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Governance Effectiveness: The Interaction of Ethno-Racial Diversity and Social Capital

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Governance Effectiveness: The Interaction of Ethno-Racial Diversity and Social Capital

This research examines the relationship among board diversity, social capital, and governance effectiveness by asking, “does board ethno-racial diversity moderate the relationship between social capital and governance effectiveness, and if so, how?” Exploring the direct and interacting effects of demographic diversity and social capital, and their relation to governing-group effectiveness using a two-sample field survey design, we illustrate whether heterogeneous or homogeneous group compositions amplify or attenuate governance effectiveness, and to what degree. Primary analyses find no support for board diversity moderating the social capital-governance effectiveness relationship, with secondary analysis revealing a more complex interaction for governance effectiveness, albeit inconsistently, across samples. Our investigation points to the value of social resources in understanding governance as an inherently socially complex activity or capability, predicated on truce or mutual agreement and shaped by the composition and connections of boards.

Biographical Statement:

Dr. Christopher Fredette is an Associate Professor of Management and Strategy with the University of Windsor’s Odette School of Business. Chris is an active researcher in the nonprofit sector, focusing on boards of directors and the role of power, diversity and inclusion in shaping change in governance and leadership effectiveness.

Dr. Ruth Sessler Bernstein, an Assistant Professor of Nonprofit Management at Pepperdine University, earned a Doctorate of Management from Case Western Reserve University. Her research interests focus on (1) diversity and inclusive interactions, and (2) nonprofit governance. Her publications have appeared in numerous journals, including NVSQ, NML, and JBE.

Governance Effectiveness: The Interaction of Ethno-Racial Diversity and Social Capital

Nonprofit governance is frequently viewed through the lens of board process, adherence to rules and regulations, and formalized structures and systems of control, yet the work of governing groups is highly interdependent and inherently social, factors that are often overlooked and underspecified. This social underbelly is both a strength (e.g. cohesion, solidarity, togetherness, trust, cooperation) and an area of vulnerability (e.g. homophily, isolation, groupthink, blindspots, exclusion) as many governance challenges have no codified or standardized response and therefore rely on mutual agreement, consensus, and coalitioning. Social capital, thought to reflect real and potential resources mobilizable through the social relationships of members of a group or unit (Nahapiet & Ghoshal, 1998), affords an important means of characterizing the social value, strength, vitality, and resilience of groups. It has also been predicated on a tension between outward facing and inward facing dynamics (Leana & Pil, 2006; Weisinger & Salipante, 2005). This tension presents boards of directors with a paradox when it comes to social capital and board diversity. Evidence exists to suggest that board diversity and social capital each may improve governing performance, with social capital potentially conferring enriched decision-making and resilience by virtue of interpersonal trust, shared understanding, and information sharing (Fredette & Bradshaw, 2012; Leana & Pil, 2006). Diversity, alternatively, may similarly improve decision-making and organizational agility by affording broader access to otherwise unheard perspectives, novel and unanticipated opportunities, and economic or legitimacy-conferring resources (Brown, 2002; Harris, 2014; Siciliano, 1996). However, it remains unclear how diversity and social capital interact in boardroom settings, and whether their combined potential benefits outweigh the potential risks associated with their interaction, which could result in difference-driven conflict and group

deterioration, attenuating governance effectiveness. Indeed, attention has recently turned to theorizing that in the highly interdependent work of governance (Johnson, Schnatterly, & Hill, 2013), the direct and interacting effects of diversity and social capital hold potentially unanticipated consequences (Tasheva & Hillman, 2019).

Defining what does or does not constitute board diversity, social capital or governance effectiveness is frequently contested and often rife terrain for dispute (and rightly so), and in this research we define our terms up front. Notwithstanding the possible competing traditions and perspectives of greater or lesser scope, for the purposes of this research we herein define:

- Board Diversity in terms of ethno-racial demography, reflecting “the representation, in one social system, of people with distinctly different group affiliations of cultural significance” (Cox, 1993, p. 5), emphasizing variety in the representation of underrepresented minority community members. Adapting criteria used in Canadian employment law and the collection of census information (Statistics Canada, 2016), we define ethno-racial categories in this research to include Aboriginal, Arab, Black, Chinese, Filipino, Japanese, Korean, Latin American, South Asian, Southeast Asian, West Asian, and White.
- Social Capital as the pool of potential and actual structural, cognitive, and relational resources available through and embedded in the relationships of group members (Adler & Kwon, 2002; Nahapiet & Ghoshal, 1998; Oh, Chung, & Labianca, 2004), which Leana and Pil (2006) use as the basis for internal Social Capital. They emphasize the relationships among group members that influence information sharing, collective visioning, and trust, which drive the flows of intellectual and social resources.
- Governance Effectiveness as emphasizing the capacity of boards to engage in a series of strategic and oversight activities, including providing strategic guidance in long-term

planning and safeguarding mission fulfillment, as well as ensuring executive succession or performance management and performing fiduciary accountability (Bradshaw, Murray, & Wolpin, 1992; Fredette & Bradshaw, 2012).

These definitions inform this research, in which we ask, “does board ethno-racial diversity moderate the relationship between social capital and governance effectiveness, and if so, how?” Alternatively put, is there a performance-benefit or a penalty-cost in the relationship between social capital and governance effectiveness associated with greater ethno-racial variety in the nonprofit boardroom? Exploring the direct and interacting effects of demographic diversity and social capital, we illustrate whether more diverse or less diverse board compositions amplify or attenuate governance effectiveness, and to what degree. This research contributes to the leadership diversity and governance literature by attending to an underexamined aspect of the interdependence in board composition, social dynamics, and board performance, by demonstrating how board diversity interplays with social capital and governance effectiveness. This research uses a two-sample field survey design to determine the pattern of relationships among our constructs, following which we test the replicability of our results with an independent second dataset. We conclude by discussing findings and implications for research, practice, and policy.

Social Capital, Board Diversity, and Governance Effectiveness

In the management literature, social capital has been argued to be an essential marker of group performance in a variety of contexts (Inkpen & Tsang, 2005; Prashantham & Dhanaraj, 2010), including among boards of directors’ capacity to share knowledge and information, agree on a common vision, and demonstrate trust (Fredette & Bradshaw, 2012; Harris & Helfat, 2007). It is a construct frequently associated with relational strength, social solidarity, and group

togetherness needed for coordinated collective action (Nahapiet & Ghoshal, 1998), often drawing comparison to other forms of capital which are subject to gains if deployed wisely, or losses if deployed ineffectively (Adler & Kwon, 2002). Management scholars have developed an integrative three-dimension construct based on structural, cognitive, and relational aspects of social capital (Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998), used in the study of groups and teams (Fredette & Bradshaw, 2012; Oh et al., 2004), within departments or business activities (Gargiulo & Benassi, 2000), and among organizations and their environments (Sundaramurthy, Pukthuanthong, & Kor, 2014).

Here, we conceptualize social capital in the managerial tradition (Nahapiet & Ghoshal, 1998), as the latent reflection of structural, cognitive, and relational factors that in combination afford the capacity to share and integrate information, develop and retain collective cognitive schemas, and exhibit sufficient trust and team comradery needed to support the functional work of boards as governing groups. The structural aspect of social capital is reflective of both the strength of connection among board members as well as the quality of those connections (Leana & Pil, 2006). For information sharing these connections are indicative of structural social capital by demonstrating the ability and willingness to communicate and update others of pending challenges, concerns, vulnerabilities or uncertainties. The ability of boards to collectively generate insight or appropriate value in relationships by reaching the disparate sources or knowledge pools of board members relies on brokering member information flows (Burt, 1997), whether connections are less-known to each other (Granovetter, 1973) or deeply embedded in trusted relationships (Uzzi, 1997). For governance, Fredette and Bradshaw (2012) emphasize the impact of information-sharing characteristics upon which boards rely in order to develop,

integrate, and distribute knowledge and insights needed to develop clear, reliable understanding of pending events and circumstances.

The cognitive aspect of social capital is reliant in many ways on the effective information sharing among board members, as the frequent updating and transparent communication among members improves the probability of developing and retaining an accurate understanding of a common vision or collective understanding (Weick & Roberts, 1993). For governance, building a shared vision of organizational purpose and strategy among board members is essential (Fredette & Bradshaw, 2012; Hawkins, 2014), because without collective agreement on the scope and direction of the organization's activities, mission and focus may become obscured or contested, thereby increasing the chances of organizational drift (Bennett & Savani, 2011). This suggests that the association between board social capital, and the collective capacity to govern effectively, may rely on the board sustaining an uncontested – or shared – collective vision of the organization's goals and the paths to be followed to reach them.

The relational dimension of social capital most frequently takes the form of trust (Leana & Pil, 2006; Nahapiet & Ghoshal, 1998), where trust characterizes the relational qualities that facilitate risk-taking and vulnerability (Granovetter, 1985; Tsai & Ghoshal, 1998), encourage reciprocal sharing (De Vries, 1999), and inform decisions about whether board members are safe to continue investing in relationships with others in groups (Ferrin, Dirks, & Shah, 2006). The ability to confidently rely on the trustworthiness of teammates, particularly in uncertain and consequential circumstances such as those found in governance settings, is paramount to coordinated collective action (Enjolras, 2009), which we anticipate to improve governance effectiveness.

The structural, cognitive, and relational dimensions of social capital, and our characterization of them in the form of information sharing, shared vision, and trust, are unique in composition and effect but also interdependent and reflective of a broader latent concept. Consistent with the work of others (Fredette & Bradshaw, 2012; Leana & Pil, 2006), we argue that board social capital contributes positively to governance effectiveness.

H1a: Social capital will positively associate with governance effectiveness, such that boards reporting higher social capital will exhibit more effective governance.

We take the position that the arguments underlying the business case for diversity have been well-made by others (including Cox, Lobel, & McLeod, 1991; Jayne & Dipboye, 2004), notwithstanding the serious and continuing challenges posed by such factors as recruitment, selection, and retention biases, or tokenism, alienation and marginalization, nor those internal to boards and organizations that frequently dissuade engagement, inhibit participation, and impede empowerment. Our intuition is that greater board diversity ought to enhance the capacity to govern. Recently, Fredette and Bernstein (2019) explored the impact of ethno-racial board diversity on three areas of governance activity. Relying on a proportional board diversity measure, they found some support for a relationship between board diversity and facets of board performance. By increasing the representation and participation of people with distinct and culturally-relevant group affiliations (Cox, 1993), boards have the potential to grow the pool of informational and financial resources available to them (Harris, 2014), as well as enhance innovative capacity of the organization to better identify and respond to the needs and interests of stakeholders in the external environment (Brown, 2002). The organizational benefits of greater board diversity are not limited to objective resource or process gains however, boards also serve as a signaling mechanism expressing values, aspirations and commitments to internal

and external audiences that may demonstrate and confer legitimacy (Brown, Brown, & Anastasopoulos, 2002; Siciliano, 1996).

We posit here that governing effectiveness is enhanced by more ethno-racially diverse board compositions by way of information, economic, and decision-making benefits not otherwise available to less diversely-composed boards. These benefits might include the capacity to better understand and reflect the needs and interests of community stakeholders in developing responsive service delivery programs, the ability to identify and access funding, clients and workforce resources that might otherwise remain inaccessible, and the opportunity for richer ideation and deliberation in the course of strategic planning and decision-making activities.

H1b: Board diversity in the form of ethno-racial variety will positively associate with governance effectiveness, such that more diverse boards will exhibit more effective governance.

Paradox in Board Diversity and Social Capital for Governance Effectiveness

We noted in the introduction that the interaction of social capital and board diversity poses a unique paradox in terms of governing effectiveness. Implicit in diversity and group performance studies is the notion of underlying fault-lines and the potential for disruption to board performance and group social capital as diversity of the group increases (Jehn & Bezrukova, 2010; Lau & Murnighan, 1998). Kanter (1977) was among the first to suggest a relationship between proportions of ingroup and outgroup composition and group function, with scholars subsequently testing thresholds and critical mass arguments in group diversity (Fredette & Bernstein, 2019; Konrad, Kramer, & Erkut, 2008). In many respects, this echoes assertions that as minority membership increases, the majority group may perceive a threat to their existing positions and associated power (Blalock, 1967), or the greater likelihood of conflict and group

fracture (Jehn, Northcraft, & Neale, 1999), or an increase in board member turnover and decline in collective performance (Pelled, 1996). This anticipates that the potential gains to performance afforded by group diversity are mitigated by a looming social cost. Differentiating between research that links increased group diversity to constructive conflict and destructive social penalty (Jehn et al., 1999), in the absence of intervening activities and processes, more diverse boards of directors are believed to become more fragmented and conflictual, under-performing their less-diverse peers in areas of board performance, group cohesiveness, and commitment (Fredette, Bradshaw, & Krause, 2016).

Leana and Pil (2006) examined social capital as dualistic, simultaneously external in its orientation to stakeholders and constituents, and internal in its structural, cognitive, and relational influence on organization leaders and members, with unique but largely independent implications. The nature of nonprofit governance and decisions about board composition however, place boards of directors at the nexus of this internal-organization and external-community divide, where the implications of the internal/external duality often result in less independence than might be anticipated. This view of social capital was picked up by Fredette and Bradshaw (2012), however, they stopped short of addressing compositional considerations.

Governing activities, accomplished by debate and discussion, held in the purview of boards of directors, speak to the *raison d'être* for separating the responsibilities of boards from those of managers in the sector (Brown & Guo, 2010; Herman & Renz, 1998). That is, they serve to preserve and coordinate the future of the organization in the face of present-day challenges and opportunities encountered by managers (Drucker, 1990). Board members, as organizational leaders, deal with complex decision-making which often involves debate, discussion, and dissent

(Brown & Guo, 2010), which through compromise or reconciliation result in truces that establish a mutually agreed upon set of governing parameters (Nelson & Winter, 1982).

Board diversity potentially extends the board's reach, connecting to resources and information, clients and constituents, and funding and markets not currently accessible, thereby improving decision-making, particularly when board members engage in greater information sharing, possess a shared vision of the organization's purpose, and demonstrate interpersonal trust (Tasheva & Hillman, 2019). At the same time, board diversity has the potential to introduce differing perspectives, governing assumptions, decision-making routines and operating habits potentially attenuating the board's cohesion or cognitive and affective bonds (Tasheva & Hillman, 2019), degrading truces at least in the short term. That is, conflict degrades the value of social capital stocks, leaving truces or 'agreed-upon areas of legitimate activity' essential for social function weakened. In the absence of basic boundaries, values, and pathways for discussion, it seems trust is unlikely to hold, let alone develop among board members.

H2: Board diversity in the form of ethno-racial variety will negatively moderate the positive association between social capital and governance effectiveness, such that the interaction of social capital and board diversity will negatively associate with governance effectiveness where more diverse boards are more impacted than less diverse ones.

Pivoting to this alternative perspective, it is unclear whether the potential benefits of diversity to social capital outweigh the potential risks associated with difference-driven conflict and group deterioration often perceived to accompany the addition of visibly diverse board members, which would attenuate the strength of the social capital-governance effectiveness relationship. This suggests that the association between board social capital, and the collective

capacity to govern effectively, may in part be a product of the underlying composition of the board, such that boards with more ethno-racial variety differ from less diverse ones.

Research Design, Method, and Analysis

This research uses a two-sample design to test hypotheses using comparable dependent and independent construct measures and testing protocols, only differing the control variables to account for differences in the context in which the data was collected. In what follows, we describe sampling characteristics, measurement approaches, testing protocols, and results for each study in turn, using structural equation modeling (SEM) with AMOS 25.

Study One – Data Collection and Sampling

We first examine data collected from a nationally sampled survey of Canadian not-for-profit organizations conducted in 2008, using a 14-page mail-in survey which was pretested and refined with focus groups of experienced professionals prior to distribution. These efforts involved outreach to 825 organizations, of which 236 responded with sufficient data to be considered complete, yielding an effective response rate of 28.6%. Each participant represented a nonprofit board and answered questions for individual members of each board, resulting in 3,011 board members being represented in this sample. All data included in this study were provided by respondents characterized as either Executive Director/Chief Executive (78.4%), Board Chairperson (3.8%), or other board representative (17.8%) with firsthand knowledge of board members, practices, and outcomes.

Our sample, approximately 60% of which is composed of organizations based in the province of Ontario, reflects an organizational population that is relatively large in terms of budget (mean = \$9.8m CDN; standard deviation = \$33.3m CDN) and fulltime equivalent staff (median = 11). Additionally, this set of organizations tended to be relatively mature, with an

average age of 42.5 years, and drawn from a variety of sectors. It would be reasonable to characterize our data as consisting of the larger, older, more-established end of the nonprofit organizational spectrum operating primarily in central Canada's health and social welfare sectors.

Study Two – Data Collection and Sampling

The data in our second study are drawn from an examination of board diversity among arts, sports, and environmental organizations conducted in 2012 in the Greater Toronto Area (GTA). The GTA is estimated to include slightly more than 6.1 million residents, with approximately 42.9% of the population self-identifying as a member of a visible minority community (Statistics Canada, 2016).

Survey data was collected using a brief online survey of senior nonprofit organizational leaders, where responses were sought and received from Chief Executives, Executive Directors, or Board Chairpersons on the impact of board room diversity on their organization's governance and performance. 903 organizations were contacted, yielding 269 responses, 247 of which we consider substantially complete (response rate of 27.4%). Each participant represented a nonprofit board and answered questions for individual members of each board, resulting in 2,789 board members being represented in this sample. We provided respondents a unique direct link to the survey, later confirming no redundancy among organization or respondent names.

Characterizing the responding organizations included in our second study, most were comparatively smaller and younger than those in the first study, with an average budget of \$1.4m CDN (standard deviation = \$3.6m CDN), an average number of full-time staff of 12.5 (median = 3), and an average age of the organizations was 30.1 years (SD 25 years). Over half of those that

replied to the survey were involved in arts and culture (63.5%), followed by sports and recreation (29.3%), and environmental (7.2%) sectors.

Missing Data Protocols

In the conduct of field surveys, missing data is not uncommon, but does raise two types of concern: first, whether the offending omissions constitute a threat to the data collection effort by virtue of the scale and scope of missingness; and second, whether the randomness of the missing data can be qualified as random (Newman, 2014). We performed missing value analysis to identify the scope of concern, following which we assess the randomness of the missing data by estimating Little's (1988) MCAR test statistic to determine whether the data reflect a Missing Completely at Random (MCAR) standard, before proceeding with a corrective strategy.

Study One. Missing value analysis conducted at the item level reveals that no variable is missing more than 10% of its values, with 84.75% of cases and 98.85% of the values complete. Testing randomness, we estimate Little's chi-square statistic where a significant statistic (i.e. $p < .05$) is suggestive of data not missing at random. These data meet the condition of MCAR ($X^2 = 5810.754$, $df = 11915$, $p = 1.0$).

Study Two. In this second sample, item-level missing value analysis demonstrated 55.87% of cases and 74.86% of values complete, with each item included in our modeling missing between 10.1% and 31.6% of its values. We estimate Little's MCAR test statistic ($X^2 = 2262.705$, $df = 2949$, $p = 1.0$), revealing that these data too meet the Missing Completely at Random standard.

While rigidly defined standards of exclusion are difficult to trace, Newman (2014) suggests using a maximum likelihood data imputation strategy when more than 10% of the respondent pool is composed of partial respondents and the data meet MCAR assumptions.

Given our analytic approach to testing moderation hypotheses, a Full Information Maximum Likelihood (FIML) estimation approach was employed (Enders, 2001; Graham, 2009; Newman, 2014).

Variables and Construct Measurement

We take a consistent approach to measurement and assessment of construct validity in each study, beginning by introducing our dependent variable, followed by our independent variables, and finally, explaining the factors we chose to control. Subsequently, the results of confirmatory factor analysis of our social capital and governance effectiveness measurement models are presented, as are the results of discriminant validity tests.

Governance Effectiveness. Assessing board performance or governance effectiveness is both complex and contested terrain in the literature (Herman & Renz, 1998). Our measure draws on a previously published five-item Likert-style scale (Bradshaw et al., 1992; Fredette & Bradshaw, 2012), in which we requested respondents to consider their board's capacity to meet governance challenges by assessing (1) the overall performance of the board, (2) the quality of fiduciary and financial oversight, (3) the capacity to safeguard and fulfill the organization's mission, (4) the provision of performance evaluation and feedback to the Executive Director or Chief Executive, and (5) the undertaking of annual strategic planning activities (Appendix A). In **Study One**, these items were measured with a ten-point scale as it had been elsewhere (Bradshaw et al., 1992; Fredette & Bradshaw, 2012), demonstrating a reliability (Cronbach's $\alpha = .881$), with removal of any single item not significantly improving the scale reliability. In **Study Two**, a five-point scale was employed and demonstrated strong reliability, with a Cronbach's α of .856. Alterations to the scale range resulted from survey design constraints centering on aesthetic appearance, software limitations, and considerations related to consistency in the

presentation of other measures. Again, removal of any single item did not significantly improve the measurement reliability.

Social Capital. We adopted a three-factor model of social capital based on information sharing, shared vision, and trust, which in prior research demonstrated reliability and validity (Leana & Pil, 2006, p. 364). The item wording and scale content were adapted for a nonprofit governance context in prior research (Fredette & Bradshaw, 2012). In **Study One**, each social capital dimension was measured with a six-item scale using a seven-point Likert rating system. Scale reliability statistics for information sharing ($\alpha = .861$), shared vision ($\alpha = .908$), and trust ($\alpha = .872$) suggested a reasonable basis for further investigation.

In **Study Two**, we pared down from the number of items used to measure social capital in Study One, in response to concerns about respondent fatigue resulting from the length of the survey instrument. To do so, an examination of the factor structure of items used in Study One was undertaken to discern which items would retain face validity while also providing statistical reliability and validity. Each dimension of social capital was measured using a three-item scale using a five-point Likert rating system (Appendix A). Pared down first-order constructs for information sharing ($\alpha = .829$), shared vision ($\alpha = .898$), and trust ($\alpha = .847$) demonstrated reliability.

Diversity. We operationalized the concept of diversity in terms of the ethno-racial variety in the composition of the boards of directors by calculating Blau Index scores for each organization (Blau, 1977)¹. Variety speaks to the scope of difference or degree of heterogeneity among board members that might attenuate homophilistic tendencies commonly associated with homogeneous groups, making Blau indices appropriate measures of diversity for our purposes (Harrison & Klein, 2007). Our measure of diversity is a board-level measure in which one

respondent per organization identified the composition of their board of directors based on Canadian census categories of ethnic origin and visible minority status. These counts were translated into a single board-level score derived as a proportion of total board membership ranging from 0 to 1, with higher scores indicating a greater variety of groups represented. In **Study One**, for example, the composition of board membership from our boards of directors was dominantly white, with boards having 2.17 visible minority groups represented, yielding a mean Blau score of .191 (SD = .211). Whereas in **Study Two**, the composition of board membership was dominantly white but slightly more varied, with Blau Index scores averaging .251 (SD = .216), representing 1.83 (SD = 3.03) racialized groups on average.

Controls. We controlled for four characteristics, of which three were organizational – sector, board size, and organizational age, and one was individual – respondent diversity, in both studies and a control for community size in **Study One**, which included responses from across the country, in contrast to the geographic concentration of **Study Two**. The first control variable, **organization sector**, coded each organization based on respondent perception of primary activity, providing a multi-categorical variable (11 subcategories in **Study One**; 3 in **Study Two**) intended to capture underlying sector-level factors that might influence demographic participation rates and governance activities. The second control variable captured **board size** to control for differences in the availability of board positions and potential barriers to entry (Goodstein, Gautam, & Boeker, 1994). The third control variable, **organization age**, measured by number of years in operation. This is important because the date of founding and age of an organization have been shown to influence the formalization with which organizations approach aspects of diversity and governance (Bradshaw & Fredette, 2013; Bradshaw, Murray, & Wolpin, 1996). Finally, we include **respondent diversity** as a control variable to address potential

sources of bias resulting from the ethno-racial background of respondents as it seemed reasonable that their influence might underlie an organization's interest, ability, and sensitivity in addressing issues of compositional diversity. These variables add control for confounding factors, even though not all control variables are statistically significant on their own.

In the Canadian context, communities with larger populations tend to exhibit more diversity than smaller or more isolated ones (Statistics Canada, 2017). **Community size** grouped the population of the location in which the organization's main office resides into categories (*1 = Big city (over 200,000); 2 = Small city (100,000-200,000); 3 = Town (25,000-100,000); 4 = Small town/rural (under 25,000)*). Because the second sample was drawn from a well-documented ethno-racially diverse metropolis (Statistics Canada, 2016), we only controlled for community size in the first study in order to address confounding factors and improve the accuracy of our models.

Measurement Models, Confirmatory Factor Analysis, and Structural Modeling

Our testing is conducted in two phases in each study, first examining the factor structure and validity of measurement models, and second, testing structural models for a social capital-board diversity interaction on governance effectiveness. Our tests involve assessing measurement models for the latent second-order construct of social capital as a product of three first-order factors (information sharing, shared vision, and trust), assessing the measurement fitness of our dependent variable governance effectiveness, and establishing convergent and discriminant validity among our predictor and dependent variables. These measurement models establish a foundation to develop and test structural models which incorporate covariate controls, board diversity, and interaction terms.

Measurement Models. To test appropriateness of constructing social capital as a second-order latent variable, we begin by loading the measurement items associated with each subordinate or first-order construct. Next, we assess the factor loading scores, following which we constrain the covariance parameter to null and to unity, finally removing the constraint to freely estimate the parameter. For social capital to be rightly identified as a common latent factor, each first-order factor must load significantly, with freely estimated covariance parameters providing superior model fit compared to the alternatives (Balasubramanian, Konana, & Menon, 2003). If the null model fit is preferred, it suggests the first-order factors reflect independent or unrelated constructs, where a preference for the unity model fit statistics suggests the data support a single factor first-order construct (Balasubramanian et al., 2003). Since governance effectiveness is proposed as a single first-order factor, our measurement modeling centers on ensuring model fit statistics based on acceptable factor loading scores.

Standardized regression weights for first- and second-order factors are presented in Table 1, with corresponding measurement items included for **Study Two** as identified in Appendix A. Composite reliability (CR), average variance extracted (AVE), maximum shared variance (MSV), and correlations between social capital and governance effectiveness presented in Table 2 with the square root of AVE reported on the diagonal. Analyses demonstrate strong reliability (CR scores > .7), convergent validity (AVE scores > .5), with correlations among second-order latent variables below the threshold for concern (Henseler, Ringle, & Sarstedt, 2015; Weston & Gore, 2006).

[Table 1 and Table 2 about here]

Measurement model fit statistics outlined in Table 3 demonstrate a preference for the hypothesized second-order three-factor model of social capital (**Study One**: $\chi^2 = 212.880$, $df =$

129, $\chi^2/df=1.65$; TLI = .966; CFI = .971; SRMR = .038; RMSEA = .053, $pClose = .355$; **Study Two:** $\chi^2 = 45.715$, $df = 21$, $\chi^2/df = 2.177$; TLI = .975; CFI = .985; SRMR = .022; RMSEA = .069, $pClose = .116$), and a single first-order model of our dependent variable governance effectiveness (**Study One:** $\chi^2 = 7.424$, $df = 4$, $\chi^2/df = 1.856$; TLI = .986; CFI = .995; SRMR = .022; RMSEA = .060, $pClose = .327$; **Study Two:** $\chi^2 = 5.779$, $df = 4$, $\chi^2/df = 1.445$; TLI = .991; CFI = .997; SRMR = .021; RMSEA = .043, $pClose = .483$).

[Table 3 about here]

Table 3 summarizes results of the confirmatory factor analyses and discriminant validity testing, demonstrating excellent fit in **Study One** ($\chi^2 = 393.288$, $df = 119$, $\chi^2/df = 1.796$; TLI = .947; CFI = .954; SRMR = .045; RMSEA = .058, $pClose = .074$) and an adequate fit in **Study Two** ($\chi^2 = 156.233$, $df = 129$, $\chi^2/df = 2.298$; TLI = .951; CFI = .963; SRMR = .043; RMSEA = .073, $pClose = .008$). Further examining discriminant validity, where the square root of AVE for governance effectiveness was smaller than its correlation with social capital in **Study One** (Hair, Black, Babin, & Anderson, 2010; Malhotra & Dash, 2011), we tested and found a statistically significant preference for the freely-estimated model representing social capital and governance effectiveness as distinct constructs (**Study One:** $\Delta\chi^2/df = 5.447$, $p < .02$; **Study Two:** $\Delta\chi^2/df = 71.728$, $p < .001$).

To address common method bias, a common latent factor was added to the measurement models and subsequently constrained and unconstrained to compare goodness of model fit using a chi-square difference test. Results demonstrate a nonsignificant chi-square change (**Study One:** $\Delta\chi^2/df = 2.95$; **Study Two:** $\Delta\chi^2/df = 2.09$), providing no evidence of underlying common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

These results provide a basis to proceed with structural modeling by demonstrating that the construction of each measurement model provides a good reflection of the underlying data in each study, that the measurement items converge on the appropriate first-order factors, and that the test of discriminant validity demonstrates that social capital and governance effectiveness are distinct, but related constructs.

Structural Modeling Results

To examine our hypotheses, we model our control variables, our predictors and hypothesized interaction, standardizing the interaction terms before adding them to the structural models to improve interpretability of moderation effects (Aiken & West, 1991). Structural models provide an excellent fit for the data, estimating a squared multiple correlation of 73.6% for governance effectiveness (GFI = .862) in **Study One** (Table 4A: $\chi^2 = 584.934$, $df = 381$, $\chi^2/df = 1.535$; TLI = .948; CFI = .947; SRMR = .058; RMSEA = .048, $p_{Close} = .682$) and a squared multiple correlation of 58.5% for governance effectiveness (GFI = .899) in **Study Two** (Table 4B: $\chi^2 = 284.852$, $df = 156$, $\chi^2/df = 1.826$; TLI = .936; CFI = .947; SRMR = .061; RMSEA = .058, $p_{Close} = .109$).

[Table 4A and 4B about here]

We find evidence in support of a positive association between social capital and governance effectiveness (**H1a - Study One:** $\beta = .824$, $p < .001$; **Study Two:** $\beta = .739$, $p < .001$), but no support for a direct effect of board diversity (**H1b - Study One:** $\beta = .014$, $p = .749$; **Study Two:** $\beta = .007$, $p = .895$) or for an interaction to support a moderation hypothesis that board diversity attenuates this relationship (**H2 - Study One:** $\beta = -.030$, $p = .496$; **Study Two:** $\beta = .068$, $p = .182$). While our structural models reflect the underlying patterns in our data, we find statistical

support for only one of our hypothesized relationships, a positive main effect of social capital for governance effectiveness, with no association found for board diversity.

Whereas our theorizing suggests homogeneous groups would differ from more heterogeneous groups in terms of social capital (information sharing, shared vision, and trust), we find no support for this argument.

A Secondary Analysis Probing for Nonlinear Relationships

To ensure that we had not overlooked the presence of a more complex relationship among the variables by limiting analysis to linearity rather than probing for underlying complexity (Aiken & West, 1991), a *post hoc* analysis was undertaken to examine potential curvilinear relationships lying latent in the data that might be otherwise overlooked (Fredette & Bernstein, 2019). We evaluated potential curvilinear associations in our data by creating a quadratic main effect term for board diversity (Board Diversity²) and a standardized higher-order interaction term (Social Capital x Board Diversity²), repeating our moderation tests with main effect and interaction terms.

Structural models provide a good estimation of the data, estimating a squared multiple correlation of 75.7% for governance effectiveness (GFI = .854) in **Study One** (Table 5A: $\chi^2 = 666.454$, $df = 439$, $\chi^2/df = 1.518$; TLI = .945; CFI = .954; SRMR = .062; RMSEA = .047, *pClose* = .754) and retained a squared multiple correlation of 58.5% for governance effectiveness (GFI = .895) in **Study Two** (Table 5B: $\chi^2 = 329.756$, $df = 192$, $\chi^2/df = 1.717$; TLI = .953; CFI = .961; SRMR = .060; RMSEA = .054, *pClose* = .246).

[Table 5A and 5B about here] [Plot 1 about here]

Our results are inconsistent in their support for a nonlinear interaction effect, with support for a quadratic main and moderation effect, in data associated with **Study One** (Table 5A). Table

5A illustrates separate positive main effects for Social Capital ($\beta = .844, p < .001$) and Board Diversity² ($\beta = .272, p = .027$), with the interaction reaching significance (Social Capital x Board Diversity² $\beta = -.364, p = .007$). Data associated with **Study Two** showed no such effect. Plot 1 illustrates the standardized interaction (Social Capital x Board Diversity²) in **Study One** with lines representing mean and +/- one standard deviation values.

Discussion

This study examines governing-group effectiveness, testing linear, nonlinear, and interacting predictions through the lens of demographic variety and social capital. This is unique, not only because group diversity and social capital rarely get examined together in the consequential and complex context of governance activities, but because few studies have assessed the potential influence of board diversity via an attenuation of social capital (Labianca & Brass, 2006; Tasheva & Hillman, 2019). We find little evidence of a linear association that board diversity either helps or harms the social or performative success of their board in either our broader national or more-concentrated regional sample of organizations. In one case, a nonlinear interaction suggesting a more complex, albeit attenuating, association was present. For these reasons, our findings are academically and practically significant as we might infer from our analysis that social capital, with its benefits of information reach, collective purpose, and interpersonal trust is more consistently associated with positive governing outcomes, demonstrating a persistent positive linear association. Board diversity does not demonstrate a similar linear association in either of our studies, nor does it appear to interact with social capital in its linear transformation. Alternatively, when examined using a quadratic transformation, board diversity demonstrates a positive main effect on governance effectiveness, superseded by an interaction with social capital, such that more diverse boards exhibit higher performance than

less diverse ones (Table 5A), where the greatest performance difference among more diverse boards and their less diverse counterparts are reported at lower levels of social capital. This interaction suggests positive performance benefits for more diverse boards across the range of social capital observation, albeit at an attenuated rate of incline. Could it be that when social capital is too strong, the performance benefits of diversity are less able to take root or are crowded out as truces set in around shared patterns of belief, practice, routine and habit? In comparison, in boards exhibiting lower social capital there is more room for contestation, adjustment, improvisation and revising patterns of governing? This is an important area of future inquiry warranting examination with alternate methods of study.

Our investigation points back to the value of social resources in understanding governance as an inherently socially complex activity or capability (Collis, 1994), shaped by the composition of boards. Nelson and Winter (1982) hinted at the importance of truce-coordinated collective action, recognizing the social and relational underpinnings of collective performance emphasizing the need for stability among participants engaged in highly interdependent decision-making activities. In this case, consequential governance decisions such as those dealing with strategic planning, directing and evaluating executive action, or allocating capital and resources are often contested by group members with differing interests (Kaplan, 2015). When overcoming differences among members social capital is built, and truces develop as points of convergence in position or understanding until a future resetting of the balance of power occurs (Zbaracki & Bergen, 2010). In our view, altering the composition of governing groups is consequential to understanding board social capital and therefore the fragility or durability of governing truces, as these decisions tend to be subject more to consensus-building and majority voting rules than to conventional managerial fiat.

Our *post hoc* analyses speak to the complex relationship among composition, social dynamics, and performance outcomes, particularly as board diversity reaches compositional thresholds or tipping-points (Fredette & Bernstein, 2019). Nonprofit organizations face external pressures from government mandates and funders to respond to new demographic characteristics of many communities (Bradshaw & Fredette, 2013). Moving toward diverse, inclusive, and equitable governing bodies might reasonably result in the renegotiation, and perhaps dissolution, of prior truces resulting from the reordering and redistribution of decision-making power among diversely-composed boards that include a greater number of members of traditionally marginalized communities.

If we consider the underlying difference in samples, the first more nationally representative where the population self-identifies as approximately 84% White and the second drawn four years later from a large multicultural urban environment where approximately half the population self-identify as White, it may be that the salience of demographic differences are more contextually sensitive in some environments and less so in others. Perhaps the passage of time and the effects of locality inform these sensitivities. In this respect, we note the relevance of time, in the form of organization age, as predictive of governance effectiveness. While we do not test for associations among organization age and board diversity or social capital, we do note that age is a significant control in Study One and a near-significant control in Study Two, which is consistent with the suggestions of having reached a state of organizational formalization posited in the work of others (Bradshaw & Fredette, 2013).

Limitations and Implications for Future Research

An avenue for extending this research lies in examining the constituent elements of social capital and their relationship to governance effectiveness vis a vis diversity. Additionally,

replications of our findings in other localities would overcome the limitations associated with using only Canadian data. We acknowledge potential limitations presented by common method and social desirability biases in our studies, which to the degree possible, we have sought to address statistically. Combining responses from chief executives and board chairpersons may present a limitation given their differences in perception of board governance (Bernstein, Buse, & Bilimoria, 2016). Future studies could explore other regions and examine whether CEOs and board chairpersons' responses were significantly different. Similarly, the implications of organizational sector warrant further consideration, particularly in samples that exclude social services and health-care emphasis such as our second study, where participation in arts or environmental and recreational or sporting organizations may be perceived as a luxury and historically exclusive, whether by intention or not.

Another limitation of this study is that we define board diversity very narrowly, in terms of ethno-racial demography. By focusing only on visible diversity, we presume that racial/ethnic differences would necessarily imply different cultural and social approaches to governing. Further research should be conducted to tease out these lesser-studied facets of diversity and their intersections in similar leadership and governance contexts.

We are optimistic that the ethno-racial diversity of the board members was well known by the survey taker but note a potential limitation in having a single survey respondent reporting on the ethno-racial diversity of the other board members. We make no claims of causality given the design of our research and note the need for longitudinal examination of our hypotheses before such claims can be made. On a practical level, our findings suggest a complex relationship among board diversity, social capital, and governance effectiveness that warrants care, attention, and active management.

Implications for Practice

Our approach to replication and generalizability across a range of subsectors, organizations, and points in time, demonstrate consistencies in our first-order associations if not our nonlinear ones. We encourage practitioners and policy makers to consider the interplay between board diversity or composition and social capital and governing effectiveness, but not to be overwhelmed by anxieties that improving representational diversity will undermine the performance benefits of healthy social dynamics. This is particularly relevant for those engaged in shaping the diversity of leadership teams and governing groups as they work on issues of executive or board succession planning, struggle to enact improved stakeholder outreach and integration strategies, or wrestle with retaining relevance and legitimacy in the face of social and economic reformation.

Appendix A: Survey Items of Dependent and Independent Variable Measurement

Dependent Variable: Governance Effectiveness

All in all, how satisfied are you with your board's performance? For each of the following statements, please write in the number that comes closest to your opinion.

Study One: 1 (Totally dissatisfied) to 10 (Completely satisfied in every way)

Study Two: 1 (not at all) to 5 (a very great extent)

- GE_1 * Overall board effectiveness
- GE_2 * Fiduciary and financial oversight
- GE_3 * Safeguarding and fulfilling the mission of the organization
- GE_4 * Providing regular feedback on the performance of the CEO or Executive Director
- GE_5 * Ensuring that strategic planning takes place annually

Independent Variable: Social Capital

Still thinking about how strongly you agree or disagree with the following statements about how board members INTERACT with one another, please write the answer that best represents your opinion in the space provided.

Study One: 1 (Strongly disagree) to 7 (Strongly Agree)

Study Two: 1 (not at all) to 5 (a very great extent)

- Inf_Shr_1 * The board members engage in open and honest communication with one another
- Inf_Shr_2 * The board members at this organization have no hidden agendas or issues
- Inf_Shr_3 The board members share and accept constructive criticisms without making it personal
- Inf_Shr_4 The board members discuss personal issues if they affect board performance
- Inf_Shr_5 * The board members willingly share information with one another
- Inf_Shr_6 The board members keep each other informed at all times
- Shr_Vis_1 Each board member shares the same ambition and vision as other members of the board
- Shr_Vis_2 * People in our board are enthusiastic about pursuing the collective goals and mission of the whole organization
- Shr_Vis_3 * There is a commonality of purpose in the board of my organization
- Shr_Vis_4 * All board members are committed to the goals of this organization
- Shr_Vis_5 Board members view themselves as partners in charting the direction of the organization
- Shr_Vis_6 There is a total agreement on our organizational vision across all members of the board
- Trust_1 * Each member can rely on the others they work with in this board
- Trust_2 * The board members in this organization are usually considerate of one another's feelings
- Trust_3 * Board members have confidence in one another at this organization
- Trust_4 Board members in this organization show a great degree of integrity
- Trust_5 There is no "team spirit" among board members in this organization
- Trust_6 Overall, the board members at this organization are trustworthy

* Items included in Study Two.

Endnotes

1. Whereas Blau is often used in social sciences as a measure of variety in composition [$\text{Blau} = 1 - \sum p_k^2$; where p is the proportion of unit members in the k^{th} category], particularly in group and organizational diversity research, it is sometimes compared to the Herfindahl-Hirschman Index (HHI) [$\text{HHI} = \sum s_i^2$; where s is the market share (or proportion of the market) of each firm in i industry], a measure commonly employed to assess industry or market concentration. These two transformations are effectively similar and share a lineage to Simpson (1949), but with different interpretational intent and histories of use.

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Table 1. Standardized Regression Weights for Measurement Models

	Study One					Study Two				
	Information Sharing	Shared Vision	Trust	Social Capital	Governance Effectiveness	Information Sharing	Shared Vision	Trust	Social Capital	Governance Effectiveness
Inf_Shr_1	.794					.834				
Inf_Shr_2	.772					.860				
Inf_Shr_3	.780									
Inf_Shr_4	.559									
Inf_Shr_5	.799					.719				
Inf_Shr_6	.668									
Shr_Vis_1		.675								
Shr_Vis_2		.850					.876			
Shr_Vis_3		.825					.873			
Shr_Vis_4		.846					.845			
Shr_Vis_5		.811								
Shr_Vis_6		.747								
Trust_1			.841					.864		
Trust_2			.681					.788		
Trust_3			.860					.869		
Trust_4			.826							
Trust_5			.576							
Trust_6			.665							
Information Sharing				.928					.975	
Shared Vision				.913					.881	
Trust				.975					.943	
GE_1					.860					.823
GE_2					.691					.757
GE_3					.851					.722
GE_4					.709					.693
GE_5					.727					.715

Table 2. Measurement Model Reliability and Validity

<i>Study One</i>	CR	AVE	MSV	MaxR(H)	<i>1</i>	<i>2</i>
<i>1</i> Social Capital	.958	.884	.679	.971	.940	
<i>2</i> Governance Effectiveness	.879	.595	.679	.895	.824	.771
<i>Study Two</i>	CR	AVE	MSV	MaxR(H)	<i>1</i>	<i>2</i>
<i>1</i> Social Capital	.953	.872	.541	.968	.934	
<i>2</i> Governance Effectiveness	.860	.553	.541	.867	.735	.744

CR = Composite Reliability; AVE = Average Variance Extracted; MSV = Maximum Shared Variance;

Square Root of AVE reported on the diagonal

*Significance of Correlations: † $p < 0.100$, * $p < 0.050$, ** $p < 0.010$, *** $p < 0.001$*

Table 3. Convergent and Discriminant Validity of Social Capital and Governance Effectiveness Measurement Models

	χ^2	χ^2/df	<i>p</i>	TLI	CFI	SRMR	RMSEA	pClose
Study One: Measurement Model Convergent Validity								
Social Capital Factor Models								
Single Factor	280.914	2.128	.000	.940	.948	.125	.069	.003
Constrained Three Factor	733.708	5.558	.000	.758	.792	.430	.139	.000
Freely-Estimated Three Factor	212.880	1.650	.000	.966	.971	.038	.053	.355
Governance Effectiveness Factor Model								
Single Factor	7.424	1.856	.115	.986	.995	.022	.060	.327
Study One: Social Capital-Governance Effectiveness Discriminant Validity								
Single Factor	398.735	1.812	.000	.946	.953	.065	.059	.059
Constrained Two-Factor	578.214	2.628	.000	.892	.906	.272	.083	.000
Freely-Estimated Two-Factor	393.288	1.796	.000	.947	.954	.045	.058	.074
Study Two: Measurement Model Convergent Validity								
Social Capital Factor Models								
Single Factor	116.671	4.861	.000	.917	.945	.168	.125	.000
Constrained Three Factor	569.649	21.098	.000	.571	.678	.530	.286	.000
Freely-Estimated Three Factor	45.715	2.177	.001	.975	.985	.022	.069	.116
Governance Effectiveness Factor Model								
Single Factor	5.779	1.445	.216	.991	.997	.021	.043	.483
Study Two: Social Capital-Governance Effectiveness Discriminant Validity								
Single Factor	227.961	3.304	.000	.913	.934	.193	.097	.000
Constrained Two-Factor	293.904	4.259	.000	.877	.906	.304	.115	.000
Freely-Estimated Two-Factor	156.233	2.298	.000	.951	.963	.043	.073	.008

TLI = Tucker-Lewis Index; *CFI* = Comparative Fit Index; *SRMR* = Standardized Root Mean Square Residual;
RMSEA = Root Mean Square Error of Approximation

Table 4A. Study One: Structural Model Statistics with Standardized Estimates

	χ^2	χ^2/df	p	TLI	CFI	SRMR	RMSEA	pClose
Structural Model Fit	584.934	1.535	.000	.948	.947	.058	.048	.682
Variable					β	Standard Error	p	
Controls								
Organization Sector					.028	.020		.534
Board Size					.105	.012		.019
Organization Age					.158	.002		< .001
Respondent Diversity					.004	.219		.926
Community Size					-.078	.076		.090
Predictors								
Social Capital					.824	.320		< .001
Board Diversity					.014	.375		.749
Social Capital x Board Diversity					-.030	.077		.496
Information Sharing --> Social Capital					.929	.196		< .001
Shared Vision --> Social Capital					.913	.170		< .001
Trust --> Social Capital					.978			

TLI = Tucker-Lewis Index; CFI = Comparative Fit Index; SRMR = Standardized Root Mean Square Residual; RMSEA = Root Mean Square Error of Approximation

Table 4B. Study Two: Structural Model Statistics with Standardized Estimates

	χ^2	χ^2/df	p	TLI	CFI	SRMR	RMSEA	pClose
Structural Model Fit	284.852	1.826	.000	.936	.947	.061	.058	.109
Variable					β	Standard Error		p
Controls								
Organization Sector					-.089	.061	.083	
Board Size					-.030	.001	.556	
Organization Age					.097	.001	.059	
Respondent Diversity					.097	.101	.055	
Predictors								
Social Capital					.739	.081	< .001	
Board Diversity					.007	.164	.895	
Social Capital x Board Diversity					.068	.033	.182	
Information Sharing --> Social Capital					.922	.078	< .001	
Shared Vision --> Social Capital					.881	.061	< .001	
Trust --> Social Capital					.977			

TLI = Tucker-Lewis Index; CFI = Comparative Fit Index; SRMR = Standardized Root Mean Square Residual; RMSEA = Root Mean Square Error of Approximation

Table 5A. Study One: Structural Model Statistics with Standardized Estimates

	χ^2	χ^2/df	p	TLI	CFI	SRMR	RMSEA	pClose
Structural Model Fit	666.454	1.518	.000	.945	.954	.062	.047	0.754
Variable					β	Standard Error	p	
Controls								
Organization Sector					.031	.020	.721	
Board Size					.121	.012	.006	
Organization Age					.170	.002	< .001	
Respondent Diversity					.010	.216	.819	
Community Size					-.068	.072	.119	
Predictors								
Social Capital					.844	.324	< .001	
Board Diversity					-.239	1.027	.051	
Board Diversity ²					.272	1.662	.027	
Social Capital x Board Diversity					.315	.241	.022	
Social Capital x Board Diversity ²					-.364	.239	.007	
Information Sharing --> Social Capital					.928	.193	< .001	
Shared Vision --> Social Capital					.910	.168	< .001	
Trust --> Social Capital					.983			

TLI = Tucker-Lewis Index; CFI = Comparative Fit Index; SRMR = Standardized Root Mean Square Residual; RMSEA = Root Mean Square Error of Approximation

Table 5B. Study Two: Structural Model Statistics with Standardized Estimates

	χ^2	χ^2/df	p	TLI	CFI	SRMR	RMSEA	pClose
Structural Model Fit	329.756	1.717	.000	.953	.961	.060	.054	.246
Variable					β	Standard Error		p
Controls								
Organization Sector					-.089	.061		.081
Board Size					-.030	.001		.556
Organization Age					.098	.001		.055
Respondent Diversity					.098	.101		.053
Predictors								
Social Capital					.739	.082		< .001
Board Diversity					-.013	.462		.926
Board Diversity ²					.021	.692		.882
Social Capital x Board Diversity					.062	.100		.689
Social Capital x Board Diversity ²					.005	.094		.972
Information Sharing --> Social Capital					.922	.078		< .001
Shared Vision --> Social Capital					.882	.061		< .001
Trust --> Social Capital					.976			

TLI = Tucker-Lewis Index; CFI = Comparative Fit Index; SRMR = Standardized Root Mean Square Residual; RMSEA = Root Mean Square Error of Approximation

Plot 1. Study One: Interaction of Social Capital and Board Diversity² for Governance Effectiveness (Standardized)

