



Influencing Factors in Family Strategies in Gibara Municipality, Cuba

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Abstract: The process of updating the socioeconomic model that is being developed in Cuba includes strategic and development management modifications, aimed at strengthening the self-management capacities of municipal governments and the non-state sector, which has affected the strategies that families have adopted for their development. Family strategies have been very diverse in the different community contexts of the country, and consequently it has been difficult for governors to make decisions when drawing up development plans, so it is vitally important to identify which are specifically the factors that have directly affected the strategies adopted by the families to be able to formulate future development plans in the different communities according to their characteristics. The study presented shows a case where changes in family strategies are manifested, influenced by the social and environmental context in which individuals interact, as well as their evolution over time and adaptation to new situations. Specifically, it is shown that the family strategies adopted by the population sectors in Gibara municipality in Cuba, have been influenced by the changes and the economic reordering that takes place in the country and the existing environmental conditions in that territory. In this sense, the factors with the highest incidence turned out to be: the exceptional physical characteristics that the municipality possesses, the delivery of land in usufruct to the inhabitants and the aging of the population. The research was carried out in three stages: an exploratory, a confirmatory and an evaluative one, in which qualitative and quantitative methods were combined that allowed the characterization of the territory, identifying the factors with the greatest incidence in the strategies and their evaluation.

Keywords: Regional Development, Family Strategies, Environmental Factors of Development, Social Factors of Development

1. Introduction

In Cuba in the year 2011, the process of updating the socioeconomic model began with the approval of the Guidelines for the Economic and Social Policy of the country. In this process, strategic and development management modifications are considered, aimed at strengthening the self-management capacities of municipal governments and the non-state sector. From this moment on, localities are recognized as self-managers of their own development, and it is recognized as a new opportunity for society to manage and create jobs, as one of the ways to raise the quality of life of the different social actors. Igreda, R. A refers that local

development not only implies its economic dimension, but also endogenous elements of the territory or locality [8]. Other authors point out that local development necessarily implies a process of economic growth and structural change, while helping to improve the quality of life of the local population [1, 14]. And they distinguish five major variables as dimensions of local development, such as: the economic variable, the training of human resources, the socio-cultural and institutional, the political-administrative variable and the Environmental variable, which includes attention to the specific characteristics of the local natural environment, in order to ensure environmentally sustainable development.

In this sense, in Gibara municipality, the new life strategies

that families have adopted are very interesting, in contrast to the traditionally developed ones, that is, the response mechanisms that families have assumed in the face of these critical situations and economic reorganization, with a view to promoting their own economic development. According to Guevara, M. "family strategies" are: A set of response actions found in certain situations, which allow families to reproduce socially and redesign their life projects. The life strategies adopted by families are closely related to environmental and social factors existing in a certain context, socioeconomic changes influence the fact that old strategies cease to be functional and families generate new practices adapted to new situations [2]. On the other hand, families become modulators of social changes, as providers of basic needs; when tensions and conflicts increase, their efforts increase and individual work and contributions intensify [5]. On the basis of these antecedents, the present investigation was carried out, with the objective of identifying and assessing the factors that have had the greatest incidence in the adoption of new family strategies in Gibara municipality, which would facilitate the design of strategies for the development of family location. Especially this municipality has exceptional physical-geographical characteristics that make it distinctive in Holguín province. This work constitutes a partial result of the project "Food security, commercialization and regional development networks: an analysis of territorial dynamics related to changes in land use and tenure and their effects on the production and commercialization of agricultural products", which has been the result of the collaboration between the University of Holguín in the Republic of Cuba and the Louvain University of Belgium.

2. Methodology

To respond to the stated objective, the research was designed in three stages as shown in Figure 1.

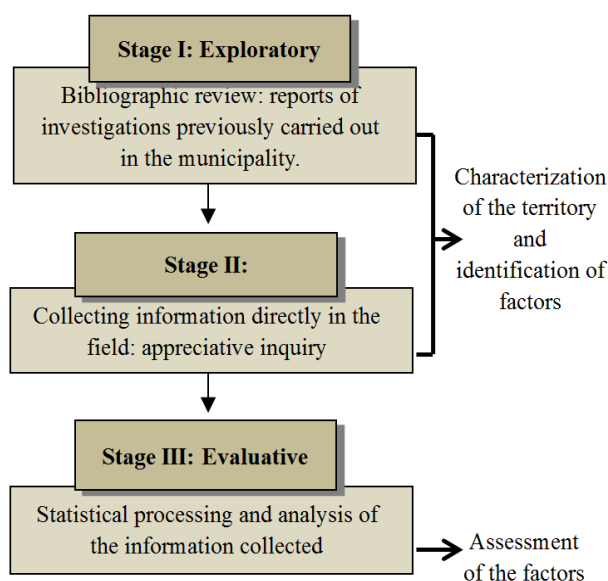


Figure 1. Scheme of the research sequence.

In the exploratory stage, an extensive bibliographic review

was carried out, consulting different sources and databases from the Ministry of Science, Technology and Environment, National Institute of Hydraulic Resources, Provincial Directorate of Physical Planning, Provincial Delegation of the Ministry of Agriculture (MINAGRI) and the National Statistics Office (ONE). This information served as the basis for characterizing the physical-natural and social conditions of Gibara municipality.

Then, in the confirmatory stage, a diagnostic work was carried out directly in the field, with the aim of identifying the incident factors in the strategies assumed by the families for their development. For this, the methodology of Appreciative Inquiry, was applied, which is based on the study of what gives life and meaning to human systems when they work at their best [6]; As information collection tools, own techniques were designed to be applied in participatory diagnosis, such as surveys, participatory inquiry workshops. The selected sample was composed by 132 families supported by various forms of production, from Gibara and Velasco Popular Councils, which are the most representative for being the ones that have assimilated the greatest transformations. The sample size was taken according to Sudman's "Central Limit Theorem" in [7].

Finally, the evaluative stage included a statistical processing of the information collected, with the aim of analyzing and evaluating the identified factors. For these, aspects such as: the work carried out by the inhabitants of the municipality as a family development strategy, the possession and use of the land, the possession of work inputs, the application of work techniques according to the work they carry out and the main difficulties they present to carry out the outlined family strategy.

3. Results and Discussion

3.1. Characterization of the Territory and Identification of Factors

Gibara municipality is located in the northwest of Holguín province, in Cuba, with a territorial extension of 619.3 km², which represents 6.7% of its total area. It limits to the north with the Atlantic Ocean, to the south with Holguín municipality, to the east with Rafael Freyre municipality and to the west with Calixto García municipality and Las Tunas province.

3.1.1. Physical and Social Characteristics of Gibara Municipality

One of the main physical characteristics of Gibara municipality is the geology of the territory; which constitutes the base of the complex geomorphological landscape of the area. According to the Geological Map of the eastern provinces at a scale of 1:100,000 and the new stratigraphic lexicon, the Jaimanitas geological formation predominates, made up of rocks of carbonate origin that are prone to the development of karst to different degrees [9, 10]. In terms of soil relief, the municipality is divided into two zones: a northern zone where the highly karsified coastal plains predominate, with three beaches "Los Bajos", "Playa Gibara" and "Playa Caletones" highly visited by national tourism, in

addition to Gibara Bay of great importance for the municipality and the province.

It is noteworthy that the Caletones Ecological Reserve is located in this area; it is recognized as an important migratory corridor for birds and sea turtles and is also home to one of the most extensive speleal-lacustrine systems in Cuba. (figures 2 and 3).



Figure 2. Coastal karstic cenote.



Figure 3. Cenote "Blue tanks".

Meanwhile, the southern area is characterized by an undulating soil relief and heights in the form of hills with steep slopes and flat tops (mogotes), which are of great importance for speleology in the municipality [12]. All these manifestations of karst make the territory a space of unique natural values that have aroused the interest of nature tourism in both nationals and foreigners.

3.1.2. Demographics

Regarding demography, Gibara municipality is the fifth most crowded in Holguín province, with 72,235 inhabitants, of whom 37,045 are male and 35,190 are female. The largest number of the population of the municipality is concentrated in Gibara city. An important fact and of great significance for the population of the municipality is the low birth and mortality rate experienced by the population, in addition to the strong migratory flow, especially of the young population. This implies that this young population is at restricted levels, while the adult population remains with a high rate of aging (adults over 65 years of age constitute 15% of the total population), Figure 4. These results are in agreement with Destremau, B, when asserting that in Cuba, demographic

aging is a clear phenomenon, documented by numerous statistics and refers that: The population structure is changing: the statistical proportion of the elderly in the Cuban population is increasing, while that of children is decreasing due to a significant decrease in fertility and, structurally, in the number of women of childbearing age to procreate. In addition, Cuban emigration of people of working age remains at high levels. Therefore, the middle age is increasing [4].

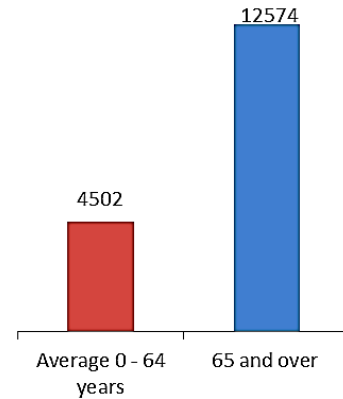


Figure 4. Distribution of the population of the Gibara municipality by age groups. (ONEI, 2019).

3.1.3. Economy

The economy of the municipality has historically focused on agriculture, cattle raising and fishing mainly. However, in the last 10 years there has been an increase in economic activities associated with the development of nature tourism, such as handicrafts and renting rooms in private homes, since the benefits and natural and environmental beauties of the area have been used for carrying out these activities. As for the state and non-state productive entities of the municipality, they are [11]:

- 1) 2 Companies and 9 Budgeted Units. They are entities through which the State administers part of the assets that make up socialist state property and organizes its internal administration. The expenses are fully financed by the State budget and they contribute their income to the State if they have any. They are written in the State Registry of Companies and Budgeted Units.
- 2) 18 Agricultural Production Cooperatives. These are economic entities with assets and their own legal personality, which are constituted with the land and other assets contributed by the farmers who make it up and other people are also incorporated. They are registered as Non-State Agricultural Entities.
- 3) 49 Credit and Services Cooperatives. It is the voluntary association of small farmers who have the property or usufruct of their respective lands and other means of production, as well as the production they obtain. They have legal personality and respond for their actions with their assets. They are registered as Non-State Agricultural Entities.
- 4) 8 Basic Units of Cooperative Production. They are agricultural cooperatives where production is carried out in common, with ownership of the means being equally

common. They use state land as usufruct. They are constituted in accordance with the provisions in force, which are registered in the State Registry of Basic Units of Cooperative Production.

In the municipality, five forms of production are identified that are closely related to the different family strategies that have been adopted according to their needs and possibilities. Two of them, agriculture and cattle raising, have their greatest development in the southern part of the municipality, which is where the best lands are located. Meanwhile, fishing, crafts and room rental (linked to tourism) have their greatest development in the northern part of the municipality.

3.2. Assessment of Incident Factors in the Five Forms of Production Related to Family Strategies in the Municipality of Gibara

Due to the environmental complexity of Gibara municipality in which five forms of production coexist, it was necessary to carry out an assessment procedure in two moments. One first aimed at identifying the elements of greatest weight that are common in the five coexisting forms of production in the area and the second to assess their representativeness.

In the first identification moment, seven fundamental aspects related to the productive activity they carry out were analyzed, and all the criteria that were referred to by more than 80% of the people in the participatory inquiry workshops were assumed. They were then subjected to statistical processing, using the StatSoft, Inc. program [13].

This statistical technique made it possible to discriminate 20 incident elements in family strategies with greater strength in the seven aspects that were taken into account in the analysis of the five forms of production, which showed a correlation coefficient greater than 75%. The results of the statistical analysis show the following:

I Time dedicated to the performance of the productive activity.

- I. 1 all life (agriculture and fishing).
- I. 2 more than 10 years (agriculture and fishing).
- I. 3 between 10 and 5 years (agriculture and crafts).

- I. 4 less than 5 years (agriculture, crafts and tourism).
- II Reason for the productive activity carried out.
- II. 5 family tradition activity.
- II. 6 brings greater economic benefits.
- II. 7 only option.
- III Belonging to productive Associations.
- III. 8 associated with a productive company.
- III. 9 free lancer.
- IV Ownership of the means of production.
- IV. 10 means of production family patrimony.
- IV. 11 land family patrimony.
- IV. 12 land acquired in usufruct.
- V Application of environmental production techniques.
- V. 13 non-application of environmental techniques.
- VI Main difficulties.
- VI. 14 need for working supplies.
- VI. 15 need for support workforce.
- VI. 16 need for technical advice.
- VI. 17 too old for the job he does.
- VI. 18 health problems for the work you do.
- VI. 19 difficulties in marketing products.
- VII Future aspirations.
- VII. 20 creation of a small family business.

Taking into consideration that these discriminated incident elements are present in the five forms of production: agriculture, cattle raising, fishing, handicrafts and rental; It is decided to carry out a second analysis aimed at assessing its representativeness and majority recognition within family strategies. This analysis was done in two moments (A) and (B):

(A) Cluster or conglomerate analysis, to identify the common criteria (similarity) in the discriminated incident elements. For this, a binary matrix was built considering the presence-absence of the discriminated elements, then a conglomerate or cluster analysis was carried out, through the application of the PRIMER (first) program version 7 [3].

The result of this analysis showed the existence of convergences between the discriminated incident elements with respect to the five forms of production, by forming three groups corresponding to a 30% degree of similarity, as shown in the convergence dendrogram in Figure 5.

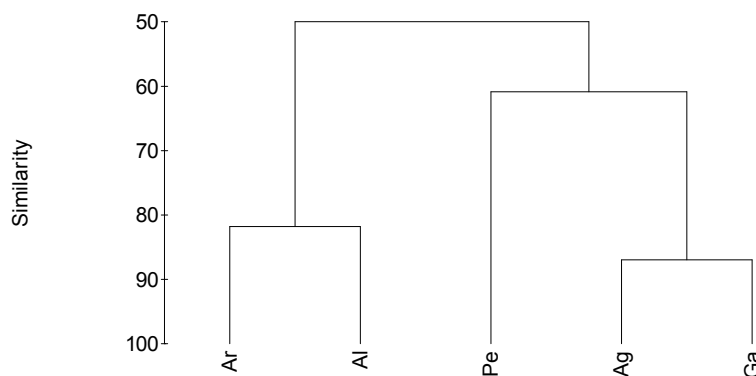


Figure 5. Dendrogram of convergence.

(B) Simple statistical processing, it was carried out to evaluate the weight (level of representativeness and emphasis)

of the incident elements discriminated within the groups, it provided the following results.

The numerical difference between the groups implies that some of the 20 discriminated elements are more represented

than others in the five forms of production that coexist in the municipality. As shown in Table 1.

Table 1. Composition of the groups according to the approach addressed.

Groups	Forms of production	Incident elements discriminated
G- 1	Crafts and rent	I.3, I.4, II.6, III.9, IV.10,, V.13, VI.14, VI.16, VI.19, VII.20
G- 2	Fishing	I.1, I.2, II.5, II.7, III.9, IV.10, V.13, VI.14, VI.17, VI.18, VI.19, VII.20
G- 3	Agriculture and cattle raising	I.1, I.2, I.3, II.5, II.6, III.8, IV.11, IV.12, V.13, VI.14, VI.15, VI.16, VI.17, VI.18, VI.19, VII.20

As can be seen in the previous table, the discriminated elements V.13, VI.14, VI.19 and VII.20 are present in the three groups, being the most representative for 100%, while I.1, I.2, I.3, II.5, II.6, III.9, IV.10, VI.16, VI.17 and VI.18 are represented in two groups for 66.7%, while I.4, II.7, III.8, IV.11, IV.12 and VI.15 only appear once, constituting a representative 33.3%.

In general, the results provided by both analyzes indicate that:

1. There are three groups of forms of production that cover common aspects.
2. The common aspects in the three groups of forms of production are related to:
 - a) Insufficient preparation in environmental matters and the non-application of environmental techniques in productive activities. This aspect was also pointed out by [15].
 - b) The need for inputs to carry out their productive activities, as well as difficulties in marketing their productions.
 - c) The aspiration to increase production levels and create small family businesses.
3. Fishing and agriculture and livestock are the forms of production that have the most roots and family tradition in the municipality since they are practiced for more than 10 years, even lifelong, and they allege as a difficulty that they are old enough to practice them, and who have health problems.
4. Crafts and room rental are new forms of family development strategies that have resurfaced, having their greatest development in a period of less than 10 years, as well as agriculture, which has also had a rebirth due to an increase in its practice in the last 10 years.
5. Handicrafts, room rental, agriculture and livestock are the forms of production that provide the greatest economic benefits to families and allege the need for technical advice for their practices.
6. Handicrafts, renting and fishing are the activities that are practiced with greater independence, that is, without being associated with any cooperative production, using the means of production belonging to the family patrimony.
7. Those who practice agriculture and livestock are generally associated with a cooperative production and the land they own comes from the family patrimony, or is acquired in usufruct and they allege that they need a workforce to support them in carrying out this exercise.

8. Fishing for many is the only option they have as a family strategy or way of life.

4. Conclusion

The response mechanisms that families have assumed in the face of these situations of crisis and economic reordering, with a view to promoting their own economic development, have been influenced by the opportunities and options offered by the natural environmental spatial context in which they live.

The cultural traditions carried by Gibara and families have significantly influenced the design of their family strategies, since fishing, agriculture and cattle raising, continue to be the most deeply rooted forms of production, practiced for more than 10 years. In addition, new ways of relating to nature have emerged, which has directed other strategies such as handicrafts and renting rooms. With these new family strategies, the economy of the territory is diversified, emerging non-state productive forms.

Environmental and socioeconomic factors have had a significant impact on changes in family development strategies, related to:

- 1) Physical and environmental characteristics of the area have influenced the increase in nature tourism.
- 2) The entry into force of Decree Law 259/08 and then No. 300 of 2012, which authorizes the delivery of land to peasants in usufruct (until 2015, 5,486.18ha were delivered).
- 3) Increase in the aging of the population.

5. Recommendations

It is recommended to the governors of the municipality and the community, to take into account these results for the elaboration of the strategic plans of development of the locality. The behavior of socioeconomic factors that affect family strategies should also be monitored in order to take pertinent measures; and deepen a study on the environmental factors that receive anthropic pressure, and establish management, protection and rehabilitation plans if necessary.

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