THE MAP OF SUSTAINABLE EUROPEAN RETAIL

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Abstract:
Sustainability has become a topic of great interest to the contemporary world, as sustainable business could provide the resources future generations need for survival and full development. The most important step towards sustainable development is to rethink production processes and current consumption behaviours that are inconsistent with the principles of sustainability. Due to its economic power and privileged position as an intermediary between supply and demand, retail has worldwide influence on the sustainability strategies of producers and on consumption patterns.

In this context, this paper aims to measure the sustainability of retail in EU countries by creating an Index of Sustainability of European Retail (ISER). The development of this index was based on a proprietary measurement methodology, using three categories of determinants of sustainable retail, ten variables, content analysis of statistical data retrieved from Eurostat, GFK and Yale University. The results of the study allowed us to evaluate EU countries based on the economic, social and environmental performance of their retail industries and to develop a map of sustainable European retail.

Keywords: sustainable development, corporate sustainability, sustainable retail, Index of Sustainability of European Retail (ISER), map of sustainable European retail.

JEL Classification: L81, M31, Q01.

1. Introduction
The most accepted concept of sustainable development (Baxter et al., 2009) was coined by the Brundtland Report (United Nations General Assembly, 1987, p.8) which claims for a development that “meets the needs of the present without compromising the ability of future generations to meet their own needs”. There are three nested and interdependent spheres where the largest is the environment that provides ecosystem services and natural resources, the middle is society and the smallest is the economy (Baxter et al., 2009). Therefore, sustainable development encompasses three main dimensions: social, environmental and economic (Savitz, 2006).

The environmental dimension encompasses the ecosystem wellbeing, which is a “condition in which the ecosystem maintains diversity and quality, its capacity to support all life, and its potential to adapt to change to provide future options” (Prescott-Allen, 2001, p. 7). The social dimension deals with human wellbeing, how to attend human needs and to increase the opportunities of development equally for all. In other words, it is about equity and quality of life. Finally, the economic dimension focuses on the wealth creation.

An important aspect in the path to sustainable development is the change in our current unsustainable consumption and production pattern to a pattern that reduces the pressures over the environment (resource consumption and waste discharges) while meeting people’s basic needs and improving their quality of life (UNEP, 2011). This change is so critical that it was adopted as one of the main objectives of the 2002 World Summit on Sustainable Development in Johannesburg and the 2012 Earth Summit in Rio.

The retail industry has a significant role to play in the sustainable development process, due to its global economic power and its privileged position between supply and demand. In fact, retailers can influence both the production (Jones et al., 2008; Illes, 2007) and the consumption patterns (Jones et al., 2005; Knight, 2004) all over the world.

In this context, this article aims to serve a double purpose. First, it provides a brief, but clear description of the determinants of sustainable retail in the European Union, through

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analysis and synthesis of the most important papers on the topic. Secondly, this paper builds upon a set of data from reports published by Eurostat, the World Economic Forum, the European Shopping Centre Trust and GFK Geomarketing, Yale University and the Global Reporting Initiative to calculate an Index of Sustainability of European Retail. Based on the values of ISER, we were able to present the current state of concerns of EU organizations from the retail industry in terms of promoting sustainability in their businesses.

2. Corporate sustainability

Although sustainable development is a societal concept, it has been applied at the organizational level under the name of “corporate sustainability” (Steurer et al., 2005), the objectives of sustainable business creation and consolidation being: optimize welfare, maintain the capacity to support life and ensure social equity (Gânescu, 2012).

Since the last decade, notably, companies as key actors in society have been pressured to change the way they do business to integrate sustainable development principles in their daily practices and to disclose their impacts and contributions to sustainable development (Kolk et al., 2010; Smith and Sharicz, 2011). Therefore, a growing number of corporations are undertaking efforts under the umbrella of corporate sustainability (Roca and Searcy, 2012). Practice has proven that responsible organizations secure their long-term survival because they create economic value, healthy ecosystems and strong communities (Bertels et al, 2010).

In this context, sustainable development actions along with transparency have become vital aspects for any company. “The urgency and magnitude of the threats and risks to our sustainability along with its opportunities will transform sustainability disclosure and transparency in a key success factor for any organization” (Global Reporting Initiative, 2012).

Scholarly literature provides fairly divergent definitions of the concept of corporate sustainability: "applying business strategies and activities that meet the needs of today's organization and stakeholders, while protecting human and natural resources that will be needed in the future" (International Institute for Sustainable Development, 1992); “meeting direct company needs and indirect stakeholder needs (shareholders, employees, customers, pressure groups, communities) without compromising the ability to meet the needs of parties who will become interested in the future” (Dyllick, Hockerts, 2002), "proving that social and environmental objectives are integrated into business operations and are in interaction with stakeholders" (Van Marrewijk, 2003), in an attempt to demonstrate that corporate sustainability and corporate social responsibility are synonymous; "the ability to act together by renewing assets, creating and delivering products and services that meet the expectations of modern society, attracting successive generations of employees, contributing to a sustainable environment, gaining the trust and support of customers, shareholders and the community in which the carry out their operations"(Caraiani, et al., 2010, p.80).

Measuring corporate sustainability is one point of great interest to researchers. Veleva and Ellenbecker (2001) have created a set of indicators to assess sustainable production practices. The authors suggested a new methodology based on 22 key indicators (quantitative and qualitative) to assess sustainable production and a guide to implement it, along with strengths and weaknesses of the suggested methodology.

Another study creates a framework of sustainability indicators, comparable with the general indicators proposed by the GRI, as a tool to evaluate the performance of mining companies (Azapagic, 2004). Gallego (2006) showed how 19 companies from Spain apply GRI principles () and identified commonly used indicators.

Ugwu and Hawupt (2007) identify sustainability indicators for South African construction industry. The research was conducted using a combination of structured interviews with the industry professionals, case study project data, existing government
guidelines, literature on sustainability research and questionnaire-based survey for indicator validation. Searcy et al. (2007) presented a system of sustainable development indicators for the transmission system for a Canadian electric utility.

Another study (Mocanu-Perdichi, 2009) focused on measuring sustainable development in Romania at regional and county level, and obtained a composite indicator of sustainability comprising of 19 indicators, grouped into four dimensions (environmental, institutional, economic and social), with emphasis on the last one. Another study conducted in 2007 (Nordheim, Barrasso, 2007) aimed to create a set of 34 indicators of sustainable development of enterprises in the European aluminium industry, covering 800 factories and measuring the evolution of these indicators between 1997 and 2002.

A study from 2011 forayed into literature published between 2000 and 2010, providing a basis for structuring a set of 65 key questions for future research (Searcy, 2012). The analysis on 17 corporate sustainability reports of Greek companies (Skouloudis, Evangeline, 2009) studied how economic, environmental, and social performance was presented and identified the most commonly used metrics (total sales, cost of materials, raw materials and services, benefits, donations and philanthropy, water and energy consumption, CO2 emissions).

The way organizations choose to incorporate the principles of sustainability into business strategy will determine their success in achieving long-term competitive advantage. This sustainable approach reshapes the rules of competition, creates new business models, redefines and restructures the markets, generating at the same time risks and opportunities (KPMG, 2011).

3. Sustainable retail

Retailing is a diverse and dynamic industry offering a wide range of goods and services to consumers. The retail sector and the retailers, the latter understood as any organization that sells products to consumers, have an important role to play in changing the current consumption and production patterns to more sustainable ones. This is due to this industry increasing economic importance, capillarity and privileged position between production and consumption influencing both directions (Jones et al., 2005; Erol et al., 2009; UNEP, 2011). In this sense, UNEP (2011) points out that to play this important role retailers should ensure the sustainability of their internal operations and influence suppliers to produce and consumers to consume sustainably.

One must also consider that retailers represent the last stage of the distribution channel and more specifically the fact that the retail industry may drive the whole supply chain process and its economic, environmental and social consequences (Claro et al, 2013). On the other hand, customers everywhere are more aware of the social and environmental activities of retailers, and companies that invest in such activities tend to perform better (Garcia-Gallego and Georgantzis, 2009).

In response to this growing attention, retailers have created corporate programs to collect valuable data and formulate a strategy for sustainability (Iles, 2007). For some retailers, sustainability was built into their core values from the beginning; for others it has been embraced only more recently, trough their sustainable business strategies, strategies meant to balance their economic, social and environmental objectives on long term. Regardless of its origin, sustainability is becoming a core consideration for the retail industry, affecting strategy, operations, workforce engagement, and connection to consumers and communities.

In order to play their role, retailers should take three main types of activities (UNEP, 2011):

✓ Management of its own sustainability impacts (stores, headquarters, warehouses.): through the implementation of environmental management systems for energy/water conservation, waste management, recycling programs, etc.;
Supply chain management: through cooperation to develop products with sustainable attributes, to incentive the adoption of cleaner production techniques, the use of sustainable criteria to select suppliers, etc.;

Education of customers: through consumer education about sustainable consumption, incentives to buy eco-friendly products, advices regarding products sustainability aspects, usage and disposal, etc. Such responsibility is increased due the trust retailers won among customers and its increasing economic global power.

Scholarly literature provides some interesting attempts to define methodologies and indicators to assess the sustainability of retail. Heller (2003) analyzed the problems and effects of applying the concept of sustainable development by each category of products, especially food. Rimmington et al. (2006) aimed to develop the principles of sustainable food procurement and key performance indicators to measure progress in putting them into practice.


Wiese (2010) reviewed the previous literature on the application of the concept of sustainable development in retail; Yudelson (2010) dedicated his research to the general possibilities of applying the principles of sustainable development in retail, while Lukic (2012) analyzed the achievements and limitations of applying the concept of sustainable development in the Serbian retail sector.

As various indicator systems exist for the individual dimensions of sustainability, research on sustainability indicators has generally occurred at two different levels: macro and micro levels. Macro indicators attempt to measure the sustainability of a city, nation or the world, while micro indicators generally relate to the smaller, more local units such as company, organization and industries (Gray and Wiedeman, 1999). The mainstream literature regarding micro level sustainability indicators includes identifying and selecting indicators in industries and organizations (Erol, 2009).

4. Research methodology and findings

There is an increasing recognition that corporate retail power is the driving force for the whole of the supply chain. In order to materialize this potential, performance in sustainability should be assessed, and evaluating sustainability performance of an industry requires developing a system of performance evaluation framework.

The first step in designing a methodology to measure the sustainability of the retail industry in EU countries was to select a set of variables that highlight the sustainability of this industry in three basic dimensions of sustainable development: economic, social and environmental. These variables are summarized in Table no.1.

<table>
<thead>
<tr>
<th>Dimensions of sustainable retail</th>
<th>Variable (unit of measure)</th>
<th>Variable nature</th>
<th>Variable source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Dimension</td>
<td>Retail sales productivity (E/m2)</td>
<td>Quantitative</td>
<td>European Shopping Centre Trust and GFK GeoMarketing (2013)</td>
</tr>
<tr>
<td></td>
<td>Sales area in retail (m2/capita)</td>
<td>Quantitative</td>
<td>European Shopping Centre Trust and GFK GeoMarketing (2013)</td>
</tr>
<tr>
<td></td>
<td>Retail contribution to GDP (%)</td>
<td>Quantitative</td>
<td><a href="http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database">http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database</a></td>
</tr>
</tbody>
</table>
Dimensions of sustainable retail | Variable (unit of measure) | Variable nature | Variable source |
--- | --- | --- | --- |
Social Dimension | Value added by retail industry | Quantitative | http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database |
| Employment rate in retail as % of population | Quantitative | http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database |
| Personnel costs in retail as % of retail turnover | Quantitative | http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database |
| Ethical behavior of retail organizations | Qualitative | Schwab, K. and Sala-i-Martin, X. (2012) |
Environmental Dimension | Number of GRI Reports in Retail | Quantitative | Global Reporting Initiative (2012) |
| Number of retail organizations certified ISO 14000 | Quantitative | http://www.iso.org/iso/home/standards/certification/iso-survey.htm |

Source: designed by authors

Defining the Index of Sustainability of European Retail required a research database with values for each variable involved in assessing sustainability in the retail industry, for each of the 28 European Union member states. The lack of 2012 data for Malta imposed its exclusion from the list of states.

The values of variables involved in assessing the sustainability of the European retail industry were aggregated and normalized using the min-max method to maintain order and relative distance between the scores of different countries included in the analysis. To determine the Economic Sub-index we used a weighting coefficient of 0.25 and a weighting coefficient of 0.33 for the Social Sub-index and the Environmental Sub-index.

The Index of Sustainability of European Retail was calculated as a composite index by determining the arithmetic average of three the sub-indexes, using the following formula (Afgan and Carvalho, 2008):

\[
ISER = \frac{(\text{Economic Sub-index} + \text{Social Sub-index} + \text{Environmental Sub-index})}{3}
\]  

The results allowed us to rank EU states in terms of sustainability of their retail industries. The state with the highest index value is the state whose retail industry demonstrated the greatest concern for the sustainability of its activities and results (Table no. 2).

Table no. 2 A ranking of EU Member States based on the sustainability of their retail industries (Malta excluded)

<table>
<thead>
<tr>
<th>No</th>
<th>Country</th>
<th>Country acronym</th>
<th>Economic Sub-index</th>
<th>Social Sub-index</th>
<th>Environment Sub-index</th>
<th>EUROPEAN SUSTAINABLE RETAIL INDEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Sweden</td>
<td>SE</td>
<td>42,624</td>
<td>35,488</td>
<td>62,603</td>
<td>46,905</td>
</tr>
<tr>
<td>2.</td>
<td>United Kingdom</td>
<td>UK</td>
<td>36,522</td>
<td>33,151</td>
<td>68,080</td>
<td>45,918</td>
</tr>
<tr>
<td>3.</td>
<td>Finland</td>
<td>FI</td>
<td>43,556</td>
<td>37,668</td>
<td>56,141</td>
<td>45,789</td>
</tr>
<tr>
<td>4.</td>
<td>Spain</td>
<td>ES</td>
<td>29,821</td>
<td>19,620</td>
<td>78,437</td>
<td>42,626</td>
</tr>
<tr>
<td>5.</td>
<td>Germany</td>
<td>DE</td>
<td>33,390</td>
<td>32,652</td>
<td>51,855</td>
<td>39,299</td>
</tr>
<tr>
<td>6.</td>
<td>Netherlands</td>
<td>NL</td>
<td>38,560</td>
<td>37,335</td>
<td>41,348</td>
<td>39,081</td>
</tr>
<tr>
<td>7.</td>
<td>Luxembourg</td>
<td>LU</td>
<td>55,230</td>
<td>32,519</td>
<td>23,090</td>
<td>36,946</td>
</tr>
<tr>
<td>8.</td>
<td>Denmark</td>
<td>DK</td>
<td>43,571</td>
<td>37,887</td>
<td>23,361</td>
<td>34,939</td>
</tr>
<tr>
<td>9.</td>
<td>Belgium</td>
<td>BE</td>
<td>41,537</td>
<td>26,882</td>
<td>31,284</td>
<td>33,234</td>
</tr>
<tr>
<td>10.</td>
<td>Austria</td>
<td>AT</td>
<td>41,975</td>
<td>31,991</td>
<td>24,894</td>
<td>32,953</td>
</tr>
<tr>
<td>11.</td>
<td>France</td>
<td>FR</td>
<td>39,022</td>
<td>27,731</td>
<td>28,168</td>
<td>31,641</td>
</tr>
<tr>
<td>12.</td>
<td>Italy</td>
<td>IT</td>
<td>28,149</td>
<td>9,666</td>
<td>49,282</td>
<td>29,033</td>
</tr>
<tr>
<td>13.</td>
<td>Portugal</td>
<td>PT</td>
<td>28,917</td>
<td>19,140</td>
<td>38,109</td>
<td>28,722</td>
</tr>
<tr>
<td>15.</td>
<td>Cyprus</td>
<td>CY</td>
<td>35,845</td>
<td>18,621</td>
<td>19,050</td>
<td>24,505</td>
</tr>
</tbody>
</table>
The ISER values helped group EU countries into four categories of performance in terms of sustainability of their retail industries:

- Retail sustainability leaders – Sweden, United Kingdom, Finland, Spain.
- High retail sustainability – Germany, Netherlands, Luxembourg, Denmark, Belgium, Austria, France.
- Medium retail sustainability – Italy, Portugal, Ireland, Cyprus, Estonia, Slovenia, Greece, Hungary.
- Low retail sustainability – Latvia, Czech Republic, Lithuania, Poland, Croatia, Slovakia, Bulgaria.

Leaders in sustainable retail respond to the expectations of contemporary society through sustainable practices, while consumers in these countries increasingly embrace sustainable consumption. In countries from the lower part of the rank, retail industries are in an emerging state and should focus more on sustainable practices regarding business, employees, suppliers and customers. Romania ranked second to last in the overall standings; this is a position justified by the low focus of Romanian organizations in general towards social and environmental reporting. The distributions made based on the ISER values helped created a map of sustainable European retail (Figure 1).

Figure 1. Map of European sustainable retail
Based on the values of the ISER, we correlated the sustainable performance of EU retail industries and the level of human development in these countries, evaluated by the HDI (Human Development Report, 2013). We obtained a value of 0.752, which indicates a strong positive correlation between the analysed indicators and proves that a sustainable retail industry contributes significantly to the enhancement of human development in the community. These results are illustrated graphically using a correlogram (Figure 2).

**Figure 2. Correlogram between the Index of Sustainability of European Retail and the Index of Human Development in 2012**

5. Conclusions
Sustainability issues are becoming more and more relevant for any retail business. The essence of the sustainable retail concept is that retailers do business in such a way that simultaneously satisfies all three objectives: environmental, social and economic. The concept of sustainable development is treated as a highly effective strategic tool of managing modern retail companies because, among other things, it contributes to creation of significant additional value in the retail sector (Lo, 2010), which is, together with meeting the customer needs, a special goal of business.

Retailing companies have a huge potential to impact on sustainability performance of national economies, due to their global economic power and there privileged position between supply and demand.

Our research contributes new knowledge on contemporary retailing by integrating three dimensions of sustainable development in a system designed to evaluate the performance of retail industries in EU countries. Specifically, this paper identifies the variables that determine the sustainable development of retail industry in the European Union, designs the methodology for the calculation of an Index of Sustainability of European Retail, distributes analysed countries into sustainable retail performance categories, demonstrates the role of sustainable retail in stimulating the process of human development and designs a map of sustainable European retail.

Research limitations derive mainly from the varying degree of reporting economic, social and environmental results among organizations in retail industries in analysed countries. On the other hand, precisely the lack of importance attributed to reporting such results may show the reduced focus of these organizations on the sustainable development of their businesses.
Bibliography:


