THE IFRS ORIENTATION INDEX: QUANTIFICATION AND EXPANSION OF THE IFRS FAVORABLE PROFILE

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Abstract: *This paper proposes the creation of a numerical index measuring the extent to which a given country's accounting value profile orients it more or less favorably to a sustained commitment to the principles of International Financial Reporting Standards (IFRS). The concept of an IFRS Favorable Profile was proposed in a previous paper that examined a set of four accounting value dimensions, i.e., conservatism, uniformity, professionalism and secrecy, linked by Sydney Gray to Geert Hofstede's original cultural value dimensions. That study identified Gray accounting values and related Hofstede cultural dimensions most important to establish accounting standards like IFRS. A specific set/profile of Gray values most conducive to IFRS were identified and termed the IFRS Favorable Profile. The current paper quantifies Gray's four accounting dimensions and uses them to create an IFRS orientation composite index. This index is then expanded to incorporate a fifth relevant dimension proposed by the author – stewardship. This dimension is derived on the basis of numerical data from four factors: corruption, political risk, education and quality of regulatory environment. The methodology is applied to a sample set of countries. Implications and applications of the study are discussed.*

Keywords: *IFRS, accounting and culture, Gray, Hofstede*

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INTRODUCTION

From its beginnings in Norwalk, Connecticut, the International Accounting Standards Board (IASB) has evolved into the international standard setting body for the financial reporting standards of 125 plus countries that have adopted or have their local standards converging with International Financial Reporting Standards. In 1972, the International Accounting Standards Committee (IASC), as it was then called, was across the street from the then newly established Financial Accounting Standards Board (FASB), the standard setting body for Generally Accepted Accounting Principles (GAAP) used for financial reporting in the United States. The geographical location reflects the close ties between these two organizations, which regularly hold join discussion sessions between Norwalk and London, UK, the current home of IASB.

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Over forty years have passed since IFRS was established. Although growth was not always strong, and there have been doubts in the past whether IASB or some other group like the United Nations might prevail, it is evident today that IFRS has become the world accepted standard for financial reporting. It is only a matter of time before all local financial reporting standards will converge with IFRS. Adoption of IFRS by the European Union, the growing importance of international securities markets and market regulators, and the continuing worldwide influence of the Big Four accounting firms, have all played their role in advancing IFRS. Even US GAAP, which, in many ways, can be seen as the parent of IFRS, is moving inexorably toward complete convergence with its progeny. Ultimately one can imagine a world upon which every country and every company subscribe to the same financial reporting principles.

There is just one issue. The world is made up of diverse peoples and nations having a variety of values and orientations. The current speed by which nations and companies are joining the ranks of IFRS reflects, in large part, a response to political and economic necessity. No one wants to be deprived of the financial benefits of participating in the global capital allocation network. If IFRS implementation is the ticket to play, most nations are ready to pay. The necessity of IFRS adoption is clear, but not sufficient in itself to assure successful implementation and long term commitment to the concepts and principles that underlie IFRS. In many countries, much professional training of new and existing accountants and auditors will be needed and strong accreditation and standard setting bodies will need to be established to create local foundations for IFRS.

The goal of this paper is to create a simple diagnostic index that reflects a country's degree of favorable orientation to IFRS based upon culturally derived values and other country data. In developing this index, various inputs are used, including (1) cultural value dimensions developed by Geert Hofstede (Hofstede, 1980), (2) accounting value dimensions developed by Sydney Gray (Gray, 1988) and (3) previous writings on the concept of an IFRS favorable accounting value profile. (Borker, 2013a).

The remainder of this paper consists of (a) a review of the literature relevant to this study, (b) a discussion of underlying hypotheses and methodology for determining an IFRS favorable orientation index, (c) the results of applying the methodology to a sample worldwide list of countries, (d) a discussion of these results and the issues that they raise, and (e) a conclusion that considers implications for future research in this area.

LITERATURE REVIEW

In 1980 Geert Hofstede published his first book on cultural value dimensions worldwide. He reported index scores for individual countries for four cultural dimensions: Power Distance (PDI), Individualism (IDV), Masculinity (MAS) and

Uncertainty Avoidance (UAI). (Hofstede, 1980) Subsequently, Hofstede developed additional cultural dimensions including Long-Term Orientation (LTO) and Indulgence vs. Restraint (IVR). (Hofstede, 2001) (Hofstede, Hofstede, & Minkov, 2010) These dimensions are fully described in Hofstede's website. (Hofstede, Dimensions of national Cultures, 2013).

Eight years after the appearance of Hofstede first book on his cultural value dimensions, Gray wrote a paper in which he posited a relationship between Hofstede's individual country cultural value dimensions and a set of accounting value dimensions. Gray identified four accounting dimensions, Conservatism (opposite of Optimism), Uniformity (opposite Flexibility), Professionalism (opposite Statutory Control) and Secrecy (opposite Transparency). (Gray, 1988) He related these accounting dimensions to Hofstede cultural dimensions via four hypotheses:

(1) The higher a country ranks in terms of individualism and the lower it ranks in terms of uncertainty avoidance and power distance then the more likely it is to rank highly in terms of professionalism.

(2) The higher a country ranks in terms of uncertainty avoidance and power distance and the lower it ranks in terms of individualism then the more likely it is to rank highly in terms of uniformity.

(3) The higher a country ranks in terms of uncertainty avoidance and the lower it ranks in terms of individualism and masculinity then the more likely it is to rank highly in terms of conservatism.

(4) The higher a country ranks in terms of uncertainty avoidance and power distance and the lower it ranks in terms of individualism and masculinity then the more likely it is to rank highly in terms of secrecy.

Gray qualified his hypotheses with observations regarding the relative importance of various Hofstede dimensions in relationship to the accounting dimensions. For example, in discussing Professionalism, Gray noted that Hofstede's IDV and UAI are strongly linked to his Professionalism value, while PDI is linked, but not as strongly to the Professionalism value.

In recent years, Braun and Rodriguez quantified each of Gray's four accounting dimensions for individual countries by taking a simple average of scores for the corresponding Hofstede dimensions. (Braun & Rodriguez, 2008) In the case of scores for dimensions that have a negative or inverse relationship to a Gray accounting dimension, the Hofstede score is adjusted in the following manner. The mean score for that dimension for the total countries analyzed is subtracted from the specific country's score. Next, this value is multiplied by -1, and then added to the mean score. By using this conversion of negatively correlating Hofstede scores, they are able to create opposite positive scores for each Hofstede dimensional component of a Gray accounting dimension. By using a simple average

in their computation, Braun and Rodriguez assume that all Hofstede dimensions that relate to a given Gray dimension should have an equal weight. This does not take into consideration Gray's observations regarding his hypotheses that certain Hofstede dimensions have a greater or lesser importance than others in determining Gray's dimensions. (Gray, 1988).

In a conceptual paper, Borker develops a revised mapping of the relationship between Gray accounting value dimensions and Hofstede cultural value dimensions that provides relative weightings based on Gray's indications in his original article. He also expands his model to include two Hofstede dimensions identified after Gray's article, specifically Long-term orientation (LTO) and Indulgence versus Restraint (IVR). (Borker, 2013a) Table 1 below summarizes the positive and negative relationships between Gray and Hofstede dimensions, using '+' to represent a lower weight positive correlation and '++' to represent an higher weight positive correlation, and '-' and '- -' to represent, respectively, lower versus higher weighted negative correlation relationships. Finally '?' is used to represent no or an uncertain relationship between the Gray and Hofstede dimension. The use of these symbols for the first four Hofstede dimensions (shaded area) was intended to reflect Hofstede's own comments in his original article on the greater or lesser importance of certain Hofstede dimensions. The use of these symbols under Hofstede's two later dimensions, LTO and IVR, indicated Borker's assumed relationship between these two dimensions and Gray's four accounting dimensions based on an examination of the Hofstede value dimensions for the seven Anglo-American countries.

Table 1
Expansion of Hofstede-Gray Relationships (Borker, 2013a)

	Power Distance: PDI	*Individualism: IDV*	*Masculinity: MAS*	*Uncertainty Avoidance: UAI*	*Long-Term Orientation: LTO*	*Indulgence vs. Restraint: IVR*
Conservatism	+	-	-	+ +	+	-
Uniformity	+	- -	?	+ +	+	-
Professionalism	-	+ +	?	- -	-	+
Secrecy	+ +	- -	-	+ +	+	-

In the paper, Borker also proposes an IFRS favorable accounting value profile based on Gray accounting dimensions. This profile assumed that the ideal IFRS accounting value profile for a country was one characterized by a low degree of the dimensions Conservatism, Uniformity and Secrecy and a high degree of the dimension Professionalism. This translates into a profile of Optimism, Flexibility, Professionalism and Transparency. Although only published in 2013, the concept

of individual country dimensional profiles and an IFRS favorable profile are applied in several studies before and after publication (Borker, 2012b) (Borker, 2012c) (Borker, 2013b).

HYPOTHESES AND PROPOSED METHODOLOGY

Hypotheses and Assumptions

It is assumed that methodology for quantification of Gray accounting values based on Hofstede cultural values as used previously (Braun & Rodriguez, 2008) can be refined by using weighting rather than simple averaging based on more detailed specification of the relative importance of Hofstede value components from Hofstede original four dimensions to produce a more accurate set of quantitative accounting values. It is assumed that incorporating Hofstede's fifth and sixth dimensions into the weighted average computation based on expanding Gray original hypotheses will provide a fuller utilization of Hofstede dimensions relevant to Gray accounting dimensions (Borker, 2013a).

It is proposed that Gray's four accounting dimensions— Conservatism versus Optimism, Uniformity versus Flexibility, Professionalism versus Statutory Control and Secrecy versus Transparency— would be complemented by the addition of a fifth accounting value dimension reflecting the degree to which a national accounting culture embodies the value of Stewardship. Botzem argues for the importance of stewardship for IFRS, which he claims is more emphasized by IFRS than US GAAP. (Botzem, 2012) Stewardship can be defined as the responsibility for taking good care of resources entrusted to one, e.g., the boards of directors must show good stewardship towards the company for which they are a board member. Stewardship accounting obligates stewards to provide relevant and reliable financial information on the resources that they control, but are owned by others, i.e., shareholders. Stewards are also obliged to provide reliable financial information to an audit. A country with a high level of Stewardship values is assumed to be more likely to protect the interests of individual equity and credit investors. It is assumed that this is more likely to be the case in countries where there is low corruption, a lack of political risk/instability, with a high level of fairly distributed educational opportunity and a commercially progressive regulatory environment.

It is initially hypothesized that a quantitative measure of the degree of a country's stewardship dimension can be determined by averaging four quantitative scores or indices. These are:

(1) The Corruption Perception Index (CPI) provided by Transparency International, (Transparency International, 2013)

(2) An adaptation of AON's political risk ratings by which the higher a country's political risk, the lower the score it receives (AON, 2013)

(3) The United Nation's Education Index adjusted for inequalities (Malik, 2013), and

(4) The World Bank's Regulatory Index. (World Bank, 2013)

Methodology for Determining a Gray Dimension Based Composite IFRS Orientation Index and a Broader Expanded IFRS Orientation Index that Includes the Stewardship Dimension

Hofstede score data for each country are used to create quantified scores for the four accounting value dimensions cited by Gray. Three alternative calculations of the Gray Accounting dimension score are determined by computing a

(a) simple average of adjusted Hofstede scores for the original four dimensions as done. Specifically, this involved first converting scores of negatively correlated dimensions to opposite positively correlated ones vis-à-vis Gray dimensions (Braun & Rodriguez, 2008)

(b) weighted average of the adjusted Hofstede dimension scores using weights suggested by Hofstede textual comments about his hypotheses (Borker 2013), and

(c) weighted average of all six of Hofstede's dimension scores based on an expansion of Gray's model to include LTO and IVR dimensions (Borker 2013)

For each of these alternative sets of accounting dimension scores (Conservatism, Uniformity, Professionalism, and Secrecy) a Composite IFRS Orientation Index is calculated. This is done by first converting the scores for Gray dimensions that are assumed to have a negative relationship to IFRS, i.e., Conservatism, Uniformity and Secrecy, into reverse scales where high values indicate greater IFRS favorability and lower scores lower IFRS favorability. The converted scores for the four accounting dimensions are then averaged to determine the Composite IFRS Orientation Index.

Finally, the Composite IFRS Orientation Index (CIOI) is expanded to include additional stewardship factors indicated above. The indexes for these factors are averaged, and that average weighted together with the Gray Value derived CIOI on a 20%/80% basis to establish a broader Expanded IFRS Orientation Index in which stewardship is given a 20% weight.

RESULTS FROM TESTING THE METHODOLOGY

The above computations are performed on a sample of selected countries to assess the usefulness and implications of the methodology. The sample country

list consists of the following countries represented in Table 2 alongside the respective Hofstede value scores for six cultural dimensions.

Table 2
World Sample List with Hofstede Value Scores

	PDI	*IDV*	*MAS*	*UAI*	*LTO*	*IVR*
Australia	36	90	61	51	21	71
Bangladesh	80	20	55	60	40	20
Brazil	69	38	49	76	44	59
China	80	20	66	40	118	24
England (UK)	35	89	66	35	51	69
France	68	71	43	86	63	48
Germany	35	67	66	65	83	40
India	77	48	56	40	61	26
Iraq	95	30	70	85	30	17
Italy	50	76	70	75	61	30
Japan	54	46	95	92	88	42
Korea (South)	60	18	39	85	100	29
Nigeria	80	30	60	55	16	84
Pakistan	55	14	50	70	50	0
Romania	90	30	42	90	52	20
Russia	93	39	36	95	81	20
Spain	57	51	42	86	48	44
Sweden	31	71	5	29	53	78
Turkey	66	37	45	85	46	49
United States	40	91	62	46	26	68

RESULTS OF APPLYING THE METHODOLOGY TO A SAMPLE SELECTED COUNTRY LIST

The results of applying the methodology to the sample set of twenty countries are summarized in Figures 4 through 8. Table 3 develops indices for each Gray accounting value dimension based on the three alternative methods of averaging the Hofstede dimension values already described.

Figures 5 and 6 show a Composite IFRS Orientation Index value for each of the sample countries based on an average of modified Gray accounting dimension index scores. Gray dimension scores have been modified so that for each dimension, a higher score indicates greater IFRS orientation as already described. The Index values and modified Gray dimension values summarized in Table 4 are based on Gray dimensions from the three alternative methods of averaging Hofstede dimension values. Table 5 summarizes the index values in the last column of Table 4 with a ranked listing of the twenty sample countries under each of the three alternative averaging methods. Table 6 shows an Expanded IFRS Orientation Index for each country including four Stewardship factor components followed by a ranked listing of countries in Table 7.

Table 3
Gray Accounting Dimension Scores using A, B, and C computations

	Conservatism A / B / C	*Uniformity* A / B / C	*Professionalism* A / B / C	*Secrecy* A / B / C
Australia	33 / 55 / 58	38 / 53 / 57	77 / 61 / 51	33 / 52 / 55
Bangladesh	63 / 62 / 60	70 / 67 / 64	46 / 47 / 44	63 / 66 / 63
Brazil	61 / 63 / 59	65 / 62 / 59	50 / 52 / 49	61 / 59 / 57
China	55 / 52 / 64	63 / 59 / 69	52 / 55 / 39	55 / 58 / 66
England (UK)	25 / 27 / 30	23 / 21 / 25	92 / 93 / 82	25 / 24 / 27
France	56 / 62 / 60	57 / 55 / 54	58 / 59 / 53	56 / 57 / 56
Germany	38 / 44 / 50	41 / 42 / 49	75 / 72 / 59	38 / 39 / 45
India	50 / 48 / 52	53 / 48 / 52	63 / 66 / 56	50 / 51 / 54
Iraq	66 / 70 / 65	80 / 76 / 69	36 / 38 / 38	66 / 72 / 68
Italy	41 / 48 / 52	46 / 45 / 50	69 / 69 / 58	41 / 43 / 47
Japan	48 / 57 / 60	63 / 65 / 66	52 / 49 / 42	48 / 54 / 57
Korea (South)	68 / 72 / 74	72 / 74 / 76	43 / 40 / 32	68 / 70 / 72
Nigeria	58 / 57 / 44	65 / 57 / 47	51 / 53 / 61	58 / 61 / 61
Pakistan	62 / 63 / 65	67 / 69 / 69	49 / 45 / 38	62 / 64 / 65
Romania	73 / 77 / 72	80 / 77 / 73	36 / 37 / 35	73 / 76 / 73
Russia	75 / 79 / 78	79 / 76 / 76	36 / 38 / 31	75 / 77 / 77
Spain	59 / 64 / 60	60 / 61 / 57	55 / 53 / 51	59 / 59 / 57
Sweden	42 / 40 / 38	26 / 25 / 27	89 / 89 / 81	42 / 35 / 35
Turkey	64 / 68 / 61	68 / 68 / 61	48 / 46 / 47	64 / 65 / 61
United States	30 / 33 / 30	28 / 25 / 25	87 / 89 / 83	30 / 29 / 28

Table 4
Composite IFRS Orientation Index with Adjusted Gray Dimensional Components (A, B. C)

	IFRS Orientation Composite Index A, B, and C versions				
	Conservatism A / B / C	*Uniformity* A / B / C	*Professionalism* A / B / C	*Secrecy* A / B / C	*IFRS Index* A / B / C
Australia	78 / 74 / 66	76 / 70 / 63	77 / 70 / 64	77 / 76 / 70	77 / 73 / 66
Bangladesh	49 / 53 / 48	45 / 46 / 43	46 / 47 / 44	47 / 46 / 44	47 / 48 / 44
Brazil	50 / 51 / 51	49 / 49 / 50	50 / 50 / 51	49 / 49 / 50	50 / 50 / 51
China	56 / 63 / 44	51 / 54 / 38	52 / 55 / 39	55 / 53 / 41	54 / 56 / 41
England (UK)	86 / 88 / 78	91 / 92 / 82	92 / 93 / 82	85 / 87 / 80	88 / 90 / 81
France	55 / 53 / 48	57 / 58 / 52	58 / 59 / 53	54 / 55 / 51	56 / 56 / 51
Germany	73 / 71 / 58	74 / 72 / 58	75 / 72 / 59	72 / 71 / 58	73 / 72 / 59
India	62 / 67 / 56	62 / 66 / 56	63 / 66 / 56	60 / 61 / 54	62 / 65 / 55
Iraq	45 / 45 / 43	35 / 37 / 37	36 / 38 / 38	44 / 40 / 40	40 / 40 / 40
Italy	70 / 67 / 56	68 / 68 / 57	69 / 69 / 58	69 / 69 / 60	69 / 68 / 58
Japan	64 / 58 / 48	51 / 49 / 41	52 / 49 / 42	62 / 58 / 50	57 / 54 / 45
Korea (South)	43 / 43 / 34	42 / 39 / 31	43 / 40 / 32	42 / 42 / 35	43 / 41 / 33
Nigeria	54 / 58 / 64	50 / 52 / 60	51 / 53 / 61	52 / 51 / 58	52 / 53 / 60
Pakistan	33 / 35 / 43	28 / 29 / 38	29 / 30 / 38	32 / 30 / 42	31 / 31 / 40
Romania	38 / 38 / 36	35 / 36 / 34	36 / 37 / 35	37 / 36 / 34	36 / 37 / 35
Russia	37 / 36 / 30	35 / 37 / 30	36 / 36 / 31	35 / 35 / 31	36 / 36 / 31
Spain	52 / 51 / 48	54 / 52 / 50	55 / 53 / 51	51 / 52 / 50	53 / 52 / 50
Sweden	69 / 75 / 70	88 / 88 / 80	89 / 89 / 81	68 / 76 / 72	79 / 82 / 76
Turkey	48 / 47 / 47	47 / 45 / 46	48 / 46 / 47	46 / 46 / 47	47 / 46 / 47
United States	82 / 82 / 77	86 / 88 / 82	87 / 89 / 83	80 / 83 / 79	84 / 85 / 80

Table 5
Composite IFRS Orientation Index Rankings by A, B, and C scenarios

	A Gray Based IFRS Index		B Gray Based IFRS Index		C Gray Based IFRS Index	
England (UK)	88	England (UK)	90	United States	80
United States	84	United States	85	England (UK)	81
Sweden	79	Sweden	82	Sweden	76
Australia	77	Australia	73	Australia	66
Germany	73	Germany	72	Germany	59
Italy	69	Italy	68	Italy	58
India	62	India	65	France	51
Japan	57	China	56	Spain	50
France	56	France	56	Japan	45
China	54	Japan	54	Nigeria	60
Spain	53	Nigeria	53	India	55
Nigeria	52	Spain	52	Brazil	51
Brazil	50	Brazil	50	Turkey	47
Turkey	47	Bangladesh	48	China	41
Bangladesh	47	Turkey	46	Bangladesh	44
Korea (South)	43	Korea (South)	41	Korea (South)	33
Iraq	40	Iraq	40	Romania	35
Romania	36	Romania	37	Pakistan	40
Russia	36	Russia	36	Russia	31
Pakistan	31	Pakistan	31	Iraq	40

Table 6
Expanded IFRS Orientation Index including Stewardship Components
(A, B, and C Weightings)

	Gray Based IFRS Index 80% A / B / C	Corruption 5%	Political Risk 5%	Education 5%	Regulation Index 5%	Expanded Composite IFRS Orientation Index A / B / C
Australia	77 / 73 / 66	91	90	97	96	80 / 77 / 71
Bangladesh	47 / 48 / 44	28	70	25	8	44 / 45 / 42
Brazil	50 / 50 / 51	46	70	50	7	48 / 48 / 49
China	54 / 56 / 41	42	50	86	36	54 / 56 / 43
England (UK)	88 / 90 / 81	80	90	81	98	88 / 90 / 82
France	56 / 56 / 51	76	90	79	78	61 / 61 / 57
Germany	73 / 72 / 59	85	90	93	89	76 / 75 / 65
India	62 / 65 / 55	39	70	26	6	56 / 59 / 51
Iraq	40 / 40 / 40	19	-10	33	-19	33 / 33 / 33
Italy	69 / 68 / 58	45	90	84	50	69 / 68 / 60
Japan	57 / 54 / 45	80	90	86	86	63 / 60 / 53
Korea (South)	43 / 41 / 33	60	90	70	98	50 / 49 / 42
Nigeria	52 / 53 / 60	29	10	25	7	45 / 46 / 52
Pakistan	31 / 31 / 40	29	-10	22	24	28 / 28 / 35
Romania	36 / 37 / 35	47	70	78	74	42 / 43 / 41
Russia	36 / 36 / 31	30	50	78	21	38 / 38 / 33
Spain	53 / 52 / 50	70	90	82	71	58 / 57 / 56
Sweden	79 / 82 / 76	95	90	93	94	81 / 84 / 79
Turkey	47 / 46 / 47	53	90	44	51	50 / 49 / 49
United States	84 / 85 / 80	78	90	94	101	85 / 86 / 82

Table 7
Expanded IFRS Orientation Composite Index Rankings by A, B, and C scenarios

	A Expanded Composite IFRS Index		*B Expanded Composite IFRS Index*		*C Expanded Composite IFRS Index*
England (UK)	88	England (UK)	90	United States	82
United States	85	United States	86	England (UK)	82
Sweden	81	Sweden	84	Sweden	79
Australia	80	Australia	77	Australia	71
Germany	76	Germany	75	Germany	65
Italy	69	Italy	68	Italy	60
Japan	63	France	61	France	57
France	61	Japan	60	Spain	56
Spain	58	India	59	Japan	53
India	56	Spain	57	Nigeria	52
China	54	China	56	India	51
Korea (South)	50	Turkey	49	Brazil	49
Turkey	50	Korea (South)	49	Turkey	49
Brazil	48	Brazil	48	China	43
Nigeria	45	Nigeria	46	Bangladesh	42
Bangladesh	44	Bangladesh	45	Korea (South)	42
Romania	42	Romania	43	Romania	41
Russia	38	Russia	38	Pakistan	35
Iraq	33	Iraq	33	Russia	33
Pakistan	28	Pakistan	28	Iraq	33

DISCUSSION

The scores for the Composite IFRS Orientation Index and the Expanded IFRS Orientation Index form a distinct array in which the Anglo-American countries, Sweden and Germany are at the high end and Russia, Romania, Pakistan and other developing countries at the low end. This general pattern is not surprising, based on earlier evaluations of the closeness of individual country accounting cultural profiles to a posited favorable IFRS profile. (Borker, 2012b) (Borker, 2012c) (Borker, 2013b) There are, however, some interesting differences in scores and resultant rankings due to (1) the impact of the three averaging methods used to derive the underlying Gray dimension scores and (2) the inclusion of the four stewardship dimension factors used in calculation of the expanded orientation index.

Impact of the A, B, and C Averaging Methods on the Composite IFRS Orientation Index

For the Gray dimension based IFRS Index, scores resulting from the A and B averaging methods resulted in the fewest changes in relative score rankings for the twenty country sample list. Twelve of these countries had an identical ranking

under both methods, and the remaining countries consisted of four pairs of countries that were consecutively ranked under A and simply exchanged rankings under B. Absolute changes in scores by country ranged from 0 to 4, with an average absolute change of 1.58. These changes reflect the differences in emphasis of certain Hofstede original four dimensions in relationship to the accounting dimensions noted by Gray himself. (Gray, 1988) (Borker, 2013a).

Changes in ranking and raw scores for individual countries when using the B and C averaging methods were more extreme. Only seven countries maintained the same ranking and those that changed ranking did so more widely. Absolute changes in scores by country were higher than between A and B, ranging from 0 to 16, with an average absolute change of 6.49. These changes reflect the inclusion of Hofstede's LTO and IVR dimensions into the averages, inputs that were not available to Gray. (Borker, 2013a) The C method had the greatest unfavorable incremental impact on the scores of China and Germany (-16 and -13, respectively), which have relatively high LTO Hofstede dimension scores. The most favorable impact (+9) was experienced by Pakistan.

Impact of Four Stewardship Factors on Expanded IFRS Orientation Index

To measure the impact on the Expanded IFRS Orientation Index of including the four factors associated with Stewardship, it is best to compare the B weighted version, as this version is more consistent with Gray but excludes the effects of Hofstede LTO and IVR dimensions. A comparison of the Expanded and Composite IFRS Orientation Index shows us that the inclusion of the Stewardship factors results in both increases and decreases in in scoring over the purely Gray based composite index. France, Japan, Spain, Korea, and Romania all received significantly higher scores using the expanded index (increase > 5%) and improved in relative ranking within the total sample group by 1 to 2 rank positions. In contrast, Iraq, Pakistan, India, Bangladesh and Nigeria received significantly lower scores (decrease > 5%), causing all but bottom ranked Pakistan to go down in ranking by 2 to 4 rank positions. China had no change in score under the Expanded IFRS Orientation Index, but declined in the rankings by three positions due to ranking improvements of other countries. China, with the highest LTO score, is most negatively impacted by C weighting. This is also the case with Germany.

Implications of the Methodology in Light of Sample Country Testing

Application of the methodology for developing the Composite IFRS Orientation Index for individual countries provides a useful quantitative measure of a country's favorable cultural predisposition toward accounting systems, and standards like IFRS, based on Gray's accounting dimensions. The B weighted variant provides a measure most in line with Gray's own hypotheses and accompanying observations. The C weighted versions includes assumed relationships between two later

developed Hofstede cultural value dimensions (LTO and IVR) that were not available to Gray at the he developed his hypotheses. These dimensions have been associated with IFRS orientation on the basis of the index scores for these dimensions among the Anglo-American countries, a group most closely associated with the accounting values of IFRS. (Borker, 2013a) Although the Anglo-American countries generally have fairly low LTO scores and can be characterized as having a short-term, bottom line orientation, this does not necessarily tell us whether this is an important part of IFRS orientation or just an accompanying characteristic of the Anglo-American countries. It can be argued that such an orientation is consistent with an interest in securities markets, where the reporting of current and recent earnings is given great importance as data for the valuation of publically traded equity securities. On the other hand, high LTO does not necessarily indicate a disregard for issues of current profits and losses. Historically, the Chinese, certain Buddhist nations like Thailand,and some European countries, have had a strong long-term orientation that has supported good planning and the persistent pursuit of long-term economic goals at the family, business or national level. At the same time, these cultures have supported business and trading practices focused on current profits. In the twenty country test sample, eleven countries have LTO scores greater than 50. These countries are China (118), France (63), Germany (83), India (61), Italy (61), Japan, (88), South Korea (100), Romania (52), Russia (81), Sweden (53) and United Kingdom (51). The UK and Sweden rank in the top three for IFRS orientation and, admittedly, have only moderate LTO scores. One might, therefore, question whether this strength is really at odds with IFRS values. In light of the effect of including LTO/IVR upon the sample country group, it may be desirable to withhold judgment on the validity of C weighted country data, pending further analysis.

Application of the methodology for developing the Expanded IFRS Orientation Index for individual countries incorporates valuable inputs relating to education, political and socioeconomic stability and ethical integrity which may be associated with the accounting value dimension of Stewardship. The up and downshifts in scores and ranking due to the inclusion of these factors provide an opportunity for some degree of balance between cultural values favoring the Anglo-American countries and other values distribut more widely among the world's nations. The results for the twenty country sample group indicate, however, that the Stewardship factors appear to affect countries differentially with respect to level of economic development and geographic region. Of the five countries receiving significantly higher scores due to Stewardship, three were European and all but one had developed economies, the exception being Romania that is an emerging economy. Of the five countries receiving significantly lower scores due to Stewardship, all were African or Asian developing/emerging economies with high levels of poverty.It is not surprising that the latter group provides conditions ripe for corruption, political instability and a lower level of mass education.

The use of both of the above indices provide an opportunity to quantify where special efforts may be needed to support the successful long term implementation of IFRS and comparably high level reporting standards. The general scores and underlying components of the Composite IFRS Orientation Index and the Expanded IFRS Orientation Index sociocultural accounting value analysis can help to identify and diagnose likely problems requiring a variety of solutions, including

- Establishing culturally sensitive education and professional training programs
- Establishing culturally focused upgrade programs for existing accounting professionals
- Empowering national accounting standard setting bodies to integrate the values of professionalism, flexibility, optimism and transparency into their professional activities
- Setting realistic timeframes and deadlines for the transition to IFRS to allow the local accounting culture to catch up with new IFRS reforms
- Establishing a comprehensive change management program for accounting professionals, businesses, government and the public with the necessary change management tools to make a successful transition.
- Creating robust support infrastructures for IFRS implementation(Borker, 2013a) (Borker, 2012a)

It must be kept in mind that the Composite IFRS Orientation Index and the Expanded IFRS Orientation Index are simply sociocultural diagnostic tools that do not take into account a variety of external and internal influences that can affect the implementation of IFRS. Thus, Iraq, in spite of its low index scores and rankings claims to have fully implemented IFRS, due no doubt to the strong influence of the United States during and after its occupation of Iraq. What the sociocultural feedback tells us is that the long-term success of IFRS based rule making and financial reporting within a country requires strong training and infrastructure building and the establishment of political, social and economic stability.

CONCLUSION

This study set out to develop a quantitative diagnostic index that reflects a country's degree of favorable orientation to IFRS based upon culturally derived values and other country data. The Composite IFRS Orientation Index and the Expanded IFRS Orientation Index serve as a useful diagnostic tool to measure a country's level of orientation toward IFRS that is grounded in culturally based values developed by Hofstede and Gray. These methodologies have been tested by applying them to a twenty-country worldwide sample and the results appear to be in line with previous work in this area. The development of two IFRS orientation indices marks an important step in classifying and diagnosing

opportunities for improvement in the continuing proliferation of IFRS throughout the world. Also, the Expanded IFRS Orientation Index opens up the opportunity to integrate the accounting value of Stewardship with the four recognized cultural accounting dimensions of Conservatism, Uniformity, Professionalism and Secrecy.

There are two directions for further research in this area. First, the current methodology needs to be applied to a broader base of countries in various regions of the world to test its effectiveness in offering meaningful insights into specific relationships and problems of financial reporting around the world. The only limitation to the scope of these studies is the number of countries for which Hofstede cultural value data is available. It is hoped that competent survey work will fill in existing gaps to expand that horizon. Second, the existing methodology needs to be scrutinized to determine optimal dimensional weightings and other issues raised in this study. This includes the issue of whether Hofstede's Long-term Orientation (LTO) and Indulgence versus Restraint (IVR) dimensions as used in this study are reliable indicators of IFRS orientation. It also includes the task of finding the optimal set of country-specific socio-cultural factors to serve as indicators of the Stewardship accounting dimension.

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