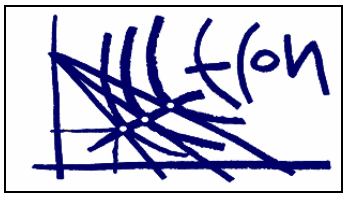

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Who do physicians work for?

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JEL Classification numbers: I10, I18.

Keywords: Dual jobs, health sector, public-private, typology of dual practice.

Department of Economics

Who do physicians work for?

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Abstract

This paper presents a thorough analysis of the issue of dual job holding among physicians. As the causes and implications of this phenomenon may well depend on the specific form of dual practice under consideration, we first introduce a typology of dual practice in the health sector based on the public versus private nature of the activity and the work regime involved. Our primary focus is on public on private practice, since it is more prevalent and poses greater adverse welfare effects than do other forms. We commence our analysis with a review of the theoretical and empirical economic literature on public on private dual job holding among physicians in developing and developed countries and analyze its underlying motives and economic effects. We find that economic motives are not the only reason why physicians engage in dual practice. Other non-pecuniary factors such as job complementarities, and institutional, professional, structural and personal variables play a relevant role and, hence, should also be taken into account when regulating dual practice. Furthermore, while dual providers may be tempted to skimp on time and effort in their main job, to induce demand for their private services, or to misuse public resources, the legalization of dual practice may also contribute to recruit and retain physicians with less strain on the budget and improve access to health services, especially in developing countries. Finally, the paper highlights the lack of evidence regarding the extent and effects of this phenomenon. Given its implications for the equity, efficiency and quality of health care provision, dual practice among physicians warrants more attention from researchers and policy makers alike.

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1. Introduction

In countries where public and private health care provision co-exist, it is common for doctors to work in both sectors at the same time. Despite the complex relationship between these sectors and the potential implications arising from dual practice, there has been little research on the economics of dual job holding in the health sector. This lack of attention is all the more surprising, given the prevalence of this practice in both developed and developing countries. Furthermore, the existing literature does not distinguish between its various forms, even though a close look at the problem suggests that welfare and policy implications vary significantly depending on the specific form of dual practice under consideration.

The aim of this article is to perform a thorough examination of the phenomenon of dual job holding among physicians, focusing primarily on public on private dual practice. What types of dual job holding exist? How widespread is the phenomenon? What motives lead physicians to become dual providers? What are the effects of this practice on the allocation of public resources to health?

The article begins by presenting a typology of dual job holding in the health sector, based on the public versus private nature of the activity and the work regime involved. This characterization is followed by a brief overview of the international extent of public on private dual practice among physicians. This review suggests that this form of dual practice is present in almost all countries regardless of income, even in settings where major regulatory restrictions have been imposed. Physicians' motives for engaging in dual practice are then examined together with its welfare implications. The theoretical arguments throughout the paper are supported by evidence drawn from experience in a number of developed and developing countries.

The main conclusions of our research are as follows. First, aside from economic motives, non-financial incentives play a key role in explaining dual practice and should be taken into account for policy design purposes. Secondly, the legalization of dual practice may have negative side effects. On the one hand, dual practice providers may skimp on hours worked in the public sector to spend time in private practice. This may adversely affect access and

quality of care for patients seeking treatment at state health facilities, the consequences being all the more severe in the presence of incentives to divert and cream-skim patients from public facilities into private services in which physicians have a financial interest. Meanwhile, dual practice providers may also misuse government supplies and equipment in the treatment of private sector patients, thus undoubtedly undermining the efficiency of public delivery.

Certain potential benefits of dual practice have, nevertheless, also been identified. These positive side-effects appear particularly relevant in developing countries, where tolerance of dual practice enables governments to recruit and retain high-quality physicians at low cost and improve access to health services.

Some of the advantages and disadvantages presented are specific to public on private dual practice, while others extend to other forms of dual job holding. This should be taken into consideration by policy-makers so that appropriate policies can be designed to address this issue. In this respect, we believe that the typology presented in this paper can provide a useful framework to develop studies that account for the particular features of other types of dual practice. Finally, our literature review reveals that the issue of dual practice requires much more research, empirical evidence and policy attention.

2. Forms and Extent of Dual Job Holding in the Health Sector

The literature addresses dual practice from a broad range of perspectives. Some authors (Ferrinho, Lerberghe, Fronteira, Hipólito, & Biscaia, 2004) view it as the combination of different forms of health-related practice – clinical, research, teaching or management – or, alternatively, health practice combined with a non-health-related economic activity, whether in the public sector, the private sector, or both. This definition lacks any further specification of the different forms of dual practice involved. Such a distinction is important, however, since they all pose different problems in the health sector and may therefore require different policy responses.

In what follows we present a classification of the different types of dual job holding that can be found in the health sector. Although we exclude forms in which clinical practice is combined with a totally unrelated activity, it is important to note that in many countries physicians combine it with occupations as varied as taxi-driving, selling, etc. This is very common in Eastern European countries where low pay and salary delays push public physicians into multiple employment in non-clinical jobs (Chawla, Berman, & Kawiorska, 1998; Healy & Mckee, 1998).

2.1. A typology of dual job holding in the health sector

There are several underlying factors associated with the different forms of dual employment found in the health sector. Our classification is based on two variables: the public versus private nature of the two jobs held by the physician and the contractual arrangement (work regime) in place. Thus, we distinguish various possible scenarios (see Table 1 for a summary).

2.1.1. Public on public dual practice

In this scenario physicians have two jobs, both in the public sector. Physicians may hold posts at two different public hospitals, as is the case in Canada, for instance (Hamilton, Letourneau, Pekeles, Voaklander, & Johnston, 1997). Alternatively, physicians may hold more than one clinical position within a single public hospital, as is the case in some Eastern European countries (Chawla et al., 1998; Healy & Mckee, 1998).

2.1.2. Private on private dual practice

In this setting physicians run two private practices at the same time. This is very common in the US, where physicians often offer private consultation on two or more sites.

2.1.3. Public on private dual practice

Another common setting is where physicians work in both the public and private sectors, carrying out their primary activity in the public sector, while also engaging in private

practice, performing similar clinical tasks in both sectors. There are several different contractual arrangements within this category:

- *Regular public post & private side practice*

Many doctors have a full time regular job on a public site and a sideline in the private health sector. This is the case of physicians who, having completed their contracted hours in a public hospital, work extra hours in a private hospital: a common arrangement in most European countries.

Alternatively, physicians may run their private practice at the same public hospital where they work full time. This is usual in some European countries such as Austria, France, Germany, Ireland and Italy where public doctors can also earn fees for treating privately insured patients in the private wing of the public hospital where they work (Stepan & Sommersguter-Reichmann, 2005; Bellanger & Mossé, 2005; Rickman & McGuire, 1999; Wiley, 2005; France, Taroni, & Donatini, 2005).

- *Regular public job & private office*

Physicians may also combine a full time regular job in a public facility by setting up a private practice outside the public hospital. Public physicians who are at the same time owners of a private practice are easily found in most European countries and also in many developing countries.

- *Part-time public and part-time private*

Physicians may work part-time in both the public and private sectors, supplementing their public salaries with private fees. The NHS in the UK allows this kind of arrangement. This type of arrangement is also permitted in France (Rickman & Mc Guire, 1999) and in Portugal, where, since 2002 physicians can choose between four work regimes in the public sector – part-time (this option is not permitted for a head of service), full-time (35 hours/week), extended full-time (42 hours/week), or working exclusively for the NHS (Oliveira & Pinto, 2005).

- *Regular full-time private work & a part-time public post*

Physicians may hold a full-time position in the private sector while holding a part-time post in the public sector. This arrangement is also found in the UK, where physicians usually tend to maintain their NHS posts. The Competition Commission (1994) showed that 25%

of public part-time consultants in the UK opted to dedicate mot of their time to private practice. This is also the case in Australia where full time private physicians are obliged to work part time in the public sector.

In this paper we focus mainly on analyzing public on private dual practice, i.e. when physicians carrying out their primary activity in the public sector decide to engage in private practice, performing similar clinical tasks in both sectors. More specifically, we deal with physicians working full time in public facilities for a monthly salary, while holding a part time position in the private sector, where they are paid an hourly rate or on a fee-for-service basis. Considering the prevalence of this particular form of dual practice, and its potentially adverse welfare implications, separate in-depth analysis is warranted.

Table 1: Typology of dual practice in the health sector

<table>
<tr><td colspan="3" rowspan="2"></td><td colspan="2">SECONDARY JOB</td></tr>
<tr><td>Public (Pb.)</td><td>Private (Pv.)</td></tr>
<tr><td rowspan="4">MAIN JOB</td><td rowspan="2">Public (Pb.)</td><td>Full time</td><td rowspan="2">Pb. on Pb.</td><td>Regular Pb. & side Pv.
Regular Pb. & Pv. office</td></tr>
<tr><td>Part time</td><td>Part-time Pb. & part-time Pv.</td></tr>
<tr><td rowspan="2">Private (Pv.)</td><td>Full time</td><td>Regular Pv. & part-time Pb.</td><td rowspan="2">Pv. on Pv.</td></tr>
<tr><td>Part time</td><td>Part-time Pb. & part-time Pv.</td></tr>
</table>

2.2. The extent of dual practice

Public on private dual practice is a widespread phenomenon in many developing countries, where the notion of a civil servant with full time exclusive dedication to the public sector is disappearing, as the gap between public and private income widens, making the opportunity to work in both sectors increasingly attractive (Macq, Ferrinho, De Brouwere, & Van Lerberghe, 2001). Thus, there is evidence of this phenomenon in several African countries like Zambia, especially among senior doctors (Berman & Cuizon, 2004), Egypt, where more than four-fifths of private physicians have some type of government or public sector job (Data for decision making, 1997) and in Portuguese-speaking countries, where two-thirds of the public doctors interviewed admitted to engaging in alternative income-generating activities. In some of these countries dual practice is more common among urban health professionals, as in Mozambique (Ferrinho, Van Lerberghe, Julien, Fresta, Gomes, Dias et al., 1998), while in other countries it is more prevalent among rural physicians, as in Egypt.

The situation is similar in Asian countries. In Thailand, a 2001 study revealed that 69% of public doctors held two jobs (Prakongsai, 2003), while most of the 2000 private clinics of Bangkok are run by government doctors (Prakongsai, Chindawatana, Tantivess, Mugem, & Tangcharoensathien, 2003). Likewise, most doctors in Vietnam and India supplement public sector work with private practice (Ferrinho et al., 2004, Berman & Cuizon, 2004) and over 80% of government doctors in Indonesia and Bangladesh are engaged in private practice (Berman & Cuizon, 2004). Even when this practice is regulated or banned it may still exist on a significant scale, as in China (Bian, Sun, Jan, Yu, & Meng, 2003).

Latin America is no exception as far as dual job holding in the health sector is concerned (Murillo & Maceira, 2001). In Peru, for instance, almost all physicians engage in both public and private practice (Ferrinho et al., 2004). It is also very common in Mexico, particularly among young general practitioners needing to augment their meagre income (Berman & Cuizon, 2004).

Public on private dual job holding amongst physicians also occurs in more developed countries, with the exception of Canada where dual practice is either prohibited or strongly

discouraged (Flood & Archibald, 2001; Madore 2006).[1] A survey distributed among Fellows of the Royal Australasian College of physicians shows that 87% of them are employed in public hospitals and an overall 79% also perform some private practice. In New Zealand, these figures vary between 92-99% and 43%, respectively (Dent, 2004). It is also common in the US, especially amongst resident physicians (Culler & Bazzoli, 1985).

European physicians working in the public sector are usually allowed to operate in the private sector under their public contracts. However, the extent of dual job holding in Europe differs from one country to another. In some it is a widespread phenomenon. In the UK, for instance, the Competition Commission estimated that in 1994 over 60% of the physicians working part or full time for the NHS devote some of their time to the fee-for-service private sector. Indeed, most private medical services in the UK are provided by physicians whose main commitment is to the NHS. In Ireland, contracts with hospital physicians permit extensive private practice and more than 90% of hospital consultants in public hospitals also have private practice privileges (Wiley, 2005). Likewise, almost 100% of the senior specialist hospital doctors in Austria work in both sectors, as civil servants are paid very poorly in comparison to their counterparts in the private sector (Stepan & Sommersguter-Reichmann, 2005).

In Southern European countries, such as Portugal, Spain and Greece, this kind of dual job holding is also present. In Portugal, of the 58% of public sector hospital workers currently holding a second job, half are doctors (Ferrinho et al., 2004). A recent survey carried out by the Spanish College of physicians revealed that 16% of public physicians in Spain are dual job holders (Colegio Oficial de Médicos de Madrid, 2003). In Greece the number of physicians undertaking dual practice is relatively low but increasing (Mossialos, Allin, & Davaki, 2005).

This practice is also found in the Scandinavian countries although there is no available data to determine its exact prevalence. In Finland most private sector services are provided by the same doctors that staff the public hospitals during the rest of the working day

[1] Lately, however, in one of the Canadian provinces (Alberta) the government is considering the possibility of encouraging public doctors to engage in private practice (Madore, 2006). There are also certain services, such as cataract surgery, where dual practice is found (Armstrong, 2000).

(Hakkinen, 2005). Similarly, in Sweden and Norway dual practice is quite common among senior specialists.

In the Netherlands, most medical specialists practice only in public hospitals, although in recent years, there has been a tendency for them to work in private practice outside the hospital (Exter, Hermans, Dosljak, & Busse, 2004). Finally, in Eastern Europe, transition to a free market economy has led to the development of a private health market and the growth of private practice. The security and familiarity of the public system, however, make many physicians reluctant to make a complete break from the old system and therefore to hold jobs in both sectors (Chawla, Berman, Windak and Kullis, 2004).

3. Physicians motives to engage in dual practice

It is important to understand why doctors decide to combine public and private practice by taking a second job. Economic theory cites hours restrictions, job complementarities, professional and institutional factors, and personal issues as the main factors behind workers' labor supply decisions.

3.1. *The Hours Restriction Approach*

The standard economic model for explaining dual job holding is based on the idea that individuals have an endowment of time, on the basis of which they choose the number of hours they wish to devote to work and leisure in order to maximize their utility. Much of the empirical literature on second jobs is motivated by a simple model of labor supply in which workers face upper constraints on main job hours: a worker willing but unable to work more hours in his main job will take a second job provided it offers a high enough wage. In this line, Moses (1962) presents dual job holding as a special case of overtime work. His results predict that a worker will be willing to accept part-time employment in a secondary occupation if he is an income maximizer who is unable to obtain sufficient overtime work in his primary employment. Perlman (1966) uses indifference curve analysis to explain the conditions under which a worker who prefers longer-than-standard hours at

the given wage, will be willing to take a second job even if the pay is worse. Shishko and Rostker (1976) were the first to find empirical support for the theory of dual job holding based on the hour constraints model.

This framework has specific applications to the health sector. Thus, Culler and Bazzoli (1985) show that the number of hours spent by US resident physicians in the main job strongly influence whether or not they decide to take a second job.

3.2. *Job Complementarities*

Although the hours constraints model has traditionally explained the existence of dual job holding, there are other factors that also require consideration. Paxson and Sicherman (1996) identify other factors that influence a worker's decision to supplement his/her primary job with secondary employment:

(i) *Complementary earnings*: While one job might provide a steady but low income, the second might offer wages that are high on average but more variable. Empirical evidence supports this hypothesis, suggesting that substantial benefits from private practice lead physicians to take secondary employment in the private sector in order to supplement their low public income and increase their overall earnings (Moss, 1984). Culler and Bazzoli (1985) also find support for the relevance of the economic factor in such decisions. They show that US residents opting for dual practice are highly influenced not only by time spent at their primary job but also by the wage potential of a second job and their public salaries.

This issue is especially relevant in developing countries, where public salaries are particularly low and governments often experience financial shortages resulting in insufficient funding for public institutions. Maq et al. (2001), using a survey conducted among a sample of physicians from different low and middle income countries, observed that dual practice would add an extra 50 to 80% to their public sector salaries. Analogously, Lerbergue, Conceicao, Damme, and Ferrinho (2002) argue that, on average, physicians' salaries in low income countries would need to be multiplied by at least five to bring them to the level of potential private earnings.

Similar results are found in specific studies for Bangladesh (Gruen, Anwar, Begum, Killingsworth, & Normand, 2002) and Cambodia (Soeters & Griffiths, 2003).

(ii) *Additional non-pecuniary benefits*: One job provides the main source of income while the other provides non-pecuniary benefits, such as professional training and improvement, contacts, cooperation with other hospitals, prestige, etc. Assuming that physicians perform their main job in the public sector, it would be secondary jobs at private clinics that would enhance their prestige and professional reputation and encourage them into dual employment. In countries where public medicine carries more prestige than private, physicians would seek non-pecuniary benefits in a public sector post. In these cases, doctors tend to spend most of their time working for the public system, although they may still do some work for private providers.

(iii) *New skills and experience*: Second jobs can also be used by workers to gain experience and learn about new occupations or techniques. A study based on data from the UK (Heineck, 2003) shows that apart from hours constraints, individuals are willing to take a second job in order to exploit complementarities with their primary jobs and obtain additional skills and experience beyond the scope of their current position. Through secondary employment in the private sector, many physicians have access to better technology and resources than they would find in the public sector. In those countries where the best technology is in public hospitals, this provides a strong motive for physicians to retain their public activity even if it is worse paid.

Finally, there are other reasons relating to the complementarities between public and private demand that might also explain dual job holding. In this line, Chawla (1996) extends the hours constraints model by including the possibility of physicians using a public post as a source of patients for their private practice. As a result, labour supply decisions in the primary job influence labour supply decisions and income in the secondary job. Physicians will concern for their reputation in the primary post as long as their work in the public sector enables them to generate positive externalities in their private practices.

3.3. *Professional and Institutional Factors*

Other reasons induce physicians to engage in dual practice. First, the workload and physical comfort of the working environment may influence the decision. A study by Askildsen and Homas (2004) in Norway shows that high work load and stress in public hospitals (stemming from both high demand and poor organization) lead physicians to allocate some time to working outside the hospital. Secondly, the "public" status of the employer in the primary job is also relevant. Public institutions are often financed through soft budgets, giving management leeway to be relaxed about financial discipline and general functioning. Moreover, employees within these public facilities enjoy civil servant status and the regulatory framework tends to limit managerial discretion over recruitment, pay and discipline. Additional problems are weak monitoring systems and low probability of formal sanctions. As a result, physicians are allowed broad discretion as to the degree of effort or effective time they spend on their work, which makes it very easy for them to engage in dual practice even if it is illegal, and/or leave the public premises during duty hours to attend their private practices. In short, many health workers resort to dual practice as a reaction to the shortcomings of the organizations in which they work, and not only in answer to low public sector wages, as often claimed. They are seeking the professional satisfaction and self-realization that the primary public job does not always offer (Macq et al., 2001).

Nevertheless, it is worth mentioning that there are also professional factors that motivate health care personnel to continue in public service. The desire for interaction and influence among fellow professionals and peer approval, are other factors that physicians value and public hospitals can provide (Eisenberg, 1986).

3.4. *Personal Factors*

Empirical research has shown dual job holding patterns to vary with personal characteristics such as sex, age and family structure. Chawla (1996) shows that in India physicians with more dependents are more likely to have two jobs. He also finds that older physicians tend to work less in their primary jobs, as do those with higher salaries. Further,

he observes that private fees in the second job increase with specialization and years of practice, making dual practice more appealing for senior doctors. Although dual practice is usually more common among senior doctors, who have already built a reputation in their public work, there are exceptions. In Peru, for instance, young male doctors are the most frequent dual practitioners (Jumpa, Jan, & Mills, 2003). This is also the case in the US (Culler & Bazzoli, 1985; Cohen, 1990). Australia and New Zealand also report evidence of gender differences, as men are more likely than women to have some private practice (Dent, 2004).

4. Welfare implications

Dual practice is a complex phenomenon that may contribute to welfare gains, especially in developing countries. However, it also may have adverse effects on quality, equity and efficiency in health care provision. This contrast makes it a key concern for health policy makers and its welfare implications worth analyzing.

Public on private dual practice is often believed to harm public health services, even when it is legal. Physicians working in both sectors may have incentives to skimp on time, divert patients, especially the easiest cases, or use public equipment and facilities to treat their private patients. These adverse implications vary according to the form of dual practice. Physicians holding a second job at a private hospital have less incentive to refer patients to the private sector than those with their own practice, since the benefits in the first case are less direct. The same applies to patient selection. Likewise, in settings where doctors are allowed to use public facilities to treat private patients, the perverse incentives to misuse public resources are reduced. Below, we analyze each of these points in detail.

4.1. *Skimping on time and effort in the primary job*

Some dual practitioners may be motivated to devote most of their time to their private practice, thus drifting into total or partial absenteeism or minimization of effort in their primary public job. This is aggravated when doctors in the public sector are paid a monthly

salary as opposed to the fee-for-service or hourly rate paid in the private sector. Furthermore, physicians holding full-time posts in government facilities have little remaining time to work in the private sector and may therefore skimp on time in the public post to work longer hours in the private sector. There is evidence that some UK consultants spend time in private clinic that they should be devoting to their public duties (Ensor & Duran-Moreno, 2002). Although this is more likely when doctors work full time in the public sector, it may also occur when doctors combine a part-time public sector job with part-time private practice. Thus, in Greece, for instance, doctors working at IKA (one of Greece's largest funds, covering the majority of the working population) primary care centers are often hired on a part-time basis, but the majority work fewer than their contracted hours (Mossialos et al., 2005).

Skimping on work hours at the primary public job is also found in developing countries. Absentee rates among doctors are very high in these countries: 42% in Bangladesh, 27% in Honduras, 43% in India, 26% in Peru and 35% in Uganda (World Bank, 2003), although not all of these absent physicians are dual providers.

Even if physicians do not skimp on work hours at their public job, they may perform with less diligence when holding two jobs. In this line, Aaron and Schwartz (1984) discuss how a private option may motivate consultants to reduce their work effort in the public sector. A key palliative to this behaviour is the reputation effect. Physicians may be interested in building a good reputation at their public post in order to guarantee a flow of demand for their private services (González, 2004).

4.2. *Diversion of patients to private sector*

The second reason why private practice amongst public health workers has been posited as a problem is because it may lead to providers diverting patients from public facilities into private services. There is evidence of patient diversion in countries like Peru (Jumpa et al., 2003), Zimbawe (Nyazema, Marondedze, & Hongoro, 2003), Bangladesh and India (Berman & Cuizon, 2004), as well as many other African countries (USAID, 2003). It is

also present in more developed economies as evidence from Greece (Mossialos et al., 2005) and Portugal (Oliveira & Pinto, 2005) suggests.

Financial motivation again seems to play a key role in fostering this behavior. The paucity of incentives in the public sector compared to private hospitals may lead dual practice physicians to deliberately channel public patients into their private practice.

Patient diversion may occur either through direct referrals, as physicians may explicitly advise patients to demand private treatment or, more subtly, through induced referrals. By induced referrals we refer to the different ways in which dual health practitioners may persuade patients to switch from public to private facilities, e.g. by skimping on quality of service or lengthening waiting times or waiting lists in public hospitals. In this sense, dual practice may result in poorer quality service in public hospitals, thus widening the quality gap between the public and private sectors (Jan, Bian, Jumpa, Meng, Nyazema, Prakongsai, et al., 2005; Biglaiser & Ma, 2006).

However, a quality reduction in public provision may have adverse consequences for an individual's professional reputation in private practice. In particular, patients may react against blatantly dishonest physicians. In this line González (2004) shows that, under some conditions, dual providers may have incentives to provide excessive quality in public medical services in order to raise their prestige as private doctors.

As quality of health care provision is difficult to assess, patients try to estimate public sector quality on the basis of observable variables such as waiting time (Cullis & Jones, 1985, Hoel & Saether, 2003). A theoretical study has found a link between the waiting time for public hospital treatment and the behavior of dual health providers (Iversen, 1997). Thus, when waiting-list admissions are rationed, waiting time in the public sector increases if consultants are also allowed to work in the private sector. These results are supported by empirical evidence from Italy, where dual practice has encouraged doctors to run long lists in government clinics to maintain demand for private treatment (France et al., 2005), in the UK (Rogers & Lightfoot, 1995) and in Alberta (Canada), where dual practice surgeons' waiting lists for publicly insured cataract surgeries were longer than those of practitioners operating in the public system alone (Armstrong, 2000).

4.3. *Patient Selection*

Dual practitioners may have incentives to divert patients to private treatment according to their severity or ability to recover. They may be tempted, in particular, to refer the less severe or less costly patients to their private practice.

The intensity of the phenomenon appears to vary widely under different health care structures. Barros and Olivella (2005) analyze, in a context of waiting lists, to what extent dual practice doctors are able to cream-skim patients. The rationing policy for admittance to the public waiting list is shown to be crucial for their results. An extreme rationing policy, be it lenient or strict, will always limit physicians' capacity to cream-skim patients. In either case, although doctors may have an incentive to offer their private services to the lowest segment of severity, only the more severe patients in this sub-group are willing to pay for private treatment.

In many OECD countries, such as Australia, Denmark, Ireland, the UK, New Zealand and Spain (Siciliani & Hurst, 2005) the policies adopted by health authorities to alleviate public sector congestion are based on a more intensive use of private hospitals. These policies may be pushing dual jobholders to cream-skim patients, as shown by González (2005). In her paper what triggers physicians to divert the easiest cases to their private practice is the fact that the payment structure in the private sector provides them with incentives for cost containment, while this is not the case in the public sector.

Finally, there exists another kind of cream-skimming. Referrals are sometimes made from the private to the public sector, as occurs when dual practitioners refer their private patients to the public system to avoid high cost treatments. Empirical evidence in New Zealand shows that patients are sent back to public facilities when private operations become complicated (Mercer, 1998).

4.4. *Misuse of public resources*

Dual practice may give physicians incentives to free ride on public facilities by appropriating supplies (e.g. gauze, medications, etc.) for use in their private practices,

treating private patients at public facilities, or making free use of public equipment. Misappropriation of public resources abounds in developing countries. Gruen et al. (2002) reporting on in-depth interviews with dual practice providers in Bangladesh, revealed cases of illicit transfer of subsidized resources to the private sector. Practices of this kind have also been reported amongst obstetricians and ophthalmologists in Thailand (Prakongsai et al., 2003). Misappropriation is not exclusive to these countries, however (Di Tella & Savedoff, 2001). In Italy, for example, cases have been reported of physicians purchasing equipment on the public budget and using it in their private practice (Cutler, 2002).

The loss to the public sector associated to redirection of diagnostic and therapeutic resources to private practice is difficult to assess. In Uganda the median drug leakage in health facilities was estimated at 78%. In the Dominican Republic the almost one third of total hospital expenditure that remains unaccounted for represents thefts of materials and diversion of funds to the private sector. Similarly, in Venezuela about 10-13% of medical supplies and medications go missing. In the UK an estimated 15 million pounds' worth of bandages, medication and stationery is stolen annually (Ensor & Duran-Moreno, 2002). Not all of the pilfered material ends up in private consulting rooms, but still these figures give some indication of the economic loss this may represent for a public hospital.

In addition to this free riding, public sector doctors may treat private patients at public facilities at the government's expense. This happens in Kenya, for instance, and has been a persistent problem across developing countries (Berman & Cuizon, 2004).

Despite the possible adverse effects of dual job holding on public welfare, dual practice also has positive consequences, as we outline below.

4.5. *Minimizing the budgetary burden required to recruit and retain skilled staff*

Access to basic health depends on the government's ability to attract and retain competent physicians in public clinics and hospitals. Allowing dual practice enables governments to recruit quality providers at low cost, as the total compensation package governments offer to physicians includes both public salaries and the non-wage benefit of private practice

revenues. This is the case in Austria, for instance, where hospital doctors receive relatively low fixed salary payments but may also earn additional income by setting up in private practice elsewhere.[2]

Banning dual practice, in contrast, reduces the attraction of public service employment, especially for higher skilled physicians and most senior doctors who, taking advantage of their already well-established reputations within the public sector, might migrate to the private sector, where the pay equipment and facilities are usually better. Globerman and Vining (1998) explain that in New Zealand and South Africa temporary staff shortages have been caused by physicians and nurses in the public sector being "captured" by private payers. If a large percentage of the best doctors opt out of the public system, the overall quality of public care will suffer. This is especially relevant in low and middle income countries where scarcity of public sector resources is acute (Buchan & Sochalski, 2004). In Mumbai, for example, a ban on private practice led to an exodus of the best public doctors to the private sector (Peters, Yazbeck, Sharma, Ramana, Pritchett, & Wagstaff, 2002). In these cases, allowing dual practice might be a key policy to retain high-skilled doctors at public facilities or even to prevent their migration to other countries. In Australia, as an additional measure to avoid the problem of unequal care that might arise if the best doctors opt out of the public system, all doctors are required to work some of their time in the public sector.

4.6. *Reduction of informal payments*

Informal payments, as defined by Lewis (2002), are very common in developing and transitional economies where the difficult economic environment, low salaries and payment delays drive physicians to demand them as a source of income (Di Tella & Savedoff, 2001), but can also be found in developed countries like in France (Bellanger & Mossé, 2000), Greece (Venieris, 1997) or Japan (Ikegami, 1991).

[2] Investigations by the Austrian audit office placed the average annual gross salary of a senior hospital doctor in 1994 at around 70.000 euros. When extra fees are considered, this figure raises up to 173.000 euros per year (Stepan & Sommersguter-Reichmann, 2005).

In these situations, legalizing dual practice might reduce informal payments by offering physicians the opportunity to supplement their public salaries with extra income from the private activity.

4.7. *Improving access*

Dual practice allows doctors to provide services outside normal working hours in their private offices and offer their public patients the option to obtain quicker treatment and avoid the long waiting lists common in the public sector.
In developing countries dual practice allows doctors to provide services, not only outside normal working hours but also in rural areas where public services are inexistent or difficult to access, thus creating a demand for private provision (Gruen et al., 2002). Public physicians in Central America, for instance, may combine their work in the public sector with private practice for NGOs providing monthly basic health services to rural and remote areas (World Bank, 2006). Likewise, in South Africa private practitioners are offered part-time state contracts to deliver their services in rural areas (Palmer & Mills, 2003).

4.8. *Public services more targeted to the poor*

When dual job holding physicians induce public patients to use their private services, they may focus only on wealthy and higher income patients, following classic price discrimination. This has been posited in the literature as a positive side effect of dual practice: altruistic providers may counsel poor patients to receive free or heavily subsidized care in the public clinic or hospital, while referring to their private practice only those who can clearly afford it. This would result in public-funded government health facilities becoming more effectively targeted to the poor (Eggleston & Bir, 2006) and in the reduction of public waiting lists by curbing demand for public health services. We must treat this reasoning with caution, however, since it could also be argued that unless private care is superior, no rich patient will be interested in paying for it. This may create a gap between the quality of care received by the rich and the poor, leading to a clearly defined

two tier system. Furthermore, empirical evidence shows that poor and uneducated patients are more likely to respond to inducement to use private services and thus to pay for expensive private treatment instead of using subsidized public care. Burchardt, Hills and Propper (1999) found that approximately 70% of private health care users in the UK in 1995 were in the top 2 income quintiles, but 30% were in the bottom 3.

5. Discussion and Policy Implications

The main issue with dual practice is whether or not restrictions should be enforced. The literature on dual practice includes arguments both for and against, making it difficult to determine whether the positive or negative aspects prevail. The balance may well depend on the specific type of dual job holding under study.

To illustrate the main features of the phenomenon, we present a typology of dual practice in the health sector based on the public versus private nature of each job, and the different contractual arrangements involved. Amongst the different forms of dual practice, we focus on analyzing full time public/part-time private practice, as we believe that the prevalence and potentially adverse welfare implications of this particular form make it worthy of separate in-depth analysis.

The lack of incentive mechanisms in the public sector aggravates these adverse implications. Public employment is usually characterized by fixed payment in the form of salaries, while in the private sector the use of tailored incentives seems to be more widespread. This creates a clear financial incentive for public physicians to maximize their private sector activity, which might be expected to undermine their public performance. Thus, common problems in this context are physicians' skimping on working hours, practicing patient diversion and selection, and misusing public equipment and facilities.

However, these adverse implications of public on private dual practice may be attenuated thanks to factors like the reputation effect. In this sense, there is evidence from the UK showing how public consultants with greater private than public commitments are more productive in their NHS activity than those with less commitment to the private sector (Bloor, Maynard, & Freemantle, 2004).

On the other hand, there are also benefits deriving from public on private dual practice. Thus, if dual practice is allowed, physicians can provide faster services in the private sector and consumers willing to pay for this will opt out of the public system, creating easier access for those remaining on the public waiting list.

Positive side effects of dual job holding are perhaps more noteworthy in developing countries ,as dual practice enables governments to recruit and retain quality physicians at a low budgetary cost and improve access to health services especially for the poor and rural inhabitants. Sometimes, physicians may also offer better quality care at their private offices, as budget constraints generally mean that the quality of public services is seriously deteriorated in developing countries. However, not every patient is willing to pay private fees and many simply cannot afford it. On occasions, moreover, dual practitioners may play up the features of health care quality that are more obvious to patients while stinting on the technical aspects, of which they are less aware. In this case, of course, allowing dual practice is unlikely to result in an improvement in quality of care.

Further, allowing dual practice may contribute to reducing informal payments, which are so notorious in many low and middle income countries. The extra income associated to dual practice may contribute to increase physicians' low income. Nevertheless, there are countries where physicians' dual practice is legal and co-exists with informal payments, as occurs in Indonesia, Poland and Bangladesh (Berman & Cuizon, 2004). Likewise, in 2002, the Greek government legalized private practice for public hospital doctors in order to regulate informal payments, but without success. Few physicians have taken up private practice and the majority has chosen to keep accepting informal payments rather than declare such income and have to pay tax on it (Mossialos et al., 2005).

As a result of uncertainty over the net effects of public on private dual practice, some governments have begun to restrict it, while others have yet to intervene. The introduction of incentive mechanisms in the public sector would appear an essential ingredient of any effective policy to mitigate the adverse consequences of this practice. Our analysis shows that the coexistence of public salaries with other payment mechanisms in the private sector is not a satisfactory arrangement, since it encourages opportunism by dual practice physicians in the public sector. Further, our analysis of the motives that lead physicians to

engage in public on private practice shows that not only financial but other non-pecuniary mechanisms should be considered when designing and implementing policies to deal with the adverse implications of dual job holding.

Finally, our review of the literature on dual practice has enabled us not only to show that this phenomenon is widespread among physicians across the world but also to discover the lack of evidence relating to its exact prevalence and how it is affected by different incentive and pay mechanisms. Given its implications for the equity, efficiency and quality of health care provision, the issue of dual practice among physicians warrants more attention from researchers and policy makers alike. We hope that this paper has contributed to increase understanding of public on private dual practice as well as highlighting its relevance in the health sector. There are other forms of physician dual job holding that would require specific analysis in order to account for their particular features and hence design appropriate policies. In this sense, the typology presented in this paper sets up a framework for future research on dual practice in the health sector.

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