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Philippine Institute for Development Studies
Surian sa mga Pag-aaral Pangkaunlaran ng Pilipinas

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and Interjurisdictional Competition
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PERSPECTIVES ON HEALTH DECENTRALIZATION AND INTER-JURISDICTIONAL COMPETITION AMONG LOCAL GOVERNMENTS IN THE PHILIPPINES

Uma Kelekar and Gilberto M. Llanto¹

Abstract

It has only been in the recent years that developing countries are increasingly decentralizing the provision of health care to their local governments. This paper explores some key issues related to health decentralization in the Philippines identified in literature and in course of interviews with country officials working in the healthcare area. Issues of planning and budgeting of health plans, revenue and expenditure assignments in a decentralized health system are discussed. In addition, issues specific to the determinants of local government health spending are closely examined. One of the key questions closely examined is whether there are any incentives for local governments to compete through spending on health in a decentralized system? The question of spatial competition is addressed through an empirical analysis that attempts to test the presence of horizontal and vertical fiscal interactions among local governments in the Philippines using local government health expenditures data. While there is a consistent positive interaction among municipalities in health spending, the interaction of municipalities with provinces is positive but weakly significant. The positive fiscal interaction among local governments is explained as a result of potential competition for healthcare inputs.

Key words local health care, health decentralization, fiscal competition, horizontal fiscal interaction, vertical fiscal interaction, Local Government Code of 1991

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1. Introduction

In the recent decades, central governments in the developing countries have increasingly devolved responsibilities of providing public services including water, sanitation, education and health to the lower levels of government. Although the local governments in the developing world have limited powers in raising their own revenue, they enjoy discretionary fiscal powers specifically in budgeting and spending. In addition to the administrative and fiscal autonomy, they also enjoy political freedom. For example, the devolved health personnel answer directly to local elected officials (Capuno, 2009).

Under a decentralization law called the Local Government Code of 1991, municipalities and cities were tasked with the delivery of primary health services. Provinces were given the responsibility of secondary hospital care. The central government, however, retained monopoly power in legislation and issuing regulations on health services, and the management of specialized tertiary care hospitals (Kelekar 2009).

This paper explores some key issues related to health decentralization in the Philippines identified in literature and in course of interviews with country officials in the healthcare field. Issues of planning and budgeting of health plans, revenue and expenditure assignments in a decentralized health system are discussed. In addition, issues specific to the determinants of local government health spending are closely examined. One of the key questions closely examined is whether there are any incentives for local governments to compete with one another while determining their own spending on health in a decentralized system. The question of spatial competition is addressed through an empirical analysis that attempts to test the presence of horizontal and vertical fiscal interactions among local governments in the Philippines with respect to providing health services.

2. Theoretical basis for horizontal and vertical fiscal interaction among jurisdictions

The economic rationale for decentralization is mainly to allocate resources and meet the heterogeneous local needs of people more efficiently (Tiebout, 1956; Oates, 1972). Proximity to local governments helps consumers reveal their true preferences by “voting with their feet”, thus making the system more transparent and accountable (Tiebout 1956). Some scholars believe that a decentralized provision not only promotes local communities to participate in public decision-making, but also encourages policy-makers to resort to innovative methods of delivering public services (Lakshminarayan, 2003).

On the other hand, a strand of public economics literature explores the possibility of competition among local governments in a decentralized system (Starett, 1980; Bewley, 1981). Competition among local governments of the same tier, long studied in

the public economics literature, can occur due to several reasons. First, horizontal interdependencies among local governments can arise from tax competition among jurisdictions in order to attract businesses and promote economic development (Sinn 2003).

Second, fiscal competition may arise due to positive or negative spillovers resulting from local public expenditure. For instance, positive spillovers from public health services such as immunization, family planning, child and maternal health and infant nutrition provided in one jurisdiction might influence the neighboring governments to supply more or less of these services (Khaleghian, 2003). Alternately, individuals in one municipality may seek higher quality medical services from a hospital of a neighboring municipality. If local governments are indeed competing with one another, such behavior may induce those governments providing better medical services to find ways to discourage residents of neighboring local governments from using their services (Capuno & Solon, 1996).

Third, competition among local governments may also be induced by yardstick competition among local political actors, wherein residents of a local government use their neighboring governments' performance as the yardstick to measure and evaluate the performance of their own government. Such benchmark comparison may induce local governments to provide comparable, if not better, services to their own residents. This phenomenon might occur particularly prior to election as an attempt to be strategically re-elected (Shleifer, 1985; Besley & Case, 1995).

Fiscal interdependencies among governments at different tiers of government are also not uncommon to expect. Different levels of government provide a variety of public services (Oates, 1972). While governments may share a common tax base, lower-tier governments often rely on transfers from higher-tier governments to finance their expenditures. Fiscal interactions between two or more tiers of government are common when tax and expenditure policies co-exist and co-occupy. In other words, it may be expected when governments at two different tiers of administration share either a common tax base or common spending responsibilities. These interactions are referred to as vertical fiscal externalities in the public economics literature.

At a micro-level, Aronsson, Lundberg & Wikstrom (2000), explain vertical fiscal externalities due to working of a direct income effect or an indirect consumption effect. For example, total resources of county residents' fall as a result of an increase in the tax rate imposed by a province. Due to sharing of tax bases, this directly affects the total residual income of residents. If the public good is normal, its demand at the municipality-level will be negatively affected.

Preferences for the municipal public good and private good may or may not be independent of the public good supplied by another level of government (in this case the province). If they are independent, provincial spending will impact municipal spending only through an income or tax base effect. On the other hand, a good provided by the province may be viewed as a substitute or a complement to that provided by a

municipality. Fiscal interaction will be positive in case of complements, and negative in case of substitutes (Turnbull & Djoundourian, 1993; Aronsson et al., 2000).

Campbell (2004) illustrates the working of both these effects diagrammatically. **Figure 1** assumes Point A as the equilibrium between municipal and county expenditures (where county is a higher-tier government and municipality is a lower-tier) that are determined endogenously. Suppose that the goods provided by the municipality and county are complements. The movement from A to B occurs due to a decrease in the municipal spending, explained by a reduction in the municipal income (direct income effect). Due to the complementarity of goods provided by the municipality and the county, the equilibrium point shifts to Point C at which the municipality supplies E_m^{x2} level of public good (indirect consumption effect).

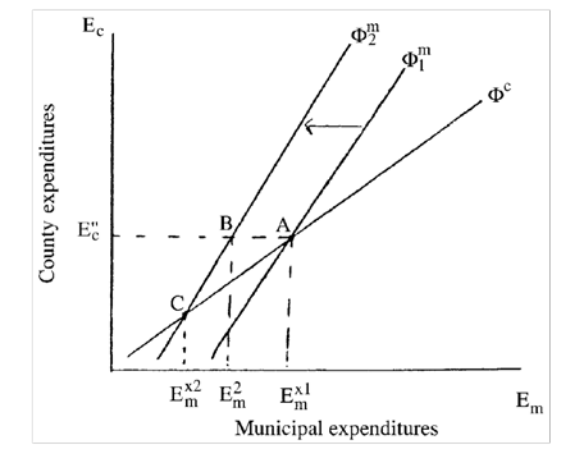


Figure 1. Fiscal interaction when goods are complements, Source: Campbell, 2004

3. Methodology

Employees of the government agencies including the Bureau of Local Health Development of the Department of Health (DOH), Bureau of Local Government Finance and Municipal Development Fund Office of the Department of Finance (DOF) were interviewed in order to gain a better understanding of the health decentralization process in the Philippines. Interviews with city and provincial health officers as well as doctors were conducted to gather additional insights from local officials. Observations made by city treasurers of three cities namely Makati, Quezon, and Pasig of the National Capital Region were collected. The interview schedule was reviewed and approved by the Institutional Review Board of George Mason University.

An empirical analysis was further conducted with the help of publicly-available public health expenditure data of local government units.

4. Country background

The Philippines is an archipelago of 7000 islands divided into three groups: Luzon, Visayas and Mindanao. In 2007, its population reached 88.57 million, thus making it the 12th most populous country in the world (Census, 2007). It is a lower middle-income country with a per capita Gross National Income (GNI) of \$3690 (for 2007 based on PPP)². The country's population is predominantly young, with the 0 to 14 years age group representing 33.8 percent of the population while the elderly (over 65 years of age) make up about 4.4 percent of the total population (WHO).

Administratively, the country is divided into 15 regions and 3 special regions namely Metropolitan Manila Development Authority (MMDA), Autonomous Region of Muslim Mindanao (ARMM) and Cordillera Administrative Region (CAR).³ The local government units comprised of provinces, cities, and municipalities make up the political sub-divisions of the country. As of 2007, the country comprised of 80 provinces, 120 cities, 1511 municipalities, and 42,008 barangays or villages. The cities are classified as component, highly urbanized and independent component cities. The latter two categories are independent of the provinces while the component cities are a part of the provinces (Article III, Local Government Code, 1991).

The Philippines spends around 3-4 percent of its GDP on health. The public and private sector jointly provide health care services -- public health and curative care services. While the public sector spending on health accounts for around 29-41 percent of the total expenditure, private sector accounts for approximately 48-50 percent of the overall health care expenditure. While the private sector predominantly provides curative care, the public sector continues to be the main provider of public health services and accounts for over three-fourths of the total public health spending. Within its own budget, the government spends more on curative care as compared to public health services (National Health Accounts, 2007; Kwon & Dodd, 2011).

The government health expenditures are composed of: salaries and wages, maintenance and other operating expenses (MOOE), and capital outlays. It is clear from **Table 1** that the local government allocates a relatively higher proportion of its health budget to salaries and wages (8.87%) as compared to operating (3.73%) or capital expenses (0.27%). The proportion spent on capital outlays is negligible for both, federal and local levels of government.

² The GNI figure is taken from World Bank at <http://data.worldbank.org/indicator/NY.GNP.PCAP.PP.CD>.

³ In every regional capital, each of the 20 government departments has its regional offices.

Table 1. Government health expenditure by type, 2005

| Expenditure Item | DOH and other agencies | Local government |
|--|-------------------------------|-------------------------|
| Salaries and wages | 3.87 | 8.87 |
| Maintenance and other operating expenses | 3.71 | 3.73 |
| Capital Outlay | 0.04 | 0.27 |
| Total by source | 7.62 | 12.87 |

Source: Kwon & Dodd, 2011

The Local Government Code of 1991 changed the delivery of the health services and devolved local government units with more responsibilities that were earlier vested with the central government. Provincial governments are primarily mandated to provide hospital care through provincial or district hospitals, as well as coordinate health delivery provided by cities and municipalities. Cities and municipalities, on the other hand are responsible for providing primary care including family planning, maternal and childcare, nutrition services as well as disease control services. The tertiary care services however, continue to be provided at regional hospitals that are managed by the central government (Kwon & Dodd, 2011).

A new Constitution was ratified in 1987, at the end of the military rule of Ferdinand Marcos from 1972 to 1986. This Constitution that is now in effect established a political system comprising of the executive, a bicameral legislature, and judiciary branches, including an independent Supreme Court. All the three branches of government have a strong influence on the working of the health system. The executive branch through the national government agencies and local government units exercise administrative or regulatory authority over the health system. The legislative system influences the system through passage of annual budgets of national health agencies and institutions. Congressional members also allocate their development funds, called the “priority development assistance fund” (PDAF) to their local constituencies for health projects. Third, the judiciary system “renders decisions in legal disputes involving health agencies and individuals” (Kwon & Dodd, 2011, p. 7).

5. Local Health Policy-making in the Philippines: Planning and Budgeting

While the Department of Health (DOH) shoulders the prime responsibility of formulating standards of health safety, and preparing guidelines for national health programs, the Local Government Units (LGUs) prepare their respective plans for public health programs. These are strategic five-year plans that focus on needs assessment, governance and financing of health programs. The plans are reviewed and revised based on suggestions received from the DOH. The development partners also get to review these plans prior to providing grants and technical assistance in public health programs of a few local government units, that the donor agencies choose to help. The next step of execution involves preparing the health budget at every level of local government by

- the local health board (local health authority) comprising of some elected and appointed members who enjoy advisory powers, planning authority and responsibility for health services,

- the local finance committee,
- the local treasurer,
- the local legislative body, and
- the local chief executive

The local chief executive (provincial governor/ city or municipal mayor) prepares the annual health budget after consulting with the local treasurer on the actual and estimated income and expenditure statements, He/She also seeks recommendations from the local finance committee, and reviews the approved local development plans and the various budget proposals made by heads of departments as a part of the process (LGC, 1991) (For more details on the stakeholders of health care decision-making see **Table 2**). Despite the guidelines set by the central government, the local and provincial authorities exercise substantial discretion in interpreting them and therefore provision of health services is subject to local political influence (Kwon & Dodd, 2011).

Table 2. Decision-making bodies of LGUs

| | Legislative body | Local chief executive | Presiding Officer | Members of local health boards | Other members of local health boards | Local finance committee |
|--------------|--------------------------|------------------------------|--------------------------|---|--|---|
| Province | sangguniang panlalawigan | Governor | Vice-governor | Governor (chairman), Provincial health officer (vice-chairman), chairman of the Committee on health of the sangguniang panlalawigan | Member from DOH, representative from the private sector and non-governmental organizations involved in health services | Provincial Planning and development Officer, Provincial Treasurer and Provincial Budget officer |
| City | sangguniang panlungsod | City Mayor | Vice-mayor | City Mayor (chairman), city health officer (vice-chairman), chairman of the Committee on health of the sangguniang panlungsod | Member from DOH, representative from the private sector and non-governmental organizations involved in health services | City Planning and development Officer, City Treasurer and City Budget officer |
| Municipality | sangguniang bayan | Municipal Mayor | Vice-mayor | Municipal Mayor (chairman), municipal health officer (vice-chairman), chairman of the Committee on health of the sangguniang | Member from DOH, representative from the private sector and non-governmental organizations involved in health services | Municipal Planning and development Officer, Municipal Treasurer and Municipal Budget officer |

| | | | | | | |
|----------|----------------------|--|-----------------|--------|--|--|
| | | | | bayang | | |
| Barangay | sangguniang barangay | | punong barangay | | | |

Source: LGC, 1991

6. Fiscal Issues: Revenue Side: Non-IRA Transfers and Other Funds Available to LGUs

The Local Government Code (LGC) of 1991 stipulated the LGUs with higher fiscal autonomy and flexibility to determine the composition of spending, taxing and borrowing to meet local development objectives within the limits set by the national government guidelines (Local Government Code, 1991).⁴

Provinces and municipalities in the Philippines are given limited taxing powers under the Local Government Code. The cities, in contrast have broader taxing powers (See **Table 3** for more information on the revenue classification among the LGUs). Further, the Code sets the maximum limit on the tax rates imposed by the LGUs. The taxes assigned to provinces are different from those of municipalities. The revenue of municipalities and cities is primarily derived from business taxes on manufacturers, wholesalers and retailers. Provinces and cities, on the other hand impose taxes on businesses, amusement places, working professionals and property tax⁵. Additionally, the proceeds of some of the provincial taxes are shared with municipalities and barangays.

The proceeds of the basic real property tax are distributed as follows:

- After retaining 35 percent of the proceeds into their general fund, the province distributes the remaining to the municipality (40 percent) and the barangay (25 percent) where the property is located (LGC, 1991).

The cities distribute their proceeds as follows:

- After retaining 70 percent of the proceeds into their general fund, the cities distribute 30 percent to the component barangays of the cities.

The 1991 Local Government Code not only gave broader revenue-raising powers but also increased the size of block grants namely Internal Revenue Allotments (IRAs) to local governments. Prior to devolution, 20 percent of the internally raised revenue was

⁴ Post-decentralization, the Internal Revenue Allotment (IRA) share received by the LGUs increased from 20 percent to 40 percent. They also receive a share of 40 percent of the gross collections of mining taxes, forestry, and fishery changes and other taxes, fees and charges (Local Government Code, 1991). They also receive a share from the proceeds of government agencies or government-owned or controlled organization.

⁵ The municipalities within the Metropolitan Manila Region also levy property taxes. While 35 percent of their proceeds are accrued to the MMDA, the municipality retains 35 percent, and the remaining is distributed to the component barangays of the municipality (Local Government Code, 1991).

distributed to local governments. The new decentralization code increased, the IRA to 40 percent based on population (50%), land area (25%) and an equal share (25%). The aggregate IRA is divided among different local government levels as follows: 23% to provinces, 23% to cities, 34% to municipalities, and 20% to barangays. The share is released directly to the provincial, city, municipal or barangay treasurer.⁶

Local government units also receive a share of 40 percent of the gross collections from mining taxes, royalties, forestry and fishery charges and other taxes, fees and charges. In addition, government agencies or government-owned or controlled organizations share their proceeds with the local governments. Additionally, the LGC gives LGUs limited corporate powers of raising their own revenue by floating bonds in the private market.⁷

Table 3. Classification of revenue of local government units

| GENERAL FUND | | | |
|--------------|---|--|--|
| TAX REVENUE | <i>Provincial/City Impositions</i> Real Property Tax <ul style="list-style-type: none"> • Basic Tax** • Special levy ** Proceeds are distributed between cities, municipalities and barangays within the Metropolitan Manila Area (Section 271). | Tax on Business <i>Provincial/City Impositions</i> <ul style="list-style-type: none"> • Business of printing and publications • Franchise tax • Tax on sand, gravel, and quarry resources* • Amusement tax on admission • Tax on amusement places* • Annual fixed truck on delivery trucks or vans * Municipalities/barangays have shares in the proceeds | Other taxes <i>Provincial/City Impositions</i> <ul style="list-style-type: none"> • Tax on transfer of real property ownership* • Professional tax • Other impositions |
| | | <i>City/Municipal Impositions</i> <ul style="list-style-type: none"> • Manufacturers, assemblers • Wholesalers, distributors • Exporters or manufacturers, dealers of essential commodities • Retailers • Contractors and other independent contractors • Banks and other financial institutions | <i>City/Municipal Impositions</i> <ul style="list-style-type: none"> • Community tax • Other impositions |

⁶ The share is released on a quarterly basis within 5 days after the end of the each quarter.

⁷ These should be revenue bonds whose proceeds shall be used to finance revenue-generating projects. Borrowing cannot exceed 20 percent of the LGUs' own source revenue.

| | | | |
|--------------------------|--|--|---|
| | | <ul style="list-style-type: none"> • On peddlers • Other business taxes | |
| NON-TAX REVENUE | Regulatory Fees <ul style="list-style-type: none"> • Mayor's Permit • Permit Fees under the Building Code • Zonal/Locational Clearance fees • Fees on weights and measures • Motorized Tricycle Operator's Permit • Cattle Registration Fees • Civil Registration Fees • Slaughter Permit Fee • Other Regulatory Fees | Service/User Charges <ul style="list-style-type: none"> • Secretary's Fees • Garbage Collection Fees • Parking Fees • Other Receipt/User charges (Sanitary inspection fees, health examination fees) | Receipt from Economic Enterprises <ul style="list-style-type: none"> • Receipts from Markets • Receipts from Slaughter houses • Receipts from cemeteries • Receipts from Bus terminal • Rentals • Receipts from waterworks systems • Other receipts from economic enterprises |
| NON-TAX REVENUE | Toll Fees | Other Receipts <ul style="list-style-type: none"> • Fishery Rentals • Sales of assets • Miscellaneous Receipts | |
| SHARES FROM NATIONAL TAX | National Tax Collections <ul style="list-style-type: none"> • Internal Revenue Allotment (IRA) • Local Government Stabilization and Equalization Fund (LGSEF) • Local Affirmative Action Project Fund (LAAPF) • Priority Development Assistance Fund (PDAF)*** • Share in National Wealth • Share in Tobacco Excise Tax • Share in Expanded Value-added tax • Share from Economic Zones <p>*** Allocated to Congress members for discretionary spending in LGU's.</p> | Extraordinary Receipts/Grants/Aids <ul style="list-style-type: none"> • Grants^– Foreign and Domestic <ol style="list-style-type: none"> 1. Calamity Fund 2. Municipal Development Fund 3. Local Government Empowerment Fund 4. Countryside development fund 5. DECS School Building Program • National Aids • Share from Lotto • Rebates on MMDA Contributions • Other extraordinary receipts <p>^-Conditional cash grants are given to</p> | Loans and Borrowing <ul style="list-style-type: none"> • Foreign • Domestic • Bond Floatation |

| | | | |
|--|--|--|--|
| | | extremely poor households a Poverty reduction and social development program called Pantawid Pamilyang Pilipino Program (4Ps). | |
|--|--|--|--|

Despite the stipulated sources of revenue under the Local Government Code, a commonly shared viewpoint among the public officials was that the total revenue raised by the local governments is inadequate to meet all the expenses for the devolved services. Furthermore, the Code allows LGUs to enter into contracts or inter-local agreements on grants, loans, and subsidies. The Bureau of Local Health Development (BLHD) under the DOH, and the Municipal Development Fund Office (MDFO) under the DOF respectively provide small loans for the implementation of development projects to LGUs⁸. Multilateral institutions such as the World Bank and Asian Development Bank (*ADB*) provide financial support to the LGUs, mostly channeled through the national government. However, some technical assistance grants (for training of health officials etc.) are given directly to LGUs.

A bulk of non-IRA funds especially the congressional allocations called Priority Development Assistance Fund (PDAF) are given to LGUs, particularly to municipalities and cities for incurring capital outlays such as construction of hospitals, and purchase of equipment.

The President of the Philippines has access to the Calamity Fund and disburses allocations in times of emergencies to the affected LGUs. However, neither an account of the distribution nor the use of these funds is publicly available.

Provincial and district hospitals are financed out of the provincial government's budgets while the municipal/city hospitals are financed from the municipal/city government's budget. While the services offered at Rural Health Units (RHUs) and City Health Offices (CHOs) are free of cost, hospitals may charge subsidized user fees that are not regulated. Provincial proceeds are re-distributed to other municipal or district-level hospitals based on their bed capacity.

⁸ MDFO created a Health Sector Reform Program (HSRP) in order to finance the Health Sector Reform Agenda (HSRA) launched by the DOH in 1999. MDFO supports the DOH agenda and finances health subprojects including construction of hospitals, health centers, training centers, barangay health stations and provision of health facilities.

7. Fiscal Issues: Expenditure Side

Statistics on the share of health spending in the LGUs' total expenditure indicate that it has grown substantially from 1991 to 2001. As compared to the share of economic services that declined from 32.9 percent to 25.4 percent, social sector spending rose from 20.5 percent to 26.7 percent during this period. Furthermore, the percent of social sector spending devoted to health increased from 23.9 percent to 44.9 percent (Manasan, 2004).

In contrast to the statistics, a theme commonly expressed in interviews with DOH officials was related to the inadequacy of total public health expenditures and an increased focus of the political mandate of spending on infrastructure projects such as construction of roads. The general impression was that infrastructure projects helped politicians to gain greater political leverage at the cost of lesser priority given to social development health and welfare projects. To the extent that at times certain infrastructure projects would be even showcased as health projects. For instance, a governor of a province proposed a "Roads for Health" program in the Province-wide Investment Plan for Health (PIPH), thereby proclaiming the need for building better roads as a means to improving access to better health care centers. One conjecture expressed by an official of the central government is that such behavior rests on the assumption that "in times of an epidemic, the DOH is going to come to their (LGUs) rescue." To assure funding for health services, a DOH official remarked that earmarking of a part of the IRA specifically for health projects should be done.

On the expenditure side, the LGC of the Philippines assigns provinces and municipalities/cities specific responsibilities. While rural health units and city health offices mostly provide primary health care, advanced medical services are the main mandate of the province-run hospitals (Schwartz, Guilkey, & Racelis, 2002; Lavado & Pantig, 2009)⁹. Hypothesizing the presence of a vertical fiscal interaction, Capuno & Solon (1996) point out that cities benefiting from the presence of province-operated or DOH-operated regional hospitals located within their jurisdiction tend to spend less on curative health services.

8. Research Questions and Hypotheses

Hypothesis 1

In the context of the taxation powers and the health responsibilities assigned to provinces and municipalities of the Philippines, this paper aims to examine *whether the lower-tier LGUs, specifically municipalities and cities interact fiscally with their respective provinces (higher-tier government) while determining their own health expenditure in addition to interacting fiscally with their neighboring LGUs.*

In the presence of a consumption effect where public health goods supplied by provinces and municipalities are viewed as substitutes, we hypothesize that a lower tier

⁹ Although the expertise of provincial hospitals is in providing advanced services, they can also treat patients for minor ailments.

government (e.g., municipality) will have lower spending on health services in response to a higher-tier government's (province) expenditure on health care. In other words, there is a negative vertical fiscal interaction in this scenario. On the other hand, competition for scarce resources between provinces and municipalities/cities may result into positive horizontal fiscal interaction.

Hypothesis 2

The paper further hypothesizes that these vertical fiscal interactions will intensify between among LGUs and the respective province if they LGUs are located closer to the provincial primate city.

The provincial primate city (with the largest population relative to the province size) is selected because it is more likely that hospitals providing advanced health services are located in the province's largest city. If the municipalities or cities are in closer proximity with the provincial primate city, these may be more inclined to draw benefits in terms of lower health spending than those located further away. On the other hand, competition for resources such as doctors, if any, may be more intense between municipal and provincial local governments if the provincial hospitals are located in the primate city.

8.1 Issues relevant to fiscal interaction among local governments

The evidence of competition among local governments in a decentralized system has been well established in the developed world. In the case of healthcare expenditures, there is evidence of competition in a positive direction found among local governments, commonly explained by the phenomenon of yardstick competition.

In the context of the developing world however, positive competition among regions has not been explained using similar logic. Instead, Bardhan (2002) argues that the traditional fiscal federalism literature cannot be applied to decentralized systems in developing countries due to differences in their institutional design. For instance the Tiebout hypothesis will not hold true in developing countries because people are not so mobile so as to induce inter-jurisdictional competition among neighboring jurisdictions. Therefore, local governments in developing countries are likely to behave in a different manner as compared to those in the developed countries due to differences in institutional (structure of incentives and organizations), administrative, managerial and political factors.

On the other hand, Caldeira, Foucault, & Rota-Graiosi (2010) apply the fiscal federalism literature to a developing country in Africa, Benin and show evidence of yardstick competition among *communes* that are geographically close to each other or with similar ethnic structures, particularly during election periods. Arze del Granado et al. (2008) and Kelekar (2011) also show evidence of fiscal interaction in the case of Indonesia and the Philippines respectively.

8.1.1. Factors that might explain spatial competition in a positive direction -- Can spending in one municipality cause another municipality to spend more?

Political Competition: One of the potential reasons of spatial interdependence in health expenditures is competition among politicians prior to elections – a possibility that was investigated during interviews with local Filipino experts.

The interviewees expressed no doubt when asked whether local health care spending was politically motivated. Political institutions in the Philippines have been described as weak and political relationships as “clientelist”(Abinales & Amoroso, 2005). Anecdotal evidence of special preference for and actual higher local health care spending by mayors with a medical background was also given in the interviews. Several cases of increased incidence of medical or dental missions were recorded prior to elections. The distribution of PhilHealth cards with the photos of political candidates printed on them was another example. Such strategic behavior among politicians might be induced by the behavior of their counterparts in the neighboring jurisdictions, whom the former are more likely to compete with on account of yardstick competition. Anecdotally, some officials also confessed that their LGUs had greater access to certain funds, e.g. for health projects from the Executive Branch due to similar party affiliations of the mayor and the President.

Incentives provided for yardstick competition in quality: As an attempt to improve the quality of health services, the DOH tries to promote yardstick competition among devolved health facilities in local jurisdictions by providing cash incentives. The Sentrong Sigla Movement is a certification program where local health facilities qualify for excellence awards and receive cash incentives for conforming to high quality of services (Solon, 2009).

Differentiation in the salary of doctors across regions: Concomitant to the devolution of health services to LGUs, a significant number of personnel were transferred from the rolls of the national government (DOH) to the LGUs. While the LGC gave local governments some degree of autonomy in determining compensation for their employees, they nonetheless had to comply with guidelines prescribed by the Civil Service Commission and the Department of Budget and Management.

Salaries of doctors across LGUs might vary on account of two levels of differentiation: income class of LGUs and levels of government. The first level of differentiation is based on the income class of the LGU. While the LGUs were originally required to adopt and set their rates of pay at a fixed percentages of the prescribed national salary schedule (the Salary Standardization Law), the Local Government Code allowed a LGU to adopt the pay schedule of a higher-income LGU if the concerned LGU were financially able to do so (Manasan & Castel, 2010). Under the second level of differentiation, doctors of the same position may receive different levels of compensation depending on whether they are employees of a province, municipality or a city (Manasan & Castel, 2010).

Although LGU spending on personnel services was originally limited up to 55 percent based on the income class of the local government, the cap was later relaxed to exclude items such as payment of benefits under the Magna Carta for Public Health Workers, and cost of devolved hospital services transferred from provinces to cities.

Under the Magna Carta Benefits for Public Health Workers (Republic Act 7305), health workers are granted subsistence allowance, laundry allowance, night-shift differential, hazard pay and longevity pay (Manasan & Castel, 2010).¹⁰ Informant interviews with doctors suggested that not all LGUs are capable of providing the allowances under the Magna Carta for Public Health Workers. The lack of uniformity among LGUs in providing these benefits probably explains the discontentment that was sensed among the interviewed health workers especially, doctors. Moreover, the interviewees also thought that they are being underpaid as compared to their counterparts in the private sector and in the foreign market. The non-uniformity in the salaries and benefits offered to doctors in LGUs of different incomes and levels indicate that this might be one of the potential causes of fiscal interdependence in healthcare spending.

8.1.2. Factors that might explain competition in a negative direction -- Can spending in one municipality cause another municipality to spend less?

Discretionary spending by LGUs: While generally the revenue base of LGUs is not very large, they enjoy substantial discretionary powers in health care spending. One such example of complete discretion enjoyed by LGUs is in the procurement of drugs and medical supplies.

Pharmaceutical procurement is done through bidding at the local level. After a therapeutic committee identifies the necessary drugs (including specific vaccines¹¹), medicines, and equipment to be purchased, a Bids and Awards Committee (BAC) is set up. Both private and government companies bid for a contract to supply the identified drugs, medicines and equipment. Following the Government Procurement Act, the most widely used and preferred mode of procurement is that of national competitive bidding (the contract for works has to be worth Pesos 5 million and above; while contracts for goods has to be worth Pesos 2 million and above). In a conference attended by prospective bidders, all details of the procurement are discussed and clarified. The documents submitted by bidders are assessed and evaluated by the BAC during a bid opening. The lowest bidder who also complies with nationally set standards of quality of service is awarded the contract. In a few cases noted by Capuno (2009), there is some anecdotal evidence that corrupt officials rig the procurement of drugs and medical supplies in favor of their chosen suppliers.

¹⁰ The subsistence allowance is equal to PhP 1500 per month, while the laundry allowance is PhP 150 per month. The hazard pay is equal to 25 percent of the basic salary for workers receiving Salary Grade 19 and below, and 5 percent of the basic pay for those receiving Salary Grade 20 and above. The longevity pay is 5 percent of the basic pay for every 5 years of service

¹¹ The regular vaccines are supplied by the DOH to LGUs three times a year.

An interviewed procurement officer at a government agency hinted at collusion among bidders in certain cases, especially in those projects of the bilateral agencies that do not stipulate a ceiling on the estimated cost of the contract. This process is unlike those national/local government projects in which the final winner of a competitive bid is the one who quotes the lowest financial cost.

Another instance of discretionary health spending was revealed during an interview with the city treasurer of Quezon city (a highly urbanized city in the National Capital Region (NCR)). Subject to the available budget the city hospital can exercise its discretion to hire consultant doctors from other regions as non-regular employees of the city at salaries that maybe much higher than the prevailing market levels.¹²

While it is mandatory for all LGUs to provide drugs at subsidized rates to senior citizens, some cities provide more than the mandatory services. For instance, through their Drug Subsidy Program, Makati City provides a 50 percent discount on medicines for common illnesses and even chronic illnesses (Annual Report of City of Makati, 2009). Pasig City residents are registered under white and blue cards that entitle them to up to a 70 percent discount on medicines and other health services.

Lack of inter-jurisdictional coordination through Inter-Local Health Zones (ILHZ): Section 33 of the LGC encourages LGUs to partner and co-operate with each other in the sharing of resources. The DOH has established Inter-Local Health Zones (ILHZ) wherein provincial and municipal governments may partner with non-profit organizations or the private sector to share resources, as well as to integrate the health referral system. The National Center for Health Facility Development is the agency of the DOH that provides technical assistance to ILHZs. While there is some evidence of coordination among provincial and municipal governments, there are case studies that show ILHZs to have limited functionality.

There is limited sharing of personnel or resources except in times of emergencies. However, the city treasurers of Pasig and Quezon cities pointed out the use of their respective cities' hospital services by residents from neighboring cities. Mostly, patients seek services from the nearest public health facility. If the nearest hospital is located in the neighboring LGU, the hospital cannot deny services and has to bear the cost of provision. To reduce the burden on the city arising from the cost of provision to non-residents, one of the city treasurers hinted the possibility of cross-subsidizing the own residents by the non-resident users. This could be done by charging nominally higher fees to non-resident users but the problem is how to sort out residents and non-residents who flock to the city's health facility.

¹² A survey done by Manasan and Cartel (2010) shows that payment to non-regular employees is one of the reasons of non-compliance of LGUs (especially cities) to the PS expenditure cap.

4.1.3. Factors that might vertical fiscal interaction between municipalities and provinces -- Does provincial healthcare spending influence municipalities to spend less or more?

The 1991 Local Government Code transferred the management of provincial, district or municipal-level hospitals to the local government units. While the provincial hospitals provide tertiary and secondary services, district-level hospitals of Levels 2 and 3 provide some secondary services.¹³ On the other hand, some district hospitals of level 1 and municipal hospitals provide primary care services. A common observation made during visits to a provincial and a district hospital in the province of Ilocos Sur of the Luzon region was the low levels of capital investments.¹⁴ Another notable observation pointed out during interviews with doctors was the over-burdening of secondary and tertiary-level hospitals with cases of primary health care. For instance, instead of going to a RHU for treatment of a minor ailment, patients preferred to go directly to the provincial hospital in Ilocos Sur province.

One of the issues faced by patients is the lack of infrastructure in district hospitals or RHUs, as compared to provincial hospitals. There is evidence of LGUs closer to a provincial tertiary hospital that have allocated lower budgets to health services (Kwon & Dodd, 2011).

9. Theoretical Model

For simplicity, we assume that a given province p has only two municipalities i and j . We also assume that this underlying structure is a non-cooperative game with a Stackleberg solution, where provinces act as leaders and the municipalities take the provinces' spending levels as given before determining their own spending. Drawing from Revelli (2003), in a two-tiered government, a consumer derives utility from a set of private composite goods (x_i), public health good supplied by its own municipality (p_i) as well as its province (p_p). Additional utility is derived from a public health good supplied by the neighboring municipality (p_j) in the presence of a horizontal fiscal interaction. Some other characteristics such as demographic structure or individual preferences (m_i) also determine spending on health care.

$$u_i = f(x_i, p_i, p_j, p_p, m_i) \text{ --- Eq. 1}$$

¹³ “Level 2 hospitals in the Philippines provide emergency care, general administrative and ancillary services, primary care for prevalent diseases in the area, and clinical services such as general medicine, pediatrics, obstetrics, surgery, anesthesia, pharmacy, first-level radiology and secondary clinical laboratory. They are not organized into departments, but cater to patients who require intermediate, moderate and partial supervised care by nurses for 24 hours or longer. Level 3 hospitals are organized into clinical departments and offer intensive care, clinical services in primary care and specialty clinical care” (WHO, pp.65).

¹⁴ While the district hospital was short of funds to replace its non-functional ceiling fans, patients carried their own fans to the hospital. On the other hand, because the radiological equipment in the provincial hospital has not been in a working condition for several months, patients were referred to private clinics.

Following standard formulation, consumers are constrained by their limited budgets. Therefore, the total consumption of a consumer depends on the total income (w_i), taxes paid to the municipal (k_i) and provincial governments (k_l) as well as exogenous contributions received from the government (g) (Eq. 2).

$$x_i = \{w_i - k_i - k_l + g\} \text{--- Eq. 2}$$

The total public health supplied depends on the total number of people residing in a municipality or a province and the per capita expenditure devoted to each resident. When horizontal and vertical externalities are incorporated, the total public health supplied by a municipality (p_i) depends not only on the health expenditure of the municipality and the neighboring municipality but also on the spending of its own province. While the parameter ρ measures the sign and magnitude of horizontal interaction between the two municipalities, λ measures the sign and magnitude of the vertical interaction, i.e. between the municipality and its own province (Eq. 3).

$$p_i = f\{(N_i * z_i)(N_j * z_j)^\rho, (N_{i+j} * z_p)^\lambda\} \text{--- Eq. 3}$$

A positive ρ and λ indicate that a municipality's health spending interacts positively with that of its province and with that of its neighboring municipality respectively. A negative coefficient indicates that the fiscal interaction is in the opposite direction. and in the opposite direction if λ is negative. The local government maximizes the indirect utility function (obtained by summing the individual utility functions) (Eq. 4) subject to own budget constraint (Eq. 5) as well as that of its consumers (Eq. 2)

$$W = \sum_{i=1}^N V\{f(x_i, p_i, p_j, p_p, m_i)\} \text{--- Eq. 4}$$

$$R = K + G + C \text{--- Eq. 5}$$

where R is the total revenue comprising of the total tax revenue (K), inter-governmental transfers (G) and other receipts received from the central government (C). In the presence of horizontal and vertical externalities, the total demand for the public health good by an individual will depend on the public good provided by the neighboring municipality (p_j), per capita income (x_i), the implicit prices of the public health goods (that depends on per capita municipality tax (k_i) and provincial tax (k_l)) as well as individual characteristics (m_i) determined by the needs and preferences of the people (Eq. 6).

$$p_i = f(p_j^\rho, p_p^\lambda, x_i^{\beta_1}, k_i^{\beta_2}, k_l^{\beta_3}, m_i) \text{--- Eq. 6}$$

where

$$p_j = N_j * z_j$$

$$p_p = N_{i+j} * z_p$$

$$x_i = w_i - k_i - k_l + g$$

Therefore, the per capita health expenditure of municipality i (in logarithmic form) may be written as a function of (Eq. 7) per capita health expenditure of the neighboring municipality j (z_j), per capita health expenditure of the province p (z_p), per capita residual income (x_i), inter-governmental grant (g_i), total population sizes of the municipality (N_i) and province (N_{i+j}), implicit prices of the public health good supplied by the municipality and the province (determined by per capita municipal tax (k_i) and per capita provincial tax (k_l)), as well as other demographic and political factors (m_i) that might affect spending.

The interdependence between the spending of municipalities i and j is captured through a reaction function (Eq. 8), where the parameter ρ denotes the sign and magnitude of horizontal fiscal interaction (interaction in z between region i and its neighbors is obtained as a weighted average of interactions given by, $\sum W_{ij}z_j$ where every neighbor receives an equal weight). In addition, λ determines the direction and size of the interaction between the municipal and provincial per capita health spending. A

$$z_i = \rho \ln z_j + \lambda \ln z_p + \beta_1 \ln x_i + \beta_2 \ln k_i + \beta_3 \ln k_l + \beta_4 \ln g_i + \beta_5 \ln N_i + \beta_6 \ln N_j + \sum_{i=7}^k \beta_i \ln m_i \quad \text{Eq. 7}$$

mixed regressive spatial autoregressive model is used with a queen contiguity matrix.

$$z_i = \alpha + \rho \sum W_{ij}z_j + \lambda z_p + \sum_{k=1}^k \beta_k x_i + u_i \quad \text{Eq. 8}$$

Hypothesis 2 (Eq. 9) is tested by modifying Equation 8 and incorporates an interaction term between per capita provincial health spending and the distance from the provincial primate city. The parameter γ measures the change in magnitude of the interaction between the municipality and its respective province as the distance (D) of the municipality from the provincial primate city increases.

$$z_i = \alpha + \rho \sum W_{ij}z_j + \lambda z_p + \gamma D z_p + \beta_k x_i + u_i \quad \text{Eq. 9}$$

10. Empirical Results and Discussion

The dependent variable in this analysis is per capita health expenditure of a municipality or a city. As illustrated in Section 4, the analysis controls for total revenue per capita, share of internal revenue allocation in total revenue, population, population density, poverty incidence, and a political dummy variable that indicates whether the municipality mayor is from the same party as the majority of the congressional district members from its respective province. In order to test whether health provided by the

municipal government is a normal good, provincial income is used as a control variable.¹⁵ **Table 4** summarizes the descriptive statistics of all the variables used in this study.

Table 4. Descriptive statistics

| Variable | Number of observations (N) | Mean | Std. Deviation | Minimum | Maximum |
|--|----------------------------|-----------|----------------|---------|-----------|
| Provincial income per capita | 1,595 | 23,483.79 | 8,618.64 | 13,105 | 140,275 |
| Poverty incidence | 1,593 | 0.455 | 0.1669 | 0.0143 | 0.8968 |
| Municipal population | 1,595 | 54,857 | 115,387 | 114 | 2,679,450 |
| Municipal population density | 1,595 | 2,050 | 7,354 | 14.82 | 121118 |
| Total revenue per capita | 1,594 | 2,029 | 5,579 | 370 | 218,071 |
| IRA as a percent of total revenue | 1,594 | 0.82 | 0.16 | 0.068 | 0.99 |
| IRA per capita | 1,594 | 1,663 | 5,515 | 325 | 216,832 |
| Provincial population | 1,578 | 1,143,322 | 763,995 | 15,974 | 2,856,765 |
| Ratio of provincial property tax to municipal property tax | 1,574 | 1.356 | 2.565 | 0.001 | 67.006 |
| Provincial health expenditure pc | 1,578 | 152.88 | 139.40 | 4 | 1363 |
| Municipal health expenditure per capita | 1,502 | 129.25 | 106.65 | 0.36 | 1328.27 |

To test for the presence of vertical fiscal interaction between the municipality and the respective province, provincial per capita health expenditure is also controlled. Following Revelli (2003), provincial population and the ratio of provincial property tax per capita to municipal property tax per capita are also used as control variables.

The study excludes all the stand-alone municipalities or cities. Also, the observations with missing political data are excluded along with their corresponding lagged observations. The NCR is excluded from the analysis because it comprises of highly urbanized cities that are independent of provinces. To induce normality, all variables are transformed into logarithmic forms and so that the coefficients are interpreted as elasticities.

The regression results are given in **Table 5**. Models 1 and 2 are ordinary-least square regressions. Models 3 and 4 are results are of two-stage least square regressions that control for simultaneity resulting from fiscal inter-dependence of municipal expenditures among themselves and with their respective province. The lagged exogenous variables determining municipal and provincial health expenditures are used

¹⁵ Since it may be argued that total revenue per capita is endogenously determined it is treated as exogenous in the empirical specification. As a robustness check, the analysis was repeated on excluding this variable and instead including per capita internal revenue allocation as a control variable.

as instruments.^{16, 17} In Models 4 and 5 test for the second hypothesis, specifically if there is evidence of fiscal interaction after controlling for the interaction between provincial health spending and distance of the municipality (LGU) from the provincial primate city. Euclidean distance is calculated from the provincial primate city to every LGU. It is estimated as $\sqrt{(\hat{x}_i - \hat{x})^2 + (\hat{y}_i - \hat{y})^2}$ where (x_i, y_i) are co-ordinates of a LGU, and (\hat{x}, \hat{y}) are co-ordinates of a provincial primate city. Further, standard errors are clustered by random province effects.

This analysis centers around two variables testing for horizontal and vertical interaction specifically per capita municipal health expenditure and per capita provincial health expenditure respectively. The regression results find evidence of a positive and consistent spatial dependence among municipalities, after controlling for any interaction with their respective provinces. The consistently positive and statistically significant coefficient for horizontal fiscal interaction in Models 3 and 4 indicate that municipalities are more likely to interact among themselves than with their respective province. The positive horizontal interaction may be explained as a result of competition among municipalities for health inputs such as doctors that drives the overall spending of LGUs to go up (Kelekar, 2012).

Further, municipal expenditures are found to be positively associated with provincial health expenditures in Models 3 and 4 and statistically significant at 10 percent level of significance. In other words, greater provincial health expenditures increase per capita municipal expenditures that may demonstrate a complementary demand relationship between the goods provided by the municipal and the respective provincial governments (Turnbull & Djoundourian, 1993; Aronsson et al., 2000).

While the rural health/city offices in the municipalities/cities provide primary health services, provincial hospitals are mandated to provide more specialized services. However, there is little evidence to suggest complementarity between the services provided by the municipalities and the province, specifically due to the lack of integration. Evidence suggests that patients directly go to secondary or tertiary hospitals to get treated for minor ailments instead of rural health units, due to the low quality of services, lack of integration between the primary and secondary services, lack of supplies in public facilities, and absence of a gate-keeping mechanism (Kwon & Dodd, 2011). If these cases were representative of the behavior of health consumers in general, one would expect a negative vertical fiscal interaction.

An alternative explanation for the positive vertical interaction between municipalities and provinces is the competition for health inputs such as doctors. In

¹⁶ While running the first-stage IV regression, the instruments included the lagged fiscal, social, economic, demographic and political determinants of municipal as well as determinants of provincial health spending. For the provincial spending, additional instrument of percent of households with access to safe water supply was included.

¹⁷ Although the theoretical model assumes that the provincial spending is exogenously determined, the empirical model treats it as an endogenous variable for robustness.

addition to competing amongst themselves for resources, municipalities also compete with the provinces for health resources such as doctors.

As expected, the interaction term in Model 4 (between provincial spending and distance from the primate city) is negative but insignificant. A statistically significant Anderson canon LR in Models 2 and 3 denotes that the instruments used in the first-stage regression of the 2SLS are relevant. An insignificant Hansen J statistic indicates that the model is not over-identified.

Total revenue per capita, is positive and significant. Provincial income, population, and grants received by the municipality, and the ratio of provincial property tax to municipal property tax, however, do not have a statistically significant impact on municipal spending. The political dummy, on the other hand, is positive at 5 percent level of significance suggesting the presence of a pork-barrel funding effect in Models 3 and 4.

Table 5. Regression results of horizontal and vertical fiscal interaction

| Dependent/Independent variable | OLS (Model 1) | OLS (Model 2) | 2SLS (Model 3) | 2SLS (Model 4) |
|---|------------------------------------|------------------------------------|-------------------------------------|-------------------------------------|
| Dependent variable: <i>Health expenditure per capita</i> | | | | |
| Provincial income per capita | -0.0426 (0.1337) | -0.0766 (0.1376) | -0.0994 (0.1353) | -0.1552 (0.1377) |
| Poverty incidence | -0.1049* (0.0613) | -0.1843** (0.0703) | -0.0729 (0.0617) | -0.1324* (0.0703) |
| Municipal population | 0.0338 (0.0386) | 0.0172 (0.0517) | 0.0430 (0.0419) | 0.0313 (0.0540) |
| Municipal population density | -0.0484 (0.0833) | -0.0537 (0.0899) | -0.0259 (0.0629) | |
| Total revenue per capita | 0.5625*** (0.1860) | 0.5391** (0.2039) | 0.5383*** (0.1809) | 0.5034*** (0.1987) |
| IRA as a percent of total revenue | -0.0712 (0.1601) | -0.1340 (0.1786) | -0.0462 (0.1385) | -0.0910 (0.1540) |
| Political Dummy | 0.1192** (0.0484) | 0.1171** (0.0520) | 0.1039** (0.0452) | 0.0958** (0.0483) |
| IRA per capita | | | | |
| Provincial population | 0.0537 (0.0565) | 0.0369 (0.0604) | 0.0796 (0.0720) | 0.0712 (0.0721) |
| Ratio of provincial property tax to municipal property tax | -0.0046 (0.0791) | 0.0116 (0.0788) | -0.0104 (0.0713) | 0.0026 (0.0624) |
| Lagged health expenditure (ρ) | 0.600*** 0.1593 | 0.600*** (0.1580) | 0.7369*** (0.2584) | 0.8200*** (0.3021) |
| Provincial health expenditure pc (λ) | 0.1645** (0.0827) | 0.1579* (0.0836) | 0.1850^ (0.1141) | 0.1784* (0.0990) |
| Provincial spending x Distance from the primate city (γ) | | -0.0225 (0.0509) | | -0.0146 (0.0843) |
| Distance from capital | | 0.0504 (0.0359) | | 0.0486 (0.0356) |
| Province effects clustered | Yes | Yes | Yes | Yes |

| | | | | |
|-----------------------------|--------|--------|------------|------------|
| Sample size | 1419 | 1346 | 1419 | 1346 |
| R ² | 0.3122 | 0.3152 | 0.3076 | 0.3045 |
| Anderson canon LR statistic | | | 346.049*** | 321.870*** |
| Hansen J statistic | | | 12.542 | 14.174 |

Notes: Some variables like population density were dropped from the regressions due to multicollinearity.

All variables were logged; so all the coefficients are interpreted as elasticities.

*, **, *** indicate levels of significance at 10, 5 and 1 percent level of significance.

^ Marginally significant at 10 percent level of significance

11. Conclusion

This paper presents an empirical analysis of horizontal as well as vertical fiscal interactions in health spending in the Philippines. While there is a consistent positive interaction among municipalities in health spending, the interaction of municipalities with provinces is positive but weakly significant. The positive fiscal interaction among municipalities is explained as a result of competition for health resources such as doctors. The disparity in the salaries of doctors on account of income differences between municipalities may induce the latter to compete among one another. The competition for health resources may also occur between municipalities and their respective province.

APPENDIX: INTERVIEW QUESTIONS

1. How does the decentralized health care delivery system in the present day compare with centralized system before the implementation of Local Government Code, 1991?
2. What is the role of your agency?
3. What are the roles of local health boards and local finance committees in every LGU?
4. I understand that the grants (Internal Revenue Allotments) make up a substantial portion of the total revenue of LGUs. How often are these allocations received?
5. Besides the own local and non-local sources of revenue, are LGUs taking any steps to increase their own-source revenue by:
 - a. floating bonds
 - b. altering tax rates
 - c. enforcing tax payments
 - d. implementing user fees
6. Compared to the Special Education Fund that is used to finance education expenses, have there been similar recommendations made to finance health services?
7. Do you think there is any misuse/ or inefficient use of funds, instead put to better use?
8. Are there any regular audits conducted to monitor the use of funds?
9. How independent of politics are the spending decisions of LGUs?
10. Are there any other disbursements from the President or central government for the purpose of health spending?
11. How and where from are the drugs and other medical supplies procured?
12. Can you describe the bidding process for procuring resources?
13. Are you aware of the DOH set Comprehensive Healthcare Agreements?
14. Does the DOH require you to maintain a minimum stock of drugs or equipment on a daily basis?
15. How is the inventory (e.g. vaccines) stored?
16. During a natural calamity or an emergency, are you adequately stocked with the necessary supplies?
17. Which of the following steps do you take during emergencies to obtain the necessary drugs or equipment?
 - a. Go and get it from the neighboring LGU
 - b. Ask the patient to go to the neighboring health unit
 - c. Purchase it from a private store
 - d. Do not know
18. How long is the travel time to obtain drugs and equipment?

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