Dynamic capacities and the influence on the innovative potential of urban hotels

Capacidades dinámicas y la influencia en el potencial innovador de hoteles urbanos

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Abstract

The irruption in the theory of intangible assets, as one of the essential resources of the contemporary organization, places innovation management at the center of organizational strategies. Several approaches are used to study innovation from a business perspective; however, the Theory of Resources and Capacities gains strength to understand the organization. It specializes in knowledge management, the dynamics approach, and the capacity for innovation. That is why this article analyzes the state of development of dynamic capabilities in hotels in the city of the destination Havana and its effect on their innovative performance. For this, the emotional capacities are defined, and the indicators to be measured are established, taking into account the particularities of the accommodation activity. As a result, it is possible to determine the state of the dynamic capacities, and the influence of these on the innovative performance of the hotels studied is analyzed. As well as the viability of the Theory of Resources and Capacities to promote innovation in hotels.

Keywords: Dynamic capabilities, innovation management, innovative potential, hotel innovation.

Resumen

La irrupción en la teoría de los activos intangibles como uno de los recursos fundamentales de la organización contemporánea, pone a la gestión de la innovación en el centro de las estrategias organizacionales. Varios son los enfoques que se utilizan para el estudio de la innovación desde la perspectiva empresarial, sin embargo, la Teoría de los Recursos y Capacidades cobra fuerza para entender la organización, la misma se ha especializado en la gestión del conocimiento, en el enfoque de las capacidades dinámicas y la innovación. Es por ello que el presente artículo se presenta un análisis del estado de desarrollo de las capacidades dinámicas en los Hoteles de ciudad del destino La Habana y su efecto en el desempeño innovador de estos. Para ello se definen las capacidades dinámicas y se establece los indicadores a medir, atendiendo a las particularidades de la actividad de alojamiento. Como resultado se logra determinar el estado de las capacidades dinámicas y se analiza la influencia de estas en el desempeño innovador de los hoteles estudiados. Así como la viabilidad de la Teoría de los Recursos y las Capacidades para potenciar la innovación en los hoteles.

Palabras clave: Capacidades dinámicas, gestión de la innovación, potencial innovador, innovación en hoteles.

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Introduction

The constant changes on an international scale in terms of the behavior of economic, technological, and social variables constitute factors that companies need to develop through adaptive mechanisms that allow them to rearrange their objectives and solve the problems associated with profitability and permanence of the market and competitiveness.

Strategic thinking is the ideal mechanism for companies to accommodate themselves in a changing environment and, in turn, provide answers to social needs in a logic of expanded reproduction of their organizational resources through value creation. However, from 1980 to the end of the 20th century, various studies on organizational performance focused more on the organization’s interior, as pointed out by the Theory of Resources and Capacities (TRC), and defended that the approach of Dynamic Capacities is a specialization of it.

The issue of capabilities is essential in the study, considering that several authors point out that innovation involves the development of business capabilities.

Thus, it is interesting to establish in the article the usefulness of the TRC in managing organizations as a paradigm for developing innovation. Fong Reynoso et al., (2017) show that the central CRT studies focus on capabilities and their construction and work with micro-foundations. Innovation is also positioned, thus allowing us to establish parallelism with the thesis that he defends that innovation in companies and their management is intrinsically associated with capacities, resources, and the establishment of routines.

Studies carried out by Sundbog & Gallouj (2000) and Hanaysha et al., (2022) point out that aspects such as the low productivity of the factors, the recognition of being little capital-intensive activities in the services sector, added to the criterion of Sirilli & Evangelista (1998), of the importance of the atomicity of the market of this type of company, are factors that hinder the research and development processes. Correctly in the tourist activity, Orfila-Sintes et al., (2005) point out that the association of hotels with different chains that manage their operation, as well as their category, are variables to take into account in the analysis of innovation in hotels themselves.

In this sense, accommodation entities need to emphasize the development of capacities that make it easier for the organization to solidify innovative dynamics in response to changes in demand and the degree of technological development reached by destinations.

Theoretical References

By establishing the Theory of Resources and Capacities (TRC) as a methodological reference for research, we adjust to what Sáez de Viteri (2000) proposes, which establishes as strategic assets: capacities, resources, and routines since they Yes, they support the core competencies of the organization. The author calls this triad value generator and recognizes that having resources in the company alone does not ensure success: like other authors for Sáez de Viteri, creating organizational capacities is essential to make resources generate value.

The TRC explains the company as a structure of intangible and tangible resources that allow establishing differences in productivity and value in the market, impacting competitiveness. This theory is based on the heterogeneity of resources; in the opinion of the authors, the TRC, as a methodological proposal, is aligned with the postulates of economic evolutionism by giving importance to the cumulative nature of economic processes, being the logic that should prevail in the solidification of capacities in the organization as suggested by the TRC.

On the other hand, from evolutionism, the company’s behavior is analyzed using its resources to compete. The parallelism of this current with Darwin’s theory supposes the companies as those in charge of transmitting the inheritance in the market through routines. In this school, the neo-Shumpeterians explain innovation as changes in business routines. Yoguiel et al., (2013) point out that the postulates of the neo-Shumpeterians are consistent with the CRT and dynamic capabilities.

The reason for which it is established is that, when analyzing innovation from companies, evolutionism provides a broad conceptual framework. It establishes principles taken up in the TRC and dynamic capabilities, a business philosophy defended to develop innovative performance in organizations suffering from this practice.
From the TRC, capacity is related to the development of skills. Vivas-López (2013) associates the issue of capabilities with establishing a new approach of Dynamic Capacities, based on the studies of Teece (2018), which raises the mechanisms that a company develops to reconfigure itself constantly. Teece (2018) views the organization as a hierarchy of routines that evolves towards more dynamic capabilities (Vergara-Romero et al., 2022).

The dynamic capacity-building approach emphasizes, as pointed out by Vivas-López (2013), Garzón Castrillón (2017), and Teece (2018), the skills that organizations can develop to reconfigure themselves through creating new products and processes and adapting to the environment. Thus, creating new performances within the organization is a product of innovation.

Due to the above, it is difficult to separate the relationship between dynamic capabilities and innovation. Following the line of Vivas-López (2013), the dynamic capabilities approach can be considered as an extension of the CRT, which improves one of its limitations such as a static approach; this limitation is overcome by the continuum proposed by the approach of dynamic capabilities (Analuisa-Aroca et al., 2023), how new capabilities create routines and vice versa, so the organization is in a constant exercise of creating new hierarchies of routines.

Zapata Rotundo (2020) states that this new approach undoubtedly allows the organization to adapt to the changing environment through innovation. Hence both Garzón Castrillón (2017) and Zapata Rotundo (2020) consider the innovation capacity as a dynamic capacity nature to the extent that it is defined as the company’s ability to create and improve goods and processes, depending on the nature of its activity (Macas-Acosta et al., 2023; Romero-Súbia et al., 2022).

Álvarez-Melgar& ejo & Torres-Barreto (2022), Aguilar Zambrano & Yepes (2006), and Robert & Yoguiel (2010) argue that the most significant consensus regarding what can be identified as dynamic capacity is found in recognition of four types: absorption capacity (Acosta Prado & Fischer, 2013; Crespi et al., 2016), adaptation capacity (Dávila, 2013; Yoguiel et al., 2013) and learning capacity (Garzón Castrillón, 2017; Miranda Torrez, 2015), Álvarez-Aros & Bernal-Torres (2017), Teece (2018), and Zea-Fernández et al. (2020), within their qualifications, add to the previous capacities to the capacity for innovation.

The perspective of managing under the approach of creating dynamic capacities fulfills a double purpose in organizations, adaptation and creation. In this sense, companies associated with tourism deserve to incorporate this practice into their work because, like the rest of the companies, They find themselves in the dilemma of offering new experiences, in this specific case, to a traveler who has tourism that moves away from the conventional. Thus, they need to develop what we could call a vice for innovation.

The preceding leads us to inquire about dynamic capacities in Havana's four- and five-star city hotels.

Methodology

In order to study the behavior of dynamic capacities in city accommodation entities in Havana, we decided to measure the current state using Sepúlveda's (2008) methodology, known as the Biogram. Although this methodology was originally designed to measure the degree of sustainable development across various territories, it enables us to visualize the performance level of our unit of analysis. For this study, we also considered the contributions made by Parra Cárdenas & Frías Jiménez (2021) in order to measure the competitiveness of tourist destinations.

Based on what Sepúlveda (2008) establishes, his calculation methodology is adopted, taking as the unit of analysis the Tourism sector in the destination Havana, for the investigation of the dynamic capacities represented the dimensions of the four capacities that the literature recognizes as dynamic:

D1, absorptive capacity. 
D2, adaptability. 
D3, learning ability. 
D4, innovation capacity.

In the specific case of the investigation, its form of calculation of indices by dimensions is used to measure the state of progress of the dynamic capacities in the accommodation entities. Figure 1 shows the work algorithm.

The previous figure shows the methodological trajectory followed in the field study. The first step of the work is based on the contributions made by: Echeverría (2008), Zapata Rotundo (2020), and Zea-Fernández et al., (2020); this
allowed the elaboration of the questionnaire used to form the database. This instrument was validated and yielded a coefficient of concordance, according to Kendall (0.71). In addition, the reliability was demonstrated with a Cronbach's Alpha of (0.98). These calculations were made with the use of SPSS.

The methodology establishes the standardization of the indicators and defines their positive or negative relationship with the innovation management process of the hosting entity. In the case of the study presented, a positive relationship is established, and they are standardized using the formula:

\[ f(x) = \frac{x - m}{M - m} \]  \hspace{1cm} (1)

The first step is to calculate the relative achievements, for which formula one is followed:

\[ f = \frac{x_i - \min (x)}{\max (x) - \min (x)} \]  \hspace{1cm} (2)

The second step is to obtain the weighted synthetic index using the following expression:

\[ \text{Figure 1. Methodological Trajectory} \]
\[ \text{Source: Ownership.} \]
\[ IS_m = \sum_{i,k=1}^{n} f(x)_i \times Fp_k \quad (3) \]

Where \( Fp_k \): Weighting factor \( k=1, \ldots, n \).

The previous formula is proposed by Parra Cárdenas & Frías Jiménez (2021) in their procedure designed to evaluate the competitiveness of tourist destinations, which, unlike the Biogram that uses an average of the indicators per dimension, proposes to work with a weighting factor, for that matter, each capacity was applied the same weighting factor on the assumption that the four contribute equally to the development of dynamic capacities.

**Results**

Based on the studies by Zapata Rotundo (2020) and Zea-Fernández et al., (2020), the result of the four recognized capacities was obtained: Absorptive Capacity, Adaptive Capacity, Learning Capacity, and Innovation Capacity.

In the case of research, it is a way of relating the development of dynamic capabilities to innovation, defined as follows:

- Absorptive Capacity is related to identifying, assimilating, and exploiting external knowledge. Our study is based on that company's ability to technological surveillance, which allows it to assimilate and incorporate technologies and methods from other economic activities.
- Learning Capacity: the creation of knowledge materialized in better performance; the lodging activity is carried out without business structures for research and development. In the research, the performance of the hotels is measured by analyzing the behavior of the development of new processes and the establishment of new work methods that entails the development of internal learning processes.
- Adaptability: relates to the strategic behavior of the organization and its ability to manage change by incorporating management models that promote a prospective approach.
- Innovation Capacity: Execution of innovation activities according to the Oslo Manual (Echeverría, 2008; Márquez-Carriel et al., 2023). Said proposal is adjusted to the operation of the hotels.

Table 1 shows the dimensions and indicators measured to evaluate the development of dynamic capacities in the Hotels evaluated in the Havana destination, and this was selected from the operation of the lodging activity itself.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Indicators</th>
</tr>
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<tbody>
<tr>
<td>Absorption Capacity</td>
<td>% who consider it necessary to carry out the study of technologies.</td>
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<tr>
<td></td>
<td>Efficient exploitation that generates the information from the databases used.</td>
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<td></td>
<td>Frequent use of prospective technology analysis.</td>
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<td></td>
<td>Frequency of studies of applied technologies in other sectors.</td>
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<tr>
<td></td>
<td>Application of benchmarking in management.</td>
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<tr>
<td></td>
<td>Monitoring of government policies on R+D+i.</td>
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<td></td>
<td>Social Media Monitoring.</td>
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<tr>
<td></td>
<td>Existence of innovation projects.</td>
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<tr>
<td></td>
<td>Links with other entities for innovation projects.</td>
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<tr>
<td></td>
<td>Results of product innovation projects.</td>
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<td></td>
<td>Results of process innovation projects.</td>
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<td></td>
<td>Results of innovation projects obtaining patents.</td>
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<tr>
<td></td>
<td>Results of innovation projects production of software for marketing or administration.</td>
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<tr>
<td></td>
<td>Results of innovation projects publication of scientific articles.</td>
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<tr>
<td></td>
<td>Participation in science and technology events.</td>
</tr>
<tr>
<td>Innovation Capacity</td>
<td>Publication of scientific results.</td>
</tr>
<tr>
<td></td>
<td>Participation in new product and process design activities.</td>
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<tr>
<td></td>
<td>Formation of work teams for the design of new products.</td>
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<tr>
<td></td>
<td>Importance of carrying out R&amp;D.</td>
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<td></td>
<td>Importance of training.</td>
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<td></td>
<td>Importance of organizational changes.</td>
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<td></td>
<td>Importance of design.</td>
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<td></td>
<td>Marketing importance.</td>
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<td></td>
<td>Existence of leadership.</td>
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<tr>
<td></td>
<td>Motivation for creation.</td>
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<tr>
<td></td>
<td>Inspiring Address.</td>
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<tr>
<td>Adaptability</td>
<td></td>
</tr>
</tbody>
</table>

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Participatory decision-making. 
Activities that promote learning. 
Organization of meetings for hotel management. 
Risk management culture in decision making. 
Management tolerance for performance errors. 
Participation of the hotel in work networks. 
Monitoring system and interface with the end customer. 
Hotel strategic process and its relationship with operational activities. 
Workshops to generate new ideas. 
New business concept. 
Infrastructure changes. 
New designs. 
Results in back-office process. 
Results in the front office. 
Results in new methods and techniques.

Learning capacity

Source: Ownership.

Table 1 shows the selected indicators studied, taking into account the constructs of innovation contextualized in accommodation organizations, always keeping in mind that one of the motives for the inquiry is to establish the relationship between the development of dynamic capabilities and the innovative performance of the hotels studied.

Six hotels were chosen; three are four stars, and with the same proportion of five-star hotels chosen, five work under the management contract modality, and only one operates as its brand.

With the fulfillment of steps one and two, referred to above, it was obtained that the dimensions (capacities) evaluated yielded deteriorated values of the state of development of the dynamic capacities in the six hotels evaluated. Figure 2 shows the results of the Indices by capacity, according to the criteria of Sepúlveda (2008), classified in a collapse situation.

![Figure 2](image)

Source: Ownership.

Researchers on the subject of innovation in hotels emphasize the star hotel categories and the imprint that the different types of administration can leave according to hotel groups. It does not constitute an essential variable in the studied case since there is no difference in the individual behavior of the cases studied.

A more in-depth study of the results shows that this behavior responds to the existence of indicators evaluated at zero because the practices were not carried out within the entities. Table 2 presents the main problems that exist within the dynamic capacities.
Table 2.  
Insufficient indicators due to dynamic capacity evaluated

<table>
<thead>
<tr>
<th>Ability</th>
<th>Deteriorated indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absorption</td>
<td>Use of technology prospective studies.</td>
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<tr>
<td></td>
<td>Study of technological progress in other sectors.</td>
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<td></td>
<td>Benchmarking employment.</td>
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<tr>
<td></td>
<td>Links for innovation.</td>
</tr>
<tr>
<td>Innovation</td>
<td>Project development.</td>
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<td></td>
<td>Project results.</td>
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<td></td>
<td>Lack of creativity.</td>
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<tr>
<td>Adaptation</td>
<td>Inspiring address.</td>
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<td></td>
<td>Interfaces with the client.</td>
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<tr>
<td></td>
<td>Results in:</td>
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<tr>
<td></td>
<td>-Back Office.</td>
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<td></td>
<td>-Front Office.</td>
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<td></td>
<td>-Methods and Techniques.</td>
</tr>
</tbody>
</table>

Source: Ownership.

Conclusions

The study complements other inquiries carried out by Álvarez Vázquez & García Leonard (2018), García Leonard et al., (2020), and García Leonard & Sorhegui Rodríguez (2020), who argue that the gaps in terms of innovation in tourism companies in the destination Havana, are a multifactorial result and highlight the problems of the deficient culture prone to innovation in these organizations, focusing management on the development of technical skills.

The previous results prove deficiencies in creating and developing capacities and establishing business routines that promote hotel innovation.

From the hotels studied, the absorption capacity is limited to be able to specify the management of innovation. In another order, the sector needs transfer mechanisms, absorption, and assimilation. It is demonstrated that the management does not cover such expectations since technological assimilation is a deteriorated indicator.

Relating dynamic capacity and innovation involves understanding how we create skills to meet the demands of the current innovative process. At this point, another essential construct is the emigration of innovation models towards complex ways of conceiving it (projects, spin-offs) associated with risk reduction, the use of capital, and human resources in a context where the degree of socialization of knowledge induces cooperation. However, in the study, the skills associated with cooperation as a shared and social learning strategy are not exploited in the accommodation activity in the destination Havana.

The ability to adapt is the one that shows the best performance, but it does not translate into an inspiring direction that encourages the creation of routines, which increases the adaptive mechanisms of hotels to the environment. Generally, they tend to perform as rigid and bureaucratic organizations, counterproductive characteristics in innovation management as shown by the low development of learning capacity.

In summary, there is a logic between the results in innovation in the hotels of the Havana destination studied and the development of dynamic capacities. In general, in tourism and specifically in the accommodation activity, innovative performance is deficient, it is one of the sectors of the economy with the lowest levels in the development of new products, in the approval of patents, and there are few publications. Compared to other economic branches of the destination studied.

Context variables such as economic trends, sectoral structures, the unequal degree of capital endowment, and factor productivity can and do influence the innovative performance of hotels. However, it is not decisive. Within organizations, passive behavior is denoted to incorporate innovation as one more function.

Organizations need to make innovation activities systematic, and in this sense, the TRC and the dynamic capabilities approach constitute a
It is shown that hotels must incorporate within their operations functions associated with technological surveillance, knowledge management, and product and process development. Currently, no business is developed on conventional bases or extensive development models. Today, organizations incorporate technology for new features and the development of experiences. Without precise, innovative performance, a technological strategy is not sustainable and does not settle if capabilities are not created.

**Bibliographic references**


