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Measuring Business Sustainability Maturity-Levels and Best Practices

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Abstract

There has been an increasing interest in corporate sustainability (CS) and how companies should strive for it in order to satisfy stakeholders' demands concerning social, economic, and environmental impacts. The purpose of this paper was to identify the best sustainability practices and the sustainability maturity levels that allow manufacturing and service companies to contribute to sustainable development in the long run. Based on a qualitative approach, a comparative study of five large companies was deployed in order to determine their sustainability maturity levels and best practices. The research method consisted of a critical review of the literature and category analysis concerning corporate sustainability trends and some of the best well-known performance frameworks such as the Global Reporting Initiative (GRI), business excellence models (BEMs), and international standards. The main findings reveal that companies' sustainability maturity levels range from *satisfactory* to s*ophisticated* in several sustainability aspects. Best sustainability practices found in this sample include the use of certifications such as ISO 9000, ISO 14001, GRI, and CSR, among others, combined with the systematic use of BEMs over many years. Finally, several key processes such as self-assessment, benchmarking, corporate reporting, strategic planning, and systematic training were found to be significant in helping manufacturing and service organisations achieve their business sustainability objectives.

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1. Introduction

Sustainable development (SD) has become a central point of debate for its economic, social, political, and environmental relevance. Since the Bruntland Commission Report in 1987 [1], the balance between economic performance, social development, and environmental issues has become a challenge for all kinds of organisations. Several concepts have been developed since then, such as corporate social responsibility (CSR), corporate social performance (CSP), and environmental management (EM), that provide an approach to support long-term business sustainability. The integration of those concepts constitute what has come to be called corporate sustainability [2]. According to Andrew Savitz [3], a sustainable company is one that creates benefits for all stakeholders while protecting the environment and improving the lives of those with whom it interacts. The three dimensions of sustainability are interrelated, and any change in one of them will impact the others. With the triple bottom line theory, Elkington [4] provided guidelines for identifying the necessary results in order for companies to generate value. In this context, companies became concerned about including business sustainability in their operating goals, and as a result, some business models developed in the '80s allowed organisations to improve their strategies and gradually move towards business sustainability. Thus, this study is based on the premise that it is necessary for manufacturing and service business to create a different vision, one that allows them to reach business sustainability and where all the stakeholders, whether public or private, make efforts to achieve significant change.

It has been suggested that business excellence models (BEMs) have the potential to support corporate sustainability by integrating SD criteria into traditional business processes [5, 6]. In addition, other initiatives, such as sustainability reports (e.g. the Global Reporting Initiative (GRI) and the ISO International Standards), have also been documented as supporting corporate sustainability [6, 7, 8, 9]. Thus, based on Baumgartner & Ebner's [10] framework, we deployed a comparative categorical analysis to identify the business sustainability maturity levels of companies that use the National Model for Competitiveness (MNC). From that, we drew conclusions about the best sustainability practices for those organisations.

2. From TQM to Business Excellence

BEMs have played a major role in improving the performance of organisations [11, 12, 13]. Based on total quality management principles (TQM), BEMs have evolved to support strategic planning and decision-making processes and also to measure overall organisational performance [13, 14]. Their evolution has come about through the application and use of quality methods and tools in addition to adding other business principles over the course of time (see Figure 1). As a result, BEMs now include business criteria focused on customers, suppliers, human resources, processes, performance, etc. Further, in order to see the organisation as a whole system, BEMs also consider internal and external factors. In fact, they are non-prescriptive frameworks based on organisational performance criteria and derived from the evolution of quality and management methods and tools [14].

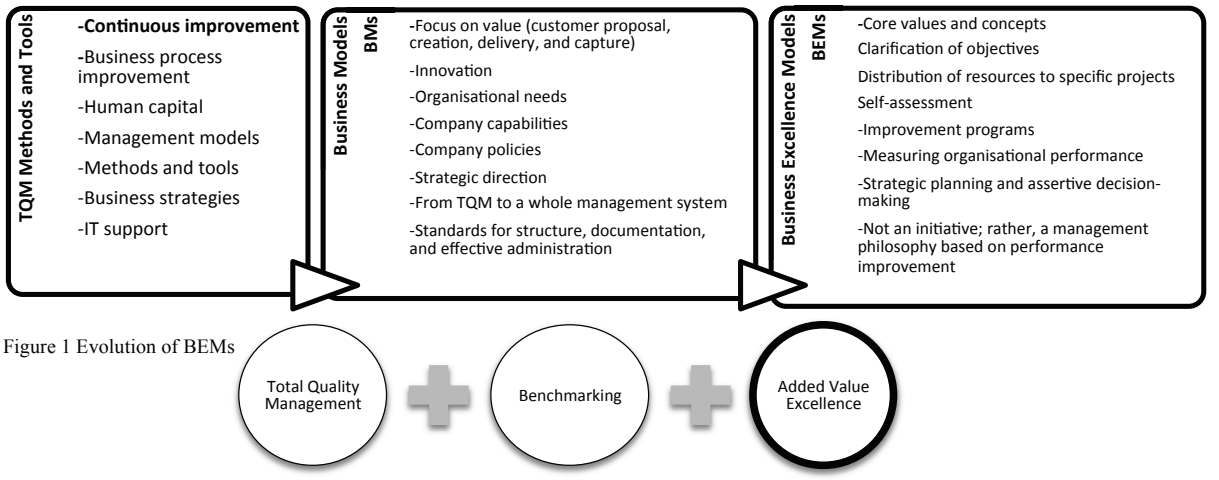

Figure 1 Evolution of BEMs

Some of the most common BEMs are the Malcolm Baldridge and the EFQM models [11, 12]. According to [15], the Baldridge framework has been used as the basis for more than 60 national quality awards. The EFQM model has been used as the basis for several European quality awards [11, 16]. We do not discuss BEMs in this study as they have already been widely documented in the literature. For an in-depth explanation of various BEMs, see, for instance [13].

For the purposes of this study, we used the MNC, which was developed in Mexico in the late 1990s to recognize the excellence of organisations and to help companies achieve total quality in business [17]. The MNC was one of the first BEMs to include social responsibility in its business criteria. The last update of its business criteria included the review and incorporation of IT and business sustainability criteria, which allows organisations to assess their three bottom lines and their performance.

Table 1 Composition of the Baldridge, EFQM, and MNC BEM models

BEM Name, Year of Introduction, and Associated Award	Country	Sector	Business Criteria	Sustainability
Malcom Baldrige (1987) **[12]** Malcolm Baldrige National Quality Award	United States of America	Manufacturing Services Education Healthcare Non-profit Small business	1. Leadership 2. Strategic planning 3. Customer focus 4. Measurement, analysis, and knowledge 5. Workforce focus 6. Operations focus 7. Results	Organisational profile (legal requirements) - Criteria→ Leadership
EFQM European Foundation for Quality Management (1992) **[11]** European Quality Award	Europe	All types of organisations, industries, and sectors, and all sizes of companies	1. Leadership 2. People 3. Strategy 4. Partnership and resources 5. Process, products, and services 6. Employee results 7. Customer's results 8. Societal results 9. Business results	- Enablers (leadership, strategy, partnership and resources). - Results (employee results)
MNC National Model for Competitiveness (1989) **[17]** National Quality Award	Mexico	Public and private organisations	Strategic Planning Results Customer focus Quality of operations Social responsibility Impulse to innovation Strategic alliances Social co-responsibility	- Strategic planning, organisational environment, strategies and strategic objectives - Implementation (sustainable development) Results→Sustainable development

Table 1 highlights the three BEMs by county-region, sectors addressed, business criteria, and sustainability orientation. It can be noticed that these BEMs share similar business criteria, and therefore, any of these models could be used to conduct a generic study using these frameworks [14]. Thus, for the purpose of this article and because our study reviews companies located in Mexico, we used the MNC.

2.1. Measuring Business Sustainability

Measurement is an essential component of sustainable development since measurable results are necessary in order to evaluate objectives defined by managers and stakeholders [5]. This research had the aim of assessing the

importance of best sustainability practices in and maturity levels of organisations in which sustainability standards are fundamental to their objectives. The GRI is one the most popular sustainability frameworks and is designed to support organisations in sustainability reporting [18]. The use of GRI has spread quickly, and more than 90 countries use it to produce their sustainability reports, as do 90% of the world's 250 largest companies [19]. In addition, the GRI has been widely used in especially the financial and energy sectors, and it has had a major impact on large economies [20]. On the other hand, the International Organization for Standardization (ISO) [21] has three standards related to sustainable development. These are ISO 9000, which integrates quality management system specifications; ISO 14000, which allows companies to evaluate their actions associated with environmental effects; and the ISO 26000, which refers to social responsibility. The relevance of these standards is that they support companies' efforts to achieve long-term corporate sustainability as well as improve the company's reputation through compliance with regulations. However, it is important to consider that holding standards certifications should not be the ultimate objective of such efforts. Instead, these efforts must be well documented and improved upon in order to achieve business sustainability and excellence in the long run [22]. Finally, the BS 8900 standard, administered by the British Standards Institution (BSI) aims to include sustainable development in organisations, taking into consideration the three bottom lines [23]. Based on principles and values, it is perhaps the most comprehensive standard for achieving corporate sustainability. In fact, the GRI, ISO, and BSI standards are some of best frameworks to support CS and may be important elements for its achievement [10]. Thus, for the purpose of this study, the companies reviewed must have at least deployed one of these sustainability frameworks.

There are several frameworks for measuring maturity levels of organisations. For instance, [24] suggested a general framework but does not contain details on precise sustainability aspects to measure. [25] also proposed frameworks and addressed the problem for particular processes or companies. However, it was necessary to have a more general framework that can be applied to most organisations. In this regard, Baumgartner & Ebner [10] provided one of the most comprehensive maturity level frameworks available for corporate sustainability and classifies maturity levels using a set of indicators that let stakeholders and decision makers understand how the organisation progresses through corporate sustainability. The authors suggested four levels: *beginner*, *elementary*, *satisfactory,* and *sophisticated* or *exceptional*. In order to determine the maturity levels, it is necessary to evaluate each dimension of corporate sustainability: the economic dimension, the ecological dimension, and the social dimension.

3. Methodology

This study consisted of first reviewing the literature on BEMs and sustainability standards as well as sustainability maturity levels. The study was designed using the MNC [17] framework and the maturity level proposed by [10]. A set of five large companies were selected based on their awareness and use of sustainability standards such as those proposed by [18], [21], and [23] and were considered a sample by convenience [26]. All of these large organisations had been awarded the National Quality Award, which is based on the MNC. Data collection was carried out using public companies reports, and then the analysis was performed using the general analytical procedure (GAP) used by [27] and [28]. In order to rank the organisations, a set of categories proposed by [10] were considered to provide direct support for corporate sustainability and foster best sustainability practices in terms of economic, social, and environmental results. These categories included *sustainability reporting, resources allocated to recycling, polluting emissions, corruption prevention awareness, health and safety, corporate governance,* and *ethical behaviour,* among others. Figure 2 gives the complete list of categories. Finally, we considered the four maturity levels proposed by [10] and displayed the results on a chart indicating each company's maturity level (Figure 1).

4. Findings and discussions

According to the maturity level framework [10], Administración Portuaria de Manzanillo possesses a *conventional visionary* profile, which means that it has the highest level of business maturity. However, there are some sustainability aspects that should be improved upon in order to reach the sophisticated level. They include *innovation and technology*, *knowledge management*, *collaboration*, *processes,* and *ethical behaviour.*

Baxter S.A. de C.V. shows similar sustainability performance [29], with award recognitions such as the Clean Industry Certification, Socially Responsible Company and compliance with the Mexican Norm on Labor Gender Equality, as well as certifications for resource efficiency, mainly water and electricity. In fact, this company shows sophisticated maturity aspects, which means it also has a *conventional visionary* profile. However, some improvements can be made in the areas of *health and safety*, *care of biodiversity,* and *capital development.* The third company, Grupo Bimbo, the largest baking company in the world [30], holds certifications for ISO 9001:2008, ISO 140001, the Hazard Analysis System and Critical Points of Control (HACCP), and Clean Industry and Safe Company [31]. Grupo Bimbo is a pioneer in implementing green technologies and does leading research on innovation and technology products. All of this company's sustainability aspects are at *sophisticated* levels, which speaks to its *conventional visionary* profile.

The fourth company, Comisión Federal de Electricidad (CFE), is a state energy company responsible for producing, transmitting, and commercializing electricity [34]. CFE holds international certifications such as ISO 9001 and ISO 14001 as well as being part of the Global Compact initiative of the United Nations. This organisation has a *transformative extroverted* profile, which means its sustainability indicators reach *sophisticated* levels. However, it has only *sufficient* levels in *care for biodiversity* since the nature of its business activities has an important impact on the environment.

Table 2 Characterization of the five companies

Company	Industry Sector	Capital	Profile of corporate sustainability	Certifications
Administración Portuaria Integral de Manzanillo S.A. de C.V. **[32]**	Transportation services	Governmental and private Licensed for 50 years Landlord figure Public Infrastructure Private services	Conventional visionary	ISO:9001:2008 ISO:14001:2004 Global Compact of the United Nations
Baxter International Inc. **[29] [33]** Baxter S.A. de C.V. México	Healthcare	Private	Conventional visionary	Clean Industry, Socially Responsible Company
Grupo Bimbo, S.A.B. de C.V. **[30]**	Manufacturing Food industry	Private	Conventional visionary	ISO:9001:2008 Clean Industry Global Compact of the United Nations
Comisión Federal de Electricidad (CFE) Southern Center Distribution Division **[34]**	Energy	Public	Transformative extroverted	ISO:9001:2008 ISO 14001:2004 Global Compact of the United Nations
Helvex, S.A de C.V.	Manufacturing	Private	Conventional visionary	Clean Industry Global Compact of the United Nations

The last company, Helvex S.A. de C.V., designs, manufactures, and distributes home products [35]. Helvex has a mature quality management system, which has contributed to the company obtaining several awards, such as Best Supplier of the Construction Industry and a Best Mexican Company. Its strategic planning indicates that this company is committed to adopting corporate sustainability as a normal practice, and Helvex has been recognized with the Clean Industry certificate and by the GEI Mexico program, a voluntary reporting plan of greenhouse emissions. It is also part of the Global Compact initiative of the United Nations [36]. Most of its sustainability aspects are *sophisticated*, although *innovation and technology* and *care for biodiversity* each ranked *satisfactory,* which shows room for improvement.

Maturity Level Sustainability Aspect	Maturity Level 1 Poor	Maturity Level 2 Sufficient	Maturity Level 3 Satisfactory	Maturity Level 4 Sophisticated
Innovation and technology				
Collaboration				
Knowledge management				
Processes				
Purchase				
Sustainability reporting				
Resources allocated to recycling				
Polluting emissions into the air, water, and/or ground				
Waste and hazardous water				
Care for biodiversity				
Environmental issues of the product				
Ethical behaviour and human rights				
No conflicts of interest				
No corruption activities and awareness of same				
Corporate governance				
Motivation and incentives				
Health and safety				
Human capital development				
Corporate citizenship				

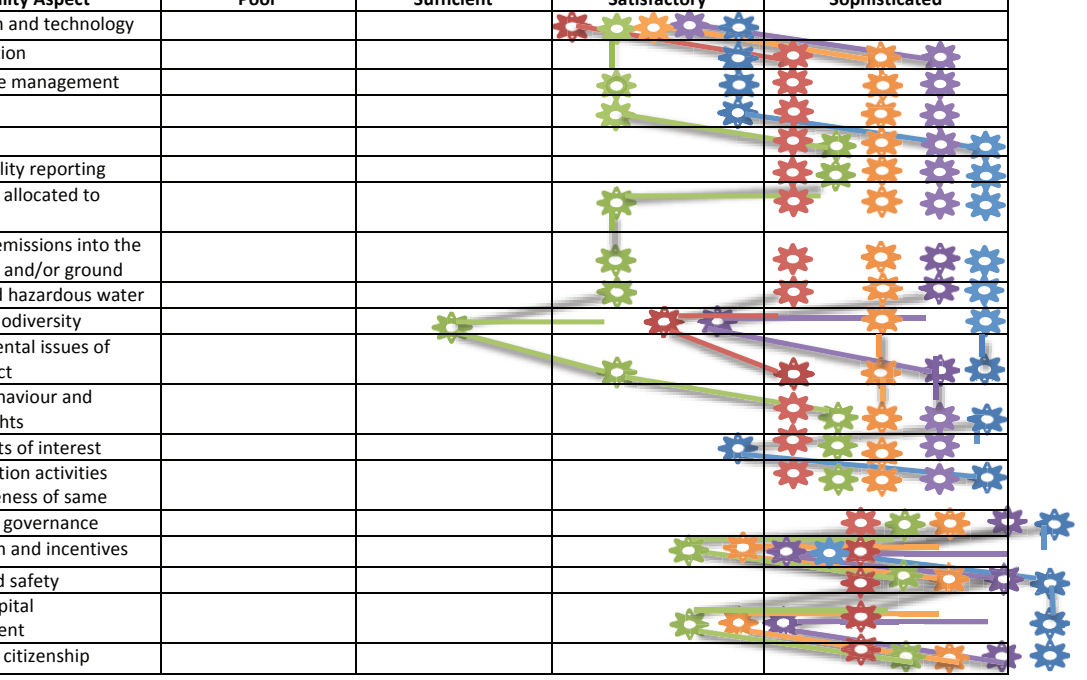

Figure 2 Comparative maturity levels of sustainability of sample companies

CODE:

Administración Portuaria Integral de Manzanillo S.A. de C.V.

Baxter S.A. de C.V.

Bimbo S.A.B. de C.V.

Comisión Federal de Electricidad, Central-South Distribution Division

Helvex S.A. de C.V.

The sustainability performance of these organisations shows good intentions to become sustainable over the long term, prioritizing and allocating important amounts of financial resources to their social and environmental impacts. In Figure 2, which shows this performance, it can be observed that all of the sample companies reach sophisticated levels in most sustainability aspects. It is also important to note that all of the sample companies show a strong commitment in *ethical behaviour and human rights, no corruption or cartel, corporate governance, health and safety,* and *corporate citizenship,* which in fact are some of the core values practices of international sustainability standards and distinctions.

4.1 Best Corporate Sustainability Practices

Several best practices were identified in this study, and one of the most important is that these organisations have been using BEMs for a long time and thus tend to perform better than their competitors. As suggested by [37] and [38], the maturity level achieved by adopting quality management systems plays an important role in achieving world-class performance, and [39] also suggest the achievement of BS through the offer of integrated systems, which delivers complex combinations of high quality products and services. By deploying self-assessment processes [16] against the established MNC, these companies have gained the capability of continuously improving thorough corporate sustainability and having organized information for better decision-making in terms of social and environmental programs. In addition, some of these organisations are in compliance with ISO 9001 quality standards, ISO 14001 for managing environmental management systems, and national standards for labour equality, health, and safety. Some organisational values, such as *behaviour & ethics codes,* were also identified as being linked to national quality standards. In addition, several methods of collecting, analysing, and processing information were found to be effective. For instance, these organisations deploy several internal and external audits a year, which gives them a sense of the overall performance of the business and allows them to respond quickly to internal and external changes. Finally, *benchmarking* and *feedback processes* were found to be tools that bolstered the improvement of these organisations, the first by allowing for evaluation of the position of the company within its sector and the second by providing for constructive criticism and better decision-making. Other best practices include *public commitments,* which are company responsibilities that become mandatory inside the organisation and reinforce the company's prestige. In addition, *training programs* were found to be systematic and compulsory in all of the organisations, especially for social and environmental programs. Finally, *recognition programs* are also established, ensuring employees are recognized for their contributions and involvement in social and environmental programs. In summary, some of the best practices for corporate sustainability found in this study are as follows:

- Leading and promoting the organisation's sustainability practices publicly.
- Including corporate sustainability in strategic planning.
- Meeting with all stakeholders (investors, consumers, employees, and government organisations, among others) periodically and considering the feedback from those meetings.
- Excellent transparency and dissemination of the organisation's performance.
- Clearly defined strategic processes defining the role of the owners and the impact of the process on performance.
- Continuous investment in social and environmental programs.
- Dedication to measuring polluting emissions and waste generation, plus concrete actions to diminish any negative impacts.
- Motivated to achieve excellent results in pursuing any certifications or awards.
- Periodically reporting on the company's sustainability performance.
- A combination of a complex products and services approach (PSS), [39], which leads also to develop business sustainability in the long term.

5. Conclusions

This paper investigated the corporate sustainability maturity levels and best practices of five large organisations, using the MNC. Currently, stakeholders are putting significant pressure on organisations to become sustainability oriented. Therefore, it was important to investigate what types of programs and best practices are used by

organisations with high sustainability maturity levels so that others can follow their lead. The sample organisations in this study had maturity levels ranging from *satisfactory* to *sophisticated,* using the measurements of maturity level discussed by [10]. It is not surprising that these large organisations have reached such levels since they generally have several world-class certifications in environmental management, social responsibility, health and safety regulations, and employee development. They show a high maturity level in deploying company-wide standards, which is congruent with [37], [8], and [14], who argued that organisations that use BEMs and quality management systems over an extended period of time tend to perform much better than competitors. It is important to highlight that the aspect of sustainability that ranked lowest in each of these organisations was *care for biodiversity,* particularly in the state-owned CFE, which ranked lower than the other four organisations in this area. This low ranking can be explained by the nature of its business, which is the generation, transportation, and commercialization of energy. It is therefore expected that this company will have a greater environmental impact. However, CFE's sustainability maturity level is still high.

Other sustainability aspects that are on the borderline of sophisticated in the sample organisations are *health and safety* and *personnel development*. These two aspects are areas of continuous improvement, and organisations continually benchmark with similar companies to find areas of opportunity. Some best practices identified are the inclusion of corporate sustainability in the strategic planning process. This is of particular importance for the long-term commitments of the organisations to become sustainable. Another relevant and common practice of these organisations is the adoption and deployment of multiple international standards such as ISO 140001, ISO 9000, GRI, MNC, and CSR distinctions. This not only means these companies comply with several international regulations but also puts them in a leading position to deploy social and environmental programs under the umbrella of such frameworks. As a consequence, key processes such as training, continuous improvement, efficient communication, benchmarking, and sustainability reporting, among others, become common practices with the deployment of such frameworks.

In this study, several corporate sustainability practices and maturity levels have been identified with the aim that other organisations learn from and quickly adopt those practices. It is, however, a challenge for governments and other stakeholders to design, deploy, and foster appropriate frameworks for medium and small organisations, which are the majority and which have significantly fewer resources for becoming sustainable available to them. Finally, it is vitally important to remember that corporate sustainability is not a goal; instead, it is a way of being for any organisation.

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