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**DUAL PRACTICE OF PUBLIC HOSPITAL  
PHYSICIANS IN VIETNAM**

**2015**

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**DOCTORAL THESIS**

**DUAL PRACTICE OF PUBLIC HOSPITAL  
PHYSICIANS IN VIETNAM**

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**Seoul National University**

**College of Medicine**

**Department of Health Policy and Management**

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# **DUAL PRACTICE OF PUBLIC HOSPITAL PHYSICIANS IN VIETNAM**

by

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A thesis submitted to the Department of Health Policy and Management  
in partial fulfilment of the requirements for the Degree of Doctor of  
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**December 2015**

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## **ABSTRACT**

### **Dual practice of public hospital physicians in Vietnam**

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Promoting public private partnership is one of the major health system reforms of the Vietnamese government to achieve universal health coverage. It has encouraged the development of the private sector and created a mixture of public and private health service delivery within the public hospitals. As a result, the phenomenon of physician dual practice has become very popular in recent years. Nevertheless, it has been poorly regulated as well as studied systematically. Therefore, this study aims at providing a comprehensive understanding of the phenomenon in Vietnam by examining three aspects: 1) the motivation of dual practice participation, 2) the effects of dual practice on physicians' performance, and 3) the view of service users and providers on public hospital physicians' dual practice. A survey with 510 physicians and 292 patients was conducted at 10 public hospitals of all three levels (central, provincial, and district) in the Northern and Southern parts of Vietnam in January 2015. Results show that extra private income is the main

motivation to take-up dual practice and basic salary increase is the most preferable option to give-up private practice. Higher-position physicians are more likely to participate in dual practice. Dual practitioners spend less time for public practice and refer more public patients to private practice compared to non-dual practitioners. Physician dual practice is a common practice although both patients and physicians perceive that it increases out-of-pocket payment. They both have high consensus on imposing regulations to regulate dual practice but not on banning it as well as terminating the public-private mix of public hospitals. This study suggests reforming provider payment mechanism at both institutional and individual levels to discourage dual practice. The public and private practice within public hospitals should be separated. Further studies to examine the impacts of dual practice on the quality of care are recommended. Cross-country comparison would provide important policy perspectives for countries with similar health system architecture, which are reforming the health sector to achieve universal health coverage.

**Keywords: dual practice, human resource for health, health system, health financing, universal health coverage, Vietnam**

**Student number: 2011-31357**

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# **CHAPTER 1: INTRODUCTION**

## **1. Overview of health system in Vietnam**

### **1.1. Overview of Vietnam**

The Socialist Republic of Vietnam is a developing country in Southeast Asia with a surface area of 332,600sq.km, stretching along the 3,260 km eastern coastline of the Indochina Peninsula. In the shape of the letter “S”, its territory also covers a vast area that encompasses a large continental shelf and a string of thousands of scattered islands. Approximately 80 percent of the lands are mountainous, highland and jungles; only 20 percent is flat land.

The country has 63 provinces and centrally administered cities. Among those, Hanoi Capital in the North and Hochiminh City in the South are the two biggest cities, where almost all of the political, social, cultural and economic organizations are located. There are 659 districts and 10,732 communes (GSO, 2014). Each province has its own provincial council and several district councils.

The public administration in Vietnam has four levels: central, provincial, district, and commune levels. Although the system is highly decentralized,

it has a *dual accountability* (Phong & Beresford, 1998). The dual accountability is a way for the central government to control the decentralized local governments. The Provincial People's Committee is the "provincial government, the District People's Committee is the "district government", and the Commune People's Committee is the "commune government". The People's Committees are accountable to the President Office. Under the People's Committee there are sector departments for example Provincial Health Department is a unit the Provincial People's Committee and District Health Department is a unit of the District People's Committee. These units are accountable to both the People's Committee and the line ministry. The Ministry promulgates government decrees for its sector, which are applicable nationwide. These government decrees are then localized by the provincial government as a result of the decentralization system. The Provincial Chairman has the power to allocate financial and human resources for each sector as well as appoint or dismiss important positions of government owned organizations located in the province territory. Therefore the Provincial Chairman is more powerful than the line Minister (Phong & Beresford, 1998). Nonetheless, district government does not have the same level of independence from the provincial government compared to the level of independence that the provincial government has from the central

government (Phong & Beresford, 1998). Commune governments are fully accountable to the district government in all issues.

Concerning the socio-economic development, Vietnam has made significant progress since mid-1980s by introducing a series of market-oriented reforms. The typical reform was the Rural Economic Development policy, in which the government distributed the agricultural land to households, providing incentives to increase farm production and diversification. The Land Law (1993) and the Resolution 10 (1988) are two main legal documents granting more autonomy for the household with five basic rights: transfer, exchange, inherit, rent, and mortgage. The production unit has changed into household instead of village/community like before. The law extends the cropland leasing period from 20 years to 50 years. This is one of the largest and fastest rural development programs worldwide in terms of scale and speed of implementation (Ravallion & van de Walle, 2008). The policy has played an important role in boosting agriculture development in Vietnam, enabling the country to move from a food deficit country to the world second largest rice exporter in two decades (World Bank, 2012).

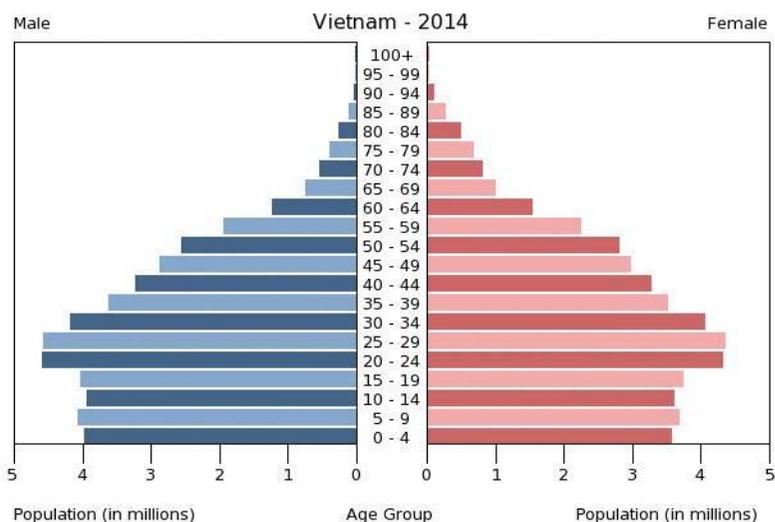
Simultaneously, the Enterprise Law was promulgated (2000) to encourage the development of the private sector. The country opened its door to

foreign investors and aimed at developing an export oriented economy. The living conditions of the Vietnamese people have markedly improved. Vietnam is listed by UNDP (2005) among the top developing countries with good records in poverty reduction. In total, nearly half of the Vietnamese people were lifted out of poverty in less than two decades (World Bank, 2012). The country has ranked in the low-middle income countries in early 2010s. However, the remaining poor are living mainly in isolated regions and among ethnic minority groups, creating a disparity in the socio-economic development. Additionally, the poverty reduction is not very solid as the near-poor can easily fall back into the poverty line when exposing to health, weather, or other social shocks.

The economic development has a profound impact on population growth and household demographic behavior. The population increases from 69 million people in 1990 to 90 million people in 2014. In term of population size, Vietnam ranks the 14<sup>th</sup> globally (World Bank, 2014). Currently, Vietnam is in its demographic golden period with seventy percent of the population is in working age. Twenty-four percent of the population is under 14 years old and seven percent is over 65 years old (Figure 1). The median age is 30 years old (Mundi, 2014). The population growing trend is continued but the main driver for population growth has changed. It

used to be the high birth rate that increased the population rapidly. However, by year 2010 fertility rate has fallen to 1.8, which is below the replacement levels (World Bank, 2012). As for now, the momentum for population growth has changed to increasing life expectancy, which increased from 68 in 1982 to 76 in 2013 (Mundi, 2014). On the other hand, the speed of aging is quite fast in Vietnam, as it is estimated that the proportion of the population over 65 will be doubled in 2017, reaching fourteen percent. Largely adopting the family planning, the household size reduced nearly one person from 5 to 4 (World Bank, 2012).

**Figure 1. Vietnam Population Pyramid**



Source: Mundi Index Database, accessed date September 13<sup>th</sup> 2015

Apart from the improvement in life expectancy, other important health outcomes have positively increased. Vietnam has achieved the Millennium Development Goal 4 (MDG) for reducing child mortality from 44.4 per 1,000 live births in 1990 to 14 in 2001 (UNDP, 2014a). Vietnam is on track to achieve its MDG 5 and 6 on improving maternal health and combating HIV/AIDS, malaria, and tuberculosis (UNDP, 2014b, 2014c).

The demographic changes have led to the changes in the disease burdens of Vietnam over the last few decades. Vietnam is facing a triple disease burdens including infectious diseases, non-communicable diseases, and injuries from accidents. In 2001, non-communicable diseases are the causes of 67 percent of mortality, communicable diseases account for 17 percent, and accidents, injuries, and poisoning account for 16 percent (Ministry of Health Viet Nam, 2013a). Accordingly, the leading morbidity diseases are diseases related to respiratory system (17 percent), followed by infectious and parasitic diseases (11 percent), and diseases of the digestive system (9 percent). Infectious and parasitic diseases are the leading causes of death (16.1 percent) and it is followed by circulatory system diseases (15.9 percent) (Ministry of Health Viet Nam, 2013a). A recent study finds that cardiovascular diseases, cancer, and stroke are

leading cause groups of premature mortality, following by pneumonia and HIV/AIDS (Nhung et al., 2013).

In addition, the disparities in socio-economic development have made equity an important issue in the health sector. There are chronic inequalities in health outcomes and out-of-pocket expenditure on curative care. Inequalities in maternal, newborn and child health are the largest by living standards (Axelson et al., 2012). Women living in urban areas and having higher income and education have higher access to antenatal care and delivery with skilled birth attendance (Goland et al., 2012). Health service utilization differs by economic status, especially in the rural areas. Households with economic growth are better-off in terms of health care expenditure and service utilization compared to households without economic growth (Thoa et al., 2013).

Universal health coverage is the goal of the health sector in Vietnam in the period 2011-2030 (*National Strategy for Protection and Improvement of People's Health 2011-2020: vision 2030*). The aim is to ensure the access to primary health care services for everybody living in the Vietnam territory. The Strategy emphasizes the tasks of consolidating and improving the primary health care system, the prevention system, and hospital system. As the core component, service delivery system is

supported by human resource for health development, health financing reform, pharmaceutical industry development, and health information system enhancement. The government has committed to invest further in the health sector to improve health outcomes and achieve the Millennium Development Goals and Sustainable Development Goals.

## **1.2. Health care system in Vietnam**

To better understand dual practice in the specific architecture and characteristics of health care system in Vietnam, three pillars of the health system are discussed, including the health care service delivery system, health care financing, and human resources for health.

### ***1.2.1. Health care service delivery system***

The health care service delivery system in Vietnam is dominated by the public facilities, accounting for 90 percent (Ministry of Health Viet Nam, 2013a). It delivers three types of services: 1) medical examination and treatment, 2) primary health care, preventive medicine, and National Health Program, and 3) population and family planning. These three types of services are delivered at all levels of care (central, provincial, district, and commune level). In addition, the traditional medicine has been integrated into the health system since 1950s. Private pharmaceutical

outlets have been permitted since the early 1990s. Accordingly, patients can just visit the private pharmaceutical outlet to buy drugs without consulting with the physicians since many types of anti-biotics could be sold without prescription.

Health care service delivery system in Vietnam is multi-tiered, corresponding to the public administration structure: central/national, provincial, district, and commune level. Embedded in a dual accountability public administrative system, the health sector also has dual accountability (Matsuda, 1997) (Figure 2). The higher levels supervise and back up for the lower levels. And the health sector at each level is accountable to the government of the same level also.

At the national level, the Ministry of Health is accountable to the central government. The Ministry of Health has the responsibility of developing, implementing, and monitoring health policy strategies. It directly manages central level health facilities of the health sector (curative, preventive, and training facilities), National Health Programs (preventive medicine), and indirectly manages health facilities of other ministries and sectors. The Ministry provides technical guidance to the 63 provinces all over the country by issuing health related legal documents guiding the implementation of health programs as well as imposing clinical and

governance standards for health facilities. The Ministry of Health decides the amount of state budget allocated to central level health facilities and the National Health Program. However, it has very limited power in allocating state budget as well as deciding the number of regular staffs to provincial hospitals, district hospitals, and commune health centers except for services related to the National Health Programs.

The central level health facilities, including central hospitals and medical centers are accountable directly to the Ministry of Health. Accordingly, the Ministry of Health involves in many decisions of these health facilities such as personnel, purchasing, and spending of resources. The directors of these facilities are appointed by the Ministry of Health. Construction of new buildings and purchasing high technology medical equipment needs the approval of the Ministry.

Among 46 central level hospitals under the Ministry of Health nationwide, there are 17 general hospitals (37%) and 29 specialized hospitals (63%) (Ministry of Health Viet Nam, 2013). These hospitals are equipped with the most advanced equipment and facilities in Vietnam. They have the most skillful and well-trained health staffs to treat and cure difficult cases of different diseases such as cancer, pediatrics, dermatology, tuberculosis, ophthalmology etc. Leading doctors and health experts are working at

these hospitals as well. Central level hospitals are large in terms of size and personnel. Most of them are located at big cities such as Hanoi and Hochiminh City. Therefore, people in those cities and nearby cities have a better chance to get benefit from the high quality services of those hospitals.

At sub-national levels, the public administration power is with the Provincial People's Committee. The Province Chairman has high authority in all sectors within the province administrative area. In term of financing, the government state budget for each sector at sub-national level is allocated to the Provincial People's Committee directly based on the approved health plan submitted by the province to the National Assembly. The line ministries have no significant involvement in this process. A part from that, the provincial general tax is also pooled at the Provincial People's Committee. The Province Chairman has full power in allocating government state budget and provincial general tax resources to each sector, including the health sector. Other issues such as personnel, construction, and legislation are all decided by the Province Chairman.

The Provincial Health Department assists its Provincial People's Committees in exercising the state management in people's health care. It is one technical department of the Provincial People's Committee. There

are 63 Provincial Health Department nationwide. Provincial Health Department plays an important role in the planning and development of the health sector within the province. Receiving budgets from the Provincial People's Committee, the Provincial Health Department allocates budget for the public hospitals (both provincial and district levels) in the province as well as preventive medicine activities. It has the authority in planning and deciding personnel quotas, equipment purchase, and building construction of the health facilities. Additionally, it develops, implements, and monitors sub-national clinical and governance standards and regulations for health facilities located in the administrative areas of the province. Provincial Health Department is the organization licensing the private health practice, approving the establishment of private health facilities, and monitoring their operations.

Provincial hospitals and health institutions are accountable to the Provincial Health Department in many aspects such as financing, personnel, constructions, and investment. Provincial level is the secondary level of care, which has both general hospitals and specialized hospitals. Each province has at least one general provincial hospital. There are totally 447 provincial hospitals, in which 140 are general hospitals (31%) (Ministry of Health Viet Nam, 2013). Provincial hospitals are quite well

equipped with medical equipment, medical materials, medicine, and human resources. The size of the hospital depends on the investment of the province. Some provincial hospitals are even more equipped than central level hospitals in terms of medical equipment and building. Provincial hospitals receive referred patients from district hospitals and refer patients to central level hospitals if necessary.

District Health Office is one technical department, exercising state management in people's health care and health promotion in the district, including both curative and preventive services. The Office is accountable to the District People's Committee and the Provincial Health Department. It makes plans, implements, and monitors the health related activities within the district under the supervision of the Provincial Health Office and District People's Committee. The operation of private health practice within the administrative area of the district is monitored by the District Health Office while the licensing authority is with the Provincial Health Department.

District Health Office manages primary health care, including district hospitals and commune health centers. At this level, there are 1,214 general district hospitals and 11,033 health centers (Ministry of Health Viet Nam, 2013). There is no specialized hospital at this level. District

hospital is the first level of curative care. The physical facilities and medical equipment at district hospitals are quite modest for simple surgeries and limited curative treatment. When complicated case occurs, district hospital can refer the patient to the provincial hospitals. If district hospitals are invested with high capacity, it would help reduce the overload of patients at higher level hospitals.

Communal health centers are the primary health units accessible to people. These centers have the tasks of providing primary healthcare services, early detection of epidemic outbreak, implementing national health programs, treating common diseases and attending normal deliveries. More than 90 percent of the communes in Vietnam have communal health centers. And 70% of health centers have at least one medical doctor. This is the result of the endeavor of the government in expanding the primary health care network all over the country to ensure the equality of access to the health services for the people.

However, many communal health centers do not have sufficient stock of essential drugs for common diseases. The equipment, medical materials, and essential drugs in health centers are limited. Only 60 percent of health centers nationwide have doctors. Sometimes, for a very simple health care service such as checking eyesight, the patients have to go to district or

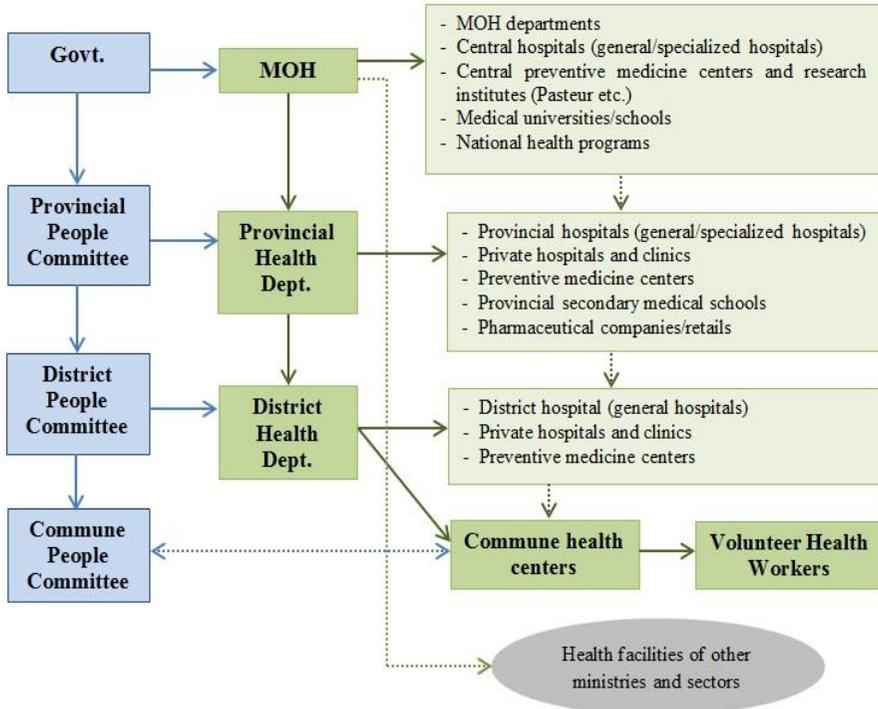
provincial hospitals. In order to achieve universal health coverage and strengthening the health care system, it is crucial for Vietnam to consolidate and further invest in health centers to improve the health of the community from grass-root level to reduce the burden for curative care system at higher-level hospitals.

Other sectors such as military, public security, transportation, and communications have their own hospital system, which accounts for 10 percent of hospital beds of the whole health care system (Ministry of Health Viet Nam, 2013a). These sectors do not have preventive medicine system. They only have hospitals, which are equivalent to central and/or provincial hospitals. Originally, these sectors established hospitals to serve for their own employees as they are specialized in the treatment of certain occupational diseases. However, later on, these hospitals also open for the public so that everybody can enjoy the services. Since social health insurance was introduced, these sectoral hospitals sign the contract with the social health insurance. Therefore, people do not see much different in these hospitals. In reality, normal people usually accounts for 70% of the patients of these hospitals.

The private health sector has been growing significantly in recent years. There are 150 private hospitals and more than 30,000 private clinics

nationwide (Ministry of Health Viet Nam, 2013b). The public health facilities are scattered nationwide in both urban and rural areas. However, private health facilities are mostly located in big cities and urban areas. They focus on services with high rate of returns on investment (Oanh et al., 2015). The private sector usually provides simple and low risk services in new buildings with better hygiene and staff attitude. Services are often delivered at small clinics, mostly on obstetric, dentistry, and family practice. Patients come to the private practice to seek for comfort and save waiting time. Sixty percent of outpatient services are provided by the private sector however only four percent of inpatient services are provided by the private sector. On the other hand, 96 percent of inpatient services are provided by the public sector as it is well equipped with expensive high-technology medical equipment.

**Figure 2. Structure of health care service delivery system in Vietnam**



Govt.: Government

Dept.: Department

MOH: Ministry of Health

—> Direct accountability

.....> Indirect accountability

—> Technical management

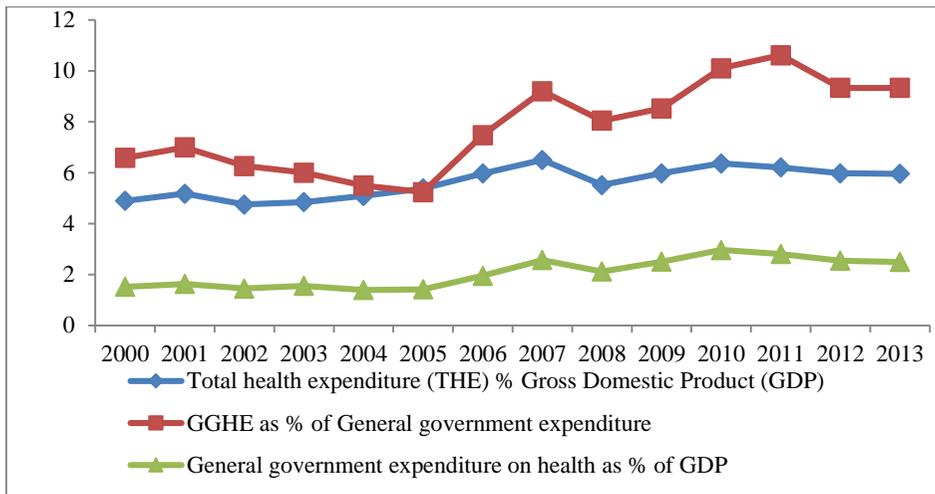
### ***1.2.2. Health care financing***

Together with the economic growth, the health care financing has been in a transition process. Government expenditure for health has been increasing over the years. General government expenditure for health increases from 1.63 percent of GDP (2000) to 2.49 percent (2013). As percentage of general government expenditure, the general government expenditure for health (GGHE) accounted for 6.5 percent in 2000, which increased to 9.33 percent in 2013 (Figure 3).

A portion of 14 percent of total health expenditure is spent for prevention, including the National Health Programs (World Health Organization, 2013). Majority of health expenditure is spent for curative care. The government allocates its fund for health facilities by budget line items, based on the inputs such as the number of beds and the level of the hospital. In general, government fund accounts for 32 percent of public hospital revenue (Ministry of Health Viet Nam, 2013a), mostly used to pay for the salary of health staffs. In case of purchasing new medical equipment or constructing new buildings, the government would allocate extra funding for the hospital.

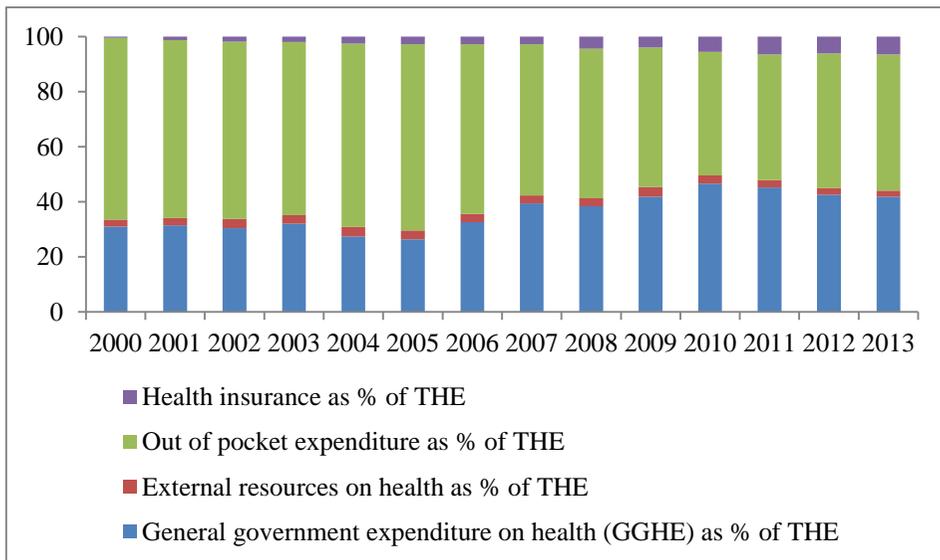
The national health insurance program is considered an important tool to financially protect the patients as health sector is being privatized. Government financial subsidy for the supply side has been shifted to the demand side. Accordingly, the government budget for public hospitals to subsidize for the user fee has been reducing. At the same time, the government full paid for the contribution of the national health insurance for the poor and 80 percent for the “near poor”. Although the national health insurance program has covered 70 percent of the population (2013), it accounts for 37 percent of general government expenditure for health but only 7 percent of total health expenditure (World Health Organization, 2013). Out-of-pocket payment has been reducing but still accounts for almost half of total health expenditure (2013) (Figure 4).

**Figure 3. Government expenditure for health**



Source: Global Health Expenditure Database, World Health Organization, Access date: 14<sup>th</sup> September 2015

**Figure 4. Health expenditure by sources**



Source: Global Health Expenditure Database, World Health Organization, Access date: 14<sup>th</sup> September 2015

### ***1.2.3. Human resources for health***

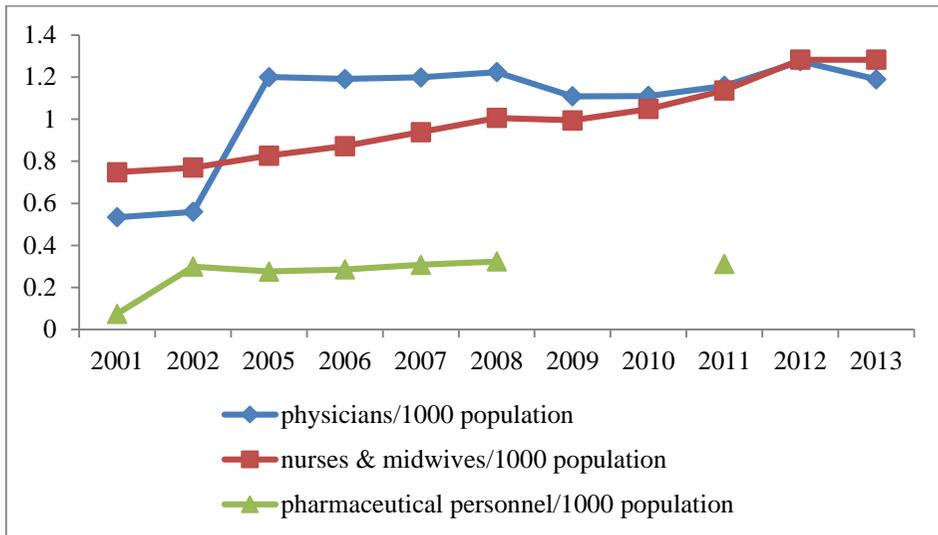
Human resources for health in Vietnam have been increasing in both absolute term and density (Figure 5). Compared to the cutting point of 2.5 health professionals over 1000 population suggested by the World Health Organization, Vietnam is still facing a shortage of health workforce (World Health Organization, 2006). There is a mal-distribution of human resources for health as only 21 percent of health professionals are working at commune level (Ministry of Health Viet Nam, 2013a). Every year, there are about four thousand medical students join the health labour market. Among 21 medical universities nationwide, there are 12 medical universities located in Hanoi, and three medical universities located in Hochiminh City (Ministry of Health, 2009). However, there are 35 secondary medical schools, which train nurses, midwives, and health technical workers, are located in 35 different provinces all over the countries. These secondary medical schools belong to the provincial government while most of medical universities belong to the Ministry of Health and Ministry of Education and Training.

Following the health sector reform, new policies on human resources for health were introduced. Previously, the government subsidized full training costs for medical training. Therefore, the government could

allocate the fresh graduates to ensure the balance of expertise in different geographical areas as well as levels of care. As the government controlled tightly both pre-service training and service participation (Buchan & Weller, 2013), fresh graduate medical students must have followed the allocation of the government to any places. On the other hand, they did not have to worry about getting a job after graduation. However, since early 2000, the government has loosened its control over the health labour market by reducing the subsidy on medical training and giving up the allocation authority on medical fresh graduates. Instead, the students have to pay partial tuition fees. The government still partially subsidizes for the training costs and imposes the quota for accepting students in public medical schools and universities. Annually, there are about four thousand newly accepted medical students nationwide (Ministry of Health Viet Nam, 2013a). These days, after graduation, medical students have to find a job on their own and most of them prefer to stay at urban areas, causing a mal-distribution of human resources for health in the country (Vujici et al., 2011). An effort to balance the distribution of human resources for health is to rotate public hospital doctors working at higher level of care to doctors working at lower levels of care for a period of six months to transfer clinical skills and build capacity for lower levels of care (Decision

of Health Minister, 2008). However, little has been known about the effectiveness of the health worker rotation policy so far.

**Figure 5. Density of health workers in Vietnam**



Source: Global Health Observatory Database, World Health Organization, Access date: 14<sup>th</sup> September 2015

The training program of medical university has several grades. In order to be titled as “physician” and able to practice, a six-year training program in the medical university must be completed. The internship is integrated in these six years. Medical students usually have to work full-time as “intern” at least one year in the hospitals. There is no national examination for medical students to get the practicing license. Once the medical student meets all the requirements of the medical university for graduation, he/she would be entitled as “physician” and can practice immediately.

Consequently, the first level of qualification for physicians is “medical doctor”. After obtaining the “medical doctor” degree, the physician can pursue further study. In the medical education system in Vietnam, the further training for physicians includes: master program, specialized doctor level 1, specialized doctor level 2, resident, and doctor of philosophy in medicine. In Vietnam, the medical master program is not always clinical related but rather epidemiology or public health. The *specialized doctor* (level 1 and/or level 2) focuses on clinical skills only, whereas each level takes two or three years to complete. The specialized doctor level 2 has longer training period as well as deeper technical knowledge and clinical skills than specialized doctor level 1. The physician must have the specialized doctor level 1 degree in order to be able to pursue specialized doctor level 2. These specialized training is not eligible for general doctor. However, the *resident* program is open for both general and specialized physicians. The resident training takes at least three years with full 24 hours a day staying in the hospital. Accommodation inside the hospital campus is given to them. Usually, in Vietnam only top 5-10 percent of medical university graduate are accepted into resident program. In terms of qualification, the *doctor of philosophy in medicine* is the highest qualification in Vietnam. Similar to other fields,

the doctor of philosophy in medicine must be able to implement research project and have publications as part of graduation requirements.

Permanent physicians are paid by the government graded salary system. The grade is multiplied with an absolute amount of money decided by the government. Physician's grade is decided mostly by qualifications and years of experience. Physicians holding management positions have additional pecuniary benefits. Other fringe benefits can be earned through overtime working hours, night shift, working in disadvantaged areas etc. The normal salary grade adjustment cycle is three years and applies to everyone regardless of the quantity and quality of services they provide. Previously, the whole income of the physicians was paid by the government through the public salary fund for civil servants. However, the current reform has reduced the government subsidy. As a result, the government only pays partial of the basis salary and fringe benefits while the rests are paid by the hospital. Contracted physician has similar salary structured but fully paid by the hospital. Apart from that, the physicians receive extra income from the autonomous fund earning through the private ward of the public hospital. Different hospitals have different arrangement for using the revenue from the private ward. In most cases, this fund is divided equally to all the staffs of the hospital, including the

administrative staffs and clinical-related staff regardless of the fact that these staffs involved in delivering the services at the private ward or not.

### **1.3. Public hospital reform**

Influenced by the Semashko health care system of Eastern European countries the health care service delivery system in Vietnam is dominated by hospitals compared to preventive medicine. The system is characterized with a large portion of hospitals owned and managed by central and local governments. Health care is principally divided into different layers, focusing on developing a network of specialized hospitals such as hospitals of cardiovascular, tuberculosis, and paediatrics etc. Acute diseases and hospital-based services are more emphasized than primary care and preventive medicine. This system seems suitable for acute care and infectious disease patterns during the war time (Joseph et al., 2011). However, as socio-economic changes, morbidity pattern also changes with the increase of chronic diseases. Medical technology keeps developing rapidly. The people have better income, allowing them to have more various demands for health care services. The Semashko system has shown many short-comings with the lack of resources and performance incentives. As a result, private health sector has been encouraged to develop to reduce the burden for the public system.

The reform of public hospitals in Vietnam focuses on four main aspects: ownership, governance, financing, and personnel. The policy was initiated in early 1989 with the introduction of hospital user fees. Previously, public hospitals were fully subsidized by the government from general tax. Patients did not have to pay for health care services provided at public hospitals. However, with the economic crisis in the mid-1980s, the government budget could no longer fully subsidize for health care services. Therefore, the health care costs have been shared with the patients through hospital user fees. The hospital user fees are not full costs for covering only medical consumables, medicine, and utility. The other costs such as capital costs and labor costs are covered by the government. The national health insurance program was initiated in 1989 and has been expanding very fast in recent years. Up to now, it has covered 70 percent of the population. The national health insurance reimburses 80 – 100 percent the user fees set by the government. Therefore, instead of receiving only the financial resources from the government, public hospitals have been receiving revenue from three main sources: government budget, national health insurance program, and patients' out-of-pocket payment.

The *hospital autonomy* policy, initiated in 2002, has significantly changed the governance, personnel, and ownership of the public hospital. The

policy provides more decision making powers for the hospital director in planning and managing on finance, personnel, and administration. The day-to-day decision rights are shifted from the government to the hospitals. Previously, public hospitals were paid by line-item budget by the government. The hospital directors could not use the funding of a specific item for another item interchangeably. However, the hospital autonomy policy allows the hospital director to make financial resources allocative decisions on which sources of revenues would be used for what cost items and activities. In addition, as the government subsidy for public hospital reduces, the government encourages the private sector to invest in public hospital, creating a public-private mix in the ownership of the hospital (Government Decree, 2006). The government allows public hospital to establish the so-called *private ward*, creating a dual system of service delivery within one public hospital: *public ward* and *private ward*. The public ward operates as a normal public hospital, whose inputs are subsidized by the government and the user fees are decided by the government. The private ward is invested by non-government fund. The investment capital for the private ward could be from the permanent physicians/staff of the public hospitals and/or other private companies (Government Decree, 2006) and/or borrowing at commercial banks (Government Decree, 2012). The user fees at the private ward are decided

by the hospital director with the approval of the Head of the Provincial Health Department (for provincial and district hospitals) or the Minister of Health (for central level hospital). Even though, the basis to set up user fees at private ward are market price, not subsidized prices as in the public ward. A fixed portion of income at the private ward is transferred to the general budget of the hospital to be used as incentives for all the staff of the hospital. The hospital director has full autonomy in using the income residual of the private ward. Usually, it is used to pay incentives for permanent staff, to contract to new staff, purchase medical equipment, and pay dividends for investors. The government received 10 percent income tax from the private wards of public hospitals. Therefore, the private wards are functioning like for-profit private hospitals embedded inside the public hospitals.

Public hospital physicians and staffs are no-longer civil servants. They are now government officers, who still have the life-long secured labour contracts. However, the government graded salary is not fully paid by the government but shared between the government and the autonomous fund of the hospital. The quota of permanent staff is decided by the government. However, the hospital director can recruit, lay-off, and offer various

benefit packages for contracted staffs using the hospital autonomous fund. Even though, the hospital director is appointed by the government.

The dual service delivery system within the public hospital has created *public patients* and *private patients*. Public patients are those who seek care at the public ward of the public hospital, where the user fees are partially subsidized and decided by the Ministry of Health. Private patients are those who seek care at the private ward of the public hospital the user fees are full costs and decided by the director of the public hospital. The national health insurance program reimburses for both public and private patients if they are enrolled in the program. However, the reimbursement rate is based on the user fees set by the Ministry of Health. Therefore, public and private patients have to pay different co-payment rate even for similar services (Do et al., 2014).

Health care services provided at the private ward are not more advanced than those provided at the public ward. Rather, most of them are outpatient and sub-clinical services. Complicated surgeries are implemented at the public ward as the equipment is usually expensive, which cannot be afforded by individual or groups of physicians or have low rate of returns for other private investors.

Since 2012, the corporatization of public hospitals in Vietnam has reached an important milestone as they are encouraged to operate like enterprises. Public hospitals can operate like joint-stock companies, earn interest, and pay income tax for the government while still can keep the public name (Prime Minister Stipulation, 2014). The ownership of the hospital is shared among the government, private companies, and even individuals. The government is reducing its subsidy for public hospital even for labor and capital costs. Accordingly, by 2018, there would be only one user fee system, using the full-cost user fees based on market price (Government Decree, 2012).

In reality, the level of autonomy of hospital is quite different. Some big hospitals at big cities have full level of autonomy, where the hospitals can manage both operational and development costs. In these hospitals, the hospital directors have the full autonomy in purchasing new medical equipment of constructing new buildings. However, some other hospitals can manage fully or partially only the operational costs. The investment decision for equipment and construction is made by the government as the government will pay for these costs. Some small hospitals located at rural areas are having low level of autonomy as they have no capacity to

manage operational costs. In this case, the government still heavily support for these hospitals.

## **2. Physician dual practice in Vietnam**

A survey in 2003 shows that more than 80% of public-sector physicians in the rural areas are reported having a private practice (Dieleman et al., 2003). A portion of 70% of the manpower of the private health sector is holding primary positions at public hospitals (USDAID, 2009). However, little has been known about the dual practice of public hospital physicians in recent years, especially of physicians in urban areas.

The private health care practice has a long history in Vietnam. The Vietnamese people have a culture of visiting health clinics or individual physician nearby the residency whenever getting sick. Many physicians provided consultation for free to their neighbors and advised them to buy medicine at pharmacies. However, some physicians charged some consultation fee. The practice was developed based on the mutual trust between the physician and the patients. Some of the consultation had been made by non-physicians, especially for traditional medicine services. There was no regulation for this kind of practice until the year 1987. Accordingly, the government allowed the public hospital physicians to

provide private practice after official working hours of eight hours a day and six days a week (Ministry of Health Viet Nam, 1987). Physicians could practice at their private specialized clinics outside the official working hours. They could also provide services in the hospital where they were officially employed and patients paid out-of-pocket money for the services received. Retired physicians and physicians of other public hospitals could participate in this practice. In reality, most of the dual practitioners at that time practiced at their own clinics. Usually these clinics were at the house of the physicians. Hospital physicians could receive patients, provide medical services, and collect user fees without being regulated. People visited these clinics for convenience as they were near their home and open after working hours. Most of the services provided at the private clinics back then were simple procedure such as abortion, IUC for birth control, transfusion, and tonsillectomy.

The private practice has been further regulated by the Law on Private Medical and Pharmaceutical Practice in 1994. Private health facilities such as hospitals or clinics are encouraged to establish. They must be registered under the name of at least one physician. The small clinic of an individual public hospital physician must also be registered. As a result, public hospital physician can provide private practice at private health facilities

outside the public hospital. In this case, the registration would be clearly written that the clinic operation time is outside official working hours (before 8am and after 5pm). If the private health facilities have a contract with the national health insurance program, the covered services can be reimbursed for insured patients (National Assembly, 2008).

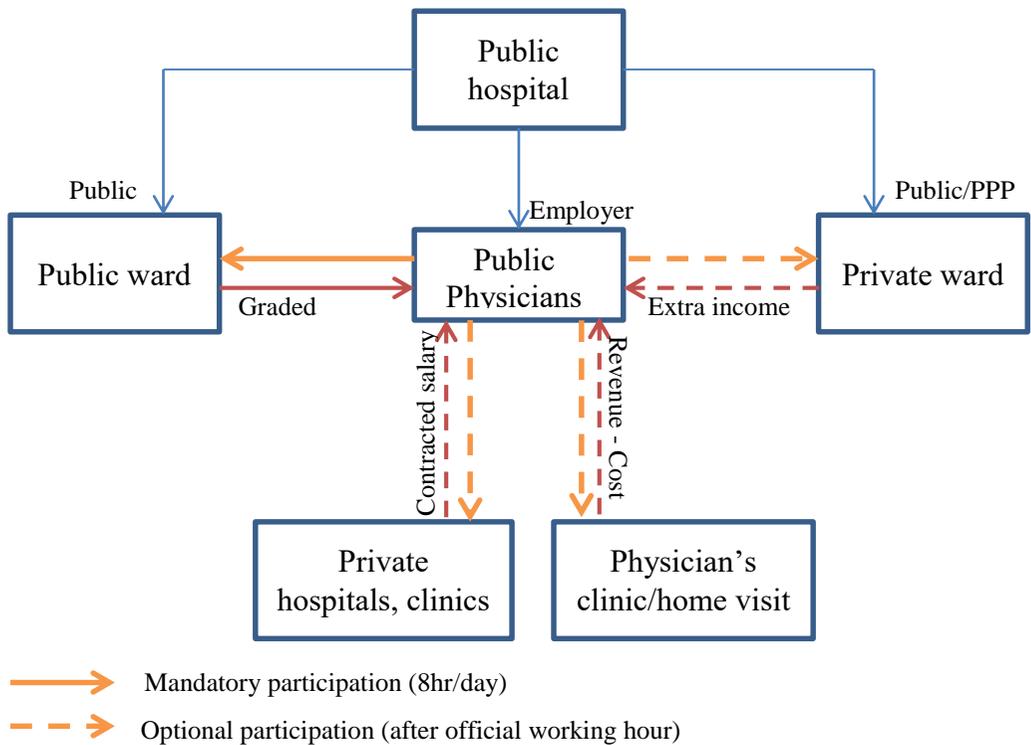
The hospital autonomy policy has brought the private practice into the public hospital. As described earlier, the revenue from private ward is an official source of income for the hospital. The physician can practice at both the public and private ward within official working hours. Therefore, after official working hours, the physician can provide other types of private practice such as home visit and private hospital/clinic. Figure 6 describes the public-private working arrangement of public hospital physicians in Vietnam. The public physician is employed by the public hospital and he/she can practice at other private hospital/clinic (National Assembly, 2003). In this case, the dual practitioner receives salary from the public hospital where he/she is full-time employee and extra income from private practice based on the negotiation between the individual dual practitioners and the private institution. The payment for the physician is based on the amount of revenue that the physician can earn for the health facilities. The higher the revenue is generated, the higher individual

income the physician can get. If the private practice of the dual practitioner is at his/her own clinic or visiting patients' house (National Assembly, 2003), the physician will receive all the difference between the revenue and costs of the services provided. As a result, the more services are provided, the higher revenue the physician can earn. In other case, the dual practitioner can practice at both public ward and private ward of the public hospital where he/she is employed (Government Decree, 2006). In this case, the income from private practice is decided by the director of the public hospital, mostly on production basis, whereas the higher private revenue generated, the higher individual income the physician can receive. Therefore, regardless of the types of private practice that the physician participated in, the higher volume of services provided, the physician can get higher income.

Dual practice of public hospital physician in Vietnam is allowed under a weak and fragmented legal environment. There has been no practicing license for both public and private physicians. Graduates from medical university are automatically eligible for clinical practice. Likewise, there has been no accreditation system for education and training in Vietnam. As a result, the quality of medical training as well as the qualification of physician is hardly ensured. Additionally, the legal framework as well as

technical guidance on hospital quality assurance is very patchy (Oanh et al., 2015). It is very difficult to identify the responsibilities when medical malpractice happens. The story told below is one of the evidence for that.

**Figure 6. Types of dual practice in Vietnam**



In October 2013, a medical malpractice happened in a private cosmetic surgery clinic operated by a public permanent employed surgeon caused one death. The patient visited the clinic around 3:00 pm (which was still official working hour) for a cosmetic surgery and died at around 4:00 pm as she did not wake up after anesthesia. The surgeon then threw her dead

body into the river pretending knowing nothing. Only when the patient was reported missing to the police by her family, the case was revealed to the public. The whole society was shaken by the news for the immoral action of the surgeon. Investigation showed that the private clinic had not been licensed though it was located right at one of the busiest street in Hanoi for three years with a huge signboard. The surgeon was a very famous physicians working in one of the biggest public central level hospital in Vietnam. He was given into custody for causing death, while the fact that he had been practicing privately without license was not accounted. Practicing at a non-licensed clinic only costed him a cash-out penalty as the clinic license is more similar to a business license providing a tax number for the clinic.

The case has shown a huge hole in the legal system related to medical practice in Vietnam. The issue of how to regulate dual practice of public hospital physicians was boiling very hot in the society at that time, urging the policy makers to pay closer attention. However, the understanding on the issue was limited for lacking scientific evidence. Therefore, research related to this topic became very sensitive to dual practitioners and public hospitals as it directly connected to their fame and income. Even though, under the pressure of the public, the government needs more

comprehensive information on physician dual practice from the types, scales, impacts, and regulation. As a result, this research does not only contribute further understanding on dual practice to the academia but also response to the practical needs of the government of Vietnam.

### **3. Literature review on physician dual practice**

Concerning the definition of physician dual practice, there has been many different ways of understanding the concept. Dual practice of health professionals can be understood as a practitioner with multiple medical specialties or working with different paradigms of health (Ferrinho et al., 2004). It is also used to describe health professionals who combine clinical practice with other health-related activities such as research, teaching, or management (Johannessen & Hagen, 2014). The combination of clinical practice with other economic activities not related to health is also considered as dual practice (Ferrinho et al., 2004). In most of the economic literature, dual practice is referred to the phenomenon that health professionals provide health care services in both public and private health facilities for personal profit or as a part of profit-sharing arrangement with the relevant government authority (Eggleston & Bir, 2006; García-Prado & González, 2007; Ranson et al., 2010; Socha & Bech, 2011).

Consequently, there are different arrangements of dual practice of health professionals (Garcia-Prado & Gonzalez, 2006; Ferrinho et al., 2004). Dual practitioners can provide the services “within” or “outside” the facility of the main job (Russo et al., 2013). In Austria, France, Ireland, and Italy, public hospital doctors can earn additional income from treating patients at the private ward of the public hospital (Wiley, 2005; Stepan & Sommersguter-Reichmann, 2005; France et al., 2005; Bellanger & Mosse, 2005). Australian medical specialists, who are employed by public hospitals, can provide services for private patients inside the public hospital or at their private clinics outside (Cheng et al., 2013). Physicians in the United Kingdom can be contracted part-time with a public hospital and part-time with another private hospital simultaneously or full-time at a private hospital and part-time with the other public hospital (Humphrey & Russell, 2004). The public-private mix arrangement is observed more frequently in Eastern European countries and developing countries such as Nepal, Bangladesh, China, Vietnam, where salaries of health professionals are relatively low (Healy & Mckee, 1997). Accordingly, health professionals often hold a permanent position in a public hospital and practice privately at other private hospitals or their own clinics.

### **Scope of dual practice**

Dual practice is commonly observed in both developed and developing countries. A survey in the early 2000s in Europe revealed that 87 percent of public hospital physicians reported having at least two jobs (Macq et al., 2001). In the United Kingdom, as large as 63 percent of National Health Service physicians participated in a private practice simultaneously (Humphrey & Russell, 2004). Results of the Spanish Labor Force Survey indicated that 20 percent of physicians and dentists were multiply employed (Dolado & Dolado, 2008). In Denmark, 43.3 percent of Danish public hospital physicians called themselves dual-job holders (Socha & Bech, 2011). Recently, a study in Norway showed a decreasing trend in the dual practice participation from 31.5 percent in 2001 to 25 percent in 2009 among male physicians and a decrease from 17.6 percent in 2001 to 14.2 percent in 2009 among female physicians (Johannessen & Hagen, 2014).

In developing countries, information on physicians' dual practice is relatively fragmented. The Indonesian Family Life Survey in 1993 showed that 80 percent of public sector physicians reported participating in private practice (Eggleston & Bir, 2006). In Thailand, a portion of 67 percent of surveyed 1,808 Thai public sector physicians practicing in the private sector (Prakongsai, 2003). Approximately 10,000 physicians among all

20,165 publicly employed physicians in Peru are working for the private health sector simultaneously (Söderlund et al., 2003). In Vietnam, 84 percent of public health doctors in rural areas are reported to take on private work due to poor conditions of employment (Dieleman et al., 2003). Even though, some data are vague as the sources of data are not well presented. For example, it was estimated that the rate of government doctors engaged in private practice in Bangladesh was 80 percent (Gruen et al., 2002), even though the data source was not identified.

Despite its commonality, the information on the scale of physician dual practice is surprisingly limited. Most of the reports provide no more than a glimpse of the scope of dual practice (Hipgrave & Hort, 2013). Majority of surveys are local and fragmented. Additionally, data are old and incomplete. Many of the surveys were implemented more than a decade ago, especially in developing countries.

### **Motivation of dual practice**

The motivation of dual practice comes from both system level and individual level. In developing countries, the rapid socio-economic changes as well as the growing demand for health have led to structural health sector reforms. As demand for health services increases, the government can no longer fully subsidize for the health services.

Therefore, the public health sector is overworked and underfunded, creating a supply gap for the private sector to develop (Bloom et al., 2008). The public-private mix is considered as a key policy in many health-sector reforms. In addition, the weak monitoring system and low probability of official sanctions have emerged the trend of public health professionals selling their services in an unorganized private market (Bloom & Standing, 2008). In developed countries, the availability of necessary health care services is ensured by the government. On the other hand, the private sector provides additional choices in both quantity and quality for those who can afford to pay. The private sector usually has more modern equipment and technology compared to the public sector. As a result, physicians are attracted to the different experience and working environment in the private sector (Johannessen & Hagen, 2014).

At the individual level, the main incentives for dual practice participation is income (Gruen et al., 2002; Humphrey & Russell, 2004; Brekke, 2007; Eggleston et al., 2008; Kankaanranta, 2008; Ensor et al., 2009; Yavuz, 2010; Sherr et al., 2012; Askildsen & Holmås, 2013; Johannessen & Hagen, 2014). Health workers usually engage in dual practice or informal payments to supplement income or drop out of the public sector because of poor working conditions and low remuneration (Hongoro & McPake,

2004; (Van Lerberghe et al., 2002; Gruen et al., 2002; Jumpa et al., 2007). Two third of publicly recruited Indonesian midwife income is from private practice (Ensor et al., 2009). Income enhancement is the first hand incentive for dual practice uptake in the United Kingdom although it only accounts for 15 percent of income from the National Health Service (Humphrey & Russell, 2004). Even though, health professionals are still committed to the public sector, which pays less, and not working full time at private facilities, which pay more. The public practice fulfills their social responsibilities, self-realization, professional satisfaction, an opportunity to contribute to the community (Ashmore & Gilson, 2015). Additionally, public practice provides many training opportunities. English physicians and specialists participated in private practice to enhance the use of professional skills and clinical autonomy, broaden professional contact and peer approval, access to alternative facilities and equipment, and expose to greater flexibility of private practice (Ferrinho et al., 2004; Garcia-Prado & Gonzalez, 2006; Jumpa et al., 2007). Senior Norwegian physicians moonlight because of the high workload and stressful working conditions at public hospitals (Askildsen & Holmås, 2013). They are seeking for the professional satisfaction and self-realization, which are not always gained in the public hospitals (Macq et al., 2001).

## **Effects of dual practice on health system issues**

Literatures consents that there is not enough evidence on the impacts of dual practice on the health systems. Most of the literatures are normative while empirical evidence is limited. Existing knowledge is consistent that dual practice has both positive and negative impacts on the health system.

### ***Dual practice vs. quality of care and access to care***

Dual practitioners have the incentives to provide good services in the public practice to earn good reputation to have more private patients (González, 2004). On the other hand, dual practitioners are suspected to purposely provide low quality in the public practice to encourage opting out of public patients to seek for private practice (Gruen et al., 2002; Jan et al., 2005). Some empirical evidence has been found on the difference in the way public and private patients are treated. In the United Kingdom, there has been a correlation between private practice income of public physicians with the waiting lists in the National Health Service system (Morris et al., 2008). Within the context that the specialists own and manage the waiting lists of patients, the involvement in private practice can cause some “conflicts of interest” to give priorities for the private patients, who provide extra income for the National Health Service

specialists (Morga & Xavier, 2001). In Australia, private patients have fewer waiting days than public patients as well as have more hours in ICU and more procedures performed during the hospitalization periods compared to public patients (Shmueli & Savage, 2014).

### *Dual practice vs. the demand and supply of health services*

As the ultimate motivation of the dual practitioners is to increase the demand for private practice, dual practice might cause demand induced by supply and self-referral of public hospital physicians (Bir & Eggleston, 2003). In addition, dual practitioners cream-skim patients to transfer the low severity or low risk patients to private practice, leaving the severe patients in the public practice (Barros & Olivella, 2005; González, 2005). By doing so, crowdedness at the public practice might be reduced, providing more chances for public patients to access to public services as well as high quality services from altruistic physicians (Delfgaauw, 2007). However, insufficient concrete evidence is found on the impacts of the “sorting of patients” to verify whether the poor utilizes more services at public facilities while the affluent utilizes more services at private facilities. The adverse behavioral reactions of the dual practitioners are assumed to be positively linked with the profits from the private practice (Biglaiser & Albert Ma, 2007). However, using a dataset on the choice of

public versus private primary health care of Indonesian patients, Bir and Eggleston (2003) conclude that the choice to utilize the service in the private sector cannot be well-explained by the difference in quality between public and private practice, especially for poor patients. The choice of the patients does not relate to self-referral, rather, it is the initial decisions of the patients on where to seek health care (Bir & Eggleston, 2003).

Many policy makers believe that dual practice is a way to increase the supply of health care services. As human resources for health are limited, additional working hours after official working time are extra supply of health care services (Johannessen & Hagen, 2014). A study of the World Bank in Indonesia found a significant increase in the supply of health services even in rural areas when encouraging dual practice although it was not clear how the time was allocated for public and private practices (Rokx et al., 2010). On the other hand, moonlighting is considered the cause of absenteeism in many countries such as: Bangladesh, Ecuador, India, Indonesia, Peru, and Uganda (Chaudhury et al., 2006). It reduces the availability of health professionals in the public hospitals, and therefore, reduces the access to care of public patients (Van Lerberghe et al., 2002).

### ***Dual practice and physician's retention in the public sector***

Dual practice is also considered a stepping stone for physicians to leave the public sector, whereas, dual practitioners use extra income from private practice to cover public-to-private or international migration costs (Chikanda, 2006). The public-to-private, rural-to-urban, and cross-border brain drain of health professionals exacerbate mal-distribution of human resources for health (Muula & Maseko, 2006; Van Lerberghe et al., 2002). On the other hand, Bir and Eggleston argue that dual practice is the most effective policy for low income countries to keep high qualified specialists in the public sector and prevent public-to-private drainage of health workforce (Bir & Eggleston, 2003). In the midst of the controversy, Ashmore (2015) concludes that the relationship between allowing dual practice and retention is complex and context-based. Different environments will provide different incentives to health workers as well as different reactions of health workers (Ashmore & Gilson, 2015).

### ***Dual practice and inefficient use of public resources***

Dual practice is often associated with the unauthorized use of public sector resources such as medical supplies, equipment, means of transportation, office infrastructure, and support personnel of the public hospitals

(Eggleston, 2006; Jan, 2005; Bir, 2003). In countries where private practice is allowed to operate within public hospital such as France, there has been free-ride of public facilities for private practice (Ferrinho et al., 2004). Physicians can see their private patients in the public hospitals and use the facilities of the public hospitals to produce extra income while the depreciation of the equipment is on public budget. As a result, the public resources for health is wrongly used while the patients' out-of-pocket money would not be reduced (Kornai & Karen Eggleston, 2001).

### **Literature gap**

Although much discussed in the literature, few empirical studies exist on physician dual practice, especially in low-income countries. There is a lack of national level data on the scope of dual practice. Available data are old and fragmented from local surveys. Most of the studies are normative while empirical evidence is limited concerning the difficulty in approaching physicians to explore the phenomenon. Especially, in low and middle income countries, where not only data are difficult to capture but the situation on the ground is changing rapidly as well. The common methodology used to investigate the incentives of dual practice participation is qualitative interview. Quantified evidence from large and diversified sample size is still limited.

Several studies have shed a light on the impacts of dual practice on several health sector issues such as quality of care, health service demand-supply, and access to care. Findings are various from different studied settings as well as different time. It is known that dual practice has both positive and negative influence on the labor supply, on the behavior of public physicians, as well as on the distribution of health professionals. Therefore, it is necessary to implement further studies on dual practice, especially in the settings where health sector reforms are being focused.

So far, literature has not been deeply digging the impacts of dual practice on the performance of public physicians. Furthermore, the acceptability of dual practice in the society is still a grey area. Stake-holders' views, especially service providers and users, on the phenomenon as well as the regulation are not yet studied. Some studies conclude that banning dual practice does not work while allowing it without any regulation would cause many problems (González, 2004; García-Prado & González, 2007; Kiwanuka & Kinengyere, 2011; Garcia-Prado & Gonzalez, 2006). Other than that, it is hardly known about the effectiveness of other policy options to regulate dual practice.

#### **4. Significance of the study**

In 2010, the World Health Organization published a special report identifying priorities in research for human resource for health globally, in which dual practice ranked the second most important and urgent human resources for health issues to be addressed to government as well as the research community. The report is not only the result of the academic research but also the discussions of policy makers in 24 countries as well as world top 15 leading experts. The report concluded that reducing dual practice and implementing suitable financial incentives were significant in improving the performance of existing health workers (Ranson et al., 2010). Understanding dual practice is crucial for achieving universal health coverage (McPake et al., 2015).

Vietnam has been making tremendous efforts to achieve universal health coverage by 2030 (*National Strategy for Protection and Improvement of People's Health 2011-2020: vision 2030*). A series of reforms have been implementing, including the national health insurance program, privatization of public hospital, and rotating public hospital physicians to rural areas. Allowing public hospital physicians to practice dually is considered as a tool to increase the supply of health services given the shortage of human resources for health. However, little has been known

about the situation of the issue in Vietnam. There have been no statistics on the prevalence of physician dual practice as well as understanding about the motivation of public hospital physicians in practicing in the private sector. Importantly, the influence of dual practice on the service delivery system is still unknown. Therefore, this study is timely important for the policy debate in the country.

## **5. Study objectives**

The main purpose of this study is to provide a comprehensive picture on the issue of public hospital physician's dual practice in Vietnam. As public hospital privatization is an important agenda in the health system reforms to achieve universal health coverage, the study aims at examining the impacts of the public-private mix service delivery system on the public-private mix of individual physicians. It objects to investigate the nature, the impacts, and the perspectives of service providers and users on dual practice. The motivation of individual public hospital physician in taking-up and giving-up private practice would be explored. Importantly, it would fill the literature gap by examining the impacts of dual practice on the performance of public hospital physicians i.e. how the dual practitioner allocates the time for public and private practice, how dual practitioner responses to patients, and how dual practice participation

impacts on their productivity at public practice. The perspectives of physicians and patients on the impacts of dual practice on the supply of public health care services as well as the regulations to regulate dual practice will be emphasized.

Since dual practice has not yet been systematically studied in Vietnam, policy makers would be better informed on the situation of physician dual practice in Vietnam. Experience of other countries in dealing with physician dual practice would be addressed to draw policy implications for Vietnam health system reformers.

## **CHAPTER 2: CONCEPTUAL FRAMEWORK**

Dual practice in this study is defined as the phenomenon that a public hospital physician who is supposed to work solely at the public wing/ward of the public hospital but also practice clinically for non-public practice inside or outside the public hospital. In case, the physicians also give lecture at medical university and/or participate in medical research under the assignment of the hospital director, they are not considered as dual practitioners within this study. Although these activities generate extra income for the physicians but they are not clinical activities. This study only concerns about the clinical practice.

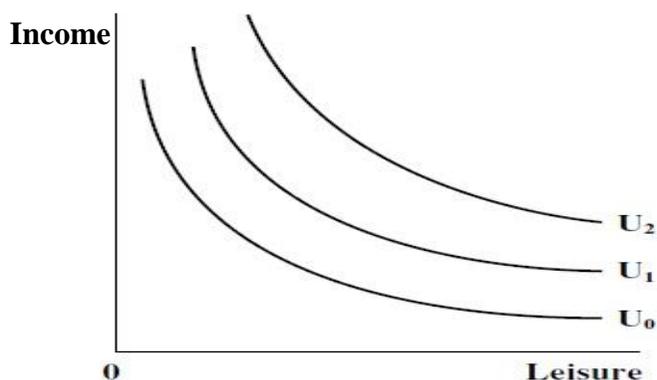
One of the core parts of the conceptual framework of this study is built on the work-leisure choice theory. Based on the conceptual framework, three research questions are developed to investigate dual practice of public hospital physician in Vietnam.

### **1. Work-leisure choice and physician dual practice**

The work-leisure choice model represents the individual choice of the physician to allocate the hours of work given the market opportunities and how the physicians values leisure (Lakhani & Fugita, 1993). Leisure

implies all “non-labour market activities”, including housework, education, as well as pure leisure activities such as travelling, watching movie, playing sport etc. The indifference curve is a downward slopping curve, mapping the preference of the individual between income and leisure (Figure 7). There is a substitutional effect on the choice of the physician as the higher the leisure time he/she wants to have, the lower the income he/she would get, and vice-versa, the higher the income the physician wants to have, the more leisure time he/she has to give up for additional income from work.

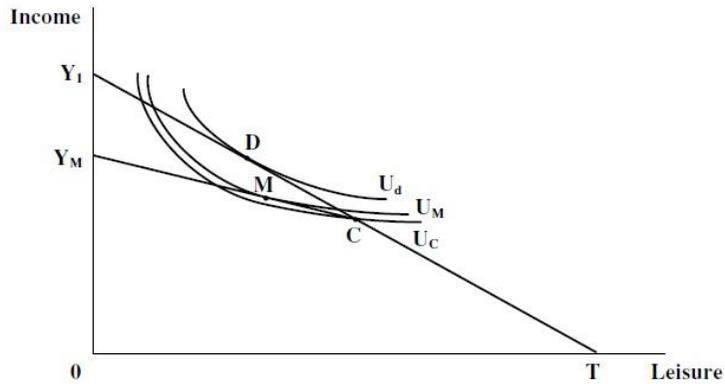
**Figure 7. Income-Leisure Indifference curves**



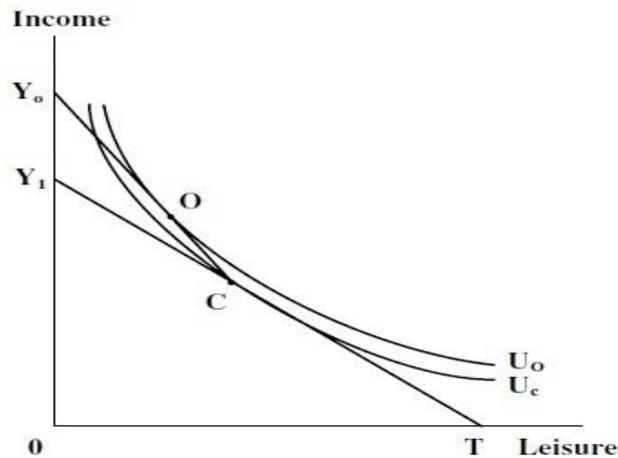
However, the preferences of the physicians are affected by a package of required working hours and fixed individual salary, creating an income and time constrains in the indifference curves of the physician (Robert Shishko & Bernard, 1978). Therefore, along the budget constrain line, the

individual is confronted with point C for a fixed hours and income “package” (Figure 8a). In case the physician does not satisfy with the income level from the public practice, he/she will participate in private practice to achieve the desired level of income. The physician would choose a private practice contract if the private income is equal or higher than the income leisure substitution effect (Sæther, 2005). The working time of the public practice limits at point C, however, the physician is willing to work more hours: at point D (Figure 8a). Therefore, starting from point C, the slope of the income-leisure line will change depending on the different of the incomes of the public practice and private practice. If the income of public practice is higher than that of private practice, the physician would spend less time for private practice and his utility is maximized at point M (Figure 8a). If the income of private practice is higher than the income of public practice, the physician will have a tendency to reduce public practice hours to exchange for private practice hours to reach point O (Figure 8b).

**Figure 8a. Work-leisure choice when private practice income is lower**

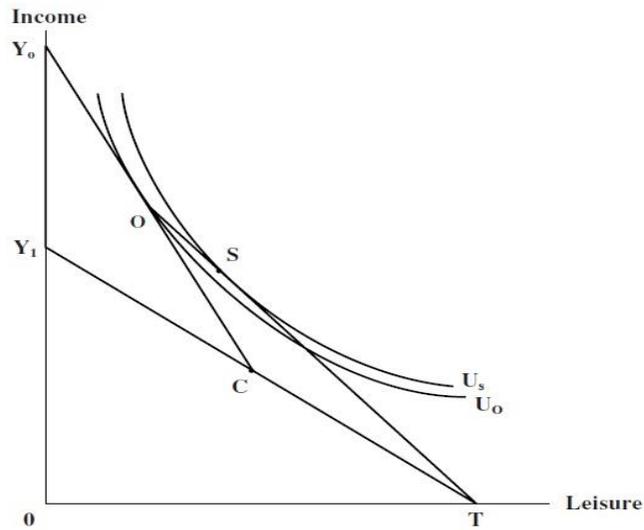


**Figure 8b. Work-leisure choice when private practice income is higher**



Even when the salary of the public practice increases, dual practice might still happen. It is the case when the public salary does not increase high enough to the desired level, the physician would still practice in the private sector if the income from private practice is high enough for the physician to give up his leisure time (Figure 8c).

**Figure 8c. Work-leisure choice when public practice income increases**



## 2. Conceptual framework

Figure 9 describes the conceptual framework of this study. As described in chapter 2, the demand for private health care services has been increasing very fast in Vietnam as the economic growth and the increase of the coverage of the national health insurance program. However, the supply seems not ready for such an increase in demand, creating an opportunity for the private sector to robust. Several policies have been introduced to regulate the operation of private health facilities as well as the private practice of physicians. In the situation where there has been a lack of human resources for health, Vietnamese public hospital physicians are allowed to provide services for both public and private sector. It is the physician's personal decision of whether to practice only for the public

sector or provide the services for both the public and private sector. The public-private mix of the health service delivery system has created different combination of public-private practice of physicians.

In the given market opportunity, the participation into private practice of public hospital physicians can be influenced by the physician's individual characteristics (Ashmore & Gilson, 2015; Shmueli & Savage, 2014). Young physicians might not be interested in the private practice because they want to spend more time on career development rather than getting more income. In addition, being younger means fewer years of experience as well as less professional fame and connections. These factors might influence on both the willingness and chances to dual practice participation. On the other hand, older physicians, especially those with high qualifications and professional positions in the hospital, tend to have higher opportunities to participate in dual practice. They would also be very attractive to private hospitals and clinics and private patients as believed to have good command of professional skills and large professional network. Single physician with no dependent would also have less pressure in earning extra income. Likewise, physicians with higher number of dependents would have higher motivation to earn more income to support these dependents (Baah-boateng et al., 2013). Being married

might reduce the available time for private practice, especially for female physicians (David Allen, 1998). In a society like Vietnam, although both male and female join the labour market, female doctors might have more responsibility with housework and take care of children as well as the elderly in the family. As the government encourages the private sector to develop specialized services, specialized physicians seem to have more chances in private practice compared to generalized physicians.

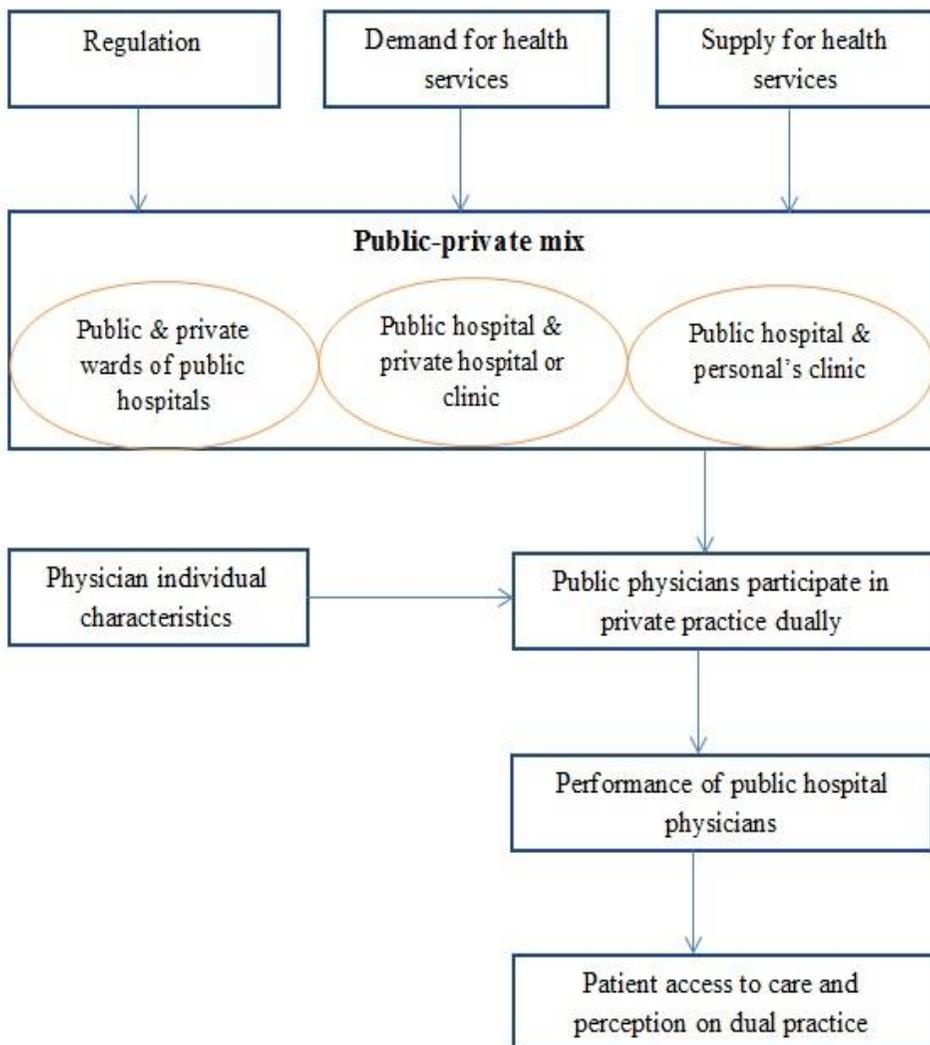
Following the work-leisure choice theory (as described above), the participation into both public and private practice would have some impacts on the performance of the physician. Being constrained by the official working hours (at least 40 hours a week), there would be substitutional effects of the trade-off between income and leisure as well as the choice of time allocation for public and private practice. Each person can only work at a maximum hours depending on physical health and preferences on leisure. After the eight-hour compulsory practice at the public ward, the physician can moonlight up to the hours that his physical and emotional conditions allow. Therefore, if the income from private practice is higher, the physician is likely to spend more time for private practice than public practice, reducing the time spent for public practice to have additional hours of work for the private practice (Robert Shishko &

Bernard, 1978). Hence, productivity (the number of outpatient patients seen and the number of surgeries operated) at public practice might also be impacted. Dual practitioners could refer more public patients to private practice to reduce the work burden at the public practice in order to have more time and physical capacity for private practice, which generates higher income. Moreover, such a referral is likely to increase the demand for private practice induced by the public physicians. Dual practitioners have higher motivation to refer public patients to private practice because this is a good source of private patients as well as income for them. As public and private patients are paying different co-payment rates and user fees, the responsiveness of physicians toward them would also be different. Additionally, in order to reduce the time for public practice, dual practitioners might ignore public patients to have more time for private patient. Public patients could be treated badly so that they would seek care at the private practice.

The performance of physician has direct impacts on the access to care and the perceptions on the impacts of dual practice on the health system. The absenteeism at public ward limits the chances to access to public health care services of public patients. In addition, the attitude and the ways patients are treated would impact on their decisions to utilize the public

services. As a result, it would influence on the acceptability of patients on dual practice as well as the perceptions on the impacts of dual practice on the health service delivery system.

**Figure 9. Physician dual practice participation**



### 3. Research questions and hypotheses

Based on the conceptual framework, three research questions are developed to explore the dual practice of public hospital physicians in Vietnam.

*Research question 1: How do individual characteristics influence on the participation into dual practice of public hospital physicians?*

This question is answered through six hypotheses, testing the relationship between physician's individual characteristics and the decision of dual practice participation.

**Hypothesis 1a:** Male physicians practice dually more than female colleagues

**Hypothesis 1b:** Married physicians with higher number of dependent moonlight more than single physicians with less dependent

**Hypothesis 1c:** Older physicians tend to practice in both public and private settings

**Hypothesis 1d:** Specialists are more likely to participate in dual practice than general doctors

**Hypothesis 1e:** Physicians with higher level of education are more likely to practice for both public and private sector

**Hypothesis 1f:** Physicians with higher position in the public hospital practice dually more than regular physicians

*Research question 2: How does dual practice impact on the performance of physicians at public hospitals?*

Performance is viewed at three dimensions: availability, productivity, and responsiveness. Testable hypotheses are developed as follow:

### **Availability**

**Hypothesis 2:** Dual practitioners spend less time at the public practice than non-dual practitioners

### **Productivity**

**Hypothesis 3a:** Dual practitioners consult less out-patient patients at the public practice than non-dual practitioners

**Hypothesis 3b:** Dual practitioners operate less surgery for public patients than non-dual practitioners

**Hypothesis 3c:** Dual practitioners refer more public patients to private practice

## **Responsiveness**

**Hypothesis 4a:** Patients perceive that dual practitioners spend less time consulting them than non-dual practitioners

**Hypothesis 4b:** Patients perceive that public patients have to wait longer for the examination results compared to private patients

**Hypothesis 4c:** Patients perceive that physicians have better attitude toward private patients than public patients

***Research question 3: How do physicians and patients perceive on dual practice?***

This research question is not explored by testable hypotheses. Rather it investigates the agreement of physicians and patients on certain perceptions on dual practice. There are two main themes of perceptions: impacts of dual practice on service delivery system and the regulations to regulate dual practice.

Specifically, perceptions on the impacts of dual practice on health service delivery are:

- Dual practice reduces the supply of public practice;

- Dual practice keeps public physicians in the public sector;
- Dual practice increases out-of-pocket payment;
- Dual practice creates the leakage of public resources for private practice.

Perceptions on regulations of dual practice are also explored:

- Dual practice should be banned;
- The types of health services provided by private sector must be regulated;
- Private practice must be licensed;
- The hours spent for public practice must be controlled;
- The private ward of public hospital must be closed;
- There should be ceiling prices for services provided by private practice.

## **CHAPTER 3: DATA**

### **1. Overview of the survey questionnaires**

Two sets of questionnaires were developed to explore the research questions. One set was used for physicians and the other was used for patients. They were then translated into Vietnamese. A pre-test was implemented with two Vietnamese doctors (physician's questionnaire) and two people (patient's questionnaire) for several reasons: 1) to estimate the time needed for each set of questions, 2) to testify how the participants would understand the questions, whether they were easy enough to understand or too ambiguous, and 3) to examine the sensitiveness of the questions and the willingness to answer, especially those related to income. Feedbacks from the participants were noted. The questionnaires were then revised and finalized before submitting to the Institutional Review Board (IRB) for approval.

#### **Questionnaires for physicians**

The questionnaire set for physician was designed to explore the physician's individual characteristics, performance, and the perspectives on dual practice. It had 38 questions with 5 sections. Section one investigated the general individual characteristics, including age, gender,

marital status, working experience, education and position at the public hospital where they are working. In this section, the physician was also asked whether they practiced dually in both public and private sector. If the physician reported himself/herself as a dual practitioner, further questions related to private practice (a separate section in the questionnaire eligible only for those who classified themselves as dual practitioners) would be asked as follow:

- Where do you perform private practice?
- How many hours per week do you provide private practice?
- How many outpatient cases you consult per week at private practice?
- How many surgeries you operated per week at private practice?
- How do private patients come to you?
- How much do you earn from private practice?
- What are your reasons for practicing in the private sector?
- What are your reasons for not giving up public practice?
- Are you willing to give up private practice? If basic salary increases? If housing benefit is given? If promotion opportunity is given?

If the physician reported not having private practice, a question to explore the reasons for not practicing in the private sector would be asked. In case the physician classified himself/herself as a non-dual practitioner but

provided information on the above mentioned questions related to private practice, their status would be changed to dual practitioner when coding.

The public practice of both dual practitioners and non-dual practitioners was explored in another section. Physicians were asked to provide information on the number of hours spent for public practice, the number of outpatient patients seen, and the number of surgeries operated per week. In addition, information on the referral of public patients to private practice was focused in the following questions:

- Do you refer patients to the private ward and/or private health facilities outside?
- How many patients do you refer a week?
- Do you discuss with them before referring them?
- Why do you refer the patients?
- Do you receive commission when referring the patients?

In addition, physicians were also asked the reasons why they were working for the public sector. This question was designed to examine the reasons that kept dual practitioners in the public sector. The physicians were also asked to provide information on the income including salary, fringe benefit, public hospital autonomy fund, refer of public patients to

private practice, income from private practice, and specification of other source of income.

The last section of the questionnaires was designed to investigate the perspectives of physicians on dual practice. Physicians were asked whether they agreed with the following statement on dual practice:

- Dual practice prevents the moving of public physicians to private sector
- Dual practice reduces the supply of services in the public sector
- Dual practice imposes the use of public resources for private sector
- Dual practice increases out-of-pocket money
- Dual practice creates conflicts of interest for public physicians who might send public patients to private practice

Furthermore, the agreement of the physicians on the following policy options to regulate dual practice was explored. They were also asked to specify other policy options that would be suitable and feasible according to their own opinions.

- Ban dual practice
- Regulate the types of services offered by private practice
- Require license for private practice
- Control the number of hours spent at public practice

- Close the private ward of the public hospitals
- Impose ceilings on prices charged at private practice

### **Questionnaires for patients**

The set of questionnaires for patients had 11 questions, exploring their perceived satisfaction on the services at public hospitals as well as their perceptions on dual practice of public hospital physicians. Concerning the perceived satisfaction, patients were asked the following questions:

- Do you care if the doctor seeing you today also practices at the private sector?
- Do you think that if the doctor practices dually, he/she will spend less time consulting you?
- Do you think that doctors discriminate public patients and private patients?
- Do you think that you have to wait longer at the public ward compared to visiting the private ward of this hospital?
- What do you think about the attitude of the dual practitioners? Treat all the patients nicely? Treat the private patient nicer? Treat the public patient badly? Other?

The perspectives of patients on dual practice were explored through the following questions:

- Do you think that dual practice reduces the supply of services in the public sectors?
- Do you think that dual practice increases inequality in access to care, especially less chance for the poor?
- Do you think that dual practice increases out-of-pocket payment?
- Do you think that dual practice provides more choices for patients in choosing the health care services?

Regarding the opinion on the policy options to regulate dual practice, patients were asked similar questions to physicians to examine whether there would be any similarity or differences in the perspective of service users and service providers.

## **2. Data collection**

### **Institutional Review Board (IRB)**

The study received ethical approvals from the Institutional Review Board (IRB) in both Korea (the hosting institute) and Vietnam (the research field). In Korea, Seoul National University College of Medicine awarded the IRB number C-1412-053-632 in January 2015 for the study. In Vietnam, I applied for IRB approval at the 175 Military Hospital. The IRB was awarded under the approval of eight IRB committee members of the hospital in February 2015.

### **Study site**

Urban areas were chosen as the research site of this study. There has been no published survey or information on the private practice of public hospital physicians in the urban areas so far. Moreover, the urban areas have all three levels of public hospitals (central level, provincial level, and district level) and a diversity of private health facilities in terms of both size and types. Therefore, the urban areas contain the availability of various health care services in both public and private sectors. Additionally, patients living in urban areas usually have higher level of education and income, allowing them to have higher ability to pay as well as higher level of knowledge to decide which services to be used. Therefore, the Northern part (provinces close to Hanoi, the capital) and the Southern part (Hochiminh City), where the urban rates are much higher compared to the middle part of the country, were selected. Another purpose of choosing different provinces, without focusing on Hanoi and Hochiminh City only, is to diversify the levels of urbanization.

The survey was implemented from December 16, 2014 to January 9, 2015. In the Northern part, the three studied provinces are: Haiphong, Hanam, and Thainguyen (figure 10). Haiphong (100km North-East away from Hanoi) is the second biggest city in the Northern part, famous for its marine industry. The province has 1.88 million people (GSO, 2014).

Thainguyen is 60km North-West away from Hanoi. It is known for the steel industry. The province has 1.14 million people (GSO, 2014). Hanam is an agriculture province, located 50km South-West away from Hanoi with a population of 0.79 people (GSO, 2014). In the Southern part, only Hochiminh City participated in the study. Hochiminh City is the second biggest city in Vietnam with a population of 7.5 million people (GSO, 2014). Hochiminh City is the economical hub of the country with many trading and industrial activities.

Figure 10. Map of Vietnam



## **Data collection procedure**

To approach the public hospital for data collection, there must be the approval of both management organization (the Ministry of Health and Provincial Health Department) and the director of the public hospital. Without the support of the Ministry of Health and/or Provincial Health Department, the hospital director might hesitate to allow the survey to be conducted within the hospital. However, even when the Ministry of Health or the Provincial Health Department is positive, the hospital director still can be negative in having the survey conducted.

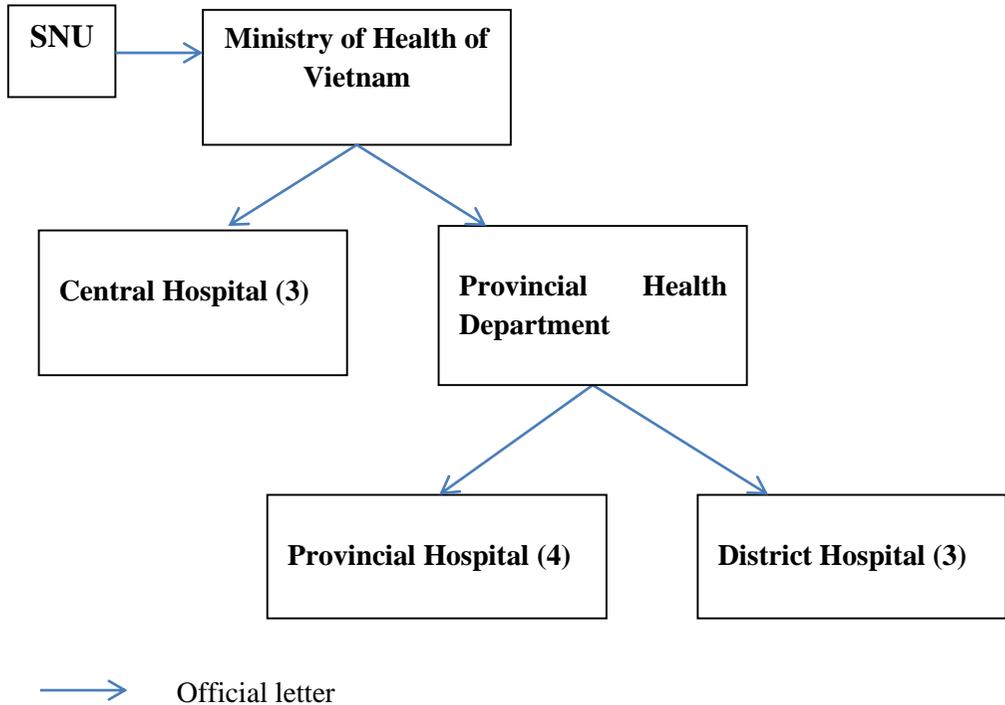
In October 2014, a document package (including the research proposal, the questionnaires, and request letter) was sent to the Ministry of Health of Vietnam seeking for administrative support to approach public hospitals and data collection. The official written approval of the Vice-Minister of Health (Dr. Nguyen Thi Xuyen, who in-charge of the whole hospital systems in the country) was achieved after two weeks. Accordingly, the Ministry officially contacted with four central hospitals (two in the North and two in the South) and three Provincial Health Department (Haiphong, Hanam, Hochiminh City). One central hospital in the North refused to have the survey conducted.

Approaching the introduced Provincial Health Departments, I presented the research objectives, contents, and the two sets of questionnaires. The Provincial Health Departments were very supportive, they issued official written approval letters introducing me and my research to the provincial hospitals and district hospitals under their direct management. After that, I contacted the four introduced provincial hospitals and four district hospitals but I was refused by one district hospital on the phone even before visiting them. As results, there were three central hospitals, four provincial hospitals, and three district hospitals participated in the survey (Figure 11).

At each hospital, I worked with the hospital director (or deputy director) and the staffs of the research department of the hospital. I presented the research objectives, contents, and data collection plan. Accordingly, physician questionnaires would be distributed to physicians at the hospital daily meeting in the early morning before changing shifts. Direct interviews with patients would be conducted at the outpatient ward as well as inpatient ward. The hospital director appointed one or two staffs to support me collect the data. General information of the public hospital as well as the policy of the hospital related to public-private practice mixture is collected through these staffs.

Two volunteers were recruited to support the data collection process. At the hospital daily meeting in the early morning, the hospital director introduced the team to the meeting attendants. I briefly presented the main contents of the study and the way to fill the questionnaires for the physicians. After that, the two volunteers, the hospital research staffs, and myself distributed the questionnaires to the physicians in the meeting room and answered any questions arose. A consent form was attached with the questionnaire, guaranteeing the confidentiality of the personal information provided and explaining how the collected data. The physicians were asked to read this consent form carefully and signed (with name and department clearly written) if they agreed to participate in the survey. Around 90 percent of physicians agreed to participate in the survey. Most of them returned the filled questionnaires to us right after the daily meeting. However, some physicians refused to participate in the survey after skimming through and returned the questionnaires to us. Some other physicians asked us to visit them later in the morning when they have more free time. With the help of the hospital research department staff, we visited these physicians to collect the questionnaire and interviewed them directly if they were willing to. Each physician spending time to participate in the survey was paid 05 US dollars as a small gift.

**Figure 11. Contact for data collection flow chart**



Regarding the patient survey, we received the support of the heads of the nursing unit to approach the patients who were waiting for their turns at the outpatient wards and also hospitalized patients whose health status was good enough to participate in the survey. In most cases, we interviewed the patients directly. We also distributed the questionnaires to some patients if they preferred. A verbal consent was obtained before the interview or distributing the questionnaire. In case the patient refused, we

approach other patients. Each patient participated in the survey was given 01 US dollar as a gift.

### **3. Data description**

#### **Overview of study samples**

There were three central hospitals, four provincial hospitals, and three district hospitals participated in the study. In term of hospital type, nine out of ten surveyed hospitals were general hospitals and there was only one specialized hospital. The survey was also conducted at one university hospital and one military hospital. The response rate of doctor for the physician survey was 90.5% and the response rate of patient for patient survey was 85.8% (Table 1).

There were 510 physicians and 292 patients participated in the survey. Among those, 43 percent of physicians and 39 percent of patients were from the North and 57 percent of physicians and 61 percent were from the South. There were 46 percent of physicians working at central hospitals, 35 percent working at provincial hospitals, and 19 percent working at district hospitals. Regarding patients, 42 percent of patients were interviewed at central hospitals, 34 percent at provincial hospitals, and 24 percent at district hospitals (Table 2).

Concerning gender, 62 percent of physicians were male and 38 percent were female. There were 82 percent of physicians married while 18 percent were not married. The age of physicians ranged from 24 to 63 and the mean was 39. Categorizing age, 21 percent of physicians was less than 30 years old, 34 percent was from 30 to 40 years old, 23 percent was from 40 to 50 years old, and 22 percent was older than 50.

The year of experience ranged from 0 to 37 with the mean of 11.6 years, covering from fresh graduate doctors to soon-to-retire doctors. The mode of years of experience was "three", showing a rather young sample of doctors. Participants were mostly specialists (specialized doctors), accounting for 74 percent while general doctors accounted for 24 percent of the surveyed (Table 2).

Regarding qualification, the largest portion of the qualification of doctors in the sample was medical doctor (33 percent). It was followed by "specialized doctor level 1" (25 percent) and master degree holder (18 percent). Within sample, 31 percent of physicians were holding a management position, specifically 0.4 percent was director, 1.2 percent was deputy director, 14 percent was department head, and 15 percent was department deputy-head. Permanent physicians accounted for 48 percent and contracted physicians accounted for 22 percent of the sample.

## **Descriptive statistics**

Survey result reveals that 48 percent of physicians reported participating into dual practice and 52 percent physicians reported not participating into dual practice. Two-third of the dual practitioners was from the South (66%) and one third was from the North (34%). The portion of dual practitioners working at central hospitals was 46 percent, at provincial hospitals was 34 percent, and at district hospitals was 20 percent (Table 3).

There are several types of private practice of dual practitioners. The most frequent reported type (45% of dual practitioners) was the private ward of the public hospital where the physician was full-time employed. There were 23 percent of public physicians providing private practice at their owned or invested clinics. About 21 percent of public physicians practiced at private hospitals and clinics and 6 percent at other public hospitals. Home visit accounted for 5 percent of private practice of public physicians. Interestingly, there were 32 percent dual practitioners reported practicing at more than one private health facilities (Figure 12). About 60 percent of them were participating in two types of private practice, 22 percent were participating in three types of private practice, and 18 percent were participating in more than three types of private practice.

Physicians participated in dual practice for several reasons. Dual practitioners were asked to grade the level of importance (not important, somewhat important, important, and very important) on the reasons to take-up private practice. Among all the reasons, extra income was the most important reasons for public hospital physicians to practice dually (62%). The second most important reason is the clinical autonomy (40%), followed by better working environment at private sector (30%). Low appreciation at public hospitals and access to new equipment at the private sector were less important reasons for dual practice participation (Figure 13). Non-dual practitioners reported not taking-up private practice for having no extra time (Figure 14) because of the workload in the public practice (42%) and taking care of family members (15%). Some physicians claimed that they did not have enough opportunity in the private sector (18%) while some others focused on other personal priorities (18%).

Concerning income of physicians, there are many missing data (Table 4). Basic salary and fringe benefit are paid by the government following the grading system, therefore, the response rate is higher. The response rate for basic salary is 87 percent and for fringe benefit is 65 percent. However, the response rates for autonomous fund, referral of public patients, and

private practice are much lower, even lower than 50 percent. Income from the private practice is double the income paid by the government and the private ward of the public hospital. Data from this survey show that, on average, income from the autonomous fund added up 32 percent of basic salary. In some hospitals, if the physician referred public patients to private practice, he/she could receive the commission for such a practice as it generates revenue for the private practice. Some physicians received commission when referring public patients to other private health facilities outside. Therefore, even when the physician did not participate in the private practice directly, he/she still could receive income from referring patients (Table 4) and created demand for private practice. On top of the fixed income from public practice, dual practitioners received additional income from private practice. Income from private practice was 2 times higher than basic salary paid for public practice (Figure 16).

Although private practice provided higher income for physician, they still wanted to stay in the public hospitals. The most important reason to keep them in the public hospital was the public responsibility followed by larger professional contact gained from the public hospital network (Figure 15). Training opportunity provided by the public sector was also an important motivation to remain in the public sector. Almost half of

surveyed physicians thought that they could manage both public and private practice because they had enough time to do so and they have the freedom in deciding their working schedule. Interestingly, more than 80 percent of physicians did not find it important to stay in the public sector because public practice was the main source of private patients.

Among the dual practitioners, there were 88 percent answering the question regarding their willingness to give up dual practice while the rest did not answer. A portion of 59 percent of dual practitioner reported the willingness to give up private practice to concentrate on public practice. Further to that, the conditions to trade off private practice were salary increase, housing benefit, and promotion opportunity. Salary increase was the most attractive to the dual practitioners with a mean of 3.75 times the current basic salary (Figure 17a&b).

In the meantime, the non-dual practitioner group expressed the main reason for not participating in dual practice was time limitation. There were 43 percent of physicians said that they did not practice dually because they spent enough time and public practice and had no time for private practice. Taking care of family member also consumes much time of physicians that they could not participate in private practice (14 percent of respondents). The second most important reason for not participated in

dual practice was the lack of opportunity in the private sector (18 percent). Other personal priority such as further study was reported important by 17 percent of respondents. About four percent of physicians reported having not enough private patients. Some young doctors expressed that they did not practice dually for now. However, they intended to open their own clinics or invested with friends later when they had enough opportunity, capacity, and capital for investment.

**Table 1. Surveyed hospital**

|    | <b>Hospital's name</b>                | <b>Hospital level</b> | <b>Location</b>           | <b>Hospital's number of doctors</b> | <b>Surveyed doctors</b> | <b>Response rate of doctors</b> | <b>Surveyed patients</b> | <b>Response rate of patients</b> |
|----|---------------------------------------|-----------------------|---------------------------|-------------------------------------|-------------------------|---------------------------------|--------------------------|----------------------------------|
| 1  | Thainguyen                            | Central               | Thainguyen City (north)   | 100                                 | 64 (66%)                | 94%                             | 28                       | 93%                              |
| 2  | 175 Military Hospital                 | Central               | Hochiminh City (south)    | 330                                 | 117 (36%)               | 94%                             | 60                       | 95%                              |
| 3  | Hochiminh Medical University Hospital | Central               | Hochiminh City (south)    | 196                                 | 56 (29%)                | 87%                             | 30                       | 80%                              |
| 4  | Viet Tiep General Hospital            | Provincial            | Haiphong Province (north) | 225                                 | 72 (32%)                | 90%                             | 40                       | 80%                              |
| 5  | Hanam General Hospital                | Provincial            | Hanam Province (north)    | 162                                 | 35 (22%)                | 90%                             | 16                       | 90%                              |
| 6  | Hanam Provincial TB Hospital          | Provincial            | Hanam Province (north)    | 16                                  | 12 (75%)                | 95%                             | 11                       | 90%                              |
| 7  | Nguyen Tri Phuong General Hospital    | Provincial            | Hochiminh City (south)    | 190                                 | 55 (29%)                | 88%                             | 28                       | 93%                              |
| 8  | Phu Nhuan General Hospital            | District              | Hochiminh City (south)    | 52                                  | 36 (69%)                | 90%                             | 30                       | 94%                              |
| 9  | Go Vap General Hospital               | District              | Hochiminh City (south)    | 82                                  | 36 (44%)                | 90%                             | 30                       | 93%                              |
| 10 | Thuy Nguyen General Hospital          | District              | Haiphong Province (north) | 39                                  | 26 (67%)                | 87%                             | 9                        | 50%                              |
|    |                                       |                       |                           | <b>1,392</b>                        | <b>510</b>              | <b>90.5%</b>                    | <b>292</b>               | <b>85.8%</b>                     |

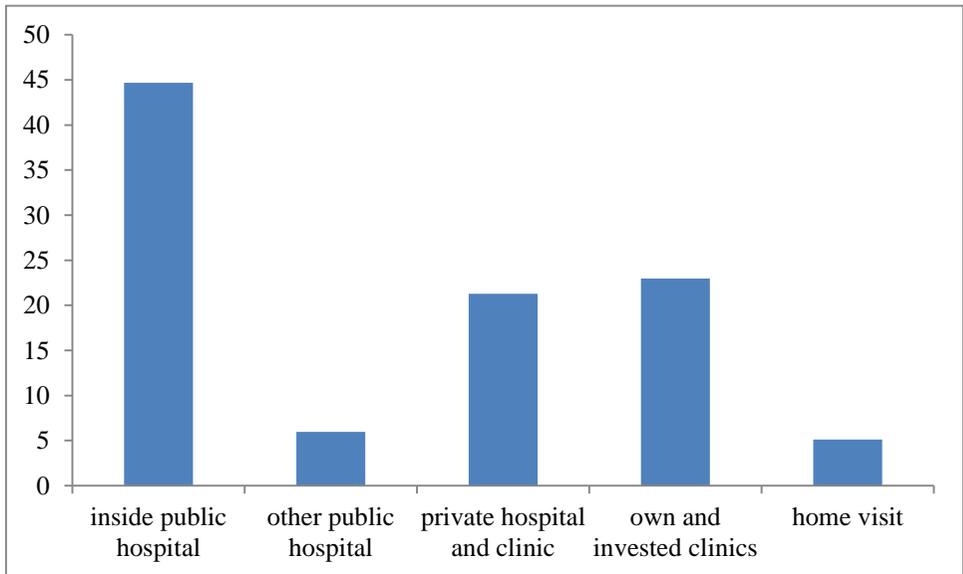
**Table 2. Sample size description**

|                      |  | <b>Physicians</b> | <b>Patients</b> |
|----------------------|--|-------------------|-----------------|
| <b>Total</b>         |  | <b>510</b>        | <b>292</b>      |
| Location             | North  | 43%               | 39%             |
|                      | South  | 57%               | 61%             |
| Hospital level       | Central hospital   | 46%               | 42%             |
|                      | Provincial hospital  | 35%               | 34%             |
|                      | District hospital  | 19%               | 24%             |
| Gender               | Male   | 63%               |                 |
|                      | Female   | 27%               |                 |
| Marital status       | Married  | 82%               |                 |
|                      | Unmarried  | 18%               |                 |
| Age                  | Mean=39, Min=24, Max=63<br>24-30: 21%; 30-40: 34%; 40-50:<br>23%; >50: 22% |                   |                 |
| Number of dependents | Mean=1.8, Min=0, Max=7   |                   |                 |
| Experience           | Mean=11.6, Min=0, Max=37   |                   |                 |
| Expertise            | Specialized doctor   | 74%               |                 |
|                      | Internal medicine=47%,<br>surgery=30%, other=3%,<br>missing cases=20%      |                   |                 |
| Qualification        | Medical doctor   | 33%               |                 |
|                      | Master degree  | 18%               |                 |
|                      | Specialized doctor level 1   | 25%               |                 |
|                      | Specialized doctor level 2   | 11%               |                 |
|                      | Resident doctor  | 7%                |                 |
|                      | Doctor of Medicine   | 6%                |                 |
| Position             | Director   | 0.4%              |                 |
|                      | Deputy director  | 1.2%              |                 |
|                      | Head of departments  | 14%               |                 |
|                      | Deputy head of departments   | 15%               |                 |
|                      | Permanent physician  | 48%               |                 |
|                      | Contracted physician   | 22%               |                 |

**Table 3. Descriptive of dual practice participation**

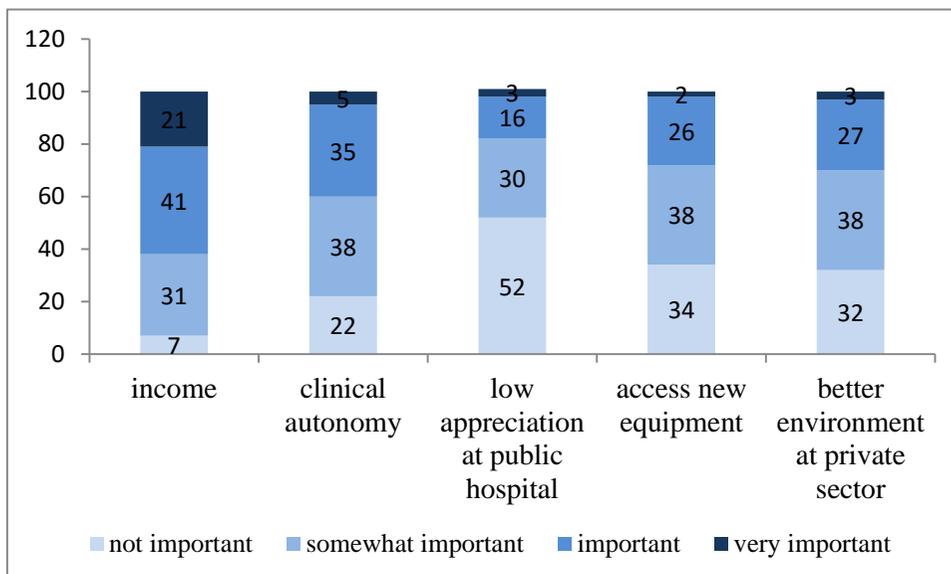
|                           | DP         |              | No DP      |              |
|---------------------------|------------|--------------|------------|--------------|
|                           | Frequency  | %            | Frequency  | %            |
| <b>Location</b>           |            |              |            |              |
| North                     | 85         | 34.41        | 134        | 50.95        |
| South                     | 162        | 65.59        | 129        | 49.04        |
| <b>Hospital level</b>     |            |              |            |              |
| Central level hospital    | 113        | 45.75        | 124        | 47.15        |
| Provincial level hospital | 85         | 34.41        | 93         | 35.36        |
| District level hospital   | 49         | 19.83        | 46         | 17.49        |
| <b>Total</b>              | <b>247</b> | <b>48.43</b> | <b>263</b> | <b>51.57</b> |

**Figure 12. Types of private practice**



Unit: percentage

**Figure 13. Reasons of dual practice**

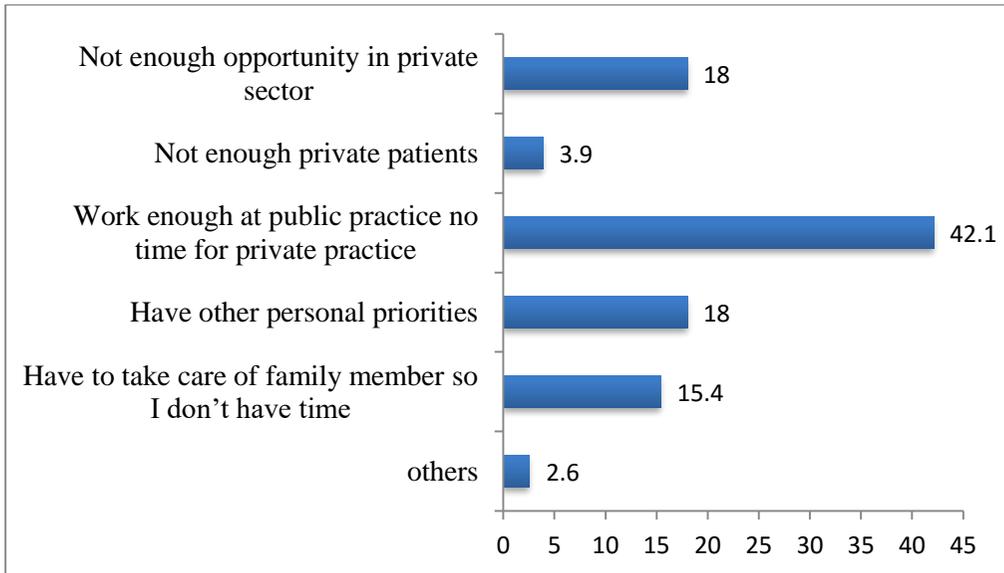


Unit: percentage

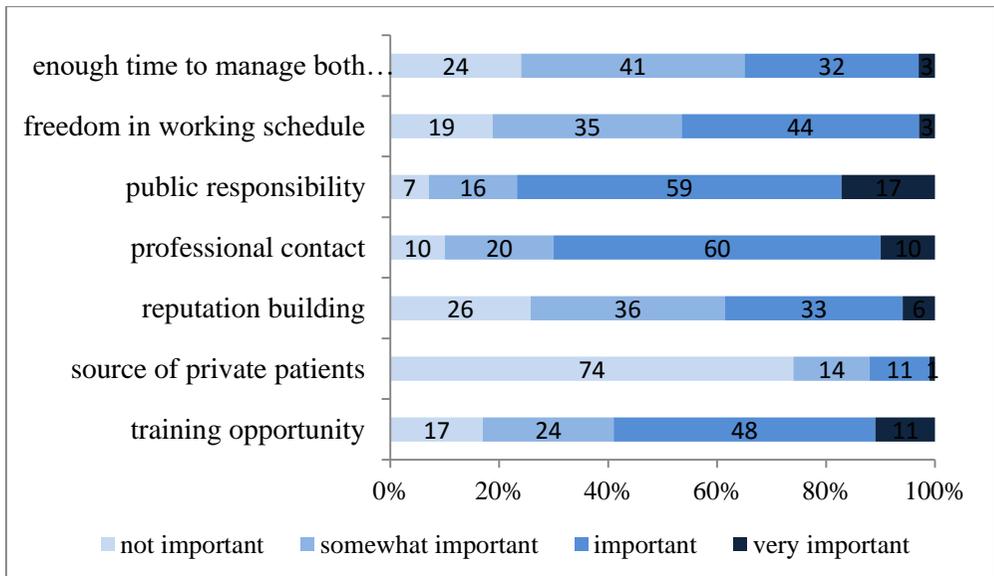
**Table 4. Physician income structure**

| Unit: million VNDong        | Mean | Standard deviation | Min | Max | Observation |
|-----------------------------|------|--------------------|-----|-----|-------------|
| Basic salary                | 5.9  | 3.1                | 1.2 | 19  | 447         |
| Fringe benefit              | 1.4  | 1.2                | 0.2 | 7   | 329         |
| Autonomous fund             | 1.9  | 2.8                | 0   | 25  | 234         |
| Referral of public patients | 0.1  | 0.8                | 0   | 7   | 76          |
| Private practice            | 11.9 | 13.5               | 0.2 | 72  | 150         |

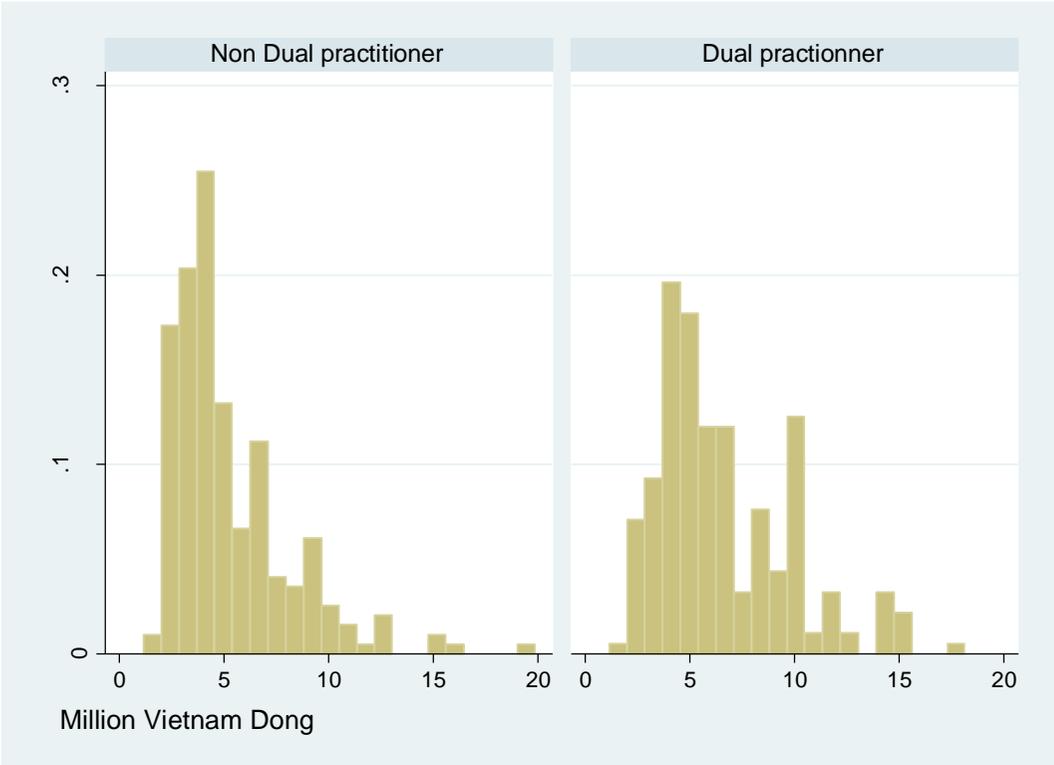
**Figure 14. Reasons not participating in dual practice**



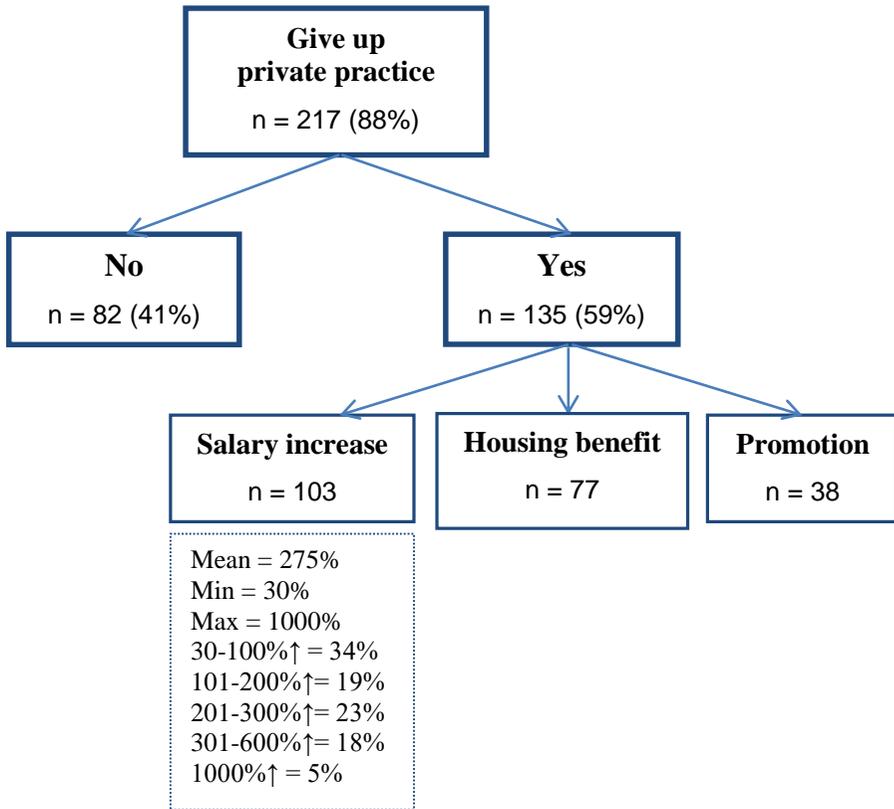
**Figure 15. Reasons not to give up public practice**



**Figure 16. Basic salary of dual practitioners and non-dual practitioners**



**Figure 17a. Willingness to give up dual practice**



**Figure 17b. Distribution of salary increase for dual practice give up**



## CHAPTER 4: METHODOLOGY

### 1. Methods to estimate factors affecting dual practice participation decision

The main purpose of this estimation is to see how personal characteristics influence on the decision to participate in private practice of public hospital physicians. The dependent variable is “dual practice participation”, which is a binary variable. Therefore, I use the logistic regression model with the following formulation for the estimation:

$$\text{Logistic (DP)} = \beta_0 + \beta_1\text{gender} + \beta_2\text{age} + \beta_3\text{status} + \beta_4\text{dependent} + \beta_5\text{expertise} + \beta_6\text{edu} + \beta_7\text{title} + u$$

in which:

- *DP* is the dual practice participation, which equals “0” if the public hospital physician reported himself/herself as not participating in private practice and equals “1” if the physician reported participating in private practice
- *gender* is the gender of the physician, which equals “0” if they physician is male and equals “1” if the physician is female
- *status* is the marital status of the physician, which equals “0” if they physician is single and equals “1” if the physician is married

- *age* is classified into four categories: less than 30 years old equals “1”, from 30 - 40 years old equals “2”, from 40-50 equals “3”, and higher than 50 equals “4”
- *dependent* is the number of the persons living on the income of the physician. This variable is a categorical variable, which equals “0” if the physician has no dependent, equals “1” if the physician has one dependents, equals “2” if the physician has two dependents, and equal “3” if the physicians has three or more dependents
- *expertise* denotes whether the physician is a general doctor (equals “0”) or a specialized doctor (equals “1”),
- *edu* is the educational level of the physician, which is a categorized variable. The variable equals “1” if the physician graduated from medical school with clinical expertise, equals “2” if they physician holds a master degree of medicine, equals “3” if the physician is a specialized doctor level 1, equals “4” if the physician is a specialized doctor level 2, equals “5” if the physician is a resident doctor, and equals “6” if the physician holds a PhD degree of medicine.
- *title* is the position of the physician in the public hospital. The variable equals “1” if the physician is practicing clinically and

holding a management position such as director, deputy director, department head, and department vice-head. The variable equals “2” if the physician is the permanent physician of the hospital providing clinical practice purely. A permanent physician has a life-long secured labor contract with the public hospital. The variable equals “3” if the physician is a contracted physician who also providing clinical practice purely but have no life-long labor contract with the hospital.

- *location* of the public hospital where the physician is employed full-time (North or South)
- *level* is the hospital level (central, provincial, and district).
- $\beta_0, \beta_1, \beta_2, \dots, \beta_7$  are the regression coefficients

## **2. Methods to estimate the effects of dual practice on physicians’ performance**

The indicators to measure performance of the physician are adopted from the World Health Report (2006) on Human Resources for Health. This study focuses on the dimensions of availability, productivity, and responsiveness (Table 5). Availability is measured by the number of working hours at the health facility. By regulation, the public hospital

physician has to work at least 40 hours per week. This variable is the self-reported working time at the public practice per week.

Productivity is measured by the number of consultation provided for outpatient services and the number of surgery provided for inpatient services. These two variables are continuous numbers reported by the physicians. Furthermore, the productivity is also measured by the variable related to the referral of public patient to private practice. Accordingly, physicians were asked whether they referred the patients to private practice. This variable is a dummy variable, therefore, it was coded as “0” if the physician reported “no referral” and coded as “1” if the physician reported to “refer” the patients.

Indicators to measure these three dimensions would be compared between two physician groups: dual practitioners and non-dual practitioners. Therefore, t-test is used to compare the means of these variables between the dual practitioners and non-dual practitioners. The variable on referring public patient to private practice is a dummy variable, therefore, chi-square is used to estimate the different trend in the behavior of dual practitioners and non-dual practitioners.

The responsiveness dimension is estimated through the patient survey. The questions related to waiting time for examination results, the time that the physician spent to consult the patient, and the attitude of the physician toward patients were asked. The answers were in “yes” and “no” form, recording the agreement of the patients on each perspective related to the responsiveness of the physicians. Descriptive analysis is used to provide the mean and standard deviation for each question. Binomial test is run to further provide confidence for the descriptive analysis.

**Table 5. Health workforce performance measurement indicator**

| <b>Dimension</b> | <b>Possible indicators</b>  |
|------------------|---|
| Availability     | Staff ratios<br>Absence rates<br>Waiting time   |
| Competence       | Individual: prescribing practices<br>Institutional: readmission rate; live births; cross-infections |
| Responsiveness   | Patient satisfaction; assessment of responsiveness  |
| Productivity     | Occupied beds, outpatient visits; interventions delivered per worker or facility                    |

Source: World Health Report 2006

### **3. Methods to investigate the view of physicians and patients on dual practice**

Concerning the perspectives on dual practice, descriptive statistics are used to analyse the data. Physicians' perspectives are investigated through physicians' questionnaires while patients' perspectives are investigated through patients' questionnaire. Questions contents were designed to explore the perspective of physicians and patients on the impacts of dual practice on health service delivery and some regulations to regulate dual practice. Regarding the impact of dual practice on health system, the patients had only two categories for answers: "disagree" and "agree" while the answer for physicians were 4-point Likert scale: "strongly disagree", "disagree", "agree", and "strongly agree". Therefore, if the answer was "strongly disagree" and "disagree", it would be merged and coded as "0". If the answer was "agree" and "strongly agree", it would be merged and coded as "1" to be relevant to the data from the patient survey. After that, the two data sets were merged for analysis using chi-square trend test.

Concerning the regulations to regulate dual practice, the physician and patient surveys have the same questions and answers (4-point Likert scale). Since the variables have more than two values, the chi-square trend test was used for the estimation.

## CHAPTER 5: RESULTS

### 1. Dual practice participation

According to the logistic regression results (Table 6), male physicians are 1.77 times more likely to participate in dual practice than female colleagues (Hypothesis 1a). Married physicians with two dependent persons are more likely to moonlight than physicians who are single and have no dependent (Hypothesis 1b). Older physicians tend to practice in both public and private more than younger one. Compared to young physicians in the 20s, the odds of physicians in the 30s are 2.61 times higher, the odds of physicians in the 40s is 3.93 times higher, and the odds of physicians older than 50 years old are 3.63 times higher (Hypothesis 1c).

Regarding hypothesis 1d and 1e, there is no statistically significant relationship between dual practice participation and the educational level of the physician (Hypothesis 1e) as well as the fact that the physician is a general or specialized doctor (Hypothesis 1d). However, the position of the physician in the public hospital influences on the decision to participate in dual practice. Physicians with management position such as director/deputy director or head/vice head of technical department are

more likely to participate in dual practice than those without management position (both permanent and contracted physicians).

The odds of physicians working in the Southern part participating in dual practice are 2.66 times higher than physicians working in Northern part. However, there is no statistical significance between dual practice participation and the level of public hospitals where physicians are working at.

**Table 6. Results of logistic regression on dual practice participation**

| <b>Variables</b>                                | <b>Odds ratio</b> | <b>95% CI</b> |               |
|---|-------------------|---------------|---------------|
| Gender (ref: female)                            |                   |               |               |
| Male  | <b>1.77</b>       | <b>(1.15</b>  | <b>2.74)</b>  |
| Family structure (ref: single with 0 dependent) |                   |               |               |
| Single, 1 dependent                             | 0.30              | (0.06         | 1.38)         |
| Single, 2 dependent                             | 0.40              | (0.08         | 1.98)         |
| Single, 3 (+) dependent                         | 1.91              | (0.19         | 19.2)         |
| Married, 0 dependent                            | 0.65              | (0.23         | 1.82)         |
| Married, 1 dependent                            | 0.81              | (0.36         | 1.84)         |
| Married, 2 dependent                            | <b>0.38</b>       | <b>(0.16</b>  | <b>0.91)</b>  |
| Married, 3 (+) dependent                        | 0.88              | (0.37         | 2.12)         |
| Age (ref: in 20 years of age)                   |                   |               |               |
| 30 years of age                                 | <b>2.61</b>       | <b>(1.20</b>  | <b>5.70)</b>  |
| 40 years of age                                 | <b>3.93</b>       | <b>(1.54</b>  | <b>10.01)</b> |
| 50 years of age or more                         | <b>3.63</b>       | <b>(1.38</b>  | <b>9.54)</b>  |
| Expertise (ref: general doctor)                 |                   |               |               |
| Specialized doctor                              | 0.83              | (0.48         | 1.42)         |
| Education (ref: under-graduate degree)          |                   |               |               |
| Master degree                                   | 1.26              | (0.60         | 2.67)         |
| Specialized level 1 degree                      | 1.70              | (0.86         | 3.37)         |
| Specialized level 2 degree                      | 0.99              | (0.38         | 2.61)         |
| Resident degree                                 | 0.66              | (0.21         | 1.76)         |
| Ph.D degree                                     | 0.52              | (1.69         | 1.62)         |
| Position (ref: doctor with management position) |                   |               |               |
| Permanent doctor                                | <b>0.44</b>       | <b>(0.25</b>  | <b>0.78)</b>  |
| Contracted doctor                               | <b>0.48</b>       | <b>(0.23</b>  | <b>0.99)</b>  |
| Hospital location (ref: North)                  |                   |               |               |
| South   | <b>2.66</b>       | <b>(1.62</b>  | <b>4.37)</b>  |
| Hospital level (ref: central level hospital)    |                   |               |               |
| Provincial level hospital                       | 1.17              | (0.70         | 1.96)         |
| District level hospital                         | 0.96              | (0.50         | 1.83)         |
| Constant  | 0.34              | (0.12         | 1.00)         |
| n=480   |                   |               |               |

## **2. Effects of dual practice on physicians' performance**

Following t-test results, dual practice has correlation with the availability of physicians at public practice (Hypothesis 2). There is a statistically significant difference in the means of the time spent for public practice between dual practitioners and non-dual practitioners. Dual practitioners spend 42.6 hours per week for public practice while non-dual practitioners spend on average 47.5 hours per week (Table 7).

Concerning the productivity at the public practice (Table 7), there are no statistically significant difference in the number of the outpatient patients seen as well as the number of surgery operated by dual practitioners and non-dual practitioners (Hypothesis 3a and 3b). Results of chi-square test shows that dual practitioners are three times more likely to refer public patients to private practice than non-dual practitioners (Hypothesis 3c) (Table 8).

Binominal test results show that 38 percent of patients think that dual practitioners spend less time consulting them compared to non-dual practitioners (Hypothesis 4a) (Table 9). A proportion of 53 percent of patients perceive that public patients have to wait longer for examination results while 43 percent do not agree (Hypothesis 4b). Even though, the

difference is not statistically significant. Concerning the attitude of the physicians toward public and private patients, a proportion of 57 percent of patients think that physicians treat all patients nicely, while 43 percent think that physicians treat private patient better than public patients and 21 percent think that public patients are treated badly by physicians (Hypothesis 4c).

**Table 7. Results of t-test comparing performance between physicians**

|  | Non-DP |      | DP   |      | p-value |
|--|--------|------|------|------|---------|
|  | Mean   | SD   | Mean | SD   |         |
| Hours spent for public practice per week | 47.5   | 0.91 | 42.6 | 0.98 | 0.000   |
| Number of OPD patients seen per week     | 90.6   | 8.1  | 80.2 | 6.03 | 0.357   |
| Number of surgery operated per week      | 6.72   | 0.72 | 5.37 | 0.66 | 0.298   |

DP: Dual practitioner, SD: Standard Deviation, OPD: Outpatient

**Table 8. Results of chi-square test on referring public patients**

|                       | Referred | Not-referred | Odds | p-value |
|-----------------------|----------|--------------|------|---------|
| Non dual practitioner | 23       | 217          | 0.11 | 0.000   |
| Dual practitioner     | 52       | 178          | 0.29 | 0.000   |

**Table 9. Patients' perception on physician responsiveness**

|  | <b>Category</b> | <b>N</b> | <b>Proportion</b> | <b>p-value</b> |
|--|-----------------|----------|-------------------|----------------|
| Do you think dual practitioner spend less time consulting you?         | Yes             | 110      | 0.38              | 0.000          |
|  | No              | 179      | 0.62              |                |
|  | Total           | 289      | 1.00              |                |
| Do you think waiting for examination results at public ward is longer? | Yes             | 155      | 0.53              | 0.320          |
|  | No              | 137      | 0.47              |                |
|  | Total           | 292      | 1.00              |                |
| Dual practitioner treats all patients nicely                           | Agree           | 156      | 0.57              | 0.018          |
|  | Disagree        | 116      | 0.43              |                |
|  | Total           | 272      | 1.00              |                |
| Dual practitioner treats private patient better                        | Agree           | 116      | 0.43              | 0.021          |
|  | Disagree        | 155      | 0.57              |                |
|  | Total           | 271      | 1.00              |                |
| Dual practitioner treats public patient badly                          | Agree           | 55       | 0.21              | 0.000          |
|  | Disagree        | 212      | 0.79              |                |
|  | Total           | 267      | 1.00              |                |

### **3. Perspectives of physicians and patients on dual practice**

#### **Impacts of dual practice on service delivery**

Results from the test of homogeneity of the thinking between physicians and patients on the impact of dual practice show that patients are 1.5 times more likely than physicians to agree that dual practice reduces the supply of public practice and 3 times more likely to agree that it increases out-of-pocket payment (Table 10). Likewise both physicians and patients share the negative perspectives on the

impacts on dual practice on the supply of public services and out-of-pocket payment.

Among the physicians, there is no significant statistical difference in the agreement of dual practitioners and non-dual practitioners on the impacts of dual practice on the health system. Accordingly, there are higher portions of physicians disagree that dual practice prevent public physicians moving to private practice and causing the leakage of public resources to private practice than the agree portions (Table 11).

### **Regulation of dual practice**

Table 12 shows the perspectives of physicians and patients on dual practice. Both physicians and patients are not agree with banning dual practice with 88 percent of strongly disagree and agree among physicians and 80 percent among patients. As large as 90 percent of physician disagree with closing the private ward of the public hospital, with 76 percent strongly disagree. There are 48 percent of patients disagree with this regulation. However, there is a huge gap between the level of disagreement between physicians and patients on closing the private ward.

Concerning other regulations, the proportions of agree are higher for both physician and patient groups on regulating the types of services provided by private sector (61% physicians and 68% patients agree), licensing private practice (71% of physicians and 85% of patients agree), controlling the number of hours spent for public practice (62% physicians and 74% patients agree), and imposing ceiling price on services provided by the private sector (63% physicians and 80% patients agree).

Dual practitioners and non-dual practitioners share the same agreement and disagreement on the mentioned regulations to regulate dual practice (Table 13). They do not agree with banning dual practice or closing the private ward of the public hospital. However, there are more proportions in the agreement of other above mentioned regulations to regulate dual practice.

**Table 10. Perspectives of physicians and patients on dual practice**

|   | <b>Disagree</b> | <b>Agree</b> | <b>Odds</b> | <b>p-value</b> |
|---|-----------------|--------------|-------------|----------------|
| Dual practice reduces public practice supply  |                 |              |             |                |
| Physician                                     | 175             | 355          | 0.49        | 0.005          |
| Patient                                       | 117             | 155          | 0.75        |                |
| Dual practice increases out-of-pocket payment |                 |              |             |                |
| Physician                                     | 136             | 364          | 0.37        | 0.000          |
| Patient                                       | 152             | 146          | 1.04        |                |

**Table 11. Perspectives of physicians on dual practice**

| <b>Perceptions</b>   | <b>Strongly disagree</b><br>% | <b>Disagree</b><br>% | <b>Agree</b><br>% | <b>Strongly agree</b><br>% | <b>chi-square</b> | <b>p-value</b> |
|--|-------------------------------|----------------------|-------------------|----------------------------|-------------------|----------------|
| Dual practice prevents public physicians moving to private sector      |                               |                      |                   |                            |                   |                |
| Non-dual practitioner  | 34                            | 33                   | 29                | 4                          | 3.63              | 0.304          |
| Dual practitioner  | 29                            | 30                   | 33                | 8                          |                   |                |
| Dual practice causes public sector resources used for private practice |                               |                      |                   |                            |                   |                |
| Non-dual practitioner  | 24                            | 32                   | 34                | 9                          | 1.53              | 0.675          |
| Dual practitioner  | 28                            | 30                   | 35                | 7                          |                   |                |

**Table 12. Perspectives of physicians and patients on regulations of dual practice**

| <b>Regulations</b>  | <b>Strongly disagree</b><br>% | <b>Disagree</b><br>% | <b>Agree</b><br>% | <b>Strongly agree</b><br>% | <b>chi-square</b> | <b>p-value</b> |
|---|-------------------------------|----------------------|-------------------|----------------------------|-------------------|----------------|
| Ban dual practice   |                               |                      |                   |                            |                   |                |
| Physician   | 74                            | 14                   | 7                 | 5                          | 21.73             | 0.000          |
| Patient   | 57                            | 23                   | 12                | 8                          |                   |                |
| Regulate the types of services provided by private sector     |                               |                      |                   |                            |                   |                |
| Physician   | 11                            | 27                   | 51                | 10                         | 7.74              | 0.052          |
| Patient   | 9                             | 23                   | 51                | 17                         |                   |                |
| Require license for private practice                          |                               |                      |                   |                            |                   |                |
| Physician   | 15                            | 14                   | 53                | 18                         | 38.79             | 0.000          |
| Patient   | 4                             | 11                   | 52                | 33                         |                   |                |
| Control the number of hours spent for public practice         |                               |                      |                   |                            |                   |                |
| Physician   | 7                             | 25                   | 55                | 12                         | 20.84             | 0.000          |
| Patient   | 11                            | 15                   | 53                | 21                         |                   |                |
| Close private wards at public hospitals                       |                               |                      |                   |                            |                   |                |
| Physician   | 76                            | 14                   | 7                 | 3                          | 111.73            | 0.000          |
| Patient   | 44                            | 14                   | 25                | 17                         |                   |                |
| Impose ceiling price on services provided by private practice |                               |                      |                   |                            |                   |                |
| Physician   | 15                            | 22                   | 50                | 13                         | 53.09             | 0.000          |
| Patient   | 5                             | 15                   | 48                | 32                         |                   |                |

**Table 13. Perspectives of physicians on regulations of dual practice**

| <b>Regulations</b>   | <b>Strongly disagree</b><br>% | <b>Disagree</b><br>% | <b>Agree</b><br>% | <b>Strongly agree</b><br>% | <b>chi-square</b> | <b>p-value</b> |
|--|-------------------------------|----------------------|-------------------|----------------------------|-------------------|----------------|
| <b>Ban dual practice</b>   |                               |                      |                   |                            |                   |                |
| Non-dual practitioner  | 73                            | 17                   | 5                 | 5                          | 3.691             | 0.297          |
| Dual practitioner  | 74                            | 12                   | 9                 | 5                          |                   |                |
| <b>Regulate the types of services provided by private sector</b>     |                               |                      |                   |                            |                   |                |
| Non-dual practitioner  | 7                             | 26                   | 56                | 11                         | 11.83             | 0.008          |
| Dual practitioner  | 16                            | 28                   | 46                | 9                          |                   |                |
| <b>Require license for private practice</b>                          |                               |                      |                   |                            |                   |                |
| Non-dual practitioner  | 12                            | 15                   | 53                | 20                         | 2.765             | 0.429          |
| Dual practitioner  | 17                            | 14                   | 52                | 17                         |                   |                |
| <b>Control the number of hours spent for public practice</b>         |                               |                      |                   |                            |                   |                |
| Non-dual practitioner  | 6                             | 21                   | 58                | 15                         | 8.222             | 0.042          |
| Dual practitioner  | 9                             | 30                   | 52                | 9                          |                   |                |
| <b>Close private wards at public hospitals</b>                       |                               |                      |                   |                            |                   |                |
| Non-dual practitioner  | 77                            | 16                   | 5                 | 2                          | 5.803             | 0.122          |
| Dual practitioner  | 75                            | 12                   | 10                | 3                          |                   |                |
| <b>Impose ceiling price on services provided by private practice</b> |                               |                      |                   |                            |                   |                |
| Non-dual practitioner  | 13                            | 21                   | 51                | 15                         | 4.65              | 0.199          |
| Dual practitioner  | 17                            | 23                   | 49                | 10                         |                   |                |

## **CHAPTER 6: DISCUSSION**

The key findings of both descriptive analysis and hypothesis testing are combined for discussion based on the three main themes: dual practice participation, effects of dual practice on physicians' performance, and the perspectives of service users and providers on public hospital physicians' dual practice. Policy implications for Vietnam would be withdrawn from the study results and experience of other countries.

### **Key findings**

The results show that dual practice participation is influenced by some individual characteristics such as age, gender, and position of the physician at the public hospital (Table 6). Vietnamese male physicians are more likely to practice dually compared to female colleagues. Public hospital physicians of older age tend to practice for the private sector than younger public hospital physicians. Moreover, the physicians who are holding management position at the public hospital such as director, deputy director, head/vice head of technical department are more likely to practice dually compared to ordinal physicians (both permanent and contracted physician). These hospital managers are highly respected by

other physicians in the public hospital and have good command of skilfulness in their clinical field of practice. Furthermore, they are usually more senior, who have enough experience, health, and professional connections. They are very attractive to private hospitals and clinics. And they also have enough capacity to open their own clinics. Additionally, the patients want to be treated by them because of their fame in clinical practice.

Similar to what has been found in other studies, dual practice participation of Vietnamese public hospital physicians reacts to financial incentives from private practice (Gruen et al., 2002; Humphrey & Russell, 2004; Askildsen & Holmås, 2013; Johannessen & Hagen, 2014). Additional income is the most important reason for public hospital physicians to take-up private practice (62%), followed by clinical autonomy (40%), and better working environment at private practice (30%) (Figure 13). Income from private practice is two times higher than the basic salary and 28 percent higher than all the income from public practice including night shift and position allowance (Table 4). On average, one dual practitioner spends 16 hours for private practice per week and 42 hours for public practice. As a result, the time spent is less but the income gains is much higher. Moreover, study results also show that dual practitioners are more

likely to refer public patients to private practice (Table 8). According to the self-reported information extracted from physicians' survey, ten percent of the sources of private patients are referred by public hospital physicians. Three percent of physicians in this study reported receiving commission from private sector for referring public patients. There are 40 percent of patients think that dual practitioner refer more public patients to private practice. Both physicians (71%) and patients (53%) think that dual practice increases the out-of-pocket payment for health services (Table 10). Therefore, there might be conflicts of interest between public responsibility and personal interests caused by dual practice. As a civil servant, the physicians are paid by the government to take care of all patients, especially public patients. However, the physician refers the patients to private practice to reduce the workload at public practice and receive referring commission.

Not only influenced by individual characteristics, the dual practice participation of Vietnamese physician responses to the governance of the public hospital. The public hospital reform has introduced the private practice into the public hospitals. The private ward basically functions as a for-profit private hospital within the campus of the public hospital, using the brand-name, the land, and the physicians of the public hospital where

it embeds in. Moreover, the board of director of the public hospital has the full autonomy in deciding the service prices at the private ward. The government does not even impose any ceiling prices for these services. Such a governance system has boosted demand for private practice induced by supply and the over-utilization of high cost services at private ward of the public hospital. Under this circumstance, it is very likely that dual practice in Vietnam would be more popular. As a result, the most frequently reported type of private practice is at the private ward of the public hospital, followed by private practice at private hospitals/clinics and private clinics owned/invested by the physician (Figure 12).

Additionally, dual practice participation is also influenced by the market opportunities. The public hospital physicians working in Hochiminh City, the second largest city in Vietnam, have higher tendency to participate in private practice than physicians in smaller urban areas such as Thainguyen, Haiphong, and Hanam (Table 6). Hochiminh City has the largest number of private hospitals and clinics of all kinds and size nationwide (Ministry of Health Viet Nam, 2013a). The people in this city also have higher level of education and income, allowing them to have higher ability to pay for private health care services, therefore the demand for private practice is

higher. As reported by dual practitioners, 90 percent of their private patients visited them directly.

The study shows some negative impacts of dual practice on the performance of Vietnamese physicians at public hospitals. Vietnamese dual practitioners spend less time for public practice compared to non-dual practitioners. In addition, dual practitioners are more likely to refer public patients to private practice. The absenteeism of public hospital physicians at public practice is similar to what has been found in other developing countries such as Bangladesh and Peru (Gruen et al., 2002; Jumpa et al., 2007) but contrary to what has been found in developed countries such as Australia and Norway (Cheng et al., 2013; Johannessen & Hagen, 2014). Such a difference might account for better regulations of dual practice as well as better hospital management system, especially time control in the developed countries.

Dual practice is legalized in Vietnam to increase the supply of health care services. In reality, both physicians (60%) and patients (53%) in this study think that in reality it reduces the supply of health services at public practice (Table 10). Less availability and the referring of public patients to private practice do not only limit the access to care of public patients but also potentially lead to the stealing of public working hours for private

practice. Even though, study results show no difference in the number of outpatient seen and surgery operated between dual practitioners and non-dual practitioners at public practice. However, the demand for both outpatient and inpatient services are not controlled, which might potentially cause bias estimation.

From the survey of this study, 88 percent of the studied physicians and 80 percent of the studied patients disagree with banning dual practice in Vietnam. Only 10 percent of physicians agree to close the private ward of the public hospital while 42 percent of patients agree. However, it is not that easy to close the private ward of public hospital in Vietnam. As this study shows that the private ward is where the largest portion of public physician providing private practice. More importantly, the public hospital managers are more likely to participate in dual practice and they have full autonomy in setting service prices and using revenue from the private ward. And the main motivation of dual practice is financial incentive from private practice. Therefore, further investigation on the perspective of policy makers on separating the public and private ward of public hospital should be conducted.

Although 59 percent of dual practitioners do not agree that dual practice is a way to keep them in the public sector, the main reasons to retain them in

the public sector are public responsibility, professional contact, and training opportunity (Figure 15). The question of willingness to give up dual practice was answered by 88 percent of dual practitioners. Among those 41 percent is not willing and 59 percent is willing to give up dual practice (Figure 17a). Giving up dual practice is more responsive to salary increase than housing benefits and promotion opportunities. On average, dual practitioners ask for 3.75 times of current basic salary increase in exchange for giving up private practice. This finding suggests for a policy to lessen the salary gap by increasing public salary.

Even though experience from other countries shows that only increasing public hospital physicians' salary in exchange for private practice give-up might not be enough (Kiwauka et al., 2011; Ferrinho et al., 2004). This policy was adopted in Greece but did not work well. In 1983, Greek government compulsorily asked the National Health Service physicians to give up private practice in exchange for an increase of 112 percent salary for junior doctors and 211 percent for directors. The policy received hard objections from the physicians, especially senior physicians, because they were enjoying better benefits from the private sector. Therefore, they just ignored the regulation, and in fact many physicians opted out of the public system (Mossialos et al., 2005). In a system where physicians received

graded salary without any performance evaluation system and informal payment is popular, it might not be feasible to simply increase the salary without any other mechanism to control the private practice. Similar attempt was made by the Norwegian government. The policy only affected on the junior physicians but not senior physicians. Other than income, the stressful working condition was also another main factor affecting the decision to take-up private practice (Askildsen & Holmås, 2013).

On the other hand, Canada has been successful in reducing private practice of public hospital physicians by minimizing the financial incentives for private practice and restricting the access to public fund of the private sector (M.Flood & Archbald, 2001). Canadian physicians are not allowed to provide public and private simultaneously, they must opt out of the public system if deliver private practice. Patients have to pay fully by out-of-pocket money if utilize private service. Private health insurance is restricted with the types of services provided by the private sector and the reimbursement rate is capped. Additionally, extra-billing is prohibited to prevent the access of private practice to public funding resources. The system does not allow public hospital physicians to top-up their income with private practice. As a result, dual practice has been controlled.

Attempts to ban dual practice were made by other countries such as Portugal but not successful (Ferrinho et al., 1998; Kiwanuka et al., 2011). Some studies found the association of banning dual practice with the migration of health workers, especially specialists, from public to private as well as international brain drain (Ferrinho et al., 2004; Buchan & Sochalski, 2004; Kiwanuka et al., 2010).

### **Policy implications**

Based on what has discussed on both study results and experience of other countries, this dissertation suggests several policy options for the government of Vietnam to consider. To control dual practice of public hospital physicians, reforms of provider payment should be made at both institutional and individual level. The current extra-billing system at Vietnamese public hospitals does not only reduce the financial protection functions of the national health insurance program but increase the incentives for private practice of physicians. Public hospitals must be paid well enough to cover full costs of services, otherwise the private practice cannot be reduced and the quality of service would be compromised. There should be only one user fee system within public hospitals, applicable for both national health insurance reimbursement and other payment methods. Importantly, the private practice inside the public

hospital must be restricted otherwise demand for private practice as well as high cost health services would keep increasing as induced by the public hospital physicians. The policy might also prevent the stealing of public working hours for private practice if a good performance management system would be introduced.

Although 43 percent of dual practitioners would give up private practice for salary increase, 41 percent showed no willingness to give up. Therefore, similar to the case of Greece and Norway, increasing salary for public hospital physicians in exchange for private practice give-up might not work properly in Vietnam, where the public salary is very low. The current graded salary system should be reformed so that individual performance evaluation can be introduced to encourage physicians to perform effectively.

Apart from provider payment reforms, controlling the private sector is strongly recommended. The individual private practice licensing system should be introduced to qualify the quality of private practice. To avoid a two tier health care system, the types and prices of health care services provided by the private sector should be controlled by the government.

## **Limitations**

Two major limitations of this study should be noted: study design and data quality. Two physician productivity indicators were not well designed as they only captured the continuous number of the outpatient seen and surgery operated per week without controlling the demand for different technical department. The smaller number of patient seen and/or surgery operated alone is not enough to measure the productivity of the physicians. As the matter of fact that the demand for surgery at one specific department is lower than other, leading to lower number of reported surgery operated. Therefore, hypothesis testing result show no correlation between dual practice and the number of outpatient seen as well as surgery operated, it might potentially be bias. Moreover, this study fails to measure the unit time that physicians spent for each patient to be able to compare the productivity between dual practitioners and non-dual practitioner.

The second main limitation of this study is the typical limitation of survey data. Using convenience sampling method, the data are not national representative although it covers various types of hospitals (military hospital, university hospital, specialized hospital, and general hospital) and various levels of hospitals (central, provincial, and district level hospitals). The sample size is small. The data are cross-sectional therefore

the trend of dual practice cannot be analysed. The new participation or drop-out cannot be captured. The quality of collected data is not desirable as expected when designing the survey. Because the data are self-reported data, they rely on the willingness and the truthfulness of the physicians when providing information. Typically, data on income have a large portion of missing data, especially data on private practice income. Physicians were very reluctant to report private income information because they worried that their colleagues, their manager, and the public would know how much they earn from private practice. As a result, the study fails to estimate the income effects on dual practice participation as well as physicians' performance although it was one of the main targets when designing the study.

### **Contributions and implications for further study**

Despite the above mentioned limitations, this dissertation has several strengths. Although it provides only a glimpse of the picture of dual practice in Vietnam, it is the first study that explores the phenomenon comprehensively in the country. It reveals interesting information on the nature, scope, impacts, and perspectives of people on dual practice, which were not known systematically before. In addition, it is timely important as the government of Vietnam is implementing privatization of the public

hospitals and the society has been questioning the quality and safety of the health services provided by the private sector. The in-depth analysis on the motivation of public-private mixed practice and its impacts on physician's performance would draw more attention of the government on the issue. Dual practice participation is not only an individual coping strategy toward low public salary but also a result of health system transitioning. By exploring the willingness to give up dual practice and the perspectives of patients on dual practice, the study desires to help brainstorming some suitable policy options to regulate dual practice properly.

Given the lack of studies on dual practice, this study provides additional evidence proving the context-based characteristics of dual practice. What has been found in one country might be different from the others. It suggests approaching dual practice at both individual and system levels to be able to understand the mechanism of public-private mix at different research settings.

The dissertation suggests several directions for future studies. Firstly, longitudinal data should be used to analyse the trend and patterns of dual practice. Rather than survey data, secondary data obtained through the licensing monitoring system would be more reliable and allow the evaluation of policies on dual practice. Secondly, as the public-private mix

is an increasing trend in many countries, it would be useful to have cross-national comparison studies on public private partnership at both system and individual level. Thirdly, additional evidence on the effectiveness of regulations to regulate dual practice should be further focused. Although some countries have been implementing interventions to control dual practice, limited description and rigorous evidence on their effects are found. Fourthly, physicians should be viewed as “agent” to have their behaviour analysed so that policy options to regulate dual practice can be well withdrawn. As but not least, given the context-based characteristic and the lack of recent studies on dual practice, more concrete empirical evidence on the impact of dual practice on quality of care, health system responsiveness, and health system goals would make meaningful contributions to the literature.

## **Conclusion**

In conclusion, dual practice is a cross-cutting issue, involving health service delivery, health financing, and human resources for health. In Vietnam, dual practice is largely accepted by the society. Although dual practice is allowed by law, the regulations are very patchy and incomplete. The socio-economic changes and the increase in demand for health services make it more likely for dual practice to expand. Dual practice

participation of Vietnamese hospital physicians is influenced by some individual characteristics, income incentives from private practice, the public-private mix of hospital governance structure, and the market opportunities. Dual practice has some negative effects on the availability and productivity of physicians at public practice, which in turns negatively influences on the access to care of the patients, especially the poor. Lessons from other countries as well as perspectives of physicians and patients in this study show that banning dual practice is not preferred and feasible. This study suggests a reform in provider payment at both institutional and individual levels to control public hospital physician dual practice. The public-private mixture needs separating with clear borders, otherwise, dual practice and its negative impacts would be very difficult to solve. This implication is not only eligible for Vietnam but also for other developing countries having similar structure of health system to consider when implementing health sector reforms.

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# ANNEXES

## 1. Questionnaire for physicians

### SURVEY ON PUBLIC HOSPITAL PHYSICIANS' DUAL PRACTICE IN VIETNAM

#### QUESTIONS FOR PHYSICIANS

##### A. GENERAL CHARACTERISTICS

1. Age: \_\_\_\_\_ years

2. Sex

0. Male

1. Female

3. Civil status

0. Married

1. Unmarried

**NOTE: please mark whether the respondent is currently living with partner**

4. Have you got dependents (for example, spouse, children, or parents who depend on your income for subsistence)?

0. No

1. Yes. How many? \_\_\_\_\_ Who are they? \_\_\_\_\_

5. For how long have you worked as a medical doctor in public hospital?  
\_\_\_\_\_ years

**NOTE: if respondent refers less than a year, write 0.**

6. What is your specification?

0. General doctor

1. Specialized doctor. Specify?  
\_\_\_\_\_

**NOTE: Please write exactly as the specialisation is referred.**

**7. What is your educational qualification?**

- 1. Medical doctor (university graduate).
- 2. Master degree (Thạc sỹ).
- 3. Specialized doctor level 1 (bác sỹ chuyên khoa 1).
- 4. Specialized doctor level 2
- 5. Resident doctor
- 6. Doctor of Medicine

**8. What is your position in the hospital?**

- 1. Director
- 2. Deputy director.
- 3. Head of department.
- 4. Deputy head of department.
- 5. Permanent physician.
- 6. Contracted physician.
- 7. Other. Please specify which.

**9. Do you practice clinically elsewhere other than the public ward of the hospital?**

- 0. No. **(Please exclude section D. Private practice)**
- 1. Yes. **(Please proceed to section B. Public practice)**

**10. For what reasons you do not work in the private practice? Please tick all the options applicable**

- 1. I do not have enough opportunities to private sector.
- 2. I do not have enough private patients.
- 3. I already work enough hours in the public sector.
- 4. I have other personal priorities
- 5. I have to take care of my family members so I don't have time.

6. Others. Please specify \_\_\_\_\_

**B. PUBLIC PRACTICE (CLINICAL)**

**11. How many hours do you spend per week at the public ward of the hospital? \_\_\_\_\_ hours**

**12. How many outpatient cases do you have per week? \_\_\_\_\_ patients**

**13. How many surgeries do you operate a week? \_\_\_\_\_ cases**

**14. Do you refer patients to the private practice?**

0. No. (Please proceed to question 19)

1. Yes.

**15. How many patients are referred to the private practice by you? \_\_\_\_\_ outpatients/day \_\_\_\_\_ surgeries/week**

**16. Do you discuss with patients regarding the referral to the private practice?**

0. No.

1. Yes.

**17. Why do you refer them to the private practice?** Please tick all the options applicable.

1. The equipment in the private ward is better/newer

2. Waiting time in the private ward is shorter

3. Other. Please specify? \_\_\_\_\_

**18. Do you receive commission when referring the patients to the private practice?**

0. No.

1. Yes.

**19. Please state your opinion with the following reasons for working in the public sector.**

- |   |                      |             |          |                   |
|---|----------------------|-------------|----------|-------------------|
| a. There are insufficient opportunities for me in the private sector.                 | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| b. To gain experience.  | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| c. Public sector provides more opportunity to further training and conferences.       | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| d. Public practice provides patients for private sector practice.                     | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| e. Public practice helps build up professional reputation.                            | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| f. Working in the public helps providing better care to your private sector patients. | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| g. Public sector jobs are more secure than private sector ones.                       | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| h. Public sector provides a pension scheme.   | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |

**20. Are there further reasons for working in the public beyond those mentioned above?**

0. No.
1. Yes. Please specify? \_\_\_\_\_

**21. What are your sources of income in the public sector? Please tick all the options applicable.**

1. Basic salary. How much? \_\_\_\_\_

- \_\_\_\_\_
2. Fringe benefit. How much? \_\_\_\_\_
3. Hospital autonomy fund. How much? \_\_\_\_\_
4. Refer patients to private ward. How much? \_\_\_\_\_
5. Other. Please specify? \_\_\_\_\_

### C. PUBLIC HOSPITAL ACTIVITY PARTICIPATION

#### 22. How do you participate in the public activities of the hospital?

|   |          |              |          |               |
|---|----------|--------------|----------|---------------|
| a. Research                               | 1. Never | 2. Sometimes | 3. Often | 4. Very often |
| b. Seminar                                | 1. Never | 2. Sometimes | 3. Often | 4. Very often |
| c. Conference in Vietnam                  | 1. Never | 2. Sometimes | 3. Often | 4. Very often |
| d. Conference in other countries          | 1. Never | 2. Sometimes | 3. Often | 4. Very often |
| e. Training in Vietnam                    | 1. Never | 2. Sometimes | 3. Often | 4. Very often |
| f. Training in other countries            | 1. Never | 2. Sometimes | 3. Often | 4. Very often |
| g. Volunteer activities of the hospital   | 1. Never | 2. Sometimes | 3. Often | 4. Very often |
| h. Outreach activities to the communities | 1. Never | 2. Sometimes | 3. Often | 4. Very often |
| i. MOH funded project                     | 1. Never | 2. Sometimes | 3. Often | 4. Very often |
| j. Other countries funded project         | 1. Never | 2. Sometimes | 3. Often | 4. Very often |

#### 23. Do you have scientific papers published in domestic and international journal?

0. No.
1. Yes. How many? \_\_\_\_\_

#### **D. PRIVATE PRACTICE**

**24. Where do you practice clinically outside the public ward of the hospital?** Please tick all applicable options.

- 1. Private ward of the hospital where I am working.
- 2. Private ward of other public hospital.
- 3. Private hospital and/or clinics.
- 4. My own clinic
- 5. The clinic that I am invested in.
- 6. Private clinic owned by colleagues or friends.
- 7. House visits.
- 8. Others. Please specify \_\_\_\_\_

**25. How many hours do you work on average per week in the private sector?** \_\_\_\_\_ hours

**26. How many outpatient cases do you have per week?** \_\_\_\_\_ patients

**27. How many surgeries do you operate a week?** \_\_\_\_\_ cases

**28. How do the patients visit private practice?**

- 1. I refer them from the public ward of the hospital.
- 2. They are referred by other physicians in the public ward of the hospital.
- 3. They go directly to private practice.

**29. How much do you earn from private practice compared to basic salary? \_\_\_\_\_ times**

**30. Please state your opinion with the following reasons for working in the private sector.**

- |   |                  |                       |              |                  |
|---|------------------|-----------------------|--------------|------------------|
| a. To increase income.  | 1. Not important | 2. Somewhat important | 3. Important | 4 Very important |
| b. To experience clinical autonomy.   | 1. Not important | 2. Somewhat important | 3. Important | 4 Very important |
| c. To relief from high pressure and low appreciation received in public sector environment. | 1. Not important | 2. Somewhat important | 3. Important | 4 Very important |
| d. To access to alternative facilities and equipment.                                       | 1. Not important | 2. Somewhat important | 3. Important | 4 Very important |
| e. To experience better working environment.  | 1. Not important | 2. Somewhat important | 3. Important | 4 Very important |

**31. Please state your opinion with the following reasons for not giving up public practice.**

- |   |                  |                       |              |                  |
|---|------------------|-----------------------|--------------|------------------|
| a. Have enough time to work in both public and private. | 1. Not important | 2. Somewhat important | 3. Important | 4 Very important |
| b. Able to decide my own workload.                      | 1. Not important | 2. Somewhat important | 3. Important | 4 Very important |
| c. Public responsibility.                               | 1. Not important | 2. Somewhat important | 3. Important | 4 Very important |
| d. Broader professional contact.                        | 1. Not important | 2. Somewhat important | 3. Important | 4 Very important |
| e. Reputation building.                                 | 1. Not important | 2. Somewhat important | 3. Important | 4 Very important |
| f. Public hospital is the main source of                | 1. Not important | 2. Somewhat important | 3. Important | 4 Very important |

private patients

g. Training opportunities

1. Not important   2. Somewhat important   3. Important   4 Very important

**32. Would you consider giving up private practice if basic salary or benefits improved?**

0. No. **Please proceed to section F. Regulation.**

1. Yes

**33. You would give up private practice to work fully for public sector if the basic salary increased by (\_\_\_\_\_)%.  
(Please assume no additional benefits)**

**34. Would you give up private practice if sufficient housing benefit is given for those who practice solely in the public?  
(Please assume no other benefits and no basic salary increase)**

0. No

1. Yes

**35. Would you give up private practice if faster promotion is given for those who practice solely in the public? (Please assume no other benefits and no basic salary increase)**

0. No

1. Yes

## F. REGULATION

### 36. Please state your opinion with the policy options to regulate dual practice.

- |  |                      |             |          |                   |
|--|----------------------|-------------|----------|-------------------|
| a. Ban dual practice   | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| b. Regulate the types of services offered by private practice.     | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| c. Require license for private practice.                           | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| d. Control number of hours spent at public practice.               | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| e. Ban the dual system of service delivery within public hospitals | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| f. Impose ceilings on prices charged at private practice           | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| g. Others. Please specify _____                                    |                      |             |          |                   |

### 37. Please state your opinions on the following REASONS why dual practice should be regulated.

- |   |                      |             |          |                   |
|---|----------------------|-------------|----------|-------------------|
| a. Dual practice prevents the moving of public physicians to private sector | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| b. Dual practice reduces the supply of services in public sector.           | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |

- |   |                      |             |          |                   |
|---|----------------------|-------------|----------|-------------------|
| c. Resources of public sector are used for private patients   | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| d. Dual practice increases out-of-pocket money  | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| e. Dual practice creates conflicts of interest for public physicians who might send public patients to private practice | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |

**38. Please state your opinion with the FEASIBILITY of the following policy options to regulate dual practice.**

- |  |                      |             |          |                   |
|--|----------------------|-------------|----------|-------------------|
| a. Ban dual practice   | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| b. Regulate the types of services offered by private practice.     | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| c. Require license for private practice.                           | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| d. Control number of hours spent at public practice.               | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| e. Ban the dual system of service delivery within public hospitals | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| f. Impose ceilings on prices charged at private practice           | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |

## 2. Questionnaire for patients

### PATIENTS' PERSPECTIVE ON DUAL PRACTICE OF PUBLIC HOSPITAL PHYSICIANS IN VIETNAM

**Hospital name:**

**1. Do you care if the doctor seeing you today practices at the private sector also?**

0. No

1. Yes

**2. Do you think that the doctor spends less time consulting you if he/she also practices at the private sector, including the private ward of the hospital?**

0. No.

1. Yes.

**3. Do you think that if the doctor also practices at the private sector he/she would tend to refer more patients to the private sector?**

0. No.

---

1. Yes.

**4. Do you think that physician who practices dually discriminating public patients against private patients?**

0. No

1. Yes

**5. Do you think that you would have to wait longer for examination results when using the services at the public wing of the hospital?**

0. No

1. Yes

**6. Do you think that dual practice reduces the supply of services in the public sector?**

0. No

1. Yes

**7. Do you think that dual practice increases inequality in access to care, especially less chances for the poor?**

0. No

1. Yes

**8. Do you think that dual practice increases out-of-pocket payment?**

0. No

1. Yes

**9. Do you think that dual practice provides more choices for patients, especially the better-off?**

0. No

1. Yes

**10. In your opinion, what is usually the attitude of the doctor who practices dually?**

a. Treat all the patients nicely                      1. Strongly disagree    2. Disagree    3. Agree    4. Strongly agree

b. Treat the private patients nicer                      1. Strongly disagree    2. Disagree    3. Agree    4. Strongly agree

c. Treat the public patients badly                      1. Strongly disagree    2. Disagree    3. Agree    4. Strongly agree

d. Other. Please specify\_\_\_\_\_

**11. Please state your opinion with the policy options to regulate dual practice.**

- |  |                      |             |          |                   |
|--|----------------------|-------------|----------|-------------------|
| a. Ban dual practice   | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| b. Regulate the types of services offered by private practice.     | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| c. Require license for private practice.                           | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| d. Control number of hours spent at public practice.               | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| e. Ban the dual system of service delivery within public hospitals | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| f. Impose ceilings on prices charged at private practice           | 1. Strongly disagree | 2. Disagree | 3. Agree | 4. Strongly agree |
| g. Others. Please specify_____                                     |                      |             |          |                   |