

**Faculty Research Incentives and Business School Health:
A New Perspective for Marketing**

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ABSTRACT

Prior research has heavily debated the value of academic research of faculty to the business schools that employ them. We study, conceptually and empirically (by surveying faculty and interviewing (associate) deans), the role of the faculty research incentive system in business school health. We find that higher research health is congruent with higher teaching quality, stronger resource support, and stronger external stakeholder support. *R*-quality of research (i.e., rigor) contributes more strongly to research health than research quantity, while *q*-quality of research (i.e., relevance) contributes positively to teaching quality and external stakeholder support. We also find that research task incentives are misaligned: (1) in faculty evaluations, the number of publications receives too much weight, while creativity, literacy, practical relevance, and awards receive too little weight; and (2) the faculty feels that they are insufficiently compensated, while (associate) deans feel faculty is compensated too much for its research. These incentive misalignments are largest in schools that perform the worst on research and business school health overall. We explore improvements that business schools and faculty can introduce.

Keywords: business school, marketing, academic research, research faculty, incentives, scientometrics.

INTRODUCTION

Today's business schools consider academic research by their faculty as one of the main pillars in their business model and allocate a large part of their resources to it (e.g., faculty time, labs, research budgets). At the same time, prior research across fields, including the marketing field, has heavily debated whether such academic research that business professors conduct really adds value to the business schools that employ them (see Table 1¹).

On the positive side, faculty research may enhance a professor's relevant knowledge base which can be transferred to students and motivate students to study the subject (Mitra and Golder 2008). Academic research may also signal teaching quality to high-quality prospective students (Besancenot, Faria and Vranceanu 2009). Business school faculty or deans may also advocate certain schools based on their academic research performance thus affecting school choices and driving high-quality students and faculty to research-intensive schools (Mitra and Golder 2008).

On the negative side, scholars have voiced concerns that academic research in business schools does not live up to its full promise. For instance, many scholars have lamented the lack of relevance of business school research (e.g., Jaworski 2011; Lilien 2011; Roberts, Kayande and Stremersch 2014) in favor of excessive sophistication (Benbasat and Zmud 1999; Lehmann et al. 2011). 16 of the 21 papers in Table 1 support this perspective. At the same time, some particularly notorious science fraud cases have arisen in business school research calling into question the rigor and integrity of academic research in management (Bettis 2012; RBBM 2017).

Business schools have taken a strong interest in the faculty research incentive system – composed of monitoring and compensation instruments – they put in place to steer the research of

¹ Table 1 lists the most prominent articles that have appeared in the journals indexed by the UT Dallas Research Ranking (<https://jindal.utdallas.edu/the-utd-top-100-business-school-research-rankings/>) that covered the role of faculty research in business schools. Note it does not include articles focusing almost exclusively on characteristics of research (so-called scientometric studies) without considering the relationship of that research to other constituents.

their faculty in the direction of their missions. In fact, prior literature (Lilien 2011; Reibstein, Day and Wind 2009; Vermeulen 2005) has hinted that the incentive system of business schools may be responsible for the main concerns on rigor and relevance that are voiced about business school research. Therefore, the purpose of this paper is to study, conceptually and empirically, the (lack of) alignment of the faculty research incentive system with business school health. Business school health, developed more elaborately below, is the extent to which a business school is capable of effectively directing the energy of all its stakeholders toward its mission.

In this paper, we aim to address the following limitations of prior literature as summarized in Table 1. First, many papers are conceptual (15 out of 21 papers). The present paper offers both conceptual insights as well as empirical evidence. Second, many papers take a scholarly field perspective rather than a business school perspective. Exceptions (Bennis and O'Toole 2005; Mitra and Golder 2008; Pfeffer and Fong 2002; Trieschmann et al. 2000) focus on specific business school outcomes (e.g., MBA ranking) or specific research metrics (e.g., number of publications) and often contradict each other with some being very negative and others being more positive. This paper also takes a business school perspective but offers more elaboration both on research metrics and business school outcomes (i.e., business school health) than prior research. Third, prior work that has suggested that the faculty research incentive system is one of the main culprits for today's state of affairs (e.g., see Lilien 2011; Reibstein et al. 2009; Vermeulen 2005) did not formally conceptualize this faculty research incentive system or offer empirical evidence of its misalignment. This paper does both. It develops a new model for the faculty research incentive system grounded in social agency theory and offers empirical evidence of its misalignment.

As Figure 1 shows, we first ground our worldview in a social agency framework (Shapiro 2005) and literature on the role of academic research in business schools (as summarized in Table

1), as well as our own personal observations as marketing professors with more than 70 years of experience across seven business schools, both in the U.S. and abroad, both in leading as well as second-tier schools, and in a variety of roles. We then develop our systematic worldview on the faculty research incentive system and business school health (step 2). In step 3, we validate this worldview in (1) a survey of 234 marketing professors of business schools across 20 countries² (response rate of 62.6%); (2) 14 qualitative interviews with (associate) deans of 13 business schools in the U.S. and Europe; and (3) qualitative interviews with leaders of external institutions of marketing scholarship (such as the Marketing Science Institute (MSI), the Institute for the Study of Business Markets (ISBM), the American Marketing Association (AMA), and the Theory and Practice in Marketing conference (TPM)). Finally, in step 4, we extract learnings and derive improvements to substantiate the discussion section of the present paper.

Our main conclusions are as follows. Business schools that have a high level of research health are also healthier in other dimensions: they offer higher teaching quality, they offer better resource support, and they receive more support from external stakeholders. *R*-quality of research (i.e., rigor) contributes more strongly to research health than research quantity, while *q*-quality of research (i.e., relevance) contributes positively to teaching quality and external stakeholder support.

We also find that research task incentives are misaligned. Among monitoring instruments, we find that number of publications receives too much weight in faculty evaluations while creativity, literacy, relevance to non-academics, and awards (in order of importance) receive too little weight. Among compensation instruments, we find a misalignment in that faculty overall feel they are insufficiently compensated while (associate) deans feel faculty are compensated too much

² Based on 222 responses out of a total of 234 of which we know the country location. 62% of the respondents is from a U.S.- based business school and 38% is from abroad.

for research. We find that miscalibration of the incentive system is greatest in schools that perform below-median on research quality, business school research and overall health.

FACULTY RESEARCH IN BUSINESS SCHOOLS:

A SOCIOLOGICAL PRINCIPAL-AGENT PERSPECTIVE

We develop a sociological principal-agent perspective on the role of academic research by faculty in business schools (see Figure 2). In this perspective, business schools (as principals) delegate the production of research to their research faculty³ (as agents) because they believe that the right quantity and quality of academic research of their faculty contributes to the research health of the school, and, thereby, to overall business school health.

To control the proper alignment of the faculty's research task with business school health, business schools develop their faculty research incentive system⁴ to minimize agency problems such as the faculty not doing enough research, or doing research that is not good enough to contribute to the ambitions of a research healthy school. They do so through appropriate monitoring (i.e., getting correctly informed on the faculty's research task execution) and compensation (i.e., rewarding faculty for their research task execution). This system implies that feedback loops may exist in two main ways: (1) business school health may influence the faculty in the execution of their research task; and (2) business school health may lead to adjustments in the faculty research incentive system.

³ In this paper, we focus on research or tenure-track faculty as agents in a business school. Therefore, we do not examine other agents that operate in function of the principal such as business developers, sales agents, support staff, PhD students, post-docs, and teaching faculty.

⁴ Given we only focus in this paper on faculty research, we focus only on incentives that control the research task, not other tasks. Of course, principals may complement the research incentive system with other incentives aimed at maximizing other dimensions of business school health, such as teaching or service incentives. Such incentives are outside the scope of the present article.

Next, we develop each of these building blocks in Figure 2 in more detail, from right to left. We also integrate our own conjectures, based on our own experience and extensive study of the literature, on each of these building blocks. In the empirical section of this paper, we will inquire to what extent our worldview is shared by interviewing and surveying the constituents of the faculty research incentive system, such as (associate) deans representing the business school as principal, research faculty (as agents) and representatives of external institutions.

Business School Health

We ground our conceptualization and measurement of business school health in the literature on elementary, middle, and secondary school health (Hoy, Tarter and Bliss 1990; Hoy, Tarter and Kottkamp 1991; Hoy and Woolfolk 1993). A healthy business school is one that is capable of effectively directing the energy of all its stakeholders (students, faculty, administrators, external stakeholders) towards its mission. To do so, business schools have three separate levels of control: technical, managerial and institutional.

At a technical level, the business school has two main functions: to produce knowledge through research and to disseminate knowledge through teaching. A business school with high research health is able to hire and retain faculty who are seen as leading in their respective fields by peers internationally, who publish regularly in the best journals in their respective fields, and who assume leadership positions in the academic research community. A business school with high teaching health can provide its students with an excellent learning environment and set high standards for teaching.

At a managerial level, the business school has three main functions: to offer leadership support, administrative support, and resource support. A healthy business school in terms of leadership support is one where the leadership team is of high quality, the standards for faculty

performance are clear and where the school's leadership is good at clarifying what is expected of faculty. A healthy business school in terms of administrative support is one where the administrative staff (i.e., PA's and secretaries, program support staff, business development staff, people division, etc.) is professional, very supportive to faculty and appreciated by students and visitors. A healthy business school in terms of resource support is one that has great facilities and provides adequate resources and materials to help faculty effectively perform their work.

At the institutional level, the business school has two main functions geared towards a healthy regulation of the school's relationships with its surrounding environment: institutional integrity and institutional support by external stakeholders. A healthy business school in terms of institutional integrity is one that is able to maintain and commit to the highest standards of integrity on a daily basis as well as to communicate strong ethical values to its students and faculty. A healthy business school in terms of external support is able to cultivate good relationships and secure the support and backing of external stakeholders such as alumni and donors such that they are willing to commit substantial resources (e.g., time, money) to the school. Our conjecture on business school health is that:

C1: *Research health of a business school affects other dimensions of business school health positively and, thus, academic research is congruent with a (overall) healthy business school.*

Note that based on our literature review as well as our personal observations, this conjecture endorses the more positive (e.g., Mitra and Golder 2008), rather than the more negative, view of the state of academic research in business schools (e.g., Bennis and O'Toole 2005; Pfeffer

and Fong 2002). If we confirm this worldview from the constituents we interviewed, it significantly broadens the support for the encouraging findings of Mitra and Golder (2008).

Research Task of Faculty

The research task of faculty in business schools is to produce research of sufficient quantity (“doing enough research”) and quality (“doing research that is good enough”) to achieve the ambitions of a research healthy school. Research quantity relates to the total *volume* of research produced by a scholar (e.g., Lightfield 1971; Nosek et al. 2010).

For research quality, we distinguish “*r*-quality” from “*q*-quality” (Ellison 2002). Prior literature typically equates *r*-quality to *rigor* and *q*-quality to *relevance* (Lehmann et al. 2011). Academic research is of high *r*-quality if it adheres to “objective, scientific standards” (Bennis and O’Toole 2005; p. 99), which means that “the various elements of a theory are consistent, that potential propositions or hypotheses are logically derived, that data collection is unbiased, measures are representative and reliable, and so on” (Vermeulen 2007; p. 755). Academic research is of high *q*-quality when it provides insights that “practitioners find useful for understanding their own organizations and situations better than before” (Vermeulen 2007; p. 755).

Business schools of which the research faculty executes their research task well should be better able than other schools to hire and retain faculty who are recognized by peers as leaders in their fields and assume leadership positions in the best journals and institutions in their fields. Our conjecture on the research task of faculty is that:

C2: *Research health of a business school increases with the production of more and higher quality (in both r- and q-quality) research by its research faculty.*

Faculty Research Incentive System: The Constituents

The faculty research incentive system is composed of multiple constituents (see Figure 3): (1) the principal; (2) the agent; (3) peers of the agent; and (4) external institutions. Each plays a specific role in the faculty research incentive system. We view the business school as a “collective principal” (instead of the Dean as an individual principal), because it has a complex administrative structure and long chain of delegation in a system of peers, very much like a political party (as in Kam, et al. 2010) or international organizations (as in Nielson and Tierney 2003). The business school incentivizes the research faculty task by monitoring and compensating the research task of faculty. Business schools typically operate within a university which oversees the school’s incentive system (exceptions exist, e.g., Insead) and are divided into disciplinary units or departments each of which influences the school’s incentive system (see top of Figure 3).

Social agency theory considers principal-agent relationships to be “*enacted in a broader social context and buffeted by outside forces,*” and thus considers the role of peer relationships between agents as well as relevant external institutions in so-called social monitoring (Shapiro 2005; p. 269). Many business schools use peer-to-peer monitoring (represented by the left-right arrow in the center of Figure 3) in their incentive systems such as through reference letters of peers for faculty promotion. Agents may also self-regulate among peers (Sharma 1997), even if at the expense of other agents or of the principal (Tirole 1986). For instance, business school faculty may favor rigorous academic research aligned with their own interests over research that aligns with the business school’s interest to be relevant to practitioners.

Building on Ahuja and Yayavaram (2011) who developed a typology of external institutions, we deem two types to be particularly relevant when one considers the faculty research

incentive system in business schools⁵, namely: (i) endorsement institutions, and (ii) cohesion institutions (see the bottom of Figure 3; for a primer and non-exhaustive list of these institutions with relevance to the marketing field, see Web Appendix A⁶). We also validated the role of these external institutions with the four qualitative, key-informant, interviews we conducted.

Endorsement institutions typically verify information about agents, conduct analyses to compare or rank agents, and endorse agents. Examples of such institutions in marketing that endorse faculty are premier journals that publish their research (such as *Journal of Marketing*) or associations (such as the AMA) that have a variety of awards for research. Principals can track such endorsement institutions' monitoring of their faculty, entrusting that endorsement institutions carefully verify, compare, and rank. In the words of a former chair-elect of the AMA Board of Directors we interviewed: “(The) *AMA aims to promote the creation of cutting-edge marketing content both through the journals and through the awards inside the Foundation. Faculty go back and list those awards on their annual reviews and use that as part of their argument for where they should stand inside their institution.*”

Cohesion institutions typically ensure collective action by enabling provision of collective goods. Collaborative research platforms, such as MSI, and professional associations, such as the AMA, are good examples of such cohesion institutions (note that institutions can provide endorsement as well as cohesion, as is the case for the AMA). They enable the provision of a common base of knowledge, sharing of such knowledge, funding, or data access that supports research faculty in their research agenda. Business schools can monitor the role or reputation of their research faculty in such cohesion institutions. A former executive director of MSI gave the

⁵ Ahuja and Yayavaram (2011) raise three other types of institutions that are responses to market failure issues (e.g., power asymmetry and agreement consummation) which have not been connected to principal-agent theory and do not seem relevant in our context.

⁶ Web Appendices available upon request.

example of MSI's Young Scholars program: *"It helps juniors develop a strong cohort. They get more invited talks, it gets them the opportunities to be recruited, and it starts research collaborations."*

Some of our interviewees pointed out that cohesion institutions can stimulate collaboration not only among academics but also between academics and practitioners. A former director of ISBM we interviewed put it this way: *"I think the ISBM or MSI can facilitate research that has both academic rigor and has got practical merit."* Another institution that attempts to increase the cohesion between marketing academics and practitioners is the organization that runs the annual Theory and Practice in Marketing (TPM) conferences. A co-founder of TPM we interviewed stated: *"At every TPM conference, we have a panel of practitioners and a practitioner speaker. And people like that"*.

Faculty Research Incentive System: Monitoring Instruments

Monitoring should be designed to accurately and inexpensively measure an agent's effort or outcomes (Joseph and Thevaranjan 1998). Schools show quite a bit of variance in the combination of metrics they use. From our own experience and study of the literature (e.g., Aguinis et al. 2014 and 2020; Lightfield 1971; Uzzi et al. 2013), we identified the following seven.

First, almost all business schools count the *number of publications* of a faculty member. This low-effort metric can be corrected for: (1) the quality of the journal; and/or (2) the domain of the journal (e.g. inside or outside marketing). However, challenges with this metric remain. For instance, journal quality as assessed by peers may not match a ranking based on Impact Factor, raising debate on which journals to count. The generally accepted "A" marketing journals are not necessarily among the highest impact factor journals in marketing or business and, for some, such

as *Marketing Science*, their impact has decreased while their peer reputation has not (see Web Appendix B⁷).⁸

Second, schools may also inexpensively count and compare the *number of citations* to a faculty member's work, possibly corrected by: (1) comparing to a peer group of scholars to accommodate for large differences in citation counts across domains and time (Stremersch, Verniers and Verhoef 2007); and/or (2) the quality of the journals that generated the citation count to assess whether the highly-cited papers of a scholar were original contributions in premier journals or, for instance, review articles in secondary journals. However, metric challenges remain. For instance, Stremersch et al. (2015) demonstrated that only 15% of all citations to articles in academic marketing journals signal intellectual indebtedness, rather than citation gaming, citation politics, extensive social promotion, or mere randomness (other fields may show similar patterns).

Third, schools may track *peer recognition* by leveraging their network of external scholars to attest to a scholar's execution of her research task in a reference letter. While this is inexpensive for the principal, it is very expensive for the agent (the reviewer) who spends perhaps a full day writing a tenure letter. Schools vary in: (1) enforcing the independence of these external scholars, excluding co-authors, advisors, etc.; (2) whether they provide a reference batch of scholars to which the scholar under evaluation should be compared, and (3) the specific instructions they provide on the items to cover in the letter. Even when schools carefully provide a standardized protocol, letter writers may not pay much attention to it and do what they normally do. The main challenge with peer recognition remains how to compare rather heterogeneous and idiosyncratic evaluations across letters or cases.

⁷ Web Appendices available upon request.

⁸ This is similar to the situation in economics as shown in Heckman and Moktan (2018).

Fourth, another low-cost monitoring approach is to count the *awards* research faculty may have received, either for individual (best) papers they wrote (such as the Hunt/Maynard Award in *JM*) or for their (early or complete) career (such as the AMA Rajan Varadarajan or Vijay Mahajan Awards). The number of annual awards in marketing has increased over time to now more than 160 (see Web Appendix B for more details⁹). Therefore, schools may give more weight to some awards than others while being confronted with social influencing by faculty to consider an award they received as more important than an award they did not receive.

Fifth, schools may try to assess the faculty's research on *relevance to non-academics*. One way to do so is to account for practitioner-oriented publications in, for instance, *Harvard Business Review (HBR)*, which has a 260,000+ circulation. One of the schools we studied allocates the same weight to a *HBR* publication than to a publication in *JM*, *JMR*, *JCR* or *Marketing Science*. Another way this is done is to ask for reference letters on faculty from practitioners. As marketing practitioners have largely disappeared from endorsement and cohesion institutions (e.g., the number of practitioners attending our main conferences or serving on the editorial boards of our main scholarly journals has decreased over time; see Web Appendix B¹⁰), schools directly approach such practitioners among their trustees, donors, or alumni.

Sixth, business schools may want to monitor the *literacy* of their faculty¹¹. If business schools increase the weight given to writing, then faculty will focus more on writing and less on reading which may hurt research quality in two main ways (Besancenot, Huynh and Vranceanu 2009): (1) it may disable scholars to stay informed about the latest (theoretical and methodological)

⁹ Web Appendices available upon request.

¹⁰ Web Appendices available upon request.

¹¹ By literacy we mean how 'well-read' a scholar is, i.e., literacy measures the knowledge base a faculty member can rely on. This definition is consistent with the American Library Association (2000) definition of "information literacy" which is a person's ability to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information" (p.2). We provided this definition also in our faculty survey to avoid confusion over the meaning of this term.

insights; and (2) it may limit scholars' vision how their research best advances existing knowledge. Consistent with poor time allocation to reading, several scholars in marketing have found poor citation practices (Stremersch et al. 2015). While monitoring faculty on literacy seems more effortful than on writing, it is feasible through peer-to-peer monitoring from external letter writers or internal department assessments. Recent work in bibliographics also offers objective methods to gauge literacy, such as analyses of the quality of bibliographies¹² (Walsh 2009).

Seventh, while a professor's literacy may measure the knowledge base s/he can rely on, *creativity* in academic writing measures to what extent a thought leader is likely to inspire. Creativity may be insufficiently captured by the other metrics mentioned before. That is why in other fields - as demonstrated in a scan of NYU's Tisch School of the Arts and Steinhardt School - creativity of a faculty member is a key criterion, even more important than her publications, for promotion or appointment. Like literacy, creativity is more costly to monitor than, say, number of publications or citations. Still, there exist well-developed and reliable measurement procedures for creativity assessment through a panel of independent experts (Amabile 1982; Besemer and O'Quin 1986). Schools can also resort to modern bibliometric methods which allow them to automatically assess creativity by, for instance, examining the variation across disciplines in reference lists (Wang, Veugelers and Stephan 2017).

The arguments above suggest that business schools may suffer from what we call an *availability bias*. An increasing number of automated, scientometric, tools have made some metrics (e.g., number of publications or citations) more readily available and easily interpretable

¹² These methods typically assess the quality of a bibliography against a preset rubric. Rubrics typically attempt to measure the quality of a bibliography around criteria such as: (i) quality of the sources used (e.g., scholarly sources are credible), (ii) quality of the citations (e.g., in-depth rather than superficial citing of a body of work; avoids perfunctory cites; properly identifies and cites all sources according to standards of ethical and fair use; effective paraphrasing; proper formatting), and (iii) quality of the synthesis provided (i.e., cited works help the author develop an original contribution based upon variety of sources; author demonstrates a sophisticated level of creative, critical synthesis).

than others. These readily available and interpretable metrics may weigh in more heavily than measures that are more accurate, but less readily available and interpretable. From our own observations, we conclude that schools with a better execution of the research task (i.e., higher research quantity and quality) and greater health succumb less to this bias than schools with a poorer execution of the research task and poorer health (we do not want to claim causality). Such “better” schools, in our experience, typically, on average, have: (1) P&T committees where the members have better capabilities in assessing others’ work, (2) better protocols for assessment built over a longer and richer experience with the research model; (3) and have better access to external letter writers who engage in more effort to write informative letters. Our conjectures on the monitoring instruments of business schools are that:

C3: (a) *Business schools rely too much on seemingly effortless metrics, such as the number of publications and the number of citations;* (b) *Business schools rely too little on effortful metrics such as practical relevance, literacy and creativity ;* (c) *Business schools that more appropriately weigh monitoring instruments show higher research task output;* (d) *Business schools that more appropriately weigh monitoring instruments show higher research health and overall business school health.*

Faculty Research Incentive System: Compensation Instruments

Given that monitoring an agent’s effort or outcomes is costly to different degrees and suffers from several limitations (as reviewed for our context above), principals rely also on compensation instruments to align the actions of agents with their own mission (Tosi Jr. and Gomez-Mejia 1994). From our own experience and study of the literature (e.g., Besancenot and

Vranceanu 2008; Gomez-Mejia and Balkin 1992; Jørgensen and Hanssen 2018), we identified the following compensation instruments used by business schools.

First, *salary* compensates, in part, for the research task. In recent years (see Figure 4), salary has strongly increased. For the period 2013-2017, salaries increased at a higher pace (3.1% on average; 5.2% among research-intensive schools) than U.S. inflation (1.3%), while both evolved more or less at par in the period 2004-2012. A publication in the premier marketing journals increases the salary of the author-professor by more than \$2,000 (Mittal, Feick and Murshed 2008). Lilien (2011) notes that while in the early days of business schools, professors needed consulting to complement their academic paycheck, they can now live prosperously from their research without ever setting foot in a company. This may be part of the explanation for a decrease in faculty alignment with practice. *Salary increases* are periodically awarded based on regular assessment of research performance with some of the metrics as reviewed above.

A more recent form of compensation on top of fixed salary and increases are *research bonuses paid as annual salary supplements*. This practice exists in Norway where scholars can receive a salary bonus of anywhere between 30,000 NOK to 400,000 NOK (about \$3,000-\$40,000) per premier-journal article published¹³. Publication bonuses have also been implemented in business schools in China, France, Portugal, and Spain.

Business schools allocate pecuniary rewards to individual faculty not only in the form of salary but also in the form of *research budgets* for data collection, hiring research assistants or conference travel. The typical business school spends a small fortune on faculty salaries and

¹³ The precise amounts vary across schools, fields, number of co-authors and journal tiers (different tiers lead to different bonuses). Scholars at Stavanger University receive up to 30,000 NOK for a premier journal article. At BI this amount is up to 200,000 NOK (single-authored paper). In Finance, Norges Bank awards up to 400,000 NOK for premier finance journal publications by scholars affiliated with a Norwegian university (see <https://www.nbim.no/en/investments/research/the-norwegian-finance-initiative-nfi/nfi-publication-bonus/>). 1 NOK is equal to \$0.09 (exchange rate in April 2020).

significantly less on research budgets; faculty may earn +\$150,000 salaries but, depending on the school, have to scramble for \$5,000-\$10,000 in research budget. In that way, business schools seem quite different from companies where R&D associates typically work with budgets that are multiples of their own salaries. Many business schools allocate performance-based *research budget bonuses*, which may depend on past productivity or on proposals of future research, or a combination of both.

While the first three (salary-based) rewards are envisioned as purely extrinsic incentives and research budget is probably partially extrinsic partially intrinsic, business schools also reward their faculty with purely intrinsic rewards¹⁴. Two prominent ones are *academic freedom* and *reduced teaching loads*. Academic freedom is typically associated with tenured lifetime employment. A reduced teaching load as a reward for research performance is also an important mechanism to empower research faculty to autonomously decide how they allocate their time. As stated by Kuhn (1996), academic freedom “permits the individual scientist to concentrate his attention upon problems that he has good reason to believe that he can solve” (p. 164). Intrinsic rewards are often considered to be better than extrinsic rewards. Specifically, for our context, intrinsic rewards may drive a stronger interest and higher excitement for the research task, thereby triggering enhanced persistence and creativity (Ryan and Deci 2000), which, in turn, may lead to higher quantity and quality of research.

However, especially the system of tenure and the academic freedom it creates for scholars has also received criticism. First, academics may give high priority to their research task to get tenure, but, then, once tenured, neglect it (Vermeulen 2007). In economics, Brogaard, Engelberg

¹⁴ We define intrinsic rewards as inherent aspects of a task that make it more enjoyable for the agent (e.g., degree of freedom), and extrinsic rewards as external outcomes to which a task leads that are valued by agents but separable from the task itself (e.g., money or status) (e.g., Deci, Koestner and Ryan 1999; Ryan and Deci 2000).

and Van Wesep (2018) have shown that both quantity and quality of research peak at tenure and fall thereafter. Second, research faculty may converge on “ivory tower” norms that may come at the cost of a broad impact on other disciplines or relevant stakeholders such as practitioners and policy-makers (MacInnis et al. 2020).

In setting salaries, within budget constraints of the school or university, an inherent conflict of interest arises. Typically, salaries are set by a delegation of professors themselves, such as (assistant or associate) deans. These professors were appointed from within their own ranks and may have long-term collegial relationships with the professors they are compensating. Such systems are sensitive to overcompensation pretty much in the same way that CEOs may be overcompensated if they are able to capture the board of directors (Lazear 2018).

However, this may lead to a situation where faculty may still feel undercompensated, while, at the same time, their principals may feel that same faculty is already overcompensated by the internal lobbying that enables it. The faculty’s perception of undercompensation may originate from comparing: (1) their own research performance with others likely on comparative metrics they themselves perform well on; and (2) their compensation with available public information (e.g., in case of public universities) or shared information (e.g., rookie salaries) on others (for a similar phenomenon in the case of boards setting their own compensation see Boivie, Bednar, and Barker 2015). Our conjecture on the compensation instruments of business schools is:

C4: *Principals’ and agents’ views on compensation are misaligned: business school professors perceive themselves to be undercompensated, while their principals consider them overcompensated for their research.*

EMPIRICAL STUDIES

In this section, we examine whether there is empirical support for our worldview as expressed above by surveying a large number of marketing faculty members at business schools (i.e., agents) and by interviewing a concise sample of (associate) deans of business schools (i.e., representatives of principals).

Study 1: A Large-Scale Survey of Research Faculty at Business Schools

Through a careful protocol following state-of-the-art survey practice (see Web Appendix C for further details on the survey regarding sampling, questionnaire structure, analysis and results¹⁵), we invited 374 marketing academics across 168 business schools to respond to our survey; 234 responded (62.6%) and offered a good representation of business schools around the globe; 182 (77.8%) respondents work at research-intensive schools (i.e., schools where tenure criteria are mainly research focused); 149 of the respondents (63.7%) work at business schools that are ranked in the Top 100 FT Global MBA ranking; 140 (59.8%) of the respondents are affiliated with public schools, while 94 (40.2%) are affiliated with private schools.

We asked each respondent to evaluate the health of their business school¹⁶ and the performance of faculty at their business schools on the three dimensions of the research task (i.e., the quantity and quality of research, in both *r*- and *q*-quality). To assess whether research faculty in business schools share our worldview as expressed under conjectures 1 and 2, we regressed (OLS) each of the seven dimensions of business school health on each other and on the three dimensions of the research task (research quantity, *r*-quality and *q*-quality). We first averaged respondents' answers to each of the items measuring each respective construct to produce

¹⁵ Web Appendices available upon request.

¹⁶ We defined their current school as the school that pays the respondent's salary. In case a respondent had multiple affiliations that pay her a salary, we asked her to select the school that pays the largest salary.

summated scales as is standard in psychometrics (Nunnally and Bernstein 1994) and marketing research (Iacobucci and Churchill 2010). The R^2 -statistic varies between 0.31 and 0.54, which is satisfactory. It is highest for the research health model (0.54) which befits the prime focus of our investigation.

Consistent with our own observations as expressed in Conjecture 1, we observe that schools with higher research health tend to also have greater teaching health ($\beta = .14$; $p < .05$), greater resource support ($\beta = .14$; $p < .10$) and greater external support ($\beta = .30$; $p < .01$). These results are consistent with our notion that research health is congruent with overall business school health. Thus, it appears that schools that lead in research also tend to offer an excellent learning environment and have external stakeholders (alumni and donors) that are more willing to commit substantial resources (e.g., time, money). This may explain why such schools also tend to have better resources for research faculty to perform their research tasks. We also note that greater research health is also associated with lower institutional integrity ($\beta = -.13$; $p < .05$), which raises an important cautionary note for business schools: A strong research emphasis may come at a cost in terms of a business school's capacity to uphold the highest standards of integrity and to communicate strong ethical values to students and faculty.

Regarding Conjecture 2, we find that research quantity ($\beta = .32$; $p < .01$) and r -quality (i.e., rigor) ($\beta = .46$; $p < .01$) are indeed associated with greater research health; r -quality is a stronger driver of research health than research quantity ($\text{stdz-}\beta_{r\text{-quality}} = .46$ vs. $\text{stdz-}\beta_{\text{qty}} = .27$). In contrast, q -quality does not affect research health significantly, but affects business school health through teaching health ($\beta = .09$; $p < .10$), institutional integrity ($\beta = .10$; $p < .05$), and external support, such as from alumni and donors ($\beta = .13$; $p < .05$). Despite their positive effects on research health, research quantity may negatively affect external support ($\beta = -.26$; $p < .01$) and r -quality may

negatively affect teaching health ($\beta = -.15; p < .05$). Both may showcase the competing demands on faculty time. The time faculty devotes to research quantity or *r*-quality cannot be devoted to spending time with students, alumni and donors, or to preparing better teaching materials.

To assess whether agents feel the research incentive instruments, we introduced above, are properly aligned, as per conjectures 3 and 4, we measured whether they feel that, at their school, (1) each of the monitoring instruments receives far too little weight (-2), too little weight (-1), just the right weight (0), too much weight (+1) or far too much weight (+2) (left panel of Figure 5); and (2) research faculty receives far too little (-2), too little (-1), just the right level (0), too much (+1) or far too much (+2) of each compensation instrument (right panel of Figure 5). Figure 5 shows the average value (μ) for each instrument, with the asterisks depicting whether this value is significantly different from 0 based on a t-test.

Consistent with our own observations as expressed in Conjecture 3(a), we observe that research faculty feel that “number of publications” receives too much weight ($\mu = .39; t = 6.88; p < .01$). All the remaining monitoring instruments – including number of citations (contrary to our Conjecture 3(a)) – are significantly underweighted. In line with Conjecture 3(b), the monitoring instruments most severely underweighted (in order) are: (1) creativity ($\mu = -.65; t = -12.95; p < .01$); (2) literacy ($\mu = -.49; t = -10.05; p < .01$) and (3) relevance to non-academics ($\mu = -.44; t = -8.58; p < .01$). Consistent with our own observations as expressed in Conjecture 4, we observe that research faculty feel insufficiently compensated except for the academic freedom they get. We also found that research faculty called out for an increase in their compensation especially in the form of (in order): (1) bonuses paid as research budget ($\mu = -.84; t = -10.34; p < .01$); (2) bonuses paid as salary ($\mu = -.77; t = -9.47; p < .01$); and (3) reduced teaching loads ($\mu = -.67; t = -10.36; p < .01$).

Our social agency framework implies that a better alignment of the incentive instruments is congruent with: (1) a better execution of the research task, i.e., higher research quantity and quality (e.g., as in C3(c)) and (2) greater business school research and overall health (as in C3(d)). Figure 6 (left panel) shows a 2-by-2 matrix according to a median split on research quantity and research quality (i.e., aggregated performance on r -quality and q -quality). For each cell within that 2-by-2, we report the MAD (Mean Absolute Deviation) from 0 across all seven monitoring (MAD^M) and compensation (MAD^C) instruments.

Consistent with our worldview in C3(c), we observe that lower misalignment in incentive instruments is congruent with a better research quality (at $p < .01$, for both MAD^M and MAD^C). Schools with a low research quality (i.e., bottom cells in Figure 6) overweigh number of publications more and underweight creativity, literacy, and practical relevance more than schools with a high research quality (upper cells). We do not find such a contrast for research quantity (i.e., the differences between the two bottom cells and the two upper cells in the left panel of Figure 6 are not significant; see Web Appendix C¹⁷). Faculty also feels more undercompensated in the former schools than in the latter schools.

The right panel of Figure 6 shows that schools with greater research health and greater overall business school health tend to more appropriately weight incentive instruments than the remaining schools (at $p < .01$, for both MAD^M and MAD^C). Schools with below-median research health and overall business school health tend to underweight creativity, literacy, awards and peer recognition more than other schools (see Web Appendix C¹⁸). Faculty also feel more undercompensated in schools with below-median research health and overall business school

¹⁷ Web Appendices available upon request.

¹⁸ Web Appendices available upon request.

health than in the remaining schools. These findings show that appropriate weighting of incentives is congruent with higher research health and higher business school health.

Study 2: In-Depth Interviews of (Associate) Deans at Business Schools

We conducted phone interviews with 7 deans (4 former and 3 current) and 7 associate deans (2 former and 5 current) at 13 business schools in the U.S. and Europe (for full information on the protocol, see Web Appendix D¹⁹). (Associate) deans are well-informed on faculty research incentive systems at business schools from a principal perspective (see guidelines by Merton and Kendall 1946). To assess whether the principal's perspective matches our worldview as expressed above, we opted for a "phenomenological" approach that is in-depth but non-directive in nature (Fournier 1998; Thompson, Locander and Pollio 1989). We conducted the 30-45 minutes interviews ourselves to enable a holistic perspective (Fournier 1998). We audio-taped the interviews (except for two who did not give permission) which were subsequently transcribed by a research assistant and double-checked by one of the authors for accuracy. We then organized sections of all interview transcripts around recurring themes for analysis.

Concerning Conjecture 1, the interviews largely confirmed our view that a higher research health positively impacts other dimensions of business school health, of which teaching health was most often mentioned. Some excerpts express this clearly:

"The people who are the most [research] productive, they're productive in every aspect of their life frankly. They're typically also exceptional teachers." [current dean at a large public school in the U.S.].

"[mentions a junior faculty member at the school], I see him as our next generation; he is interacting with the world but still producing great research, and still coming to seminars, and he is engaged to the world and his teaching is much more appreciated" [former dean at a U.S. FT top 15 school].

¹⁹ Web Appendices available upon request.

“Good researchers who are capable of publishing in top journals tend to be skillful people. There is an unobservable trait that makes them capable of publishing but also makes them very good at many other things.” [current vice-dean at a public non-U.S. business school]

“Part of business school health is whether you have a good number of professors who can credibly take their own research into the MBA class.” [current dean of research at a non-U.S. FT top 75 school].

With respect to Conjecture 2, the interviews largely confirmed that research quantity and research quality (both in *r*-quality and *q*-quality) are important in achieving a research healthy business school. Many of our interviewees expressed a more positive view on the extent to which their school’s faculty was achieving this on *r*-quality than on *q*-quality:

“Basic science tries to understand how the world works, applied science tries to develop applications. I believe that management research is now 99% ‘basic’ and only 1% ‘applied’.” [current vice-dean at a public non-U.S. business school]

“We like to see people who hit a homerun, like this is really good paper. (...) There's a lot of acceptance of low productivity rates if the quality of the home runs are there” [former deputy dean at a U.S. FT top 30 school].

“Huge transformation here. I think we're in the process of just becoming considerably more rigorous. And I think the junior faculty is looking stronger and stronger” [former dean at a U.S. urban private business school].

“My own normative statement is: ‘ask for great stuff, but do not ask too much of it.’” [current dean of research at a non-U.S. FT top 75 school].

“We have a management department...and I think at this point, there’s maybe two people in there who could be teaching exec ed. And that’s where your leadership people should be...and they just can’t do it. At some level, we may kick ourselves out of business” [current dean at a U.S. FT top 75 school].

The (associate) deans we interviewed also connected concerns on *q*-quality of research of their faculty more with a “production” than a “translation” problem:

“At some level most of the work that I see that goes on doesn’t connect to management. (...) Sometimes the research is so technical that it's not acceptable to a broader audience” [former deputy dean at a U.S. FT top 30 school].

“...it seems every marketer wants to be a social scientist and wants to stop selling cookies. I mean, there are a lot of marketing scholars that fundamentally do not study marketing topics

anymore and just look at topics that are generic social science research topics” [current dean of research at a non-U.S. FT top 75 school].

“I feel increasingly frustrated by the extent to which we talk to other academics and we do work that is not addressing the issues and questions that are really most pressing in the world of business or the world more broadly and that we could be a lot more relevant and we could be speaking to practice a lot more” [former vice-dean for faculty at a U.S. FT top 25 school].

“I would give that (a research center connecting faculty with local companies) as a beautiful example of zero return to a massive investment. We had a donor give 20 million dollars to set up this stupid research center and I can’t think of a damn thing that was useful that came out of that... It’s sort of lipstick on a pig that pretends that we’re really interacting with industry in a useful way” [current dean at a U.S. FT top 100 school].

To assess principals’ views regarding monitoring and compensation (cf., conjectures 3 and 4), we asked our interviewees whether they felt the research incentive instruments were properly aligned at their schools. In support of Conjecture 3 (a and b), virtually all interviewees expressed effortless metrics predominate (especially number of publications, but also number of citations) over more effortful metrics such as practical relevance, literacy and creativity:

“I definitely have seen just what I feel is an overreliance on the cohort table and the numbers. And I feel that that was something that I have kind of raised and I hadn’t felt that I necessarily had any impact in terms of trying to say this is just one piece of information” [former vice-dean for faculty at a U.S. FT top 25 school].

“When I started in 2000-2001, it was about the quality of the journals and what the outside reviewers said. So initially, there was very light weight put on citation counts and then over time, it started to increase a bit and then we got a couple of people elected to the promotion and tenure committee who were like ‘we don’t even have to look at quality, we can tell from the citation counts whether these things are any good or not” [former dean at a U.S. FT top 30 school].

“(Awards) should weigh a lot even when compared with contemporary productivity metrics, but in all honesty, contemporary productivity metrics are some of the most overused metrics to gauge academics” [current dean of research at a non-U.S. FT top 75 school].

“My frustration is when I’m drawing on a department chair for information, I get counts such as they had 27 publications, four in premier outlets, and this was the citation count” [current dean at a large public school in the U.S.].

“I remember when Google Scholar first came out there was a lot of skepticism about it... but that has definitely been adopted as the norm. And I think the ease of checking it and following it has caused a drift toward weighing it more highly” [former dean at a U.S. FT top 15 school].

“Are we just giving up on our ability to be doing all the heavy work? I think we're relying too much on the ease of numbers. [current dean at a U.S. FT top 75 school].

“I personally view it [a growing reliance on counting] as a very negative trend because people start gaming the citation count [current dean at a U.S. FT top 100 school].

“Now that we have metrics and now that people are scored on those metrics, I think that the system does – it shouldn't, but it does - put a greater emphasis on those numbers and less on, for example, creativity” [current vice-dean at a U.S. FT top 10 school].

“I think letters are becoming less diagnostic, but not because of their positivity, I think, but I think letter writers also feel less of an obligation to read the work” [current vice-dean at a U.S. FT top 10 school].

Consistent with Conjecture 4, but in contrast with agents' views, our key informants on principals found business school professors overpaid for the research they do:

“...people come with their hands out all the time. I don't get it. It's just wrong. And I think we get paid really well. We have been historically. And we get things that other university faculty just don't get like guaranteed summers. I mean, talk to someone in public health, right? It has become an absurdity to me, and it's very unsustainable” [current dean at an FT top 75 school].

“The financial incentives that exist right now in the field are, to a certain extent, disturbing the market. I think the financing model of the top 100 business schools in the US sooner or later will explode... it is a crisis waiting to happen” [current dean of research at a non-U.S. FT top 75 school].

“Research is the most important piece in driving raises or faculty compensation or any rewards other than that” [current dean at a large public school in the U.S.].

“We do not have bonuses for publications and I do not find those a good idea, they may trigger perverse behaviors” [current vice-dean at a public non-U.S. business school].

“I think that at least among our faculty if a bonus was paid directly for a paper, it would make faculty feel like coin operated. And I think that would lead to a culture impact that would not serve us” [former dean at a U.S. FT top 15 school].

DISCUSSION: IMPLICATIONS AND LIMITATIONS

Next, we discuss implications of our observations for business school faculty and business schools as principals (for a summary of conjectures and observations, see Table 3). Then, we list the main limitations of the present paper and how future work could enrich our knowledge further.

Implications

One of our main findings is that the faculty's research task contributes positively to business schools' research health, which, in turn, is congruent with overall business school health. Both faculty and (associate) deans consider *r*-quality of research to be more important as a driver of research health of a school than research quantity. The results on *q*-quality are decidedly more mixed. While the survey results indicate that it does not directly affect research health (while it does positively affect teaching health and external support), the (associate) deans consider *q*-quality to be fundamental to research health. The (associate) deans report that the schools they lead have made more progress on *r*-quality than on *q*-quality and that they are concerned about a further decline in *q*-quality in recent years. They attribute this state-of-affairs to a failure in research production rather than research translation.

We recommend that business schools steer their research audits to more effectively ensure that the health of the business school is positively affected by its research activities to the greatest extent possible, focused on two predominant themes: (1) "quantity \rightarrow *r*-quality"; (2) "*r*-quality + *q*-quality". For "quantity \rightarrow *r*-quality," the following questions could be used:

- Are we allocating money to the right people (e.g., is it focused enough on quality)?
- Is the "water cooler" chat about high-quality research?
- Are our research metrics sufficiently rewarding quality?
- Are we represented enough on the Editorial Review Boards of the best journals in the field?

For "*r*-quality + *q*-quality", the following questions could be used:

- Is the school lenient enough or does it sufficiently stimulate consulting by faculty high in r -quality? (e.g., Roberts, Kayande and Stremersch 2014 found many dual-impact papers to originate in senior faculty consulting).
- Does our doctoral program do enough to socialize our students with practice, while maintaining a high r -quality focus?
- Are our research centers fundamentally engaging with practice or is it mostly “lipstick on a pig” (as one our interviewed associate deans put it)?
- Are our research faculty high in r -quality teaching in executive MBA or open and custom programs? Teaching in undergraduate, or even daytime MBA programs provides less socialization with practice than executive education.

Research audits are conducted in a number of ways such as internally with a multi-department committee chaired by the research dean or, better still, externally with a panel of outside faculty with outstanding research records, preferably on both r - and q -quality, and with a good understanding of business school health. For schools that have not done a research audit for a while, the above findings and suggestions should stimulate them to organize such audits, preferably on regular intervals. For schools that already perform such audits regularly, the topics noted above, based on our findings, should make such audits more impactful and focused on today’s major challenges of business schools.

Our paper also has a clear implication for faculty of business schools: they will need to work on increasing q -quality without decreasing r -quality of their work (we agree with Vermeulen (2005) that the two are not necessarily contradictory). Enhancing q -quality can counteract the potentially negative effects of r -quality (when focused on in isolation) on teaching health. Some specific suggestions for faculty to improve the present state of affairs are:

- Faculty need to consciously strengthen the cohesion institutions that support the promotion of socialization with practitioners (e.g., AMA, MSI, TPM). Within such cohesion institutions, we could stimulate action that increases q -quality of research of high r -quality. Should MSI give fewer, but larger grants? Should MSI assign a corporate sponsor directly to steering such larger grants? Under its present organizational structure (the executive team being fully composed solely of practitioners), the AMA has failed to make the connection between academics and practitioners²⁰. Can faculty aid in building a new model within the AMA?
- As faculty, we need to embrace consulting and executive education assignments as learning ground for our research and not as an activity separate from our research. The translation of such experiences to scholarly research may be effortful, but such experiences are critical to identifying big, dual-impact, research topics.

Another main set of our findings relates to the faculty research incentive system. Our respondents felt that metrics such as the number of publications which are easy to collect receive too much weight in faculty evaluation while effortful metrics such as creativity, literacy, and relevance to non-academic audiences, receive too little weight. We advocate finding a better balance (i.e., a redistribution of weights) between low-effort and effortful metrics. More specifically, business schools should:

- Improve otherwise low-effort metrics such as number of publications or citations to be more informative (i.e., making the effortless more effortful). For example, aggregate citation counts should be complemented by analyzing (1) whether highly-cited papers of a scholar were original contributions in premier journals or, rather, review articles in

²⁰ As noted by the representative from the AMA we interviewed.

secondary journals; (2) whether a scholar's articles are consistently in the top 20% cited papers or consistently in the bottom 20% cited papers of a journal; and (3) whether the top 5 or 10 cited articles of a scholar were published in premier or secondary journals.

- Consider low-effort metrics such as number of publications or citations only as a starting point for faculty evaluation rather than an end point. For instance, for citations, it would be meaningful to rank a professor's work according to Web of Science citations, after which the 5 highest ranked articles are assigned for reading to a committee, which assesses their *r*- and *q*-quality of the respective 5 papers based on reading them.
- Dedicate more effort to reading and evaluating than counting when assessing faculty research. For instance, some schools establish reading committees and empower departments to take a more holistic approach to decision-making. Ideally, these committees provide thorough evaluations of the work, rather than a mere summary of the papers. One (associate) dean also told us about the practice of assigning discussants on specific papers of a candidate up for P&T evaluation to stimulate reading and evaluation.
- Add creativity and literacy of scholarly work to the evaluation process as well as to the training and coaching of doctoral students and young faculty. History and philosophy of science, as well as history of marketing thought, should find their way back into our PhD curricula. Innovation management as a field has shown that creativity, ideation, idea development, are all processes that can be trained with tools (e.g., Burroughs, et al. 2011); doctoral students and young faculty could be trained on such tools.
- Make the system of reference letters used for P&T decisions more effective, by (1) explicitly providing a cohort list to which the candidate should be compared, (2) making evaluation criteria such as creativity and literacy explicit, and (3) involving a more

heterogenous set of letter writers. Schools should prevent gaming of cohort lists. For instance, schools can decide on a universal set of reference schools, such as the 10-20 schools that perform similarly or a little better on the FT overall or UT Dallas research rankings. The cohort for a specific candidate in a P&T process could consist of two types of faculty members of the reference schools: (1) all research faculty with a similar “time since doctoral degree” (e.g., +/- 1-2 years); (2) all faculty of the rank the candidate is considered for that graduated (doctoral degree), at most, 5 years prior to the candidate. Academic letter writers should also not be confined to specialty but be sourced from the entire discipline across silos. And why not also allow non-academics to write letters? One school we studied included alumni, students and professionals, with a typical P&T package having up to 50 letters.

On compensation, we found that faculty members feel undercompensated while (associate) deans feel the faculty is overcompensated for the research they do. This misalignment is less present at better performing schools than at worse performing schools. We are optimistic that this poor alignment may fade in the future. First, although the *force majeure* COVID-19 crisis and its dramatic impact on higher education will very likely lead to a major downward adjustment of compensation of research faculty (Perry 2020; CNN), pressure on faculty to contribute to their business school’s long-term health will simultaneously increase ultimately leading to a better principal-agent alignment. This is because business school principals are likely to highly appreciate the efforts of their faculty while faculty will (hopefully) understand their sacrifice is necessary to mitigate an unusual crisis threatening the survival of their institution. In other words, “we’re all in this together” will have real meaning in the alignment of compensation expectations.

Second, we believe that business schools will gradually get better at increasing the leverage they have over faculty by aligning them more with the mission of the school rather than their own self-interest. Posner (2010) would call this fostering a “high-commitment environment,” in which agents emotionally identify with the principal and “*wages are kept down by the nonpecuniary rewards of work motivated by a sense of commitment*” (p. 10). Here are some suggestions for how to do this:

- Schools should give faculty a better understanding of the entire organization, its operations and its finances. Some schools have a well-developed habit of organizing faculty meetings where they transparently cover all aspects of the school’s business. In one of the business schools we serve, faculty meetings periodically cover the school’s income statement, sales forecasts, and balance sheet to increase faculty’s understanding of the economics of the school. Others do not or purposefully hide financials, which prohibits the faculty from seeing their salary and contribution in the context of the bigger picture.
- Schools should showcase what administrators, (associate) deans and other senior faculty do on a day-to-day basis to improve the school’s health. We have seen “a day in the life of...” presentations by deans to give faculty a better idea of what kinds of internal and external pressures s/he is facing. Transparency on such direct contributions to the health of the school may put the research accomplishments of a research faculty member (such as another *JM* or *JMR* publication being freshly accepted) into perspective.
- Schools could promote teamwork and collaboration among faculty within the same school. Such collaborations may stimulate faculty’s emotional identification with the school and its mission. While considering such promotion of internal collaboration, schools also need to put checks in place against undesirable practices, such as: (1) forcing people into

collaborations; (2) free-riding in collaborations; or (3) junior faculty trading in co-authorships for political or teaching support, often from senior faculty, among others.

Another way would be for schools to ensure their research faculty meet the outside world also from a compensation perspective. We feel that business school professors would gain from practicing in their professional area just like medical school professors see patients or law professors assist in writing and enforcing legislation, practicing law, or performing expert witness services. Why are business school professors different? Why are so few business school professors even partially active as business professionals? Outside activity by professors would also give those professors an outside valuation on their time. Very likely, such external valuation could: (1) bring the compensation demanded from the school more in line with actual valuation by external stakeholders; (2) complement the pecuniary reward from the school lowering the faculty's dependency on the school's paycheck.

Limitations

There are some limitations of this research that may give rise to future work. First, our empirical evidence is all self-reported from a survey and interviews. While self-reports enable us to cover a broad set of topics, each of the relationships we establish could fuel secondary data research. There has been some secondary data studies that examine the effect of research on teaching, but much less so involving other business school health dimensions, such as donations, leadership quality or institutional integrity, all of which could be gauged by secondary data also (e.g., endowment statistics, dean bios or online chatter of student communities).

Second, our empirical evidence and conceptual derivation only limitedly exposes the causal mechanisms at work. In fact, we have been prudent throughout the paper not even to claim causation, rather merely claim correlation. Thus, future research that goes from correlation to

causation would be very fruitful; it could also document more precisely the nature of the feedback mechanisms that we introduced. Future research could also more elaborately document the behavioral mechanisms in place that makes business schools excessively monitor numbers and insufficiently monitor creativity or literacy. One can conceive behavioral experiments with academic assessors on research metrics, how people use them and under which conditions decisions can be (de)biased.

Third, we explored the variance in incentive misalignment across schools on a limited number of school descriptors. Research could easily expand on a larger set of school descriptors. For instance, do the effects we study depend on whether the school offers more or less executive education, where the school is located (US vs international), whether the school is strongly integrated into a larger university system or not, whether the school is private or public, or how high the tuition fees are that it is charging?

Fourth, we took a step beyond our empirical inquiry to conceptualize what business schools could do to positively affect the present state-of-affairs. Some of the recommendations we gave seem easy to implement, others are more difficult and would benefit from a more elaborate conceptualization than the length and scope of this paper allow. For instance, how can business schools create a stronger sense of common purpose among its faculty such that the faculty is less self-interest seeking? Or, how can business schools favor more reading and less counting and how can they implement creativity and literacy as metrics better? The latter question can also fuel scientometric research to address some of the alternate metrics we suggest.

Despite these limitations, we feel that we have made a significant contribution to understanding the role of faculty research in business schools' health. At the very least, we hope

that we have sparked a dialogue to get more (marketing) faculty and business school administrators to re-think how to make business schools healthier.

Figure 1:
Methodology

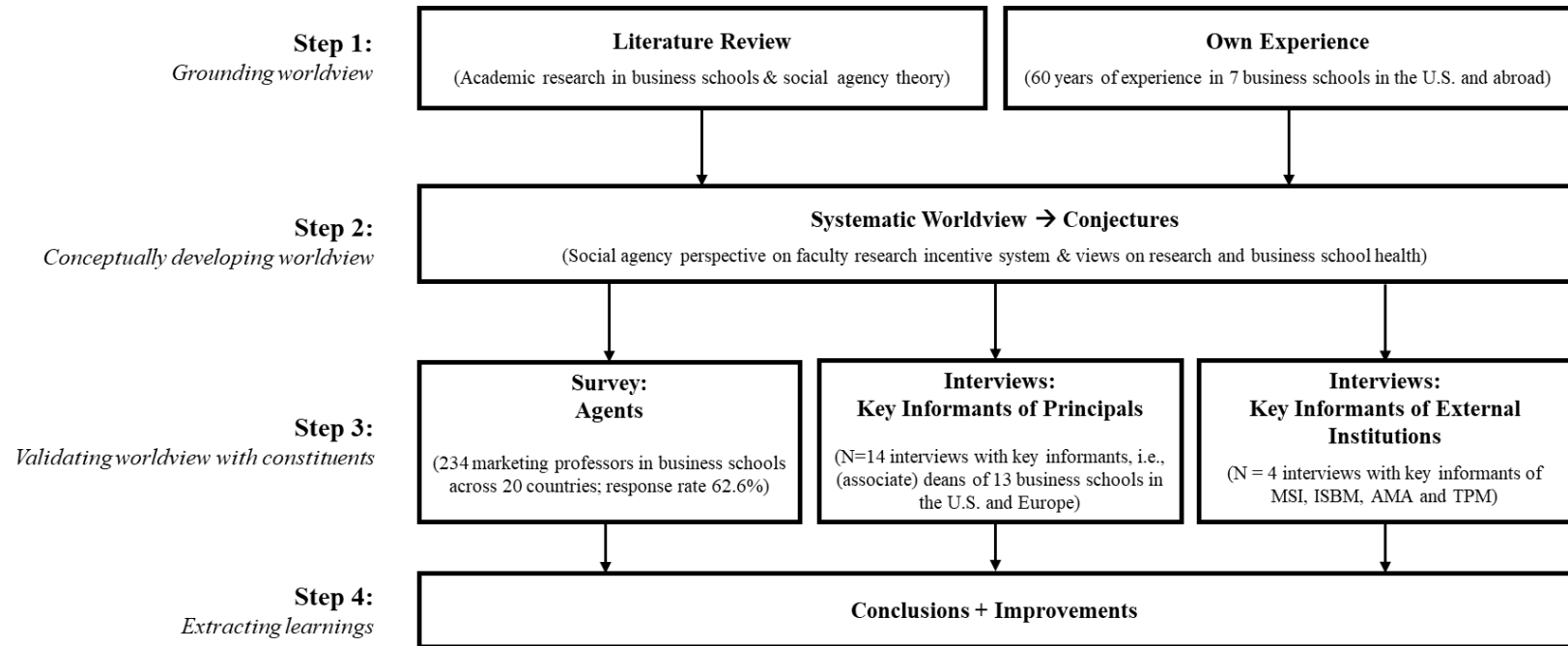


Figure 2:

The Role of Faculty Research Incentives in Business School Health

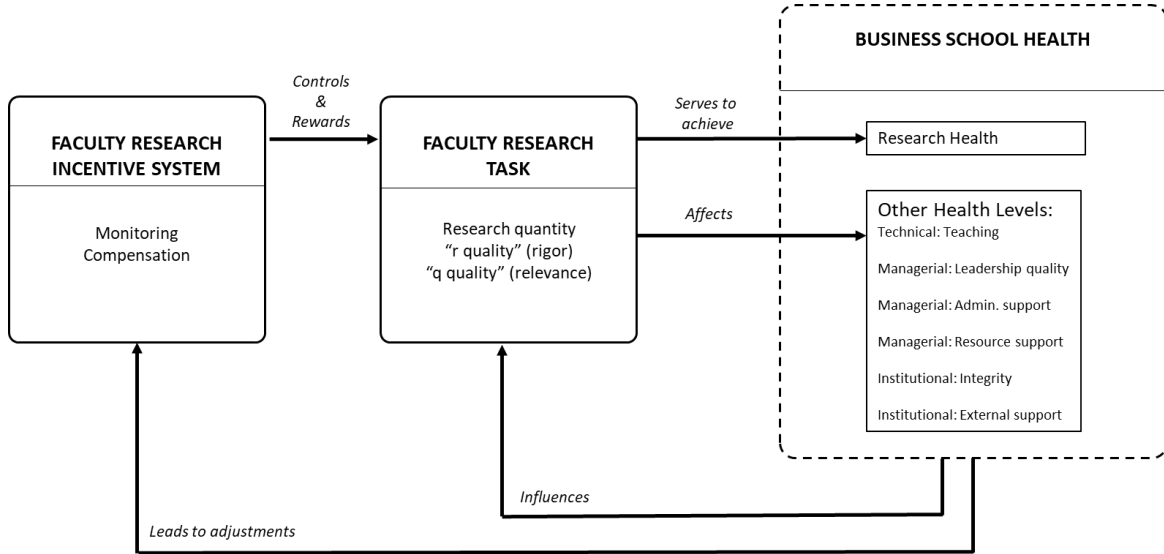


Figure 3:

The Faculty Research Incentive System: A Sociological Principal-Agent Perspective

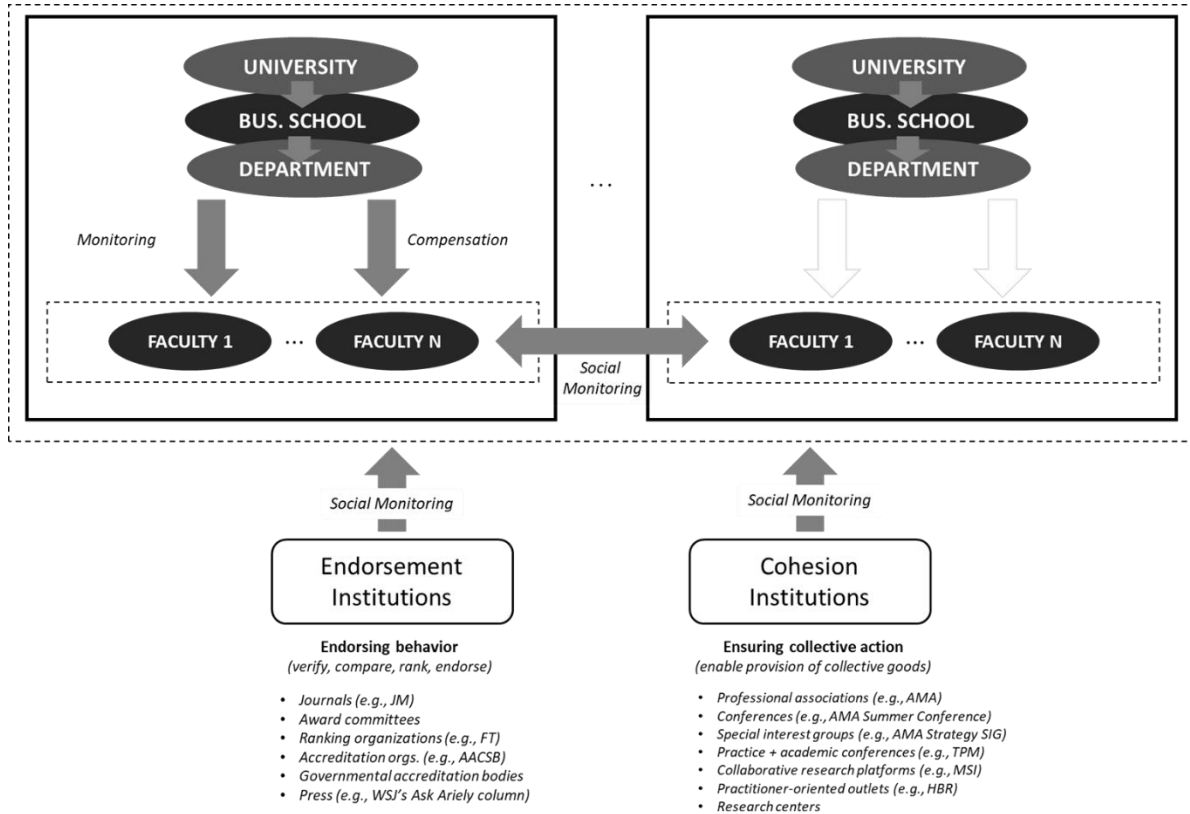
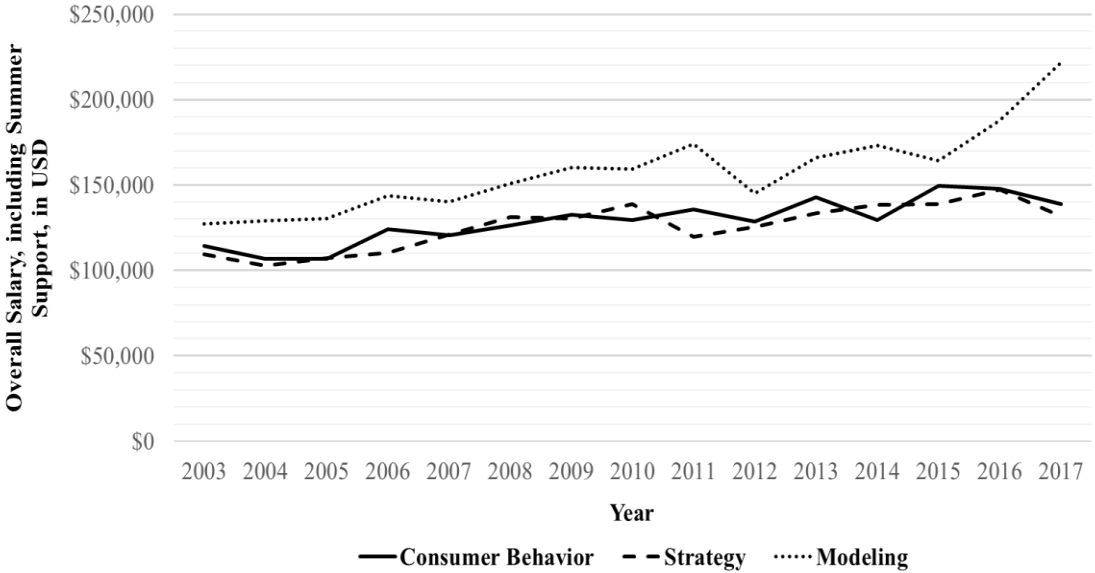


Figure 4:
Salary of Newly Appointed Assistant Professors in Marketing Over Time (in USD)

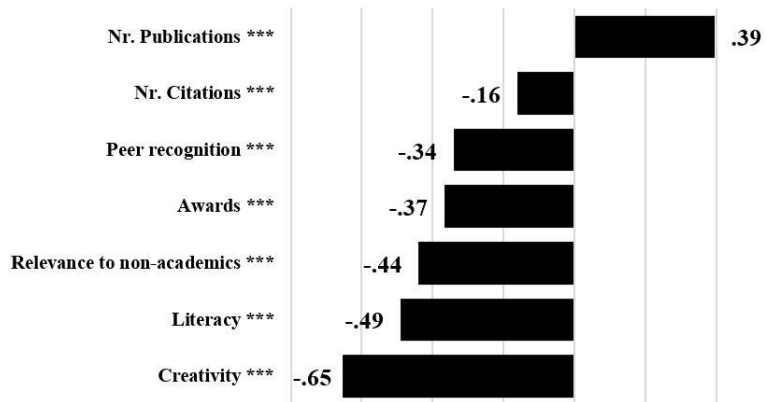


Source: Data compiled of AMA DocSig “Who Went Where? Survey Reports” (2003-2017; see <http://docsig.org/who-went-where>).

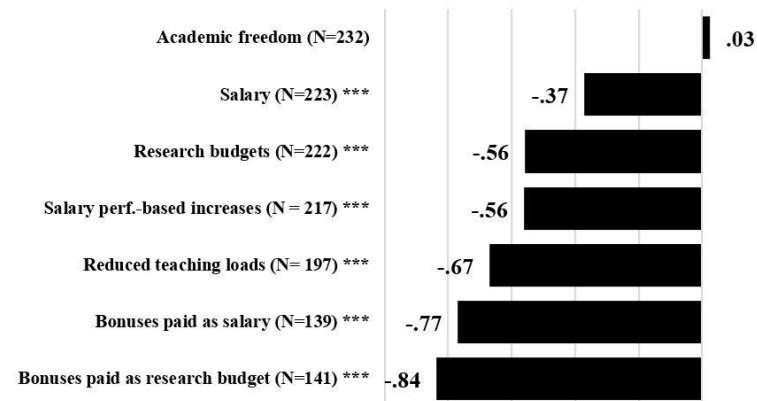
Figure 5:

Misalignment of Incentive Instruments

**Monitoring Instruments: Too Little Weight (-); Too Much Weight (+)
(N=234)[†]**



Compensation Instruments: Too Little (-); Too Much (+)[†]



[†] The question asked, for each monitoring instrument, was “At your school, do you feel that the following metrics on research faculty receive too much or too little weight?” and the response scale was: -2 = Far too little weight, -1 = Too little weight, 0 = The weight is just right, +1 = Too much weight, +2 = Far too much weight.

[†] The question asked, for each compensation instrument, was “At your school, do you feel that research faculty receive too little or too much of each of the following as rewards for their research?” and the response scale was: -2 = Far too little, -1 = Too little, 0 = Just right, +1 = Too much, +2 = Far too much.

The asterisks represent the *p*-values for t-tests comparing the mean score for the perceived appropriateness of the weight given to each instrument to 0 (which meant the weight is “just right”): * *p* < .10; ** *p* < .05; *** *p* < .01. All *p*-values are two-sided. In the case of compensation questions, respondents could answer “not applicable”, hence we indicate the sample used to compute mean responses next to each compensation instrument’s label in the right panel.

Figure 6:

Misalignment of Incentive Instruments:

Variation According to Research Quantity and Quality (Left Panel) and Business School Health (Right Panel)[†]

Misalignment of Faculty Research Incentive Systems for Schools with Low vs. High Research Quantity and Low vs. High Research Quality

Misalignment of Faculty Research Incentive Systems for Schools with Low vs. High Research Health and Low vs. High Business School Health

Research Quality (<i>r</i>- and <i>q</i>-quality)	High	MAD ^M = .50 MAD ^C = .56 N = 41	MAD ^M = .39 MAD ^C = .49 N = 77*
	Low	MAD ^M = .71 MAD ^C = .75 N = 76	MAD ^M = .75 MAD ^C = .75 N = 40
		Low	High
		Research Quantity	

Business School Health	High	MAD ^M = .45 MAD ^C = .50 N = 35	MAD ^M = .43 MAD ^C = .41 N = 79
	Low	MAD ^M = .76 MAD ^C = .84 N = 84	MAD ^M = .58 MAD ^C = .75 N = 36*
		Low	High
		Research Health	

* In the case of compensation, one respondent answered “not applicable” to all seven compensation questions and, thus, for the computation of the mean absolute deviation among compensation items for the top right quadrant the sample size is N=76 instead of N=77.

* In the case of compensation, one respondent answered “not applicable” to all seven compensation questions and, thus, for the computation of the mean absolute deviation among compensation items for the bottom right quadrant the sample size is N=35 instead of N=36.

[†] Recall that to measure miscalibration of faculty research incentive systems we computed the mean absolute deviation (MAD) across respondents and items between the responses to the appropriateness of the weight given to each of the seven monitoring instruments (MAD^M) and to each of the seven compensation instruments (MAD^C) vis-à-vis the score that would indicate proper calibration (i.e., the weight is “just right”).

Table 1 - Selected Papers on the Role of Academic Research in Business Schools (1/2)

Paper*	Field	# Cites** (Google)	Focus	Conceptual or Empirical	Short Summary
RRBM (2017 [§])	Business	3	Practical Relevance of Research & Rigor of Research	C	Both the relevance and quality of research in business schools has been under attack for more than two decades. The first issue is the widening gap between research and practice. The second concern is the quality and integrity of research.
Bettis (<i>SMJ</i> 2012)	Strategy	124	Rigor of Research	C	Data snooping may be prevalent among strategy researchers, even though evidence is lacking. This raises serious issues for the future of strategic management research.
Jaworski (<i>JM</i> 2011)	Marketing	168	Practical Relevance of Research	C	The author defines managerial relevance. Research faculty in marketing needs a better understanding of the roles of marketing managers within firms and must craft their research programs to fit these needs, by spending more time with managers.
Kaplan (<i>Acc. Review</i> 2011)	Accounting	257	Practical Relevance of Research	C	Accounting scholars have distanced themselves from the professional practice of accounting. Accounting scholars should devote more resources to fundamentally understand contemporary and future practice.
Lehmann, McAlister and Staelin (<i>JM</i> 2011)	Marketing	135	Practical Relevance of Research	E	The level of analytical rigor has risen steadily in marketing academic journals. While, <i>ceteris paribus</i> , rigor is desirable, other desirable characteristics, such as relevance, communicability, and simplicity, have been downplayed, to the detriment of the field of marketing.
Lilien (<i>JM</i> 2011)	Marketing	141	Adoption of Research by Practice	C	There is a large and widening academic-practitioner gap in the research published by marketing scholars. There are many successful marketing model developments, but their level of usage in practice is low.
Reibstein, Day and Wind (<i>JM</i> 2009)	Marketing	376	Practical Relevance of Research	C	The widening divergence between marketing academia and practice has become detrimental to the long-term health of the field.
Mitra and Golder (<i>JM</i> 2008)	Marketing	50	Consequences of Research for B- Schools	E	Academic research has positive long-term effects on the perceptions of academics, recruiters and program applicants, and on education performance. A persistent increase of three single-author A-level articles per year is associated with an improved MBA ranking by one place.
Rosemann and Vessey (<i>MISQ</i> 2008)	Information Systems	402	Practical Relevance of Research	C	To improve practical relevance, IS researchers should combine rigor and relevance by conducting applicability checks with practitioners.
Bartunek (<i>AMJ</i> 2007)	Management	483	Practical Relevance of Research & Adoption of Research by Practice	C	Management researchers need to develop a relational scholarship of integration with practitioners, in which each have an equal role (e.g., via forums to flesh out research implications).

Table 1 - Selected Papers on the Role of Academic Research in Business Schools (2/2)

Paper	Field	# Cites (Google)	Focus		Key Findings & Conclusions
Gulati (AMJ 2007)	Management	460	Practical Relevance of Research & Rigor of Research	C	Many "serious scholars" presume that colleagues writing for practitioners ("management types"), by definition, lack rigor and those writing primarily for other scholars lack relevance. It is important for management scholars to seek out room for reconciliation between rigor and relevance.
Rynes, Giluk and Brown (AMJ 2007)	Management	569	Adoption of Research by Practice	E	Practitioner and bridge journals provide little coverage of some of the research findings deemed most important by HR academics. When they do offer coverage, this coverage is often inconsistent with research evidence.
Shapiro, Kirkman and Courtney (AMJ 2007)	Management	416	Practical Relevance of Research	E	The theory-practice gap stems not only from a "translation" problem (i.e., translating research for a practice audience), but from a "production" problem (i.e., producing research that is relevant for a practice audience).
Tushman and O'Reilly III (AMJ 2007)	Management	253	Practical Relevance of Research	C	Executive education is a fertile and underleveraged setting to shape research that is both rigorous and relevant.
Bennis and O'Toole (HBR 2005 [§])	Management	2802	Practical Relevance of Research & Consequences of Research for B-Schools	C	Rigor crowded out most of the relevance of the research conducted at business schools. The science model may not be applicable to business schools. Business is "essentially a human activity in which judgements are made with messy, incomplete and incoherent data".
Vermeulen (AMJ 2005)	Management	243	Practical Relevance of Research	C	Research that lacks rigor cannot be relevant. Business school scholars should strive to conduct research that "makes a difference".
Pfeffer and Fong (AMLE 2002 [§])	Management	2291	Practical Relevance of Research & Consequences of Research for B-Schools	E	Business school research is making a modest contribution to management practice at best, especially when compared to research and ideas that come from consulting firms, journalists, and companies.
Rynes, Bartunek and Daft (AMJ 2001)	Management	1313	Practical Relevance of Research	C	Diffusion of academic knowledge to practitioners is slow. Practical knowledge gathered from practitioners can enhance scientific progress.
Trieschmann et al. (AMJ 2000)	Management	363	Consequences of Research for B-Schools	E	Research performance (e.g., number of first-tier publications) and MBA performance (e.g., business press rankings) have different determinants.
Benbasat and Zmud (MISQ 1999)	Information Systems	1454	Practical Relevance of Research	C	IS academic research lacks relevance because it emulated the rigor of other academic fields.
AMA Taskforce (JM 1988)	Marketing	65	Practical Relevance of Research	C	Marketing suffers from several structural impediments to the development and dissemination of knowledge with long-term impact.

* We constrained the selection of articles in Table 1 to those published in journals on the UTD list.

** We collected the Google cites for the listed papers between April 8 and April 16.

§ Three papers were included as an exception to this rule, because of the strong impact they had.

† While many papers cover multiple dimensions, we attempted to define the focus of the respective papers rather narrowly. The four dimensions we categorize papers on are: (1) *consequences of research for B-schools*, which includes papers that explicitly take a B-school perspective (as contrasted to a field-perspective); (2) *practical relevance of research*, which includes papers that address threats to *q*-quality such as the gap between academia and practice, from the perspective of academics; (3) *adoption of research by practice*, which includes papers that address the limited application of academic research, from the perspective of practitioners; (4) *rigor of research*, which includes papers that address threats to *r*-quality such as low replicability of studies, low rigor and scientific integrity of research.

Table 2:

Impact of Faculty Research on Business School Health

	Bus. School Health: Technical Level		Bus. School Health: Managerial Level			Bus. School Health: Institutional Level	
	Research Health	Teaching Health	Admin. Support	Resource Support	Leadership Quality	Institutional Integrity	External Support
Constant	-.37	1.93 ***	.51 *	1.00 ***	-.61 *	.10	.49
Research quantity	.32 ***	-.07	-.03	-.02	.11	.09	-.26 ***
<i>r</i> -quality (“rigor”)	.46 ***	-.15 **	.10	-.01	.16 **	.07	-.09
<i>q</i> -quality (“relevance”)	-.01	.09 *	.05	-.05	-.04	.10 **	.13 **
BSH: Research Health		.14 **	-.04	.14 *	.06	-.13 **	.30 ***
BSH: Teaching Health	.15 **		.09	.04	.02	.33 ***	.15 *
BSH: Administrative Support	-.04	.08		.29 ***	.28 ***	.07	.21 **
BSH: Resource Support	.12 *	.03	.26 ***		.12 *	.14 **	.15 *
BSH: Leadership Quality	.04	.01	.22 ***	.10		.25 ***	.11
BSH: Institutional Integrity	-.13 **	.30 ***	.08	.15 **	.33 ***		.12
BSH: External Support	.20 ***	.09 *	.14 **	.11 *	.10	.08	
N =	234	234	234	234	234	234	234
R ² =	.54	.31	.44	.38	.47	.46	.38
Adj. R ² =	.52	.29	.42	.35	.45	.44	.36

* $p < .10$; ** $p < .05$; *** $p < .01$. All p -values are two-sided.

Table 3:
Overview of Conjectures and Observations

Conjectures	Main Observations: Faculty Survey	Main Observations: (Associate) Dean Interviews
C1: Research health of a business school affects other dimensions of business school health positively and, thus, academic research is congruent with a (overall) healthy business school.	Schools with higher research health tend to have higher teaching health, higher resource support, and higher external support.	Higher research health positively impacts other dimensions of business school health (teaching health being most often mentioned).
C2: Research health of a business school increases with the production of more and higher quality (in both <i>r</i> - and <i>q</i> -quality) research by its research faculty.	Research quantity and <i>r</i> -quality are associated with higher research health; the latter association is stronger than the former. <i>q</i> -quality is associated with higher teaching health, while <i>r</i> -quality is associated with lower teaching health.	Research quantity, but especially research quality (both <i>r</i> - and <i>q</i> -quality) are important to achieve a research healthy school. (Associate) deans have a more positive view on the achievement of <i>r</i> -quality than of <i>q</i> -quality; lack of <i>q</i> -quality is more often seen as a problem of “production” than a problem of “translation”.
C3(a): Business schools rely too much on seemingly effortless metrics, such as the number of publications and the number of citations.	Effortless metrics, especially, number of publications (and not number of citations) get too much weight as a metric in faculty monitoring.	Effortless metrics (such as number of publications and number of citations) rule over more effortful metrics such as creativity, literacy and practical relevance.
C3(b): Business schools rely too little on effortful metrics such as practical relevance, literacy and creativity.	Effortful metrics, such as creativity, literacy and practical relevance all receive too little weight in faculty monitoring.	
C3(c): Business schools that more appropriately weigh monitoring instruments show higher research task output.	Schools with below-median research task output, research health and overall business school health tend to overweigh number of publications and underweight creativity, literacy and practical relevance more than the above-median schools.	N/A (too limited a sample to make conclusions on these conjectures).
C3(d): Business schools that more appropriately weigh monitoring instruments show higher research health and overall business school health.		
C4: Principals’ and agents’ views on compensation are misaligned: business school professors perceive themselves to be undercompensated, while their principals consider them overcompensated for their research.	Research faculty feels undercompensated on all compensation instruments, except academic freedom. Faculty of schools with below-median research task output, research health and overall business school health feel more undercompensated than faculty from the above-median schools.	Professors are overcompensated for the research they do.

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