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# For an orientation toward the societal impact of graduate studies in administration in Brazil

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*Abstract*

This essay analyzes the challenges of graduate programs in administration in Brazil, considering mainly the challenges of the early 2020s, marked by changes in the assessments put forward by the Brazilian agency CAPES and the perspectives of a career in the field. Some of the most relevant facts that occurred from 2000 to 2020 were considered, indicating the need for changes in the education priorities, from a focus based on rigor in research to a focus on practical relevance. The reported situation and the intellectual debate on rigor and relevance led to two models: one oriented to scientific production and the other oriented to societal impact. When assuming the opportunity for a change toward the societal impact model, the study suggests updates in educational projects, research practices, knowledge dissemination channels, and research incentive policies.

**Keywords:** Relevance. Impact. Graduate program. Management. Regulation.

## *Por uma orientação ao impacto societal da pós-graduação em administração no Brasil*

*Resumo*

Este ensaio analisa os desafios da pós-graduação stricto sensu em administração no Brasil, considerando principalmente os desafios do início da década de 2020, marcada por mudanças na avaliação da Coordenação de Avaliação Pessoal de Nível Superior (CAPES) e nas perspectivas de carreira dos egressos. Na construção do texto, foram revisados alguns fatos mais relevantes de 2000 a 2020, configurando a necessidade de alteração de prioridade formativa de um foco baseado em rigor na pesquisa para um foco maior na relevância prática. Com base na situação relatada e no debate intelectual sobre rigor e relevância, foram definidos 2 modelos: um orientado à produção científica (MOP) e outro orientado ao impacto societal (Mois). Assumindo a oportunidade de mudança na direção do Mois, são indicadas proposições referentes a mudanças nos projetos formativos, nas práticas de pesquisa, nos canais de difusão de conhecimento e nas políticas de incentivo à pesquisa.

**Palavras-chave:** Relevância. Impacto. Pós-graduação. Administração. Regulação.

## *Por una orientación al impacto societal de los estudios de posgrado en administración en Brasil*

*Resumen*

Este ensayo analiza los desafíos de los estudios de posgrado en Administración de Empresas en Brasil, considerando principalmente los desafíos de principios de la década de 2020, marcada por los cambios en la evaluación de la CAPES y en las perspectivas de carrera de los egresados. Para ello, se buscaron algunos de los hechos más relevantes desde 2000 hasta 2020, configurándose la necesidad de cambiar la prioridad formativa de un enfoque basado en el rigor en la investigación a un mayor enfoque en la relevancia práctica. A partir de la situación reportada y del debate intelectual sobre rigor y relevancia, se definieron dos modelos: uno orientado a la producción científica y el otro orientado al impacto societal. Asumiendo la oportunidad de seguir la dirección del modelo orientado al impacto societal, se indicaron propuestas relacionadas con cambios en los proyectos de formación, en las prácticas de investigación, en los canales de difusión del conocimiento y en las políticas de incentivos a la investigación.

**Palabras clave:** Relevancia. Impacto. Posgrado. Administración. Regulación.

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## INTRODUCTION

The beginning of a new decade is a good time to reassess perspectives, priorities, and formative projects. If this is a reality in general, at the beginning of the 2020s, there seems to be something mandatory for the Brazilian academic universe as a whole and for the management academy, specifically. The 2020s began by inheriting enormous turbulence due to a global health emergency, associated with the COVID-19 pandemic, and coincided with the year of closing an evaluation cycle of the 'Área 27' of the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES), the Brazilian government agency for the evaluation and regulation of *stricto sensu* graduate programs. These two factors give the leaders and professors of graduate programs (GPs) an opportunity to carry out what administrative theory teaches well: at each moment of long-term planning, such as the beginning of an evaluation cycle, it is necessary to analyze the internal and external contexts, present and future, and define the best strategies for its mission and vision.

The moment, however, is not opportune for these two reasons alone. Also, the year 2020 was an anniversary of two decades experiencing a *stricto sensu* graduate model that was unprecedented in the field of management and related areas. We will detail later what we call the production-oriented model (POM), but for now, we assume that it has established a way of doing academic work based primarily on scientific production, since we are part of an institutional environment that has adopted an evaluation system whose main driver was the scientific publication.

In this model, the main motivation of agents (professors and students) would be less production of useful knowledge for society and the maximization of their personal utility, through the generation of more scientific products with the lowest level of effort possible (Machado, 2021). The consequence of this model was the distancing of students and professors from the most applied field and the concern to align research rigor with the relevance of the knowledge produced beyond the academy itself. Like Wood and Souza (2019), we also support a practical orientation for Brazilian research, with efforts more oriented towards relevance, while maintaining scientific rigor, that is, research more aligned with what Alvesson (2012) called *re*-search, as opposed to *roi*-reserach.

If the distance is real, as we understand it to be, it certainly did not have greater relevance in the early 2010s. But the situation has changed since then, and it seems to us that such a model (POM) needs adjustments for improvement, perhaps for an intense change and a realignment in the graduate programs preparation for the next two or three decades. Anticipating what we will comment and debate later in this essay, this seems evident for two main reasons: first, because this model failed to generate positive impacts on the professional life of graduates – it was beneficial for the student in the period of expansion of the demand for new professors, but it became problematic due to the reduction of public entrance examinations and the demand for professors in private Higher Educations Institutions (HEIs); secondly, due to the demand for not only academic impact on CAPES' assessment requirements (CAPES, 2020). On the other hand, the reality that signaled a necessary change found practices and GPs models not easily adjustable.

This essay has two main objectives. In the first place, we will seek to contextualize the scenario of the beginning of the decade as the arrival point of a model that needs to change and the starting point for a graduate programs model that prioritizes practical relevance and dialogue with the productive sector (Etzkowitz & Leydesdorff, 1995, 1998; Wood & Souza, 2019). Second, we intend to reflect on how to make these changes viable in the context of academic GPs.

We assume that scientific production, which was the dominant concern in stricto sensu training practices in Brazilian management GPs from 2001 to 2020, although it continues to be important, will not be, for the future, the most relevant criterion of our impact on our universities and on the society (Aguinis, Shapiro, Antonacopoulou, & Cummings, 2014; George, 2016; Pettigrew, 2011). We understand that this requires a change in practices, visions, and we venture, with this essay, contributing to facilitate the introduction of new practices. Inspired by Vince and Hibbert's (2018) proposition on the production of an impact essay, we seek not only to define a theme, diagnose a problem, and explore potential explanations, but we also seek to indicate a call for action, pointing out some recommendations for renewed practices.

Before continuing, we note that the essay offers a contribution to a debate that has been more intensely unleashed in Brazil since 2018, when the CAPES began to change the evaluation rules, and when the reduction in demand for graduates in the labor market was more evident. The authors' inspiration came from their concerns with the model in which they were immersed as professors for more than one decade, working in teaching, research, and leadership in their GPs, in addition to

experiences with the CAPES itself. The conviction that the model needed an update seemed to be well assimilated among the hundreds of GPs and thousands of professors. And, if the moment demanded changes, the proposal of well-founded and purposeful visions and points of view seemed appropriate.

## A BRIEF HISTORY

The debate and reflection on graduate training in management has been carried in Brazil for decades and by several authors (Alcadipani & Bertero, 2014; Cirani, Silva, & Campanário, 2012; Festinalli, 2005; Maccari, Lima, & Riccio, 2009). In this section, we outline an abbreviated description of the history of this training field from 2000 to 2020, based on this literature in addition to public data, the authors' experience, facts that are known by those with experience in the field, on official documents from CAPES.

In Brazil, the graduate courses in management had its first movements in the 1970s, with few programs which were aligned with a vision strongly inspired in imported models, especially from the United States. At least until the end of the 1990s, the GPs aligned their master's and doctoral research with mixed perspectives, with academic and professional vocations, and with demands on faculties that were quite different from what came in the 2000s. For example, until the end of the 1990s, there were still professors with only a master's degree, and their scientific production was not a major requirement.

Great changes emerged from 2001 onwards. Below, we summarize the main events that took place from that year to 2020, from the initial appropriation of the production-oriented model to the moment of pressure for its change and updating (the periods are related to the evaluation cycles of CAPES).

### From 2001 to 2003

During this period, changes in the training model began with clear differences from previous years or decades. For example, the minimum degree required to work as a professor in a GP got to be a doctorate – and the title should necessarily be validated by the rules of the national system governed by CAPES –, with scientific production becoming one of the main requirements for measuring program performance. In addition, this period was characterized by the expansion of the private higher education sector and the first experiences of professional masters' degree courses.

It was a period of structural adaptation of the GPs and of reorientation towards a more academic-scientific culture. The more traditional programs had to adjust, even experiencing problems with their teaching staff, with several professors with no experience in scientific production.

### From 2004 to 2006

This was a period of deepening the POM and focusing on the rigor of scientific production. There was an increase in the number of scientific journals, a strong appreciation of academic conferences and a timid expansion of GPs. During the period, there was an annual average of 5,145 enrolled students, a total of 4,969 graduated and an annual average of 1,278 professors, including permanent professors, collaborators, and visitors, spread across 81 post-graduate programs in the area, of which 60 were academic degrees and 21 were professional degrees. These professors and students published a total of 4,575 articles in 1,040 journals.

During this period, the POM established itself as the standard model, and, despite the expansion of journals, it was still a time of limited channels for publishing articles, in addition to having few professors with experience in scientific production. There was a high demand for graduates in the private higher education institutions, and the advancement of professional programs was limited.

## From 2007 to 2009

This was the initial period of the Brazilian federal government Reuni project, with the expansion of the network of universities and federal institutes. In this period, the expansion of the private sector, the intense focus on the rigor of research, with a growing volume of articles and journals, as well as the evident distance from applied and relevant concerns, stood out. There was an annual average of 6,611 students enrolled, and a total of 5,848 titled. The annual average number of professors was 1,670, including permanent professors, collaborators, and visitors, spread across 100 graduate programs in the field, 74 of which were academic category and 26 were professional. These professors and students published a total of 7,845 articles in 1,287 journals.

The POM seems to have reached its moment of greatest valorization and consolidation, including the incorporation of professors with PhD trained in this model. The strong expansion of public and private HEIs encouraged the training of academically biased professors, as the demand for graduates was abundant, both for academic and professional courses.

## From 2010 to 2012

This period was marked by the expansion of public and private HEIs, as well as by the devaluation of scientific conferences as channels for diffusing scientific production, and with the definition of publication only for what was published in a scientific journal (and no more in a scientific meeting). Also, there was the expansion of more professional GPs than academic ones. There was an annual average of 8,103 enrolled students, a total of 6,607 titled students and an annual average of 1,953 professors, including permanent, collaborators, and visitors, spread across 119 graduate programs in the area, 76 of which were academic degrees and 43 professional degrees. These professors and students published a total of 13,877 articles in 1,869 journals.

This was a period of qualification for the POM, which got aligned with the more traditional academic areas with the delimitation of publications (for evaluation purposes) only to communications in scientific journals. In addition to the pressure for qualification of scientific products, there was also a demand for the internationalization of GPs. There was still a high demand for master's and doctoral degrees in public and private HEIs, which strengthened the model.

## From 2013 to 2016

This period was marked by an economic and political crisis at the national level and was also characterized by a reduction in the pace of expansion of public HEIs and the number of private HEIs, a growing pressure for the qualification of scientific production and an expansion of GPs with complete training projects (master's and doctorate). There was an annual average of 8,458 enrolled students, a total of 11,913 titled students and an annual average of 2,956 professors, including permanent, collaborators, and visitors, spread across 182 graduate programs in the area, of which 107 were academic degrees and 75 were professional ones. These professors and students published a total of 26,297 articles in 3,562 journals.

While the pressure for the qualification of more academic results increased, especially for high-impact and international-level publications, there was a reduction in the demand for graduates in the labor market – this when there were almost twice as many graduates in relation to the triennium 2010 to 2012. The POM seemed to show signs of need for adjustments in academic GPs, which were the majority.

## From 2017 to 2020

This period evidenced the crisis of employability of graduates, especially those with master's degrees. The main characteristics were: the deepening of the restriction of public resources for GPs, with federal investment increasingly scarce; creation of the first professional doctorates; demand by CAPES and other agencies of relevance and societal impact of GPs. The number of registered and titled students, professors and volume of production and periodicals also grew, with an annual average of 12,006 registered students, a total of 17,407 tittle, and an annual average of 4,453 professors, including permanent, collaborators, and visitors, spread across 189 programs in the area, of which 113 were academic degrees and 76 were professional ones. These professors and students published a total of 46,276 articles in 4,854 journals.

The changes in the political and economic scenario implied a reduction in public expenditures and in the demand for graduates in HEIs, even with the number of students enrolled and with degrees still increasing. The demand for applied and practical relevance created pressure and opportunity for a rapprochement with the productive sector. Professional doctorates have potentially emerged as an appropriate model in this regard.

We believe that for about 15 years (from 2001 to 2015), there were moments of stimulus to the POM, with high appreciation of high-quality publications. It was only in the last years of the 2010s that the model began to show weaknesses, after a funding crisis and a reduced demand for graduates in the labor market. Apparently, the same mechanisms that motivated the GPs to take on the POM – the expectation of success of the graduates and the CAPES assessment – stimulated its improvement, potentially leading to its overcoming, at least in comparison with what prevailed until the beginning of the year of 2010.

New concerns thus began to guide the actions of leaders and professors. In our point of view, the need to resume the dimension of the only academic relevance of individual productions and projects, as well as the practical relevance of research and projects, has become well established. In the next section, we briefly rescue the debate on scientific rigor and academic relevance, before presenting our propositions.

## REVISITING THE DISCUSSION OF SCIENTIFIC RIGOR *VERSUS* PRACTICAL RELEVANCE

The debate around rigor and relevance is very old one, having been intense both nationally and internationally. We rescued elements of this debate, but without intending to make an exhaustive survey of the literature. We only seek to situate it in relation to what we have described and proposed for Brazil in the following item – and we recommend, to anyone interested, to consult Wood and Souza (2019), who highlight the trajectory of this debate since the 1960s.

Researchers seek rigor through defensible and generalizable ideas (Bansal & Sharma, 2021; Sharma & Bansal, 2020). Thus, in research, rigor is related to the internal coherence of the work, to the proposed conceptual design, to the clarity of conclusion and contribution and, most importantly, to the fulfillment of methodological rigor. On the other hand, relevance means social consensus around the importance and pertinence of the problems addressed, which are expected to be worthy of society's attention and for which research should bring new knowledge capable of clarifying or redefining them, improving the associated actions, whether in the interest of organizations (in their management and in the efficiency of their practices), governments (in the interest of organizational actions and public policies), or in the interest of academic responsibility (in teaching or research practices) (Vasconcelos, 2009).

Relevant research must give rise to new understandings, attract readers from society and surprise, criticize or contest previous assumptions (Mattos, 2008). Furthermore, the relevant study needs to have the potential to generate positive societal benefit (George, 2016) and have 'something to say' (Alvesson, 2012). In other words, it is necessary to show the research contribution to a group of people outside the academy, who should be interested in reading and find the results interesting for their organizational life, or lead practitioners to think and act differently, improving of organizational performance and of people's work environment (Alvesson, 2012).

Wood and Souza (2019), using a base of 780 articles published between 1876 and 2015, found that the field is marked by controversies about what constitutes relevant knowledge, how such knowledge should be generated and what is the best way to transfer it to practitioners. The analysis of these articles, through a network of citations, showed criticism of business schools, which were previously aimed at the low production of knowledge and the lack of rigor in what was produced, and later, for having succumbed to a view of science originated in the natural sciences, relegating the production of practical knowledge to minor importance.

In view of what was exposed in section two and in the study by Wood and Souza (2019), we are invited to rethink the way we develop our research, directing them not only to, and by, the existing literature, but also and mainly to, and by, the practice to be improved with the knowledge generated (Kieser & Leiner, 2009). In this way, especially because we are in an applied field, research needs to foresee and demonstrate its usefulness in its application, both for researchers (scientific application) and for managers and society in general (practical application).

Therefore, in spite of the perspective, the paths indicated for the solution of the dilemma of rigor and relevance of research in management always involve an approximation among the university and other agents, such as government and industry, as well as a different form of relationship between researchers and research users (Wood & Souza, 2019).

Despite being easy to understand, developing rigorous and relevant research is not simple, since the union of what is rigorous (academic) with what is relevant (practical) involves different realities and preparations, as well as their own communication systems (Kieser & Leiner, 2009; Sharma & Bansal, 2020). Combining these aspects does not seem to have a trivial solution, also because academic research is evaluated by academics, who tend to consider more theoretical and methodological rigor of scientific utility in their evaluations (Kieser & Leiner, 2009), apart from the fact that some academics do not have a real notion of the practical implications arising from their research. In order to unite the object of study and the researchers, the challenge of directing efforts explicitly towards what practitioners do, what tools they use, how they interact with each other and for what purpose (Suddaby, Hardy, & Huy, 2011) still emerges. Indeed, researchers need to see the impact of research not just 'as' practitioners, but also 'with' practitioners (Bansal & Sharma, 2021).

Thus, changing orientation after starting a career focused exclusively on research with scientific utility to practical utility and with impacts beyond academia is much more challenging (Aguinis et al., 2014). In our view, the pressure for publication in graduate programs, at least until the end of the 2010s, seems to have discouraged the development of research with the potential to transform reality and people's lives, with the development of works being more evident with incremental or not much innovative theoretical improvements. It seems that in Brazil we replicate the same reality experienced internationally, in which, as stated by Alvesson and Sandberg (2013), the journals did not prioritize useful and innovative research.

With the increase in the number of graduate programs, enrolled students, professors, and journals at each evaluation cycle (see section 2), there seems to have been an explosion of efforts in the production of papers. It can be seen, as indicated, that the production volume has almost doubled with each evaluation cycle. Questions emerge in this scenario. This can be good for the academics, but was it equally good for society? Are we not writing too much? Putting more emphasis on education and less on paper production would not more beneficial for society as a whole? (Alvesson, 2012).

From our experience and the reflections already published, it seems correct to conclude that the POM distanced students and professors from the more applied field and from the concern to align research rigor with the relevance of knowledge produced beyond the academy itself. Assuming this conclusion, we believe it is necessary to define the value of research not only by the vehicle of dissemination, but by its impact, and not just that impact calculated based on citation metrics – which is one of the main measures of the impact of our works (Aguinis et al., 2014; George, 2016) – or the supposed methodological improvement. We need to cause resonance and real impact in the economic and social context, translating the research's results into benefits for the real world (Machado, 2021).

Thus, it seems inevitable and essential to reflect on how the production of knowledge in management field can be analyzed vis-à-vis the challenges of professional training faced by graduate programs. The question that emerges is: does the current training model of many GPs (when we wrote this essay), only focused on the training of researchers and professors, still make sense? In our view, the previous context, which led to this restricted focus, generated a model that had its value as long as there were successful results (especially in relation to the career success of graduates). However, for the moment and for the future, this model does not make sense, from the perspective of responsibility for high-level training and with research that has the potential to generate positive societal benefits; after all, in business schools, we have many possibilities for this. As suggested Pettigrew (2011), we should not fear an impact-oriented agenda.

## PRESENTING ALTERNATIVES

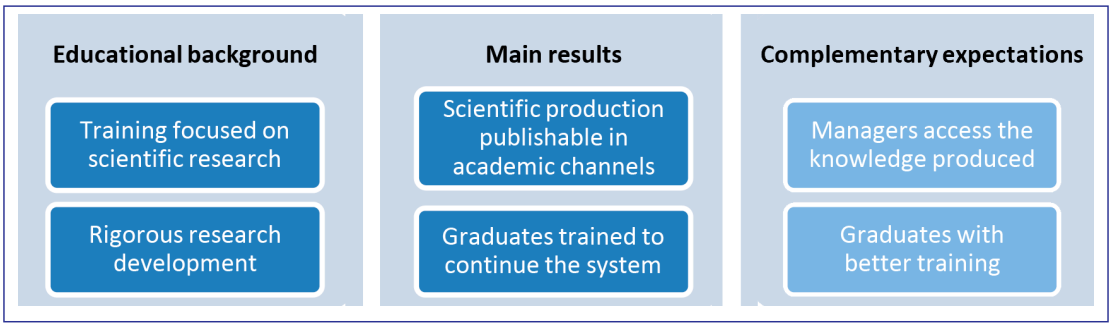
As academics, many of us make an impact from our work when we teach our classes, integrate teaching and research, translate work into books, contribute to the media, do administrative work, participate in professional associations, etc. (Aguinis et al., 2014; George, 2016). It is already a great challenge to teach the best content to our students and generate the usefulness of our research in management schools (Gulati, 2007), but progress in our area will not only occur with teaching and scientific production of (only) academic impact; our impact needs to reach non-academic stakeholders as well (Aguinis et al., 2014).

In our view, the already refined reflection on alternatives for interaction between the university and the outside world directs us to the field of studies on technology transfer and of technology understood as applied knowledge. In this field, the mechanisms that encapsulate knowledge matter in the way it can be effectively transferred and in the absorption capacity of those who receive it (Cunningham, Lehmann, Menter, & Seitz, 2019; Good, Knockaert, Soppe, & Wright, 2019). Thus, researchers must even embrace their differences with management professionals and nurture them (Bartunek & Rynes, 2014; Nonaka, 1994; Rynes, Bartunek, & Richard, 2001). Therefore, there is repercussion in the form of interaction and language, in addition to other aspects that need to be considered by those who offer and by those who receive the object of knowledge.

Assuming this vision, we structured a model that we call societal-oriented impact model (SOM), integrating production based on the scientific method with the delivery of value and the promotion of positive impacts on society. The proposal does not consist in completely refuting the contents of the research-oriented model or in moving away from the scientific lens, but in complementing it with alternatives that allow the generation of impact on the productive sector, the development of value and competences that improve the chances career of graduates, in addition to the articulation and implementation of new and more abundant sources of funding for training and research.

We can have a better idea of the proposal in relation to the current model (POM) with two illustrations. Figure 1 represents the dominant model, at least until 2020, and is based on training focused mainly on scientific production and research with greater emphasis on methodological rigor or relevance to academia. As main results, we have research that mainly resulted in publications of the results in scientific vehicles and the formation of qualified graduates to feed back this model. As complementary expectations of this model, we have access to productive knowledge by organizations and their managers, who will supposedly find and use this knowledge through reading, and the success of graduates in better training, through the exercise of their teaching work, the future executives, entrepreneurs, and leaders.

**Figure 1**
**Characteristics of the scientific production-oriented model (POM)**



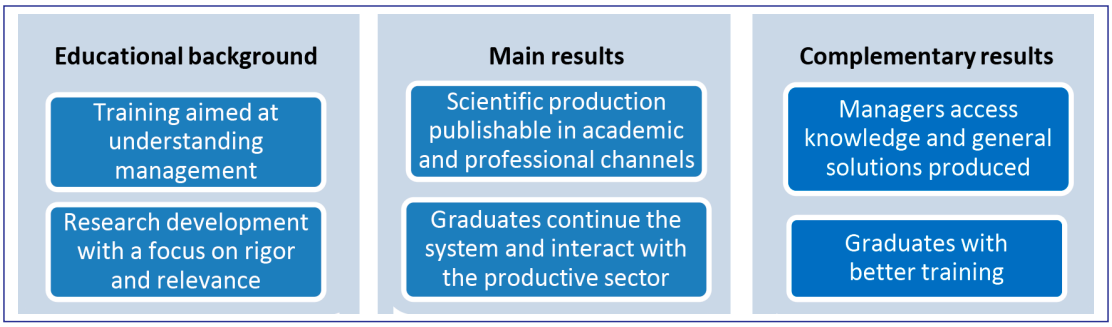

Source: Elaborated by the authors.

In our view, what is described, and which is a great synthesis of what we have indicated before, would make perfect sense to continue, if the complementary expectations were in fact realized. If this is not the case, it is a good model, a priori, but without good adaptation to current and future demands. For example, and at least as evidenced by the authors' experience, managers' access to publishing journals seems to be minimal, and there seems to be no scenario of future change; also, we still do not have definitive evidence demonstrating that undergraduate management training had a significant improvement provided by this model since it was implemented.

The last question above is more complex, as the size of the demand for professors for undergraduate education was greater than it was before the POM model was established. What we don't know is whether the expansion of the teaching staff, much more qualified in academic terms, had a real impact on the training in management undergraduate courses or other courses in which GP graduates potentially work.

The societal-oriented impact model (SOM) is illustrated in Figure 2, in which the emphasis is on complementing what is already being done in the production-oriented model, in terms of training, with greater focus on understanding management and better articulating rigor and relevance. If this occurs, it will mainly result in scientific productions with potential for circulation both in academic and professional channels, and with graduates who will be able to continue the system and, at the same time, develop interaction with the productive sector. If this comes, we will not have just expectations, but real complementary results, with agents in the productive sector accessing knowledge through professional channels and with the potential absorption of solutions created in the most applied research. In addition, the ability of these graduates to train, in their work in undergraduate schools, will be greater, and it is certain that the students of these courses will make management more qualified and their organizations more efficient.

**Figure 2**
**Characteristics of the societal-oriented impact model (SOM)**




Source: Elaborated by the authors.

The SOM model seems, at first glance, to be the same as for professional masters and doctorates. In fact, the proximity exists by virtue of the nature of its proposals in the field of management. Thus, both the models of academic and professional courses propose to make use of the scientific method to produce high-impact research results. Perhaps the difference between the formations is only of emphasis, and not of exclusivity of professional work. As in Aguinis et al. (2014), the question that should guide GPs is not, in an exclusionary format, whether researchers want to influence their academic colleagues 'or' other stakeholders, but how the integration of academics 'and' other stakeholders should be. In this way, a training for academic programs that integrates influence on peers and the knowledge generated by them is proposed considering, for example, scientific publications, but that also allows any of these graduates to seek influence over agents in the productive sector not in a mandatory way, but as something desirable or optional for students with a vocation or need for their careers. In other words, we propose that the academic programs that assumes the SOM model add to the publication, as an option, the generation of organizational innovations in different formats, amplitudes, and the training of professionals who have the possibility of not only an academic career.

The proposed model is in line with the idea of using knowledge already developed in the field of technology transfer, as previously mentioned. In this case, the proposed model should, in addition to the dimensions indicated (Figure 2), associate mechanisms proposed in the literature available to researchers, such as the proposal of moments by Bansal and Sharma (2021): co-creating and resulting – in fact, building the research with the participation of management professionals from its conceptualization to the delivery of artifacts that may actually be useful (Bansal, Bertels, Ewart, MacConnachie, & O'Brien, 2012).

This alignment seems to be present in different spaces of the management academy. For example, the CAPES itself legitimized the so-called technical and technological products (TTP), considering them a teaching production for evaluation purposes and highlighting, in its evaluation, characteristics of innovation, applicability and impact (CAPES, 2019, 2020). Clearly, well-developed technology transfer initiatives favor the evaluation of GPs, if not as much as scientific papers – as was when we wrote this essay –, certainly as an inviting alternative for professors and students.

It seems to us that there are no formal impediments to a migration from the POM to the SOM model. However, we know that agents react to incentives received and analyze barriers to change. Thus, unless the model/system is changed, GPs will continue to be more POM inclined. As we perceive, the biggest impediment is cultural, associated with the inertia of the GPs in following the POM model, and there is a lack of incentives and experience of the agents to get involved in new SOM practices. Seeking to contribute to this, we present the four propositions indicated below.

## Proposition 1: renew training projects

With it, without excluding the focus on rigor and valuing the scientific and methodological approach, the aim is to include, in a complementary way, for students and professors, components (disciplines, seminars and methodologies) that shortens the distance from the managerial universe.

This is, it seems to us, the biggest challenge, as it requires the organization of formative components as there is time restriction for their accomplishment. Faced with the proposition, a creative alternative would be, for example, to offer subjects with a more professional vocation, including, in addition to academic literature, components of professional literature. Another interesting alternative, even experienced by one of the authors, consists of having optional curricular components aimed at scientific entrepreneurship, with the study of models for transforming knowledge produced into solutions with potential reach of the productive sector, with studies of innovation theory, phases and maturity of projects, fundraising, etc.

A third option consists in offering elective components in professional modality courses – this is practiced, for example, in the Harvard Business School doctoral courses, where students without an MBA are required to take courses in this modality. Experiences in this sense can be reported in forums for debate on training and in cases for publication in journals or events.

## Proposition 2: Renew the development of research

With this proposition, the aim is to appropriate theories and methods for analysis and development of models of applied interest.

We understand that the studies may involve research problems that dialogue with organizations in the productive sector and in alignment with their real problems. As an example, we highlight the case of the "Cientista-Chefe" project, a public innovation linked to the government of the State of Ceará, in which academics develop projects and applied research in strategic areas of the government. By 2021, there were 19 'chief scientists' working in different fields (education, safety, health...). Closer to the administration area, the program had the chief scientist for Innovation, with projects linked to the Secretariats of Science and Technology and Higher Education (SECITECE), Development and Work (SEDET), as well as the Support Foundation to the Scientific and Technological Development of Ceará (FUNCAP). The purpose of the chief scientist for Innovation was to improve public policies for innovation by applying theories to practices and evaluations of public projects.

The actions of the project were, therefore, of interaction between academics, government leaders and public agents. The challenge of interacting and translating academic content into practices was complemented by interaction with public policy recipients (actors in the state's innovation ecosystem). In addition to assisting in the development and improvement of state public policies for innovation, the studies became the basis for the development of dissertations, monographs, and scientific papers by the leader (chief scientist) and his advisees.

## Proposition 3: keep renewing channels

It is about complementing or adjusting the channels of circulation of conventional scientific products and results, for the reception and encouragement of academic and professional productions.

Journals and academic conferences have historically been well defined as channels for the dissemination of conventional research, being successful as a means of recording and disseminating the details of researches and the results of scientific efforts. Our understanding is that this model can be modernized with the opening of space to enhance interaction with the non-academic public.

There are already initiatives in this direction in Brazil. For example, relevant national journals are open to receiving cases for teaching, as well as for technological papers – see, for example, *Revista de Administração Contemporânea* (RAC) and *Teoria e Prática em Administração* (TPA) journals. There are also creative initiatives at events, such as the Latin American Retail Congress (CLAV), which hosted both executive and scientific papers.

### Proposition 4: Renew practices associated with research support

This proposition aims to encourage studies proposals not only to demonstrate its academic rigor and scientific relevance, but also to demonstrate the potential practical relevance.

Fostering research implies allocating scarce resources. As Alvesson (2012) indicates, investing in academic research implies the risk that schools, health, social welfare, public safety, and transport receive fewer resources, that is, the resource allocated to a professor's research may be related to one less nursing professional in a health center or one less teacher in basic education, elementary or high school. Thus, considering the enormous challenges that Brazil faces in these areas, in addition to those that organizations face to make their operations more effective, efficient, productive, socially and environmentally sustainable, researchers should direct efforts to research based on practical relevance/utility (Wood & Souza, 2019).

In this way, we understand that the promotion of applied research is one of the most effective ways to encourage SOM. Due to the state decision to allocate resources in what has the potential to generate knowledge or technique/technology in line with its needs, the approximation between academia and the productive sector is naturally promoted. For this, research proposals eligible for funding need to demonstrate usefulness in solving real-world problems.

There are already experiences in this direction. For example, after a long time without issuing calls to promote research in the state of Paraíba, the Research Support Foundation of the State of Paraíba (FAPESQ-PB) launched a universal public announcement, nº 09/2021, with the objective of supporting projects of research aimed at scientific and technological development and innovation, having as a judgment criterion the importance of the topic or problem addressed – from the scientific, economic or social point of view of the state of Paraíba –, the potential for generating knowledge or technique/original technology in line with the goals of the state government plan and the demonstration of the impact of the results on the scientific, technological, economic or social development of Paraíba.

In the same direction, we can observe the practice adopted by the CNPq, in the Call CNPq/MCTI/FNDCT nº 18/2021, in which it was asked, in the proposal form: "This project will give rise to something practical (a new technique, a new technology, a new equipment)? That is, can their results be immediately used to solve some practical problem?"

The demands of the public announcements from the funding agencies mentioned above, therefore, are fully in line with the model defended in this essay. These two examples even indicate that there is potential for the adoption of a policy to promote decentralized science and technology, with CNPq resources being allocated to state foundations, in order to encourage the development of research aimed at solving problems and local/regional needs.

## FINAL CONSIDERATIONS

In this essay, we reflect on graduate (academic) training projects in management, indicating problems and some recommendations. If we assume the really applied sense of what an area of 'applied social sciences' is, we understand that a GPs in management should have a natural focus on solving organizational problems. From what we diagnose, doing this is a challenge for the present and for the future. But how to promote this approximation with the productive sector in an institutional environment aimed at meeting norms and parameters that are little aligned with this context?

Given the environment in which we operate and considering the changes in the national graduate programs system, the beginning of a new decade is opportune for such reflection, especially when the CAPES itself began to require less focus on scientific production and more on societal impact. If, in CAPES' four-year evaluation 2013-2016, intellectual production accounted for about 60% of the score of a program in the area that involved management, the forecast was that, in the four-year evaluation for the period 2017-2020, such weight would be a maximum of 35%. On the other hand, the impact came to be around 33%, compared to around 10% in the previous four-year assessment (CAPES, 2020).

Within the scope of the national graduate programs evaluation system, the impact started to be interpreted based on the programs' social insertion modes, encompassing initiatives and their respective effects on the training of qualified personnel, the repercussion of the research on audiences outside the scientific field and the conversion of knowledge into technologies (Guarido, 2018). The change in the institutional environment was configured, therefore, as an invitation to changes in scientific production practices, favoring conditions for societal impact. It is also expected that this change will influence structural changes

not only in academic production practices, but also in the model of student training, in a model capable of providing graduates with the opportunity to develop their academic careers, as professors and researchers, and increase their employability in an increasingly competitive and demanding labor market.

Considering the difficulty of researchers and practitioners to develop research in a collaborative way and that they can irrigate, provoke and inspire each other (Kieser & Leiner, 2009), there is an opportunity to promote training and research models that bring the knowledge acquired from the managerial practice, providing the job market with professionals with the necessary skills or, on the contrary, attracting those who are already in the job market for a solid academic training capable of providing the necessary knowledge to solve the problems faced in their daily lives, shortening the distance between theory and practice.

Without intending to offer a roadmap or a solution methodology, as indicated in the introduction, we leave the general lines and some propositions and examples that demonstrate the real possibility of having an advance towards a new model. More significant changes will only come from the proper articulation of various components of the system: training involving academic and professional content, appraisal models that values relevance, channels that also privilege applied research (not just applicable), institutional mechanisms that facilitate collaboration between academics and practitioners, funding targeted at impact issues, etc. On the other hand, inaction will lead to anachronism and decline, which in fact is occurring and can be observed, at least until the time we wrote this essay.

We know that the problems are diverse, and there would be no way to reach them in a single essay. There are specific issues that require more specific analysis. For example, public universities, which host most GPs, seem to have a good opportunity to rethink their internal policies for managing the work regime of their professors, since, in some HEIs, the interpretation of 'exclusive dedication' creates unreasonable restrictions for bringing professors closer to the productive sector. How to configure the exclusive dedication of professors of management or accounting, knowing that they need to be immersed in the organizations, the objects of their studies? We also talked, throughout the essay, about the proposal of a new model, but we did not indicate details of its evaluation. How to measure comparative impact between the POM and SOM models? These are points of debate that may be the subject of further studies.

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