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Good research and bad teaching? A business school tale

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ABSTRACT

The paper presents a simultaneous differential game between rich and poor Business Schools (BS) that yields an equilibrium in which either type of BS may end up with bad teaching and good research, without resorting to informational problems. The necessary condition for this is that the BS's impatience is smaller than the growth rate of research, which may arise as a result of the school's lack of vision and ambition in becoming a leading school, or due to the fact that after a given critical mass of human capital is achieved in a BS, research grows fast, making BS managers underuse the available human capital for teaching. Policy implications are discussed.

1. Introduction

The market for managers is growing fast with globalization. The demand for good managerial skills is reflected in the growth and importance of Business Schools (BS thereafter). Traditional BS have received huge amounts of resources, becoming richer, more powerful and influential.[1] The high demand for professionals has created an immense international market allowing new BS to appear[2] (e.g. Kwok and Arpan, 2002). The creation of new BS is increasing competition. The competition between BS has generated rankings that aim at informing prospective students and employers how good they are. Most of the BS rankings are based on research output, measured through publications in academic journals. The rankings have made the BS put an emphasis on research and invest in new personnel, and resources for research.[3] However, this relatively new trend has attracted criticism. For the critics the emphasis on research has damaged teaching, and the research output of BS is being regarded in some circles as narrow, irrelevant and impractical (Bennis and O'Toole, 2005, p. 98; AACSB, 2007, p. 6, Skapinker, 2008).[4]

One of the main issues raised by the critics is whether BS can create a research environment and reputation without affecting the teaching quality negatively. Some authors (Pfeffer and Fong, 2002; Besancenot and Vranceanu, 2008) have tried to explain why schools would engage in a race for publications that brings only a limited value to students and managers. Recently Besancenot et al. (2009) addressed the possible trade-off between research and teaching in BS. Their approach depends on informational problems. They show that if students have imperfect information about the BS, the least productive BS have an incentive to do as much research as the top-tier ones in order to manipulate a student's expectations and to attract them. This makes the most productive schools do excess research to signal their types, sacrificing teaching.

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1 One of the sources of resources is the Business school's naming, see Burch and Nanda (2005).

2 A signal of the internationalization of BS is the emergence of new BS in Europe; see Bowden and Mulnix (2005) on the differences between American and European BS, and Kraft and Vodopoviec (2003) on the creation of new BS in transition economies.

3 See, among others, Shugan (2003), Jeon et al. (2007) and Tracy and Waldfogel (1997).

4 Others such as Binks et al. (2006) stress that links need to be created between teaching and research with an increasing focus on the general utility of entrepreneurial skills and aptitudes.

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This paper examines how bad teaching and good research can arise as an equilibrium without resorting to informational problems. The paper examines a simultaneous differential game between rich and poor BS that yields, among the possible steady state solutions, an equilibrium in which either type of school may end up with bad teaching and good research. In the model all BS try to be successful in publishing research in order to gain a reputation in the market as a leading business school. They invest in human capital to do research and teaching. They do not aim at doing only research or teaching. However, whenever one of the BS's impatience is smaller than the growth rate of research, it may end up with good research and bad teaching. There is a number of possible explanations. One explanation may be due to the school's lack of ambition in becoming a leading school, and it is just joining the wagon of research making. Another explanation is related to the fact that after a given critical mass of human capital is achieved in a BS, research takes off, growing fast, and it makes BS managers wonder what they can achieve with the human capital at their disposal, leading them to underuse it for teaching.

Bad teaching, seen as a suboptimal allocation of personnel in teaching, can be a policy issue, and one wonders how to fix it. We consider some policies regarding public funding, curriculum changes and human capital formation, that may improve teaching without damaging research.

The paper is organized as follows. The next section presents the general model and a tractable, stylized, model, which admits an explicit solution. The outcome of bad teaching and good research is analyzed in Section 3. Section 4 discusses the policy implications, and Section 5 brings the concluding remarks.

2. The model

2.1. General formulation

There are two types of business school (BS), rich and poor. Both schools try to be successful in publishing research R in order to gain a reputation in the market as a leading business school. Market leadership in research may attract more and better students, allowing the BS to become a market leader. As publications depend on external peer evaluation of the work done in any given school, it should be considered as a variable that is not under the BS's control. The production and evolution of research depend on previous research, the BS human capital and teaching, and the opportunity costs of academic personnel.

The rich BS recruits its academic personnel from the top schools; this human capital is denoted by H. The poor BS recruits people from any school, their academic personnel having the human capital denoted by h.

The time evolution of research is:

$$\dot{R} = F(R, H, h, T, \tau) - cT - \delta\tau \tag{1}$$

where $\dot{R}$ denotes the time derivative of R, $\dot{R} \equiv \mathrm{d}R/\mathrm{d}t$; T and τ are the teaching at the rich and poor BS respectively; and $F(\bullet)$ is the production function of research. We assume that the production function of research $F(\bullet)$ depends on previous research, on the efforts of the human capital of both BS (since research is a social product it depends on efforts of all researchers, no matter their affiliation or human capital), and on the positive spillovers of teaching on research. In Eq. (1) the term $\delta\tau + cT$ accounts for the total opportunity costs of research. It is important to stress that T and τg are the teaching indices, they combine the amount of time dedicated to teaching with quality.

The preferences of both BS over time are represented by the following utility integrals:

Rich business school:

$$\int_0^\infty U(Y)\, \mathrm{e}^{-r\,t}\, \mathrm{d}t.$$

Poor business school:

$$\int_0^\infty V(y)\, \mathrm{e}^{-\rho\,t}\, \mathrm{d}t$$

where r and ρ are the rates of the time preferences of the rich and poor BS, respectively. Note that the argument in each BS utility function is income Y, and y. As the BS's income depends on the product and services they sell, education, it depends on teaching and research. Therefore, we have: $Y = Y(T, R)$, and $y = y(\tau, R)$.

The general problem of our interest is that each BS maximizes its respective utility integrals taking as given the dynamic constraint (1). They consider Eq. (1) as a constraint because the schools cannot control published research since it depends on external peer review and, consequently, it is outside their reach. What each BS controls is teaching. Therefore the general problem to be studied here is how each BS allocates teaching so as to maximize their respective utility integral, which is equivalent to maximize their discounted flow of income, taking into account how research evolves.[5]

This general formulation does not provide us with clear cut results, so we must specify the functions paying special attention to their mathematical tractability so as to obtain a set of explicit solutions for the problem. This is done in the next subsection.

[5] Faria (2002) discusses in detail a model for a representative scholar that has some similarities with the current approach.