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Articles in the field of agricultural economics, suitable for publication in the journal, will be welcomed.

Articles should have a maximum length of 10 folio pages (including tables, graphs, etc.), typed in double spacing. Contributions, in the language preferred by the writer, should be submitted in triplicate to the Editor, c/o Department of Agricultural Economics and Marketing, Pretoria, and should reach him at least one month prior to date of publication.

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Recent Changes in the Location Factors of South Africa's Developing Meat Processing Industry (Part II)

by

K. HAFFERT,
University of South Africa

PART II

THE DEVELOPMENT OF THE LOCATION FACTORS OF THE MEAT PROCESSING INDUSTRY (MPI) DURING THE 1960's

The first half of the 1960's witnessed a tremendous expansion of the MPI. The total output in 1965 exceeded the 1960/61 level by about 65 per cent[21].

The meat canning output in the Republic not only increased greatly in absolute terms but it also improved its relative position in the MPI, namely from 16% in 1960/61 to about 25% in 1965. This is underlined by the fact that 64% of all plants producing canned meat in the South African customs area in 1965 were established in the preceding decade. Furthermore, the relation of exports to imports rose tremendously. In 1955 the exports represented only 39.8% of the imports, but they were 17 times higher than the imports in 1965.[22] In the same period the percentage of corned beef products of the total output of the canning plants in the Republic rose from 14% to 38%, while that of tinned ham commodities fell from 21% to less than 5%.

Significant developments also took place in the perishable goods section of the MPI.

The various trends of specialization in this sector noted in Part I, continued in the 1960's but with certain modifications.

On the whole those plants that had specialized in products aimed at a certain group of the population were able to maintain their position and even accommodate new plants. On the other hand, those that were located close to the industrial centres and whose areas or groups of consumers were based on specialization had to contend increasingly with competition from larger firms. The latter grew by adding new specialized plants to their existing ones and from 1960 onwards were endeavouring to find outlets for their increased production capacity. The new plants enjoyed a quality and cost advantage that facilitated their penetration into the markets of the older competitors. The resultant overlapping of previously established specialized markets occasioned a slight decrease in prices in areas just outside the demand centres but did not noticeably affect the more distant areas.

In many cases an outlet was also sought in other industrial centres, which enhanced the interdependence of the markets in the industrial areas. The latter trend manifested itself especially between the Witwatersrand and the Durban areas. The over-all competition was however not as fierce as at the end of the 1950's because this expansion was carried by the wave of general expansion of the whole economy. Nevertheless those plants which had specialized in a certain group of products, often suffered as a result of the expansion of the plants of the bigger firms. On the other hand where a brand name was established for the special products the output could frequently not only be maintained but even expanded.

By way of general summary we may say that the location and the market patterns of the plants

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* Professor D.C. Krogh and Mr. S.S. Brand of the Department of Economics of the University of South Africa made valuable suggestions for the improvement of this article. Various officials of Government departments and institutions were helpful in providing part of the basic material. None of the gentlemen can, however, be held responsible for any errors of contents or computation which might occur in this article.

21) These computations were made on the basis of unpublished statistics obtained from the Livestock & Meat Industries Control Board in Pretoria and are based on avoirdupois.

22) The relations of the imports and exports have been computed on the basis of statistics obtained from the Department of Customs and Excise in Pretoria.

producing perishable goods remained basically the same at the beginning of the 1960's, but that the larger firms were sporadically forcing their way into the markets of specialized areas and specialized groups of products.

We noted in Part I that in the second half of the 1950's a new trend in location started to develop that deviated from the traditional location pattern. In the beginning of the 1960's this trend gained momentum by the expansion of that sector of the meat canning industry that could be detached from the perishable goods production because of an increase in customs duties. This made canned beef imports from Rhodesia almost prohibitive. The labels of such products soon changed to "Made in South Africa", even in the case of brand names of foreign firms. The fact that no factories of these well-known foreign firms were established within the customs area, however, means that the changing of the wording on the labels indicates that local firms were now producing these commodities on behalf of foreign companies. With these products with their well-known brand names the aim was to combine high quality with low prices. This could only be accomplished in regions like the North-Eastern Cape, South West Africa and Botswana where a beef surplus[23] existed. As they turned to these regions there followed a tremendous drive to increase the output or establish new meat canning factories or both.

Apart from the foreign interests inducing the expansion of the production of these commodities, other firms and even those in the traditional production areas for perishable products turned their attention to beef canning. One reason for this was the necessity for linked sales of corned beef with the canned products attached to the perishable goods production. To avoid extensive losses in these cases the corned beef production was often operated in combination with the production of beef extract. The other reason must be sought in a temporary slackening of supplies caused by the increase of import duties. Since beef canning usually starts with the production of corned beef which enjoys a ready market but is relatively less profitable, it was the local supply of this particular product that was the first to expand. Soon, however, the factories added other items to their production programme which often resulted in overlapping of commodities of the production schedule of the beef raw material and the perishable market orientated plants.[24]

There remain two final questions to be answered. Firstly, to what extent did regional price differences encourage the development of the new location pattern of meat canning plants, and secondly, how did manufacturers react to seasonal price differences?

The phenomenon of the regional difference in beef prices is manifested in established floor prices for beef in South Africa. They are based on the fact that certain regions have more stock than others. For controlled markets near plentiful supplies the prices are fixed slightly lower than for more distant ones.

The fixing of floor prices applies to controlled areas only, i.e. areas in which only graded meats may be sold. The Witwatersrand, Pretoria, Durban, Pietermaritzburg, Cape Town, Port Elizabeth, East London, Bloemfontein and Kimberley are proclaimed controlled areas. The biggest regional price difference operates between the Witwatersrand and Kimberley in the

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23) In South West Africa and Botswana the normal beef surplus grew more and more on account of the repeated occurrence of foot-and-mouth disease which closed their export markets for fresh and frozen beef or live animals. This in turn increased the downward pressure of beef prices and favoured the erection or expansion of canning factories.

24) The extension of the production programme of the independent branch of the MPI led sometimes even to the inclusion of such items as those which require pork. Pork, unlike beef, can be produced almost anywhere, because it does not require extensive land. Therefore it can be induced, as for instance in Poland before the Second World War, when a dominant firm of the MPI gave piglets of their choice to the surrounding farmers for feeding them according to the specifications of the firm. After they had reached a predetermined weight they were given back to the firm and the farmer received a certain sum for the feeding. As pigs do not look for their food, but food is brought to them, the production of pork can be achieved on a very small piece of ground where sufficient food is available. This is usually the case in agricultural areas or even at the Witwatersrand - where for instance the swill of the mine compounds feeds a large number of pigs. The regional prices of pork are therefore not homogenous with those of beef. Here the highest prices are at the coast according to the minimum price table, and especially in Cape Town which is not surrounded by wide agricultural areas. As pork production is almost ubiquitous in South Africa but cheaper in agricultural areas, it was often advantageous for firms in the beef regions to include pork in the meat canning production programme.

case of grade III beef, and this difference came to 10.2% according to the floor prices in 1964.[25]

Since the controlled areas were characterized by the concentration of the White population, keen competition at the beef auctions drove prices up. The advantage to plants outside the controlled areas, i.e. in the beef producing regions where sales could be effected by private contract was accordingly even greater.

The differences in prices were usually considerably greater than the 10.2% allowed for in the floor prices between the Witwatersrand and Kimberley and this, no doubt, encouraged the gravitation of beef canning plants to the more remote cattle areas.

Apart from the locational differentiation of prices, we find considerable differentiation in time. This can again be seen from the fixing of the floor prices. Beef prices are usually highest from the beginning of November, and during December, and usually reach their lowest ebb towards the end of April.

In 1964 the difference between peak and lowest prices was 15.2% for grade III beef in the Witwatersrand area and 16.6% in the Kimberley area.

Within the South African customs area, however, this seasonal differentiation has been largely overlooked. It is true that some firms took advantage of it by freezing carcases in cold storage during the low price period for use in the high price period. But this did not prove to be very satisfactory because of the cost of cold storage, the loss of weight and usually a deterioration in quality as freezing techniques were not as well developed as, for instance, on the Continent of Europe.

As pointed out earlier on, the biggest differences in regionally fixed floor prices amounted to only 10.2% (1964) whereas a seasonal difference of 15.2% or 16.6% was experienced if the regional differentiation is reckoned in as well. These differences must be regarded as very moderate in relation to the regional and seasonal differences in the case of beef prices. In this connection it is important, however, to bear in mind that the locational attraction of the beef producing area is greater the higher the beef content in the product of the plant. For the MPI as a whole, that is including the canning production, the average proportion of beef content in total costs was about a quarter in 1960/61. If we eliminate those canned commodities which contained 80% and more beef, then we find for 1965 that these items account for about 15%[26] of the total output. The regional cost advantage was therefore 80% to 100% of the difference depending upon the actual percentage of the beef content. In the light of the meagre profit margin of the MPI as a whole, the difference was quite considerable and it is therefore not surprising to find that the bulk of the canned beef production schedule today is concentrated in the abovementioned low beef price regions.

25) The figures were computed from the - RATES FOR THE CALCULATION OF MINIMUM PRODUCERS' PRICES FOR BEEF CARCASES IN CONTROLLED AREAS, 1964. The table was obtained from the Livestock and Meat Industries Control Board in Pretoria.

26) The figure is based on weight relations obtained from unpublished statistics of the Livestock & Meat Industries Control Board.

For the perishable goods production the percentage varied from plant to plant depending upon the production schedule but in most plants it was less than one fifth of the total costs of the respective plants. This share content in total costs does not seem to have been sufficient to outweigh the advantages of the external economies and the inertia of these firms. This must therefore be regarded as the main reason for the continued market orientation of this branch of the MPI in the 1960's.

Generally we may conclude that we find a development towards a regional gravitation of two groups of the MPI, the one following the location pattern of the traditional perishable goods production, the other the lower regional beef prices. In neither case does the seasonal differentiation of the beef prices appear to affect their production policy during the year.

SUMMARY

We have seen that in the past ten years the MPI was subjected to and underwent quite considerable changes.

The location pattern of the MPI during the early 1950's was almost exclusively market orientated whereas individual firms displayed a rather homogeneous schedule of production items.

In the course of the fifties a tendency towards specialization developed which was caused mainly by increased competition. In the 1960's this tendency towards specialization was partly generalized by the expansion of the bigger firms not only in volume but also in the range of items produced. The tendency towards specialization and expansion was most noticeable in one branch of the MPI, namely in the meat canning industry.

Here one has to distinguish between two groups of manufacturers - the one adhering to the location pattern of the traditional perishable goods production while the other gravitates towards the beef producing regions in the western areas of Southern Africa.