CONCENTRATION IN THE AGRICULTURAL SECTOR

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Abstract

The objectives of the workshop were to (a) explain the concept of economic concentration and (b) critically analyse concentration in the Dairy and Red Meat sectors. Restrictive regulations were cited, among other factors, as a cause of concentration in both sectors. Policymakers therefore need to implement deregulation and promote contestable markets to prevent potential abuse (restrictive practices and price collusion).

1. Introduction

The objectives of the workshop were to (a) explain the concept of economic concentration and (b) critically examine aspects of concentration in South African agriculture. Three speakers gave short papers as a basis for workshop discussion. Dr. Brooks first defined economic concentration and outlined its causes, potential economic effects and public policies for dealing with it in South Africa. Dr. Jordaan and Dr. Lubbe then, respectively, spoke on aspects of concentration in the local Dairy and Red Meat sectors.

This paper summarizes the main issues raised by the speakers and ensuing discussion. It also highlights some useful references for readers who want more information about the workshop topic.

2. Definition of concentration

Concentration refers to the extent to which a market's or an economy's total output is accounted for by the few largest member firms. Conventionally, it is thought that markets with higher seller concentration are less competitive (Pearce, 1981:75).

3. Measures of concentration

A lack of available statistical information in South Africa severely limits the range of measures of concentration that can be calculated (Fourie and Smit, 1989:242; Lubbe, 1991:254). Where data are available, the researcher can construct absolute, relative and distributional measures of concentration.

Absolute measures include the concentration ratio (CR) which gives the cumulative market share of the N largest firms. Experience suggests that a four-firm threshold CR of 50-60% should give a clear divide between effective competition seen in loose oligopoly and the high market power that tight oligopoly may create (Shepherd, 1987:563).

The most widely used relative measures are the Lorenz Curve and the Gini Coefficient (GC). These reflect the relative unevenness in the spread of market shares. For example, a GC of 0 implies that firms are of equal size, while a monopoly exists if GC equals 1. Distributional methods comprise frequency tables and statistical measures of location, dispersion and skewness. See Du Plessis (1977), Hepplewhite (1983) and Lubbe (1991) for estimation procedures.

None of the measures of economic concentration outlined above is generally regarded as superior, since each has limitations. For example, the CR fails to take account of all firms in an industry, while the GC considers only the distribution of gross output between firms and not the absolute number of firms in an industry (Du Plessis, 1977; Shepherd, 1987; Rothschild, 1987; Brozen, 1982). Despite such limitations, attempts to find suitable measures of concentration have contributed to a better understanding of the issues involved.

4. Causes of concentration

Theoretical and empirical debate internationally focuses on whether high levels of economic concentration are caused by entry barriers and related competition restricting behaviour and strategies (monopoly hypothesis), or by superior low-cost firms having higher profits and growing to dominate their industries (efficiency hypothesis) (Fourie and Smit, 1989:252; Leach,1992:144).

Dr. Brooks identified some broad causal factors in South Africa as:

(i) the historical rise of large mining houses able to finance large capital investments,
(ii) the relatively small South African economy which restricts the size of potential markets,
(iii) exchange control, sanctions (limiting exports), dis-investment and the weaker Rand, all of which encourage mergers and acquisitions,
(iv) over-regulation which discouraged small business development, and
(v) past discriminatory legislation (eg Group Areas Act and Population Registration Act) which limited access of the majority of the population to commercial and business activity.

Dr. Jordaan cited the trend towards fewer and larger firms and primary producers in the Dairy Industry since the early 1930's as evidence of economic concentration. This was partly ascribed to efficiency factors such as technology development, product development and the benefits of economies of scale. However, he also identified the development of regulations for the Dairy Industry, and the actions of the Dairy Board in applying and administering these regulations, as contributory factors. Explanations for this could be the formation of

informal power groups and interest groups within the official structure of the Board, and the Board's inability to fully implement decisions.

Dr. Lubbe presented empirical evidence of economic concentration minima in the Red Meat Industry. Relatively high concentration was prevalent at each marketing stage, from feedlots through to auction buyers. Using data for the period 1989-1990, CR's for the top three firms in each stage ranged from 38% (buyers on beef auctions at controlled abattoirs) to 94% (abattoir agents for pig marketing). Estimated GC's were all above 0,50, varying between 0,55 (feedlot standing capacity) and 0,87 (abattoir agents for pig marketing). Dr. Lubbe contended that this concentration was caused, promoted and maintained by past restrictive regulations of the Marketing Act (as amended since 1937), which control the marketing of red meat in South Africa. He cited regulations such as permits and quotas (distributed by agents) to control supply to the controlled markets, slaughtering for controlled markets only at controlled abattoirs and restrictive entry into the business due to 'excessive' health laws, as examples of legal barriers to entry which foster concentration.

5. Effects of concentration

Dr. Brooks indicated that high levels of concentration can facilitate 'tacit' collusion, and, hence, monopoly pricing in domestic markets. Conversely, larger firms may be able to compete more effectively on world export markets due to economies of scale benefits.

According to Dr. Jordaan, Dairy Industry regulations were used to distribute income amongst firms based on a system of levies and premiums, against a historical background of restrictive registration and barriers to entry into manufacturing. The *de facto* regulation of product flow was justified by the Board as an attempt to 'stabilize' the Industry.

Dr. Lubbe argued that Red Meat Industry regulations resulted in an inflexible marketing structure (strengthening oligopoly) and a non-dynamic producer orientated marketing system. The long-run effects of these regulations - higher relative red meat prices and declining per capita red meat consumption - had not been fully considered.

6. Remedies for concentration

Dr. Brooks noted that concentration *per se* is not necessarily bad, but it should not lead to abuse (restrictive practices and price collusion). The Competition Board investigates allegations of abuse and recommends corrective action to the Government. The Board however lacks the 'teeth' of quasi-judicial edict, and the Government is free to ignore its recommendations. He identified a stricter mergers policy, changes in company law and tax law to facilitate the 'unbundling' of conglomerates and more exposure to international competition, as broad remedies where concentration is excessive in South Africa.

Dr. Jordaan emphasized the need for remedies based on quantifying the process by which concentration had occurred. The solution lies in greater reliance on bargaining according to market forces. Effective and efficient management decision-making under these circumstances will be aided by the establishment of appropriate information systems.

Dr. Lubbe called for further deregulation of the Red Meat Industry. Free entry, the protection of fair business practices and the removal of 'excessive' health regulations were examples of potential remedies. Entry by newcomers would, however, be constrained by capital investment requirements and economic power of established firms.

7. Discussion and conclusion

Economic concentration occurs to some extent in the general South African economy and in the Dairy and Red Meat sectors. A common cause, amongst others, identified by all three speakers was restrictive regulations. Policymakers should therefore give more attention to deregulation to prevent potential abuse (restrictive practices and price collusion). In short, there is a need to promote contestable markets, in which the force of competition from potential entrants constrains the behaviour of existing firms as there are no significant entry barriers (Bumble *et al.*,1982).

Future research on concentration in South African agriculture should, if the data are available, analyse whether or not concentration is a key determinant of profits. Empirical evidence of a positive relationship between concentration and monopoly profits would support the case for deregulation.

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