

Out of sight, out of mind. Reporting of three indices in the UK national press between 1990 and 2009.

Stephen Morse,

Centre for Environmental Strategy,

University of Surrey

Guildford

Surrey GU2 7XH

Telephone +44 (0) 1483 686079

Fax +44 (0) 1483 686671

Email: s.morse@surrey.ac.uk

Abstract

This paper explores the reporting of three indices – Corruption Perception Index (CPI), Human Development Index (HDI) and Ecological Footprint (EF) – in the national press of the UK between January 1990 and December 2009. The indices were compared over both time (year and month of article publication) and space (across the component countries of the UK and the Republic of Ireland; ROI). Results suggest that there are significant differences in reporting of the three indices. The EF appeared more frequently and was employed more often in articles compared to the CPI and HDI, perhaps reflecting a greater flexibility of the EF in terms of methodology and its association with consumption at all social scales, including the individual. The HDI was used by journalists more often as an ‘ornament’ to provide factual support to discussion over development, aid, conflict etc.

Keywords: Indices, CPI, HDI, Ecological Footprint, national newspapers, UK

Introduction

Public engagement in sustainable development has long been regarded as critical for its fulfilment (Morse, 2008) and the media has an important role to play in the communication of sustainable development to a wide audience (Corson, 1995). Indeed as Valenti (2003; page 385) has so eloquently put it with regard to press reporting of the Rio+10 World Summit on Sustainable Development in August/September 2002:

“Sustainability is perhaps the ultimate environment story, it is international, and it needs telling.”

Given the importance of ‘telling the story’ a number of researchers have explored how sustainable development issues have been represented in the media. For example, Lewis (2000) looked at US newspaper articles between 1987 and 1997 and found that sustainable development was largely discussed in terms of economic growth rather than social or environmental. Hence the often perceived dominance of economic indicators such as Gross Domestic Product (GDP) and the recent rise of alternative narratives such as ‘Beyond GDP’ which has been promoted in a high-level conference hosted by the European Commission, European Parliament, Club of Rome, OECD and WWF in 2007 (www.beyond-gdp.eu). The dominance of economic growth over social and environmental dimensions is a concern within sustainable development and various agencies have attempted to redress the balance by promoting alternative indices (a collection of indicators into a single value) as a means of facilitating communication of complex issues and datasets to the public and policy makers (Mitchell, 1996; Bell and Morse, 2003, 2008; Parris and Kates, 2003; Mayer et al., 2004;

Moffatt, 2008; Fleurbaey, 2009). Gallopin (1996, page 108) defines indicators (and by extension indices) as:

“variables that summarize or otherwise simplify relevant information, make visible or perceptible phenomena of interest, and quantify, measure, and communicate relevant information.”

Those creating such indices intend for them to have a wide exposure amongst experts and non-experts alike, and they are in effect focal points for the promotion of wider concerns. One of the key assumptions, for example, is that policy makers and managers need access to indices as a means of enhancing their decision making process (Hezri, 2005; Hezri and Hasan, 2004; Hezri and Dovers, 2006). The argument goes that this group may not have the time or expertise to dissect complex data and hence indices are a useful device by which they can engage with these data and thus base their decision making, at least in part, upon evidence. As a result of this desire to reach as wide an audience as possible the creators of indices put forward arguments as to why their index is the most appropriate for any particular issue and make every effort to ensure that their index receives a wide publicity. Hence the index may be published within colourful reports and even ‘league tables’ specifically designed to attract wide attention, including from the popular media which are viewed as an intermediary. However this assumption raises some interesting questions as to whether the media do pick up the indices and to what extent they are reported? Indeed do indices differ in their relative ‘attractiveness’ to the media? There are also more complex questions as to whether this reporting raises awareness of the issues the indices are attempting to promote or indeed whether it has any influence on policy making? This is a large and important field for exploration given the increasing popularity of indices, but one which has received very little

attention. Hence the aim of this paper is to help make an initial contribution to answering the questions by focussing on the extent of reporting in UK national newspapers of some indices that are designed to span aspects of sustainable development that go beyond the economic.

While the reporting of indices in the press has not received much attention from researchers the influence of the media on those who consume it has been subject to much study, and perhaps not surprisingly the picture is complex and often contradictory with many interactions and influences at play (Callaghan and Schnell, 2001; Mortensen and Serritzlew, 2006; Walgrave et al., 2008). For example, the media might not change an individual's view of an issue but might change how they perceive that others see it (Mutz and Soss, 1997). There is also the extent of exposure to consider both over space and time. It is possible that there may also be differences depending upon whether the media has an international, national or more local reach. Over time there may be differing influences in terms of whether an issue is repeated over time rather than being a 'once off' or whether the issue is repeated on a daily basis over a relatively short period or whether it comes and goes more transiently over longer time frames (McComas and Shanahan, 1999; Sampei and Aoyagi-Usui, 2009; Holt and Barkemeyer, 2010). An important factor here is that much of the media source their news from a relatively small number of specialist agencies and this can limit the independence of journalists (Lewis et al., 2008). Also, while there is evidence that the media can have an influence on policy makers and politicians the influence may often be reciprocal (Walgrave et al., 2008). In all of this it has to be remembered that journalists face constraints of time and space within which to express what can be complex ideas which they may have little experience of, and under these conditions it is perhaps not surprising that there may be tensions in covering the technical debates and uncertainties that are so central to science (Smith 2005). Such uncertainties do not disappear when indices are created using such

datasets. After all, even GDP, for all of its influence, presents only a partial picture of monetary flows within an economy and is in part influenced by the quality of the data collection process.

The research reported here was part of a larger EU Framework 7 project entitled ‘Policy Use of Indicators’ (POINT; contract no 217207). The aim of the research was to analyse the reporting of three indices – Corruption Perception Index (CPI), Human Development Index (HDI) and the Ecological Footprint (EF) – in the UK national press between January 1990 and December 2009 with a view to exploring differences that may exist between them and identify some of the factors that may have an influence on reporting. The indices were selected on the basis of having quite different, albeit related, functions, but which represent elements of sustainable development that go beyond economic growth as encapsulated by indicators such as GDP. Hence the CPI addresses corruption, the HDI is often equated with ‘quality of life’ and the EF seeks to highlight the global impacts arising from consumption.

The paper begins with a brief description of the three selected indices before moving onto to analyse the reporting of the indices in terms of space, by looking at differences that may exist across the countries of the UK, and time (across years and months). The paper concludes with a discussion of these patterns and what they say about the relative success of the three indices to attract attention and explain why differences may have been observed.

The three indices

The CPI is arguably the narrowest of the three indices selected for analysis in that it summarises a perception of corruption at the scale of the nation-state. The index was created by a non-governmental organisation called Transparency International (TI; www.transparency.org) to highlight the importance of corruption, and values are released each year in the form of a league table, with worst performing states (those perceived as most corrupt) towards the bottom. The CPI utilises data from a variety of ‘perception’ surveys although these have varied since the first release of the index in 1995. Indeed the fact that the CPI is founded on ‘perception’ of corruption rather than measured corruption has resulted in some criticism (De Maria, 2008). The UK has been included in all of the CPI league tables, but there is no breakdown of the index for the component countries of the UK.

The HDI was created by the United Nations Development Programme (UNDP) and values of the index are released each year (first in 1990), again in league table format, within the Human Development Reports (HDR; www.hdr.undp.org/en). The HDI is intended to capture a sense of ‘human development’ in its broadest sense, and thus has a much broader *raison d’être* than that of the CPI, although it is similar in terms of being calculated at the scale of the nation state (at least in terms of the HDRs release by UNDP). However, while human development is broad, and arguably encompasses corruption as a concern, the UNDP opted to focus on just three aspects for the HDI:

1. life expectancy (a proxy indicator for health care and living conditions).
2. adult literacy combined with years of schooling or enrolment in primary, secondary and tertiary education.

3. real GDP/capita (\$, adjusted for Purchasing Power Parity; a proxy indicator for disposable income).

These are given an equal weighting (Stapleton and Garrod, 2007). Note that there is no environmental element to this list (Morse, 2003). The HDRs are published each year and released by its regional offices across the globe as well as on its website. In addition to the global version there has been something of a surge in regional and national HDRs with corresponding 'local' versions of the HDI. The UK does not have a national HDR or local versions of the HDI, but the nation has been included in all of the HDI league tables that have been released since 1990.

The EF is different to the other two in being primarily an index of consumption (Mitchell, 1996; Holden and Linnerud, 2005). It has a theoretical relationship with the other two indices, consumption can be related to wealth for example, but unlike the CPI and HDI the EF has units in that it is measured in terms of the land area (global hectares) required to support a human population (Wackernagel and Rees, 1996; Holmberg et al., 1999; Ferguson, 2002; Wackernagel et al., 2002; Haberl et al., 2004; Kitzes and Wackernagel, 2009). The latter can be estimated for any human scale, from the individual to the globe, and unlike the CPI and HDI values of the EF have been released by a variety of organisations to match their needs and available datasets and as a result the methodologies tend to vary. The 'Footprint for Nations' version of the EF has values of the EF calculated at the scale of the nation state and is published by Global Footprint Network. It appears as one of two key indices in the World Wildlife Funds (WWF) 'Living Planet Reports' published on a biennial basis since 2000.

Given that all three indices have been applied at the level of the nation state they provide three different visions of the world but visions which are related in terms of the over-arching vision of sustainable development. Figure 1 illustrates how the three indices fit into the typical ‘three overlapping circle’ (or in this case globes) representation of sustainable development. The CPI is an example of an economic indicator (albeit not a measure of economic performance as such), while the HDI fits into the social sphere (although one of its components, GDP, is an economic indicator) and the EF into the environmental. But it is important to stress that these visions are those of the creators of the indices rather than representing some sense of an objective and universal ‘truth’. Hence there is much subjectivity here, and the indices are like filters; they highlight what those creating those filters wish the rest of humanity to see. As a result each of these indices has been subject to a degree of academic critique which will not be provided here (please see Morse 2004 for an overview). Nonetheless, each has been picked up and reported within the UK national press and as a result they provide the basis for a comparison over space and time.

Methodology

The definition of ‘national’ newspapers is somewhat vague and broadly equates to a newspaper that is marketed throughout a nation even if coverage is patchy. Thus it is possible for some apparently ‘regional’ newspapers to be classified as ‘national’. Here it is taken to be those classified as ‘national’ in the NEWSUK database (available at www.newsuk.co.uk), the source of the articles analysed, and comprises the 31 publications listed in Table 1. The Irish Times, a non-UK publication but widely available through the UK, is also listed in the NEWSUK database.

<Table 1 near here>

The NEWSUK database was used to search the electronic editions of the newspapers from January 1st 1990 to December 31st 2009 (20 years). Keywords for the search were ‘Corruption Perception Index’, ‘Human Development Index’ and ‘Ecological Footprint’. Articles mentioning any of these indices at least once, or perhaps more than one of them, were extracted and stored in an ACCESS 2003 database. Care had to be taken as duplicates can occur as a result of various newspaper ‘editions’. Duplicates were removed for the same newspaper but were kept if the same story had appeared in a number of different publications. Once extracted the stories were coded in terms of:

- a) Year of publication (1990 to 2009)
- b) Month of publication (January to December)
- c) Country of newspaper publication (England, Scotland, Wales, Northern Ireland and the Republic of Ireland). This is relatively easy to establish from the website of each publication.
- d) Political outlook (left/right/centre). This was a far more subjective classification than that of (c) and can vary over time for a single newspaper. The classification of the newspapers in Table 1 was developed from a variety of web-based sources.

These four groups provide the basis for exploring causes of variation in reporting of the indices. Once coded a number of variables were estimated from the database. These were as follows:

1. count of the number of articles in each of the categories
2. number of words in each of the articles
3. number of times the index was mentioned in each article. As article lengths varied this was standardised as the number of mentions of the index per 1000 words.

Analysis of the data was primarily via non-parametric tests (Kruskal-Wallis and Chi-square) with separate codes for country, political outlook, month, year etc. The Kruskal-Wallis test (KW; Kruskal and Wallis, 1952) checks whether two or more independent samples come from identical populations, and is thus a nonparametric alternative to a one-way ANOVA.

The KW test is performed on ranks of the original data rather than the data themselves.

Hence the smallest value gets a rank of 1, the next smallest gets a rank of 2 and so on for the entire dataset (procedures are in place to accommodate tied ranks – usually by averaging).

The test then compares the mean ranking of the categories (not the medians or means of the raw data in the categories) and calculates a statistic referred to as 'H'. Also provided in the results presented here are the z-values (positive or negative) which represent deviation for the mean rank of that category from the overall mean for all observations.

It should be noted that the different categories of data can have identical means and/or medians but still be significantly different when tested using the KW test. The use of ranks does reduce the degree of information held in the original dataset but the advantage is that it does not require data to have a normal distribution, and it was assumed that variables such as

article length and extent to which the indices were mentioned in the articles would not necessarily have a normal distribution, even after transformation. However the KW test does assume that all of the categories being compared have the same distribution.

Results

(a) Comparison across indices

Table 2 presents the results of the three variables (number of articles, article length and mentions/article, presented as counts, means and standard deviations; SD) for the indices divided in terms of country of newspaper publication (Table 2a) and political orientation of the newspaper (Table 2b). For the same index the total counts of articles were different because it was not possible to discern the political outlook for all of the newspapers in the database. At the foot of the tables are the results of the KW tests (H and z-values with degrees of freedom and significance).

It has first to be noted that the total number of articles published over the 20 years that mention the indices at least once was not high but there were differences between the indices. For the CPI, HDI and EF the numbers were 171, 356 and 414 respectively but it should be noted that these figures cover 31 newspaper titles and 20 years and hence these numbers of articles can hardly be called an extensive coverage. For comparison, over the same 20 years and for the same newspapers there were over 39,300 articles that mentioned the GDP at least once. The year of first appearance of the three indices in the press also varied. For the CPI it was 1997 and for the HDI it was 1992, in both cases this is two years after the first release of

the index by their respective creators (TI and UNDP). For the EF the first appearance in the UK national press was in 1994, some 6 years prior to the release of the global version of the EF published by the WWF.

There were a number of significant differences between the three indices in terms of the country of newspaper publication and political outlook. Scotland and Wales had more articles mentioning the EF than would be expected while England the Republic of Ireland had fewer. With the CPI and HDI the pattern was reversed, with newspapers from England and the Republic of Ireland having a greater number of articles than expected and Scotland and Wales having fewer. Counts of articles subdivided in terms of the political orientation of the newspapers also generated some significant differences between the indices (Table 2b). Of the 806 articles that could be classified in terms of political orientation just over half (474) appeared in 'left' of centre newspapers. Of the others there was a more or less equal representation of the indices within 'centre' and 'right of centre' newspapers. Articles mentioning the HDI and EF were more than expected in the 'Left' newspapers, while the opposite was the case for the 'right' of centre newspapers. For the CPI the tendency was for them to be mentioned more often than expected in the 'right of centre' newspapers. In terms of average word length of articles this was greater for the HDI than for the CPI and EF, but for the mentions/article this was highest for the EF and lowest for the HDI.

<Table 2 near here>

(b) Corruption Perception Index

The CPI (Table 3) showed a steady increase in the number of articles between 1997 and 2009, with a peak of 21 articles per annum in the years 2006, 2007 and 2008. Most of the articles were published in the 'English' newspapers (131 out of the 171) with the Republic of Ireland coming second (33 out of the 171). Relatively few articles mentioning the CPI were published in Scottish and Northern Ireland newspapers, and none at all in the Welsh. Most of the articles were published in newspapers classified as having a leaning towards the 'centre' (68) but the numbers are similar across all three categories. However, no statistically significant differences for the word length and mentions of index/1000 words were discernable between both the country of publication and political outlook of the newspapers. Thus while most of the articles mentioning the CPI were published in 'English' newspaper the length of the articles and the extent to which the index is mentioned was similar across newspapers from all the countries and political leanings.

<Tables 3 near here>

(c) Human Development Index

The HDI (Table 4) also had a steady increase in the number of published articles each year from 1992 to 2009, with a peak of 43 articles published in 2007. As with the CPI, the majority of the articles appeared in English newspapers (242 out of the total of 356). The Irish Times carried 78 articles over that period while Scottish newspapers had 25. However, unlike the CPI, there were significant differences between countries for word length and number of mentions of index/1000 words. Word length tended to be highest for the English

newspapers and lowest for those from Ireland. The reverse was the case for the number of mentions of the index/1000 words; this was lowest for the English newspapers and highest for those from the Republic of Ireland. Values of these variables were similar for newspapers from the other three countries. In term of political outlook the majority of the articles appeared in newspapers which had a 'left of centre' outlook (218 out of 330). Counts for 'centre' and 'right of centre' were similar. However, there were no significant differences for the other parameters between the newspapers. Having said that, it is interesting to note that the 'right of centre' newspapers did tend to have articles mentioning the HDI that were shorter than the other two categories. Thus for the HDI there were significant differences in reporting of the index across countries, with English newspapers having articles that were longer but which mentioned the index less than for the other countries.

<Table 4 near here>

(d) Ecological Footprint

As with the CPI and HDI, the EF also showed a steady increase in the number of articles from 1994 to 2009, with a peak of 83 articles per annum in 2006. However from 2006 onwards there was a decline in the number of articles mentioning the EF. The majority of the articles mentioning the EF were in the English newspapers (238 out of the 424) with 76 appearing in those from Wales and 58 from Scotland. There were significant differences between countries in terms of word length and mentions of index/1000 words. Article length was highest for the newspapers published in England and lowest for those published in Wales, but in terms of the number of mentions of the index/1000 words this was greatest in Welsh and Scottish newspapers and lowest in those published in England. In terms of

political outlook the majority of articles were in the 'left of centre' newspapers (196 out of 307) but as with the CPI and HDI there were no significant differences in terms of political outlook for the other two parameters.

<Table 5 near here>

(e) Month of publication

A further facet for exploration involved the month of publication of articles, and Table 6 presents data for one of the variables – the number of mentions/1000 words. The figures in the table are the KW z-values for the 12 months combined over years, with z-values greater than +1 shaded. There are significant differences between months of publication for all three variables. For the CPI the highest z-values are found in the months of September, October and December and this corresponds to the months when most of the annual Transparency International reports have been published. For the HDI the largest z-value is found for July, and this month is the one where many of the HDRs have been published. For the EF the largest z-value is for October, and this corresponds to the month when the WWF reports are published. Thus from Table 6 there is a pattern which suggests peaks of reporting (assessed in terms of the number of times each index is mentioned per 1000 words) related to publication of key reports. However, there is also some scatter, especially for the HDI and EF. The HDRs have been published in a number of different months since 1990, including March, May, September and November. The EF does not refer to one single index but to a family of indices all based on the same idea, and reports are published by a variety of organisations often on a more *ad hoc* basis.

<Table 6 near here>

(f) Geographical focus of article

Table 7 is a categorisation of the articles in terms of the main geographical focus of the article. The EF articles had an especial focus on the UK and Ireland, but also a significant number of articles mentioned many countries or no countries at all. The latter were often discussing the EF of individuals, households, companies, towns etc., and whilst the majority of these referred to those units within the UK and Ireland, they did not mention a specific country. The articles mentioning the HDI were largely focussed on Africa (103 articles), with a significant number (91) mentioning many countries, often in terms of the league table ranking. Interestingly the CPI had a far less clear focus on any one region.

<Table 7 near here>

Discussion

The results of the analyses presented here suggest that there are significant differences in the pattern of reporting of three indices across the countries of the UK and Ireland and indeed over time assessed as years and months of article publication. Three potential reasons behind this causality have been explored here. Firstly there was the influence arising from where the newspaper was published. For the CPI most of the reporting has occurred in the English newspapers, although the articles tended to be shorter than those of the HDI and with a relatively low number of mentions of the index per 1000 words. Indeed the articles that

mentioned the CPI were usually those that referred to the release of the report from Transparency International. For the HDI the pattern was different. Articles that mentioned this index tended to be longer than for the other two but didn't mention the index that much. These articles were typically focussed on a range of issues, for example a discussion of the allocation and impact of aid or local strife and the HDI was employed to help set the background for a country or region. Hence reporting of the HDI was often linked to Africa. Thus in many of the articles the HDI had but one mention and was not a centre piece for discussion in the article; it acted more as an ornament. It should be noted that the English-based newspaper tended to have more of a UK-wide focus than did the newspapers from the other countries of the UK. Therefore these papers were more likely to cover issues of international importance related, for example, to the UK overseas aid program, and that would help to explain the greater extent of reporting of the HDI amongst the English-based titles relative to those from the other countries of the UK.

By way of contrast, the EF tended to have significantly more mentions per 1000 words of article than did the other two indices, and this was especially so for the Welsh and Scottish based newspapers that while classified as national tended to have a more local emphasis than the English and Irish-based newspapers. Unlike the CPI and HDI which tended to relate to distant 'others' in the articles the EF appeared to have a more local resonance and thus was used more prominently within articles that discussed consumption at all social scales, including the individual. Hence the EF was often more aligned with the thrust of the article rather than being a mere ornament. It should be noted that Section 121 of the Government of Wales Act 1998 places a legal duty on the National Assembly for Wales to set out how it will promote sustainable development. This duty is unique in the UK and indeed is one of a few such provisions in the world. Of the three indices it is likely that the EF would have the best

fit to this local context for promoting sustainability and this would explain the greater prominence of the EF in the Welsh newspapers, both in terms of the number of articles mentioning the index and the number of times the index is mentioned within each article. Here it is probably a case of press reporting of government initiatives. The ability of the EF to apply to more local scales would also enhance its reporting within Scotland and Northern Ireland.

The second potential influence was the political orientation of the newspapers and this did indeed appear to be significant factor. Generally the pattern was perhaps as one would expect, with 'right of centre' titles tending to report the CPI and its relevance to business while 'left of centre' titles tended to report the HDI. Interestingly the EF is more neutral within this political spectrum, being picked up by both right and left of centre titles. Thirdly there was evidence to suggest that newspaper coverage in the UK has been related in part to report publication as evidenced by increased reporting of the indices at times when major reports containing the indices are released.

Therefore it can arguably be claimed that the EF has been the most successful of the three indices in terms of its substantive and sustained use by journalists, although it is interesting to note that the 'use' of the index by journalists waned in more recent years; perhaps reflecting the dominance of the economic recession. While the HDI is related to the UNDPs vision of human development that does not seem to have captured attention in the same way that EF is associated with consumption. Thus it would appear that the flexibility of the EF both in terms of methodology and scale is a major advantage aiding its visibility. Human development simply does not have that same flexibility in the UK context; there are no HDRs and HDIs for the component countries of the UK which would help facilitate a debate. Hence the use of

the HDI was linked much more to ‘distant others’ and that appeared to be the province of the national newspapers from England and the Republic of Ireland.

However, it has to be noted that the level of reporting of the three indices was relatively low (at least when compared with GDP). Even if the number of articles mentioning the three indices was added together (941 in total) it would come to less than 2.5% of the number of articles that mentioned the GDP over the same period. This is hardly a sign that the dominance of GDP in these newspapers or indeed elsewhere is under threat. It should also be stressed that reporting of the indices in UK newspapers is not necessarily a reflection of technical excellence *per se*. After all, all three indices have attracted criticism in the academic literature (see Morse, 2004 for a review) but this was not repeated or even hinted at by the vast majority of the newspaper articles that were surveyed.

So what do these results say about the potential of such indices for the promotion of sustainable development to a wider audience? While public participation has long been regarded as important in sustainable development the picture is a mixed one with regard to how successful this has been in practice (Morse 2008). The history of attempts to engage the public in the UK is no exception to this, as reported by Wild and Marshall (1999) with their review of participation in three ‘progressive’ local authorities. The media certainly has a role to play and indices do have the advantage of being designed to express complex ideas and datasets within single values. The evidence from this study suggests that the three indices, each encapsulating one of the dimensions of sustainable development, are reported in the national press albeit to varying degrees and at a low level compared to other indicators such as GDP. In that sense there are some grounds for optimism. However, whether these differing extents and styles of reporting have had different impacts on the readership of the newspapers

is another matter, and could readily form the basis for more research. Others have alluded to the effects that such factors can have on readerships (McComas and Shanahan, 1999; Sampei and Aoyagi-Usui, 2009; Holt and Barkemeyer, 2010) and it would be interesting to know whether the three indices discussed here differ in terms of their degree of awareness-raising ‘power’ amongst the readership of the newspapers. Allied to this, of course, is the question as to whether the patterns seen here are repeated in the newspapers of other countries, other media such as magazines, broadcast media and the internet.

Conclusions

Based upon the analysis conducted here the EF would appear to have some key competitive advantages that aid its visibility in the national newspapers of the UK. Unlike the CPI and HDI there is no single dominant methodology for the EF, thereby allowing a range of variants of the EF to exist and be promoted by various groups. It is also flexible in the sense that it can apply to a range of human scales – from the individual up – and in the case of Wales where sustainability is legally enshrined as a commitment for the government then resonance of the EF with consumption helped enhance its profile in the press. The EF also has a powerful appeal in the sense that it encapsulates a readily appreciated and understood notion of impact on the globe. The CPI and HDI are not as flexible or ‘local’ as the EF, although the HDI has been estimated for regions within some nation-states. But questions remain as to whether these differences are reflected in different awareness amongst the newspaper readerships or indeed whether the same is true for other media?

There has been little research on the reporting of indices in the media or indeed their ability to facilitate a change in thinking amongst the public and policy makers. Indeed to date most effort has gone into the technical merits of indices without much, if any, consideration as to their appeal or how they may best be promoted to non-specialists. The results of this research illustrate the need to consider such matters on the part of those creating indices although the skillset required is perhaps closer to advertising than anything else. For example, one clear recommendation that arises from these findings is the need to identify indices that encapsulate something that ‘matters’ to people (rather than only to those creating the indices), are readily conceptualised (EF is expressed as area) and which are as flexible as possible, thereby allowing variants of the index to be created to suit local needs. Yet in practice indices are often created because interest groups wish to promote their own agenda (which may be relatively narrow, as with the CPI for example), be difficult to conceptualise (the CPI and HDI have no units) and methodologies can become fixed (albeit with relatively minor flexibility in detail, as with the CPI and HDI) and associated with but one spatial scale (e.g. the nation state). There are trade-offs at play here, of course, as after all the GDP is a very successful yet inflexible indicator in terms of its methodology but it does have a unit (money) that people can resonate with and does encapsulate a concept (monetary flow) that people can resonate with. Indeed none of the indices came close to emulating the attention which GDP received in the UK press; by comparison they were almost out of sight and arguably out of mind. .

Acknowledgements

The research leading to these results has received funding from the European Commission's Seventh Framework Programme (FP7/2007-2013) under the grant agreement n° 217207 (POINT project, www.point.pb-works.com). The author would like to thank all of his colleagues in POINT for providing support but especially Tom Bauler, Lea Sebastien and Lars Petersen.

The author would also like to thank the two anonymous referees for their comments and suggestions to aid the improvement of the paper.

References

Bell S, Morse S. 2003. *Measuring sustainability. Learning by doing*. Earthscan: London

Bell S, Morse S. 2008. *Sustainability Indicators. Measuring the immeasurable*. 2nd Edition. Earthscan: London

Callaghan K, Schnell F. 2001. Assessing the democratic debate: How the news media frame elite policy discourse. *Political Communication*. 18(2): 183-212

Corson WH 1995. Priorities for a sustainable future: The role of education, the media, and tax reform. *Journal of Social Issues* 51(4): 37–61.

De Maria W. 2008. Measurements and markets: deconstructing the corruption perception index, *International Journal of Public Sector Management* 21(7):777 - 797

Ferguson ARB. 2002. The assumptions underlying eco-footprinting. *Population and Environment* 23(3): 303-313

Fleurbaey, M 2009. Beyond GDP: The Quest for a Measure of Social Welfare. *Journal of Economic Literature* 47(4): 1029-1075

Gallopin GC. 1996. Environmental and sustainability indicators and the concept of situational indicators. A systems approach. *Environmental Modelling and Assessment* 1: 101-117.

Haberl H, Wackernagel M, Krausmann F, Erb KH, Monfreda C. 2004. Ecological footprints and human appropriation of net primary production: a comparison. *Land Use Policy* 21(3): 279-288

Hezri AA. 2005. Utilisation of sustainability indicators and impact through policy learning in the Malaysian policy processes. *Journal of Environmental Assessment Policy and Management* 7(4): 575-595.

Hezri AA, Hasan MN. 2004. Management framework for sustainable development indicators in the state of Selangor, Malaysia. *Ecological Indicators* 4: 287-304.

Hezri AA, Dovers SR. 2006. Sustainability indicators, policy and governance: Issues for ecological economics. *Ecological Economics* 60: 86-99.

Holden E, Linnerud K. 2005. The sustainable development area: satisfying basic needs and safeguarding ecological sustainability. *Sustainable Development* 15(3): 174–187

Holmberg J, Lundqvist U, Robert KH, Wackernagel M. 1999. The ecological footprint from a systems perspective of sustainability. *International Journal of Sustainable Development and World Ecology* 6(1): 17-33

Holt D, Barkemeyer R. 2010. Media coverage of sustainable development issues – attention cycles or punctuated equilibrium? *Sustainable Development Early View* (Articles online in advance of print)

Kitzes J, Wackernagel M. 2009. Answers to common questions in Ecological Footprint accounting. *Ecological Indicators* 9(4): 812-817

Kruskal WH, Wallis WA. 1952. Use of ranks in one-criterion variance analysis. *Journal of the American Statistical Association* 47(260): 583-621.

Lewis TL 2000. Media representations of “Sustainable Development”. *Sustaining the Status Quo? Science Communication* 21(3): 244-273

Lewis J, Williams A., Franklin B. 2008. A compromised Fourth Estate? UK news journalism, public relations and news sources. *Journalism Studies*. 9(1): 1-20

Mayer AL, Thurston HW, Pawlowski CW. 2004. The multidisciplinary influence of common sustainability indices. *Frontiers in Ecology and the Environment* 2(8): 419-426

McComas K, Shanahan J. 1999. Telling stories about global climate change - Measuring the impact of narratives on issue cycles. *Communication Research* 26(1): 30-57

Mitchell, G. 1996. Problems and fundamentals of sustainable development indicators. *Sustainable Development* 4(1): 1-11

Moffatt I. 2008. A preliminary analysis of composite indicators of sustainable development. *International Journal of Sustainable Development and World Ecology* 15(2): 81-87

Morse S. 2003. Greening the United Nation's Human Development Index? *Sustainable Development* 11(4): 183-198.

Morse S. 2004. *Indices and indicators in development. An unhealthy obsession with numbers.* Earthscan: London

Morse S 2008. Post-Sustainable Development. *Sustainable Development* 16(5): 341-352.

Mortensen PB, Serritzlew S. 2006. Newspapers and budgeting: The effects of media coverage on local expenditure decisions. *Scandinavian Political Studies*. 29(3): 236-260

Mutz DC, Soss J. 1997. Reading public opinion - The influence of news coverage on perceptions of public sentiment. *Public Opinion Quarterly* 61(3): 431-451

Parris TM, Kates RW. 2003. Characterizing and measuring sustainable development. *Annual Review of Environment and Resources* 28: 559-586

Sampei Y, Aoyagi-Usui M. 2009. Mass-media coverage, its influence on public awareness of climate-change issues, and implications for Japan's national campaign to reduce greenhouse gas emissions. *Global Environmental Change-Human and Policy Dimensions* 19(2): 203-212

Smith J 2005. Dangerous news: Media decision making about climate change risk. *Risk Analysis* 25(6), 1471-1482.

Stapleton LM, Garrod GD. 2007. Keeping things simple: why the Human Development Index should not diverge from its equal weights assumption. *Social Indicators Research* 84(2): 179-188

Valenti JM 2003. Commentary: Media coverage of the World Summit on Sustainable Development. *Science Communication* 24(3): 380-386

Wackernagel. M, Rees WE. 1996. *Our ecological footprint: reducing human impact on the Earth.* New Society Publishers, Gabriola Island

Wackernagel M, Schulz NB, Deumling D, Linares AC, Jenkins M, Kapos V, Monfreda C, Loh J, Myers N, Norgaard R, Randers J. 2002. Tracking the ecological overshoot of the human economy. *Proceedings of the National Academy of Sciences of the United States of America* 99(14): 9266-9271.

Walgrave S, Soroka S, Nuytemans, M. 2008. The mass media's political agenda-setting power - A longitudinal analysis of media, Parliament, and government in Belgium (1993 to 2000). *Comparative Political Studies*. 41(6): 814-836

Wild A, Marshall R 1999. Participatory practice in the context of local agenda 21: A case study evaluation of experience in three English local authorities. *Sustainable Development* 7(3): 151-162.

Table 1. Newspapers included in the survey and three of their characteristics

Newspaper	Country of publication	Political outlook
Belfast Telegraph	NI	R
The Daily Express/The Express on Sunday	E	R
Daily Mail/The Mail on Sunday	E	R
The Daily Mirror/The Sunday Mirror	E	L
Daily Record/Sunday Mail (Glasgow)	S	L
The Daily Telegraph/The Sunday Telegraph	E	R
Edinburgh Evening News	S	-
Evening Times (Glasgow)	S	-
Financial Times	E	C
The Guardian	E	L
The Herald/Sunday Herald (Glasgow)	S	-
The Independent/The Independent on Sunday	E	L
Irish Times (Dublin)	ROI	L
News Letter (Belfast)	NI	R
The Observer	E	L
Scotland on Sunday (Edinburgh)	S	R
Scotsman (Edinburgh)	S	C
South Wales Echo (Cardiff)	W	-
The Sun	E	R
Sunday Business	E	-
The Times/The Sunday Times	E	R
Wales on Sunday (Cardiff)	W	-
Western Mail (Cardiff)	W	-

E England
S Scotland
W Wales
NI Northern Ireland
ROI Republic of Ireland

L Left of centre
C Centre
R Right of centre

Table 2. Three measures of index ‘publicity’ over the period January 1990 to December 2009.

(a) By country

Country	Number of articles (expected)				Average word length per article (SD)				Average mentions of index/1000 words (SD)				
	CPI	HDI	EF	Total	CPI	HDI	EF	Z-values	CPI	HDI	EF	Z-values	
England	131 (111)	242 (231)	238 (269)	611	668 (555)	1018 (798)	955 (942)		3.67	5.4 (9.9)	2.4 (3.2)	3.8 (6.6)	
Scotland	5 (16)	25 (33)	58 (39)	88	745 (551)	889 (681)	697 (570)	Between countries	-1.44	4.5 (5.4)	2.2 (2.2)	5.3 (4.3)	Between countries
Wales	0 (17)	5 (31)	76 (36)	81		915 (529)	694 (1052)	H = 18.78	-3.21		2.4 (3.1)	6.4 (6.1)	H = 49.5
Northern Ireland	2 (4)	6 (8)	13 (9)	21	1131 (940)	830 (594)	494 (316)	DF = 4	-1.61	1.4 (1.1)	2.7 (3.2)	3.6 (4.3)	DF = 4
Republic of Ireland	33 (25)	78 (53)	29 (62)	140	746 (448)	730 (430)	784 (527)	P < 0.001	-0.54	3.9 (7.2)	3.6 (4.3)	4.7 (6.9)	P < 0.001
Total	171	356	414	941	Between indices H = 23.05 DF = 2 P < 0.001				Between indices H = 45.68 DF = 2 P < 0.001				
	Chi-Sq = 142.95 DF = 8 P < 0.001				-2.99	4.59	-2.16		1.63	-6.7	5.28		

(b) By political leaning of the newspaper

Political stance	Number of articles (expected)				Average word length per article (SD)				Average mentions of index/1000 words (SD)					
	CPI	HDI	EF	Total	CPI	HDI	EF	Z-values	CPI	HDI	EF	Z-values		
Left	58 (98)	220 (195)	196 (181)	474	679 (439)	987 (806)	920 (944)	Between political leanings	1.99	4.1 (6.1)	2.9 (4.0)	4.2 (7.1)	Between political leanings	-0.59
Centre	68 (34)	59 (67)	35 (62)	162	669 (634)	953 (594)	862 (847)	H = 4.09 DF = 2 Not sig.	-1.48	6.8 (13.0)	1.8 (1.6)	5.1 (6.3)	H = 1.8 DF = 2 Not sig.	1.32
Right	41 (35)	53 (70)	76 (65)	170	739 (518)	809 (563)	859 (683)		-0.95	3.5 (4.3)	2.5 (2.7)	3.0 (3.3)		-0.58
Total	167	332	307	806	Between indices H = 23.05 DF = 2 P < 0.001				Between indices H = 45.68 DF = 2 P < 0.001					
	Chi-sq = 75.7 DF = 6 P < 0.001				-2.99	4.59	-2.16			1.63	-6.7	5.28		

Table 3. Articles mentioning the Corruption Perception Index (CPI) at least once over the period January 1990 to December 2009

(a) By year and country of newspaper publication.

Year	Number of articles						Average word length per article (SD)					Average mentions of index/1000 words (SD)				
	England	Scotland	Wales	NI	ROI	Total	England	Scotland	Wales	NI	ROI	England	Scotland	Wales	NI	ROI
1997	2					2	936 (433)					1.2 (0.6)				
1998					1	1						472				
1999	5	1				6	658 (350)	966				4.2 (3.7)	1.0			
2000	5	1				6	567 (529)	75				3.5 (2.8)	13.3			
2001	10				4	14	580 (413)				449 (102)	4.3 (4.2)				3.1 (2.0)
2002	14	1			1	16	605 (658)	1469			528	8.8 (17.1)	0.7			7.6
2003	6	1			6	13	962 (742)	330			575 (342)	2.2 (1.7)	6.1			8.9 (16.3)
2004	15				1	16	661 (556)				1091	4.9 (6.2)				0.9
2005	13	1			4	18	738 (1061)	885			843 (425)	7.5 (12.1)	1.1			3.7 (3.8)
2006	17				4	21	717 (497)				1075 (990)	4.1 (7.4)				2.0 (2.1)
2007	14			2	5	21	632 (425)			1131 (940)	847 (459)	6.2 (10.7)			1.4 (1.1)	2.6 (1.8)
2008	19				2	21	647 (344)				841 (194)	3.2 (4.1)				2.6 (2.3)
2009	11				5	16	602 (307)				738 (182)	8.4 (18.0)				1.9 (0.7)
Total	131	5	0	2	33	171	Between countries (CPI) H = 3.05 DF = 3 not significant					Between countries (CPI) H = 1.67 DF = 3 not significant				
						Z-values	-1.68	0.44		0.79	1.4	0.81	-0.53		-1.08	-0.35

(b) By year and political leaning of the newspaper

Year	Number of articles				Average word length per article (SD)			Average mentions of index/1000 words (SD)		
	Left	Centre	Right	Total	Left	Centre	Right	Left	Centre	Right
1997			2	2			936 (433)			1.2 (0.6)
1998	1			1	472			2.1		
1999	3	1	2	6	447 (219)	799	1058 (130)	6.2 (3.3)	1.3	1.0 (0.1)
2000	4	2		6	600 (623)	257 (8)		5.7 (6.0)	3.9 (0.1)	
2001	8	4	1	13	566 (279)	572 (522)	75	3.0 (1.8)	4.3 (4.0)	13.3
2002	4	5	7	16	536 (279)	249 (165)	1010 (840)	4.2 (3.3)	18.2 (27.4)	3.4 (4.1)
2003	7	4	1	12	578 (312)	1080 (923)	854	8.3 (15.0)	1.8 (1.1)	1.2
2004	2	10	4	16	867 (317)	720 (678)	518 (160)	2.0 (1.6)	6.1 (7.3)	2.1 (0.9)
2005	5	7	5	17	692 (499)	1004 (1396)	494 (391)	5.2 (4.7)	8.5 (16.1)	5.4 (6.3)
2006	7	11	3	21	840 (763)	797 (516)	616 (723)	2.0 (1.5)	4.7 (9.1)	4.1 (3.7)
2007	7	11	3	21	938 (563)	569 (258)	836 (839)	2.2 (1.7)	6.9 (12.0)	3.6 (4.0)
2008	4	9	8	23	585 (388)	596 (279)	783 (376)	6.4 (8.2)	2.7 (1.6)	2.1 (2.2)
2009	6	4	5	15	740 (163)	421 (319)	631 (269)	1.8 (0.6)	16.7 (29.3)	4.7 (7.4)
Total	58	68	41	167	Between political leanings H = 2.06 DF = 2 not significant			Between political leanings H = 3.89 DF = 2 not significant		
			Z values		0.57	-1.39	0.96	0.52	1.2	-1.94

Table 4. Articles mentioning the Human Development Index (HDI) at least once over the period January 1990 to December 2009.

(a) By year and country of newspaper publication.

Year	Number of articles						Average word length per article (SD)					Average mentions of index/1000 words (SD)				
	England	Scotland	Wales	NI	ROI	Total	England	Scotland	Wales	NI	ROI	England	Scotland	Wales	NI	ROI
1992	2					2	400 (136)					8.6 (6.5)				
1993	1					1	991					1.0				
1994	1					1	472					2.1				
1995	7					7	1041 (422)					2.2 (3.1)				
1996	4				2	6	708 (468)				537 (28)	3.9 (4.2)				2.8 (1.2)
1997	7				2	9	670 (374)				1167 (974)	3.4 (3.4)				4.5 (5.5)
1998	12				4	16	1167 (1334)				465 (238)	2.6 (2.3)				7.0 (2.6)
1999	9	1			6	16	807 (277)	1148			466 (330)	1.6 (0.7)	0.9			9.3 (10.2)
2000	17	2			6	25	885 (463)	196 (145)			604 (271)	1.8 (1.6)	7.1 (5.2)			2.0 (0.9)
2001	8	2			8	18	1292 (1270)	2573 (440)			691 (380)	1.6 (1.4)	0.4 (0.1)			5.0 (6.6)
2002	19	4			4	27	1078 (720)	849 (189)			733 (171)	1.7 (1.5)	1.6 (0.8)			3.7 (2.2)
2003	13	2		1	6	22	858 (463)	581 (374)		360	499 (202)	2.4 (1.9)	2.2 (1.4)		2.8	2.6 (1.2)
2004	15	2		1	8	26	862 (759)	479 (375)		529	602 (259)	3.3 (3.7)	5.0 (0.5)		1.9	3.3 (1.8)
2005	25	2	1		8	36	913 (891)	707 (215)	1145		1015 (472)	3.6 (4.9)	1.5 (0.5)	0.9		1.7 (1.0)
2006	17	4	2	1	3	27	1120 (695)	1288 (772)	809 (964)	1100	1187 (671)	1.6 (1.8)	1.0 (0.6)	4.3 (5.1)	0.9	3.0 (4.0)
2007	28	3		2	10	43	1107 (694)	485 (80)		1439 (345)	741 (465)	1.3 (0.7)	2.1 (0.3)		0.7 (0.2)	2.9 (2.3)
2008	30	2	2		3	37	1264 (1189)	530 (33)	907 (339)		853 (164)	2.3 (2.4)	1.9 (0.1)	1.2 (0.4)		1.2 (0.2)
2009	27	1		1	8	37	1015 (564)	938		111	918 (615)	2.7 (5.5)	1.1		9.0	2.6 (3.5)
Total	242	25	5	6	78	356	Between countries (HDI) H = 9.59 DF = 4 P < 0.05					Between countries (HDI) H = 15.32 DF = 4 P < 0.01				
							2.83	-0.61	0.44	-0.24	-2.87	-3.27	0.17	-0.68	-0.12	3.82

(b) By year and political leaning of the newspaper

Year	Number of articles				Average word length per article (SD)			Average mentions of index/1000 words (SD)		
	Left	Centre	Right	Total	Left	Centre	Right	Left	Centre	Right
1992			2	2			400 (136)			8.6 (6.5)
1993			1	1			991			1.0
1994	1			1	472			2.1		
1995	7			7	1041 (422)			2.2 (3.1)		
1996	6			6	651 (373)			3.5 (3.4)		
1997	9			9	781 (521)			3.6 (3.6)		
1998	14		2	16	1084 (1245)		343 (324)	3.5 (2.9)		
1999	13	2		15	657 (342)	758 (393)		5.1 (7.7)	1.5 (0.8)	
2000	11	9	1	21	858 (543)	763 (256)	635	2.1 (1.8)	1.5 (0.6)	1.6
2001	12	3	3	18	1051 (1094)	965 (259)	1835 (1316)	3.9 (5.6)	1.1 (0.3)	1.2 (1.4)
2002	16	6	2	24	1102 (758)	805 (402)	914 (175)	2.0 (1.7)	1.9 (1.1)	3.7 (3.8)
2003	11	4	5	20	745 (394)	747 (407)	664 (586)	2.0 (1.2)	2.3 (2.4)	3.5 (1.9)
2004	12	8	5	25	578 (252)	1138 (932)	597 (348)	41. (3.3)	2.7 (3.4)	2.3 (1.7)
2005	20	7	6	33	1030 (866)	947 (811)	617 (578)	3.5 (5.2)	1.7 (0.8)	3.5 (3.7)
2006	16	3	2	21	1114 (722)	1222 (628)	981 (169)	1.9 (2.4)	1.4 (1.0)	1.0 (0.2)
2007	23	6	12	41	1160 (770)	894 (414)	803 (403)	1.8 (1.8)	1.7 (0.7)	1.5 (0.6)
2008	25	4	4	33	1316 (1249)	958 (1000)	938 (309)	2.3 (2.5)	2.3 (1.6)	1.2 (0.4)
2009	22	7	8	37	916 (565)	1223 (575)	887 (596)	3.5 (6.3)	1.2 (0.3)	2.3 (2.8)
Total	218	59	53	330	Between political leanings H = 2.55 DF = 2 not significant			Between political leanings H = 1.01 DF = 2 not significant		
				Z values	0.65	0.69	-1.55	0.18	-0.87	0.68

Table 5. Articles mentioning the Ecological Footprint (EF) at least once over the period January 1990 to December 2009.

(a) By year and country of newspaper publication.

Year	Number of articles						Average word length per article (SD)					Average mentions of index/1000 words (SD)				
	England	Scotland	Wales	NI	ROI	Total	England	Scotland	Wales	NI	ROI	England	Scotland	Wales	NI	ROI
1994	3					3	721 (273)					2.6 (1.5)				
1995	3					3	869 (477)					2.2 (1.1)				
1996	3					3	475 (325)					3.9 (0.7)				
1997	3					3	391 (431)					5.3 (3.9)				
1998	3					3	535 (341)					3.2 (0.8)				
1999	2					2	1054 (136)					1.8 (1.1)				
2000	3	1			1	5	598 (426)	573			989	6.7 (4.3)	7.0			12.1
2001	7	1	3		3	14	1218 (1329)	352	875 (627)		952 (465)	2.2 (1.6)	2.8	12.5 (8.5)		1.2 (0.6)
2002	12	3	12		2	29	913 (896)	448 (153)	395 (317)		786 (186)	3.3 (3.2)	5.5 (2.7)	7.0 (7.6)		1.3 (0.3)
2003	6	1	2		3	12	659 (832)	186	264 (17)		287 (259)	6.7 (6.2)	5.4	13.5 (8.9)		10.5 (11.1)
2004	16	7	1	2	3	29	886 (622)	952 (647)	122	301 (24)	512 (806)	2.8 (3.1)	5.3 (4.9)	16.4	10.4 (10.2)	15.6 (13.3)
2005	28	3	10		5	46	888 (571)	569 (123)	424 (232)		1212 (721)	2.5 (3.1)	3.6 (1.7)	6.8 (4.7)		2.1 (1.9)
2006	59	14	5		5	83	1012 (1337)	683 (528)	602 (435)		742 (339)	3.7 (3.8)	4.8 (4.0)	4.7 (4.2)		2.5 (2.6)
2007	31	17	21	1	4	74	1024 (890)	725 (713)	718 (618)	1465	919 (572)	6.1 (14.3)	6.9 (5.7)	6.5 (6.3)	1.4	1.6 (0.7)
2008	30	8	8	9	2	57	1058 (920)	753 (622)	1575 (2971)	426 (131)	439 (51)	3.5 (4.8)	3.6 (2.5)	7.1 (6.9)	2.6 (0.9)	3.5 (2.0)
2009	29	3	14	1	1	48	990 (716)	554 (374)	700 (349)	527	588	3.9 (7.3)	5.4 (1.9)	3.0 (2.1)	1.9	1.7
Total	238	58	76	13	29	414	Between countries (EF) H = 16.55 DF = 4 P < 0.01					Between countries (EF) H = 37.06 DF = 4 P < 0.001				
						Z values	3.53	-1.24	-2.8	-1.88	0.37	-5.24	2.88	4.63	0.16	-0.89

(b) By year and political leaning of the newspaper

Year	Number of articles				Average word length per article (SD)			Average mentions of index/1000 words (SD)		
	Left	Centre	Right	Total	Left	Centre	Right	Left	Centre	Right
1994	3			3	721 (273)			2.6 (1.5)		
1995	2		1	3	705 (542)		1197	2.0 (1.6)		2.5
1996	3			3	475 (325)			3.9 (0.7)		
1997	3			3	391 (431)			5.3 (3.9)		
1998	2		1	3	678 (342)		258	2.8 (0.7)		3.9
1999	1		1	2	1150		958	2.6		1.0
2000	3		1	4	859 (279)		205	7.5 (5.2)		9.8
2001	7	1	3	11	1388 (1268)	352	555 (194)	1.3 (1.0)	2.8	3.5 (0.7)
2002	11	2	2	15	939 (910)	771 (640)	498 (384)	3.2 (3.2)	3.6 (3.9)	2.9 (2.2)
2003	7	1	1	9	491 (797)	681	695	9.8 (7.7)	1.5	1.4
2004	14	4	6	24	840 (697)	717 (419)	688 (532)	5.9 (8.0)	5.6 (3.9)	4.5 (6.5)
2005	26	2	6	34	905 (588)	959 (423)	1024 (711)	2.7 (3.3)	2.7 (2.7)	1.5 (0.9)
2006	50	6	14	70	975 (1368)	597 (183)	1045 (991)	3.6 (3.8)	3.8 (2.7)	4.0 (3.7)
2007	24	7	13	44	988 (907)	947 (981)	1025 (751)	6.8 (16.0)	4.8 (3.5)	3.3 (4.5)
2008	21	7	17	45	884 (680)	1487 (1439)	657 (557)	4.0 (5.3)	3.9 (4.2)	2.3 (1.2)
2009	19	5	10	34	1018 (778)	440 (302)	994 (560)	3.2 (4.3)	11.3 (14.4)	1.7 (1.3)
Total	196	35	76	307	Between political leanings H = 0.35 DF = 2 not significant			Between political leanings H = 4.84 DF = 2 not significant		
				Z values	0.48	-0.71	-0.01	-0.42	2.1	-1.08

Table 6. Z-values arising from the Kruskal-Wallis test for the Average mentions of index/1000 words variable.

Shaded cells are for those months where the z-value is greater than 1.

Month of article publication	Index		
	CPI	HDI	EF
January	-1.46	-1.84	-1.82
February	-1.52	-0.3	1.35
March	-1.54	-0.08	-0.19
April	-1.91	1.2	-0.02
May	-1.75	-2.98	1.47
June	-0.46	1.2	-0.88
July	1.06	4.13	1.18
August	0.75	-1.82	-0.21
September	1.96	1.81	-2.95
October	2.55	-0.46	1.85
November	1.67	-0.16	-1.21
December	-2.36	-2.39	0.3
	H = 30.64	H = 38.92	H = 21.0
	DF = 11	DF = 11	DF = 11
	P < 0.001	P < 0.001	P < 0.05

Table 7. Classification of articles in terms of the countries which form the main focus.

	CPI	HDI	EF	Total
Africa	20 (23)	103 (47)	2 (55)	125
Europe	26 (10)	27 (21)	2 (24)	55
Central/South America and the Caribbean	3 (4)	15 (8)	2 (9)	20
Asia	27 (13)	37 (27)	6 (31)	70
North America	1 (3)	8 (5)	5 (6)	14
UK and Ireland	31 (53)	55 (111)	206 (129)	292
Many countries	46 (39)	91 (83)	81 (96)	218
None	16 (26)	20 (55)	110 (64)	146
Total	170	356	414	940

Observed counts with expected counts in parentheses.

Chi-Sq = 367.49 (df = 14) P < 0.001