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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 include it to satisfy stakeholders' demands concerning social, economic, and environmental impacts. In this way, the purpose of this paper was to identify the best sustainability practices and sustainability maturity-levels that allow companies to contribute to sustainable development in the long-term. Based on a qualitative approach with five large companies, a comparative study was deployed in order to determine their sustainability maturity-levels and best practices. The research method consisted of a critical review of the literature concerning corporate sustainability trends and some of the best well known performance frameworks such as the Global Reporting Initiative (GRI), Business Excellence Models (BEM's) and international standards. The main findings reveal that companies' sustainability maturity-levels are from *satisfactory* to *sophisticate* in several sustainability aspects. Best sustainability practices found in this sample include the use of several certifications such as ISO 9000, ISO 14001, GRI, CSR, among others, plus the systematic use of BEMs for many years. Finally, several key processes such as self-assessment, benchmarking, corporate reporting, strategic planning, and systematic training, were found significant to help organizations to achieve business-sustainability objectives.

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1. Introduction

Sustainable Development (SD) has become a central issue of debate for its economic, social, political and environmental relevance. Since the Brundtland Commission Report in 1987 [1], balance between economic performance, social development, and environmental issues has become a challenge for all kind of organizations. Several concepts have been developed since then such as Corporate Social Responsibility (CSR), Corporate Social Performance (CSP), and Environmental Management (EM), which provide an approach to support business sustainability in the long-term. In this way, the integration of the concepts above is referred as Corporate Sustainability [2]. According to Andrew Savitz [3], a sustainable company is that one who 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] provides guidelines to identify company's results necessary to generate value to the company. In this context companies are concern to include business sustainability within their activities, and as a result some business models developed in the 80s, allowed organizations to improve their strategies and gradually start their journey through business sustainability. Thus, we start from the premise that it is required to create a different vision in business that allows companies to reach business sustainability, where all the stakeholders' whether public or private make efforts to achieve significant changes.

In this way, it has been suggested that Business Excellence Models (BEM's) 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., Global Reporting Initiative (GRI), and International Standards) have also been documented to support corporate sustainability [7, 8, 6, 9]. Thus, based on Baumgartner & Ebner's [10] framework we deployed a comparative and category analysis to identify the business sustainability maturity levels of companies that use the National Model for Competitiveness (MNC), and then we draw the best sustainability practices and sustainability maturity-levels of these organizations.

2. From TQM to Business Excellence

Business Excellence Models (BEM's) have played a major role to improve organizations' performance [11, 12, 13]. Based on Total Quality Management principles (TQM), they have evolved to support strategic planning and decision making processes and measure full organizations performance [14, 13]. Their evolution has been through the application and use of quality methods and tools, and adding business principles across the time (See Figure 1). In this way BEMs now include business criteria focused on customers, suppliers, people, processes, performance, etc., and consider internal and external factors to see the organization as a full system. In fact, they are non-prescriptive frameworks based on organizational performance criteria, derived from the evolution of quality and management methods and tools [14].

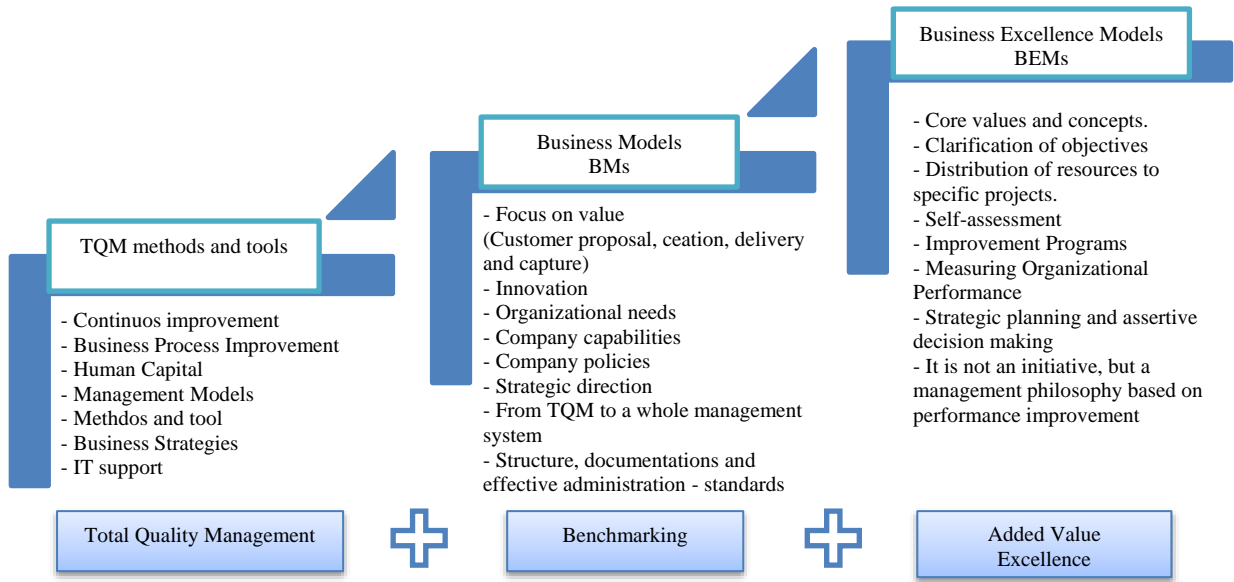


Figure. 1. BEMs Evolution

Some of the most common BEMs are the Malcolm Baldrige and the EFQM Models [11, 12]. According to [15], the Baldrige framework has been a model for more than 60 national quality awards. On the other hand The EFQM model has also been a model for several quality awards in Europe [11, 16]. We do not intend to have a discussion of BEMs, as they have been widely documented in the literature, for an in-depth discussion see for instance [13]. For the purpose of this study, we use the National Model for Competitiveness (NMC), developed in Mexico in the late 90s to recognize organizations excellence and help companies to achieve total quality in business [17]. The MNC was one of first BEMs to include social responsibility in its *business criteria*. The last update of its *business criteria* included the review/incorporation of IT and business sustainability criteria, which allows organisations to look at the tree bottom lines and their performance.

Table 1 Some BEMs (The Baldrige Model, the EFQM, and the NMC)

BEM's	Country	Sector	Business Criteria	Sustainability
Malcom Baldrige (1987) [12]		- Manufacturing - Services - Education	1. Leadership 2. Strategic Planning 3. Customer focus	Organizational Profile (legal requirements)
Malcolm Baldrige National Quality Award	United States of America	- Healthcare - Non profit - Small business	4. Measurement, analysis and knowledge 5. Workforce focus 6. Operations focus 7. Results	-Criteria→ Leadership
EFQM The European Foundation for Quality Management (1992) [11]			1. Leadership 2. People 3. Strategy 4. Partnership & resources	-Enablers (leadership, strategy and Partnership & Resources).
European Quality Award	Europe	All type of organizations, industries and sectors. All size of companies	5. Process, products and y services 6. People Results	-Results (People Results)

			7. Customers Results	
			8. Society Results	
			9. Business Results	
MNC			1. Strategic Planning	- Strategic Planning
Nacional Model for Competitiveness		Public and Private Organizations	2. Results	(Organizational Environment and Strategies & Strategic Objectives
(1989) [17]	Mexico		3. Customer focus	
			4. Operations quality	
National Quality Award			5. Social Responsibility	-Implementation
			6. Impulse to Innovation	Sustainable Development)
			7. Strategic Alliances	
			8. Social Co-responsibility	Results→Sustainable Development

Table 1 highlights the three BEMs by county-region, sector used, business criteria, and sustainability-oriented. It can be noticed that these BEMs share similar business criteria and therefore, any model could be used to conduct a generic study using these frameworks [14]. Thus, for the purpose of this article and since we review companies located in Mexico, we used the National Model for Competitiveness (MNC).

2.1 Measuring Business Sustainability

Measurement is an essential component of sustainable development necessary to evaluate objectives defined by managers and stakeholders [5]. This research was set out with the aim of assessing the importance of best sustainability practices and maturity levels in organizations, in which sustainability standards are fundamental for this objective. The Global Reporting Initiative (GRI) is one the most popular sustainability frameworks with the objective to support organizations in sustainability-reporting [18]. The use of GRI has spread quickly and more than 90 countries use it to produce their sustainability reports, as well as 90% of the world's 250 largest companies [19]. In addition the GRI has been widely used in two specific sectors: the financial and energy ones, and it has had a major impact on large economies [20]. On the other hand the International Organization for Standardization (ISO) [21] have three standards related to sustainable development which are ISO 9000 which integrates quality management systems specifications, ISO 14000 that allows companies to evaluate their actions associated with environmental effects, and the ISO 26000 that refers to Social Responsibility.

The relevance of these standards, is they support companies' efforts to achieve corporate sustainability in the long-term, as well as improving company reputation by obtaining compliance with regulations. However, it is important to consider that holding standard-certifications should not be the last objective of such efforts, instead, these effort must be well documented and improved to achieve business sustainability and excellence in the long- term [22]. Finally, the BS 8900 standard administered by the British Standards Institution (BSI) aims to include sustainable development in organizations, considering the three bottom lines [23]. Based on principles and values it is perhaps the most comprehensive sustainability-standard to achieve corporate sustainability. In fact, these are some of best sustainability frameworks to support CS, and may become an important strategy to achieve it [10]. Thus, for the purpose of this study, the companies considered have at least deployed one of the sustainability frameworks mentioned above.

There are several framework to measure maturity-levels in organizations. For instance [24] suggest general framework, but does not contain details on precise sustainability-aspects to measure. [25] have also proposed frameworks or addressed the problem for particular process or companies, however, it becomes necessary to have a more general framework that can be applied to most organizations. In this regard, Baumgartner & Ebner [10] provides one of the most comprehensive maturity level-framework available for corporate sustainability, and classify maturity-levels considering a set of indicators that let stakeholders and decision markers understand how

the organization progresses through corporate sustainability. The authors suggested four levels: *beginner*, *elementary*, *satisfactory* and *sophisticated* or *exceptional*. In order to determine the maturity levels it becomes necessary to evaluate each dimension of corporate sustainability: the economic dimension, the ecological dimension, and the social dimension.

3. Methodology

The methodology to carry out this study consisted on a literature review of BEMs and sustainability standards, as well as literature review of the sustainability maturity levels. The study was designed considering the National Model for Competiveness [17], 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 [21] [18] [23] and considered a sample by convenience [26]. All of these large organizations were awarded for the National Quality Model, based on the MNC. The data collection were carried out based on public companies reports and then, the analysis was deployed using the General Analytical Procedure (GAP) [27], [28]. Then, in order to rank the organizations, a set of categories proposed by [10] were considered to have a direct support to corporate sustainability and foster best sustainability practices in terms of economic, social and environmental results. In this way, some of these categories include *sustainability reporting*, *resources allocated to recycling*, *polluting-emissions*, *corruption prevention-awareness*, *health & safety*, *corporate governance*, *ethical behavior*, among others, see Figure 2 for the complete list. Finally, we considered the four maturity levels proposed by [10], and then displayed the information on “maturity-level chart” (Figure 1).

4. Assessing sustainability maturity-levels

According to the maturity-level framework [10], Administracion Portuaria de Manzanillo possess a *conventional visionary profile*, which means that it has the highest levels of business maturity, however there are some sustainability aspects to improve such as *innovation technology*, *knowledge management*, *collaboration*, *processes and ethical behavior* in order to reach the sophisticated level. Baxter S.A. de C.V. has similar sustainability performance [29], having award-recognitions such as the Clean Industry Certification, Social Responsible Company, as well as compliance with the Mexican Norm on Labor Gender Equality and the certifications for resource-efficiency, mainly water and electricity. In fact, this company shows a sophisticated maturity aspects which means it also has a *conventional visionary profile* and some improvements can be done in *health & safety*, *care of biodiversity* and *capital development*. The third company Grupo Bimbo, the largest baking company in the world [30], holds certifications on 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 on implementing green technologies, and does leading research on innovation and technology products. All company’s sustainability aspects are at *sophisticate levels*, which speaks itself to have a *conventional visionary profile*.

Table 2 Characterization of the five companies

Company	Industry Sector	Capital	Profile of corporate sustainability	Certifications
Administración Portuaria Integral de Manzanillo SA. de C.V. [32]	Transportation Services	Governmental and Private License for 50 years. Landlord figure Public Infrastructure Private Services	Conventional Visionary	ISO:9001:2008 ISO:14001:2004 The Global Compact of United Nations
Baxter International Inc. [29] [33]	Health Care	Private	Conventional Visionary	Clean Industry Social Responsible Company
Baxter S.A de C.V México				

Grupo Bimbo, S.A.B de C.V. [30]	Manufacturing Food Industry	Private	Conventional Visionary	ISO:9001:2008 Clean Industry The Global Compact of United Nations
Comisión Federal de Electricidad. (CFE) Southern Center Distribution Division [34]	Energy	Public	Transformative Extroverted	ISO:9001:2008 ISO 14001:2004 The Global Compact of United Nations
Helvex, S.A de C.V.	Manufacturing	Private	Conventional Visionary	Clean Industry The Global Compact of United Nations

The Fourth Company, Comisión Federal de Electricidad (CFE), is a state-energy company, responsible for producing, transmitting, and commercializing electricity [34]. CFE has international certifications such as ISO 9001 and ISO 14001, as well as being part of the Global Compact Initiative of United Nations. This organization has a *Transformative Extroverted profile*, which means has sustainability indicators that reach *sophisticated levels*, but also has *sufficient levels in care for biodiversity*, since the nature of its business activities has an important impact on the environment. The last company, Helvex S.A. de C.V. has business on the design, manufacture, and distribution of home products [35]. Helvex has a mature Quality Management System, which has contributed to obtain several awards such as the *Best Suppliers of the Construction Industry* and the *Best Mexican Companies*. From its strategic planning, this company is committed to adopt corporate sustainability as a normal practice, and has been recognized with the *Clean Industry certificate* and by the *GEI Mexico Program*, a voluntary reporting plan of greenhouse emissions, and is part of the Global Compact Initiative of the United Nations [36]. Most of its sustainability aspects are *sophisticate*, and the *innovation and technology*, and *care for biodiversity* ranked “*satisfactory*”, which offer a room for improvements.

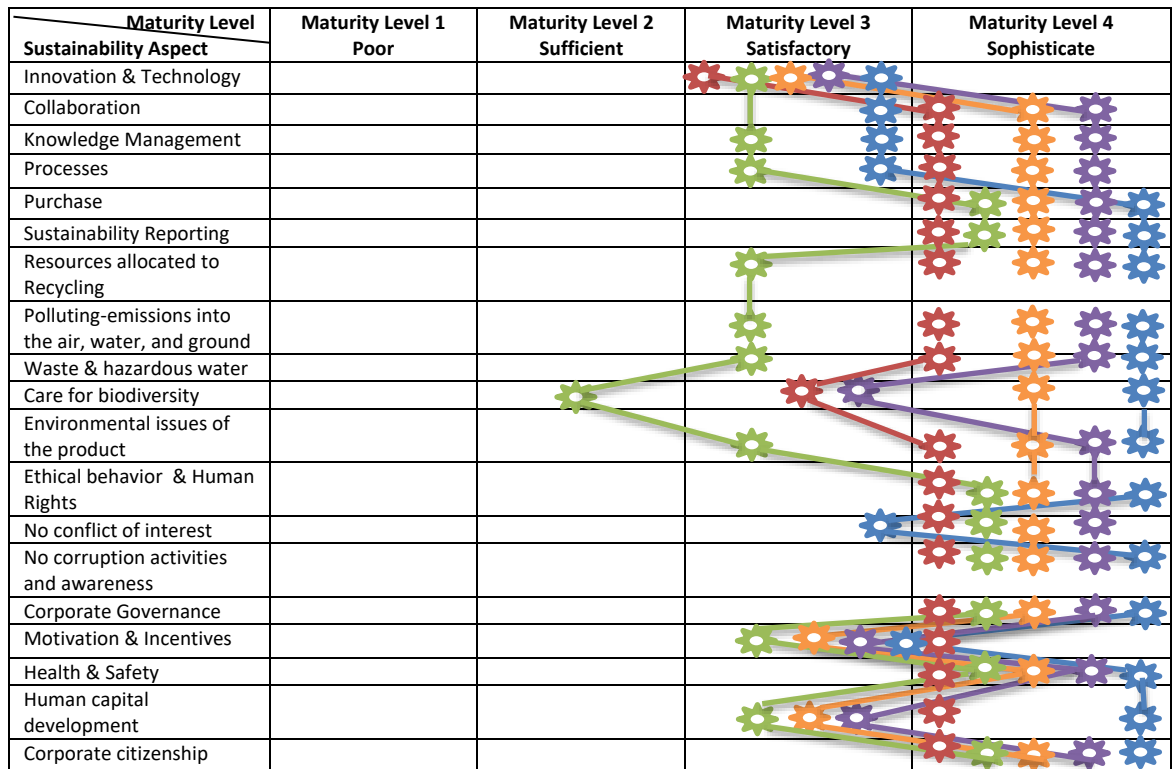







Fig. 2. Comparative of maturity levels of sustainability from the sample.

Code		Administración Portuaria Integral S.A. de C.V.
		Baxter S.A. de C.V.
		Bimbo S.A.B de C.V.
		Comisión Federal de Electricidad CFE. Central-South Distribution Division
		Helvex S.A. de C.V.

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

4.1 Best Corporate Sustainability Practices

Several best practices were identified from this study, and one of the most important is that those organizations have been using BEMs for a long time, and therefore tend to perform better than competitors. As suggested by [37] [38], the maturity level adopting quality management systems play an important role to achieve world-class performance. By deploying self-assessment processes [16] against the established National Model for Competitiveness, those companies have gained capability to set continuous improving thorough corporate sustainability, and to have organized information for better decision-making in terms of social and environmental programs. In addition, it was found that some of those organizations have compliance with ISO 9001 quality standards, ISO 14001 for managing environmental management systems, and national standards for labor equality, health & safety.

Some organizational values such as *behavior & ethics codes* were also identified linked to national quality standards. In addition, several methods for collecting, analyzing and processing information were found effective. For instance, those organizations deploy several internal/external audits a year, which allow to have a “full picture” of their business and to respond quickly to internal and external changes. Finally *benchmarking* and *feedback processes* were found tools that endorsed the improvement of those organizations, the first one allowing to evaluate the position of the company within its sector and the second one allowing constructive criticism and better decision-making. Other best practices include *public commitments* which are companies’ responsibilities that become mandatory inside the organization and reinforce companies’ prestige. In addition, *training programs* were found to be systematic and compulsory in all the organizations especially for social and environmental programs. Finally, *recognition programs* are also were established, ensuring employees are recognized for their contributions, and their involvement in social and environmental programs. In summary, we can highlight some of the best practices as follows:

- Companies lead and promote a “sustainability organization” publicly.
- Companies include corporate sustainability on strategic planning.
- Companies consider and meet all stakeholders periodically (investors, consumers, employees, and government organizations, among others).
- Excellent transparency and dissemination of organizations performance.
- Clear defined strategic-processes and the role of the owners, plus impact on performance.
- Continuous investments in social and environmental programs.
- Obsession for measuring polluting emissions and waste generation, plus concrete actions to diminish the negative impacts.
- The organizations “seems to be motivated” to achieve excellent results in all certifications and awards they participate.
- The organizations periodically report sustainability performance.

5. Conclusions

This paper investigated the corporate sustainability maturity-levels and best practices of five large organizations that used the National Model for Competitiveness MNC. Since there is currently a high pressure from several stakeholders on organizations to become sustainable-oriented, it was important to investigate what sort of programs and best practices such organizations used as common practices so that others can follow. The main results show that this sample of organizations reached a maturity-level that goes from *satisfactory* to *sophisticate* according its maturity level [10]. It is not a surprise that these large organizations reached such levels, since it was found that they have several world-class certifications in environmental management, social responsibility, health & safety regulations, and employee development. They show a high maturity level in deploying several standards, and these results are congruent with [37] , [8], [14], who augmented that such organizations that used BEMs and Quality Managements Systems for a long time will tend to perform much better than competitors.

It is important to highlight the aspect for sustainability that ranked lowest was *care for biodiversity*, particularly for the state-owned company Federal Commission of Electricity (CFE), which on average ranked lower compared to the other four organizations. This can be explained for the nature of its business, which is in the generation, transportation, and commercialization of energy. It is therefore expected this company has bigger environmental impact, however, on average, the CFE sustainability maturity level is still high. Other sustainability aspects that are in the borderline to become “sophisticate” are *health & safety*, and *personnel development*. These two aspect are areas of continuous improvement, and organizations continually benchmark with similar companies to find areas of opportunity. Some best practices identified are the inclusion of corporate sustainability on the strategic planning process. This is of particular importance for the long-term commitments of the organizations to become sustainable. Other relevant and common practice of these organizations is the adoption and deployment of several international standards such as ISO 140001, ISO 9000, GRI, MNC, and CSR-distinctive. This does not only make these companies to comply with several international regulations, but also set them on a leading position to deploy several social and environmental programs under the umbrella of such frameworks. As a consequence, several key process such as training, continuous improvement, efficient-communication, benchmarking, sustainability-reporting, among others, become common practices under the deployment of such frameworks.

Thus, several corporate sustainability practices and maturity levels have been identified with a hide aim that some other organizations adopt quickly those practices and learn from the big ones. It is however a challenge for governments and other stakeholders to design, deploy, and foster appropriate frameworks for mediums and small organizations that represent the majority and have much less resources to become sustainable. Finally, not less important to remind, that corporate sustainability is not a goal, instead, it is a way of being for any organization.

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