

## Analysis of the distribution of red meat by the butcheries in the urban area of Maracaibo

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### Abstract

This descriptive non-experimental study was performed with the purpose to analyze the distribution of red meat by the butcheries located in Maracaibo municipality, Zulia state, identifying related problems and to propose strategic actions. A population of 554 butcheries it was considered distributed into 18 parishes of the municipality. A sample corresponding to the 20% (110 butcheries) randomly selected and stratified by circuits, was selected. An inquest was used as an instrument to collect the data. A descriptive non-parametric analysis, including an analysis of frequency and independency tests of the data was performed by using the Statistical Analysis System (SAS). This trade could be characterized as a traditional retail mart, with low technological level, performed by Venezuelan. Some problems could be identified: low educational level; deficient capacity of negotiation; lack of organization; lack of advertising and information; disproportional sale of retail cuts; unsymmetrical distribution of the butcheries per circuits, characterizing the urban distribution of red meat performed by the municipal butcheries as «deficient». In order to improve this stage of the process of red meat marketing, the strategic actions should based on the organization of the merchants; capacitation of the human resources; integration of the meat-market trading system, application of in force regulation.

**Key words:** Organization strategies, markets, urban distribution, red meat, butcheries.

### Introduction

Urban food distribution is the last phase of marketing process, where are related structures, practices and institutions that allow that the product can be acquired by the consumer (8).

This phase is complex and is considered as one of the more sensitive links of food industry (8), because it is the responsible of satisfying the consumer request, and in a general way, present problems

that have effects on quality, distribution and price of the product, that join with the economical crisis of the country, affects in a negative way the consumption of red meat in the population (12), reflecting in the reduction of frequency and in quality of kilograms of meat per person-year (9).

To evaluate the meat marketing system, is justified if considering the importance of this product in the diet of the Venezuelan, especially to Zulia population, that for tradition and customs identify meat as a basic component in diet, but in the last years have been reducing and is tending to disappear from daily food (5).

The presence of meat in the diet makes sure the absorption of certain vitamins and minerals less approachable in other foods, it means,

a small quantity of meat provides a significant quantity of nutrients in a direct or indirect way (5), maybe that is not known for people with better economical situation. Despite, for people with lower economical situation that represent 70 % of Venezuelans, which health and ingest of food is seriously affected, have cause changes in the consumption toward products with a higher carbohydrate content and few proteins (5).

In this sense, the aim of this research is analyzing urban distribution of red meat made specifically by specialized commerce (butcheries), responsible of distributing 80 % of meat in the city, and the identification of main distribution problems in urban areas to design strategies that improve this activity (9).

## **Materials and methods**

A non experimental and descriptive research was made, where were identified and described the structural and functional characteristics that incise in the distribution process of red meat in a detailed level in the city. By the descriptive character, the design used was the transversal or descriptive transectional, in order to investigate the incidence and values where appears one or more variables, measured only once (4).

The research took place in the nor-occidental part of Zulia State, including 18 parishes (table 1), with a total population of 1.289.610

habitants (1) being the limits: in the north with Mara, in East with Maracaibo's Lake, in South with San Francisco and West with Jesus Enrique Lossada. The population considered in this research were 554 butcherries, represented by database of the Venezuela Electric Energy (3) proportionally distributed in parishes that are part of the city. The sample of the research was randomized selected proportionally stratified (table 1). This technique was applied, so the sample has the same proportion where the elements are in the population, it means, to keep proportionality in the butcherries

**Table 1. Butcheries and habitants distribution, and sample per parish. Maracaibo, Zulia state.**

Parish	Numbers of habitants	N°of butcheries	Sample
Antonio Borjas R.	58182	6	1
Bolívar	20408	18	4
Cacique Mara	71086	16	3
Caracciolo Parra P.	53804	45	9
Cecilio Acosta	70381	13	3
Chiquinquirá	57234	230	46
Coquivacoa	80019	8	2
Cristo de Aranza	105995	12	2
Francisco Bustamante	134780	22	4
Idelfonso Vazquez	88366	4	1
Juana de Avila	78952	54	9
Luis Hurtado H.	76804	12	2
Manuel Dagnino	93060	10	2
Olegario Villalobos	97981	33	7
Raúl Leoni	61598	28	6
Santa Lucia	39104	13	3
Venancio Pulgar	101856	30	6
Total	1289610	554	110

Source: 1 Maracaibo Office of Major 1998

2 ENELVEN. 1999

distribution per parish. The size of the sample was determined in 20% of the total population (110 butcheries) applying the equation proposed by Martinez C. (7) with sample mistakes less than 8%.

As variables of this research were considered: the socio-economical identification and characterization of the retailer, store description, definition of the functional relation supplier-retailer and retailer-buyer, as well as the respective indicators

The compilation of information in the field, was made through the structure interview technique, and as

compilation instrument was used the questionnaire, that has the complex variables described before. This instrument was previously submit to an evaluation process to the identification of the validity with 5 experts, who check concordance and coherence of the question with variables, dimensions and indicators, which opinions and advices were considered to the application of the final version, to then been applied directly in each analysis units (butcheries).

The data analysis was made using descriptive statistics,

specifically the application of frequency analysis and independent test ( $\chi^2$ ) (4). Tables of double entrance were used to make the analysis and discussion of tendencies in answers. A categorization of butcheries in the parish was done, according to the indicated by the decree 2.527 published in March 26, 1993 (2,6) where is pointed the decision 197 of the Agreement Committee of Cartagena, where butcheries are classified as type (A,B,C), in base of conditions and availability of equipments and installations. Considering this classification, was

made an adaptation according to the characteristics observed in this research, as is described in table 2.

The problems manifested by retailers during the application of interviews and those problems identified by the researcher, were considered as weakness that affect urban distribution, and represent the actual situation, and with the application of the situational strategic planning were designed strategies to improve the process, and have obtained a favorable change in the distribution of red meat in the urban area (10, 13).

## Results and discussion

### Percentage butcheries distribution by category in Maracaibo

38% butcheries in the parish were classified type A, considering that in these stores is made an adequate management and conservation of meat and that also have the required equipment to make

this activity. 40% butcheries were classified type C, it means, without the necessary equipments to make this activity in a efficient way, also 22% butcheries were classified type B, because do not have pay machines separated from the counters and freezers to the conservation and exposition of cuts (table 2)

**Table 2. Characterization criteria of butcheries in Maracaibo, Zulia State.**

Type A	Type B	Type C
Icebox	Icebox	Weight
Electric saw	Electric saw	
Weighting machine	Weighting machine	
Electric miller	Electric miller	
Refrigerated cabinet		
Pay machuine		

The presence of equipment in bad physical and mechanical conditions were not considered to the classification.

These results define urban distribution of red meat deficiently and the realization of this activity in stores that do not have adequate conditions to manipulate and expand a product highly perishable, specially when is related to refrigeration.

### **Butcheries distribution by type in the parish**

The butcheries distribution per parish do not have a determined pattern, neither a physical location nor a socio-economical level of habitants. That is why that in parishes Cristo de Aranza, Luis H. Huigera, Raul Leoni, Idelfonso Vazquez, Cacique Mara and Bolivar, with 16% butcheries types A-B, that suppose a red meat distribution in adequate stores. All the same, is observed butcheries predominance type C in parishes Antonio Borjas R, Coquivacoa, Chiquinquirá, Francisco E. Bustamante, Manuel Dagnino, that represent 50% of butcheries, besides are inside the most popular parishes and with a lower number of butcheries, which affect the accessibility and meat quality that is consumed in these areas (table 3).

### **Retailers and commercial store characterization:**

**A) Retailers description:** the results of this research allow to describe retailers as traditional, 61% have more than 11 years in this activity, 97% are Venezuelans, 92% are men, 55% with ages between 20-40, and 51% has finished high school. Considering that these results are very favorable when it will required to make a changes in the process. However, must be highlighted the

lack of preparation of 73% of retailers in the commercial area. This also indicates the deficient specialization in this activity, so this concise with those results obtained by Rincon *et al* (10) and Segovia-Martinez (13), in the study of detailed traditional and specialized commerce in the parish, in 1998.

**B) Description of commercial stores:** in general terms, butcheries in the parish are characterized in: 53% stores are rented and 91% are not associated or organized, 63% open everyday with more than 8 hours of customers attention, 73% work in the counter, it means do not have car service. Besides, 71% buy the meat in a slaughterhouse. In table 4 are identified by butchery type other elements that characterized commercial stores, where are included some socio-economical aspects. It is observed that in butcheries type A, with less time of established, where innovations have been incorporated to make this activity more efficient, but these only represent 38% of butcheries in the parish, the rest 62%, is determined by butcheries with high deficient in equipment and physical space. These results characterized the detailed urban red meat commerce as efficient to distribute this product highly perishable.

### **Main identified problems in urban red meat distribution made by butcheries.**

The actual situation identification of red meat distribution by butcheries, allowed to identify and define causal relations that generate main strategically problems, as a

**Table 3. Percentage distribution of butcheries per class/parish**

Parish	Type of butchery(%)		
	A	B	C
Antonio Borjas R.	0	0	100
Bolívar	100	0	0
Cacique Mara	67	33	0
Caracciolo Parra P.	56	33	11
Cecilio Acosta	33.3	33.3	33.3
Chiquinquirá	18	15	67
Coquivacoa	0	0	100
Cristo de Aranza	50	50	0
Franc. Bustamante.	25	25	50
Idelfonso Vazques	0	100	0
Juana de Avila	67	11	22
Luis Hurtado H.	50	50	0
Manuel Dagnino	50	0	50
Olegario Villalobos	57	29	14
Raúl Leoni	83	17	0
Santa lucia	33.3	33.3	33.3
Venancio pulgar	33	50	17

result of «have to be» and «might be». Besides, product of the retailer's answer to the question of identifying main problems that affect detailed red meat commerce.

### **Main identified problems**

1. Low preparation level of retailers in the commercial area, and food management. Proved for the instruction level, 51% are high school graduated, 29% have only coursed primary school, besides 73% of retailers have not done course in the administration food management area. This determines that the management store, is product of their experience, and can be translated in low technology application. Besides, this situation is also reflected in

persons that are hired in these stores, where the only requirement is to have experienced, because there do not exist or is not common specialized courses for butchers.

2. Lack of organization, where 91% are associated. This situation is caused because of the few information about the existence of organizations, and benefits, that are evident by the education level, and negative experience that is in these organizations, which cause the non exploitation of these benefits, as the scale economies for a more negotiation power.

3. Deficient negotiation capacity. This is a causal effect of the previous problem, it means, individualism and

**Table 4. Characterization of butcheries per class. Maracaibo parish**

Quality	Type A	Class B	Class C
Established time	74% lees of 10 years	38% more than 20 years	70% more than 20 year
Sell volume	52% more than 300.000 Bs.	63% less 300.000 Bs.	87% less 300.000 Bs.
Employment capacity	46% more than 4 persons	73% more than 2 persons	41% one person
Kind of supplier	60% slaughterhouse - icebox	42% icebox	64% icebox
Frequency of provisions	60% every two days	63% every two days	57% daily
Buy volume	33% 7-8 cattle/week.	42% 3-4 cattle/week.	43% less than 4 cattle/w.
Price	50% slaughterhouse	42% supplier	64% supplier
Package used	64% plastic bag	88% plastic bag	98% plastic bag
Average prices	6% more than type C	2% more than type C	Highest prices

incapacity of looking for collective solutions, which caused the management of small capital investments and low volumes of buying and selling. 64% retailers sell 6 or less cattle per week, with incomes less of 300.000 Bs/day for 66% of the same, which generates a retailer dependence, limiting the negotiation capacity, as well the opportunity to evaluate others agents to be supplied. Besides, the supplier dependence is due to the deficient refrigeration capacity, limited or non existent in butcheries type C, that represents 40% of the sample, forcing them to be provided with a supplier that warranty the low volume and/or high frequency (78% are daily provided or every other day, with 1 to 2 cattle per buy). This supplier provides 46% butcheries, which limited other route election, increment in prices, expenses and reduction of retailers profits.

4. Lack of publicity and information by retailers to consumers. This problem is related to the type of meat they sell, which is a law exigency, the correct preparation of different cuts and qualities of cattle meat, which cause few consumer information and interest reduction in this kind of product.

5. Disproportion sell in different cuts. Only 32% channel cuts have high quality and more than 50% of consumers prefer these cuts, because are very easy to prepare, which lead to a reduction of cuts request of second and third. This also happens because of the low technology application that give more value to the meat, in a way that reduces preparation time in

harder cuts and increment request.

6. Disproportion butcheries distribution in parishes. This provoke that many persons have to drive many miles, to obtain meat in butcheries. In that way, are obtained relations of 249 habitants/butcheries (Chiquinquira parish) and 22.092 habitants/butcheries, which implies that one butchery provides an approximate average of 465 homes (of 5 members) in Maracaibo. According to table 5, there are parishes where this relation determines deficiencies, and makes think a shortage, and are precisely the most popular and farthest parishes in the urban area, where the relation habitants/butcheries is higher.

Besides, it has to be considered that this research embraces urban distribution made by butcheries, because are responsible of providing 80% of meat that are distributed in the city, the other 20%, is made by organized commerce, like supermarkets, hypermarkets, others commerce that also sell meat (ENNE, Centro 99), as well as illegal or spontaneous stores. However it has to be said, that these stores are distributed in the urban area, where most of the people do not have access, maybe for the distance or by the economical situation.

#### **Strategically proposals.**

According to the detected reality to meat commercialization in

**Table 5. Distribution of butcheries/habitants/parishes in Maracaibo**

Parish	Habitants	Habitants butchery	N°.butcheries
Antonio Borjas R.	58182	9697	6
Bolivar	20408	1134	18
Cacique Mara	71086	4443	16
Caracciolo Parra P.	53804	1196	45
Cecilio Acosta	70381	5414	13
Chiquinquirá	57234	249	230
Coquivacoa	80019	10002	8
Cristo de Aranza	105995	8833	12
Francisco Bustamante	134780	6126	22
Idelfonzo Vazques	88366	22092	4
Juana de Avila	78952	1462	54
Luis Hurtado H.	76804	6400	12
Manuel Dagnino	93060	9306	10
Olegario Villalobos	97981	2969	33
Raúl Leoni	61598	2200	28
Santa Lucia	39104	3008	13
Venancio Pulgar	101856	3395	30
Total	1289610	2328	554

Maracaibo, strategically actions are proposed, based in the methodology approach of situational strategic planning that allow to establish a competitive and productive sell system to recover the consumption levels:

The posing of strategically proposal search the following objectives:

- To organize retailers with the purpose of increasing the participation level in the system.

- To improve the distribution process through the development of a efficient distribution logistic (car services, house services, sells on the internet) obtaining the presence of the product in a continues way.

- To improve the product quality through investigation and development actions that give value to the product.

- To increase the managerial capacity of retailers with the aim of getting and efficient administration of the process and fortify the manager knowledge.

- Fortify the financial capacity to increment investments.

- To promote support services to commercialization and customer services.

- To promote the adequate adoption of physical practices in the commercialization process to improve competitiveness.

- To promote the application of techniques to the meat with the purpose of facilitating the preparation.

The following strategic proposals, are the analysis result that

are part of systemic-causal red of main problems previously identify, defined as critical points, which changes originate a significant alterations of actual situation to obtain the objectives proposed before. These strategic actions lay in: retailers organization, retailers capacitation, and the application of existents laws.

Retailers organization: promoting the detailed stores organization, can be obtained a productive and effective cooperation in the activity to face deficiencies and obstacles that are presented inside the red meat commercialization chain, these organizations can be: detailed chain and/or cooperative chain or buy unions.

These organizations offer theirs services as: buy of quantity of products, transport, storage, meat processor, where each retailer obtain the operative economical autonomy.

With this strategy is pursued that retailers develop direct commercialization ways, promoting the scale economy, avoiding having unnecessary intermediates and facilitating buys in quantity, storage to keep the request in critical times, distribution of products, to offer better prices, provides their associates, to have financial incomes to fortify the investment capacity and represent them in the governmental, legal and commercial instance, which provokes more benefits and higher competitiveness.

This detailed organization must be promoted by national and regional organism that are direct and indirect

involve with detailed meat commerce, these might be: Maracaibo's Office of Major, Production and Commerce Ministers, Agricultural and Land Ministers, CORPOZULIA, FEDENAGA, and others.

- Retailers and human capacitation: the implementation of capacitation and training programs for retailers and other people that work in the store, will be in function of achieving that the commercialization process be efficient and effective, improving the competitive store capacity. This capacitation must embrace knowledge in the marketing, technology, meat industry, administration and customer service areas. All the same, capacitation with base in technology that allow to improve supply processes, storage, processing and product dispatch, this can be done through workshops, courses, hand sheets, and others.

- Application of existence law: the application of existent law in the

decree N°2.527 where is put in evidence the decision 197 of the Agreement Committee of Cartagena, which establishes the technical salubrity requirements to the cattle commerce, and in chapter 4, point 4.5 about the wholesale and detailed red meat merchandise, where are highlighted the following articles: 4.5.2, 4.5.3, 4.5.4, 4.5.5, 4.5.13, 4.5.14.

Integration of the commercialization chain: to promote the integration of meat circuit from the producer to the buyer, with the purpose of reducing costs because in this way is obtained a more efficient participation of each actors of the merchandise process, and more and better services can done to the client.

With the integration is also obtained a better transference of information, from the consumer to the buyer according to theirs request and necessities, reaching to each participants of the integration, which will take the necessary measure to give the consumer a positive answer.

## Conclusions

When characterizing the distribution process of red meat made by retailers in Maracaibo, have to be pointed: that are persons between 20 and 40 years old, all men, Venezuelans, with more than 11 years in the activity and instruction level low (high school); disorganized, butcheries type A have more selling volume; the owners in a general way, have the mission of obtaining economical benefits and the vision of staying and grow in the business; the

freezer man, is the provider in all butcheries except in butcheries type A, where also predominate the direct supplying of slaughterhouse; the supplying frequency is every two days with payment facilities; to buy the meat is considered the slaughterhouse classification, butcheries work from Monday to Sunday, approximately 8 hours per day, through the counter and the main package way is using a plastic bag; cut prices are more expensive in butcheries type A,

around 5%, among other aspects. These results coincide with previous research made in the urban area to the traditional detailed commerce, besides allow to conclude that these stores that sell red meat, have important deficiencies in order to provide food to the people, specially to those with lower social class, where meat with higher prices, less quantity and less merchandise service are sold.

What lead to the distribution of butchereries in the parish, was determined an inequality between the different parishes, specially parishes where exist less butchereries than habitants, and are precisely the farthest from the city, where do no exist any other near food stores (supermarkets, hypermarkets, among others), and makes think that the red meat consumption is lower, and also affected by quality and price.

The identified problems in the process that affect the urban

distribution of meat are: low preparation level of retailers in the commercial area and food management, lack of organization, deficient negotiation capacity, lack of promotion and negotiation, disproportional sell of different types of cuts and disproportion distribution of butchereries in parishes. The symptoms of these problems are defined as: low sell volume, low incomes margins, less meat consumption, higher prices, stores with lower quality, disloyal practices to the consumer and few merchandise services.

The strategic proposals to obtain a change in the actual situation, and to make the objectives, are pointed to the application of the following actions: to organize the buyers, buyers capacitating, the application of existence laws, and promote the chain integration.

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