Ludewig and Sadowski (2009) empirically examine the economic value of organizational capital. They use a comprehensive panel data set from the Institute for Employment Research (IAB) that provides standard information about inputs and outputs of the production process of German corporate establishments. This data set also includes organizational dimensions of those establishments, which makes it an interesting source for a study on organizational capital.

The sample that Ludewig and Sadowski (2009) use comprises information about whether establishments adopted quality control systems and quality circles, profit or cost centers, and teamwork practices. Moreover, we can determine if the management delegated decision-making power to line workers and whether supply by external vendors increased or outsourcing took place. Using these organizational practices as measures for organizational capital and a sophisticated econometric methodology, Ludewig and Sadowski (2009) find that except for profit centers, none of the measures for organizational capital exerts a significant impact on the performance of the establishments. The paper advances our knowledge on the value of organizational capital by shedding light on what particular practices contribute to organizational capital. Thus, this paper represents a valuable contribution to this literature.

Given the tremendous importance of intangible capital for the performance of firms and the value they represent to the society, it is difficult to overstate the relevance of research that measures organizational capital and examines antecedents of organizational capital. Still, this literature is relatively young and provides ample opportunities to proceed further. We use Ludewig and Sadowski’s (2009) paper to exemplify our ideas about how to build on existing research.

One of the fundamental issues that plague empirical research in organization capital is that which is associated with the endogeneity of the organization. Organizations are not the result of purely random trials from which we can infer the features of the best-
performing organizational structure. Rather, we should view the creation and modification of organizations as a thoughtful managerial process. It is well known that ignoring the endogenous nature of organizations might lead to biased estimation results about the performance effects of the organizational structure. Recent econometric studies (e.g., Imbens and Angrist (1994)) take this problem into account, and we advocate the view of a more widespread application of this method for use in the empirical research on organizations, and on organizational capital in particular. Given that Ludewig and Sadowski (2009) do not deal with the entire problem of endogeneity, we are reluctant to take their results at face value.

To be more specific about the critical issues in Ludewig and Sadowski’s (2009) empirical approach, we note that the authors mainly use cross-sectional information on the relation between organizational practices and performance. However, certain firms may be more likely to adopt organizational practices than others. For example, they might do so because their management is more talented or because the adoption is less costly to perform. Pooling all observations and either ignoring or insufficiently controlling for these differences may lead to biased estimates and incorrect interpretations of the estimation results.

However, there are two ways to get around this problem. First, researchers could make inferences based on the temporal variation in the organizational dimension. If an organizational practice is profit-enhancing, then the performance of the firm should increase after its adoption. When the talent of the management team and other performance determinants do not change, time-series information should provide a cleaner test of the performance implications of organizational practices. We may argue that time-series inferences have their own problem when a general trend distorts the organizational performance effect. Therefore, we should compare the performance change over time for firms that were subject to organizational innovation with those whose organization has remained unchanged. For example, when the sample covers an economic downturn, there is a general decline of the firm performance. By comparing the two differences, we avoid wrongly attributing this business cycle effect to the structural change. This approach is called the difference-in-difference method (e.g., Athey and Imbens (2006)).

Under some assumptions, this approach may not work. This is the case when the temporal effects are different between the firms that change their structure and those that retain their organizational form. This issue is tackled in the matching literature (e.g., Abadie and Imbens (2006)). In this literature, one tries to find pairs of (sets of) firms that are as similar as possible along all dimensions that are relevant for performance, except for the organizational dimension whose performance influence one wishes to test. It seems that both approaches are feasible for the IAB data set, and to test the stability of the original results, both should be pursued.

There are other empirical challenges associated with measuring the performance impact of organizational practices, one of which is associated with the fact that organizational practices are likely to depend on each other in complicated ways. For example, two specific practices might be linked by a complementary relationship in the sense of Milgrom and
In the specification used by Ludewig and Sadowski (2009), ignoring complementarities leads to an omitted variable bias. Furthermore, measuring performance is a critical issue. Even though we absolutely agree with Ludewig and Sadowski (2009) about the limitations of market-based performance measures, relying entirely on value added as the only performance measure may not be appropriate, because it ignores important components of the economic costs of production.

Finally, the issue that is central to the discussion is what organizational capital really is, and why it matters. Ludewig and Sadowski (2009) discuss different theoretical approaches, one of which highlights the resource-like property of organizational capital. This theory suggests that non-imitability of the organizational practice is required for it to become a value driver of the firm. It seems questionable that the particular organizational practices studied in the Ludewig and Sadowski (2009) paper are indeed hard to imitate, and thus, that this theory is relevant in the context of the study. Nevertheless, it would be instructive to distinguish between fundamentally different explanations of organizational capital. One indication of a failure of the resource-based view to explain organizational capital can be found in a recent study by Van Reenen and Bloom (2007). These authors have shown that management seems to be reluctant to implement simple-to-adopt and clearly profit-enhancing management practices under some conditions, such as low competition.

**References**


Ludewig, Oliver, Sadowski, Dieter (2009), Measuring Organizational Capital, *this issue.*