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Intangible assets that add tangible value and their relationship to the economic efficiency and financial performance of a Cuban enterprise

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Abstract*— *An empirical study was conducted at a Cuban financial institution. We study the national and international theoretical models of intangible assets in the modern enterprise and its importance to generate value in the organization based on the premise that if you can't measure intellectual capital you can't manage it which is determine whether intangible assets are adding or destroying value in the organization. The results of the metrics applied were triangulated, and revealed that there is no significant relationship between the economic performance of the bank branch and the perception of the management of intangible assets by the leaders, the average scores denote low management of intangibles so in the short term they deserve to generate alerts to avoid in the long term contractions in the economic efficiency.

Keyword*— *Economic performance, Intangible assets, Tangibles assets, Human capital indices, Efficiency economic indices.

I. INTRODUCTION

The changes that occur in the Cuban socioeconomic model at present have a significant impact on their labor organizations. This new scenario calls for a greater role of executives and workers in the sense of adopting different ways of acting and managing the processes of working life (Casaña 2015). Since 2011, the Cuban business system has been going through a new stage of transformations that, among other purposes, seek to unleash old ties, grant greater powers and achieve more efficiency and organization. Like any change process, it has not been without complexities, successes and misadventures. The government's top direction led to a diagnostic in the main organisms of the state, in order to know the deficiencies, their causes and measures to solve them (Izquierdo L. 2018).

The institution is implementing a process of reform or improvement of its internal functioning and structure. As a result, the process map, the institution's value chain, was developed and a strategic computerization program was designed for the development and adoption of new information and communications technologies. To develop this reform process, scientific research related to human resources is needed to assess its impact on technology and economic efficiency.

II. THEORETICAL FRAMEWORK

Intellectual capital is a system of relationships within the organization supported by tools of information technology, knowledge, communications that are essential for the organization to work and that by themselves constitute an asset (Brookings A. 1996; Lennard 2019).

The management of intellectual capital emerges as part of the advances in science and technology in the field of information technology and communications, giving rise to a new era, the era of knowledge. Intangible assets recreate a broader perspective, since it contemplates the human capital aspect and that of relational capital and structural capital (Brookings A. 1996; Vega Falcón 2017).

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Within the framework of knowledge societies, the intellectual capital management is a key process in the generation of value and competitiveness for the different organizations (Lobova S. Alekseev A. Litvinova T. Sadovnikova N. 2020). The measurement of intangible assets is undoubtedly an opportunity for the institution, because it allows us to calculate exactly what its true wealth is and what makes the organization to stay and endure (Pedro E., Leitão J. Alves H. 2018). It is a source of attention for making decisions when faced with limitations or restrictions that occur in the dynamics of the organization (Días R., Leopoldo P. Casas J. 2017). Within the different intangibles that make up the intellectual capital of an organization, we must first point out the human capital. This can be defined as the set of knowledge, skills, experiences and abilities of the subjects that make up the organization, which are articulated through human and social communication and make up a complex and dynamic interweaving that is the organization (Armas-Heredia I. et al 2017; Viteri M., Ponce W. 2017).

The concepts discussed above have been studied by Cuban labor organizations, and there is a certain familiarity with their impact on the organization. However, the studies carried out do not reach the magnitude necessary to determine the costs they generate, either the expenses incurred when a worker decides to leave or takes with him the investments made in their preparation.

The current perspective puts physical and financial assets at the center of attention, without taking into account that the know-how is owned by the individual and is an intangible asset, others such as: knowledge, skills the motivations, values, job skills; and the organizational structures, software, information systems and documents, also make up these intangible assets (Cuesta A. 2014; Song M. Xiongfeng P., Xianyou P. and Zhiming J. 2019).

In order to comply with the changes required by the current situation, it is necessary to have a competent staff capable of taking on the changes required. In addition, it is necessary to develop new channels of communication that allow to identify and conceptualize. Also invite organizations, to recognize the intellectual capital that is creating value. It's not just re- analyst of corporate reporting. It is necessary to innovate in the search for communication that facilitate the measurement and identification of intangibles assets (Cuozzo B. et al 2017).

That is why attention to people at work, is an essential aspect to develop efficient organizations. In this sense, it is necessary to model change management so that the institution transitions to a scenario that responds to the new demands of the environment (Kaplan and Norton 2004; Cuesta A. 2014).

The change of economic paradigm requires adopting a new strategic perspective, where it must identify and manage those resources and capacities that make it sustainable over time. In the knowledge economy, these resources and capacities will be - basically - of an intangible nature, delimiting the potential of the organization. Other authors have stressed the importance of identifying cultural and language aspects for analysis of intangible assets. Differences between countries in approved regulations are often different and create difficulty in equally understanding the effect these intangibles have on productivity (Catalfo P. 2016).

The question that arises is: how to collaborate so that such changes do not impede welfare and human development? The pretense is added that those processes or changes that arise from the implementation of this methodology are in themselves generators of value for the organization.

According to Borrás (2015):

" This requires promoting an academic model characterized by the investigation of problems in their contexts, the production and transfer of the social value of knowledge (...)", "(...)" a scientific investigation, technological, humanistic and artistic problems to have a fundamental solution for the development of the country and the region ... "(...)" (p. 354).

In the literature consulted we appreciate the need or lack of research in this field that contributes to the development of this topic. The relevant data, scientific articles, journal and revised books, clearly explain this research variable and are consistent in their presumptions. Recent research finds that the magnitude of the intangible assets recognized in the accounting book is significantly related to the quantity and quality of the disclosure and communication of intangible assets. For example, there is a need to improve the intellectual capital reports that are made in the organizations (Quiroz V., Yangali J. 2018). It is necessary that they be more integrated and cover all areas in which intangible assets take place. In turn, intellectual captain assets should be included in the annual reports of the institution. However, we appreciate theory inadequacies that need to be studied and that could facilitate the work of the

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modern enterprise (Shaper S., Nielsen Ch., & Roslender R. 2017; Schiemann F., Günther T. 2015)

The reliability of Models to measure Intellectual Capital is still insufficient. Especially Methods based on the VAIC model as they respond to financial reports reporting strategies already implemented, but which does not take into account synergies between different components of the model and that does not analyze the innovation capacity and the relational capital of the company as value generators. These models do not detail the management of intangible assets and this point becomes a limitation that requires study (Moreno G. Londoño E. 2016).

Other methodologies study the effect of the labor cost of innovation, using data that is derived from intangibles. They also link the labor share of intangible assets and knowledge savings of the direct effect of innovative work on technology. The intangible assets within the organization presupposes a higher level of creativity and innovation to cope with the constant changes in the environment (Piekola H. 2020).

Cuesta A. (2014), proposes us the possibility of correlated intangible indicators with tangible, especially with the important to show the impact of the former. This gives you positive correlations between the two types of indicators. It is important to recognize that the value of intangible assets is indirect and potential and also depends on the context; they have as fundamental characteristics that are expressed grouped, so their study is more complex (Kaplan &Norton 2004).

Roth F. (2020), found significant relationship between the growth of labour productivity and the effect of intangible assets collected in the ledgers. The company's added value is increased and becomes a source of productivity growth. However, another study purported to understand how financial results are influenced by intangible assets, analyzed the relationship between intangible assets and the company's total assets to measure the relationship and intangible assets were found to have no significant effect on the financial performance of the companies studied, although the intangible/total asset ratio has been found to have a significant impact on financial performance, in these cases it was not always similarly behaved in all companies (Vanderpal G. 2019).

The measurement of intangible assets is not necessarily linked to the traditional measurement of classical physics or positivist research (Cuesta A. 2014). In this case the measurement of intangibles is considered relevant states non-parametric, especially those referring to the ordianl or Likert type scales and are able to provide the necessary research inferences associated with correlation. Intangible values are often manifested in deterministic processes expressed through mathematical correlations that show the trend of this intangible values (Grazia A., Di Gabriele N., Zigiotti E. 2019).

The accounting dimensions of tangible assets are generally consistent. However, there is a significant variation when the dimensions of intangible assets are represented in financial assets. Accountants recognize a broader perception of intangible assets Accounting reports reflect greater openness and development in this topic. Other studies reveal that intangible assets on corporate performance can lead to a significant increase in their financial results However, sometimes companies cannot maximize wealth due to the effect of stock markets (Syed A. et al 2017; Jannatul F., Mohammad M. 2019).

Intangible assets have a contrasting positive impact on firm performance. The measurement of intangible assets corresponds to the field of behavioral science so the most taken measurements are nominal and ordinal. The tendency is usually to establish correlations and inferences about their value compared to economic and efficiency indicators. Ordinal scales can be used for the measurement of intangible assets, due to their isomorphic characteristics with respect to the system of arithmetic numbers. In this sense it is not advisable to use parametric tests such as mean and standard deviation (Cuesta A. 2014: p.17, 19; Abdifatah A., Nazli A. 2018).

All the above is summarized in the following problematic situation: Lack of technical tools and their limited use to measure results that allow to know the value of psychosocial assets that generate value in the organization. The application of the Integrated Human Capital Management Systems that is developed has not been able to calculate the labor costs. Failure to recognize the existence of intangible assets prevents analysis of efficiencies that contain variables such as: motivation index, leadership index, training time, % worker retention and % turnover, labor climate index, % of dedicated people to R & D, satisfaction indexes, degree of alignment to the culture of the organization (%), and communication, among others. This analysis suggests that such tools are not being used to predict the future

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development of the organization (Quinapanta M. 2019; (Quiroz V., Yangali J. 2018).

This problem has a complex nature and although there are objective conditions that favor the implementation of the management of intangible assets in the financial institution, learning of human talent and knowledge management practices is still insufficient (Kaplan and Norton 2004). There is a lack of methodologies, models, own programs that facilitate the management of intangible assets, their characterization and current status.

Thus, an inadequate measurement of intangibles (due to the use of classical valuation methods) can lead to an inefficient allocation of material, financial and human resources. It is then necessary to develop intangible asset management methodologies that allow the use of information and knowledge of people, experiences, research results and other sources of information and knowledge, in order to achieve superior results (Lennard A. 2019; Xiongfeng P., Xianyou P. and Zhiming J. 2019).

The considerations referred to above demand an investigation that solves the following scientific problem: Lack of management of psychosocial intangible assets that prevents having information about those that add value to the organization and that are important to manage them in the organization work. That has proven to be valid and effective in the field of labor organizations. From which the research question emerges: How to management intangible assets of the human capital dimension that allows obtaining superior results. Fig. 1 represents the research hypothesis, which establishes the presumption that intangible assets influence tangible assets. See Figure 1

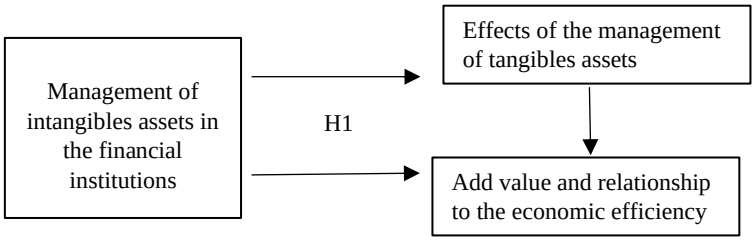

Fig.1: Reference theory framework for research

Note: Own elaborations

Taking into account international experiences, empirical research focuses on the diagnosis of the management of the intangible human capital in a Cuban financial institution.

H.1 The management of human capital in the financial value under study is insufficient

H 1.1 The measurement and management of human capital variables in the financial value under study is not insufficient.

The organization under study assumes that intangible assets of human capital are not being managed favorably and that this effect can be reflected in tangible assets of economic efficiency. See Fig. 2 Own elaborations.

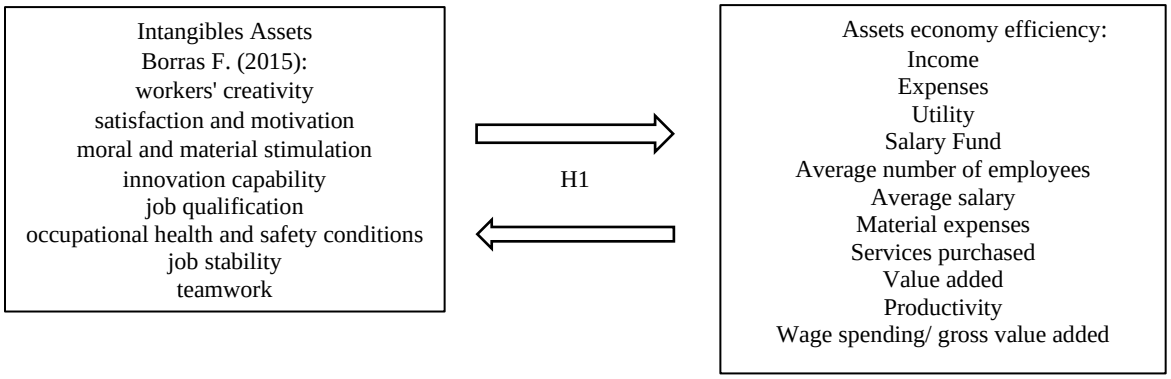

Fig.2: Relationship and influence of the intangibles and tangibles assets

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III. METHODOLOGY

The research methodology used for the determination of specific hypothesis and sub hypotheses was realized using the scientific inquiry scheme commonly used by authors studying intellectual capital.

Research hypothesis was assessed through a questionnaire prepared for this purpose, using a non-probabilistic sampling, to 150 workers of the financial institution, the expert group criteria of banking leaders were analyzed and customer interviews were conducted. The procedure used in three-stage: character of the institution, creation of questionnaire and selection of experts and customer for data retention and finally evaluation of the results. The use of the likert scale allowed obtaining average ranges of perceptions of human capital assets, which were evaluated using the questionnaire questions (Sampieri R. 2014).

The experts established an order of influence of the variables that make up the intangible assets analyzed giving it a value of 1 to 5 (no. 5) (the greatest influence corresponded to the smaller number). Then the matrix of weights was formed. Using the Kendall W status, and the goodness of the W coefficient that allows obtaining the level of concordance of the judges between 0 and 1. A value of 1 means a total criterion match and the value 0 means a total disagreement.

To establish inferences about the value of economic efficiency indicators, the behavior of their value in several consecutive years was taken as references to growth or decrease.

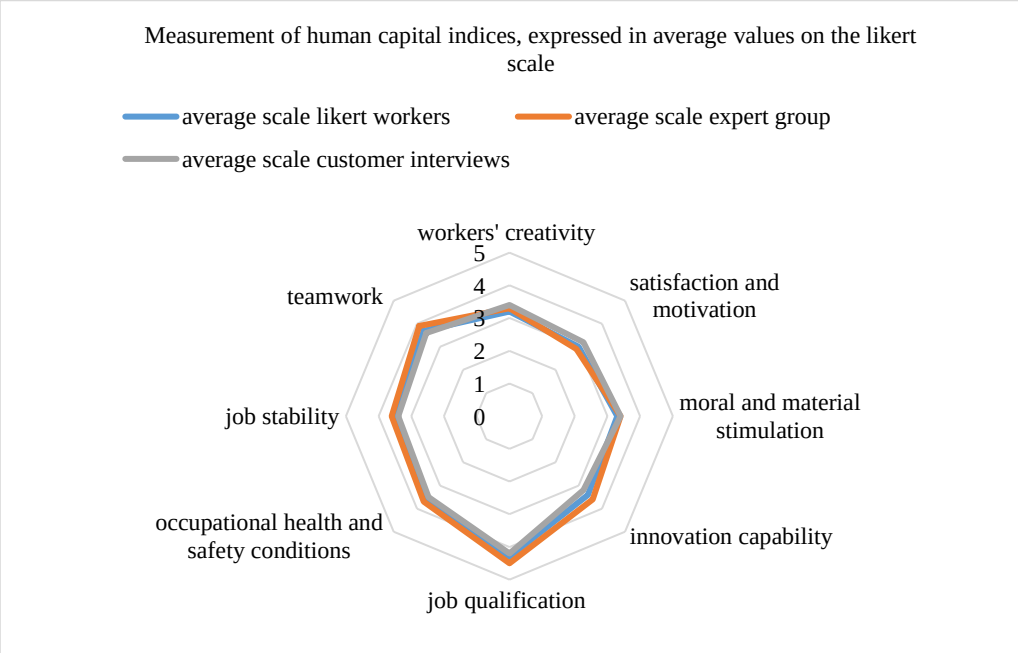
IV. RESULTS

The analysis of the influence of intangible assets of human capital on the generation of value is based on the presumption that the asset creates value only when the results are tangible, which is why it is necessary to use indices that allow measure whether these assets are creating value. The above allows subsequently its management, as long as it is known and measured can be managed.

The least-scored human capital indexes are the job satisfaction and motivation of workers. Previous statement sits that an inadequate management of the leaders of these indicators succeeds. The assessed indices of regular or poorly were moral and material stimulation, job stability, and worker creativity.

The indices job qualification occupational health and safety conditions and teamwork achieved higher scores, indicating that leaders perform better management of these indicators and are considered as sources of worker satisfaction. See chart 3.

Chart 3: Results scores of human capital indices



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Results of the triangulation of techniques:

Human capital behavior strengths

• The interpersonal and intergroup relationships that are established are harmonious, based on collaboration rather than competition.

• Workers perceive that organizational objectives and roles are clearly defined as well as strategies for achieving them.

• Members of this organization value head-subordinate relationships positively.

• The perception of management is also based on elements that speak in favor of good professional preparation and the skills necessary for the exercise of administrative functions.

• The functioning of the organization is perceived as efficient, teamwork is encouraged and its development prospects are favorable.

• Workers are satisfied with the Human Resources Policy carried out by the organization and the quality of it.

• There is a sense of belonging to the group, backed by satisfaction with the center.

• High satisfaction with the content and working conditions, as well as their own job performance, is noted.

Human capital behavior weaknesses

• Workers are more in need of participation and influence in the functioning of their jobs and in the organization of organizational activities.

• The need for greater autonomy and spaces for creativity when carrying out its work is noted.

• There is no correspondence between the responsibility and complexity of the work that is done with what is perceived as wages.

• Dissatisfaction with the stimulation system, for the need to better combine moral and material stimulation.

• Workers appreciate that formal and informal communication channels are not fully effective.

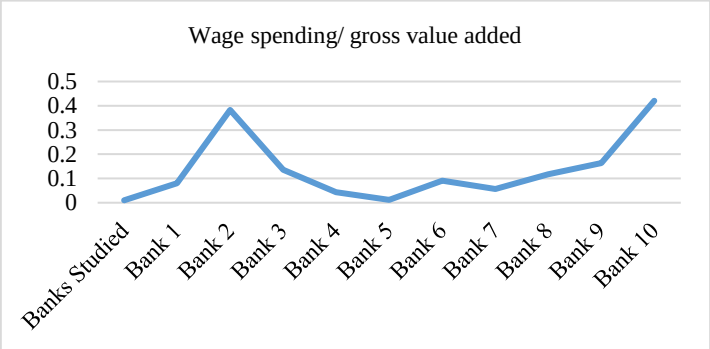
The data collected in the research show that there is the management of intangible assets of human capital in the financial institution is not enough, which shows a goal-oriented management style rather than people. Another important aspect is that motivation management and job satisfaction are not managed positively, which can influence long-term outcomes. However, the management of professional improvement is given great value.

It is clear that the management system must pay more attention to low-scoring indices because although short-term economic results show good benefits, the institution has an internal weakness that deserves to be studied.

Comparison of gross value-added wage expenditure of the Cuban National Banking System.

The values of the financial institution are displayed in relation to the gross value added salary spending indicator in a given period with respect to the financial institutions that make up the National Banking System. Note that the institution studied has the lowest index relative to the rest, which while smaller is the highest positive correlation value shows and evidences financial growth in this period. See chart 2

Chart 4: Final gross value added



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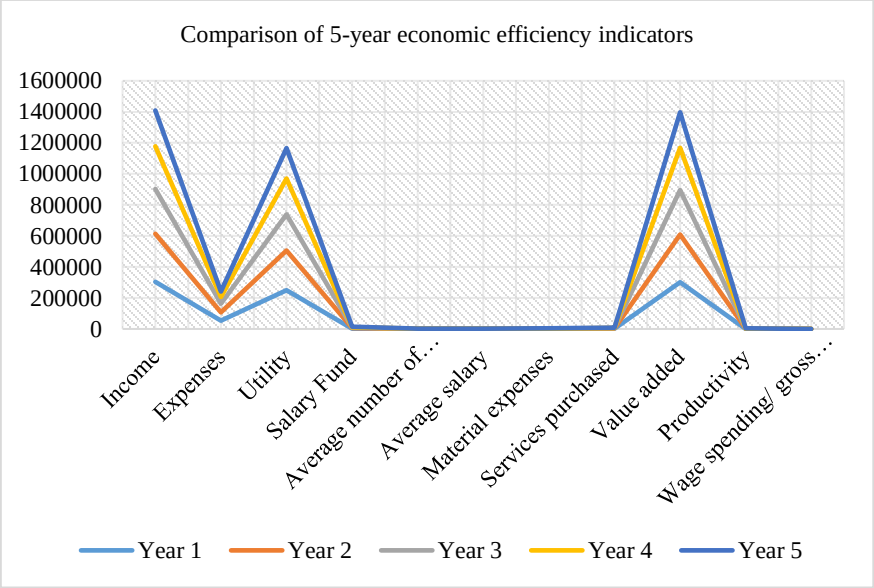
When we compare of the main indicators of economic efficiency of the institution over a period of five years, we appreciate a decrease in some indicators. This may be related to the management of intangible assets.

The table above shows that it is the institution under study that generates the most wealth of the Cuban national banking system, due to its function as a state bank, monetary issuer and regulator of the country's monetary policies.

Comparing the economic efficiency indicators between five years shows that efficiency rates were declining by the end of the last year. See table 3

Chart 5: Economic efficiency analysis



There is a decrease in productivity and gross value added and an increase in the average number of workers, as well as in the wage fund in the last year analyzed. It is important to evaluate other external factors that could affect these results. The comparison between years is a reflection of the management strategies adopted, where it is appreciated that for four years the institution maintained a growth in its indicators of economic efficiency.

The causes that led to this decline may have multiple triggers making it a multicausal phenomenon and requires a comprehensive analysis across all dimensions of the organization, including concomitant external factors. It is important to assess the regulatory role of the financial institution in the development of the economy which differs from the business sector, where productivity growth is a true indicator of efficiency.

In this case it is taken into account but is not compatible with its nature, so this variation can be considered normal. It is also appreciated that the institution, despite having a slight decline at the end of the fifth year analyzed, is not destroying added economic value of its main assets and indicators but shows stability over time. In addition, other indicators such as income, productivity, do not deteriorate, although if you see a decrease in the indexes in the last year.

This institution measures their efficiency by meeting work objectives, which analyses indices such as inflation, growth in the amount of money outstanding: monetary stability, interbank market behavior, and monetary and banking supervision policies, so economic efficiency indexes do not provide a real means of management.

It is therefore not possible to assert the direct relationship between the assessments of human capital indices carried out by subjects and experts with respect to the efficiency results of the institution.

The results shed light on the need to apply an intangible asset management model that allows identification and then management first. To do this, the Intellectual Capital Model must be adapted to Cuban companies designed by Borras F. (2015), and determine the indexes of intangible

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assets defined by Cuesta A. (2017), such as: the job satisfaction rate, the commitment index, the utilization rate of the working day, the training index.

Intangible assets are the main factor of value creation in organizations, so their institutional philosophy provides for adequate and contextualized planning. The institution's value chain must be redesigned to include intangible assets that add value. Subsequently, it is identified the main management processes and keys of the organization, and it is proposed to measure intangible assets. In addition, redesign the competences of the institution, the competences of the processes and jobs. Identify assets that are having an influence on economic efficiency and manage them intensely.

Review the strategic alignment of human resources objectives with respect to the institution's main objectives. Include in the annual report the analysis of the impact of intangible assets on efficiency. Update training and stimulation plans and include the indexes of intangible assets that need to be managed, and propose solutions to improve moral and wage stimulation. Apply new incentive policy.

Continue working on the securities awareness program and work on the intangible assets associated with the organizational values. Update the policies of the Efficiency and Innovation Committee and include intangible assets that must be managed as innovation. Identify the current results of innovations and enhance it through the Economic Efficiency Event. The results of these proposed measures can be evaluated and compared with the results of this study. Continue working on the implementation of the requirements of Cuban Standard 3000, 3001,3002, Integrated Human Capital System, modifying the Human Resources policy of the institution.

V. CONCLUSION

No direct link was found between the results of the management of intangible human capital assets with respect to the economic efficiency results of the institution under study. It is necessary to measure the efficiency rates of human capital that are influencing the generation of value, so that if we can measure it we can better manage it, or if intangible assets are destroying value in the institution.

Low investment in intangible indicators of human capital is evident as the perception of workers in showing little or no management. It is important that the management of variables, indicators, measurement criteria and intangible asset tools is based on models validated by international practice.

The rates of human capital that have low management are job satisfaction and motivation. Also, moral and material stimulation, job stability and creativity of workers. Job qualification is the most attention. The management of intangible assets in the institution studied is low. Human capital policies that act directly on these intangible assets need to be adopted.

There was a decrease in the institution's economic efficiency indicators at the end of the last year analyzed. The analysis of us indicators shows that it is not destroying added economic value, but it is not possible to make direct inferences about its relationship with the management of the intangible, for them it is necessary to establish direct correlations.

The findings of the study confirm the need to design methodologies and procedures that help increase efficiency in the management of intangible human capital assets in the organization.

For future studies, indices can be calculated for the analysis of the dynamics of labor productivity and the use of working hours, which allow to obtain inferences on the relationships between tangible and intangible assets. Such intangible assets that have a direct expression of the worker offer a greater significant relationship due to the nature of the number and the source of the data.

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