



## Bringing managers closer to papers: measuring the relevance of business and management research

Carlos Vílchez-Román, Arístides Vara-Horna & Lizardo Vargas-Bianchi

To cite this article: Carlos Vílchez-Román, Arístides Vara-Horna & Lizardo Vargas-Bianchi (2021): Bringing managers closer to papers: measuring the relevance of business and management research, Journal of Education for Business, DOI: [10.1080/08832323.2021.2017251](https://doi.org/10.1080/08832323.2021.2017251)

To link to this article: <https://doi.org/10.1080/08832323.2021.2017251>



Published online: 14 Dec 2021.



Submit your article to this journal [↗](#)



View related articles [↗](#)



View Crossmark data [↗](#)

## Bringing managers closer to papers: measuring the relevance of business and management research

Carlos Vílchez-Román<sup>a</sup> , Arístides Vara-Horna<sup>b</sup>, and Lizardo Vargas-Bianchi<sup>c</sup>

<sup>a</sup>CENTRUM Católica Graduate Business School (CCGBS), Lima, Peru. Pontificia Universidad Católica del Perú (PUCP), Lima, Peru;

<sup>b</sup>Universidad San Martín de Porres (USMP), Lima, Peru; <sup>c</sup>Universidad de Lima (UL). Graduate School, Lima, Peru

### ABSTRACT

This study aims to validate a data collection tool's psychometric properties to explore whether business management research's relevance is a high-order construct made up of its perceived interest and perceived relevance. The authors conducted a confirmatory factor analysis to validate a two-factor scale. The sample was composed of 148 MBA students from a Peruvian business school. Results showed the appropriate levels of validity and reliability and confirmed the usefulness of this data set for exploring the relationship between perceived interest and relevance. Businesses and schools can replicate the validated tool for reviewing their curricula and teaching practices, exploring the gap between business and management research results and advancing managers' research literacy and evidence-based practice in business education and training.

### KEYWORDS



Business and management research; confirmatory factor analysis; psychometric properties


### Introduction

The relevance of business and management research (BMR) has been widely discussed in the academic literature (Koskela, 2017; Syed, Mingers, & Murray, 2010; Zolkiewski, 2018). It is a hot topic for the graduate business and management education sector. This interest is due to the growing pressure on the faculty to publish papers in top-tier journals without neglecting their teaching practice, including maintaining high-performance standards and up-to-date managerial content relevant to the professional practice (Graber, Launov, & Wälde, 2008; Kaari, 2019; Shahbazi-Moghadam et al., 2015). Even though there are some researchers arguing that being exposed to high-quality BMR predicts higher salaries for MBA graduates (O'Brien, Drnevich, Crook, & Armstrong, 2010), other managers and practitioners from different areas perceive that BMR results are not relevant for the industry and organizations (Raffield, Vang, & Lundsten, 2016; Tenhiälä et al., 2016; Toffel, 2016; Vong, 2017). Even scholars from the BMR community sharply criticize BMR's potential contributions to improve the business performance or profitability (Goshal, 2005; Raffield et al., 2016).

One of the reasons why practitioners do not accept BMR widely is be the lack of validated concepts and theories, such as the ones that exist in the fields of medicine, economics, or engineering, because management and business are fields of knowledge populated by fads and pseudo-academic theories (Goshal, 2005; Sutton, 2004). However, the primary reason for this lack of acceptance is its low utility and relevance. The low utility is a consequence of two facts: (a) the obscure language used in academic outputs like conference proceedings and journal papers that makes them hard to understand; (b) the substitute resources, like the best-selling and widely-known books, used by practitioners for getting new knowledge. The low relevance is related to the low utility and explains the managers' perception that BMR is directed to academics and theory, not to practitioners and application (Koskela, 2017; Vong, 2017).

Previous studies explored why managers and other practitioners perceive BMR has a low relevance for the business practice. We must ask them about their interest and understanding of BMR and, after obtaining such information, analyze how both variables explain their negative perception. Previous research studies on BMR relevance were descriptive and

**CONTACT** Carlos Vílchez-Román  cvilchez@pucp.edu.pe  CENTRUM Católica Graduate Business School (CCGBS), Pontificia Universidad Católica del Perú (PUCP), Lima, Peru.

 Supplemental data for this article can be accessed at [publisher's website](#).

© 2021 Taylor & Francis Group, LLC

limited to examining attitudes toward human resources and management research (Barends et al., 2017; Rynes, Brown, & Colbert, 2002; Rynes, Brown, et al., 2002; Sanders, van Riemsdijk, & Groen, 2008).

Early studies explored practitioners' attitudes toward published academic work on human resources and found a combination of positive and negative attitudes (Rynes, Brown, et al., 2002; Rynes, Brown, et al., 2002). Replications of those studies reported similar findings even on studies using cross-cultural samples (Tenhiälä et al., 2016). A recent study on this matter surveyed managers and practitioners from diverse managerial areas and industries ( $n=2,789$ ) from five countries (Australia, Belgium, the Netherlands, the United Kingdom, and the United States), and found that at least 20% of the participants believed that BMR studies covered topics with no practical relevance or obtained findings that do not apply to the organizations (Barends et al., 2017).

Even though several earlier studies confirmed the perception of low interest in academic research on management and business, exploring the factors associated with such understanding would help BMR material to be consumed by managers and practitioners. Therefore, this research aims to analyze the relationship between the perceived interest and the perceived relevance of business and management research among managers and practitioners. We developed a conceptual model focused on the attitudes that explain the perception of the BMR relevance.

### Conceptual model and literature review

Our proposed model hypothesizes that the perceived relevance of BMR is a high-order construct made up of perceived interest (in research results) and perceived relevance (applicability of research results). In this sense, the relevance of BMR can be conceptualized in two sub-dimensions: relevance and feasibility. The relevance is related to the output of research activity (theoretical extent), and the feasibility, related to the implications academic research may have for organizations (practical extent).

#### Perceived interest and relevance of research results

Research interest is a favorable disposition for the research process or findings. Relevance of the research results refers to the perceived usefulness of the findings, a phenomenon that happens if the research can be applied in a specific real-world business setting. In

a study carried out with 139 undergraduate psychology students from a public university in the United States, the authors found a moderate correlation between the interest in psychological research and its perceived relevance for the graduate curricula ( $r=0.31$ ,  $p<.05$ ) (Vittengl et al., 2004). Barends et al. (2017) measured the interest in research activities using a four-point Likert scale (0=Not at all, 4=Extremely). They asked managers and practitioners about their interest in published research and their perception of BMR's relevance, but only reported descriptive data (Barends et al., 2017). After carrying out an original analysis, we found a moderate correlation between the interest in research results and the perceived research relevance ( $r = [0.21-0.30]$ ,  $p<.0001$ ).

Another dimension is the reader's ability to understand the research's contents, a matter that some studies refer to as the individual's self-perception as capable of appreciating academic research activities (e.g., data collection and analysis) and the main outputs (e.g., papers, technical reports, etc.). This ability is referred to as research literacy in several publications; however, it is more common in medicine and education studies than in management studies because those are evidence-based professions. Research literacy refers to the subject's ability to find, understand, and accurately interpret a survey and its results (Brody, Dalen, Annett, Scherer, & Turner, 2012; Shank & Brown, 2013). Regarding this matter, McSherry (1997) surveyed 765 registered nurses and midwives in the United Kingdom and reported a weak correlation between the comprehension of the research process and the perceived non-relevance of research related to their professional responsibility ( $r=0.138$ ,  $p=.02$ ). A more recent study surveyed dietitians from the United States ( $n=580$ ) on their professional characteristics, research interests, and research involvement (Boyd, Marcus, Byham-Gray, & Decker, 2015). The authors found that reading academic research had a moderate correlation with their research interest ( $r=0.298$ ,  $p<.001$ ). The analysis found a medium correlation between the dietitians' research comprehension and their research interest ( $r=0.35$ ,  $p<.001$ ).

Most of the above studies are descriptive. Analytical efforts of such publications explored correlations among data collection tools' items, but they did not study whether there is a latent structure on the factors associated with BMR's relevance. Therefore, it is important to determine whether or not it is possible to measure the perceived interest and relevance of BMR.

**Hypothesis:** BMR is a construct made up of two dimensions: perceived interest and perceived utility. Therefore, perceived interest and perceived utility will be positively related to BMR relevance (Boyd et al., 2015; McSherry, 1997).

Based on the proposed model, we hypothesize that the perception of BMR is related to managers' and practitioners' interest levels and the perceived usefulness concerning those efforts. Although other factors could explain this lack of relevance, it is reasonable that a simple and parsimonious explanation is a preferred and effective exploration starting point before developing a more complex model. Assuming this two-factor model demonstrates sound evidence of validity and reliability, the authors plan to develop a more advanced model that includes structural paths and moderation effects (e.g., how changes of low relevance perception vary according to the firm size or managerial status).

## Methods

We describe the subjects and data collection procedure, the measurement of variables, and the analytical approach used to validate the two-factor model.

### Sample and data collection

Due to budget and time restrictions, the convenience sample was composed of students enrolled at an elite Peruvian business school. Students enrolled in the school's part-time MBA program ( $n = 148$ ) answered the questionnaire developed for this study. Subjects were from different geographical locations where the masters' program is taught: Lima (28%), the metropolitan capital city, and five regions: Cajamarca (20%), Cusco (11%), Huancayo (15%), Ica (14%), and Puno (12%). Most of the respondents belonged to the millennial demographic cohort (age =  $34.89 \pm 6.77$ ). There was an overrepresentation of male participants (68%). Even though it was not a random sample, it provided a representative approximation of the entire MBA student population studying in that business school.

Compared to the MBA programs from other countries, Peruvian graduate students must have several years of working experience before enrolling in the master's programs, and a significant proportion (18%) belonged to a senior management level. Given the importance of professional experience, the participants' managerial status (e.g., supervisor, middle or senior management) was treated as a moderating variable.

Printed questionnaires were filled out during the first session of the research methods course included in the MBA program, in all six regions, from 2018 to 2019. Before answering the questions, participants gave their informed consent and then spent approximately 10 minutes, responding to the questionnaire's items. Because participants' anonymity was guaranteed, their names or identification details were not required.

### Measures and questionnaire development

Researchers adapted the data collection tool from the questionnaire developed by Barends et al. (2017), which is a brief and complete instrument but does not have validity and reliability indicators. The adaptation included all the original items (see Barends et al. [Supplementary material](#) available in paper's web link) translated into Spanish, as well as questions on demographic information. We compared the original items by Barends et al. (2017) with those reported by Funk, Champagne, Wiese, and Tornquist (1991) and Rynes, Brown, et al. (2002) to verify that the measurement of perceived interest and the relevance of research results was comprehensive. Funk et al. (1991) developed the Barriers to Research Utilization Scale, which is comprised of 28 items and four factors (Characteristics of the adopter: the nurse's research values, skills, and awareness; Characteristics of the organization: setting barriers and limitations; Characteristics of the innovation: qualities of the research; Characteristics of the communication: presentation and accessibility of the research). The BARRIERS scale has a well-established reliability and validity level (Kajermo et al., 2010). The second group of authors designed the Practitioners Attitudes Toward Academics and HR Research (Rynes, Brown, et al., 2002), composed of five items and one factor. The empirical evidence for validity was not included in that study.

Barends et al. (2017) developed eight items (but reported six of them) for attitudes toward research findings (three items) and perceived barriers (three items). For this study, we grouped the original eight items into two factors: research interest (four items, "Managers and consultants do not have enough time to read research articles," "Managers and consultants have limited understanding of scientific research," "Managers and consultants are practitioners, they have no interest in research," "Research articles are unreadable") and BMR relevance (four items, "Every firm is unique, hence the research findings are not

applicable,” “The results are theoretically sound, but do not work in practice,” “Research is conducted by scholars who are too far from the firms’ day-to-day,” “Researchers investigate topics which have no practical relevance”). We used three indicators for measuring reliability: Cronbach’s Alpha, Joreskog’s rho, and composite reliability index (CRI), with a threshold of 0.7 for the eight items grouped into two factors. All items were measured with a five-point Likert scale (1 = Strongly disagree, 5 = Strongly agree).

### Confirmatory factor analysis (CFA) of the interest and relevance scales

To validate the hypothesis, we used a confirmatory factor analysis (CFA). First, researchers computed the loadings, standard errors, and significance level of each factor’s indicator variables (interest and relevance). According to the accepted criterion for CFA, an acceptable value for the loadings was 0.5 (Hair, Black, Babin, & Anderson, 2010). Researchers then calculated the covariance of both factors and elaborated a path diagram. We got four goodness-of-fit (GoF) indicators derived from the  $\chi^2$  test. To compare the user model versus the baseline model, we worked with the Comparative fit index (CFI) and Tucker-Lewis index (TLI); neither of which depended on the sample size, but both had a threshold higher than 0.9 for an acceptable fit (Hu & Bentler, 1995; Marsh, Balla, & McDonald, 1988). For the model residuals, we used the Standardized root-mean-square residual (SRMR) and the Root-mean-square-error of approximation (RSMEA); the first one with a threshold lower than 0.05, and the second one with an acceptable range from 0.05 to 0.08 (Browne & Cudeck, 1993). For a summary of GoF indicators’ adequate level, refer to Schumacher and Lomax (2010, p. 76). Reliability analysis was carried out with SmartPLS 3.2.8 (Ringle et al., 2015) and confirmatory factor analysis with *lavaan* R package 0.6–4.

## Results

As measured by the three reliability indexes, relevance and interest factors obtained high reliability, with the higher values corresponding to the CRI (see Table 1).

Concerning the CFA estimates, the eight items got factor loadings higher than the acceptable threshold, and four of them achieved satisfactory values. However, it must be noted that two items (“Every firm is unique, hence the research findings are not applicable,” and “The results of scientific research are

**Table 1.** Reliability analysis of indicator variables.

Factors	Items	$\alpha$	$\rho_J$	CRI
Relevance	Relevance 1	0.696	0.752	0.811
	Relevance 2			
	Relevance 3			
	Relevance 4			
Interest	Interest 1	0.725	0.736	0.826
	Interest 2			
	Interest 3			
	Interest 4			

Source: Developed by the authors, using the study results.  $\alpha$  = Cronbach’s alpha,  $\rho_J$  = Jöreskog’s rho, CRI = composite reliability index. Reliability indicators computed with Smart PLS 3.2.8

**Table 2.** CFA estimates for variable indicators.

Factors	Items	Loadings	Std. error	z-value
Relevance	Relevance 1	0.549	0.103	5.316***
	Relevance 2	0.536	0.100	5.382***
	Relevance 3	0.837	0.106	7.886***
	Relevance 4	0.926	0.095	9.705***
Interest	Interest 1	0.802	0.105	7.655***
	Interest 2	0.748	0.096	7.778***
	Interest 3	0.709	0.098	7.248***
	Interest 4	0.654	0.099	6.613***

Source: Developed by the authors, using the study results. \*\*\*  $p < 0.001$

theoretically sound, but do not work in practice”) obtained factor loadings smaller than 0.6; therefore, both items are candidates for a later revision. Besides them, the remaining items’ loadings got statistical significance at  $p < .0001$  (see Table 2).

The covariance between interest and relevance were non-orthogonal factors, sharing a covariance = 0.576 ( $p < .0001$ ), as exhibited in Figure 1. This finding confirms that both factors are independent and measure different dimensions.

Regarding GoF indicators, the two measures did not depend on the sample size and obtained good values above 0.9. That means the estimated two-factor model resembles the original data distribution. The recomputed values showed that the amount of variance to be explained was close to zero concerning the model’s residuals. Both results confirmed that the proposed model obtained a good fit (see Table 3).

## Discussion

This research is one of the first psychometric studies of a data collection tool that measures BMR’s relevance. The primary contribution is the empirical evidence for validity and reliability. Despite some limitations, the CFA results provided compelling evidence for the research hypothesis: BMR’s relevance is a high-order construct made up of perceived interest and feasibility. These findings are similar to those reported in the academic literature (McSherry, 1997;



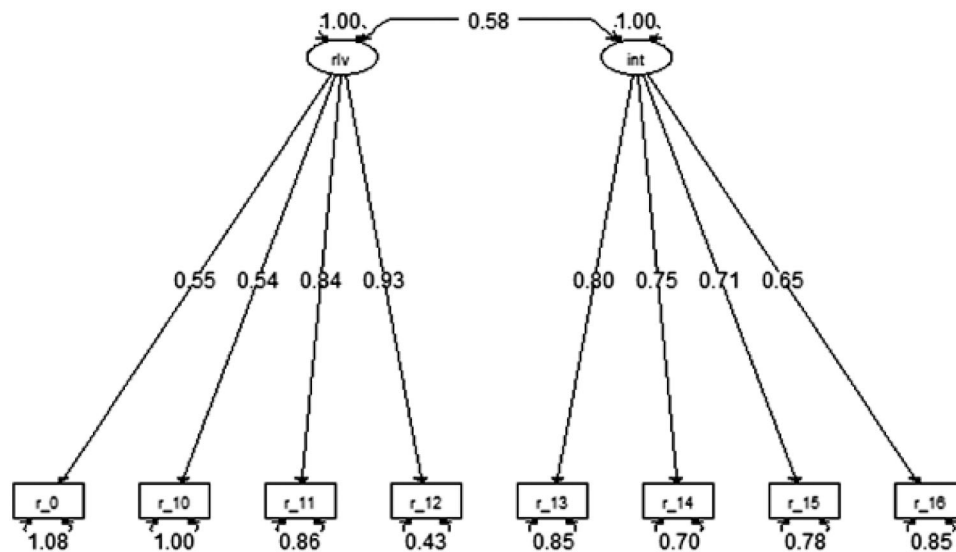


Figure 1. Path diagram for factors interest and relevance.

Table 3. Goodness-of-fit indicators for the model.

Indicator	Value	CI lower bound	CI upper bound
CFI	0.986		
TLI	0.979		
RMSEA	0.035	0.000	0.083
SRMR	0.049		

Source: Developed by the authors, using the study results.  
CI = Confidence Interval at 90%

Vittengl et al., 2004). The analysis of the dataset included in the study, based on the international sample of managers and practitioners (Barends et al., 2017), also obtained similar results. While previous findings reported a positive relationship using Pearson's correlation coefficient at the item level, this study is among the first ones that explore the underlying structure of BMR's relevance using a classical approach for testing psychometric properties: CFA. Given the GoF indicators' good values, it is possible to replicate this study to verify whether the two-factor structure can be subdivided, always considering the criterion of getting a parsimonious model. Despite having worked with small sample size, the two-factor scale achieved high validity and reliability. This data collection tool may be used to identify why managers and practitioners do not use BMR, avoid including it, or distrusting it (e.g., specific size, profitability, or industry sector).

The study's main contribution is a data collection tool, supported by sound theoretical and empirical evidence that can be used with students from other graduate and business schools to analyze the reasons behind managers' and practitioners' perceptions of BMR as a low-relevance effort. The data collection tool used in this study would require adaptations if

used in other Latin American countries. Despite being in Spanish, some linguistic variations would need to be included according to the region.

Based on these initial results, it is possible to envision follow-up studies introducing control variables, such as firm size (measured by the number of employees), firm profitability (measured by any of the existing indicators related to the financial performance), the firm scope (e.g., familiar, national, a multinational company), or industry sector (e.g., agriculture and fishery, hotels and tourism, manufacturing, media, mining and hydrocarbons, telephony and telecommunications), to see whether these findings remain the same or change when we take into account any of these control variables. For example, we can formulate a plausible hypothesis like this: perception of BMR's relevance depends on the firm scope because the family-oriented business could not understand the potential of BMR to improve decision-making. At the same time, multinational companies could be interested in cultural factors that affect the relevance of research results.

This research provides relevant data to the knowledge about graduate business management education. Showing that interest can be a driver for practitioners' adoption of BMR, educational institutions that offer MBA programs –or similar– can review their academic approach and advance in the grounds of evidence-based education, which would be of value to management practice, as observed in other disciplines like agriculture, health-care professions, or public management. This research provides information to

continue working in a research literacy effort in business and management among professionals.

Goshal (2005) and Koskela (2017) have established that the lack of coherence between business research and management practice increases over time. However, this existing gap had not been operationalized in a parsimonious model supported by an easy-to-apply data collection tool with a high validity and reliability level. In that sense, this is the first study that provides evidence of its sound psychometric properties. Therefore, we recommend using this questionnaire to obtain more data through multi-centric and comparative studies to provide robust data-oriented results and to improve the curricular reform on business and management education. In this way, we contribute to finding solutions to reduce the gap between the academic and business worlds, hoping to find better teaching and learning approaches.

Regarding the feasibility issue, while it is true that there are data collection tools such as BARRIERS or the beliefs about effective human resource practice, they are too long to be applied without any risk to the internal validity since they have 50 and 39 items. In full-time MBA programs, very long questionnaires can be used in the research projects; however, in Andean countries like Peru, the MBA programs are mostly part-time or weekend programs. Even though the survey could be completed online, Peruvian MBA students value their time. Consequently, we decided to validate a small data collection tool to be applied within learning sessions and obtain valid and reliable responses.

### Limitations and future research

Since we worked with a purposeful sampling, results can only be generalized to the MBA students who took part in the study. We cannot extrapolate findings to all Peruvian MBA students, neither those enrolled in other programs offered by the analyzed business school. Even though we tried to control other variables, such as age, managerial level, or working experience, the small sample size prevented us from entering those variables into a regression model.

Another limitation of the study is the cross-sectional research design. It is advisable to carry out a longitudinal study using this two-factor scale to show the analyzed business school's effectiveness in teaching research methods in business and management and increase its perceived relevance and research consumption. This data collection tool could be applied at the beginning and the end of an academic term,

introducing a scale to measure whether the firm level's decision-making process improved due to the practitioners' participation in the business school's research course method. This approach would offer compelling evidence that –if the right curricular approach is taken– it is possible to improve the BMR's relevance. Thus, Peruvian business people, practitioners, and entrepreneurs can make more informed decisions.

We argued that BMR could be conceptualized in two sub-dimensions: relevance, a theoretical extent related to the output of research activity, and feasibility, as a practicable extension associated with the significance that research may have in the managerial exercise. This study analyzed the underlying structure of BMR's relevance. Future research could include feasibility concerning published works in the analysis model, as that of Barends et al. (2017) which provided empirical evidence to support a moderate association between relevance and feasibility of BMR findings ( $r = 0.35$ ,  $p < .001$ ). As noted, a more advanced model that includes this variable, and structural routes and other moderation effects, are open opportunities that allow future research to continue to examine this area.

As mentioned earlier, students from MBA programs enrolled at Peruvian business schools are active managers and practitioners. They complete the program's courses and their responsibilities as senior managers simultaneously. Because of that managerial experience, their opinions represent the actual viewpoint of active practitioners. Based on the collected data, we provide empirical support for the positive relationship between BMR's interest and the perception of its relevance. This finding implies that adjustments in the educational strategy on teaching research methods and other managerial lectures will positively affect BMR's results' perceived relevance among practitioners. If the data collection tool introduced in this study is escalated at the regional or national level, it will offer essential insights for understanding the practitioners' perception of BMR. Consequently, Peruvian business schools could carry out instructional modules to improve the students' attitudes toward BMR results, strengthening a research literacy and research culture within graduate and business schools (Asarta et al., 2018; Hinnenkamp, Correia, & Wilkinson, 2019).

### ORCID

Carlos Vílchez-Román  <http://orcid.org/0000-0002-6802-053X>

## References

- Asarta, C. J., Bento, R., Fornaciari, C. J., Lund Dean, K., Arbaugh, J. B., & Hwang, A. (2018). The scholarship of teaching and learning: Changing the dominant narrative about (and in) research institutions. *Journal of Management Education*, 42(6), 731–748. doi:10.1177/1052562918777271
- Barends, E., Villanueva, J., Rousseau, D. M., Briner, R. B., Jepsen, D. M., Houghton, E., & Ten Have, S. (2017). Managerial attitudes and perceived barriers regarding evidence-based practice: An international survey. *PLoS One*, 12(10), e0184594. doi:10.1371/journal.pone.0184594
- Boyd, M., Marcus, A. F., Byham-Gray, L., & Decker, R. T. (2015). Research interest and research involvement among United States Registered Dietitians. *Journal of the Academy of Nutrition and Dietetics*, 115(9), A11. doi:10.1016/j.jand.2015.06.024
- Brody, J. L., Dalen, J., Annett, R. D., Scherer, D. G., & Turner, C. W. (2012). Conceptualizing the role of research literacy in advancing societal health. *Journal of Health Psychology*, 17(5), 724–730. doi:10.1177/1359105311425273
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds), *Testing structural equation models* (pp. 136–162). Newsbury Park, CA: Sage.
- Funk, S. G., Champagne, M. T., Wiese, R. A., & Tornquist, E. M. (1991). BARRIERS: The barriers to research utilization scale. *Applied Nursing Research*, 4(1), 39–45. doi:10.1016/S0897-1897(05)80052-7
- Goshal, S. (2005). Bad management theories are destroying good management practices. *Academy of Management Learning & Education*, 4(1), 75–91. doi:10.5465/AMLE.2005.16132558
- Graber, M., Launov, A., & Wälde, K. (2008). Publish or perish? The increasing importance of publications for prospective economics professors in Austria, Germany and Switzerland. *German Economic Review*, 9(4), 457–472. doi:10.1111/j.1468-0475.2008.00449.x
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis*. Englewood Cliffs, NJ: Prentice Hall.
- Hinnenkamp, C., Correia, C. L., & Wilkinson, T. J. (2019). Creating a research culture on the way to AACSB accreditation. *Journal of Education for Business*, 94(3), 204–208. doi:10.1080/08832323.2018.1510362
- Hu, L.T., & Bentler, P. M. (1995). Evaluating model fit. In R. H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp. 76–99). Thousand Oaks, CA: Sage.
- Kaari, J. (2019). Publication numbers are increasing at American research universities. *Evidence Based Library and Information Practice*, 14(4), 185–187. doi:10.18438/ebliip29647
- Kajermo, K. N., Bostrom, A.-M., Thompson, D. S., Hutchinson, A. M., Estabrooks, C. A., & Wallin, L. (2010). The BARRIERS scale – The barriers to research utilization scale: A systematic review. *Implementation Science*, 5, 32. doi:10.1186/1748-5908-5-32
- Koskela, L. (2017). Why is management research irrelevant? *Construction Management and Economics*, 35(1–2), 4–23. doi:10.1080/01446193.2016.1272759
- Marsh, H. W., Balla, J. R., & McDonald, R. P. (1988). Goodness-of-fit indexes in confirmatory factor analysis: The effect of sample size. *Psychological Bulletin*, 103(3), 391–410. doi:10.1037/0033-2909.103.3.391
- McSherry, R. (1997). What do registered nurses and midwives feel and know about research? *Journal of Advanced Nursing*, 25(5), 985–998. doi:10.1046/j.1365-2648.1997.1997025985.x
- O'Brien, J. P., Drnevich, P. L., Crook, T. R., & Armstrong, C. E. (2010). Does business school research add economic value for students? *Academy of Management Learning & Education*, 9(4), 638–651. doi:10.5465/amle.9.4.zqr638
- Raffield, W. D., Vang, D. O., & Lundsten, L. L. (2016). The relevance of academic research in OSCM practice. *Journal of Education for Business*, 91(5), 267–273. doi:10.1080/08832323.2016.1181044
- Ringle, C. M., Wende, S., & Becker, J.-M. (2015). *SmartPLS 3*. SmartPLS. Retrieved from <https://www.smartpls.com>
- Rynes, S. L., Brown, K. G., & Colbert, A. E. (2002). Seven common misconceptions about human resource practices: Research findings versus practitioner beliefs. *Academy of Management Executive*, 16(3), 93–103. doi:10.5465/ame.2002.8540341
- Rynes, S. L., Colbert, A. E., & Brown, K. G. (2002). HR professionals' beliefs about effective human resource practices: Correspondence between research and practice. *Human Resource Management*, 41(2), 149–174. doi:10.1002/hrm.10029
- Sanders, K., van Riemsdijk, M., & Groen, B. (2008). The gap between research and practice: A replication study on the HR professionals' beliefs about effective human resource practices. *The International Journal of Human Resource Management*, 19(10), 1976–1988. doi:10.1080/09585190802324304
- Schumacher, R. E., & Lomax, R. G. (2010). *A beginners' guide to structural equation modeling*. 3rd. ed. New York, NY: Routledge.
- Shahbazi-Moghadam, M., Salehi, H., Amin Embi, M., Zavvari, A., Shakiba, M., Mohammadjafari, M., ... Bakhtiyari, K. (2015). Effective factors for increasing university publication and citation rate. *Asian Social Science*, 11(16), 338–348. doi:10.5539/ass.v11n16p338
- Shank, G., & Brown, L. (2013). *Exploring educational research literacy*. New York: Routledge.
- Sutton, R. I. (2004). Prospecting for valuable evidence: Why scholarly research can be a goldmine for managers. *Strategy & Leadership*, 32(1), 27–33. doi:10.1108/10878570410511390
- Syed, J., Mingers, J., & Murray, P. A. (2010). Beyond rigour and relevance: A critical realist approach to business education. *Management Learning*, 41(1), 71–85. doi:10.1177/1350507609350839
- Tenhilälä, A., Giluk, T. L., Kepes, S., Simón, C., Oh, I.-S., & Kim, S. (2016). The research-practice gap in human resource management: A cross-cultural study. *Human Resource Management*, 55(2), 179–200. doi:10.1002/hrm.21656



- Toffel, M. W. (2016). Enhancing the practical relevance of research. *Production and Operations Management*, 25(9), 1493–1505. doi:[10.1111/poms.12558](https://doi.org/10.1111/poms.12558)
- Vittengl, J. R., Bosley, C. Y., Brescia, S. A., Eckardt, E. A., Neidig, J. M., Shelver, K. S., & Sapenoff, L. A. (2004). Why are some undergraduate more (and others less) interested in psychological research? *Teaching of Psychology*, 31(2), 91–97. doi:[10.1207/s15328023](https://doi.org/10.1207/s15328023)
- Vong, F. (2017). Relevance of academic research to hospitality practitioners. *Journal of Hospitality & Tourism Education*, 29(3), 116–128. doi:[10.1080/10963758.2017.1336447](https://doi.org/10.1080/10963758.2017.1336447)
- Zolkiewski, J. (2018). Bridging the relevance-ranking chasm: Mission impossible? *European Business Review*, 30(2), 128–144. doi:[10.1108/EBR-03-2017-0067](https://doi.org/10.1108/EBR-03-2017-0067)