BENCHMARKING THE CONSTRUCTION INDUSTRY: AN ADAPTATION OF THE WORLD MANAGEMENT SURVEY METHODOLOGY

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¿What is Benchmarking?

¿Why is it important to measure performance?

Management practices

- Productivity
- Profitability
- Company survival rates

In the construction, best management practices can make companies increase their productivity up to 32% (Baladrón and Alarcón 2017)
INTRODUCTION

Manufacturing, Retail, Education, Health

(Bloom & Van Reenen, 2007)

4 groups of dimensions and 18 management practices

telephone interviews aimed at company managers

Construction

(Construction Industry Institute (CII), 2000)

165 questions with 11 best management practices

They used surveys to collect the data

Ramírez et al. (2004)

15 management dimensions

used surveys for work and office personnel

Opitz et al. (2016)

Adapted the 15 management dimensions of Ramírez et al. (2004)

used personal and telephone interviews

(Cha & Kim, 2018)

7 management dimensions

collected project data through surveys and bibliographic compilations
The objective of this research was to develop a benchmarking exercise of minimum management practices in construction, using a website to obtain information from construction companies through an adaptation of the World Management Survey (WMS) methodology.
METHODOLOGY

1. Scope
2. Development of a questionnaire
3. Testing and validation of the questionnaire
4. Creation of a website
5. Sample Selection
6. Data collection
A website was created to collect the data to carry out the Benchmarking exercise between construction companies.

The 7 dimensions and the 34 lean management practices defined in this study.

- Operations management
- Performance Monitoring
- Target Settings
- Talent management
- Occupational Health and Safety
- Leadership and Change Management
- Enterprise risk
A total of **58 surveys** were obtained

Leaving **41 viable companies**

13 micro companies, 18 small, 8 medium and 2 two large companies

The result of the Alpha de Cronbach coefficient was **0.91**, which indicates that the internal consistency of the evaluation instrument is excellent
RESULTS

Management of construction companies nationwide

Mean of construction companies surveyed = 2.41

- Symmetric distribution curve
- Distribution curve skewed to the right

<table>
<thead>
<tr>
<th>National average</th>
<th>2.41</th>
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<tbody>
<tr>
<td>Mode</td>
<td>1.83</td>
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<tr>
<td>Median</td>
<td>2.40</td>
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<td>Pearson's bias equations</td>
<td>[S1=1.09; S2=0.06]</td>
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</table>
The construction industry of Ecuador

<table>
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<tr>
<th>Dimension</th>
<th>Micro</th>
<th>Small</th>
<th>Medium</th>
<th>Large</th>
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<tbody>
<tr>
<td>Target settings</td>
<td>0.44</td>
<td>0.52</td>
<td>0.56</td>
<td>0.50</td>
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<tr>
<td>Talent management</td>
<td>0.50</td>
<td>0.58</td>
<td>0.58</td>
<td>0.60</td>
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<td>Performance</td>
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<td>0.48</td>
<td>0.60</td>
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<td>Operations</td>
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<td>management</td>
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<tr>
<td>Enterprise</td>
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<tr>
<td>Leadership</td>
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<td>0.53</td>
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<td>and change</td>
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<td>Health and Safety</td>
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</table>

Score Scale (0-1)

Mean

Dimension score = \( \frac{\sum \text{question score}}{5 \times \text{number of question by dimension}} \)

(1) Ramírez et al.(2004)
Conclusions

• During this study, 7 dimensions and 34 management practices applied to the construction industry were defined. These were determined through a literature review and statistically validated with experts from different construction companies to be the minimum necessary to characterize construction management.

• By adapting the World Management Survey (WMS) methodology, it was possible to create a tool to develop an external benchmark. A website collected information from 41 companies, which were able to evaluate their management practices. These data allowed to measure differences and diagnose management practices in different size construction companies.

• The main contribution of this research is a questionnaire to evaluate the minimum common management practices for construction companies, with a Lean approach. The website containing the questionnaire is available for free through the link: http://www.benchmarkingempresasasconstructoras.com/
THANK YOU

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