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Health economics or Health Care economics?[1]

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Resumo: Arrow (1963) iniciou a discussão sobre mercados de cuidados de saúde. Contudo, foi Grossman (1972) quem apresentou um modelo de procura de saúde, mostrando que a problemática relevante era a Saúde e não os Cuidados de Saúde. Tanto Arrow como Grossman defenderam que os Cuidados de Saúde são apenas uma das variáveis que explicam a Saúde. Apesar de partirem da mesma premissa, os autores seguiram diferentes abordagens.
Discute-se se a disciplina, usualmente chamada de "Economia da Saúde" é essencialmente *economia da saúde* ou *economia dos cuidados de saúde*; e se é possível traçar uma fronteira precisa. A conclusão é que a separação existe e que, nas últimas décadas, a *economia dos cuidados de saúde* dominou a investigação.

Palavras-chave: pensamento económico, história económica, economia da saúde, economia dos cuidados de saúde, programas de investigação

Abstract. Arrow (1963) started the discussion about health care markets. However, Grossman (1972) was who presented a model of demand for health, showing that the relevant social concern was health, not health care. Both Arrow and Grossman defended that health care is just one of the variables that explain health. Despite starting from the same premise, they followed different approaches.
It is discussed if the discipline usually called 'health economics' is mainly *health economics*, or mainly *health care economic*s; and if we can trace a precise distinction. The conclusion is that the separation exists and that, in the last decades, the *health care economics* had dominated the research.

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1 Introduction

The birth of health economics is usually associated with Arrow's article published in 1963, in The American Economic Review. Arrow (1963) was very clear when, in the second paragraph of his paper, he affirmed: "It should be noted that the subject [of his paper] is the *medical-care industry*, not *health*". Therefore, it seems that Arrow started a new field of research: health care economics, not health economics.

Since the 1960s, the literature about health specific issues has become regular in economic scientific publications. In 1982, it was published the first specialized scientific publication in the field: *The Journal of Health Economics.* Usually the field is nominated by 'health economics', but we also found the nominations of 'economics of health care or medical care'. Edwards (2001) discussed the distinction between *health care economics* and *health economics*. He argued that *health economics* has been mainly *health care economics*, (i.e. the economics of health care markets, such as hospital services, medical services, pharmaceuticals). The distinction starts within demand models. What is relevant: demand for health, or demand for health care? The choice made for researchers determines the scope of their works.

My aim is to see what kind of distinction exists between *health care economics* and *health economics*. My starting points are two basilar articles: Arrow (1963) and Grossman (1972). I question how these two articles influenced further research towards *health economics* or *health care economics*.

I choose those two articles, not because they are the first introducing the respective issues, but because they were very influent in further research. In fact, there was an author that primarily wrote about many of those topics: Selma J. Mushkin. In her 1958´s article (Mushkin, 1958), she stated that health economics is about two main subjects: (i) "the organization of the medical market", and (ii) "the net yield of investment in people for health". Despite that she didn't present the exactly same ideas as Arrow and Grossman, she was very close of their main ideas, and especially she had a very clear notion of the division of the discipline in two fields of research.

The rest of the paper is organized as follows. Section 2 reviews the two basilar articles and section 3 shows some examples of research promoted by several institutions. In section 4, I discuss the research distinction about health and health care and, in the last section I draw my main conclusions.

2. Two basilar articles

Arrow's article started the discussion about health care markets. However, Grossman (1972) was who presented a model of demand for health, showing that the relevant social concern was health, not health care. Both Arrow and Grossman defended that health care is just one of the variables that explain health. Despite starting from the same premise, they followed different approaches.

The Ford Foundation sponsored Arrow's article. It was prepared to be included in a series of papers on the economics of health, education and welfare, as we may read in the initial footnote in Arrow (1963). The Ford Foundation wanted to collect papers about the areas mentioned above, because those were areas where expenditures were rising and there was an important public-private interaction. The invitation from the Ford Foundation to Arrow was to examine the medical market (Hammer et al., 2001).

Arrow's article was not simply concerned with demand-side aspects. He presented a complete view of the health care market. He emphasized the special characteristics of health care market namely: the role of uncertainty on health care effectiveness; the agency problem both between doctor and patient and between doctor and health insurance (private or public); the physician's behavior, namely concerning demand inducement; and the supply and demand for medical care. Basically, Arrow's argued that health care market differs from the competitive model (taken as the model that maximizes welfare). He tried to evaluate the differences leaving policy inferences for further research.

Therefore, the attention dedicated to demand is residual. It is said that demand for medical services is singular. Consumers only have satisfaction from health care in case of illness, which makes individual's demand for health care "irregular and unpredictable". He was not concern with the concept of "demand for health".

In the beginnings of the seventies, Grossman published his paper "On the concept of health capital and the demand for health". That article was based on his PhD dissertation. The author constructed "a model of the demand for the commodity "good health"" (Grossman, 1972). He assumed that health is a durable capital stock, and "healthy time" is the output of that stock. Individuals have an initial stock of health that depreciates with time and can be augmented by investment. The "price" of health depends on many things, other than the price of medical care.

Article's introduction is mainly a justification for the model. Grossman stated that, by that time, it was widely accepted the idea that individuals invest in themselves. He also said that even those who study the health care market know that people don't demand health care per se, but they demand "good health". However, he realized no one had modulated the demand for health itself, contrary to what was done with knowledge or human capital.

By the time Grossman wrote his dissertation, he had the tools to approach health demand in the way he did: models that made a difference between demand for commodities and demand for market goods. In his paper, he referred the works on consumption theory of Gary Becker, Kelvin Lancaster, Richard Muth, Robert Michael, and Gilbert Ghez, all published between 1965 and 1970. Gary Becker was indeed Grossman's teacher at the Columbia University Ph.D. Program in Economics. Robert Michael entered the Ph.D. Program in the same year as Grossman, but he ended his dissertation before Grossman did (Grossman, 2004).

Grossman modulated health as a commodity in the sense that to maintain your health stock you have to buy market goods (like medical care, pharmaceuticals, exercise,...) but you also have to spend your own time. The model relates health depreciation with age, using the life cycle framework. It also relates demand for health (and, in consequence, the demand for health care) with the wage rate and education. The paper ended with these words: "the demand for medical care must be derived from the more fundamental demand for 'good health'".

An analysis to Grossman's references show that he based is paper on theoretical framework about consumption and demand. In twenty-two references, only five were directly concerned with health (additionally, we may observe that there was no reference to Arrow's article). One possible explanation for this is advanced for Grossman himself: he was not a health economist by that time. His interest for the field was born when Victor Fuchs employed him at National Bureau of Economic Research (NBER), in 1966, with the condition that he would write in health economics (Grossman, 2004).

The two articles reviewed here were written by to non-health economists, by the time they wrote it, in the sense that none of the two had written about health before. Both brought to the analysis their own experience and competences, gained in other areas. Arrow, when emphasizing the uniqueness of health care markets characteristics, justified that researchers get specialized in this area. Grossman, on his hand, opened the human capital theory to health economists. That is why these two authors (or theses two articles, to be more precise) were so influent to further research.

3. Demand for ideas

Since the 60's, many institutions had promoted research in the field of health economics, and health care markets. It is important to see how those institutions had influenced the research in the field. The question is: do institutions pay for research on *health economics* or *health care economics*? I will show some examples to illustrate.

One of the most important is RAND Health. It was originated in the 1960s, when policymakers were engaged in debate about how to finance health care. However,

the debate required a factual basis. To assure it, in 1971, the Department of Health, Education, and Welfare made a fundamental contribute with the creation of the *RAND Health Insurance Experiment* (RAND HIE), a 15-year, multimillion-dollar effort that to this day remains the largest health policy study in U.S. history. The RAND HIE addressed two key questions in health care financing: How much more medical care will people use if it is provided free of charge? What are the consequences for their health?

RAND HIE assured a large database for the research in the field of health care and health insurance. The availability of data in those areas was appealing to health economists that developed a lot of work about it[3]. It is clear that the focus of RAND HIE is health care market.

In the late 1980's, the Agency for Healthcare Research and Quality's (AHRQ) was created. Its aim was to support research designed to improve the quality, safety, efficiency, and effectiveness of health care, in USA. Almost all its budget was destined to finance grants for researchers and to finance universities and research institutions. The mission statement of the AHRQ was clear on the focus of the research sponsored, conducted, and disseminated by the Agency: to provide information that helps people make better decisions about health care (in www.ahrq.gov). Are health care decisions not health decisions that should be analyzed.

Nowadays, Michael Grossman directs the NBER'S Health Economics Program, which was created in the 1970s. This research program emphasizes studies on the economics of substance use, the economics of obesity, the roles of such basic economic forces as years of formal schooling completed, unemployment, and welfare reform in health outcomes, and the determinants of the cost of medical care. Despite the Health Economics Program is covering this last topic, NBER has another research program in the field: Health Care Program (directed by Alan Garber). The Health Care Program is devoted to the study of the consolidation health care organizations, the expansion of managed care, and the increased price competition among health care providers. The Program's researchers analyze health care markets and policy options concerning health care[4]. The majority of the funding for these programs comes from the National Institutes of Health.

As a signal of separation of health economics from health care economics, more than the existence itself of those two research programs at NBER, is the separation between researchers. Despite the connections between the two programs, Health Care Program has 77 members, but just 19 from those 77 (less than 25 per cent) are simultaneously members of both programs. It seems that people who research in the field of health care don't research in the field of health economics.

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[3] For a list of papers based on RAND HIE's data (just RAND HIE's publications), see http://www.rand.org/health/projects/hie/hiepubs.html.

[4] in http://www.nber.org/programs/

We may see, in figure 1, the number of working papers from members of Health Economics Program and the number of working papers from members of Health Care Program. Health Care Program is much more recent than Health program, but it is evident that both programs had a boom of working papers in the 1990s. Since 2001, the number of working papers from Health Care Program, is decreasing (followed by an increase in the number of Health Program working papers).

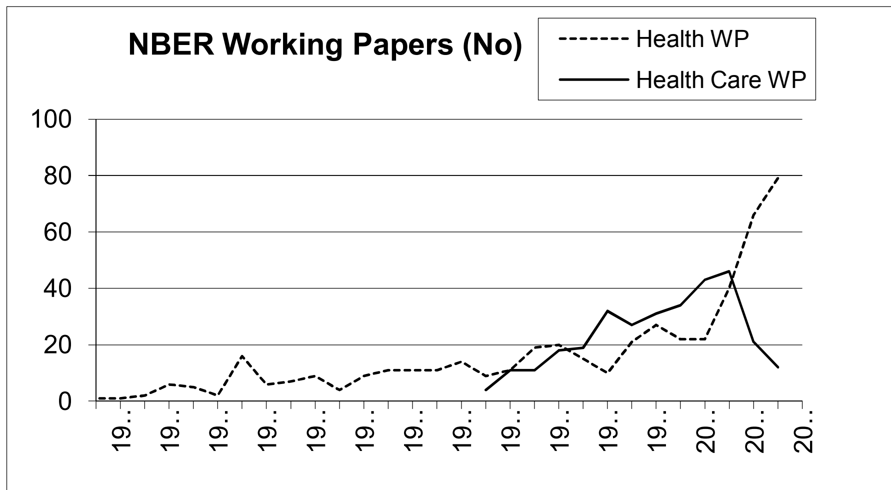

Figure 1. Evolution on the number of NBER'S Health Economics Program and Health Care Program Working Papers (source: NBER web site)

These are just some examples of institutions that promote research in the field. There are others, of course, and there is also research at universities. My point was to show that research is directed to health or to health care distinctively. From the examples, we see that RAND and AHRQ research is devoted to health care; and NBER explicitly divided its research in two different programs: one for health and the other for health care.

4. Health, or health care: different research programs?

I reviewed the articles of Arrow (1963) and Grossman (1972), trying to show what were their motivations and what they brought new into the field. After, I presented research that is promoted for some institutions. Done it, it is time to discuss if the discipline usually called 'health economics' is mainly *health economics*, or mainly *health care economics*; and if we can trace a precise distinction.

In 1987, *The New Palgrave: A Dictionary of Economics* stated that: 'the field divides naturally into two distinct, albeit related, subjects: the economics of health *per se*, and the economics of medical care'. It also observed what seems to be a contradiction: despite researchers had paid more attention to economics of medical care; it is useful to consider health first (using the argument that demand for health care is derived from demand for health).

Blaug (1998) suggested that the dominance of health care market's perspective on literature is due to the lack of irrationality in Grossman' model. Because health care perspective intended to internalize agent's non-rationality, it was more appellative than a model with rational consumers choosing health investment.

As I already notice in introduction, also Edwards (2001), fourteen years after the edition of *The New Palgrave,* conveyed the idea that health care economics has dominated the research in the field. The author said that the determinant input for health is health care, in mainstream research, but he argued that the discipline need to evolve towards health rather health care as the relevant social need. Edwards stated that the evolution would be promoted by policy challenges, with the recognition by governments on the importance of other factors besides health care to promote health. Until now, the major concern of policy-makers has been how to approximate health care markets to a competitive market structure, because they believe that was the most efficient way to improve Health. The corollary for this argument is that health care has been the focus because there has been a demand for that type of research. I presented several examples of sponsored research (i.e., research 'on demand') that reinforce this thesis.

Grossman (2000) also remarked the dominance of health care. In the conclusions to his chapter on the Handbook of Health Economics, the author is very clear when he said that:

> *Most of the chapters in this Handbook focus on various aspects of the markets for medical care services and health insurance. This focus is required to understand the determinants of prices, quantities, and expenditures in these markets. The main message of my paper is that a very different theoretical paradigm is required to understand the determinants of*

health outcomes. I have tried to convince the reader that the human capital model of the demand for health provides the framework to conduct investigations of these outcomes.

He realized that the majority of chapters in the Handbook of the discipline are about health care (and additionally health insurance). Looking to the Handbook index, we may observe that not only there are several chapters dedicated to health care, but also there are chapters dedicated to different health services or products (as dental services or pharmaceuticals). Grossman agreed with that approach to understand the market; however he defended that his 'health demand model' should be the basis for studying health outcomes. He traced a frontier between research that provides insights of market and research about health itself.

Leibowitz (2004) said that Grossman's article revolutionized the economic study of health, because it drew a separation between health and medical care. Grossman's article presented a complete model of demand for health, which divides the demand for health in two components: goods component and time allocation. The first component is that concern with health care. This vision of the problem puts the health care analysis as a part of the general model. The author posed the question in these terms: 'Despite the great influence of Grossman's work [...], much of the empirical work on these issues in the past 30 years has focused on the demand for the goods component, while paying less attention to the time component of health production.".

The evidence about distinction between both fields of research is presented by the specialization of researchers. As we had seen in NBER (researchers from Health Care Program are not researching in Health Economics Program), if we look for authors with papers published about health care market, we see that they are very far away from Grossman's approach. The aim of their works is not health itself, but market goods as medical services or pharmaceuticals.

The first problem to solve is: if *health* should be the major concern, why had *health care* been predominant? Two answers arise: the attraction for health care policy issues, and the availability of data about health care and tools to deal with that data. Even Grossman (2000) said that studying demand for health, not demand for health care, would not be easy. He was referring to data availability and measurement issues.

The second issue is about the distinction between the two disciplines. If we took the Grossman's model approach, we should define *health care economics* as a sub-discipline of *health economics*. In the sense that 'health' is the general concern and 'health care' is just one of the inputs for 'health'. However, if we look to similarities between the works of each discipline and other fields of research, we may be tempted to separate *health care economics* from *health economics*, and to focus on those similarities.

Health care economics could be related with the analysis of other markets that present similar questions as those enumerated by Arrow (1963): product

uncertainty, moral hazard, agency problems, private-public interaction. For instance, Arrow remarked the similarities between the health care market and the market of legal services. The problems that researchers face in that kind of market analysis are similar, as well as tools and techniques required. Those are problems of industrial organization, competition, regulation and so on.

And what about *health economics*? It seems that the 'human capital' approach is more related with life cycle models, labour economics, and economics of education than with market analysis.

5. Conclusions

I presented the bifurcation of health economics in two sub-disciplines, departing from the basilar articles of Arrow and Grossman. I concluded that the separation exists and that, in the last decades, the *health care economics* had dominated the research.

Besides differences, both sub-disciplines are neoclassical approaches. They are two ways of dealing with scarcity: by market clearing (the health approach), or by solving choice problems (the health care approach). As Blaug (1998) remarked, "health economics would seem to be a perfect topic for heterodox dissent and yet, surprisingly enough, radical economists and Marxists have not on the whole been attracted to health economics.". Maybe that was because neoclassical economists challenged themselves to solve the problems posed by such a non-neoclassical market.

The dominance of *health care economics* is mainly a response to the demand for research about health market failures and the role of public intervention to assure health care to citizens.

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