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Improving on the Kogut and Singh metric of psychic distance

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Improving on the Kogut and Singh metric of psychic distance

Abstract

Purpose – The purpose of this study is to examine the applicability of the Kogut and Singh (1988) index to the psychic distance scales of Dow and Karunaratna (2006). This is in response to recent scholarly articles that have used the Kogut and Singh (1988) index in combination with the scales of Dow and Karunaratna (2006) in order to calculate composite psychic distance scores.

Design/methodology/approach – We review the literature on the measurement of psychic distance, in particular with regard to the empirical usage of the scales of Dow and Karunaratna (2006). In addition, we develop a new approach to calculate aggregate psychic distance scores.

Findings – Our findings indicate that the Kogut and Singh (1988) index is not appropriate to use in combination with the psychic distance scales of Dow and Karunaratna (2006). We propose an alternative methodology for calculating aggregate psychic distance scores which involves standardizing the raw scores of the psychic distance dimensions of Dow and Karunaratna (2006) and establishing summated scales.

Originality/value – The study contributes to the literature by proposing an alternative methodology for the psychic distance scales of Dow and Karunaratna (2006) rather than the Kogut and Singh (1988) index. In light of the prominence of these two influential and widely-cited articles, our commentary challenges the notion of calculating psychic distance.

Keywords psychic distance, Dow and Karunaratna (2006), Kogut and Singh (1988), cultural distance, methodology, index

Paper type Research paper

Introduction

The concepts of psychic distance and its related cousin cultural distance have received considerable attention in the international business literature over the last five decades (Drogendijk and Zander, 2010; Evans and Mavondo, 2002; Tihanyi *et al.*, 2005).

According to Dow and Karunaratna (2006, p. 578), psychic distance is “one of the most commonly cited, yet vaguely measured, constructs within the realm of international business research”. Originally coined in the 1950s to explain trade patterns among nations (Beckerman, 1956), Johanson and Vahlne (1977, p. 24) were the first to conceptualize psychic distance in the management literature defining it as

the sum of factors preventing the flow of information from and to the market. Examples are differences in language, education, business practices, culture, and industrial development.

The notion of psychic distance is a central aspect in the stages model of internationalization developed by the Uppsala School in the 1970s (Johanson and Wiedersheim-Paul, 1975; Johanson and Vahlne, 1977). The stages model has its influences in behavioral theory (e.g. Cyert and March, 1963) and holds that firms generally start to internationalize to “psychically close” countries in order to gain experiential knowledge and avoid risks. As the firms gain more experiential knowledge, they tend to progress to “psychically distant” countries through gradual internationalization starting from exporting operations to establishing a wholly-owned manufacturing subsidiary. The analogy of “rings in the water” has been used to describe this incremental internationalization process (Madsen and Servais, 1997, p. 561). Thus, according to the stages model, decisions are based on bounded rationality, and the concepts of experiential learning and companies’ risk-averse behavior associated with psychic distance shape the internationalization process of firms. It has been argued that psychic distance (and distance, in general) may explain why MNEs

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3 focus on regional rather than global markets due to the increasing costs associated
4 with accessing global competitiveness (Rugman and Verbeke, 2004; Rugman *et al.*,
5 2012).
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10 Psychic distance has been examined in various contexts to explain
11 international market selection (e.g. Johanson and Vahlne, 1977; Dunning and Bansal,
12 1997; Ellis, 2007; Hoffman *et al.*, 2008; Sun, 2009), trade flows among countries (e.g.
13 Dow and Karunaratna, 2006), foreign direct investment decisions (e.g. Blomkvist and
14 Drogendijk, 2013), organizational performance (e.g. O'Grady and Lane, 1996; Evans
15 *et al.*, 2008) and entry mode choice (e.g. Kogut and Singh, 1988; Torres *et al.*, 2012).
16
17 In addition, the relevance of psychic distance has been investigated for different types
18 of firms, such as born globals, which are defined as companies that internationalize
19 early and rapidly after their inception, thereby deriving a large share of their total
20 sales from international markets (e.g. Crick and Jones, 2000; Bell *et al.*, 2004; Rialp *et*
21 *al.*, 2005; Jones *et al.*, 2011; Freeman *et al.*, 2012). Since Johanson and Vahlne's
22 (1977) work, various attempts at operationalizing psychic distance have been brought
23 forward by scholars, including objective, macro-level indicators of psychic distance
24 (e.g. Dow and Karunaratna, 2006; Brewer, 2007), subjective, perception-based,
25 individual-level psychic distance scales (e.g. Evans and Mavondo, 2002; Sousa and
26 Bradley, 2006; Evans *et al.*, 2008; Child *et al.*, 2009), and a combination of both
27 subjective and objective indicators (e.g. Jenkins and Mockaitis, 2010). In the context
28 of psychic distance, the literature has tended to predominantly adopt the Kogut and
29 Singh (1988) index in combination with Hofstede's (1980) cultural values in order to
30 operationalize psychic distance (Tihanyi *et al.*, 2005; Ojala and Tyrväinen, 2007;
31 Dow and Larimo, 2011). To account for the multidimensionality of psychic distance,
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3 Dow and Karunaratna (2006) recently developed scales involving differences in
4 language, religion, industrial development, education and political system.
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7 The key purpose of this study is to propose an alternative methodology for the
8 psychic distance scales of Dow and Karunaratna (2006) instead of using the Kogut
9 and Singh (1988) index. This is in direct response to several recent scholarly articles
10 that have applied the Kogut and Singh (1988) index in combination with the scales of
11 Dow and Karunaratna scales when calculating psychic distance (e.g. Blomkvist and
12 Drogendijk, 2013; Dow and Ferencikova, 2010; Ojala and Tyrväinen, 2009).
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20 The study is organized as follows. The literature review is presented in the
21 next section, followed by the research methodology. Finally, we outline the key
22 conclusions of the study and offer potential avenues for future research.
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28 **The concept of psychic distance**

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30 The extant literature tends to have equated cultural distance with psychic distance,
31 thus using the two terms interchangeably (e.g. Dow and Karunaratna, 2006; Sousa and
32 Bradley, 2006; Chapman *et al.*, 2008). In doing so, the national-level cultural values
33 by Hofstede (1980) (i.e. individualism, power distance, masculinity and uncertainty
34 avoidance) have often been used in order to operationalize psychic distance
35 (Hakanson and Ambos, 2010; Drogendijk and Zander, 2010).
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44 Kogut and Singh (1988) developed a composite, formative index to calculate
45 cultural distance using Hofstede's values. Subsequent studies have predominantly
46 used the cultural distance scales from Hofstede (1980) as a proxy for psychic distance
47 and calculated a composite index based on Kogut and Singh (1988). For example,
48 Tihanyi *et al.* (2005) found that 55 out of 66 reviewed studies have adopted the Kogut
49 and Singh (1988) index of Hofstede's scales as the single indicator of psychic distance.
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51 This is consistent with Dow and Larimo (2011) who found that 87% of their reviewed
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3 papers have used the Kogut and Singh (1988) index as the sole criterion to
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5 operationalize psychic distance. However, Hofstede's scales have been criticized for
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7 being too narrow and only capturing the cultural aspect of psychic distance without
8
9 considering other key areas, such as political and educational issues (Shenkar, 2001).
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11 For example, O'Grady and Lane (1996) argued for an expanded definition of psychic
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13 distance by including other factors, such as industry structure and the competitive
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15 environment. Similarly, Child *et al.* (2009, p. 202) found support for a
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17 multidimensional operationalization of psychic distance arguing that "a uni-
18
19 dimensional emphasis on culture as an explanatory variable limits our understanding
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21 of other cross-national differences and their potential relevance to firm
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23 internationalization". Harzing (2003) suggested including language and institutional
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25 differences in operationalizing psychic distance. Arguing that "the operationalization
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27 of psychic distance would be better if it were based more broadly on the level of
28
29 familiarity between firm and country market" (p. 47), Brewer (2007) recommended
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31 operationalizing psychic distance by including commercial, political, historic, social,
32
33 and information ties between countries as well as level of development. Thus, the
34
35 focus of Brewer's (2007) operationalization lies in the familiarity of managers with
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37 markets rather than perceptions of differences between countries. In this regard, Smith
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39 *et al.* (2011) argued that differences in perceptions of psychic distance may not
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41 necessarily equate with "difficulty", such that managers from a developing country
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43 may have a large psychic distance to a developed country; yet, despite its difference,
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45 the business environment in the developed country may be more favorable than in the
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47 manager's home developing country. As a result, the perceived level of *difficulty* that
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49 arises from differences leads to psychic distance according to Smith *et al.* (2011).
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3 Other authors argued that cultural distance may not equate with psychic
4 distance. For example, Nordström and Vahlne (1994) found that cultural and psychic
5 distance may measure different things such that countries which were relatively
6 distant according to Hofstede's cultural dimensions were interpreted by Swedish
7 managers as psychically close. In this respect, Shenkar (2001) noted several criticisms
8 of cultural distance in terms of conceptual and methodological properties, such as the
9 "illusion of symmetry" (i.e. distance from country A to B is not necessarily equal to
10 distance from country B to A), the "illusion of stability" (i.e. culture is not static, but
11 changes over time), the "illusion of linearity" (i.e. impact of cultural distance on
12 investment, entry mode and performance is not linear, but may be non-linear), the
13 "illusion of causality" (i.e. culture may not be the only determinant of distance in
14 terms of FDI, but there may be other factors, such as market size and political
15 instability), and the "illusion of discordance" (i.e. cultural differences may not always
16 be negatively impacting on investment and performance, but may have
17 complementary and synergistic, positive effects on performance). In a retrospective,
18 Shenkar (2012) reviewed the use of cultural distance and concluded that academic
19 studies have generally not appropriately considered the shortcomings of cultural
20 distance research that were raised in his initial 2001 article. Shenkar (2012)
21 recommended a shift from the concept of "distance" to the notion of "friction" as this
22 captures more suitably the intangible and complex nature of culture. In addition,
23 Shenkar (2012) suggested widening the narrow economic view of institutions by
24 incorporating insights from other areas, such as sociology and political science, as it
25 allows an interdisciplinary approach to studying cultural differences.

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Ghemawat (2001) broadened the academic discussion on distance by
examining issues beyond cultural factors. Adopting exogenous country-level factors,

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3 Ghemawat (2001) developed the CAGE framework which helps to examine distance
4 between countries along multiple dimensions, including cultural,
5 administrative/political, geographic and economic variables. Contrary to “the world is
6 flat” hypothesis popularized by Thomas Friedman (2005), Ghemawat (2001) argued
7 that the world is characterized by incomplete cross-border integration (i.e. “semi-
8 globalization”), a concept which is similar to the regionalization effect advanced by
9 Rugman and Verbeke (2004). Ghemawat (2001) provided ample empirical evidence
10 for “semi-globalization” and concluded that “distance still matters” implying that
11 companies need to explicitly account for it when making decisions to go international
12 (p. 138). This conclusion is in stark contrast to the “flat world” scenario by Friedman
13 (2005) where distance is irrelevant. One key contribution of the CAGE framework is
14 its integrative nature in that it allows the examination of not only unilateral attributes
15 of countries (as used for example by the global competitiveness index of the World
16 Economic Forum), but also bilateral measures of distance. The CAGE framework
17 yields several practical implications, such as a better understanding of the liability of
18 foreignness and a comparison of international markets for companies (Ghemawat,
19 2001, 2007). In essence, the CAGE framework helps to answer the fundamental IB
20 question of “Why do countries differ?” (Ricart *et al.*, 2004).

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43 Rugman (1981) originally developed the CSA/FSA matrix related to country-
44 specific advantages (CSAs) (e.g. availability of raw material and labor) and firm-
45 specific advantages (FSAs) (e.g. proprietary firm assets and capabilities) which
46 explain an MNE’s outward foreign direct investment (FDI). This matrix was later
47 popularized in Rugman and Collinson (2012). The country-specific advantages
48 (CSAs) are similar to the exogenous country-level factors of Ghemawat’s (2001)
49 CAGE framework, while the firm-specific advantages (FSAs) are consistent with
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3 internalization theory (Rugman, 2010). CSAs interact with FSAs, and MNEs are able
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5 to overcome the liability of foreignness in international markets through leveraging
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7 their unique FSAs. The CSA/FSA matrix can be partly reconciled with the eclectic
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9 paradigm of Dunning (1980) (also known as the OLI-paradigm). One difference is
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11 that the CSA/FSA framework is applicable for MNE strategies in both home and host
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13 countries, while the eclectic paradigm of Dunning (1980) focuses on outward FDI into
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15 the host country only (Rugman, 2010).
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19 In the context of psychic distance, the related notion of institutional distance
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21 should be mentioned. Defining institutional distance as “the difference/similarity
22
23 between the regulatory, cognitive, and normative institutions of two countries” (p. 71),
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25 Kostova and Zaheer (1999) proposed that the greater the institutional distance
26
27 between the home and host country of a multinational enterprise (MNE), the greater
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29 the challenge will be for the MNE subsidiary to establish and maintain its legitimacy
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31 in that host country. Xu and Shenkar (2002) argued that institutional distance may
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33 provide an alternative explanation for MNE behavior. Thus, they suggested that
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35 institutional distance complements cultural distance in providing a comprehensive
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37 assessment of the environment for MNEs’ foreign market entry strategy and
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39 international market selection. Slangen and Van Tulder (2009) raised the issue that
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41 governance quality of foreign countries serves as a predictor for the choice of MNE
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43 entry mode (i.e. joint venture versus wholly-owned subsidiary). In addition, it has
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45 been argued that institutional distance between home and host country of the foreign
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47 investor may generate positive FDI spillover effects (Dunning, 2007; Dunning and
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49 Fortanier, 2007). Drawing on business ethics and stakeholder theory, Van Tulder
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51 (2010) noted that future research on distance in international business would benefit
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53 from focusing on “normative” (or “development”) “distance” and “stakeholder
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3 distance". Van Tulder (2010) proposed that the greater the development distance
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5 between the home and host country of a company is, the greater the ethical dilemmas
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7 are and, thus, the bigger the need for an integrated approach to managing corporate
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9 social responsibilities for the MNE. In terms of stakeholder distance, Van Tulder
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11 (2010) noted the diverging interests of a variety of home and host country
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13 stakeholders (in particular, owners/shareholders, employees, suppliers, and
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15 government), and identified the need for an MNE to appropriately coordinate these
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17 often conflicting interests. Consistent with the above-mentioned operationalizations of
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19 psychic distance that go beyond cultural factors, institutional distance is generally
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21 viewed as broader in scope than Hofstede's (1980) cultural dimensions.
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25 When reviewing the IB literature, it seems appropriate to comment on the unit
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27 of analysis in distance research. The majority of IB scholars have generally focused
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29 on the individual country as the main unit of analysis (e.g. measuring the distance of
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31 country A to country B). However, according to Rugman and Verbeke (2004, 2007,
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33 2008), this may not necessarily fully reflect the business activities of MNEs which
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35 frequently adopt a regional focus (e.g. through regional geographic divisions).
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37 Rugman and Verbeke (2008) argued that industry competition increasingly occurs at
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39 the regional level rather than the national level. Thus, in order to better account for the
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41 regional strategies of MNEs, it may be fruitful to shift research attention away from
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43 the individual country and move towards the region as the unit of analysis. For
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45 example, examining the regions in the Triad of European Union (EU), NAFTA zone
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47 and Asia may improve our knowledge on factors that impact on psychic distance and
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49 the regional strategies of MNEs (e.g. Rugman and Verbeke, 2004). Being home to
50
51 most large MNEs in the world, the Triad region could be a suitable research setting as
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53 it is the location where the majority of new business innovations occur and where
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3 there is the core of world demand for knowledge-intensive products and services
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5 (Rugman and Verbeke, 2008; Crick, 2009).
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8 **The psychic distance scales of Dow and Karunaratna (2006)**

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10 Following a similar rationale as Shenkar (2001), Dow and Karunaratna (2006)
11 emphasized the importance of the multidimensionality of psychic distance by
12 developing a range of psychic distance stimuli, including differences in language,
13 religion, education, industrial development, and political systems. The authors found
14 empirical support for psychic distance stimuli serving as predictors of trade flows
15 among 38 nations, whereas cultural distance as operationalized by Hofstede's
16 dimensions was not a statistically significant driver. Dow and Karunaratna (2006)
17 developed their scales based on macro-level indicators, which were sourced from
18 various, reputable secondary references, such as the United Nations and CIA World
19 Factbook.
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33 The key strengths of the scales of Dow and Karunaratna (2006) lie in their
34 scope and comprehensiveness by considering the multidimensionality of psychic
35 distance instead of solely relying on cultural distance as a proxy of psychic distance.
36 In addition, the relatively large number of countries (i.e. 120) and the sound research
37 methodology underpinning the study strengthen the validity of the scales. The scales
38 of Dow and Karunaratna (2006) have received considerable attention in the literature
39 (see for example, Blomkvist and Drogendijk, 2013), and have been empirically used
40 in subsequent studies, often in combination with the Kogut and Singh (1988) index
41 (Blomkvist and Drogendijk, 2013; Dow and Ferencikova, 2010; Ojala and Tyrväinen,
42 2009). However, this combination is flawed as we will outline in the following section.
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An alternative methodology for the scales of Dow and Karunaratna (2006)

In a recent study on FDI flows into Slovakia, Dow and Ferencikova (2010) applied the Dow and Karunaratna (2006) scales, and used the following aggregate index to calculate the psychic distance scores between different countries:

$$PD_{DK} = \sum_{k=1}^5 (I_{ijk})^2 V_k / 5$$

where I_{ijk} is the distance between countries i and j for the k th dimension of psychic distance, and V_k is the variance of the k th dimension of psychic distance across 120 countries. This formula is consistent with the Kogut and Singh (1988) composite index.

However, we argue that this methodology leads to incorrect results and is, therefore, not appropriate. The following example based on the psychic distance differences between Australia-New Zealand and Australia-Japan illustrates this. The factor scores for each of the psychic distance dimensions of Dow and Karunaratna (2006) are publicly available on Douglas Dow's research website (Dow, 2013). Table 1 shows the individual psychic distance scores from Dow and Karunaratna (2006) for the two country pairs Australia-New Zealand and Australia-Japan.

 Table 1 about here

Table 1 shows that the level of psychic distance between Australia and New Zealand (2.314) is larger than between Australia and Japan (0.407), which is clearly incorrect. Australia and New Zealand share the same English language, and are generally very similar in terms of their religion, industrial development, education, and political system (CIA World Factbook, 2013). In contrast, the psychic distance

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3 between Australia and Japan is expected to be comparably larger, primarily due to
4 differences in language (e.g. English vs. Japanese) and religion (e.g. Christianity vs.
5 Buddhism) (CIA World Factbook, 2013). The reason for this inaccuracy in psychic
6 distance scores lies in the application of the Kogut and Singh (1988) index to the
7 scores of Dow and Karunaratna (2006). Thus, looking at the individual components of
8 the Kogut and Singh (1988) index, we can shed light on this issue. According to the
9 scales of Dow and Karunaratna (2006), the factor score for language differences for
10 Australia and New Zealand is -3.389 (this negative value suggests relatively low
11 differences between these two countries in terms of language) (see Table 1). The
12 factor score for language differences between Australia-Japan is 0.526 suggesting
13 stronger language differences as compared to Australia-New Zealand. However, if
14 these two values are put in an index following Kogut and Singh (1988), the result is
15 quite different, suggesting a higher positive value for language differences between
16 Australia-New Zealand (i.e. 10.489) than Australia-Japan (i.e. 0.253) [1]. This implies
17 larger psychic distance between Australia and New Zealand than between Australia
18 and Japan, which is inaccurate. The key reason for this discrepancy is that the Kogut
19 and Singh (1988) index expects negative numbers to be meaningless (as they are
20 squared), whereas the scales of Dow and Karunaratna (2006) involve numbers where
21 negative values are meaningful (i.e. the more negative the numbers, the larger the
22 psychic distance between two countries).

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25 To resolve these inaccuracies, we propose a different methodology for
26 calculating an aggregate psychic distance score with regard to the scales of Dow and
27 Karunaratna (2006). As the first step, we check and calculate the means and standard
28 deviations of the factor scores for each of the five dimensions of the psychic distance
29 scales of Dow and Karunaratna (2006). Table 2 shows the results.

Table 2 about here

As the means and standard deviations differ for each of the five dimensions, we standardize the raw data using z-scores, according to the following formula, in order to allow comparison of the data:

$$z = \frac{x - \mu}{\sigma}$$

where x is the raw score, μ is the mean of the population and σ is the standard deviation of the population.

The resulting z-scores for each of the five Dow and Karunaratna (2006) dimensions are then summated accordingly for a final, aggregate psychic distance score [2].

Discussion and conclusion

This study examined the application of the Kogut and Singh (1988) index to the psychic distance scales of Dow and Karunaratna (2006). The Kogut and Singh (1988) index in combination with Hofstede's (1980) cultural dimensions is generally viewed as one of the most commonly applied operationalizations of psychic distance (e.g. Tihanyi *et al.*, 2005). The Dow and Karunaratna (2006) scales have also been highly influential in the psychic distance literature, and have often been jointly used with the Kogut and Singh (1988) index in order to calculate an aggregate psychic distance score (e.g. Ojala and Tyrväinen, 2009; Dow and Ferencikova, 2010; Blomkvist and Drogendijk, 2013). Our study indicates that the application of the Kogut and Singh (1988) index to the scales of Dow and Karunaratna (2006) is flawed. The underlying issue is that the scales of Dow and Karunaratna (2006) are based on a range where

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3 negative numbers are meaningful and predicted, while the Kogut and Singh (1988)
4 index expects data to be in a format where negatives are meaningless (as the
5 calculation involves squaring the differences). Therefore, we propose a new
6 methodology to calculate aggregate psychic distance scores. This includes
7 standardizing the raw data of the dimensions of Dow and Karunaratna (2006) and
8 summing the z-scores for the individual psychic distance dimensions accordingly.
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10 As shown in the previous section, this approach circumvents the problems associated
11 with the Kogut and Singh-like (1988) index in the context of the scales of Dow and
12 Karunaratna (2006), and, thus, yields more accurate and valid results.
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23 Future research could empirically adopt the scales of Dow and Karunaratna
24 (2006) for various country contexts in combination with our proposed methodology.
25 In addition, further efforts to consider the multidimensionality of psychic distance
26 seem to be a step in the right direction and excellent attempts have been made recently
27 (e.g. Brewer, 2007; Child *et al.*, 2009; Hakanson and Ambos, 2010; Sousa and Lages,
28 2011). In this respect, consideration of the geographic distance between two countries
29 as an antecedent of psychic distance may be an interesting angle to pursue (Hakanson
30 and Ambos, 2010). The combination of both objective, macro-level as well as
31 subjective, perception-based, individual-level psychic distance indicators may also
32 have strong merits and could lead to more robust results (Jenkins and Mockaitis,
33 2010). This approach accounts for the importance of managers' values and how they
34 *perceive* international markets as well as objective data, such as language differences.
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49 Following Rugman and Verbeke (2008), the examination of psychic distance
50 across regions could be an interesting future research area as it accounts for the
51 regional strategies of many contemporary MNEs. In the context of cultural distance,
52 Drogendijk and Zander (2010) suggested focusing on cultural similarities, overlaps
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3 and complementarities rather than “distance” and “differences”, which are the typical
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5 focus in the extant literature. This approach may represent a promising endeavor for
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7 psychic distance and ties in with Brewer’s (2007) suggestion to focus on “familiarity”
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9 of managers with overseas markets instead of differences.
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11 A key caveat to distance research relates to considering the challenges of
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13 measuring distance as raised by Shenkar (2001, 2012), such as over-generalization of
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15 complex forces, inability to capture directional effects, and the inherent assumption
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17 that greater distance leads to negative effects. Our study attempts to improve the
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19 methodological issues related to the Kogut and Singh (1988) index and the psychic
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21 distance scales of Dow and Karunaratna (2006).
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25 In conclusion, the notion of psychic distance is a subject that has generated
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27 strong interest among the academic community. In addition, psychic distance often
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29 yields key practical implications for companies (e.g. in terms of foreign market entry
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31 mode choice and international market selection). As discussed earlier, the concept of
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33 psychic distance has had a long history of scholarly discourse, and is likely to remain
34
35 a promising and fruitful area for future research. In light of the prominence of the
36
37 scales of Dow and Karunaratna (2006) as well as the Kogut and Singh (1988) index,
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39 we hope that our commentary can provide fresh insights into the psychic distance
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41 debate.
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47 Notes

48 [1] The variance for the language dimension of Dow and Karunaratna (2006) is 1.095.

49 [2] The z-scores for each of the scales of Dow and Karunaratna (2006) are available
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51 from the author on request.
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Table I.

Comparison of Australia-New Zealand and Australia-Japan psychic distance scores according to the scales of Dow and Karunaratna (2006).

The psychic distance dimensions of Dow and Karunaratna (2006)		
	Australia-New Zealand	Australia-Japan
Language	-3.389	0.526
Religion	-1.032	1.268
Industrial development	0.035	0.166
Education	0.082	0.094
Political system (degree of democracy)	0.068	0.186
TOTAL psychic distance score (using the Kogut and Singh-like index)	2.314	0.407

Table II.

Means and standard deviations of the psychic distance dimensions of Dow and Karunaratna (2006).

The psychic distance dimensions of Dow and Karunaratna (2006)	Mean	Std. Deviation
Language	-0.063	1.046
Religion	-0.019	1.008
Industrial development	0.802	0.585
Education	0.793	0.561
Political system (degree of democracy)	0.817	0.619
N=14,280		