The Triangular Axes of Universal Health Coverage Achievement: The Success Factors Behind Korean Community-Based Health Insurance Expansion

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Abstract
Though it has passed over 30 years, Korea’s community-based health insurance (CBHI) expansion can provide useful policy implications to developing countries with similar conditions, that is, lack of fiscal resources, health infrastructure, and medical resources to expand coverage to the informal sector. We summarized three groups of success factors through in-depth interviews and narrative analysis: system design, system operation, and public perception of the system. Korean CBHI could expand to the informal sector with the same system design as the formal sector such as mandatory enrolment, compulsory designation of medical service providers along with the low-benefit, low-contribution, and a low-payment system. However, expansion to the informal sector was somewhat different, as the CBHI exercised and operated the scheme with flexibility, semi-autonomy and leadership to fit for local context in terms of operation. Moreover, cultural factors that encouraged public awareness and increased participation significantly contributed in appealing to the informal sector. Overall, the systemic, operational, and cultural factors interacted with each other and created a synergy effect that local members in the informal sector found attractive.

Keywords
community-based health insurance, health insurance, population coverage, informal sector, Korea

What we already know
The success factors of Korean UHC achievement were economic growth, strong governmental power, and the support of elite bureaucrats.

What this article adds
Korean CBHI had the same system design and frameworks as the formal sector, while in terms of operation, each CBHI could operate with flexibility, semi-autonomy, and leadership to gain members’ trust and increased participation on the basis of CRVS.

The systemic, operational, and cultural factors interacted with each other and created a synergy effect that local members found attractive.

What are its implications for practitioners?
The concrete system design with flexible, autonomous, and community-friendly policy implementation along with CRVS could expand the informal sector.

Introduction
The informal sector expansion of health insurance is essential, especially in developing countries that usually cover a large proportion of the population. However, it is not easy to activate and expand the public health insurance system to cover the informal sector, owing to factors like poverty, poor tax systems, systematic and operational insufficiencies, lack of awareness, and avoidance of paying insurance contributions, that are associated with the informal sector.
In that sense, the Korean health insurance system, which achieved total population coverage including the informal sector within a short span of 12 years, could give policy insights to low-middle income countries (LMICs) and upper middle-income countries (UMICs) seeking to expand the system to the informal sector. The Korean government adopted a mandatory medical insurance enrolment system to the formal sector after amending the Medical Insurance Act in 1977 and achieved a population coverage of 90.39% in 1989, with the exception of medical aid groups. The government first focused on the expansion of the formal sectors to achieve over 40% of the population coverage, then actively expanded the informal sectors since 1987, and finally achieved population coverage of universal health coverage (UHC) in 3 years as shown in Figure 1.

When Korea adopted the compulsory medical insurance system in 1977, GDP per capita was slightly over 1,078 dollars. Later, when it achieved universal coverage in 1989 with the system covering the whole nation, GDP per capita still remained at 5,886 dollars. We can infer that factors other than economic growth also contributed to the expansion of the insurance coverage of the informal sector in case of countries that did not achieve UHC despite having an economy of a similar scale as Korea in the 1980s.

In previous studies, many authors defined several contributory factors of CBHI expansion, including clear legal/regulatory frameworks, strong administrative power or an umbrella organization, trust in institutions, information, education, public awareness, benefit packages, social solidarity, and sustainability. Similarly, factors such as low premiums, quality of care, renewal rates, education, and participation were important for CBHI expansion at the community level. Factors that influence individual choices, such as low contribution, quality of care and the benefit packages were significant in the voluntary CBHI system.

Meanwhile, most studies on Korean health insurance associated the achievement of total population coverage with high economic growth and the government’s strong administrative power. Strong administrative power was not only effective in increasing subscribers but also in establishing a single benefit package. The government’s study regulations and controls resulted in a single benefit package since the beginning of medical insurance system, and there was little backlash from the people. Additionally, it was analyzed that this was due to the capabilities of the elite officers who planned and implemented the policy at the time.

The overall aim of this study is to determine the success factors behind Korea’s CBHI expansion experience, which
may have different aspects from the expansion of health insurance in the formal sector, and to suggest policy implication to LMICs and UMICs that wish to expand CBHI. This study expanded research areas including social, cultural, and institutional backgrounds and factors for the CBHI expansion. The research questions were about finding the social, cultural, institutional factors behind the successful expansion of CBHI through the case of Korea, and to suggest implications for countries that desire to achieve UHC.

**Methods**

This research was approved by Ethics Committee of Health Insurance Research Institute of NHIS in 2018 (Approval No. Yun-2018-HR-03-001). The data collected for the research was from 1977 to 1990. This period was selected as the Korean government had started social health insurance system by amending the Medical Insurance Act in 1977, and the population coverage of UHC by covering over 90% of people was achieved in 1989. We reviewed secondary data such as newspaper articles, press releases, and reports published during the study period. Three major Korean daily newspapers such as Chosun, Donga, Hankyoreh were searched for terms like “regional medical insurance/association” and “urban and rural medical insurance.” We also perused the reports and press releases from CBHI related institutions including the Ministry of health and social affairs (MOHSA), Medical Insurance Management Corporation, and National Federation of Medical Insurance. We also referred the data from Statistics Korea (http://kosis.kr) and Economic Statistics System of Bank of Korea (http://ecos.bok.or.kr). Additionally, we conducted interviews with twenty key informants who were actively engaged in the expansion of public health insurance coverage to the informal sector during the study period. Written informed consent was obtained from all the participants for their anonymized information to be published in this article. They were officers from the MOHSA (3 people), officers and staffs from the CBHIs and the National Federation of the CBHI (7 people), medical doctors and hospital management experts (3 people), civil activists and farmers (5 people), and scholars involved in the CBHI pilot projects (2 people). Research participants were selected using snowball sampling, and semi-structured questionnaires were used for the interview. The questionnaires were tailored to each group of 5 according to their roles. Individual in-depth interviews lasted about 1-2 hours per session, and two or more follow-up interviews were conducted when necessary. All the interviews were recorded with consent. We analyzed the transcripts, selected nine factors to which participants commonly referred and re-categorized them into three parts. Focusing on these factors, we compared the transcripts of key informants and analyzed the context.

**Results**

Factors that contributed to the swift expansion of coverage in the informal sector could be categorized into 3 parts (system design, operation, public awareness and participation) and 9 factors were grouped as shown in Table 1.

**System Design Factors**

*Mandatory Enrolment System.* A few company-based and hospital-based voluntary medical insurance associations used to operate prior to 1977. While these insurance associations experienced a significant deficit, the central government did not actively engage in the medical insurance system in an effort to avoid the risk of financial burden for the government. For the first time in 1977, the government started the engagement by enforcing that a company with 500 or more employees should compulsorily be enrolled in the medical insurance system. Since then, the number of employees enforced decreased to 300 (1979), 100 (1981), 16 (1983), and finally to 5 employees in 1988. The number of subscribers to the formal sector significantly increased owing to the enforcement.
Compulsory enrolment in the formal sector played a significant role in promoting health insurance benefits to potential subscribers in the informal sector though it was not mandatory for people in the informal sector until the medical insurance system expanded to rural people in 1988 and the self-employed in the urban area in 1989. After adoption of the mandatory enrolment system, the government and CBHIs could prevent adverse selection and they could exercise the right to compulsory collection of contribution and seizure of the property including phone, farming equipment, even the household’s livestock, in case of overdue payment.20

**Semi-Autonomous CBHI System.** Notably, CBHIs were allowed some autonomy in implementing the mechanisms of contribution and collection, while they were prevented from expenditure autonomy. The benefit packages were the same across the country regardless of the sector. On the other hand, the central government did not intervene in the financing of CBHIs directly as it did not want to take the financial burden on itself. The 20-30% of subsidies that were provided to CBHIs by the central government was under the banner of a “loan.”21 Consequently, the CBHIs had to seek efficient methods of financing within the legal framework set by the government. They were able to make and revise the rules and guidelines for contribution collection, levying system, how to address delinquencies, etc., according to the community’s economic conditions. For example, some CBHIs tested new levy guideline by imposing contributions on a quarterly basis as many farmers didn’t have enough money to pay before the harvest season. The CBHI were able to adjust the amount, collection period, and delinquency to customize according to the members’ needs when the members resisted the payment of contribution. Meanwhile, the central government actively supported the establishment and maintenance of CBHIs by aiding administrative expenses like establishment and operation expenses, staff recruitment and training, and salaries for the administrative staff, which allowed it to set up the system with minimal financial expenditure. The central government could minimize financial burden while maintaining the right to control the scheme due to its semi-autonomous feature.

**Compulsory Designation of Medical Providers.** It was difficult to sign contracts with health care service providers in the early days of medical insurance system, due to the low medical fee payment system and the hassle of billing work. To address this problem, the government set up the same benefit package for both the formal and informal sectors, and expanded the designation of medical facilities to all medical institutions in the country with the Ordinance of the Ministry of Health and Social Affairs in 1979, first applied to the formal sector in companies with 300 or more employees and expanded later.22 Meanwhile, the number of medical facilities grew explosively when CBHI schemes expanded nationwide between 1988 and 1989 as shown in Figure 2.

**Low-Contribution with Low-Benefit Packages.** The Korean government adopted a low contribution, low-benefit packages, and low medical fees policy when it expanded the health insurance system nationwide. It was referred to as “the three low policy.” The central government was aware that it could not charge high contributions, given the national income level at the time. Thus, it designed a levy system for the informal sector with the lowest level of contribution post the 2 informal sector pilot projects in 1981 and 1982. The ratio of out-of-pocket payments was relatively high, reaching up to 40-50% because of such low insurance contributions. Nevertheless, people in the informal sector welcomed CBHI system which reduced the burden of medical expenses to 50% of OOP.

The government adopted the fee-for-service (ffs) system and set the allowed amount at 55% of customary fees since

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Figure 2. Growth in the number of medical facilities in Korea during the 1980s.
Source: Reconstructed from 1991 Year Medical Insurance Statistical Yearbook, 1992.
the start of the health insurance system in 1977. [Case A] was a bureaucrat of the MOHSA, who designed and established the ffs system in 1976. He was worried that the first national medical insurance scheme would fail due to financial problems in the early stages, so he opined that it should start by charging low contributions and with a low fee schedule, and gradually raise the rate as the system developed.

The (Japanese) Health Insurance Statistics Handbook shows the yearly medical insurance figures. According to the book, it’s no wonder that the medical costs went up. Therefore, when working on a fee schedule, we thought we should set it low in the beginning. [Case A]

Interestingly, participants other than [Case A] testified that even though the government adopted the low-payment policy, medical providers did not care and showed little resistance. According to the interviewees, as the number of subscribers was so small, the payment from the insurance scheme did not have a visible impact on the revenue of the providers, and they didn’t anticipate the CBHI system to be successful. However, as the CBHI scheme gradually expanded and many providers joined, the low-payment system was considered a threat to the providers’ revenue, which led doctors to adopt various mechanisms such as “uncovered service” and “3 hour waiting, 3 minute service.”

At the same time, there was a continuous threat to the insurance coverage rates despite the government’s various attempts to raise the service coverage rate. For example, the Korean NHI service coverage rate was 61.3% in 2004, and it remained at 63.8% in 2018 for 15 years. With the ffs system, there was a risk of over-treatment practices and over consumption of medical expenses.

**Family-Based Enrollment Model.** When the Korean medical system expanded to the informal sector, the government applied a family-level membership model that imitated the insured-dependent model of the formal sector, thereby gaining favorable responses from the informal sector and significantly increasing subscribers. Contributions are levied for all the family members under the CBHI system, but the obligation to pay is imposed on the head of the household by considering family members as dependents, thereby making the CBHI pay is imposed on the head of the household by considering family members under the CBHI system, but the obligation to pay is imposed on the head of the household by considering family members as dependents, thereby making the CBHI.

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**Management/Operation Factors**

**Linkage with the Civil Registration and Vital Statistics system.** The well-developed Civil Registration and Vital Statistics (CRVS) system played a significant role in the expansion of the CBHI system. The CRVS which enrolled every citizen from birth to death, facilitated the reliable management of subscribers in the informal sector. CRVS allowed the administrative process to track any changes in qualification in the family and to levy contributions from other associations even if there were alterations in the association of local subscribers owing to a move, employment, or retirement. Eligibility, levy, and contribution management was easy and efficient though hundreds of CBHIs were operated in the country. Prior to 1990, almost all CBHIs dispatched a staff to the district office to manage the eligibility of the members. The central government began the establishment of the online network CRVS system in 1987, and finalized it in 1990.

**Flexible Policy Application and Local Leadership.** In terms of operation, CBHI officers and staffs contributed to the successful settlement of the initially incomplete system by flexibly modifying and supplementing the system. Each CBHI could exercise flexible operation for the members within the legal and institutional frameworks set by the central government. They were able to implement policies by amending their rules and guidelines with the consent of the members. They tried to gain the members’ trust by applying the modified rules and guidelines for the members and by raising awareness within the community. According to [Case F] who was an officer of National Federation of CBHI, the officers and staffs of CBHIs went from community to community to raise public awareness and to promote medical insurance system through movies.

We made a movie for promoting medical insurance system and borrowed a projector, and then, went to all of the communities, here for a week, there for a week. Every day we did it all over the country. We played the promotion movie with other popular commercial movie at a time. [Case F]

Though the major framework was set by the central government, each CBHI could exercise flexibility in terms of operation. The officers and staffs who were very familiar with the local context could exercise leadership for the success of CBHI expansion.

Another example of flexible operation could be captured from narrative of [Case C] who was a local CBHI staff in late of 1980s. He recalled that one of the staffs suggested that community leaders should be requested to hand out bills to the members instead of postal delivery services when CBHI faced difficulties in billing work and delivery in remote areas; the community leaders could get the amounts of postage as an incentive. This prevented postal delivery failure and missing payment deadlines, and encouraged the community leaders’ participation in the CBHI scheme.

**Public Awareness Factors**

**Envious and Favorable Response to The Medical Insurance Card.** People in the informal sector were alienated from benefits and medical coverage while the government expanded the medical insurance system in the formal sector. Politicians could feel
the demand in the informal sector growing into major political pressure. According to [Case F] who led the CBHI pilot projects, as the number of formal sector workers who received medical insurance benefits increased, people belonging to the informal sector started to feel deprived and envied the former; they wanted a job that provided medical insurance benefits.

At that time, whether or not a company provided medical insurance was a critical matter when recruiting workers. The workers wanted to work in companies that provided medical insurance coverage, if possible. It definitely worked as an incentive when hiring employees. [Case F]

With the rapid expansion in the formal sector, knowledge about medical insurance and information about it began to flow to people in the informal sector. Informal sector workers preferred to enroll in CBHI and wanted to access the same benefits as formal sector workers. Clearly, a favorable attitude towards the medical insurance system perpetuated.

Active Participation of The Civil Society in Line with The Democracy Movement. Although the government supported the CBHIs in the name of loans,27,28 many farmers called for the government to increase subsidies from 30% to 50%, the same as employer contributions in the formal sector, claiming that the government should subsidize the chronic deficit of CBHI schemes, as it was fundamentally a state-led system. Below, [Case B] vividly describes the social atmosphere at the time. After the government and political representatives listened to public opinion, they decided to support the national subsidy.

They claimed, “Why do we get different support from the government when employees get 50% support for their health insurance?” It got really messy. So then at the National Assembly teams went to listen to the people and talk with them. The angry backlash was very strong. [Case B]

Eventually, the government increased the medical insurance subsidy to 54% in 1988. This was officially the first time in history when the government supported insurance contributions toward CBHI schemes.21 Although the rate was gradually decreased to 26.4% in 1999, it was a feat by the civil movement in terms of the government accepting the demand of farmers and reflecting their needs in policies. Additionally, the civil society promoted the Insurer Integration Act to maximize fiscal resources and to mitigate the financial gap among CBHI schemes. Their efforts were ultimately defeated due to the president’s veto at the time, but the insurer integration movement continued, finally leading to the integration into a single insurer, the National Health Insurance Service (NHIS) in 2000.

Discussion

Among the nine factors from the three categories including system, operation and public awareness, some were relevant to both formal and informal sector expansion such as mandatory enrolment, compulsory designation of medical service providers and the low-benefit, low-contribution, low-payment system. The compulsory enrolment system was effective in preventing adverse selection at the national level both in the formal and informal sectors. Moreover, it resulted in positive experiences from the insured, and functioned as viral-marketing to the members of the informal sector. The three low policy was designed to overcome the limited health conditions and financial resources in both the formal and informal sectors.

Notably, in addition to the factors that are common to both formal and informal sectors, operational and cultural factors like semi-autonomy, flexible operation and local leadership fit for local contexts were found to be the main success factors of informal sector expansion in Korea. Though CBHIs could not modify or intervene in expenditure aspects like benefit package and payment, they could exercise some autonomy in financing including contribution, collection, levy, delinquency, and overdue payment.

In addition, in terms of operation, CBHIs were able to adopt and adjust the policy to fit local context with flexibility. CBHI officers and staffs could modify them to suit local conditions as the system and policies were incomplete at first. They could exercise local leadership to get favorable responses and call for people’s participation in the system. Also, the CRVS system played a significant role in the expansion of the informal sector. It ensured the efficiency of eligibility, levy and contribution management though hundreds of CBHIs operated in the informal sector. In summary, based on these systemic and flexible operational factors as well as cultural factors such as public awareness and participation succeeded and yielded fruitful results of the whole population coverage.

Most significantly, these factors were found to be interacted and intertwined with each other. For example, the mandatory enrolment system influenced cultural factors including heightened public awareness and participation. The family-based enrolment model was effective to raise awareness about medical insurance system in the informal sector, and make it favorable among people. The semi-autonomous nature of the CBHI system facilitated flexible policy application and local leadership, and finally brought forth a health insurance reform movement by the civil society. The three low system was effective in family-based enrolment and vice versa.

Meanwhile, the family-based enrolment model enabled many women to access medical services as dependents, which significantly lowered maternal and child mortality rates. The rate of childbirth in medical facilities which was only 17.6% in 1970, increased to 35.8% in 1977, and to 87.8% in 1988. The delivery rate at medical facilities in urban areas rose to 92.9% when the CBHI in these areas was expanded in 1988.29,30

To comprehend the success of Korean CBHI expansion, it is noteworthy to understand social and cultural backgrounds
at that time in Korea. First, until the end of 1970s, almost all Koreans could rarely access free and necessary medical services from the public health sector. So, people were willing to enroll in the social medical insurance to save even the 50% of OOP. Reduced medical expenses was regarded as a significant benefit. Second, private health insurance market was not active until the 1990s. Therefore, prior to 1990s, people had no other options but had to depend on the social health insurance system even though the system did not sufficiently ensure their health without having to worry about economic burdens during illness, as it had low-service coverage and low-cost coverage. Third, along with the democracy movement, people’s expectations for equality in the social health insurance system was high in late 1980s. Voices from the civil society were silenced by the strong military regime until the late 1980s. However, Starting in 1987, civic groups awakened to the need for democracy, and actively joined hands with farmers for the medical insurance reform movement. For example, informal sector members were satisfied with the same benefit packages as the formal sector members, but they resisted the levy system that differed from the formal sector members. To solve the problem, civil societies argued for health insurance system reform and the insurer integration movement to combine both sectors into one single financial pool. The Korean government’s nationwide CBHI expansion was viewed as one of the most influential political strategies to win the parliamentary elections, the public’s medical needs at the time were so big that politicians could not ignore them.

While this study presents new perspectives in understanding of the success factors for the CBHI expansion by focusing on both common and unique success factors between the formal and informal sectors, the findings of this study may have to be seen in light of some limitations due to the small sample size and snowball sampling method that is taken when selecting interviewees. To minimize the potential bias due to the small sample size, we selected the interviewees who had direct experiences in policy design and implementation and who can neutrally represent the policy implications at that time. Also, interviews were added until the saturation point was reached to extract the success factors of Korean CBHI expansion through the vivid “voices” of the participants who actively engaged in the CBHI implementation at that time.

Conclusion

This study analyzed Korea’s CBHI expansion to attain informal sector population coverage, and gave policy implications to LMICs and UMICs that desired to expand CBHI and to finally achieve UHC. It was important that the policy and the system suited local context with flexibility and autonomy on the basis of concrete system design for the successful expansion of the informal section. Based on a concrete system and frameworks, CBHIs implemented policy flexibly and adaptably according to local conditions. Also, public awareness and participation were critical factors that created a synergetic impact with the systemic and operational factors. Beyond the economic factor, there were systemic, operational, and cultural factors that were interacting and intertwining with each other behind the scenes of the successful CBHI expansion.

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Ethical Approval

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