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Abstract
How important is industry and country to firms’ capabilities? This question seems less addressed in the larger management literature. Reflecting this, we argue that there is a gap in our conceptual understanding of industry and/or country influences of firms’ capabilities. Drawing on institutional theory, we develop a conceptual model where firms’ capabilities (partly) reflect industry and country conditions, with implications for how we can understand the interrelationship between firm, industry and country factors in empirical analysis of firm (financial) performance. Using a simple multilevel model for variance decomposition analysis, we show that industry and country factors can account for 21-29% percent of the explained variance in firms’ managerial capabilities. While results provide initial empirical support for the conceptual model, they also suggest that firm capabilities reflect influences from their industry and country environments and, as a consequence, may be less firm- idiosyncratic than typically assumed in theorizing.

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ABSTRACT

How important is industry and country to firms’ capabilities? This question seems less addressed in the larger management literature. Reflecting this, we argue that there is a gap in our conceptual understanding of industry and/or country influences of firms’ capabilities. Drawing on institutional theory, we develop a conceptual model where firms’ capabilities (partly) reflect industry and country conditions, with implications for how we can understand the interrelationship between firm, industry and country factors in empirical analysis of firm (financial) performance. Using a simple multilevel model for variance decomposition analysis, we show that industry and country factors can account for 21-29% percent of the explained variance in firms managerial capabilities. While results provide initial empirical support for the conceptual model, they also suggest that firm capabilities reflect influences from their industry and country environments and, as a consequence, may be less firm- idiosyncratic than typically assumed in theorizing.
**Introduction**

An extensive research tradition in strategic management has asked the question “how important is industry and country” for firm (financial) performance, and concluded that firm specific effects carry far more weight as a source of firm performance relative to country and industry factors (Makino, Isobe, and Chan 2004; McGahan and Porter 1997, 2002b; Rumelt 1991). Typically, these empirical results have been attributed to organizational heterogeneity in capabilities and their firm specific nature (Hawawini, Subramanian, and Verdin 2003; Rumelt 1991), helping to establish capability based theorizing as a leading theoretical perspective of the firm in the strategic management literature (Barney 1991; Barreto 2010; Teece, Pisano, and Shuen 1997).

In this study, we approach this issue from a new angle and ask: How important is country and industry for firms’ capabilities? Surprisingly, this question has not been subject to the level of attention it deserves. However, we think it is an important question to ask. The reason is that while empirical results have demonstrated the superiority of firm-specific effects in variance decomposition analysis of firm financial performance, this is not a testimony to the firm idiosyncratic nature of capabilities. Simply put, what if firm capabilities have (part of) their origins in sources and conditions at higher levels of analysis, such as industry and /or country levels? Our empirical knowledge about this is scarce (although some notable examples exist such as the study of input/output conversion rate and their institutional antecedents (Duran et al. 2015)) and theorizing is generally poorly developed. Reflecting this, we propose that there is a gap in our conceptual and empirical understanding of the importance of industry and country influences on firm capabilities, with important implications for theorizing on capabilities origin, evolution, performance effects.

Drawing on institutional theory, we develop a conceptual model where firms’ capabilities (partly) reflect industry and country conditions, with implications for how we can understand
the interrelationship between firm, industry and country factors in analysis of firm (financial) performance. The following research question has guided the nature of our conceptual theorizing: How may industry and country factors matter to firms’ capabilities?

While our paper is mainly conceptual and seeks to direct attention to an unaddressed issue that warrants empirical and theoretical attention, we do offer initial empirical evidence to shed first insight into the merits of our conceptual theorizing. Using an internationally harmonized cross-country firm database, we decompose the variance in (empirical measures of) firm managerial capabilities into their respective firm, industry, and country specific components. Our results show that industry and country factors can account for a significant and substantial share of the variance in firms’ managerial capabilities, providing initial support for our conceptual model.

By starting to dissect the firm capabilities and how sources at higher level above the firm are instrumental to their function, in particular their capabilities, we contribute to the broader management literature in three distinct ways. First, we explore the first part of the indirect effect from industry and country level factors on differences in firm outcome. Previous studies find that the firm level factors accounts for about 50% of the earnings differential without looking into what these factors are (McGahan and Porter 1997). We demonstrate that a significant share of the variance in key core capability of a firm – related to management – can be explained by factors residing at the industry and country levels. Thus, we nuance the debate about the relative importance of industry and country factor for firm outcome by incorporating indirect effect from these higher levels onto firm capabilities. This is done by showing that a significant share of the variance in key firm constructs associated with the resource-based view themselves can be attributed to industry and country effects. We argue that analysis such as this has the potential to open up new and more nuanced
research in the variance decomposition approach in management on the sources and origin of key firm constructs and their importance – directly and indirectly – in influencing firm outcome.

Second, by combining insights from institutional theory and previous management literature, we propose a possible pathway to a richer understanding of the antecedents of firm capabilities and methods with which to quantitatively analyze them. At the heart of this path is to better understand more of the inner workings of the firm (e.g. firms’ capabilities), how it is influenced by sources and factors at the industry and country levels, and to disentangle their direct and indirect contribution in accounting for sources of firm outcome and performance.

The rest of this paper is organized as follows. Section two runs the theoretical background explaining the origins of the main effects on (financial) performance; the direct effect. Section three applies institutional theory to argue the case for indirect effects through firm capabilities. The discussion leads to some simple hypotheses for further illustration. Section four lays out the data from the World Management Survey and the statistical methods used to shed light on the hypotheses. We conclude in section five with some paths for future research.

**Theoretical background**

Management researchers, particularly within strategic management, have for decades debated the sources of firms (accounting) performance (Brush, Bromiley, and Hendrickx 1999; M. A. Fitza 2014; Hansen and Wernerfelt 1989; Hawawini, Subramanian, and Verdin 2003; Karniouchina et al. 2013; McGahan and Porter 1997, 2002a; Rumelt 1991; Schmalensee 1985). While most management scholars agree that firms differ in their (financial) performance (e.g. (Nelson 1993)), the origins of
these differences are debated. Two main perspectives can be identified in the literature, the *industry based view* and the *resource based view* (Peng 2002; Peng et al. 2009). Evolving from the Industrial Organization (IO) tradition, the industry based view argues that since industry structure is the central determinant of firm performance, the origin of performance heterogeneity across firms can be traced back to industry effects (e.g. Bain, 1951 Schmalensee, 1985). As a reaction to this, scholars within what is now known as the resource based view, have argued that firm heterogeneity in performance stem from organizational processes, resources and capabilities that are idiosyncratic to the firm (Hansen and Wernerfelt 1989; McGahan and Porter 1997; Rumelt 1991). Therefore, the argument goes, firm specific effects will carry far more weight than industry effects in analysis of sources of firm performance.

The debate over the relative role of industry and firm factors in accounting for the major share of the variance in firms (accounting) performance has been of particular importance in the field of strategic management, most notably in the Strategic Management Journal (M. A. Fitza 2014; Hansen and Wernerfelt 1989; McGahan and Porter 1997; Rumelt 1991). Overall, the accumulated empirical evidence show that firm factors matter far more for firm performance than industry factors (McGahan and Porter 2002a). These stylized facts have been used as empirical support for the importance of idiosyncratic firm resource and capabilities; leading up too the seminal formulation of the resource and capability based theorizing (e.g. (Barney 1991; Teece, Pisano, and Shuen 1997)). Currently, the firm idiosyncratic nature of capabilities and resources is a key point of departure in current theories of the firm in strategic management. Table 1 sums up the most important studies decomposing variance in economic outcome – performance – at the firm level using higher level factors as sources of explanation.
Scholars have, however, worked to nuance the debate over the relative role of industry and firm effects in accounting for differences in heterogeneous firm performance (McGahan and Porter 1997; Rumelt 1991). One recent development is to decompose the variance across levels in other variables than (financial) performance (M. Fitza and Dean 2016; Mazzei, Gangloff, and Shook 2015). This reflects recent theoretical developments where non-economic performance and non-economic variables emerges as the focal point in a more broad and holistic view on firm heterogeneity and performance. Arguably, this is a natural development in the overall variance decomposition approach in management since the issue of economic performance across firms is now rather well researched. However, far less is known about the origins of variance in other key firm constructs besides economic performance; the *firm capabilities including* concepts such as resource access, organization, corporate governance, and management practices.

Another recent development is the argument that not only are industry and firm effects important, *country effects* are also important. Adding country to the analysis of sources of firm heterogeneity reflects the emerging institutional-based view as a third leading perspective in strategic management, complementing the industry and resource based views (Peng 2002; Peng et al. 2009). The institutional based view brings country context back in, arguing in particular that country institutional
differences can both constrain firm behavior and advance firm capabilities. This addition of the institutions to the resource based- and industry based views makes for a third leg in what Peng et.al (2009) coin “the strategy tripod”. Importantly, it can be argued that country effects can possible account for a larger share of the variance in firm heterogeneity and performance than the well-established link effect from industry level factors.

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Figure 1 about here

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Figure 1 illustrates the contemporary variance decomposition research on firm firm performance, largely financial (accounting) performance, by indicating the explored pathways of research on performance differentials. The direct effects running through paths A and B are both well developed with C in a nascent, but emerging state. We will briefly review this literature in the subsequent section. Moreover, and of pivotal interest in this paper, the links between industry- and country level factors and firm capabilities (path D and E) are far less visible in the debate. These indirect effects on firm outcome runs through the “black box” that is the firm capabilities broadly understood. In other words, the industry and country context surrounding the firm will have an effect on these capabilities and their efficiency, and consequently on firm outcome. Consequently, the full impact of higher order factors such as industry and country are possibly underestimated in the abovementioned debate as the indirect effect is captured in the firm specific effect B. This is the topic for this paper where we aim to theorize and empirically illustrate higher level factors affect capabilities at the firm level. As a first step, we look at one
particular firm capability – **managerial capability** – and ask *to what extent are industry and country level factors affecting firm managerial capabilities?*

**Hypotheses development**

The core literature handling firm specific resources (Penrose 1959), their activities and routines (Eisenhardt and Martin 2000) and their dynamic capabilities (Teece, Pisano, and Shuen 1997) make some implicit assumptions about the idiosyncrasy of these factors (Barreto 2010). Granted, arguments of capability convergence and similarities across firms are found in the literature (Eisenhardt and Martin 2000), it seems to be a common claim that such capabilities are firm specific in their nature (Barreto 2010; Priem and Butler 2001). We will argue that assumptions of idiosyncrasy rests on an omission of important higher level factors – most notably institutions at the industry and country level.

The literature on institutional impact on organizations and firms is comprehensive and thorough (see Scott 2008 for a review) and several different conceptions of institutions exist. We find the broad conception of Scott (2001; 2008) to be a fruitful point of departure for understanding the institution-firm linkages: “Institutions comprise regulative, normative, and cultural-cognitive elements that, together with associated activities and resources, provide stability and meaning to social life (ibid p 56)”. In the subsequent section we build on institutional theory to argue the importance of higher level structures, i.e industry and country, in understanding the heterogeneity of firm capabilities. Specifically, we develop hypotheses of linkages between the institutional matrix of higher level structures and the firm level capabilities by means of the conception of isomorphism (DiMaggio and Powell 1983; Powell and DiMaggio 1991). The forces of institutional convergence/isomorphism have been found to be a considerable determinant of organizational form and function (Beckert 2010) and core theoretical papers are widely cited (Zhao et al. 2017). This tendency of entities within the same
context to develop similar organizational characteristics and practices (DiMaggio and Powell 1983; Zhao et al. 2017) would indeed also play out with firms embedded in industries and countries.

*Industry level explanations*

Particularly industry membership provides a push for similar practices for firms as a part of the same “organizational field”, meaning that they “constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies and other organizations that produce similar services or products” (DiMaggio and Powell, 1983, p. 148). Industries can be seen as groups of firms producing similar products, but also facing the same competitive forces (Porter 1985). While these forces impact firm performance, as thoroughly demonstrated in the literature (McGahan and Porter 2002b), they would also shape the capabilities within the firm. When facing in uncertainty in the form of changing factor conditions, factor prices or barriers to entry, firms located within the same industry will seek to minimize risk through *mimetic isomorphism* (Powell and DiMaggio 1991). Such diffusion of common ideas could emerge through interfirm movement of human capital, outside knowledge creators such as consultancies and the common meeting ground of trade associations. Specifically, this mimetic isomorphism based on common beliefs (Scott 2001) would often take the form of firms copying best practices observed among their peers.

Another form of convergence stems from the social obligation stemming from norms shared by an industry (Scott 2001) and how firms adapt according to what is considered appropriate (March and Olsen 2006). Such *normative isomorphism* will arise within an industry as the human capital of firms tend to stem from similar professional strata (Powell and DiMaggio 1991), sharing similar education from the same schools. The impact of professionals on organizational development and firm similarities runs through the conformity stemming
from professional communities and their “variety of social rewards and sanctions, including selection, socialization, and access to employment opportunities” (Teodoro 2014, 985)

Employees of a firm determines a considerable share of the resources and routines (Wright, Dunford, and Snell 2001) and hence we would argue that convergence in the form of human capital from normative isomorphism leads to convergence in firm capabilities as well.

Finally, industry membership can also expose the firm to a set of regulative rules (Scott 2001) enforced by industry organizations. These could typically be industry standards and shared sets of practices required for maintaining a legitimate level of self regulation – one particular example would be ethical standards beyond the legal requirement (Edwards, Mason, and Washington 2009). This form of coercive isomorphism would, however, require the enforcing agency the exhibit the authority to sanction deviations from the expected level of standard (Oliver 1991) and the benefits from following the norms would be increased legitimacy and possibly access to resources.

Industry membership constitute isomorphic pressure on the firm. Furthermore, as industries have different types of interest organizations representing them with differing magnitudes of ties with the individual firm Granovetter (1973), industries themselves differ with respect to how strong such pressure would be. Typically, an industry with strong interest groups and strong ties to the individual firm, will presumably create better diffusion of firm capabilities.

Summing up the mimetic, normative and coercive isomorphicism facing firms from industry membership we compile two conclusions. First, industry membership affect firm capabilities and thus "organizational practices are either a direct reaction of, or response to, rules and structures built into their larger environment" (Paauwe and Boselie 2003, 59). Second, different industries vary in respect to the extent of isomorphic pressure. Therefore, due to how
industry membership shape the capabilities of the firm through isomorphism we hypothesize that industry factors will be a significant determinant of firm capabilities.

\[ H1: \text{Industry level factors will account for a significant proportion of the variance in firm capabilities.} \]

Country level explanations

Firms are also embedded in the institutional setting of the country within where they are situated. Thus, in a line of reasoning related to the role of industry membership we can extend the idea of isomorphism to a national institutional context. Lewin and Kim (2004) argue that ‘organizations embedded in a nation-state share a common institutional backdrop that shapes a distinctive set of managerial practices’ (ibid p 338). This institutional setup includes formal and informal ties and define the ‘rules of the game’ for the firms North (1990). Categorization of such distinct institutional configurations include varieties of capitalism (e.g. Hall and Soskice (2001)), national business systems (e.g. Whitley (2000)), national systems of innovation (e.g. Freeman (1987); Lundvall (1992)). A collective term for these theories are comparative capitalisms (CC) and relate strongly to the modern management literature in general (Jackson, Deeg, and Jackson 2008) as well as the advent of institutional factors in management studies (i.e the third leg of the strategy tripod), in particular Peng (2002) and Peng et al. (2009).

The core idea of CC is that each country exhibits a set of institutions (formal and informal) as a function of its historical, political and economic trajectory Campbell and Pedersen (2014). Along such lines Chandler (1990) finds that the way firm level decisions are made differs considerably between different systems. Whitley (1996) finds similar results across European countries. Furthermore, Kogut (1991) finds that organizational routines, as well as
technological capabilities, develop following a certain trajectory that is contingent on the institutional setting of the country.

Following similar reasoning to that of impact on firm capabilities from industry membership, we can extend an argument involving isomorphism. Indeed, normative and mimetic isomorphism happens at the national level as well. Rather, there are particular characteristics with national institutions that are not shared by other levels of context dependence such as industry membership; most notably their coercive nature (Dacin 1997; North 1990). As institutions defines the set of appropriate firm behavior and shape their trajectories (Lewin and Kim 2004), we observe a coercive push toward adopting similar practices in line with the institutional expectations surrounding them. The theoretical discussion above leads us to expect that country level factors would be of particular importance in explaining variation in management practices:

H2: Country level factors would be significant determinants of variation in management practices

Case in point – firm management capability

From the previous discussion, we have established that firm capabilities are impacted and shaped by higher order factors through the forces of isomorphism as well as at the firm level. If this claim holds true we would be able to observe that capabilities cluster in patterns following distinct national or industrial paths. If this is not the case they would be considered independent of higher level factors as seems to be the postulates of the main contributions to the firm level (RBV and DCV). We suggest embarking on a simple illustration of our point by looking at a specific firm level capability – its management practice or managerial capability.
We choose to focus on managerial capabilities as a distinct form of capabilities in general for two reasons. First, management is to some extent a coordinating capability upon which other capabilities are contingent. This puts management practices at a central position within the firm. Second, the field of management research is particularly focused on explaining and understanding the role of management in firm outcome.

Methods and data

We illustrate our theoretical point by looking at one particular firm capability – its managerial capability. The issues of measurement related to managerial capabilities have also been subject to a certain debate (Bloom and Reenen 2007); (Bennett et al. 2012)). A considerable contribution to this measurement is The World Management Survey (WMS) described in detail in Bloom and Reenen (2007).

The WMS asks approximately 10 000 companies over 20 countries a range of questions asking the respondents to describe different aspects of the organization (e.g. how processes are organized), and about management practices (e.g. how performance is tracked and rewarded). The interviewer (a graduate student) rates the response on a 5-point scale indicating the quality of the response. All interviews are done by at least two students to control for interviewer variability. The questions are in turn merged into four categories:

- Operations Management - management
- Performance Monitoring - monitor
- Target Setting - target
- Talent Management - people

The WMS scores measures different dimensions of management quality and we are consequently interested in all of them as dependent variables in our analysis. The management
dimension captures the quality score of the operations management of the firm. This includes the use of lean manufacturing techniques, the documentation and the rationale behind the improvements in processing. A high score indicates a structured approach to exposing problems and solutions as a part of the normal operations of the firm. The monitor dimension measures how employees are monitored, tracked, and reviewed, and consequences they yield. A high score demonstrates a continuous tracking of performance, both informally and formally using a visual management tool. The target dimension captures the type of goal (financial, operational or more holistic), their realism, transparency and interconnectedness. A high score would mean that goals are meaningful and demanding as well as grounded in an understood rationale. Finally, the people dimension captures promotion criteria, ability to fix or fire bad performers, and pay. The highest score would mean that the firm actively identifies and promotes top performers. A detailed outline can be found in Bloom and Van Reenen (2007). We include all these four measures as indicators of management practices arguing that they do indeed capture different dimensions of the same underlying construct of management.

The use of variance decomposition has a long and interesting tradition within management research. The typical contributions described earlier (e.g. Schmalensee (1985); Rumelt (1991); McGahan and Porter (1997); McGahan and Porter (2002)) are all extended to new areas such as the role of executives Fitza (2014), and VC ownership Fitza, Matusik and Mosakowski (2009).

To decompose the variance in management quality from different levels of analysis we use a multilevel model (MLM) following recent discussions on its advantage juxtaposed to the traditional ANOVA model approach (Crossland and Hambrick 2011; Misangyi et al. 2006; Quigley and Graffin 2017). MLM is better designed to handle the structural relationships between different levels of analysis, a problem addressed in detail by McGahan and Porter (2002). In other words, firms can be nested within industries and countries without the former
being nested in the latter. Thus, Misangyi et.al (2006) argue for using MLM can examine the relative importance of different levels of analysis “in a manner that attempts to address the lack of independence among these levels” (ibid p 574). This particular method is implemented in the lmer function in R’s lme4 package. The WMS dataset provided us with 6991 firms whereof 1909 was observed over two or more years. These firms are nested within 19 countries in the full sample and 13 countries in the reduced sample with firms observed two times or more. These firms also represent a total of 155 industries in the full sample and 129 in the reduced. This made for a case where we could decompose our dependent variable – managerial capabilities – at the firm, industry and country level. Firms observed only one time was omitted from the main analysis to capture the firm-level effects directly, but included in a second analysis for the sake of robustness and the fear of selection bias in the sampling. As the higher level industry and country are at the focal point of our analysis, it makes sense to control for the empirical effect of including the full sample although it does not allow for variance at the firm level to be estimated. Furthermore, we evaluate the significanf of each level of variance using the anova method suggested by Bates et.al (2015) taking the problems of estimator symmetri into account when interpreting the corresponding p-values.

**Empirical results**

Our overall results suggest support for our hypotheses that higher order factors from the industry and country level do indeed impact firm managerial capability as an illustration for more general firm capabilities. The results are summed up in table 2 below where the share of total variance in managerial capabilities are expressed in percentage points. Table 3, in turn, depict the share of *explained* variance from each level. Note that total variance includes the residual term, whereas explained variance concerns only the part of the total variance in the dependent variable (managerial
capability) that can be explained by factors at the three levels of analysis (i.e the firm, industry and country level).

Management captures the way the firm works with operational management such as process improvement, documentation and rationale behind the improvements. The country level accounts for approximately 8.7% of the total variation, whereas the industry level accounts for 3.9%. This accounts for 16.9% and 7.6% of explained variance respectively.

Monitoring captures how employees are monitored, tracked, and reviewed, and the consequences they yield. The country level accounts for 7.5% compared to about 4.4% at the industry level. This makes for 16.5% and 9.7% of explained variance respectively.

Target captures the type of goal (financial, operational or more holistic), their realism, transparency and interconnectedness. Here the country level accounts for about 8.3% and industry about 3%.

Finally, people captures promotion criteria, ability to fix or fire bad performers, and pay. About 6.3% of the variation can be explained by factors at the country level contrasted by a mere 1.7% on the industry level.

Common for our findings along the four dimensions of management capabilities is that they align pretty well with earlier research on the role of industry level factors.
in explaining firm level characteristics (M. A. Fitza 2014; Short et al. 2015), albeit varying between dimensions. Discussing the variation between these dimensions is beyond the scope of this paper, however, recent important work on managerial capabilities show similar differences between these indicators systematically over different countries and firms (Bloom and Reenen 2007, 2010).

Another point worth noting is that our sampling strategy motivated by isolating firm level effects by including only company units being observed two or more times, significantly reduced the overall number of firms in the analysis and the number of industries represented (went from 6991 to 1909 firms, and 155 – 129 industries). Moreover, the reduction in firms also reduced the number of firms per industry making the estimates of interclass variance less reliable. Owing to our focal point being higher order factors at the industry and country level and the potential problems with omitted observations, we included a full sample analysis using the same methodology. In tables 4 and 5 we present MLM results for the full sample including firm effects where these were available. The main objective with this analysis is mainly to illustrate that the country effect may be slightly overstated, whereas industry may be underestimated in our main model due to fewer observations per industry code. This is most certainly an empirical point to be addressed using richer and more numerous data in the future.

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Table 4 about here

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Table 5 about here

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Methodological challenges aside, based on the multilevel model we do indeed find support for hypotheses 1 and 2. Still, a relatively large share of the managerial capabilities can be traced to sources at the country and industry level. Despite the rather simplistic empirical analysis, these results have some interesting implications for future research.

**Conclusion and future research**

From the outset of the relative importance of firms, industries and countries in understanding differences in firm outcomes, with the former explaining the bulk of the variance, we have argued that the general management literature, at least partly, neglect the impact higher order factors at industry and country level has on firm capabilities. This indirect channel of impact runs from higher levels, through the firm capabilities and ultimately to firm outcome. Drawing on institutional theory, we have developed a conceptual model where firms’ capabilities (partly) reflect industry and country conditions, with implications for how we can understand the interrelationship between firm, industry and country factors in analysis of firm (financial) performance. Albeit a mainly conceptual paper, our theoretical implications are elucidated through some simple empirical illustrations. These empirics offer some initial support for our conceptual theorizing in that between 21-29% of the explained variance in firm managerial capability stems from the higher level factors. Based on our theoretical discussion this range may very well vary with different forms of firm capabilities due to varying forms of isomorphic pressure.

Our theoretical discussion and empirical illustration suggests a pathway for further research in two ways. First, the theoretical microfoundations of institutional theory and their linkages to firm capabilities should be explored and developed.
Granted, the field of organizational theory have provided much insight into how institutions shape organizations, but the distinct characteristics of the firm would benefit from a tighter coupling with the institutional literature.

The other path to pursue in future papers would be through more sophisticated empirics. Our empirical illustration has some methodological challenges that need to be addressed in the future. The main concern is the access to data on firm specific resources and capabilities at the micro level – preferably over time. Such data, similar to those in WMS, would provide a richer empirical insight into other capabilities beyond those discussed in this paper. Furthermore, the simple variance decomposition approach is unable to shed light on what kind of factors at the industry and country level matter. By combining explanatory variables at these levels with firm level covariates in a multi-level analysis framework, future research could help us to a deeper understanding of the actual institutional isomorphic pressure at work. Finally, an empirical analysis tying the indirect and direct effects on firm performance together in a path-analysis (e.g a multilevel Structural Equation Model) would be a considerable progress in understanding the mediating effect of firm capabilities and hence to our overall conceptual framework.

In conclusion our theoretical discussion and empirical illustration should at the very least raise some interesting questions about the relative importance the firm level perspectives of the resource based view and dynamic capabilities, and the industry based view. In most of the empirical literature, most notably the aforementioned debate in the Strategic Management Journal, the industry based view suffers from a relatively minor explanatory power compared to the resource based view. Our findings suggest that this effect could be underestimated and that in fact the industry based view, through indirect effects of institutions on firm capabilities, could play a
larger role in explaining firm variance than presently understood. Similarly, this also lends new support to the importance of the institutional based view of country effects opening up for further inquiry into the role of national political economic institutions as well. It may be time for the relative importance of the resource based-, industry-based and institutional based views to be reconsidered.
References


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Figures

Figure 1 - Analytical framework of firm outcome

Table 1 - Literature review on higher level effects on firm outcome

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<td>Comparto combined with Thomson Financial IPO database. Simultaneous ANOVA</td>
<td>Underpricing in % of an IPO</td>
<td>Underpricing: 8.7%</td>
<td>Find that VC is of more importance than the underwriter in affecting the underpricing of IPOs</td>
</tr>
<tr>
<td>Short et al. (2015)</td>
<td>Kinder, Lydenberg, and Domini Co. (KLD) to estimate Corporate Social Performance Hierarchical Linear Model – Random Coefficient</td>
<td>Corporate Social Performance</td>
<td>Industry-level: 6.2%</td>
<td>Investigating Corporate Social Performance and how it grows and declines over time. This trajectory is contingent on both firm and industry factors</td>
</tr>
<tr>
<td>Mouni et al. (2015)</td>
<td>Kinder, Lydenberg and Domini Co. (KLD) Comparto Hierarchical Linear Model – Random Coefficient</td>
<td>Corporate Social Responsibility Corporate Social Irresponsibility</td>
<td>Industry-level: 6%</td>
<td>Studying the formation of both responsibility and irresponsibility of businesses</td>
</tr>
<tr>
<td></td>
<td>Management</td>
<td>Monitor</td>
<td>Target</td>
<td>People</td>
</tr>
<tr>
<td>----------------</td>
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<td>--------</td>
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</tr>
<tr>
<td><strong>Country</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of variance</td>
<td>8,70</td>
<td>7,50</td>
<td>8,30</td>
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</tr>
<tr>
<td>Significance</td>
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<td>&lt; 0.01</td>
<td>&lt; 0.01</td>
<td>&lt; 0.01</td>
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<tr>
<td><strong>Industry</strong></td>
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</tr>
<tr>
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<td>4,40</td>
<td>3,00</td>
<td>1,70</td>
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<tr>
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<td>&lt; 0.01</td>
<td>&lt; 0.01</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td><strong>Firm</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of variance</td>
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<td>33,60</td>
<td>30,70</td>
<td>29,50</td>
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<tr>
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<td>&lt; 0.01</td>
<td>&lt; 0.01</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td><strong>Residual</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of variance</td>
<td>48,40</td>
<td>54,50</td>
<td>58,00</td>
<td>62,50</td>
</tr>
</tbody>
</table>

**Table 2 - Multilevel random effects from MLM – share of total variance**

<table>
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<tr>
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<th>Management</th>
<th>Monitor</th>
<th>Target</th>
<th>People</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of variance</td>
<td>16,9</td>
<td>16,5</td>
<td>19,8</td>
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<tr>
<td><strong>Industry</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of variance</td>
<td>7,6</td>
<td>9,7</td>
<td>7,1</td>
<td>4,5</td>
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<tr>
<td>Significance</td>
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<td>&lt; 0.01</td>
<td>&lt; 0.01</td>
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<tr>
<td><strong>Firm</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of variance</td>
<td>75,5</td>
<td>73,8</td>
<td>73,1</td>
<td>78,7</td>
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</table>

**Table 3 - Higher order factor’s share of explained variance**

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<th>Management</th>
<th>Monitor</th>
<th>Target</th>
<th>People</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of variance</td>
<td>7,10</td>
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<td>5,50</td>
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<td>&lt; 0.01</td>
<td>&lt; 0.01</td>
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<tr>
<td><strong>Industry</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of variance</td>
<td>7,00</td>
<td>7,10</td>
<td>6,00</td>
<td>3,20</td>
</tr>
<tr>
<td>Significance</td>
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<td>&lt; 0.01</td>
<td>&lt; 0.01</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td><strong>Firm</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of variance</td>
<td>39,60</td>
<td>34,70</td>
<td>32,40</td>
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<td>&lt; 0.01</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td><strong>Residual</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of variance</td>
<td>46,20</td>
<td>51,50</td>
<td>55,30</td>
<td>62,50</td>
</tr>
</tbody>
</table>

**Table 4 - Robustness tests including full sample – share of total variance**
<table>
<thead>
<tr>
<th></th>
<th>Management</th>
<th>Monitor</th>
<th>Target</th>
<th>People</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
<td>13.2</td>
<td>13.8</td>
<td>14.1</td>
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</tr>
<tr>
<td>Industry</td>
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<td>14.6</td>
<td>13.4</td>
<td>8.5</td>
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<tr>
<td>Firm</td>
<td>73.7</td>
<td>71.5</td>
<td>72.5</td>
<td>76.8</td>
</tr>
</tbody>
</table>

*Table 5 - Higher order factor’s share of explained variance - Robustness test with full sample*