly-defined efficiency concept to the broader performance concept was also outlined. Following this, market organisation and the role of performance were integrated into an analytical approach for evaluating the marketing problem. With regard to the hypothetical flow of causality proposed by Bain in his early writings on industrial organisation, namely to be from structure to conduct to performance, recent developments in different viewpoints were outlined. It was assumed that in compliance with authors such as Jesse, Martin and Hill, among others, the flow of causality is in both directions as opposed to Bain's hypothetical one-way flow from structure to conduct to performance.

Against a rather characterstic background of government intervention in the marketing of beef and cattle in nine controlled areas of South Africa a set of performance objectives was selected. For each selected performance objective, some performance indicators and quantitative measures were delineated. In specifying the general objectives for the performance of the beef and cattle market, these objectives were not ranked in order of importance.

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[1]JESSE (1978), among others, commented extensively on this matter

[2]Several authors have recently commented extensively on this matter (Jesse; Bressler and King; Martin (1980a) and Hill (1979) to name a few

[3]JESSE; HILL and MUSTARD; MARTIN (1980b); HILL (1982); and LOMBARD (1979)

[4]The author would be remiss without acknowledging Dr. Lowell D. Hill who, with his usual deep insight, provided much needed guidance in the early drafts of these sections

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