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The influence of knowledge-based resources and business scholars' internationalization strategies on research performance

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ABSTRACT

This study investigates how business research scholars' internationalization strategies influence their research performance and how this relationship is moderated by the availability of different knowledgebased resources. The authors analyze citations to journal articles authored by business research scholars with German affiliations and examine how the number of citations is determined by international collaborations and a researcher's knowledge resources in terms of language skills, research experience, and foreign market knowledge. The results demonstrate that the augmentation of complementary knowledge resources (i.e., when researchers lack language skills and foreign market knowledge) positively influences the performance of a collaboration-based internationalization strategy (i.e., collaborations with international researchers). The collaboration-based strategy also improves performance for less experienced researchers, but this advantage diminishes with increasing research experience. The findings provide further insights into drivers of scholars' research performance and have practical implications for science policy.

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1. Introduction

The internationalization of authorship in leading business journals that are traditionally published in the U.S. and dominated by U.S. authors has increased remarkably in recent years (Kocher and Sutter, 2001; Stremersch and Verhoef, 2005). For instance, authors from European countries, such as the Netherlands and Germany, have experienced high growth rates in terms of top economic journal publications (Cardoso et al., 2010): The share of articles in leading economic journals by European researchers has steadily increased from 14% in 1991 to 22% in 2006 at the expense of publications by U.S. researchers (from 85% to 76%). Previous research has investigated the consequences of the internationalization of authorship regarding such factors as a discipline's diversity or a journal's impact (e.g. Smeby and Try, 2005; Stremersch and Verhoef, 2005). However, thus far, little is known regarding the individual internationalization strategies that non-US authors utilize, such as working abroad or collaborating with international authors, and how these internationalization strategies enhance their individual research performance. This study investigates how

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scholars' various internationalization strategies impact scholars' research performance.

We investigate this issue by examining international journal publications by German-speaking scholars in the field of business. We explain the success of these publications (in terms of the citations that a paper receives) through references to the various internationalization strategies of German scholars, as indicated by whether and how intensely they collaborate with international authors. Our reasoning is based on the resource-based view and focuses on alternative entry modes into international markets that provide various opportunities for value creation by exploiting or augmenting knowledge-based resources. We analyze whether the relationship between internationalization strategies and performance is moderated by researchers' knowledge-based resources, such as their language skills, their experience, and their market knowledge. In particular, we attempt to answer the following question: How does the availability to researchers of various knowledge-based resources moderate the influence of internationalization strategies on research performance?

Our study makes several contributions. The findings reveal the internationalization strategies used by researchers that increase the number of times their work is cited. By demonstrating that knowledge-based resources moderate the influence of internationalization strategies on performance, the study adds to the literature on the consequences of internationalization in science (e.g. Smeby and Try, 2005; Stremersch and Verhoef, 2005) and to the research stream on determinants and drivers of research





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performance (e.g. Martín-Sempere et al., 2008; Rey-Rocha et al., 2007). Consequently, the study identifies successful combinations of knowledge resources and internationalization strategies that enhance a scholar's research performance. Research performance is said to provide a fine indicator for the measurement of scientific quality, and it is viewed as the best approach to encouraging high-quality research. Therefore, the findings resulting from this study not only are of theoretical interest but also have important consequences for scientists, journal editors, publishers, sponsors, the scientific community, and science policy at large. Our findings suggest that science policy can improve research performance by facilitating international mobility, particularly for inexperienced researchers who are developing conceptual papers. International mobility and collaboration should be encouraged with regard to English-speaking countries because the findings reveal that collaboration with scholars from English-speaking countries has a positive influence on research performance.

The remainder of the paper is structured as follows: First, we provide a brief literature review of the consequences of internationalization in scientific research and determinants of research performance. Next, we develop hypotheses that relate to the moderating influence of knowledge-based resources on the relationship between researchers' internationalization strategies and research performance. Next, we describe the research methods and our empirical results. Finally, we discuss the results in light of the suggested hypotheses and consider theoretical and practical implications.

2. The internationalization of research and research performance: prior research

2.1. Consequences of internationalization in research

In this study, the internationalization of research refers to the increasing number of publications by authors located outside the U.S. in leading international journals. These leading journals in the field of business are published primarily in the U.S. and are traditionally dominated by articles by U.S. researchers.

The number of publications by non-U.S. authors is steadily increasing, and the impact of these publications has increased as well (Cardoso et al., 2010). For instance, the share of citations to journal articles by European researchers used to be lower than the share of citations to journal articles by U.S. researchers, indicating that articles by European researchers have a smaller impact than articles by U.S. researchers. This gap between the share of citations and the share of articles has narrowed over the years and even disappeared in 2006.

Stremersch and Verhoef (2005) have conducted further investigation to determine whether and how the internationalization of authorship helps or hinders a field that was formerly driven almost exclusively by U.S. authors. Their results demonstrate that globalization furthers the diversity of the discipline, as well as reduces the impact of several major journals. However, none of the prior studies has demonstrated how individual internationalization strategies determine a scholar's research performance. An internationalization strategy is one of many possible determinants of research performance.

2.2. Determinants of research performance

Determinants of research performance can be categorized into individual factors (age, education, etc.), departmental factors (characteristics of the institution), and environmental factors (policies, financial support, infrastructure, etc.) (Abramo et al., 2009). Individual factors that have a significant positive influence on performance include the researcher's socioeconomic status and her/his level of education (Fox and Mohapatra, 2007; Tien and Blackburn, 1996). Another important individual factor is amount of experience working as a scientist. Studies have discovered both positive and negative effects on research performance. Holly (1977) suggests a curvilinear relationship: There appears to be an increase in research performance prior to a tenure announcement and a rapid decrease in research productivity after a tenure announcement.

As for departmental factors, previous studies have demonstrated that organizational structure (e.g., a decentralized organization and research group diversity), leadership styles (i.e., leaders with research knowledge and the usage of participatory management practices), and rewards for research output positively influence scientific output (Bland and Ruffin, 1992). Findings related to the departmental factor faculty size are mixed. Kyvik (1995) argued that faculty size plays an important role in individual research performance because of enhanced interaction and greater access to resources. However, in his empirical study, he found a significant relationship between size and performance only for natural sciences. Additionally, Dundar and Lewis (1998) reported that larger faculty sizes enhance productivity but do so at a decreasing rate. The larger a research group is, the more difficult the communication among researchers is and the more complex formal regulations and routines are, which impedes both innovation and initiative. Blackburn et al. (1978) even found that faculty size does not at all determine research output.

At the environmental level, private universities, a small studentstaff ratio, and annual research spending are found to have a positive effect on research performance (Dundar and Lewis, 1998; Grunig, 1997). Moreover, assistance during the research process, e.g., with literature search or data entry, increases research performance (Hekelman et al., 1995).

As for the importance of these factors, Fox (1983) observed that the combination of individual and environmental factors leads to higher research performance. Bland and Schmitz (1986) have investigated thirteen characteristics at the individual, departmental and environmental levels that determine research performance. They found that the primary factors that increase research performance are individual motivation, time for research, content and methodological knowledge, supportive colleagues, organizational structure, identification with organization, and resources.

In our study, we focus on collaboration with other researchers as a factor that improves research productivity (Narin et al., 1991) and leads to more rapid diffusion of knowledge (Singh, 2005). Katz and Martin (1997) have demonstrated that interactions between researchers lead to better performance; and Lee and Bozeman (2005) found that the number of collaborating researchers is positively correlated with productivity. International collaborations in particular positively influence research performance (Barjak and Robinson, 2007; Martín-Sempere et al., 2002; Van Raan, 1998). The underlying motives for collaboration are diverse. According to Bozeman and Corley (2004), as well as Katz and Martin (1997), the motives include access to knowledge, equipment, and funds, the enhancement of prestige and productivity and simply the enjoyment that results from working with other researchers. International collaborations can increase research performance because they provide access to knowledge, expertise, and language skills that researchers who want to collaborate might lack.

In the following section, we focus and extend the findings on international collaborations as a determinant of research performance (Barjak and Robinson, 2007; Martín-Sempere et al., 2002; Van Raan, 1998). We refer to the literature on internationalization strategies in business research, and we explain how different internationalization strategies (i.e., different approaches Download English Version:

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