

# Tell Me Where You Belong, I Might Cite Your Work: Affiliation Origins, Legitimation Efforts, and the Citation of Team-Produced Research in Business and Management Scholarship

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## ORIGINAL RESEARCH ARTICLE

# Tell Me Where You Belong, I Might Cite Your Work: Affiliation Origins, Legitimation Efforts, and the Citation of Team-Produced Research in Business and Management Scholarship

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## Abstract

Drawing from the country-of-origin literature, this study theorizes the effect of academic affiliation origins on the academic impact of knowledge produced by teams of researchers. Our econometric analysis employing more than 65,000 peer-reviewed articles published from 1997 to 2012 in business and management journals reveals that the higher the share of co-authors with peripheral affiliations (i.e. the proportion of authors in a research team not affiliated with a US or UK institution), the lower is the number of citations their articles receive on average. Despite the globalization of knowledge production, the results show that scholars' geographic location still plays an influential role in knowledge diffusion processes, conditioning gains, or setbacks with respect to the academic impact of their work. We further show that scholars on the periphery of global scholarship can reduce this negative effect by developing 'targeting' and 'framing' legitimation efforts reflected in the composition of the team they are part of and in the positioning of the knowledge it produces.

**Keywords:** *Citation; Country of origin; Legitimacy; Research collaboration*

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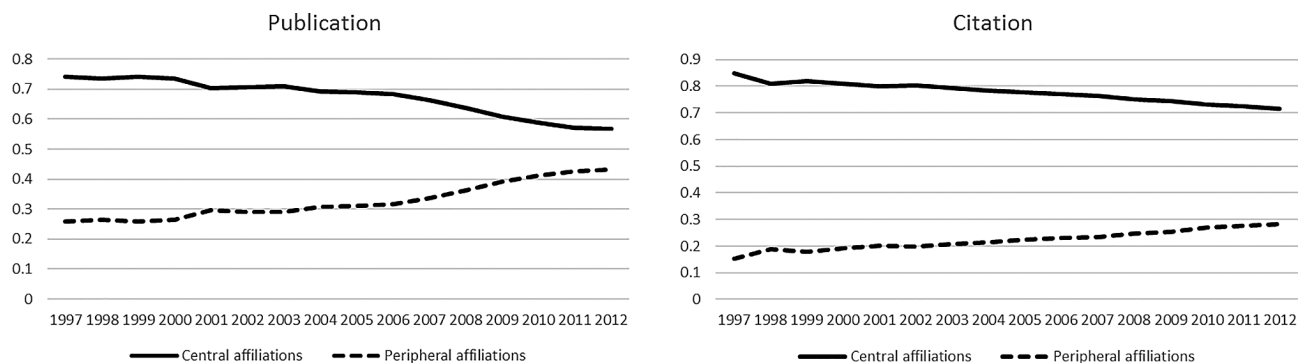
Despite the significant role of geography in providing location-specific (dis)advantages for knowledge production and diffusion (Cronin & Shaw, 1999; Frenken & Hoekman, 2014; Paris et al., 1998; Smith et al., 2014; Wuestman et al., 2019), little is known about its implications on academic business and management knowledge (BMK), whose research community (like many others) has become more internationalized over time (Corbett et al., 2014; Yoon et al., 2021).

The internationalization of business and management studies is characterized by a growing segment of authors affiliated with Western European and East Asian institutions publishing in 'top' academic journals and a declining share of the US and UK authorship in these publications (Dubois & Walsh, 2017; Mangematin & Baden-Fuller, 2008; Mangematin & Belkhouja, 2015; Saunders et al., 2011; Walsh et al., 2017). For instance, we discovered from the UT Dallas Top 100 Business School Research Rankings that whereas the share of

North American institutions in the Top 100 ranking has decreased from 91% (2002–2006) to 78% (2012–2016), the shares of European and Asian institutions during the same period have increased from 4.71 to 10.94% and from 4.04 to 10.11%, respectively.

Yet, although the international panorama for journal publications has become progressively more geographically 'balanced', the field of business and management studies is still not a truly 'multinational association of scholars with all the paraphernalia of international exchange' (March, 2005, p. 5). As Figure 1 illustrates, while the relative number of publications from the US and UK universities is diminishing, these two environments, which historically represent the primary and secondary centers of business and management global scholarship, respectively (Mangematin & Baden-Fuller, 2008; Üsdiken, 2014), have maintained their influence and leadership in terms of citations. Preliminary evidence suggests that while the productivity gap between incumbents and

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Note: The solid line indicates teams comprising only authors with central affiliations (US and UK); the dotted line indicates teams comprising only authors with peripheral affiliations. Calculations are based on Web of Science data.

**Figure 1.** Evolution of the market share by publication and citation in business and management

authors from follower institutions from various regions has narrowed (Yoon et al., 2021), the actual academic impact (i.e. citations) of the knowledge outputs they publish remains geographically disproportionate. It also implies that BMK generated by scholars who are affiliated with institutions outside the US and UK centers, on the semi-periphery and periphery of global business scholarship (Üsdiken, 2014), may implicitly be regarded as less important, or at least less valuable, for and by scholars. Prior studies (Mangematin & Baden-Fuller, 2008; Üsdiken, 2014) indicate that the field of business and management studies is articulated around a primary center (i.e. the US) and a secondary center (i.e. the UK) that are surrounded by semi-peripheral countries and a more distant periphery (see also Schott, 1988). Therefore, we rely on the center-periphery model of scholarship (e.g. Ben-David, 1984) to understand the globally stratified nature of business and management studies.

This study addresses two contentious and prominent research questions: (1) Do affiliation origins of scholars in a research team influence the academic impact (i.e. citations) of its research outputs? and (2) How can research teams mitigate and overcome the potential effects of the liability of affiliation origins? Using a large database containing information on more than 65,000 business and management research articles published between 1997 and 2012 and whose teams of authors originate from all over the world, we examine the effect of 'peripheral' affiliation on the citations of the knowledge published by a research team and test the moderating effects of targeting and framing legitimization strategies on that relationship. We operationalize 'peripheral affiliation' as the proportion of authors in a research team not affiliated with a US or UK institution (Üsdiken, 2014). Our analysis focuses on team-produced knowledge, as team science has been a pervasive norm in the contemporary knowledge production landscape

(Wuchty et al., 2007). Given today's lower collaboration costs and tendency toward more division of scientific tasks (Katz & Martin, 1997; Lee et al., 2015), team science or team-based knowledge production is the current norm in many academic disciplines (Wuchty et al., 2007) as well as in business and management research communities (Liu et al., 2017).

Our primary contribution is to explain how geography influences the fate of research outputs by highlighting location-specific (dis)advantages for research teams. Previous studies on the geography of academic knowledge impact mainly address how the co-location of scientists across organizations, regions, and countries influences citations, from a capability augmentation and knowledge transfer lens (Breschi & Lissoni, 2009; Fiaschi et al., 2017; Frenken et al., 2009; Heimeriks & Boschma, 2013; Wuestman et al., 2019). In contrast, we specifically focus on identifying and addressing the challenges faced by teams of scholars affiliated with institutions located outside the center of global business scholarship. By combining insights from country-of-origin and legitimacy literature, we contribute to prior research by underscoring the liability of peripheral affiliation origins and by proposing remedies, through team composition and knowledge positioning, to the negative effect of authors' peripheral affiliations on the academic impact of the BMK produced by research teams (Moeller et al., 2013; Veale & Quester, 2009). In doing so, we advance a general understanding of how to achieve greater legitimacy for knowledge generated by research teams (Thomas & Wilson, 2011).

The remainder of this study is organized as follows. First, we review the streams of literature on country-of-origin and legitimacy to formulate hypotheses. Second, we explain the data and methods used in the analysis. Third, we report our results with additional robustness checks. Finally, we discuss the implications of our findings.

## Theory and hypotheses

### Country-of-origin and knowledge production

In global knowledge production, authors' geographic location appears to influence the number of citations of a research article (Frenken et al., 2009; Heimeriks & Boschma, 2013; Wuestman et al., 2019). Specific research fields, including information science (Cronin & Shaw, 1999), ecology and environmental science (Paris et al., 1998), and physics (Smith et al., 2014), have identified such a region-based citation bias. To theorize the role of geography in determining the impact of BMK, we draw on the notion of country-of-origin, which explains that audiences' evaluations are subjective and that the geographic origin or location of a 'product' might sometimes be more or less valued than its intrinsic quality and serve as a signal that influences decision-making and establishes behavioral intentions (Verlegh & Steenkamp, 1999). As such, the role of location-specific (dis)advantages (Dunning, 1998) is well recognized in International Business and Marketing studies.

The liability-of-origin literature further emphasizes that perceptions of the place of manufacture of products can significantly shape audiences' evaluations and represent a source of bias (Amankwah-Amoah & Debrah, 2017; Bartlett & Ghoshal, 2000; Moeller et al., 2013; Ramachandran & Pant, 2010; Veale & Quester, 2009). That is, the liability of origin refers to negative perceptions, stereotypes, or beliefs regarding products or organizations associated with the area they originate from (Ramachandran & Pant, 2010), a handicap incurred because of their geographic roots (De Beule et al., 2014). The idea relates to the propensity of audiences to favor artifacts produced by core organizations they consider superior or more advanced, while more or less consciously disregarding products or organizations originating from some peripheral areas (Sharma, 2015) or perceiving them as less legitimate (Amankwah-Amoah & Debrah, 2017; Fiaschi et al., 2017). This stance might lead to difficulties of certain groups and organizations in competing due to their origin, as they can encounter biases and legitimacy-related challenges 'because of where they are from' (Kolk & Curran, 2017, p. 699). Thus, we posit that for research teams and the knowledge artifacts they produce, being affiliated with academic institutions originating from a country perceived as less legitimate or less advanced can represent an intrinsically negative signal for knowledge audiences.

### Peripheral affiliation in business and management academia

With growing worldwide competition in business and management research activities, recent decades have witnessed a relative globalization of authorship in top journals (Saunders et al., 2011). In a broadening 'publish-or-perish' context, business scholars across the globe have now set their eyes on

prominent international journal outlets (Leung, 2007), and the dominance of research institutions in the two major English-speaking countries has gradually given way to Western European and East Asian institutions that have partly adopted or adapted the American-British research production and evaluation system (Mangematin & Baden-Fuller, 2008; Üsdiken, 2014; Walsh et al., 2017).

Nevertheless, the US and UK academic institutions have maintained academic reputation globally over the years and, to a large extent, represent *de facto* reference points for business and management scholarly audiences in other parts of the world. Although world-class institutions in other geographic areas have to a certain extent also appeared on the global scene, institutions in the US and UK national environments continue to attract highly visible researchers and offer supportive conditions for research (Vogel et al., 2017). The persistent predominance of the US and UK business and management scholarship is also due partly to English being the lingua franca for publication and partly to the Anglo-American origins of more than half the influential journals in business and management research (Üsdiken, 2014). These elements indicate that the reputation of scholars is somehow, through the academic institutions they work at, geographically bounded to particular countries or language areas (Wuestman et al., 2019). On these premises, articles written in English at such US and UK academic institutions might still be more searched, found, read, and consequently cited.

In addition, the still-dominant positions of the US and UK in the scientific world further make not citing research outputs they produce highly critical, while the converse does not (March, 2005; Paris et al., 1998). For example, North American authors and references are still more likely to be featured in European academic business and management journals than non-North American authors and references in North American ones (March, 2005; Üsdiken, 2014). Such geographic differences may be understood from social constructivist theories, considering that citations are not only a sign of intellectual acknowledgment (Baldi, 1998). The act of citing is indeed a complex, dynamic, cognitive process (Harter, 1992). Motives for citing are multiple (Erikson & Erlandson, 2004; Shadish et al., 1995; Starbuck, 2013) and can be driven by biases and deficiencies (Bornmann & Daniel, 2008; Nicolaisen, 2007), which can relate to geography. In particular, intendedly or not, to increase the perceived validity and relevance of their arguments, scholars may decide to cite an article based on the location of a cited paper's author within the stratification structure of an academic field rather than on the consideration of its actual, specific content (Baldi, 1998; Wuestman et al., 2019). For these reasons and in a context where knowledge produced at the 'center' may remain perceived as less questionable (Üsdiken & Wasti, 2009), business and management scholars, whether at the center or periphery of global scholarship, consciously or

not, may preferentially cite the work of scholars from centrally located institutions perceived as more reputable and credible over equally relevant research contributions by scholars affiliated with organizations on the periphery of global scholarship (Wuestman et al., 2019). Given the preceding arguments and the particular articulation of business scholarship around US and UK primary and secondary centers (Üsdiken, 2014), we hypothesize a relationship between the peripheral nature of the affiliations of members of a research team and the academic impact of the BMK produced by this team:

**Hypothesis 1.** *Ceteris paribus*, the peripheral affiliation of a research team is negatively associated with the academic impact of the knowledge it produces.

### **Remedies for the liability of peripheral affiliation origins**

An academic work is considered a legitimate scholarly endeavor when it constitutes a source of interest to other scholars (Thomas & Wilson, 2011). This is consistent with the view of institutional theory scholars, who claim that legitimacy is granted to an actor by other field actors when they deem his or her actions or outputs as desirable and appropriate (Suchman, 1995). Conversely, actors are deemed as lacking legitimacy when their activities are not desirable or do not conform to prevailing societal norms and standards (Hiatt et al., 2009; Kim et al., 2016). Such a lack of legitimacy may lead to unstable links with audiences, a detraction of their attention, and the withholding of material or ideational support to an actor (Aldrich & Fiol, 1994).

In this context, scholars and research teams in various knowledge domains typically try to gain a firmer footing in a research community and to increase their academic impact by establishing legitimacy (Kacperczyk & Younkin, 2017). Theoretically, legitimacy is a multidimensional concept. Research efforts taking into account the social judgment perspective of the legitimacy conferred specifically recognize both an evaluative and a cognitive dimension (Bitektine, 2011; Suchman, 1995). The evaluative dimension of legitimacy requires acknowledgment by audiences of the specific or generic contribution of the actor to their well-being (i.e. pragmatic legitimacy). It can also include the extent to which audiences perceive this actor as doing 'the right thing' and the normative appropriateness of the outcomes of the actor's activities (i.e. moral legitimacy), given his or her link to institutional standards or broader societal values. The evaluative dimension of legitimacy refers to 'collective action [as] an outcome based on common understanding' (Golant & Sillince, 2007, p. 1150). The cognitive dimension of legitimacy is based not on assessed interests or proper motivation but rather on the mere acceptance of the entity as 'taken for granted' (Suchman, 1995).

From a more processual standpoint, legitimation involves the continuous testing and redefinition of the legitimacy of actors through ongoing interaction with audiences in their environment (Kostova & Zaheer, 1999). It captures social processes 'by which cultural accounts from a larger social framework in which a social entity is nested are construed to explain and support the existence of that social entity' (Berger et al., 1998, p. 380). Kim et al. (2016) suggested that legitimation efforts by social actors can be classified into two main categories: those related to the channels of communication which they refer to as 'targeting' strategies and those related to what social actors communicate and the way their message is conveyed, which they call 'framing' strategies.

### **Targeting strategies**

Targeting strategies can be mobilized to enhance an entity's cognitive legitimacy (Baum & Oliver, 1992; Foreman & Whetten, 2002). Targeting efforts indeed involve affirmative backing of artifacts, leading audiences to accept them as necessary or inevitable (Suchman, 1995). In our study and in a context in which audiences consider some scholarly work more legitimate than others (Patriotta, 2017), we argue that targeting strategies to build legitimacy on a cognitive basis for BMK produced by a team of scholars include deciding on team composition and positioning the research output in the discursive and communicational space constituted by journals in the research field.

We contend that enhancing the cognitive legitimacy of a research team can be achieved by 'targeted team composition' efforts – that is, forming the research team with authors with high status and pre-existing salience in the research community proxied by the citation counts their research output has received (Kacperczyk & Younkin, 2017; Merton, 1968). Considerations of cognitive economy among audiences indeed elicit less expansive judgments based on the assignment of social actors and the outcomes of their activity to some pre-existing cognitive category (Bitektine, 2011). In this context, an author's status and the associated salience of his or her work in a research community can represent crucial assets underpinning potential co-author recruitment efforts and collaboration among researchers (Jones et al., 2008). That is, scholars may be more likely to cite articles written by high-status individuals in the hopes of conferring legitimacy to their own work (Judge et al., 2007).

In addition, we suggest that cognitive legitimacy can be achieved by fostering audiences' spontaneous acceptance of claims of scientific rigor and objectivity predictably associated with publications in 'top' journal outlets (Kim et al., 2009; Thomas & Wilson, 2011) characterized by a high impact factor. That is, through the 'targeted spatial positioning' of an article within the restricted discursive arena constituted by top-tier



journals, research teams can obtain explicit certification of the appropriateness of their research efforts because they are considered inevitably conforming to the highest norms of scholarly quality and rigor. A piece of knowledge is indeed then 'authorized by people or groups who have power, and meanings are validated and accepted as "correct" or "standard" by others' (Jackson, 2010, p. 111). Several studies show that publishing research work in a leading, prestigious journal positively affects referencing of the published work (Mingers & Xu, 2010; Parker et al., 2013).

In summary, the 'penalty' in received citations due to peripheral affiliations could be offset when the work is produced by scholars with extensive track records and published in top journals, because the audience will grant more credit to the research produced by such scholars and published in well-regarded journals and pay less attention to where this research originates. Given the preceding arguments, we thus hypothesize the moderating effects of targeting legitimization strategies through team composition and spatial positioning on the relationships at the heart of the liability of affiliation origins:

**Hypothesis 2a.** Targeted team composition positively moderates the relationship between the peripheral affiliation of a research team and the academic impact of the knowledge it produces.

**Hypothesis 2b.** Targeted spatial positioning positively moderates the relationship between the peripheral affiliation of a research team and the academic impact of the knowledge it produces.

## Framing strategies

In addition to targeting strategies, framing efforts leading to increased evaluative legitimacy may help reduce the liability of peripheral affiliation origins on the academic impact of BMK produced by research teams of scholars all affiliated with institutions located outside the center of business scholarship. Audiences base evaluative legitimacy assessments largely on self-regarding utility calculations and arrive at cost-benefit appraisals and moral judgments through explicit horizontal discussions (Suchman, 1995). In this sense, the framing of the piece of knowledge produced by a research team in terms of its general scope (Kacperczyk & Younkin, 2017) and relevance matters to achieve greater evaluative and especially pragmatic legitimacy of the produced knowledge and to help overcome the liability of the team's affiliation origins.

We contend that framing strategies can be actionable at the team composition and research spatial positioning levels. In particular, the broadening of interest for produced BMK can be leveraged by including scholars in the research team who possess diverse expertise and are grounded in various business-related research communities. This move toward signaling greater multidisciplinary and generality, which we label 'framed team composition', represents a way to enlarge potential

knowledge audiences and expand the academic impact through an increasing number of communication channels (Leahey et al., 2017).

Similarly, to position produced knowledge in the discursive space of business journals, framing the artifact to fit general-purpose rather than more specialized journals, which we label 'framed spatial positioning', represents a good way to achieve evaluations of general scope and relevance as preconditions of greater evaluative legitimacy (Kacperczyk & Younkin, 2017). Generalist journal outlets indeed contain research works grounded in more diverse domains and reflect interconnected interests of wider audiences (Hicks & Hegde, 2005). In this sense, a prevalent view is that such a general orientation leads to greater epistemic curiosity for audiences (Mitchell et al., 2009).

In summary, the 'penalty' in received citations due to 'peripheral' affiliations may be offset when the work is co-authored by scholars originating from several disciplines and is published in generalist journals because the research output will be exposed to various audiences and be diffused more broadly through diverse communication channels. Thus, we hypothesize the moderating effects of framing legitimization strategies in team composition and spatial positioning on the relationship between the peripheral affiliation and the academic impact of BMK:

**Hypothesis 3a.** Framed team composition positively moderates the relationship between the peripheral affiliation of a research team and the academic impact of the knowledge it produces.

**Hypothesis 3b.** Framed spatial positioning positively moderates the relationship between the peripheral affiliation of a research team and the academic impact of the knowledge it produces.

## Methods

### Data and sample

We collected data from the Web of Science (WOS), focusing on the area of business and management (see Table 1), over a 20-year period from 1994 to 2013. We downloaded all 'articles' published in English in peer-reviewed journals that resulted in 159,169 journal articles in total. For each article, we accessed detailed information, including author names, author affiliations, article's title, year of publication, journal name, and the number of citations yearly received. We limited our study to only 'journal articles' because they are considered the most valued scholarly outputs for business scholars.

Regarding data processing, first, we removed all the articles for which critical information, such as authors' names, authors' affiliations, and the number of citations, was missing, which reduced the sample to 130,223 articles. Second, we checked for inconsistencies in both institution and author names. We standardized the names of all the institutions (affiliation) in our

**Table 1.** Distribution of articles and citations over disciplinary areas

*Disciplines	Articles		Citations	
	Count	Percentage	Count	Per article
Accounting	2,949	4.33	47,907	16.25
Business history and economic history	216	0.32	1,172	5.43
Economics, econometrics, and statistics	4,371	6.42	62,017	14.19
Entrepreneurship and small business management	1,799	2.64	42,773	23.78
General management, ethics, and social responsibility	9,247	13.59	171,030	18.50
Finance	10,816	15.9	166,625	15.41
Human resource management and employment studies	2,296	3.37	24,862	10.83
International business and area studies	1,840	2.7	30,498	16.58
Information management	1,633	2.4	40,459	24.78
Innovation	2,624	3.86	60,145	22.92
Management development and education	265	0.39	4,794	18.09
Marketing	7,957	11.69	165,640	20.82
Operations and technology management	3,288	4.83	51,386	15.63
Operations research and management science	6,680	9.82	118,591	17.75
Organization studies	4,242	6.23	80,398	18.95
Psychology	3,701	5.44	101,048	27.30
Public sector and healthcare	108	0.16	726	6.72
Regional studies, planning, and environment	196	0.29	1,884	9.61
Sector studies	1,578	2.32	32,341	20.49
Social sciences	1,035	1.52	14,676	14.18
Strategy	1,202	1.77	31,610	26.30
<b>Total</b>	<b>68,043</b>	<b>100</b>	<b>1,250,582</b>	<b>18.38</b>

\*Authors' database matched with business and management disciplines as categorized by the ABS Academic Journal Guide.

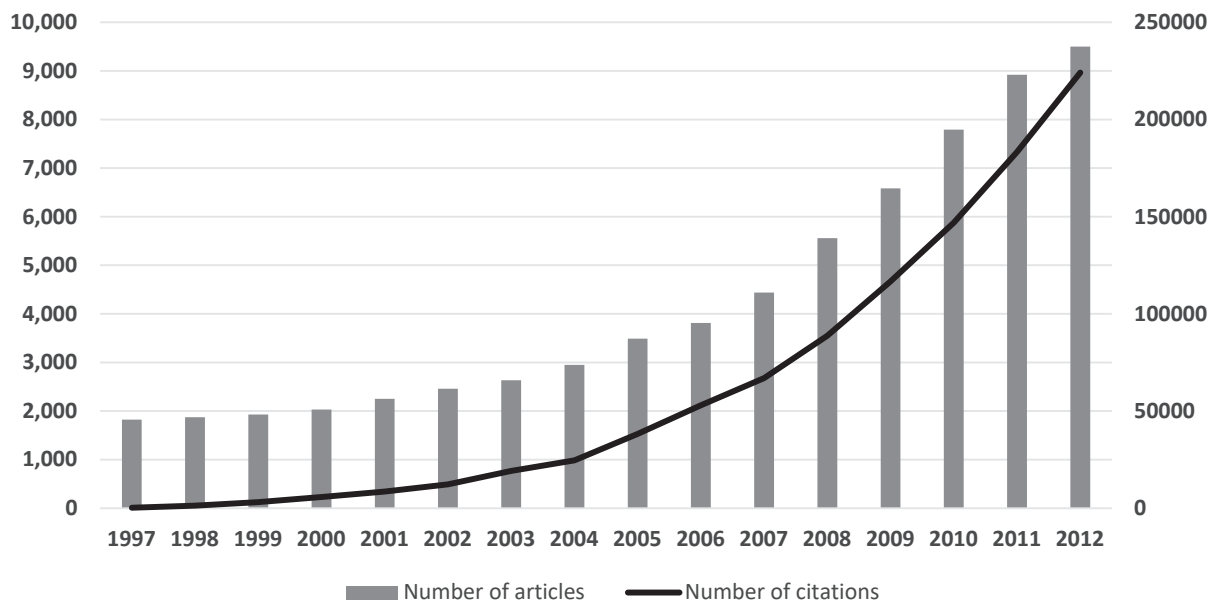
dataset. We updated authors' affiliations with the standardized institution names and manually checked the CVs of the scholars for whom we detected namesake issues (e.g. authors with multiple affiliations in the same year and authors with different affiliations over a short period). By doing so, we were able to track the productions of all scholars, their disciplinary orientations, and their number of citations. Third, we reduced the time span to 1997–2013 to remove any remaining left censoring bias. In other words, we identified all the authors who published paper from 1994 to 1996 (15,807 authors in total) to remove their publications over the whole period (13,953 papers published from 1994 to 1996, and 15,123 papers published from 1997 to 2013) and then calculate correctly teams' prior production, prior citations, research scope, and tenure at the article level. This additional restriction led to a sample of 101,147 articles with complete information. Finally, we excluded papers published in 2013 to ensure at least 2 years to be cited as well as single-author papers, to test the hypotheses related to the team composition strategies (H2a and H3a). Thus, the final core sample consists of an unbalanced panel, with 481,295 observations for 68,043 articles published from 1997 to 2012 and appearing in 205 journals

covering research subjects relevant to business and management, as shown in Table 1.

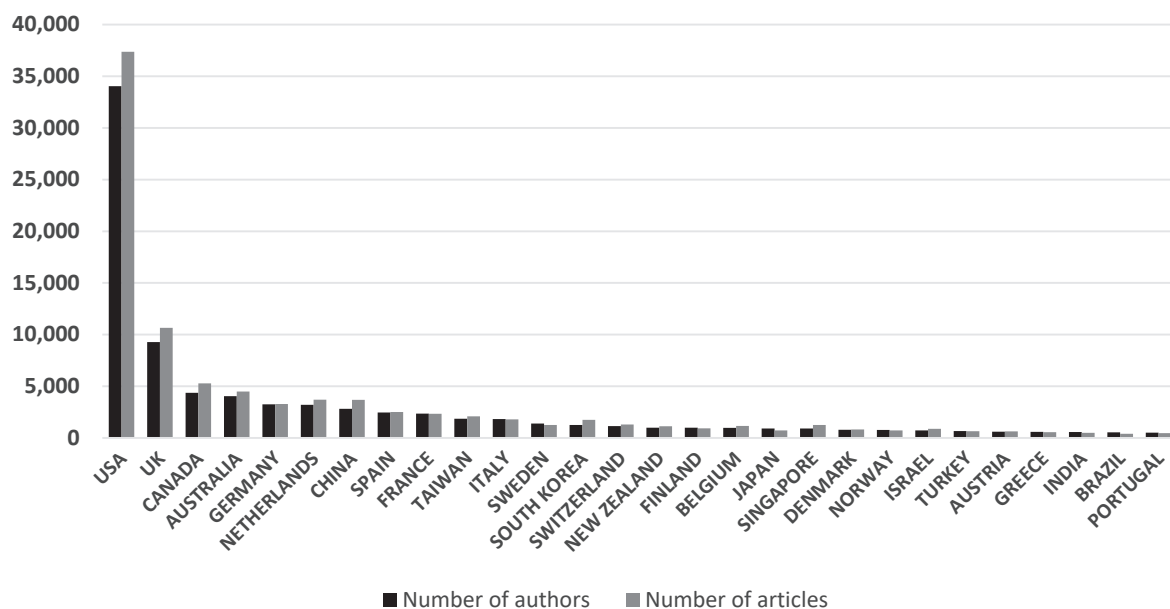
In Figure 2, we can observe the exponentially increasing trend of the distribution of articles included in our final dataset and of the received citations over the period of analysis.

In Figure 3, we also compute the density distributions of the number of authors and articles per country over the period 1997–2012. We can observe that, geographically, 38.41% (34,040) and 10.47% (9,277) of the researchers in our sample are based in the USA and the UK, respectively. Moreover, these researchers with central affiliations have published 48,022 articles in business and management. In our final sample, 36% of papers are co-authored by scholars with central affiliations, 34% of papers are co-authored by scholars with peripheral affiliations, and 30% of papers are co-authored by scholars with mixed affiliations, which include both central and peripheral affiliations.

Concerning collaborating patterns, we can observe in Table 2 that the distribution of articles per team size is skewed, ranging from two to eight co-authors and almost 50% of articles being co-authored by two authors.



**Figure 2.** Distribution of articles and citations over years



Note: We only included countries with more than 500 authors over the period 1997–2012. Calculations are based on Web of Science data.

**Figure 3.** Number of authors and articles per country

## Variables

### Dependent variable

Our dependent variable 'academic impact' refers to the yearly number of citations a published article received until 2013

across all journals included in the WOS database. Article citations are a relevant measure of academic impact or reputation of research and have important implications for scholars' career progress (e.g. job placement, promotion, earnings, and grants) (Belkhouja & Yoon, 2018; Bornmann & Daniel, 2008;



**Table 2.** Distribution of articles per number of authors over the period 1997–2012

Team size	Count	Percentage
2	32,572	47.87
3	25,253	37.11
4	7,872	11.57
5	1,704	2.50
6	435	0.64
7	148	0.22
8	59	0.09
<b>Total</b>	<b>68,043</b>	<b>100</b>

Judge et al., 2007; Leahey et al., 2017; Mingers & Xu, 2010; Ryazanova et al., 2017). We traced and recorded the citations each article received on a yearly basis up to 2013.

### Main effect variable

Our main independent variable 'peripheral affiliation' refers to the share of co-authors affiliated with an institution located on the periphery of global business and management scholarship (i.e. outside the US and UK). We operationalize it as the number of authors with a peripheral affiliation divided by the total number of authors of the article.

### Moderating variables

First, the 'team prior research impact' variable addresses a targeting strategy through the team composition and serves as a proxy of the salience of the authors in the business and management research community. We measure it as the yearly lagged cumulative number of citations received by other articles the co-authors of the focal paper have published since 1997.

Second, the 'journal impact' variable addresses a targeting strategy through research spatial positioning of the BMK produced by the team in the discursive space constituted by business and management journals. For our purposes, we operationalize it using the SCImago yearly impact factor of journal outlets, which is calculated as the average citations per article published in a given journal within the two previous years (Mingers & Xu, 2010).

Third, the 'team research scope' variable addresses a framing strategy through team composition, as we presume that a higher degree of team knowledge variety attracts the interests of diverse audiences, thereby reducing the effect of the liability of peripheral affiliation origins on the academic impact of an article. This variable represents the number of disciplines covered by the authors of a focal article over the years. To determine this, we assigned each article to its academic field of

relevance based on the ABS Academic Journal Guide of 2015 and then traced back all the authors of each article and counted all disciplinary areas covered by them from 1997.

Fourth, the 'journal scope' variable addresses framing strategies through research spatial positioning by assuming that generality reaches and attracts more audiences, which in turn may counteract the liability of a peripheral affiliation. 'Journal scope' is a dummy variable that distinguishes whether the journal has a general purpose or not (coded as 1 or 0 otherwise). After identifying a list of general management journals from several journal rankings, we manually checked the scope of journals by visiting their websites and those of relevant associated academic societies to ensure the appropriateness of our measure.

### Control variables

We controlled for several article-, team-, and institution-related factors that could affect the academic impact of BMK. We first controlled for two article-specific variables: 'article prior impact' and 'article age'. The 'article prior impact' variable serves as a proxy for the intrinsic quality of the focal article, because previously received citations contribute to signal the quality of an article. The 'article prior impact' variable helps control for the self-reinforcing dynamic of success (in terms of citations) of the focal article. This phenomenon, known as Matthew effect (Merton, 1968), creates a positive loop around the article, because 'success breeds success'. We operationalized 'article prior impact' as the yearly lagged cumulative number of citations of an article until the focal year. We computed 'article age' as year  $t$  minus the publication year of the focal article.

We further controlled for four team-specific variables: team size, team tenure, team prior production, and whether the authors are located in an English-speaking country. As a higher number of co-authors can increase the likelihood of an article to be cited (Lee et al., 2015), we controlled for 'team size'. To account for teams' research experience, we constructed two variables: 'team tenure' and 'team prior production'. We compute 'team tenure' as the average tenure of co-authors in the focal article, calculating each author's tenure as year  $t$  minus the year of his or her first article publication as it captures the commencement of a scientific career with relative accuracy. Moreover, prior research indicates that the more the scientific production of an author, the more citations his or her work will receive (Podsakoff et al., 2008). Thus, we operationalized 'team prior production' as the yearly lagged cumulative number of publications of all the authors of the focal article (since 1997). Another potential driver of citations is English language skills, which facilitate the crafting of articles and the communication of research findings, especially for native speakers. Thus, we added the control dummy variable 'English-speaking countries', which takes the value of 1 if at least one of the co-authors of

an article is affiliated with an institution located in a country classified as majority native English speaking and 0 otherwise.

Regarding the effect of institutions on citations, we controlled for 'institution research impact' by using a dummy variable to indicate whether the focal article includes at least one author affiliated with an elite institution based on the Top 100 UT Dallas Business School research ranking. UT Dallas Business School research ranking tracks publications in the 24 leading business and management journal outlets included in its journal list to generate a ranking of the top 100 business schools based on the total contributions of faculty to these journal outlets since 1990. Finally, because the number of article citations can vary widely across years, we incorporated year fixed effects in our model to capture not only the yearly increase in citations but also the growing number of journal outlets in the WOS database and the changes in citation dynamics over time. Moreover, instead of including multitudinous individual journal effects, we used discipline fixed effects to account for heterogeneity in research domains (Judge et al., 2007) by

referring to the ABS Academic Journal Guide of 2015, as reported in Table 1.

### Estimation approach

As the number of citations received by an article in a given year ('academic impact') is a count variable whose distribution is highly skewed in comparison with a normal distribution, we adopt a negative binomial model. A negative binomial regression is more appropriate than a Poisson model because it can better deal with over-dispersion issues (Wooldridge, 2002). Moreover, to capture the within-entity and between-entities effects, we employed a random-effect specification. The advantages of using the random-effects specification are several: (1) it includes time-invariant variables, while with the fixed-effects specification, the effects of these variables are absorbed by the intercept and thus cannot be used to investigate their influence on the dependent variables; (2) it is more efficient than the fixed-effects specification; and (3) it does not exclude

**Table 3.** Descriptive statistics and correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Dependent variable</b>													
<b>1</b> Academic impact (article citations)	1.00												
<b>Main effect variable</b>													
<b>2</b> Peripheral affiliation	-0.08*	1.00											
<b>Moderating variables</b>													
<b>3</b> Team prior research impact <sup>a</sup>	0.45*	-0.19*	1.00										
<b>4</b> Journal impact	0.40*	-0.12*	0.41*	1.00									
<b>5</b> Team research scope	0.14*	-0.06*	0.46*	0.21*	1.00								
<b>6</b> Journal scope	0.07*	-0.05*	0.08*	0.18*	0.10*	1.00							
<b>Control variables</b>													
<b>7</b> Article prior impact <sup>a</sup>	0.66*	-0.12*	0.54*	0.37*	0.08*	0.06*	1.00						
<b>8</b> Article age <sup>a</sup>	0.26*	-0.09*	0.32*	0.15*	-0.03*	-0.00	0.72*	1.00					
<b>9</b> Team size	0.03*	0.06*	0.16*	0.05*	0.16*	-0.01*	-0.02*	-0.08*	1.00				
<b>10</b> Team tenure	0.28*	-0.18*	0.62*	0.29*	0.26*	0.03*	0.62*	0.67*	-0.05*	1.00			
<b>11</b> Team prior production <sup>a</sup>	0.24*	-0.14*	0.66*	0.28*	0.65*	0.06*	0.22*	0.07*	0.33*	0.44*	1.00		
<b>12</b> Institution research impact	0.06*	-0.69*	0.17*	0.09*	0.08*	0.05*	0.10*	0.08*	0.02*	0.17*	0.15*	1.00	
<b>13</b> English-speaking countries	0.12*	-0.23*	0.24*	0.19*	0.15*	0.07*	0.09*	-0.01*	0.06*	0.09*	0.24*	0.22*	1.00
Mean	2.56	0.44	7.80	2.12	2.57	0.07	1.90	2.17	2.63	7.53	2.68	0.79	0.30
SD	3.82	0.42	7.58	1.54	1.84	0.25	2.06	0.82	0.82	3.92	1.05	0.41	0.46
Min	0	0	0	0	1	0	0	1	2	1	1.41	0	0
Max	96	1	96.85	14.60	10	1	11.83	4.12	8	17	10.81	1	1

<sup>a</sup>Square root transformed because of the skewed distribution.

\*p < 0.01.

**Table 4.** Predicting the academic impact of academic BMK with the random-effect negative binomial model

Variables	Model 1		Model 2a		Model 2b		Model 3a		Model 3b	
	$\beta$	Exp ( $\beta$ )	$\beta$	Exp ( $\beta$ )	$\beta$	Exp ( $\beta$ )	B	Exp ( $\beta$ )	$\beta$	Exp ( $\beta$ )
Peripheral affiliation	-0.1673** (0.0132) [-0.1932, -0.1415]	84.59%	-0.2931** (0.0143) [-0.3211, -0.2652]	74.59%	-0.3440** (0.0153) [-0.3739, -0.3140]	70.89%	-0.2765** (0.0174) [-0.3107, -0.2424]	75.84%	-0.1637** (0.0135) [-0.1901, -0.1374]	84.90%
Team prior research impact <sup>a</sup>	0.0132** (0.0005) [0.0122, 0.0143]	101.33%	0.0108** (0.0005) [0.0097, 0.0118]	101.09%	0.0139** (0.0005) [0.0129, 0.0149]	101.40%	0.0135** (0.0005) [0.0125, 0.0145]	101.36%	0.0132** (0.0005) [0.0122, 0.0143]	101.33%
Journal impact	0.1027** (0.0015) [0.0998, 0.1057]	110.82%	0.1031** (0.0015) [0.1001, 0.1061]	110.86%	0.0796** (0.0018) [0.0760, 0.0832]	108.29%	0.1028** (0.0015) [0.0998, 0.1058]	110.83%	0.1027** (0.0015) [0.0997, 0.1057]	110.82%
Team research scope	0.0171** (0.0021) [0.0130, 0.0212]	101.72%	0.0146** (0.0021) [0.0106, 0.0187]	101.47%	0.0160** (0.0021) [0.0119, 0.0201]	101.61%	0.0006 (0.0027) [-0.0047, 0.0059]	100.06%	0.0171** (0.0021) [0.0130, 0.0212]	101.72%
Journal scope	0.2908** (0.0177) [0.2562, 0.3255]	133.75%	0.2870** (0.0176) [0.2525, 0.3215]	133.24%	0.2874** (0.0176) [0.2529, 0.3219]	133.30%	0.2919** (0.0177) [0.2572, 0.3265]	133.90%	0.3102** (0.0233) [0.2645, 0.3560]	136.37%
Article prior impact <sup>a</sup>	0.0379** (0.0018) [0.0343, 0.0415]	103.86%	0.0377** (0.0018) [0.0342, 0.0413]	103.84%	0.0388** (0.0018) [0.0352, 0.0424]	103.96%	0.0378** (0.0018) [0.0342, 0.0414]	103.85%	0.0379** (0.0018) [0.0343, 0.0415]	103.86%
Article age <sup>a</sup>	1.2447** (0.0091) [1.2268, 1.2625]	347.19%	1.2335** (0.0091) [1.2157, 1.2513]	343.32%	1.2348** (0.0091) [1.2169, 1.2526]	343.77%	1.2440** (0.0091) [1.2262, 1.2618]	346.95%	1.2446** (0.0091) [1.2268, 1.2625]	347.15%
Team size	0.0444** (0.0050) [0.0347, 0.0541]	104.54%	0.0465** (0.0049) [0.0368, 0.0561]	104.76%	0.0451** (0.0049) [0.0354, 0.0547]	104.61%	0.0446** (0.0049) [0.0349, 0.0543]	104.56%	0.0444** (0.0050) [0.0347, 0.0541]	104.54%
Team tenure	0.1697** (0.0016) [0.1664, 0.1729]	118.49%	0.1705** (0.0016) [0.1673, 0.1737]	118.59%	0.1697** (0.0016) [0.1665, 0.1729]	118.49%	0.1700** (0.0017) [0.1668, 0.1733]	118.53%	0.1696** (0.0016) [0.1664, 0.1729]	118.48%
Team prior production <sup>a</sup>	0.2241** (0.0042) [0.2159, 0.2322]	125.12%	0.2184** (0.0042) [0.2102, 0.2266]	124.41%	0.2227** (0.0042) [0.2146, 0.2309]	124.94%	0.2227** (0.0042) [0.2145, 0.2308]	124.94%	0.2241** (0.0042) [0.2160, 0.2323]	125.12%
Institution research impact	0.0713** (0.0047) [0.0620, 0.0806]	107.39%	0.0699** (0.0047) [0.0606, 0.0792]	107.24%	0.0714** (0.0047) [0.0621, 0.0807]	107.40%	0.0702** (0.0047) [0.0609, 0.0795]	107.27%	0.0713** (0.0047) [0.0620, 0.0806]	107.39%
English-speaking countries	0.0594** (0.0130) [0.0340, 0.0848]	106.12%	0.0384** (0.0129) [0.0131, 0.0638]	103.91%	0.0447** (0.0129) [0.0194, 0.0701]	104.57%	0.0519** (0.0130) [0.0265, 0.0774]	105.33%	0.0599** (0.0130) [0.0344, 0.0853]	106.17%
Peripheral affiliation × Team research impact <sup>a</sup>			0.0120** (0.0005) [0.0110, 0.0131]	101.21%						
Peripheral affiliation × Journal impact					0.0685** (0.0030) [0.0626, 0.0745]	107.09%				

**Table 4.** Predicting the academic impact of academic BMK with the random-effect negative binomial model

Variables	Model 1		Model 2a		Model 2b		Model 3a		Model 3b	
	$\beta$	Exp ( $\beta$ )	$\beta$	Exp ( $\beta$ )	$\beta$	Exp ( $\beta$ )	B	Exp ( $\beta$ )	$\beta_w$	Exp ( $\beta$ )
Peripheral affiliation × Team research scope							0.0373** (0.0039) [0.0297, 0.0449]	103.80%		
Peripheral affiliation × Journal scope									-0.0466* (0.0211) [-0.0879, -0.0052]	95.45%
Constant	-1.5049** (0.0756) [-1.6530, -1.3568]	-	-1.4289** (0.0756) [-1.5771, -1.2808]	-	-1.4240** (0.0756) [-1.5722, -1.2758]	-	-1.4543** (0.0757) [-1.6027, -1.3058]	-	-1.5067** (0.0756) [-1.6548, -1.3585]	-
Year dummies	Included		Included		Included		Included		Included	
Discipline dummies	Included		Included		Included		Included		Included	
Number of observations	481,295		481,295		481,295		481,295		481,295	
Number of articles	68,043		68,043		68,043		68,043		68,043	
Log pseudolikelihood	-822485.1067		-822232.5795		-822231.6601		-822439.0307		-822483.0924	
Wald $\chi^2$ (model i vs. model 1)			506.08**		507.22**		92.10**		4.03*	
Wald $\chi^2$ (overall fit)	195146.75**		195801.20**		195801.53**		195248.11**		195143.47**	

Note: Standard errors are in parentheses.

95% confidence intervals in brackets.

Significance tests are two-tailed.

Significance level: \* $p < 0.05$ , \*\* $p < 0.01$ .

<sup>a</sup>Square root transformed.

articles that had no citations during the observation period, thus leading to a full rather than reduced sample size.

Incidence rate ratios (IRRs) were also calculated for easier interpretation (i.e. the interpretation of negative binomial regression coefficients is different from that of linear regression coefficients). In negative binomial models, IRRs are computed by exponentiating the regression coefficients,  $e(\beta)$ . In particular, the estimated IRR provides 'the expected multiplicative effect for a one-unit change in the independent variable scaled in terms of the original dependent variable, conditional on all independent variables being at their mean' (Seibert et al., 2017, p. 1117). Hence, reported values of IRR larger than one imply a positive impact of the covariate on the dependent variable and for a unit increase in  $x$ ,  $y$  increases on average by the percentage  $100*(e(\beta)-1)$  (Lin et al., 2013).

## Results

### Tests of our model

As shown in Table 3, on average, 44% of co-authors in a research team are affiliated with an institution on the periphery

of global business and management scholarship. Regarding the correlations, while 'academic impact' is negatively correlated with the 'peripheral affiliation' variable, it is positively correlated with the rest of the variables, as expected. The correlations between the independent and control variables are modest, and the variance inflation factors are within the tolerance range (maximum score = 4.83), suggesting that multicollinearity is not a concern.

Table 4 reports the results of the random-effects negative binomial regressions. Model 1 estimates the effects of the explanatory and control variables on the academic impact of BMK. Models 2a and 2b test the moderating effects of the 'team prior research impact' and 'journal impact' variables on the relationship between 'peripheral affiliation' and 'academic impact' reflecting targeting strategies. Models 3a and 3b examine the moderating effects of the 'team research scope' and 'journal scope' variables on the relationship between 'peripheral affiliation' and the academic impact of BMK reflecting framing strategies. The Wald measure of overall fit indicates a significant chi-square for each model ( $p < 0.01$ ), confirming that the models are acceptable for interpretation. Moreover,

the results show that the estimates are similar across all model specifications, as signs of predictors remain constant and their levels of significance remain stable.

Regarding Hypothesis 1, the negative and significant effect of the 'peripheral affiliation' variable on the academic impact of BMK in Model 1 ( $b = -0.1673$ ,  $p < 0.01$ , confidence interval [CI] =  $[-0.1932, -0.1415]$ ) indicates that, for example, a paper co-authored by one author with peripheral affiliation and one author with central affiliation (the share of co-authors with a peripheral affiliation is equal to 50%) is on average 7.70% less cited than a paper co-authored by two authors with central affiliations, on a yearly basis, when the other variables are held at their mean values. In other words, articles co-written by authors affiliated with institutions situated on the periphery of global business scholarship are generally less cited than articles co-written by teams including only authors affiliated with an institution located in the primary (US) and/or secondary (UK) centers of scholarship; note that citation bias reaches its maximum when articles are written by a team of co-authors with pure peripheral affiliations (15.41% less on average). Thus, we find strong support for Hypothesis 1, indicating that co-authors' affiliation origins matter and underscoring the bias in citations toward knowledge produced by research teams with peripheral affiliations. It is important to note the citation bias between articles co-authored by research teams with peripheral affiliations and articles co-authored by research teams with central affiliations is not driven by the abundance of the latter since, as mentioned earlier, articles constituting our sample are more or less equally distributed (36% of articles are co-authored by scholars with central affiliations, 34% of articles are co-authored by scholars with peripheral affiliations, and the left 30% of articles are co-authored by scholars with mixed affiliations).

Regarding the strategies that may overcome the liability of peripheral affiliation origins, Model 2a demonstrates a positive and significant moderating effect ( $b = 0.0120$ ,  $p < 0.01$ ; CI =  $[0.0110, 0.0131]$ ) of the framing strategies reflected in the team prior research impact on the negative relationship between the share of peripheral affiliations of co-authors within the team and the academic impact of the knowledge it produces. This result is also supported by the Wald chi-square test (Wald  $\chi^2 = 506.08$ ,  $p < 0.01$ ). More specifically, each additional citation of a team research work is associated with a 1.21% decrease in the negative effect of 'peripheral affiliation' on 'academic impact'. To illustrate our results, we graphically depict the difference, in terms of citations, between articles written by a team of co-authors with pure peripheral affiliations and articles written by a team of co-authors with pure central affiliations. Panel (a) in Figure 4 shows that articles written by a team of co-authors with pure peripheral affiliations are less cited on average than articles written by a team of co-authors with pure central affiliations when the level prior research impact is

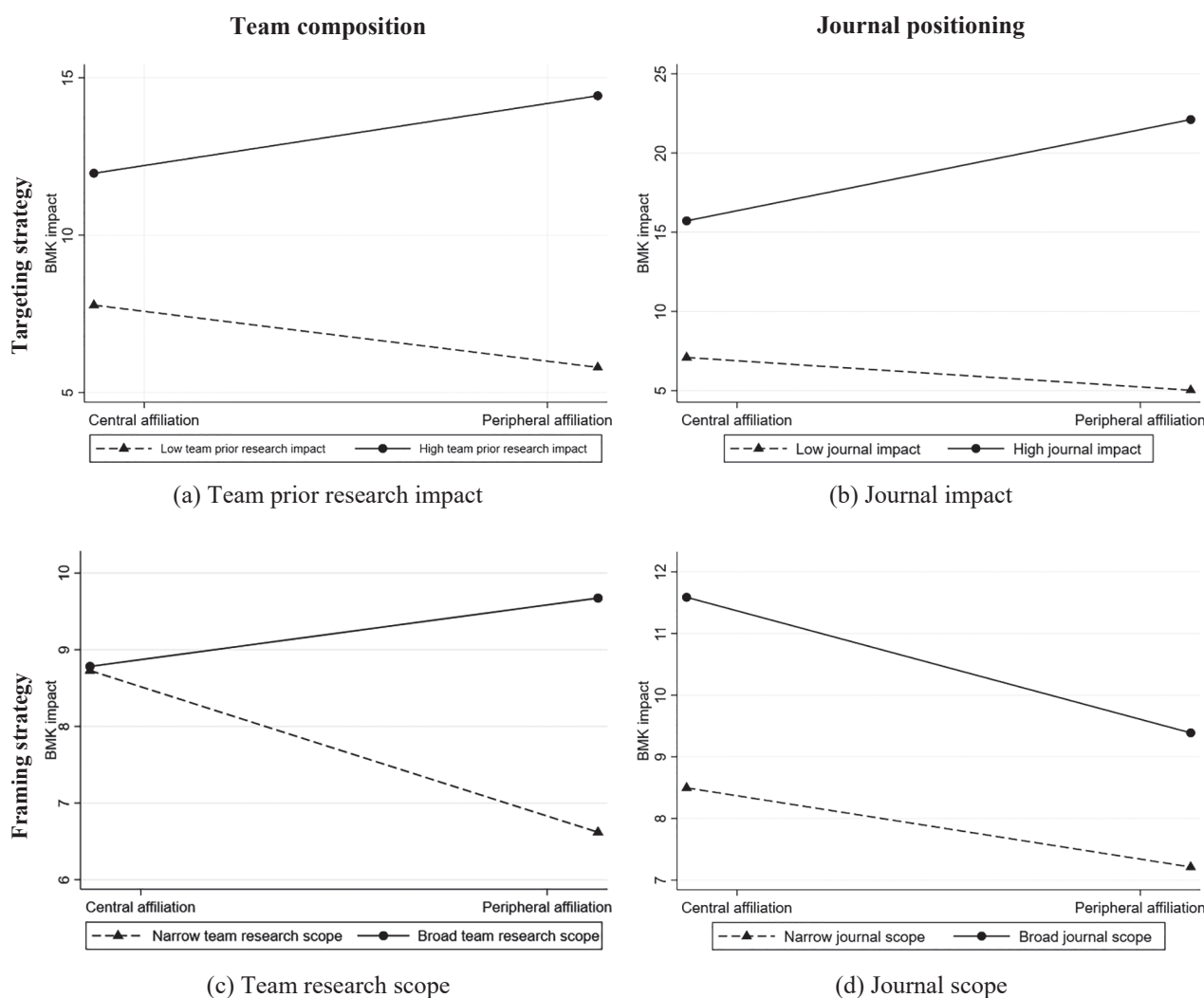
low. However, this negative effect is attenuated and even offset when the prior research impact of the co-authors with pure peripheral affiliations is high. Thus, in support of Hypothesis 2a, team prior research impact mitigates the negative effect of 'peripheral affiliations' on 'academic impact'.

Similarly, the results of Model 2b show a positive and significant moderating effect of the 'journal impact' variable on the relationships between 'peripheral affiliation' and 'academic impact' ( $b = 0.0685$ ,  $p < 0.01$ ; CI =  $[0.0626, 0.0745]$ ). This means that a unit increase in the journal's impact factor is associated with a 7.09% decrease in the negative effect of 'peripheral affiliation' on 'academic impact', holding the other variables at their means. The Wald chi-square test also provides support to the significance moderation effect of 'journal impact' (Wald  $\chi^2 = 507.22$ ,  $p < 0.01$ ). More explicitly, teams with pure peripheral affiliations may overcome the negative effect due to their affiliation origin, as shown in Panel (b) of Figure 4, by targeting and publishing in journals with a higher impact factor, which is consistent with Hypothesis 2b.

Regarding evaluative legitimacy mechanisms, we identify in Model 3a a positive and significant interaction ( $b = 0.0373$ ,  $p < 0.01$ ; CI =  $[0.0297, 0.0449]$ ) between 'team research scope' and 'peripheral affiliation'. This result, confirmed by the Wald test (Wald  $\chi^2 = 92.10$ ,  $p < 0.01$ ), suggests that each additional disciplinary area in the portfolio of authors with peripheral affiliations is associated with 3.80% decrease in the liability effect of their affiliation origin. This is in line with our prediction in Hypothesis 3a, as well as the illustration in Panel (c) in Figure 4. However, the negative and significant interaction in Model 3b ( $b = -0.0466$ ,  $p < 0.01$ ; CI =  $[-0.0879, -0.0052]$ ; Wald  $\chi^2 = 4.03$ ,  $p < 0.05$ ) indicates that the liability of peripheral affiliation origins is magnified when the BMK produced appears in a general-purpose journal. More specifically, targeting general-purpose journals is associated with a 4.55% increase in the liability effect of origin of authors with peripheral affiliations. As shown in Panel (d) of Figure 4, while research teams with pure peripheral affiliations may garner more citations for their articles on average by targeting journals with a broad scope, the citations gap between their work and the work of research teams with pure central affiliations seems to be smaller when it is published in special-purpose journals. Therefore, targeting special-purpose journals appears to act as a buffer that decreases the negative effect of peripheral affiliation on academic impact, thus providing no support for Hypothesis 3b.

The effects of the control variables are statistically significant and consistent with their theoretically predicted signs across all models. Overall, the results show that the academic impact of an article (i.e. citations) is indeed positively and significantly influenced by its own prior academic impact and its age.

'Team size', 'team tenure', 'team prior production', and whether the focal team includes authors affiliated with a



**Figure 4.** Moderating effects of legitimization efforts

country classified as majority native English speaking all favor the number of citations an article receives. Finally, the findings also show that the research impact of the institutions to which the co-authors are affiliated positively affects the academic impact of their research output.

### Robustness checks

To rule out alternative explanations and check the sensitivity of our results, we performed several additional analyses.

We considered whether our results are driven by the assumptions behind the specific estimation model (i.e. random-effect negative binomial model). To address this concern, we used, first, the propensity score matching (PSM) method. This way, we were able to generate unbiased estimates of the effect of peripheral affiliation nationality on the number of

citations. The PSM results show that peripheral affiliation does have a negative impact on citations ( $b = -0.112$ ,  $p < 0.00$ ), which re-confirms Hypothesis 1. Second, we used the population-averaging specification to estimate the negative binomial models. The results are reported in Appendix Table 1. Third, we log-transformed the dependent variable to predict the yearly number of citations with a linear combination of the independent variables. The results are consistent with the main findings, except for the moderating effect of 'Journal scope' which is not significant. The results are reported in Appendix Table 2.

In order to check whether the negative effect of peripheral affiliation is driven by academic institutions in emerging countries like China, where business and management schools have evolved rapidly, and not by institutions in Europe that are more established, we tested our hypothesis 1 by using (1) a sample including only papers published by scholars with European



affiliations (peripheral affiliation), and US and UK affiliations (central affiliation); and (2) a sample excluding papers published by scholars with Chinese affiliations. The results show that articles produced by European affiliations still suffer from the liability effect (see Model 1 Appendix Table 3) and that the liability effect persists even after excluding the papers published by scholars with Chinese affiliations (see Model 2 Appendix Table 3), respectively.

Finally, to address potential sample size effect issues, we have used two random samples (10 and 20% from our final dataset of 68,043 articles) and two stratified random samples (10 and 20% from our final dataset of 68,043 articles) based on the distribution of articles across the three affiliation composition types of co-authorship (central, peripheral, and mixed) to run the analyses (see Appendix Tables 4–7).

All the results from the additional analyses, employing different alternative methods and samples, are qualitatively similar and consistent with our main results.

## Discussion and conclusion

### *Theoretical and practical implications*

Globalization of business research and education, wide adoption of information technology, and increased connectivity across regions have provided opportunities for scholars of many backgrounds and cultures sharing common research interests to work together in a variety of academic communities. Yet, many times, scholars form teams that are not equal in power or opportunities. Such differences have given rise to terms such as ‘core’, ‘center’, and ‘periphery’ in social science and management studies (Cattani & Ferriani, 2008; Schott, 1988). Although the production of knowledge has become increasingly globalized and business scholars are no longer confined to national borders, their geographic location still appears to play an influential role in processes conditioning gains or setbacks with respect to their legitimacy or competitive edge.

Our study maintains that although the global playing field has progressively flattened, researchers located at the center of global business and management scholarship remained in prominent and privileged positions in their research community during that period (Üsdiken, 2014). Although US and UK centricities have been increasingly challenged by Continental European schools and more recently by institutions from East Asia, which has led to subtle changes in the rules of the game (Mangematin & Baden-Fuller, 2008), we show that a peripheral affiliation origin still represented a relative impediment for researchers wanting to take part in the global knowledge production and diffusion system in this recent period. As citations can be used as persuasion tools (Gilbert, 1977) and as a researcher ‘is often partly unconscious of, or fails to recognize, his or her reasons for citing a particular source and not citing

another’ (Nicolaisen, 2007, p. 616), the highlighting of the influence of the geography of business and management academia on the acknowledgment and dissemination of the knowledge it produces appears particularly important. As success breeds success, with a large number of citations leading to a high status in research and, in turn, a high status generating greater academic impact and more citations (Merton, 1968; Mingers & Xu, 2010), our results indeed suggest that disadvantages of researchers on the periphery of the knowledge production and diffusion system might keep aggregating. Yet, as Lyotard (1984) argues, research production and diffusion processes need ‘equals’, and a scientific community depends on its members’ contributions and recognition for its full flourishing.

Our findings also emphasize that research team members can fruitfully engage in efforts geared towards limiting and countering such a watered-down effect. In particular, our study shows that the intellectual production of research teams evolving on the periphery of global scholarship can be made relatively more visible through the implementation of targeting and framing strategies intended to increase the perceived legitimacy of produced knowledge. First, we show that teams can endeavor to influence the subsequent academic impact of their work by carefully considering their composition. For scholars with an affiliation on the periphery of global business and management scholarship, partnering with scholars with a central affiliation appears to be a possible way to foster greater impact of the knowledge they produce as a team. What our study shows, though, is that building research teams, including the presence of members with a peripheral affiliation having high status and pre-existing salience among peers, can enhance the taken-for-grantedness and cognitive legitimacy that shape audiences’ perceptions. Second, relevant spatial positioning of the produced knowledge in well-regarded journal outlets can help foster its authorization and the certification of its appropriateness, as the work of the team might then be judged as undeniably meeting the highest norms of quality and thoroughness.

In addition, our findings reveal that research teams of authors affiliated with institutions on the periphery of global business and management scholarship can take advantage of framing effects by leveraging the evaluative dimension of the legitimacy of the produced work. First, composition efforts to build teams with members who have demonstrated proficiency in various knowledge domains can enhance the publicity of the team’s research work (Lee et al., 2015), thereby mitigating the negative effect of peripheral affiliation origin on the academic impact of the work. Second, our results show that framing efforts geared toward positioning the produced knowledge in a specialist outlet have the potential to leverage the self-interest of audiences and reduce the citation bias that can affect the produced knowledge, as the scope of potentially interested audiences then narrows and audiences’

self-regarding utility calculations may encourage their pursuit of special-purpose knowledge and content. Researchers affiliated with institutions located on the periphery of global business and management scholarship might tend to focus more on local issues that are preferred by specialist journals, and those attempting to adopt a more generalist approach are likely to face many challenges because publishing in generalist journals is intensely competitive and are crowded with mainstream issues (Leung, 2007). That being said, author teams with peripheral affiliation origins should have better chances to compete with more 'central' teams in terms of citations when they target specialist journals.

### Opportunities for future work

First, the large sample size prevented us from collecting data on individual characteristics of co-authors, such as academic ranks, awards, recognitions, educational background (e.g. PhD-awarding institution), and recent geographic mobility, to operationalize team composition with greater details. Yet considering such ex-publication factors would contribute to shed light on the micro-foundational dynamics in team composition efforts (e.g. seniority and experience of co-authors) and the role of these factors in building research teams and academic reputations. Nevertheless, we took into account multilevel factors by including article-, journal-, team-, and affiliation-specific variables in our empirical model. In addition, examining the sources of citations (e.g. peripheral institutions, central institutions, and elite institutions) and understanding their motives (see Bornmann & Daniel, 2008) to test their influence on citations would be a meaningful future research agenda that was simply unidentifiable with our large dataset.

Second, as the main focus of our analysis was to explain the number of citations, we did not consider alternative measures of research performance, such as the propensity to publish in highly ranked journals, which could be covered by future studies.

Third, our study, which specifically focuses on the geography of business and management scholarship from 1997 to 2012, should be expanded to address broader disciplinary contexts and consider more recent years. This could lead to a more comprehensive and up-to-date understanding of key features and potential biases that characterize periphery-center dynamics of knowledge diffusion processes in a fast-changing academic ecosystem.

Finally, digging into the business and management field and specifically examining the differences in citation patterns across business and management disciplines could contribute to bringing relevant additional insights on dynamics at play in business and management academia.

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## Appendix