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Health Expenditure Growth under Single-Payer Systems: Comparing South Korea and Taiwan

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ABSTRACT

Objective: Achieving universal health coverage has been an important goal for many countries worldwide. However, the rapid growth of health expenditures has challenged all nations, both those with and without such universal coverage. Single-payer systems are considered more efficient for administrative affairs and may be more effective for containing costs than multipayer systems. However, South Korea, which has a typical single-payer scheme, has almost the highest growth rate in health expenditures among industrialized countries. The aim of the present study is to explicate this situation by comparing South Korea with Taiwan. **Methods:** This study analyzed statistical reports published by government departments in South Korea and Taiwan from 2001 to 2015, including population and economic statistics, health statistics, health expenditures, and social health insurance reports. **Results:** Between 2001 and 2015, the per capita national health expenditure (NHE) in South Korea grew 292%, whereas the corresponding growth of per capita NHE in Taiwan was only 83%. We find that the national health insurance (NHI) global budget cap in Taiwan may have restricted the growth of health expenditures. Less comprehensive benefit coverage for essential diagnosis/treatment services under the South Korean NHI program may have contributed to the growth of out-of-pocket payments. The expansion of insurance coverage for vulnerable individuals may also contribute to higher growth in NHE in South Korea. Explicit regulation of health care resource distribution may also lead to more limited provisioning and utilization of health services in Taiwan. **Conclusion:** Under analogous single-payer systems, South Korea had a much higher growth in health spending than Taiwan. The annual budget cap for total reimbursement, more comprehensive coverage for essential diagnosis and treatment services, and the regulation of health care resource distribution are important factors associated with the growth of health expenditures.

Keywords: health care expenditure, national health insurance, single-payer system, South Korea, Taiwan.

Introduction

Achieving universal health coverage has been an overarching goal for many developed and developing countries worldwide. However, the rapid growth of health expenditures has challenged all nations, both those with and without such universal coverage. Previous studies revealed that single-payer systems are more efficient for conducting administrative affairs and may be more capable of containing costs than multipayer systems [1–4]. Among the Organisation of Economic Co-operation and Development (OECD) nations, South Korea has almost the highest growth rate of health expenditures, approximately 9% annually between the years 2000 and 2010, which is much higher than the average growth rate of 4.3% [5]. In the case of South Korea, it seems that the single-payer social health insurance system has not functioned effectively in containing costs. The failure to contain expenditure growth in South Korea is even more striking when its system is compared to that of Taiwan. The factors that contribute to the rapid growth of health expenditures in South Korea deserve investigation by comparative analysis, and the findings from such an analysis may shed light on cost containment strategies for other nations.

Both South Korea and Taiwan are recently developed countries, and they implemented universal national health insurance (NHI) schemes in 1989 and 1995, respectively. During the past two decades, both of the NHI systems have achieved their preliminary goals of ensuring access to care with an acceptable quality of care [6,7]. Moreover, these two health delivery systems share several characteristics, including open access to care without gatekeepers, freedom of choice among patients to select appropriate providers for each episode, hospitals that employ doctors and possess sizable outpatient departments, a high number of physician visits (approximately 13 or more visits per capita) and sufficiently long hospital stays (in terms of days) for those

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patients who are admitted, and a high proportion of nonpublic hospitals and beds.

From 1998 to 2000, after years of political struggle, the South Korean government successfully consolidated 367 health insurance funds (227 corporate funds and 139 regional funds) into a publicly run single-payer system. This action happened shortly after the implementation of the universal health insurance scheme was completed in Taiwan in 1995. Since these programs were implemented, however, national health expenditure (NHE) has experienced rapid growth in South Korea but not in Taiwan. Between 2001 and 2015, the per capita NHE in South Korea grew from $509 to $1996 (in US dollars), a 292% increase, whereas the corresponding growth figure for per capita NHE in Taiwan was only 83% ($759 to $1387) [7,8]. Given this divergent performance in health expenditure growth between two similar neighboring countries that both have NHIs, this article aims to explicate the factors that may account for this variation.

Materials and Methods

This study analyzed statistical reports published by government departments in South Korea and Taiwan. The main data sources included population and economic statistics, health statistics, health expenditures, and social health insurance reports. To facilitate the comparison of health expenditures between South Korea and Taiwan, we used the time frame from 2001 to 2015 because the single-payer health insurance system in South Korea was not fully implemented until the year 2000.

The calculation of total health spending (i.e., NHE in South Korea and Taiwan) follows the guideline from the OECD statistics. In general, health spending includes items related with health care services, health insurance expenses, out-of-pocket payments for health care services, and spending on other health-related commodities. In this study, the sources of NHE were divided into three major components: government budget, social health insurance scheme, and out-of-pocket payments. We first compared South Korea and Taiwan with respect to the overall structure of NHE during the observation period. Then, we focused on the comparison of demand side factors, supply-side factors, as well as government regulation and NHI system design between the two countries to extract possible factors that might account for the variation in the growth of NHE.

Results

The National Profiles

South Korea and Taiwan share numerous cultural and economic development features. Since the early 1950s, both countries have experienced rapid economic growth. During the 1990s, the per capita income of both countries reached $10,000. Table 1 shows the basic national profiles of South Korea and Taiwan in the years 1991, 2001, and 2015 [8–11]. The population of South Korea is approximately twice that of Taiwan, although the growth rates of the two countries do not differ significantly. However, the proportion of the population aged 65 years or older grew somewhat faster in South Korea during this period, increasing from 5.2% to 12.8% compared to a growth from 6.5% to 12.5% in Taiwan during the same period.

Between 1991 and 2001, the growth rates of per capita gross domestic product (GDP) and per capita NHE were similar in the two nations. However, from 2001 to 2015, economic growth was rather strong in South Korea, where the per capita GDP grew by 153%, from $10,655 to $27,009. In comparison, the GDP growth in Taiwan was weak during the same period; it was reported as 67% and increased from $13,452 to $22,407. Similarly, the per capita NHE grew much faster in South Korea than in Taiwan, with an increase in per capita NHE of 292% in South Korea and only 83% in Taiwan. With respect to the proportion of GDP accounted for by NHE, the figures were 3.9%, 4.5%, and 7.4% in 1991, 2001, and 2015, respectively, for South Korea and 4.3%, 5.6%, and 6.2% for Taiwan during those same years. Moreover, the overall upward trend in growth of NHE/GDP was higher in South Korea than in Taiwan, especially from 2001 to 2015, when it rose 2.9 percentage points in South Korea and only 0.6 percentage points in Taiwan.

National Health Expenditure

To compare the growth of health expenditures under the single-payer systems in South Korea and Taiwan, we first examined the components of NHE for the two nations (Table 2) [8,9]. We noticed that the amount spent on health increased from $24,123 million to $101,832 million from 2001 to 2015 in South Korea, with a corresponding spending increase in NHE for Taiwan during the same period from $16,963 million to $32,554 million. The table also shows that in South Korea, the government sector (including social insurance spending) accounted for approximately 58.7% of the NHE budget in 2001 and 56.4% of the NHE budget in 2015, whereas the corresponding figures for Taiwan were 66.0% and 59.8% for the same years. In 2001 and 2015, spending on NHI accounted for 48.4% and 46.1% of NHE in South Korea, whereas for Taiwan, this spending accounted for 57.3% and 52.4% of NHE during those years. We also note that the public sector portion of the NHE decreased by 2.3 percentage points in South Korea and by 6.2 percentage points in Taiwan during these years. These figures indicate that the structure of NHE and the direction of change in NHE were similar in the two countries. Given the similarity of the NHE structure for both countries during the study period, we next examined health care provisioning and

Table 1 – National profiles of South Korea and Taiwan.

	South Korea			Taiwan		
	1991	2001	2015	1991	2001	2015
Population (1000 persons)	43,296	47,357	51,015	20,503	22,341	23,462
Age 65 years and over (%)	5.2	7.6	12.8	6.5	8.8	12.5
GDP/per capita (USD)*	7,280	10,655	27,009	9,143	13,452	22,407
NHE/per capita (USD)*	281	509	1,996	394	759	1,387
NHE/GDP (%)	3.9	4.5	7.4	4.3	5.6	6.2

* The annual average exchange rates of KRW/USD were 733.4 in 1991, 1,291.0 in 2001, and 1,131.3 in 2015; NTD/USD were 26.8 in 1991, 33.8 in 2001, and 31.9 in 2015.