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Master's Thesis of Public Administration

Bandaids or Bandwagons?
A Comparative Analysis on the Nonprofit
and For-Profit Organizations' Entry in
the Seoul Elderly Care Program

영리와 비영리 사회서비스 조직의 진입 요인에 관한 연구:
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Bandaids or Bandwagons?
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Abstract

The growing phenomenon of a mixed sector market as a social service delivery mechanism in Korea prompts the question of whether such diversification in the types of providers can help address the unmet demands by the other sectors. The three-failures theory that emerged from public economics literature supports this hypothesis by arguing that government, nonprofit, and for-profit sectors coexist as supplements to each other in the face of increasing societal needs for public (and publicly funded) social services. However, most of the relevant empirical studies have paid disproportionate attention to nonprofit entry patterns, leaving the distributional patterns of their for-profit counterparts either neglected or over-simplified.

With this in mind, this study aims to test how the three-failures theory unfolds when nonprofit and for-profit entry patterns are jointly tested under the same conditions through the case of the elderly care program in Seoul. We highlight and demonstrate that a comparative analysis between the two sectors provides a better analytic opportunity to assess each sector's role on a relative scale as well as the entire landscape of local service deliverers. With the 2 ordered probit models, 5 major hypotheses are tested on the number of nonprofit and for-profit entries into the Seoul elderly care program between 2012 and 2019. Our findings suggest that newly entering nonprofit organizations and for-profit organizations are useful supplements; nonprofit organizations are more prevalent in and cater to the needs of lower-income communities, whereas for-profit organizations are more prevalent in wealthier neighborhoods. However, the nonprofit sector's role as "gap-fillers" seems to be very limited in serving heterogeneous demands that are also unable to be addressed by the government or by the for-profit sector.

Keywords: Nonprofit organizations, three-failures theory, social service delivery, Seoul elderly care program

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CHAPTER 1. INTRODUCTION

1.1. Research Background

The movements away from a unified public service delivery towards a mixed sector market can be viewed as one of the most radical changes to public–private relations since the modern welfare state (Considine, 2003; Salamon, 1993). Korea's social service system has also gone through a significant transformation since the introduction of electronic vouchers in 2007. Having been provided by local community welfare centers with stable funding streams either through direct provision or contracts, it was a new funding scheme, with the involvement of private nonprofit agencies and business firms. In particular, this transformation entails two major shifts in Korea's social service delivery scheme. First, it signals a shift in governments' role from service providers to funders of third parties (Le Grand, 1991). Second, unlike the previous contract–based relationship, it allows a relatively free entry to and exit from the program as multiple providers ranging from public, for–profit, and nonprofit agencies all compete for the same funding source or clientele. The introduction of market mechanisms to the social service delivery scheme resulted in a 976 percent increase in social service organizations between 2007 and 2017 (Social Security Information Service, n.d.).

What is still largely unknown, however, is the drivers that generate cross–community variations in the magnitude of new entries of nonprofit and for–profit organizations. The overall performances of this service delivery including the distribution of resources and the quality of services are currently highly dependent on the performance of those private organizations (Cheng, 2019: 238; Ford and Andersson, 2016: 883). Therefore it is an important public policy and management question to take a systematic examination on what has been encouraging or inhibiting the new formation of private service organizations in

such publicly funded service delivery scheme. Additionally, the distribution of service providers by government, for-profit, and nonprofit sectors differs significantly across localities. This is also closely linked to managing equity in service distribution as one of the most important public values, and thereby ensuring the efficacy of enhancing accessibility of service to the vulnerable population by private participation in public service delivery (Gazley et al., 2020).

The three-failures theory has been the most elaborated framework used by public and nonprofit management scholars to explain varying sizes and scope of the three sectors across localities. Having emerged from the public economics literature, it is the most clearly articulated theoretical framework that addresses differences in the role that for-profit and nonprofit sector play when these two sectors jointly provide quasi-public goods in the same market (Bushouse, 2017; Smith and Gronbjer, 2006; Gazley, 2021; Paarlberg and Zuhlke, 2019). The theory seeks to explain why a three-sector economy exists, by identifying how each of them regularly fails due to its inherent limitations and therefore the three sectors together work as supplements to meet the existing societal demand for public service (Smith and Gronbjer, 2006).

1.2. Purpose of the Study

This study aims at investigating the following questions: (1) What accounts for the varying entry patterns of new nonprofit and for-profit organizations into a publicly funded social service scheme across localities? And in particular, do new nonprofit organizations respond to societal needs or availability of resource in comparison to for-profit organizations? The three-failures theory is based on sector-based behavioral assumptions that support the former scenario. However, their desire to hold on to the uniqueness of nonprofit organizational form have recently been challenged by various reasons, as we will take a closer examination in this study. This study set out to contribute to this debate by

conducting a comparative analysis between the for-profit and the nonprofit entries in response to local characteristics accomplish a comprehensive examination on the drivers of each non-profit and for-profit producers' entry where both sectors coexist competing for the same source of government funding.

Despite an accumulation of empirical studies of the three-failures theory, they provide limited explanation of the above lines of inquiry. A true joint test of the above questions requires two things. First, we should investigate both for-profit and nonprofit organizations operating within the same market to make a direct comparison between the two sectors and also to capture the entire landscape of distributional patterns of public service provided through a 'mixed' sector market. As shown in Table 2, there is only a limited amount of empirical research that studies the entire mixed sector market in specific by investigating both nonprofit and for-profit organizations and making direct comparisons between each other (Ben-Ner and Hoomissen, 1992; Kushman, 1979; Chakravarty et al., 2006; Lee, 2019).

Second, the research scope of the vast majority of past studies has been limited to service industries supported by grants, for which we do not have a widely accepted entry model for a mixed sector market where nonprofits compete with for-profit enterprises but at the same time being a 'quasi' market where both sectors are largely reliant on government funding. Relatedly, despite the growing theoretical discussions on the so-called 'sector bending' (Ben-Ner, 2002; Dees and Anderson, 2003; Marwell and McInerney, 2005; Schmid, 2013), little has been investigated about the possibility of business-like drivers of nonprofit activities and non-pecuniary drivers of firms through a synthetic model of both for-profit and nonprofit sector growth (Travis, 2017).

In all, this study seeks to demonstrate a true joint test of the arguments postulated by the three-failures theory, and thereby provide a more

comprehensive and robust understanding of the distributional patterns of for-profit and nonprofit organizations across communities.

1.3. Scope of Research

This study takes place within the context of social service system of South Korea where a uniform quasi-marketization of the entire service delivery scheme has taken place since 2007 (Ministry of Health and Welfare, 2017), and thereby showing varying dynamics which makes it a suitable field for the aforementioned lines of inquiry. An overwhelming majority of previous investigations has taken place within the context of the Western world, such as American hospital industries (Chakravarty et al., 2006) and daycare services (Kushman, 1997), whose findings might not be applicable to Asian countries. It is possible that high politicization and state dominance of the private sector rooted in their political and administrative legacies (Kim and Kim, 2015: 243) may show distinct patterns and causes of formation and decline of their non-profit and for-profit sector.

The case of elderly care has two advantages over other government-funded social service programs in Korea. First, elderly care and prenatal care are the two social service programs that the government lowered the entry barrier for service agencies since 2012. Other programs like vocational rehabilitation of the disabled and daycare remain highly controlled by the government in terms of qualifications for registration. Second, variations in entry patterns across localities matter the most when it comes to elderly care services. They tend to be provided throughout a longer time period than vocational rehabilitation or prenatal care programs.

Here in this study, the term 'entry' will be defined as initiation of a new type of service (or Korean elderly care program in this study) by an organization, based on the argument of Hansmann (1980, 882) that a new nonprofit

organization should be distinguished by initiation of a new type of activity.

1.4. Methodological Considerations

Using the case of nonprofit and for-profit organizations that have been operating elderly care service under the same government-funded program between 2011 and 2019, I explore the community conditions under which local conditions they newly participate. Drawing on the long developed literature on the non-profit-for-profit dichotomy in organizational behaviors, I test the model onto two different subsamples—nonprofits and for-profits—and their entry patterns across 25 localities in Seoul for the past decade. The focus of this article is community-level variations in the patterns of growth of the mixed sector market, for it uses local districts (Gu) as the unit of analysis.

The hypotheses are tested by ordered probit models estimated for each sample of nonprofit entries and for-profit entries during the period of analysis. I use one-year lagged independent variables in order to control any possible endogeneity.

CHAPTER 2. THEORETICAL BACKGROUND

2.1. History of Privatization of Social Service Delivery in Korea

2.1.1. Defining Privatization

Governments are engaged in planning, paying for, and producing various goods and services that enable their societies to function. Any of these three roles can be privatized. Bearing this caveat in mind, Savas (1989: 345) defines privatization as "the act of increasing the role of the private sector, or decreasing the role of government, in an activity or in the ownership of assets (Savas, 1989: 345)." We could then interpret the concept of privatization as to revolve around two relevant phenomena: decreasing role of government and increasing role of the private sector with respect to providing a certain type of goods or services needed for society. More specifically, Savas has presented a typology of privatization strategies of government by the degree of reduction in government's role as is shown below in Table 1.

Table 1. Savas's Ranking of Privatization Arrangements

Only government role—No private sector role	Governmental provision and production Intergovernmental agreement Government vending Contract Grant Voucher Franchise
---	---

	Market arrangement
	Voluntary arrangement
No government role—Only private sector role	Self-service

Source: Savas (1987).

2.1.2. The Social Service System in Korea

Korea's social service system has been seen as being privatized since its very beginning around late 20th century but through several altering of its modes (Kim, 2017: 407). Shortly after being liberated in 1945 from Japanese colonial rule, the nascent government which yet lacked its own state capacity mobilized and relied on foreign aids through voluntary associations to address the sharp increase in demand of social service right after the war. Later in 1990s, Korean government contracted out its publicly owned community welfare centers to nonprofit corporations to meet the exponential increase in social welfare needs since the democratization in 1987. It also initiated home helper services for the elderly (Kim et al., 2011).

Privatization of social service was reinforced in 2007 by introducing and thereby transforming the entire social service delivery scheme towards vouchers. It signaled one of the major transformation in the existing contracting regime of social welfare services which has long been favored. Instead of subsidizing producers, vouchers subsidize eligible consumers which creates a market-like environment. More importantly, it induced not only the community welfare centers and nonprofit providers, but also business firms to compete in a same service market. Table 3 summarizes the history of privatization of social service delivery scheme in Korea.

According to privatization scholars, privatization of public service results in a reduced role of government and an increased role of private institutions

(Savas, 1987). The introduction of vouchers, which is the most recent change in social service delivery in Korea, features a reduced role of government as it enables free entry and exit of private institutions in government–funded social service. They are often called ‘quasi–markets’ where monopolistic state providers are replaced by competitive independent ones. Additionally, the quantity of provision is decided upon consumers demand and choice of provision and private providers’ entry and exit decisions are greatly affected by them rather than by government’s decision to renew or transfer its outsourcing contract (Le Grand, 1991).

An increased role of private sector in social service delivery is featured in the quantitative increase in the number of private providers as well as in diversification among them. To begin with, the introduction of market mechanisms to the social service delivery scheme resulted in a 976 percent increase in the number of social service organizations between 2007 and 2017 (Social Security Information Service, n.d.). Besides the quantitative expansion of the private sector, diversification of composition of those private providers by the influx of for–profit as well as nonprofit service organizations also signals an increased role of private sector in social service since the introduction of vouchers. In fact, the introduction of such market mechanisms and mixed delivery model of social services through social service vouchers has resulted in diversification of types of private service providers that participate in public care system. Historically, human services have largely been provided by nonprofit organizations either through governmental contracts or as voluntary associations. With the formation of a quasi–market, however, there has been an increasing influx of for–profit firms in human services. Figure 1 illustrates how the elderly care program for instance has become both quantitatively expanded and qualitatively diversified in terms of its registered providers.

Figure 1. Expansion and Diversification of Providers under Publicly Funded Elderly Care Program in Seoul

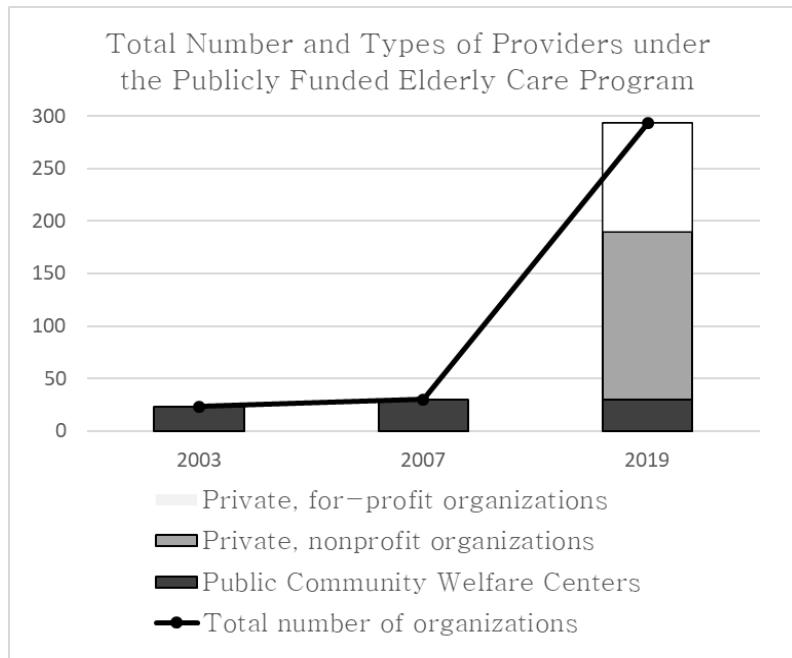


Table 2. Expansion and Diversification of Providers under Publicly Funded Elderly Care Program in Gangdong-gu

Name of Program	List of publicly funded providers
-2007 가정봉사원파견사업	(Public) Gangdong Seongnae Community Welfare Center (강동구립 성내종합사회복지관)
2014 노인돌봄종합서비스	(Public) Gangdong Seongnae Community Welfare Center (강동구립 성내종합사회복지관, Public) (Public) Gangdong Community Welfare Center(강동구립해공노인종합복지관, Public) (Nonprofit) Good Heart Community Care Center (굿하트전문사례관리강동재가센터) (Nonprofit) Dong-Seoul Community Care Center (동서울

	<p>(Nonprofit) Cheonho Community Care Center (천호재가노인지원센터)</p> <p>(Nonprofit) Korea Funeral Culture Cooperatives (한국장례문화협동조합)</p> <p>(For-Profit) Bumo-sarang Welfare Center (부모사랑복지센터)</p> <p>(For-Profit) Useum-Deurim Visitng Nursing Home (웃음드림방문요양센터)</p>
--	--

Source: Ministry of Health and Welfare, Social Security Information Service

However, there have been raised concerns regarding the rise of mixed sector markets in social service in mainly two ways. First, the flip side of formation of such markets by lowering the entry barrier of providers is also lower (or actually free) barrier of exits of those providers. While this is the most basic principle in conventional markets, leaving the entry and exit decisions to the discretion of private providers may be problematic when it comes to a managed market that is designed as a delivery system of 'public' service to the vulnerable population (Le Grand, 2011: 85). Second, confusion has been growing over the long-developed dichotomy between non-profit and for-profit sector as many nonprofit organizations incorporate revenue-generating streams, resembling those in the for-profit world, and for-profit organizations begin to explicitly demonstrate their social missions along with profit maximization (Graddy-Reed, 2017; Graddy-Reed and Feldman, 2015).

The reinforcement of third-party government in social service delivery prompts a question of how those private providers, in lieu of the government, would respond to such introduction of market characteristics into the service delivery scheme.

Table 3. History of privatization of social service delivery in Korea

	Post Korean War–1987	1987–mid2000	After 2007
Government as regulators	weak Foreign aid agencies and government	↑ Contracts	↓ Free entry and exit from the voucher system
Government as financiers	weak Foreign aids	↑ Community welfare centers (CWCs) owned by local governments	—
Service Providers	Social welfare corporations (private)	Contracted agents for operating the CWCs (social welfare corporations) —same providers with a different policy tool	CWCs (Public) + Private nonprofits + Private for-profits
Targets	Selective	Less selective	Universal

Source: Summarized and adapted from Kim (2012: 55–63) and Han & Choi (2015)

2.2. The Non-Distribution Constraint as Institutions

This section introduces the extant literature on behavioral differences between the organizations of the two-sectors and how they would possibly diverge or converge in a mixed sector market where they coexist.

The three-failures theory rests on an institutional approach to explaining organizational behaviors by sector-based behavioral assumptions. Hansmann (1980) developed the Contract Failure Theory to explain consumers' demand for nonprofit provision of goods and services under information asymmetries between buyers and consumers. Weisbrod (1978) developed the Market/Government Failure theory to explain nonprofit production of public service. The primary justification for such nonprofit institutional forms is their non-distribution-of-profit constraint. Hansmann (1980: 838–840) pays attention to the legal state of incorporation, noting that all nonprofit organizations are subject to non-distribution-of-profit constraints. All profit earned cannot be distributed to administrators or employers and must be reallocated to enhancing production or reduce prices. The legal structure has historically been used for identifying the types of practices and behaviors an organization employs.

Meanwhile, there has recently been growing concerns that these boundaries between the nonprofit and for-profit sectors are blurring as nonprofits become more commercialized and for-profits become more socially involved (Clark and Estes, 1992; Graddy-Reed, 2015; Dees and Anderson, 2003; Salamon, 1993).

2.3. Background: The Three-Failures Theory

Nonprofit scholarship emerged out of the very fundamental question of 'why nonprofit organizations exist.' The most articulated model is the three-failures theory from an economic perspective (Steinberg, 2006; Bushouse, 2017), which

is also described in terms such as the 'market niche model (Smith and Gronbjerg, 2006)', government and market failure arguments (Ben-Ner and Van Hoomissen, 1992; Polson, 2017).

This three-failures theory emphasizes how government, nonprofit, and the for-profit sector are seen as occupying unique niches in the market. According to the property rights school of economics, the nonprofit sector is called 'the third sector' in that it does not belong to the market at all, since the absence of a profit motive insulates them from the need to operate at its best efficiency (Smith and Gronbjerg, 2006: 223). Economists such as Hansmann (1980) and Weisbrod (1977) argued that nonprofits, therefore, arise in response to particular demand structures that cannot be adequately addressed by for-profit firms or government. In particular, they conceptualized this argument into theories of contract and government failure, each of which explains that nonprofits would coexist in a market to supplement the inherent limitations of service provision made by private firms and governments. They argue that a community with a heterogeneous population is highly likely to have too heterogeneous demands for public provision to fully address. Some service demands are too diverse for the public provision by the government, which usually converges to median voters' preferences. Some goods or services of which the risk of asymmetric information is too high are not amenable to contractual transactions with private firms so that preferences for nonprofit provision arise. Later, Salamon suggested another corollary of these two failures theory called 'voluntary failure' by which he argued voluntary associations' inability to meet demand then leads to government provision. In this section, the three arguments about each sector's inherent limitations are provided to explain under which conditions nonprofit and for-profit organizations would newly form.

2.3.1. Government Failure

Government failure theory argues that nonprofits locate in the area where there is more "excess demand" that arise from inherent limitations on the government's ability to fully respond to the public needs. In other words, nonprofits are "fulfilling the demand for public goods left unsatisfied by government (Young 2000, 150)." Excess demand exists either "in the face of limited government production" and/or when "social diversity generates more demand for nonprofit activities" in secondary markets (James, 1987, p.412). With this caveat in mind, the two corollaries of this theory relate the size of the nonprofit sector to two major determining factors: government capacity and social diversity (Abzug and Turnheim, 1992; Gazley et al. 2020; Lecy and Van Slyke, 2007).

According to government failure theory, heterogeneity (or low level of homogeneity) of the society is another source of excess demand for a certain social service as noted above. Given the same level of government financial capacity (first source of excess or deficiency of demand), greater demands will be left unaddressed if the society is too heterogeneous for the government to cover them. Governments inherently fail to respond to heterogeneous demands as it will select the outcome most preferred by the median voters or political coalitions, leaving the non-average preferences unaddressed (see median voter theorem in Weisbrod, 1977, p.102–103).

One corollary of this theory is that the size of the nonprofit sector is inversely related to the capacity of government programs to fully address diverse needs of the public (Douglas, 1987; Smith and Grønbjerg, 2006). Given the same degree of demand heterogeneity, the government's capacity to produce and deliver services may become impeded because of insufficient financial capacity to cover the costs either for direct provision or subsidization

of private third-party providers (Brooks, 2000; Douglas, 1987; Lecy and Van Slyke, 2012; Gazley et al., 2020). Moreover, reliance on the private nonprofit sector has been regarded as a central mechanism for supplementing public provision of service especially for governments in fiscal distress (Graddy-Reed, 2015; Kim and Kim, 2016). Although government's lack of capacity is not a source of inherent limitation of public provision of service by itself, empirical studies on government failure pay great attention to government capacity for this reason.

2.3.2. Contract Failure Contract failure refers to a specific aspect of the general "market failure" and focuses on the conditions when for-profit organizations fail to provide specific goods due to competition and to consumers' fear of being cheated (Young 2016). This is true especially for human services when consumers cannot decide on the quality and quantity of the goods and services they are receiving, such as daycare of young children and elderly care.

According to Hansmann (1980), the formation of nonprofit organizations is in response to these information asymmetries, as consumers presume that nonprofits are more 'trustworthy'. Community's low level of average income usually reflects greater demand for nonprofit services communities because they have less ability to choose a reliable for-profit provider unlike those living in wealthier communities (higher risks of contract failure involved in transactions with for-profit providers of same service) (Ben-Ner and Hoomissen, 1992; Hansmann, 1980; Smith and Grønbjerg, 2006). This is because nonprofits, in general, are thought to have less incentives to maximize their profits due to their non-distribution-of-profit constraints, in comparison with for-profit firms (Chakravarty et al., 2015; Hansmann, 1980; Harrison and Laincz, 2008)., as they are legally barred from taking the profits home have less incentives to maximize their profits due to their non-distribution constraints.

Since it is costly to accurately examine the quality of goods so that consumers can have enough information to alleviate information asymmetry, low-income groups will prefer non-profits than high-income groups do.

2.3.3. Voluntary Failure

Later alongside the long-developed market and government failure theories, an argument about the possibility of 'voluntary failure' by Salamon (1997). And combinedly, these are known as the Three-Failures Theory (Steinberg, 2006), providing a more complete explanation for why these three sectors would coexist. Since then, the three-failures theory has been the most dominant theoretical framework explaining geographical distributions of quasi-public services (Bushouse, 2017; Gazley, 2021; Smith and Gronbjerg, 2006; Steinberg, 2006; Van Puyvelde and Brown, 2016).

Theoretically, nonprofits presumably are not profit seekers because their non distribution of profit constraint prohibit these organizations from profit maximizing (Sloan, 1998). The property rights school of economics, in particular, argue that nonprofits do not belong in the market at all, since the absence of a profit motive leaves them operating despite inefficiency (Smith and Gronbjerg, 2006).

However, in practice, they often have to act as profit seekers in response to the changing funding environment (Salamon, 1999; Paarlberg and Gen, 2009). Voluntary failure theory by Salamon (1987) and profit in disguise (FPID) model of Weisbrod (1977) best explain the underlying rationale. Larger the income, greater the chance there will be for them to have more users who are affordable to purchase additional fee-for-service or private donations (Marcuello, 1998; Weisbrod, 1997). More aggressively, Weisbrod (1977: 11–13)'s for-profit-in-disguise model raises a possibility that weak enforcement by government may make nonprofits may the non-distribution constraint negligible in

explaining behavioral patterns of nonprofit organizations. This is coupled with the assumption that the objective functions of nonprofit firms coincide with those of their for-profit counterparts including profit maximization conditions.

Additionally, with the growing trend toward commercialization of the nonprofit sector such as increasing pursuit of earned income and participation in voucher markets, profitability represented by community wealth and market size are discussed as the predictor of nonprofit organizations' entry as well (Corbin, 1999; Gazley et al., 2020; Twombly, 2003).

Although the both sector respond to profitability of markets, for-profits are thought to be more responsive to the changes than nonprofits. Lakdawalla and Philipson(2008) explains that non-profit firms have a different utility function than for-profit firms due to their non-pecuniary motives such as utility from output itself other than profits, which leads to less sensitivity to changes in market conditions. Some also point to their cost-advantages since they benefit from tax exemptions and lower cost labor force by volunteers unlike for-profit firms (Schiff and Weisbrod, 1991).

2.3.4. Alternative Theories: Population and Service Density

Population Density

A number of studies have also studied the effect of population density as a measure of urbanization. They point to social cohesion as another determinant of the size of nonprofit sectors across different localities (Saxton and Benson 2005; Corbin 1999; Matsunaga and Yamauchi 2004; Lecy and Van Slyke 2012). The concept of social capital (Putnam 1995) also holds a similar argument that social connections engender trust and foster voluntary associations and the resultant collective activities by them. Socially cohesive groups with homogenous preferences have advantages in forming nonprofit organizations. The level of urbanization measures the level of social cohesion in a community

(Matsunaga and Yamauchi 2004). Urbanization deteriorates socially cohesive activities and hence may interfere with community integration therefore, decreasing the ability of community members to support nonprofit organizations (Gronbjerg and Paarlberg 2001).

Service Density

Population ecologist and institutionalist perspectives identify organizational behaviors as mimetic, saying that organizations adopt other's successful elements when they are uncertain about alternatives. Their prediction about the effect of previous density on organizational foundings has been found to be valid among both for-profit and nonprofit sector. Swaminathan (1998) Corbin (1999) and Gronbjerg and Paarlberg (2001) also claimed that the number of nonprofit organizations in the past determined the number in the future.

Population ecology and resource dependency theories suggest the importance of density of pre-existing organizations in an opposite direction. High density signals higher competition for limited amount of resource, whether it may be governmental funding, private donations, or consumers in voucher markets, which may hinder new agencies from entering the place. From a little different point of view, density dependence theory assumes that high density may have positive associations with new entry, especially at the initial stage of niche that lacks legitimacy (Hannan and Freeman 1989, 96).

2.4. Previous Research

This section summarizes the empirical studies that test the aforementioned theories of formation of nonprofit and for-profit organizations. Although this study follows in the wake of these extant literature, this dissertation aims at carrying out a true joint test of the theories explaining the comparative behavior of nonprofit and for-profit organizations in terms of the production of quasi-

public services in Seoul. In particular, what factors contribute to the growth of the nonprofit and for-profit sector? When bearing a key responsibility for providing public service, under which conditions do greater number of nonprofit and for-profit organizations form?

A true joint test of the above questions requires two things. First, we should investigate both for-profit and nonprofit organizations operating within the same market to make a direct comparison between the two sectors and also to capture the entire landscape of distributional patterns of public service provided through a 'mixed' sector market. As shown in Table 2, there is only a limited number of empirical research that studies the entire mixed sector market in specific by investigating both nonprofit and for-profit organizations and making direct comparisons between each other (Ben-Ner and Hoomissen, 1992; Kushman, 1979; Chakravarty et al., 2006; Lee, 2019). Furthermore, a true test of the niche models of nonprofit formation also requires a comparative analysis of the relevant magnitude of nonprofit versus for-profit versus public sector (Corbin, 1999: 304; Young, 2000; Matsunaga and Yamauchi, 2004: 230) to see whether nonprofits actually do form in niches amid the market preferences and constituencies.

Second, the research scope of the vast majority of past studies has been limited to service industries supported by grants, for which we do not have a widely accepted entry model for a mixed sector market where nonprofits compete with for-profit enterprises but at the same time being a 'quasi' market where both sectors are largely reliant on government funding. We also have limited understanding of nonprofit formation within the context of Korean politico-administrative culture (for exceptions, see Lee, 2019; Kim and Kim , 2015). An overwhelming majority of previous investigations has taken place within the context of the Western world, such as American hospital industries (Chakravarty et al., 2006) and daycare services (Kushman, 1979), whose findings might not be applicable to Asian countries. It is possible that high

politicization and state dominance of the private sector rooted in their political and administrative legacies (Kim and Kim, 2015: 243) may show distinct patterns and causes of formation and decline of their non-profit and for-profit sector.

In terms of empirical strategy, it seems that there needs a more accurate predictor for the capacity of public program since tests on government failure theory shows inconsistencies in its results. The size of governmental programs has often been proxied by the amount of government subsidies (Matsunaga and Yamauchi, 2004; Lecy and Van Slyke, 2012) or fiscal capacity (Lee, 2019). This study attempts to test a more diverse aspects of government capacity in two ways: first, it investigates the impact of regulation on nonprofit and for-profit entries, and second, it uses a more direct representation of the size of public programs than proxy variable of total amount of government subsidies or welfare expenditure used in previous studies.

Table 4. Research Scope and Variables in Previous Studies

		Kushman (1979)		Ben-Ner & Hoomissen (1992)		Chakravarty et al.(2006)		Lee (2019)		Lecy & VanSlyke (2012)	Matsunaga & Yamauchi (2004)
	Research Variables	NP	FP	NP	FP	NP	FP	NP	FP	NP	NP
	Dependent	Size		Size		Entry		Entry		Size	Size
Contract/ Voluntary failure	Independent										
	Demand size	Y(+)	Y(+)	.	.	Y(+)	Y(+)			Y(+)	
	Community wealth	Y(+)	Y(+)	N	Y(+)	N	Y(-)			Y(+)	Y(-)
Government failure	Government size							N	Y(-)	Y(+)	Y(-)
	Demand heterogeneity	Y(-)	Y(-)	Y(-)	.			N	N	N	Y(+)
	Poverty rate	Y(+)	Y(+)	Y(+)	N			N	N	Y(-)	
Alternative factors	Urbanization			N	Y(+)			Y(+)	N		
	Service density							Y(-)	Y(+)		N

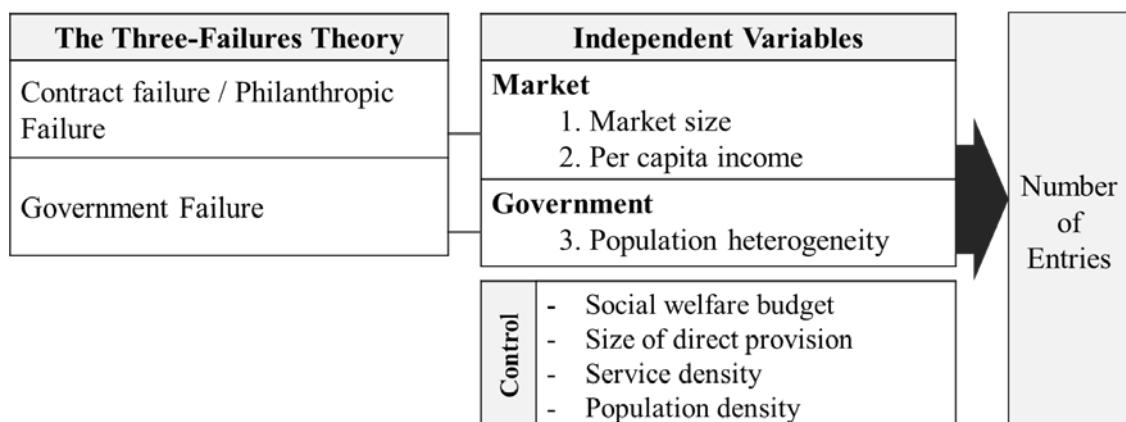
CHAPTER 3. RESEARCH DESIGN

3.1. Analytical Framework

This study tests the effect of the aforementioned four theoretical components regarding the determinants of the district-level magnitude of new formations of non-profit and for-profit provision of social service. Another focus of this article is on whether these drivers of entry patterns vary by sector.

The analytical framework for the study is provided below in Figure 2 and tests the effect of each component within the context of government-funded elderly care service market.

Figure 2. Analytical Framework



3.2. Hypotheses

By utilizing the analytical framework presented in the previous section, the following section provides five hypotheses to be tested. Each corresponds to one of the three theoretical components which the above analytical framework consists of. They will be tested on the growth of two sectors—nonprofit and

for-profit – and relative elasticity with respect to each determinants of growth.

As noted, the three-failures theory identifies the following four factors as the major sources of inherent limitations of each sector: information asymmetry from market size and/or income, and demand heterogeneity (Ben-Ner and Van Hoomissen, 1992; Marcuello, 1998).

Market Size

The first important determinant of nonprofit and for-profit organizations' entries is market size. In case of for-profit firms, an increase in the size of market allows them to produce more and thus have a lower average production cost (Ben-Ner and Van Hoomissen, 1992; Van Puyvelde and Brown, 2016). Consequently, market size will be positively related to the number of for-profit firms entering the service market.

Meanwhile, a larger market will create greater demand for nonprofit organizations as well but for different reasons. Theories of contract failure refer to imperfections in the system of market transactions so that the trust in the provider yields greater influence in consumer's purchase decisions. As noted, nonprofits are more trusted providers than for-profits as the prohibition against distributing profits for private gain ensures trust in relation to profit-maximizing firms (Hansmann, 1980). With more for-profit firms, stakeholders must gather more information and spend considerably more effort and time to determine which for-profit firms are trustworthy. As a result, a larger market size will induce a relatively higher demand for nonprofit organizations.

These predictions are also in line with Chakravarty et al. (2006)'s study where they showed that any service providing organization's level of output is determined by classic factors including market size, as well as sector-specific factors (Ben-Ner and Hoomissen, 1992: 393; Chakravarty et al., 2006). Thus

I expect that the level of entry in both nonprofit and for-profit sector will be affected by the size of demand as suggested below in Hypothesis 1.1.

Hypothesis 1.1: Market size will be negatively related to the number of for-profit entries and positively related to the number of nonprofit entries by district.

Although both sectors respond to the market size, for-profits are thought to be more responsive to the changes than nonprofits. Lakdawalla and Philipson(2008) explains that non-profit firms have a different utility function than for-profit firms due to their non-pecuniary motives such as utility from output itself other than profits, which leads to less sensitivity to changes in market conditions. Therefore, while both being encouraged by greater market size, the entry decisions by for-profits will be more sensitive to the change in this market size than nonprofits are.

Hypothesis 1.2: For-profit entries will be more responsive to the change in market size (the size of demand population) than is the number of nonprofit entries.

Income

Theories of contract failure also posit income as another important indicator of the severity of asymmetric information problem in the market. Poorer stakeholders are more likely to prefer services provided by nonprofit organizations. Since it is costly to accurately examine the quality of goods so that consumers can have enough information to alleviate information asymmetry, low-income groups will prefer non-profits than high-income groups do. Thus,

based on the contract failure theory, the hypothesis is that per capita income of the community will be positively related to the number of for-profit entries while being negatively related to the number of nonprofit entries.

However, some investigations of nonprofit distribution have discovered that this may not be the case, positing a voluntary failure theory that nonprofit organizations are also profit-seekers. As noted, voluntary failure predicts that nonprofits also have higher incentive to mobilize in wealthier communities as income is an indicator of the expected philanthropic giving as well as purchasing power of the service users (Corbin, 1999; Paarlberg and Gen, 2009; Gazley et al., 2020). Additionally, considering the fact that social service agencies tend to be relatively more reliant on fee-for-service than other areas' voluntary associations, voluntary failure is even more likely.

Hypothesis 2.1: Level of income will be negatively related to the number of for-profit entries and positively related to the number of nonprofit entries by district.

Based upon the same logic presented above with respect to the market size, here we also hypothesize that for-profit agencies will be more sensitive to unit change in the per capita income than nonprofit agencies.

Hypothesis 2.2: For-profit entries will be more responsive to the change in income level than is the number of nonprofit entries.

Demand Heterogeneity

According to the three-failures theory, heterogeneous demands within

constituencies are a major source of government's inherent limitations in public provision of goods and services. According to Weisbrod, government will select the outcome most preferred by the median voters or political coalitions, for which it leaves non-average preferences unaddressed (Weisbrod 1977). These marginalized demands are not addressed by markets either, since market transactions also focus on average demands of consumers (Smith and Gronbjerg, 2006).

This is supported in Kushman(1979)'s empirical study on non-profit, for-profit and public market share in daycare industry of North Carolina. It was found that an increase in the percentage of nonwhites reduced 84 percent of the market share of proprietary daycare centers, which was more than double the market share decrease of the nonprofit sector. The same theory posits that the nonprofit sector has a comparative advantage over for-profit or government sector in the presence of demand heterogeneity, as is empirically found in previous studies (Corbin 1999; Abzug and Turnheim, 1998; Matsunaga and Yamauchi, 2004)

Demand heterogeneity is measured in empirical studies by education level (Ban-Ner and Van Hoomissen, 1992; Lee, 2017; Marcuello, 1998), racial (Corbin 1999; Ben-Ner and Van Hoomissen 1992; Matsunaga and Yamauchi 2004) and/or religious diversity (Corbin 1999; Gronbjerg and Paarlberg 2001). In this study, educational diversity and poverty rate were chosen as the proxy measure. According to public health and social works literature, a person's education level is one of the most consistent demographic predictor of change in activities of daily living, severity of pathology and functional limitation (Li, 2005). It is also a robust predictor of income levels which is an even more robust predictor of greater diversity in range of service and programs in need. Wilkinson and Picket (2009) found that more health issues occur in low income population because of less accessibility and insufficient healthcare and being more likely to be blue-collar workers as well as in the works of Li (2005),

Fuller-Thomson & Gadalla (2008) and Kaplan et al. (1993). Therefore, it is highly likely that greater dispersion of people with various levels of education and income will also signal a greater diversity in programs and personnel required.

Hypothesis 3: Demand heterogeneity will be negatively related to the number of for-profit entries and positively related to the number of nonprofit entries by district.

3.3. Research Variables and Data Collection

The data covers 25 districts (Gu) of Seoul South Korea and a list of nonprofit agencies by district that newly entered the elderly care program between 2011 and 2019. This makes 200 observations of markets each for varying levels of nonprofit and for-profit entries. Among the diverse types of services that social service agencies provide, this study focuses on those that are enrolled in voucher-based senior home care program of South Korea, which has been fully activated since 2012. Nonprofit organizations that provide this service have been in an unprecedentedly competitive environment than any other service area since then, by facing a massive influx of for-profit social service agencies and the introduction of users choice (Social Security Information Service 2017). The variables and their data are defined and collected for this study in the following ways.

Dependent Variables

Dependent variables are the number of entries nonprofit and for-profit organizations in each district. These variables are constructed by comparing the list of nonprofits and for-profits that file electronic registration system in a

given district with the list right before the given period. Since elderly care programs have been uniformly transformed into electronic voucher systems, their information is automatically registered as long as it is providing service to at least one person so that measurement error is less likely¹.

Table 5. Dependent variables and measures

Variable	Measure
Number of nonprofit entries	Count data of the number of nonprofit entry by district
Number of for-profit entries	Count data of the number of for-profit entry by district

Independent Variables

Market size (The size of elderly population) – The market size or the size of demand population for elderly care is measured by the number of elderly population (ages 65 and greater) who are eligible for applying to the elderly care program.

Changes in the size of elderly population – The number of elderly population in district j in year t subtracted by per capita income at district j in year t–1.

Per capita income – A proxy for average income by using total tax revenue

¹ Still, it is possible that there could be a service agency which is not out of business but simply no users during that given time period. However, I confirmed that there was no such cases during the study period by double checking the providers lists with those owned by each district offices.

divided by the total number of population. This variable predicts the level of expected revenue as it is positively correlated with philanthropic giving (Twombly, 2003; Gazley et al., 2020) as well as the average purchasing power. Service fees are only partially subsidized to people above 150% poverty level, which means the rest depends on people's purchasing power.

Changes in per capita income— Per capita income at district j in year t subtracted by per capita income at district j in year t-1.

Educational level diversity— This variable indicates how much dispersed is the groups of people with different education levels in the district calculated from the Herfindahl–Hirschman index. This census variable retrieved from KOSIS is a categorical variable of three levels: no education, below bachelor's degree, bachelor's degree and higher. The index is calculated as:

$$1 - \sum_{i=1}^3 s_i^2 \text{ where } s_i = (\text{population in } i^{\text{th}} \text{ category}) / (\text{total population})$$

Poverty rate— Measures income inequality. This variable records the ratio of people who receive basic income assistance, as is known to reflect the degree of diversity management required (Fuller–Thomson & Gadalla, 2008).

Social welfare budget—Measures the ratio of budget on social welfare by local district. This variable is a proxy for public subsidy. The Social Security Information Service did not provide us the data for the exact amount of public subsidies spent for the elderly care agencies. Local districts finance 15 to 25percent of the cost of care service while the central government

finances the remainder of the cost (SSIS n.d.).

Number of public elderly care facilities—This variable measures the total number of publicly owned community welfare centers that provide elderly care services in the district.

The size of public elderly care facilities—The size of public program measures the direct crowding-in(or out) effect of government fiscal capacity. It is measured by the average amount of subsidy received by publicly owned community welfare centers (divided by total number of centers in the district).

Population density—This variable measures inverse degree of social cohesion of the district. Total population is divided by the area of the district.

Service density— This variable measures the number of social service agencies registered with the elderly care voucher program in order to control service density which is known to affect entry and exit levels of organizations. From a population ecology perspective, higher density might imply higher level of competition for limited amount of organizational resource (in this case clients with vouchers or government funding). Table 4 presents the summary of the research variables and measures.

Table 6. Independent variables and measures

Variable	Measure	Source
Market size	Total number of elderly population by district (over age 65)	KOSIS
Per capita income	Total tax revenue divided by total population by district	KOSIS
Change in market size	Total number of elderly population of district j at year t subtracted by total number of population of district j at year t-1	KOSIS
Change in income	Per capita income of district j at year t subtracted by per capita income of district j at year t-1	KOSIS
Social welfare budget	(The amount of budget on social welfare) / (total budget) (%)	KOSIS
Number of public facilities	the total number of publicly owned community welfare centers that provide elderly care	SSIS
Size of public facilities	Annual subsidy to community welfare centers established by each local districts.	Data.seoul.go.kr
Demand heterogeneity	Herfindahl-Hirschman index representing the degree of educational background diversity as: $1 - \sum_{i=1}^3 s_i^2$	Data.seoul.go.kr
	Poverty rate (Ratio of elderly population receiving basic income assistance)	MOHS
Population density	Population size / area	KOSIS
Service Density	The number of incumbent agencies	SSIS

Subsamples by Legal Structure of Organizations

To investigate sectoral differences in terms of the impacts of each of the above possible factors, this paper presents the results of analysis by subsamples of legal structure—nonprofit and for-profit—.

Among various ways in which nonprofit organizations have been defined, this study utilizes legal form of incorporation as for categorizing each case of entry into either non-profit or for-profit entry. In order to categorize the observations into the categories of either non-profit or for-profit entries, I collected business registration numbers of the social service agencies of the sample and categorized them into either non-profits or for-profits according to the rules below in Table 5. Registration numbers are ten digit numbers which are automatically created once a newly incorporated business entity registers with the National Tax Service. Among the ten digit numbers, the fourth and fifth digits tell whether the entity is an individual or a corporation and also whether it is a non-profit, for-profit or publicly owned corporation. An organization that has '82(the code indicating for non-profit corporations)' or '83 (the code indicating for publicly owned corporations)' in its registration number was categorized as 'non-profits' (National Tax Service, n.d.). These two groups are the ones who get tax exemption benefits and non-distribution constraints (Enforcement Decree of the Value-Added Tax Act, 2017). Then the rest such as individual business owners and for-profit corporations were categorized as 'for-profits'.

Table 7. Categorizing into non-and for-profits by legal structure

Non-profits	For-profits
(82) Branch/Sub-branch of a nonprofit corporation	Else
(83) Publicly owned corporation of either national or a local government	(01–79) Individual business owners
(89) Religious associations	(81, 85, 86, 87)Branch/sub-branch of a for-profit corporation

3.4. Methodology

This analysis seeks to enhance understanding of the variations in the size of nonprofit and for-profit entries across localities. To do so, I use an ordered probit model separately for nonprofit and for-profit organizations, since OLS regressions will predict negative non-integer values and therefore is not an appropriate model. Since the ordered probit model is non-linear, it is more appropriate to look at the marginal effect of the unit change of each determining variables on the expected frequency of entries (Chakravarty et al., 2006). Thinking of the dependent variable Y as representing levels of nonprofit or for-profit entries of some underlying latent variable Y^* , I assume that

$$\begin{aligned}
 Y_i^* = & \beta_0 + \beta_1 \text{Elderly Population} + \beta_2 \text{Change in Elderly Population} \\
 & + \beta_3 \text{Community Wealth} + \beta_4 \text{Change in Community Wealth} \\
 & + \beta_5 \text{Social welfare budget} + \beta_6 \text{Number of public facilities} \\
 & + \beta_7 \text{Average gov. expenditure on public facility} \\
 & + \beta_8 \text{Educational Diversity} + \beta_9 \text{Income inequality} \\
 & + \beta_{10} \text{Population density} + \beta_{11} \text{Service Density} + u_i
 \end{aligned}$$

and we observe the ordinal choice Y_i as:

$$Y_i = \begin{cases} 0 & \text{if } Y_i^* \leq 0, \\ 1 & \text{if } 0 < Y_i^* \leq u_1 \\ 2 & \text{if } u_1 < Y_i^* \leq u_2 \\ 3 & \text{if } u_2 < Y_i^* \leq u_3 \\ 4 & \text{if } u_3 < Y_i^* \end{cases}$$

CHAPTER 4. FINDINGS

4.1. Descriptive Statistics

Figure 3 shows the total number of organizations in Seoul by year. It shows that new organizations steadily entered the market every year.

Figure 3. Total number of organizations by year (2012–2019)

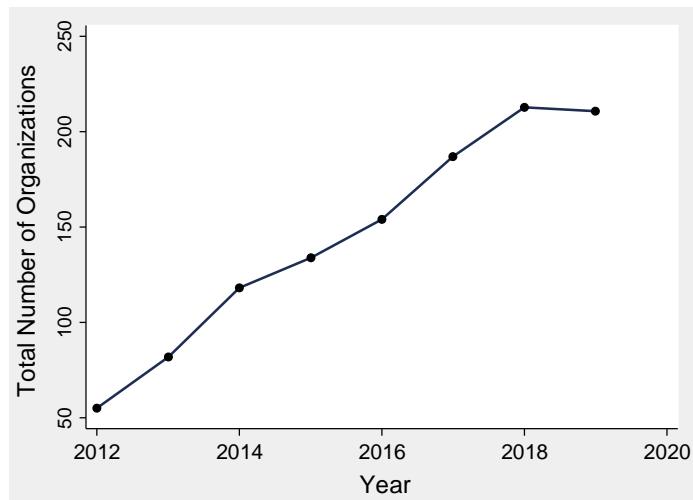


Table 8 reports descriptive statistics of dependent and independent variables. Several variables have been rescaled as the following in order to avoid numerical problems in the estimation of the model: Size of public program/100; average income/1000; total number of elderly population/100; population density/1000.

Table 8. Summary statistics at local district level

	Mean	SD
Number of for-profit entries	0.73	1.13
Number of nonprofit entries	0.64	1.06
Elderly population	10.81	0.32
Log change in elderly population	7.61	0.63
Per capita income	1358.77	530.43
Log change in per capita income	11.55	0.77
Education level diversity	0.73	0.01
Ratio of basic livelihood security recipients	0.06	0.02
Number of public facilities providing elderly care	0.61	1.43
Social welfare budget (ratio)	47.92	8.03
Average public expenditure by public facility	955.69	142.78
Population density	17804.43	4833.16
Service density	4.82	4.56

4.2. Results of Analysis

This analysis seeks to enhance understanding of the variation in the entry patterns of nonprofit and for-profit organizations across the local districts in Seoul. As noted, the three-failures theory predicts that the three sectors would exist in a way that complement the other two sector's limited provision of the same service. The five hypotheses presented in the previous chapter were therefore drawn from this theory hypothesizing that the entry patterns of for-profit and nonprofit service organizations should appear in

opposite directions in response to the market size, the level of income, and population heterogeneity.

Table 9. Ordered probit estimation of for-profit/nonprofit entry in local districts

	For-profit entry		Nonprofit entry	
	B	SE	B	SE
Log elderly population	-0.20	0.81	0.21	0.74
Δlog elderly population	0.34	0.28	0.08	0.25
Log income	1.35**	0.69	-2.46***	0.69
Δlog income	0.45*	0.25	0.40**	0.24
Education level diversity	-19.85*	10.38	-32.84**	12.49
Poverty rate	-11.89*	7.09	-0.24	8.44
Welfare budget	0.04*	0.03	0.02	0.03
Number of public facilities (size)	0.07	0.06	-0.20**	0.14
Public expenditure (capacity)	0.00	0.00	0.00***	0.00
Log population density	-0.18	0.49	-2.11***	0.54
Log service density	0.54***	0.15	0.60***	0.16
Log likelihood	-166.28		-148.15	
LR Chi2	50.71		43.17	
Obs	196		196	

Note 1: *** p<0.01; ** p<0.05; * p<0.10

Note2: 4 observations omitted due to missing data

Note 3: Models include dummy variables controlling year specific effects.

Table 9 reports estimates from the ordered probit analysis of for-profit and nonprofit entry at the district level. The overall goodness-of-fit values for both nonprofit and for-profit entry models are statistically significant at the

p<0.001 level. Also, the VIF value for testing multicollinearity turns out to be 2.59 and 4.93, which is less than 10. Multicollinearity is less likely.

Contrary to what we expected, neither the market size nor the changes in market size has a statistically significant effect on the magnitude of entry by for-profit and nonprofit elderly care agencies in Seoul. These results reject Hypothesis 1.1 and Hypothesis 1.2.

The main prediction regarding the per capita income by district is that it will have a positive effect on for-profit entries and a negative effect on nonprofit entries (Hypothesis 2.1.). The estimated coefficient of income level is 1.35 for-profit entries and -2.46 for nonprofit entries, which supports Hypothesis 2.1. Hypothesis 2.2 for the effect of marginal change in per capita income is also supported. As predicted, the marginal change in per capita income has a positive effect on both for-profit and nonprofit entry. The estimated coefficient of the log change in income is 0.45 for for-profits and 0.40 for nonprofits. That is, a one unit increase in the district's level of income affects the expected number of for-profits entering the service by 0.45 while the expected number of nonprofit entrants increase only by 0.40 given the same condition. As predicted, for-profits respond more sensitively to the changes in community wealth².

Regarding the education and income inequality variables for demand heterogeneity, there was found a negative correlation with the number of for-profit entries. However, population heterogeneity measured by education level diversity also showed a negative correlation with the number of nonprofit entries as well. A unit increase in education level diversity decreased the

² This difference is statistically significant at 5% level, according to the results of seemingly unrelated estimation(SUEST) of combining estimates from multiple models. This allows cross-model tests of predictions by computing cross-model covariances (Weesie, 1999). See Table A.1. for the rest of results.

expected counts of for-profit entrants by 19.85 while it decreased the nonprofit entrants by 32.84 expected counts, and this difference was statistically significant at the 10% significance level. Meanwhile, their entry patterns were not affected by income inequality measured by poverty rate. These results did not support hypothesis 3 that demand heterogeneity will be negatively related to for-profit entry while being positively related to nonprofit entry.

Next, the results on government-related variables support the findings from previous empirical studies. The coefficients of social welfare budget estimate the effects of local government's financial capacity to support these private social service providers. Local government's social welfare budget, including the amount of financial subsidy for private social service providers, is positively correlated with the number of for-profit entries. However, they were not statistically relevant to nonprofit entries. In terms of the size of public elderly care program, the size and capacity of public elderly care program negatively affect nonprofit elderly care agencies' decision to enter. To for-profit elderly care agencies, in contrast, they were not influential factors for their entry decisions. This is also consistent with the findings from Ben-Ner and Hoomissen (1992) that the size of public program does not affect the for-profit sector's service because they inherently target different groups of people.

Among the control variables, nonprofit organizations were negatively affected by logged population density. One of the possible explanations from social capital literature is that high social capital communities are most likely to come together to engage in activities of a voluntary organization that is designed to respond to community-based needs (Saxton and Benson, 2005). Interestingly, both nonprofit and for-profit entry were positively related to service density. Interpretation on this variable needs further examination. This may signal that the elderly care voucher system is not yet in equilibrium as Schiff (1986 as cited in Twombly 2003: 232) suggested. Or as Choi (2015: 457)

suggested, population density may not simply be about the number of organizations in a niche but also high capacity and/or high diversity.

Since ordered probit models are not linear, it should be equally important to closely examine the marginal effect of each covariates on the expected number of entries. The estimate results are shown in Table 10 and Table 11, each on for-profit and nonprofit entry respectively. The marginal coefficients represent the change of occurrence probability of the level of entry by one unit increase of the input covariate, fixing other covariates at their mean values. A positive marginal coefficient of a variable for a particular level of entries means that the probability of this magnitude of entry will increase by a value equals the coefficient, as the one unit increase of this input variable, and vice versa. For instance, all things equal, one unit increase in the log income will increase the number of for-profit entrants by 23 percent, 14percent, 8 percent, and 5 percent by every unit of increase. Under the same condition, the probabilities of each level of entry by nonprofits will reduce by 46 percent, 23 percent, 13 percent, and 7 percent respectively.

Table 10. Marginal Effects on For-Profit Entry

	0 Entry	1 Entry	2Entries	3 Entries	≥ 4 Entries
Pr	0.64	0.24	0.07	0.03	0.01
Log elderly population	0.08	-0.03	-0.02	-0.01	-0.01
Δ log elderly population	-0.12	0.05	0.03	0.02	0.01
Log per capita income	-0.05	0.23	0.14	0.08	0.05
Δ log per capita income	-0.16	0.07	0.05	0.03	0.02
Education level diversity	7.42	-3.43	-2.03	-1.20	-0.75
Poverty rate	4.44	-2.05	-1.21	-0.72	-0.45
Ratio of budget on welfare	-0.01	-0.00	0.00	0.00	0.00
Size of Public program	-0.02	0.01	0.01	0.00	0.00
Public expenditure(capacity)	0.00	-0.00	0.00	0.00	0.00
Log population density	0.06	-0.03	-0.02	-0.01	-0.01
Log service density	-0.21	0.09	0.06	0.03	0.02

Table 9. Marginal Effects on Nonprofit Entry

	0 Entry	1 Entry	2Entries	3 Entries	≥ 4 Entries
Pr	0.67	0.23	0.06	0.03	0.01
Log elderly population	-0.08	0.04	0.02	0.01	0.01
Δ log elderly population	-0.03	0.01	0.01	0.00	0.00
Log per capita income	0.90	-0.46	-0.23	-0.13	-0.07
Δ log per capita income	-0.15	0.08	0.04	0.02	0.01
Education level diversity	11.96	-6.11	-3.06	-1.80	-0.99
Poverty rate	0.09	-0.04	-0.02	-0.01	-0.01
Ratio of budget on welfare	-0.01	0.00	0.00	0.00	0.00
Size of Public program	0.07	-0.04	-0.02	-0.01	-0.01

Public expenditure (capacity)	0.00	0.00	0.00	0.00	0.00
Log population density	0.77	-0.39	-0.20	-0.12	-0.06
Log service density	-0.22	0.11	0.06	0.03	0.02

Table 12 summarizes our findings by hypotheses previously proposed in Chapter 3. In the following chapter, these findings are closely examined in detail.

Table 12. Summary of findings by hypotheses

Theoretical Component	Hypotheses	
Contract failure / Voluntary failure	Hypothesis 1.1: Market size will be negatively related to the number of for-profit entries and positively related to the number of nonprofit entries by district.	X
	Hypothesis 1.2: For-profit entries will be more responsive to the change in market size (the size of demand population) than is the number of nonprofit entries.	X
	Hypothesis 2.1: Level of income will be negatively related to the number of for-profit entries and positively related to the number of nonprofit entries by district.	O
	Hypothesis 2.2: For-profit entries will be more responsive to the change in income level than is the number of nonprofit entries.	O
Government failure	Hypothesis 3: Demand heterogeneity will be negatively related to the number of for-profit entries and positively related to the number of nonprofit entries by district.	X

4.3. Discussions

Our objective of this thesis has been to examine the underlying factors that lead to diverging entry patterns between for-profit and nonprofit agencies into a publicly funded program for elderly care services. In particular, drawing from the three-failures theory, the two separate ordered probit models in the previous section tested whether the market size, level of income, and demand heterogeneity of a local district differentially affected for-profit and nonprofit entries. This section further examines various implications of these findings and how they may contribute to the extant literature.

4.3.1. Summary of Findings

First, the findings partially supported the contract failure arguments on for-profit and nonprofit entry behaviors. As predicted, lower income level of the district discouraged for-profit entries while it induced more nonprofit entries. This finding supported the hypothesis of contract failure that nonprofits were more preferred than for-profits as service providers by lower income population. Because low income was often associated with high information costs, the problem of information asymmetry accentuated where income was lower. This is highly likely especially within the context of elderly care services, which is one of the typical examples considered as 'trust goods' (Van Puyvelde and Brown, 2016). The actual quality of service is hard to evaluate accurately by consumers, for which it is especially more likely that demand effects for nonprofit services surpasses its supply effects, which work at an opposite direction, when it comes to these trust goods (Ben-Ner and Hoomissen, 1992; Smith and Grønbjerg, 2006; Van Puyvelde and Brown, 2016). This has also been shown in empirical studies, including the works of Marcuello (1998), Kim (2015), and Matsunaga and Yamauchi (2004). In order to further investigate the effect of contract failure, we also tested the impact of market size and the

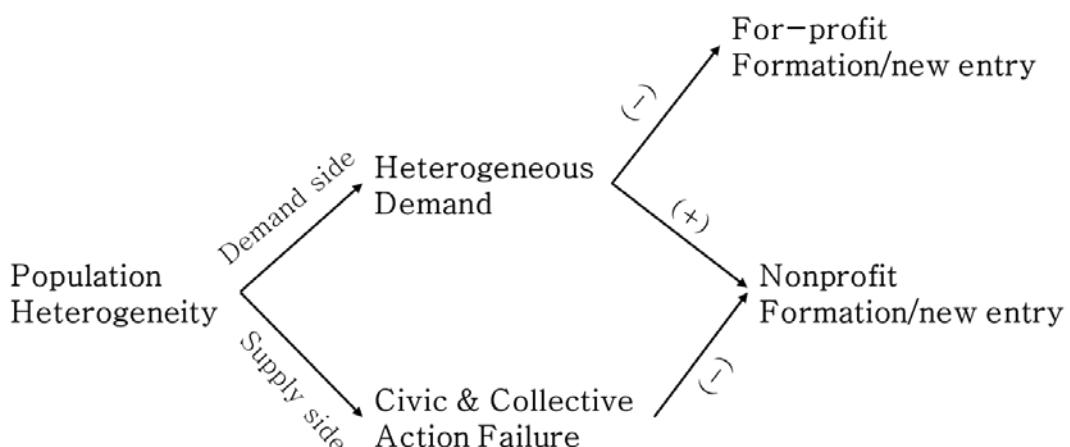
marginal changes in market size (Hypothesis 1.1 and Hypothesis 1.2), but both were found to be statistically insignificant. Taken together, these results suggest that income-related factors can wield greater impact on information asymmetry than the market size itself in the case of Seoul's elderly care service markets.

Second, the government failure arguments in the three-failures theory were found invalid (Hypothesis 3). While this demand heterogeneity hypothesis has been widely tested and extended, there has been mixed results about the relationship between demand heterogeneity and the size of nonprofit sector. Some empirical studies, including Corbin (1999), James (1987), and Matsunaga and Yamauchi (2004), have successfully shown the validity of the hypothesis by demonstrating a positive association between the two variables. However, almost an equal number of studies have reached the same result as our research by finding a negative association between the two, such as Ben-Ner and Van Hoomissen (1992), Paarlberg and Gen (2009), and Abzug and Turnheim (1998). Although population heterogeneity may provide a demand side driver for the need for nonprofit provision, the resultant low level of social cohesion may be an impediment for collective action and provide resources to support such action.

This has been the major critique of demand heterogeneity arguments in the three-failures theory. There has been a growing body of literature that suggests that population heterogeneity can be detrimental to mobilizing collective actions and resource. According to Lu (2017) and Paarlberg and Gen (2009), there could be two possible reasons for this negative effect. First, people are inclined to trust and gather around with others who are demographically similar to themselves, as they would have higher chance to share beliefs and interests. Second, diverse groups will also have diverse preferences or agendas, which makes it difficult to reconcile potentially conflicting interests and promote collective action towards shared goals. Figure 4 is a summary of conclusions from previous studies about these line of arguments, mainly retrieved and adapted from Lu (2017:5) and Ben-Ner and

Hoomissen (1992). Based upon their explanations, the negative association between population heterogeneity measured by education level diversity and the number of nonprofit entries could be because the supply side negative effects outweighed the demand-side positive effects on nonprofit firms' entry decisions.

Figure 4. The impact of population heterogeneity on for-profit and nonprofit entries from previous studies



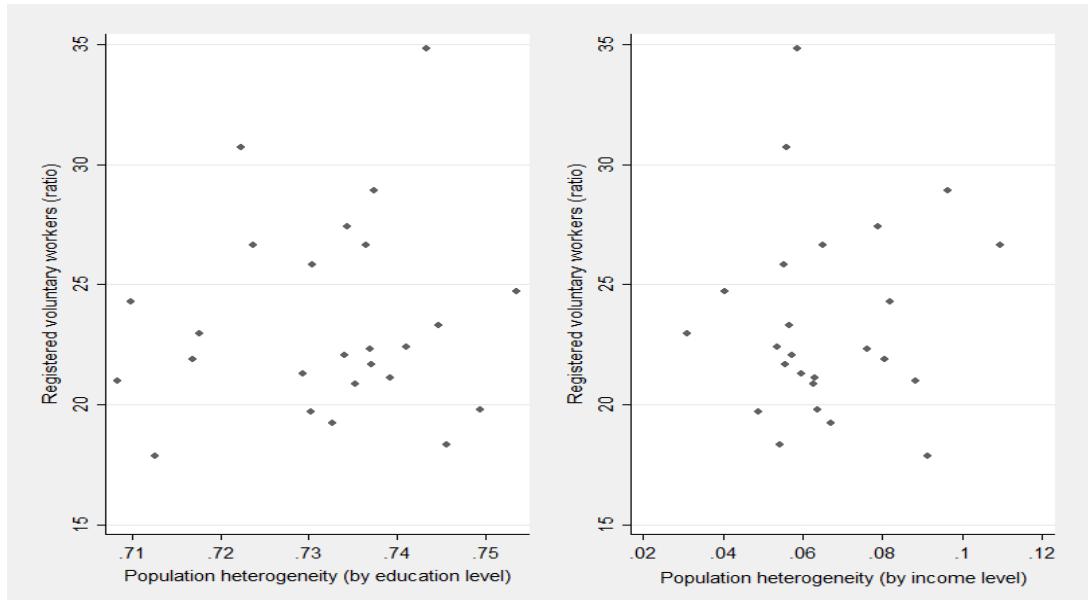
Source: Retrieved and adapted from Lu (2017) and Ben-Ner and Van Hoomissen (1992)

In fact, as in Figure 5, it is interesting to see a positive correlation between population heterogeneity and the size of voluntary workforce³ by local districts in general. Therefore, we conducted an additional panel data analysis predicting the size of mobilization of voluntary workforce from the same set of independent

³ The size of voluntary workforce in a local district was measured by a ratio of the number of registered voluntary workers over the district's total population. Data retrieved from Seoul Metropolitan Government Open Data (<https://data.seoul.go.kr>). This variable was not included in the model due to high correlation with population heterogeneity variables, as supposed by the government failure arguments from the three-failures theory.

variables that we previously used to predict the size of new entries. Both coefficients of population heterogeneity (by education level and by income) were positively correlated, with statistically significance at 1% level (See Table A.3.). The missing link to explain the reason that such mobilization for civic and collective action cannot develop into an incorporation of nonprofit entities needs further investigation. According to the 2017 report issued by the Seoul Institute, interviews with voluntary workers in Seoul tended to reveal their distrust in their capacity for collective actions, narrow definition of their voluntary actions limited to a mere 'service providers', 'unprofessional works', perceiving 'voluntary works' and 'civic engagement' as two separate spheres (Seoul Institute, 2017). In fact, the Ministry of Health and Welfare has recently been reporting about difficulties and future development plans regarding effective management of local community's voluntary resources such as volunteers and/or donations to enhance the stability of care services provided by social service organizations (Ministry of Health and Welfare, 2019).

Figure 5. A general correlation between population heterogeneity and the size of voluntary actions in a district



Note: Observations in 2018

Third, it is worth noting the effects of the local governments' social welfare budget, size and expenditure on public elderly care facilities in a local district. The entry patterns of for-profit firms showed a positive correlation with the ratio of budget on social welfare. In contrast, the entry patterns of nonprofit agencies were not statistically relevant to the district's budget on social welfare. The size of public programs measured by the number of public elderly care facilities and average expenditure for each facility were negatively correlated with the level of nonprofit entries only, while for-profits entry decisions did not. This may imply that nonprofit services can be in a more directly supplementary relationship with public elderly care facilities than for-profit services are. These results are understandable considering several previous research which document the possibility that elderly care services provided by for-profit firms may target different groups or types of service compared to those by nonprofit and government agencies (Ben-Ner and Van Hoomissen, 1991; Marcuello, 1997). These are also in line with the extant literature which

posit that the objectives of government agencies tend to be more akin to those of nonprofit agencies than for-profit agencies (Salamon, 1987: 38; Van Slyke, 2007: 160). It is possible that these results also suggest that for-profit agencies are serving a mutually exclusive target population with those served by the public and nonprofit social service facilities.

In case of the nonprofit entry model, the size of public programs measured by the number of public elderly care facilities and average expenditure for each facility had statistically significant association with the level of nonprofit entries. These results support the conclusions that have also been reached by Lecy and Van Slyke (2014) that government failure theory loses explanatory power once the government's capability to subsidize (complementary characteristics) and its public program capacity (supplementary relationship) are jointly taken into account, rather than just the latter.

4.3.2. Entries Based on Needs versus Resource

There has been a long standing debate about whether a nonprofit status as legal form makes a difference in organizational behaviors. In particular, much of the debate centers on the question of whether nonprofit sector's size and growth varies by the size of community needs or by the amount of available resource for supply (Ben-Ner and Hoomissen, 1991; Marcuello, 1998; Paarlberg and Gen, 2009). The three-failures theory, although it has been the most dominant theoretical framework supporting the sectorial uniqueness, has very often shown inconsistencies in explaining empirical reality. As such, some scholars attempted to develop an alternative theoretical framework to better explain the distributional patterns (Aligica, 2015; Gazley, 2021; Paarlberg and Gen, 2009; Van Puyvelde and Brown, 2016). Some others attempted to find an answer by seeking to better assess the empirical reality with a systematic review of previous findings (Kim, 2015; Lecy and Van Slyke, 2014; Lu, 2017; Matsunaga

and Yamauchi, 2004). This study contributes to this debate by testing the three-failures theory through a comparative analysis between the entry patterns of nonprofits and those of for-profits under the same community conditions, utilizing a newly constructed dataset of the entire providers registered with the publicly funded elderly care program.

The results of our analysis raise important implications. Given the three-failures theory's assumption on the nonprofit sector as a 'niche' for unfulfilled community needs, nonprofit organizations seem to be a successful gap-filler of for-profits while partially insufficient as a gap-filler of the government. To begin with, new nonprofit organizations tend to prefer fulfilling lower income communities' needs while the for-profit organizations tend to prefer providing their service to relatively wealthier communities. However, the nonprofit sector plays limited role in terms of responding to heterogeneous demands that are unable to be addressed by government or by the for-profit sector. The negative correlation between population heterogeneity and for-profit entries is also shown in the results of our analysis. Moreover, for both for-profit and nonprofit organizations, it is highly likely that a local district with greater number of social service providers in the previous year experience a virtuous cycle of influx in the succeeding year as well, if all other things being equal. This finding suggests that the current registration policy for private social service agencies with minimum qualification might have been trapping those who are already disadvantaged.

Our findings can be leveraged by public officials to better identify a socially desirable strategies for correcting the imbalances in public service distribution across localities. The results of our analysis demonstrate that simply diversifying the types of service providers does not automatically lead to enhanced responsiveness to citizens' diverse needs nor better achievement of government's social equity goals. Drawing from the Institutional Analysis and Development Framework perspective (Ostrom, 2011), the nondistributional

constraint is a meta constitutional rule while the actual service delivery process and outcomes would be largely dependent on how this rule unfolds in an operational-choice level action arena (Bushouse, 2017: 56–57). In fact, the inconsistencies between the theory and our empirical observations may be attributable to some contextual factors which could possibly override the effect of legal structure of these organizations on their entry patterns.

To begin with, these inconsistencies lend support to the growing criticisms on these demand side arguments in government and market failure theories. One of the critiques of the three-failures theory is that an 'ownership' approach to predicting service providers' entry decisions erroneously categorizes the nonprofit sector as a "self-contained, closed system (Gazley, 2021: 235)." In fact, our findings show that nonprofits closely interact with and adapt to external environment and resources, creating a continuum rather than a dichotomy between the two sectors. Another critique of nonprofit theories is that they are weakest in their ability to explain cases in which two or three sectors all succeed or fail together. Steinberg (2006) also states that "understanding the coexistence of providers from each sector in the same service industry is also difficult" and concludes, that "what is needed is a theory of the supply of this organizational form to complement the theories of demand (Steinberg, 2006: 128)."

In sum, the three-failures theory's sector-based assumptions may face inconsistencies in the empirical reality due to contextual matters such as the type of public (or publicly funded) service and/or community infrastructure and the available resource. The following section raises another possible implication of these sector-based assumptions, which is the increasing hybridization across the three sectors.

4.3.3. Cross-Sector Hybridity

Compared to the extant literature that focuses on the nonprofit sample to apply the three-failures theory, our findings provide another vantage point, which is potential cross-sector hybridity across the sectors.

We find an unexpectedly close alignment between the government and the for-profit sector. For instance, the for-profit entry patterns, both in counts and rates of entries, are statistically relevant with the amount of local district budget on social welfare. When it comes to the entry rates of for-profit firms, expenditure on public elderly care facilities by local district as well as the welfare budget of a local district is positively correlated. These results suggest a number of ideas that may be relevant to the study of cross-sector hybridization, in comparison to similar comparative analyses previously conducted by scholars (Kushman, 1987; Ben-Ner and Van Hoomissen, 1992; Chakravarty et al. 2006). Business firms in our sample are those that are registered with the publicly funded elderly care program, operating under the registration, monitoring, and subsidization by government. That being said, it is highly likely that they will follow the preferences of government more than before.

Similarly, the newly entering nonprofit care providers in Seoul appear to prefer to locate at relatively homogeneous communities. This was also unexpected. A nonprofit social enterprise organization that operates an elderly care service staffed by disadvantaged workers, for example, would also have a nonprofit community logic, a market logic, and government logic. It is worth noting at this point that education level diversity was found to be more responsive in the nonprofit entry model than in the for-profit entry model, and this difference was statistically significant at the 5% level (see Table A.1.).

Last but not least, the reasons for such anomalies could be myriad, and another growing phenomena these days is the emergence of hybrid organizational forms such as social enterprises. The Korean government

enacted the Social Enterprise Promotion Act in 2006 and became effective in July 2007. As such, any qualified enterprise, whether it be a for-profit or a nonprofit legal structure, can enroll themselves as social enterprise for various supports it gets from the government. For instance, the Ministry of Employment and Labor supports these registered social enterprises with professional consultations. Local governments can also support these enterprises by renting public land or by tax exemptions (Lee et al., 2009). In fact, 17 organizations within the sample in this study are legally for-profits but registered as social enterprises which report their social contributions to government in order to receive the above benefits. For-profit firms nowadays are becoming more socially conscience while nonprofits are adopting profit making activities to ensure their viability. For this reason, one of the possibilities is increasing social practices of these for-profit firms due to the increasing institutional pressures to pursue social missions to a certain extent along with their profit maximizations.

Table 13 presents the results of t tests of major variables including income between the group of registered social enterprises and the remaining firms within the original sample. As it shows, the mean of log income of local districts where hybrid firms first enter turns out to be lower than purely for-profit firms at $p<0.05$ significance level. Sample means of financial autonomy also show statistically significant difference between these two groups. However, considering the fact that the sample size of these hybrid firms was very small ($n=17$), further examinations on this potential cross-sector hybridity are needed. With this in mind, a particularly important and potentially very useful area of scholarship is connecting the social entrepreneurship literature to these three-failure theories in earlier public economics literature. For instance, how the competing institutional logics within these social enterprises might relate to consumers' trust and contract failure could be addressed in future studies.

Table 13. Two sample t–tests between hybrid and purely for–profit organizations on major variables

Variables	Groups	Mean	SD	$\Pr(T > t)$
Log elderly population	Purely for–profit	10.80	0.32	0.96
	Hybrid	10.81	0.27	
Log per capita income	Purely for–profit	7.19	0.35	0.01**
	Hybrid	7.06	0.28	
Education level diversity	Purely for–profit	0.73	0.01	0.29
	Hybrid	0.72	0.01	
Poverty rate	Purely for–profit	0.05	0.01	0.49
	Hybrid	0.05	0.01	
Financial autonomy	Purely for–profit	39.84	16.22	0.09*
	Hybrid	36.37	11.03	
Size of Public program	Purely for–profit	0.65	1.48	0.17
	Hybrid	0.13	0.35	
Public expenditure	Purely for–profit	955.16	147.71	0.85
	Hybrid	961.973	59.05	

Meanwhile, it is not to say that the three–failures theory is incompatible with the empirical reality. Smith (2014: 1500–1502) argues that the theory actually does address these hybridity, although implicitly. Hansmann (1980) expresses concern about the commercialization of nonprofits and even suggests that nonprofit organizations should potentially lose their tax exemption benefits if they rely on earned income too much. Additionally, Weisbrod (1977) defines a separate model for nonprofits that are 'for–profits in disguise (FPID)', which implies that his government failure argument inheres in the assumption on nonprofits as pure types.

CHAPTER 5. CONCLUSION

5.1. Summary

Amid the increasing reliance on the private sector in public service delivery as well as the growing discussions about cross-sector hybridity, this study set out to accomplish two things: first, to show how the Three-Failures Theory unfolds in an empirical case of elderly care program in Seoul and thereby second, to demonstrate that a comparative analysis with its for-profit counterparts allows us to examine an entire universe of local service delivery. As the previous literature mostly focused on investigating only the nonprofit entry patterns, we could only see a partial picture of the distributional patterns of social service providers across localities. Our analysis leads to several conclusions related to these stated goals.

By using a newly constructed panel data of entries of both nonprofit and for-profit elderly care agencies in Seoul between 2012 and 2019, we conducted an ordered probit regression analysis to see whether the government, nonprofit and for-profit sector actually work as complements of each other as the Three-Failure model predicts. Our findings suggest that the newly entering nonprofit organizations and for-profit organizations appear to be useful supplements as more nonprofits are found to be entering lower-income communities' needs while more for-profits are found to be joining wealthier neighborhoods. However, the nonprofit sector's role as 'gap-fillers' seems to be very limited in serving heterogeneous demands that are also unable to be addressed by the government or by the for-profit sector.

5.2. Theoretical Contributions

This study demonstrates some possible limitations in current approaches to

nonprofit studies, where the three-failures theory still pervades their sector-based behavioral assumptions.

First, there has been a long-standing debate about whether an organization's nonprofit legal status makes a behavioral difference compared to government, and business sectors. Nonprofit literature as a whole, uniqueness of the sector or why a nonprofit sector exists has been one of the central but at the same time most controversial theme in the nonprofit literature. While nonprofit scholars mostly made indirect inferences about the for-profit sector from their data, this study contributes to this literature by providing a comparative analysis with the for-profit counterparts.

This study contributes to this debate by comparing the nonprofit sector's entry patterns with the for-profits' under the same community conditions, utilizing a newly constructed dataset of the entire providers registered with the publicly funded elderly care program. Compared to the well-established literature on government–nonprofit relations (Young, 2000; Salamon, 1997), little has been understood about the relationship between a government and for-profit firms in a mixed sector market. They were only indirectly inferred, but likely due to the lack of comprehensive longitudinal data incorporating the three sectors. Furthermore, this study may provide theoretical and methodological contributions to tests of government failure argument in particular, as it provides more focused and relevant sectoral comparisons. In comparison to previous studies which have used raw aggregates of government activity as a proxy variable (i.e. total amount of subsidies for social welfare, average wage in social works), this study focuses on the government, for-profit, and nonprofit actors that are engaged with the same, distinct public service.

Relatedly, our findings lend support to the recent criticisms on the demand-sided arguments of the three-failures theory. The three-failures theory, although it has been the most dominant theoretical framework supporting the

sectorial uniqueness, has very often shown inconsistencies in explaining empirical reality. As such, some scholars attempted to develop an alternative theoretical framework to better explain the distributional patterns (Aligica, 2015; Gazley, 2021; Paarlberg and Gen, 2009; Van Puyvelde and Brown, 2016). Some others attempted to find an answer by seeking to better assess the empirical reality with a systematic review of previous findings (Kim, 2015; Lecy and Van Slyke, 2014; Lu, 2017; Matsunaga and Yamauchi, 2004). This study contributes to this debate by testing the three-failures theory by comparing the nonprofit sector's behavioral patterns with its for-profit counterparts given the same local characteristics.

Second, the desire to hold on to the uniqueness of the nonprofit organizations as a legal form is increasingly challenged by the emergence of social enterprises. As is shown through the list of 17 organizations within the sample, these hybrid organizations prompt the needs for an important modification to the earlier three-failures theory proposed by the public economics school. Dees and Anderson (2003) and Alter (2007), also arrived at a similar conclusion, though with a different theoretical framework. They proposed typologies of nonprofit hybridity with for-profits on one end of the continuum and nonprofits on the other end and identified only the ideal type of nonprofit, which does not exist in reality, is not a hybrid. While our analysis cannot identify the specific mechanism driving these continuum, we have provided potential explanations to encourage additional research into these issues around elucidating hybridity within the three-failures theory. For instance, how the competing institutional logics within these social enterprises might relate to consumers' trust and contract failure could be addressed in future studies.

5.3. Policy Implications

The findings of this study call for a reassessment of recent quantitative expansion of private social service organizations. The introduction of social service vouchers in 2007 was followed by the change in its management policy from permit to registration system in 2011. As such, entry barriers were lower than ever for private social service providers to join the publicly funded social service delivery scheme, leading to a 976 percent increase in the number of social service agencies as well as the formation of a mixed sector market. Both such quantitative and qualitative expansion of social service providers with a higher-than-ever degree of discretion to these private actors were aimed at enhancing responsiveness to diversifying needs of citizens for social welfare with lowest cost.

As the results above show, nonprofit organizations appear to be an effective organizational form for addressing some inherent limitations of the government and the business sector to a certain extent. As expected, nonprofit and for-profit agencies work as supplements, as greater number of nonprofits enter lower income districts while being less preferred by for-profit providers. Communities with less or no publicly owned elderly care facility appear to have greater number of new entries by nonprofit organizations while the entry decisions by for-profits are not affected at any statistically significant level. However, whether these nonprofit services are responsive to heterogeneity in demands is highly questionable, as they demonstrate a negative or no correlation with various indicators for population heterogeneity of a local district. Moreover, for both for-profit and nonprofit organizations, it is highly likely that a local district with greater number of social service providers in the previous year experience a virtuous cycle of influx in the succeeding year as well, if all other things being equal. This finding suggests that the current registration policy for private social service agencies with minimum qualification might have been trapping those who are already disadvantaged.

Our findings can be leveraged by public officials to better identify a socially desirable strategies for correcting the imbalances in public service distribution across localities. The results of our analysis demonstrate that simply diversifying the types of service providers does not automatically lead to enhanced responsiveness to citizens' diverse needs nor better achievement of government's social equity goals. The Korean government's privatization efforts of social service delivery system may have (erroneously) been based on the assumption that each nonprofits and markets can pick up service delivery on their own. The aforementioned results of analysis suggest that lowering the barriers of entry for private organizations may necessitate a more delicate institutional design than the current system which has solely relied on economic institutions based on the logics of efficiency.

Given the three-failures theory's assumption on the nonprofit sector as a 'niche' for unfulfilled community needs, nonprofit organizations seem to be a successful gap-filler of for-profits while partially insufficient as a gap-filler of the government. Nonprofit organizations in practice may not be providing heterogeneous services as expected. For-profit organizations may not be providing services with their highest possible efficiency, unlike what we expect as an outcome of privatization of social service delivery. With this caveat in mind, the question of institutional design should not focus only on who delivers but also on who regulates and who finances.

5.4. Limitations of the Study

Possible improvements for further studies are as follows. The empirical findings of this research require further efforts for generalization by conducting cross-sectional analysis to other public service area since the scope of analysis is limited to voucher program for in-home care for the elderly population. Since

other subsectors such as arts and culture, education, environment, and international development all rely on government funds in different ways (Kim, 2015), it is not clear whether the relationships would identically appear in these sectors (Lecy and Van Slyke, 2014; Twombly, 2003). Future research could also move on to further inquiries of various vantage points of cross-sector hybridity other than social enterprise groups, as it has been only preliminarily investigated in this study. Relatedly, these sectoral differences could rather be continuous scales that appear on a spectrum rather than a clear cut dichotomy as several scholars have also proposed. This issue, too, calls for a further investigation. Cumulatively, these inquiries will be able to lead us to a more multi-dimensional understandings of the government, community, and nonprofit relationships and contribute to further theoretical developments.

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APPENDIX

Table A.1. Cross-model difference between the for-profit entry and the nonprofit entry models

	For-profit entry		Nonprofit entry		Cross-model difference	
	B	SE	B	SE	B	SE
Log elderly population	-0.20	0.81	0.21	0.74	-0.42	1.06
Δlog elderly population	0.34	0.28	0.08	0.25	0.12	0.79
Log income	1.35**	0.69	-2.46***	0.69	1.11	0.85
Δlog income	0.45*	0.25	0.40**	0.24	0.04**	0.02
Education level diversity	-19.85*	10.38	-32.84**	12.49	12.99*	7.71
Poverty rate	-11.89*	7.09	-0.24	8.44	-11.65	10.45
Welfare budget	0.04*	0.03	0.02	0.03	0.02	0.04
Size of Public program	0.07	0.06	-0.20**	0.14	0.26**	0.14
Expenditure on public program	0.00	0.00	0.00***	0.00	0.00**	0.00
Log population density	-0.18	0.49	-2.11***	0.54	1.92***	0.65
Log service density	0.54***	0.15	0.60***	0.16	-0.06	0.18
Log likelihood	-166.28		-148.15			
LR Chi2	50.71		43.17			
Obs	196		196			

Note : *** p<0.01; ** p<0.05; * p<0.10

Table A.2. Hausman–Taylor Estimations on entry rates (= new entries / incumbents)

	For-profit entry rate		Nonprofit entry rate	
	B	SE	B	SE
Log elderly population	0.23	0.24	0.23	0.24
Δlog elderly population	0.03	0.03	-0.01	0.03
Log income	0.07*	0.04	-0.09**	0.05
Δlog income	0.04**	0.02	0.01	0.02
Education level diversity	-3.53	3.57	-2.46*	1.67
Poverty rate	-3.74***	1.60	1.41	1.73
Welfare budget	0.01*	0.00	-0.01*	0.00
Size of Public program	-0.02	0.06	-0.05	0.10
Expenditure on public program	0.00*	0.00	0.00	0.00
Log population density	-0.10	0.18	-0.20	0.30
Log service density	-0.06**	0.02	-0.07*	0.02
Year dummies?				
Obs	196		196	
Hausman FE–RE	25.00		17.17	
(p-value)	(0.00)		(0.02)	
Hausman FE–HT	0.44		2.45	
(p-value)	(0.99)		(0.96)	

Note 1: *** p<0.01; ** p<0.05; * p<0.10

Note 2: Hausman–Taylor estimation enables the coefficients of time-invariant variables (the size of public program) to be estimated.

Note2: Hausman FE–RE is the Chi-squared value of the Hausman test comparing the fixed effects and random effects estimators. Huasman FE–HT is the Chi-squared value of the Hausman test comparing the fixed effects and Hausman–Taylor estimator.

Table A.3. The independent variables regressed on the size of voluntary workforce by local districts

	Model 1 – OLS		Model 2 – OLS	
	B	SE	B	SE
Log elderly population	2.55	1.68	6.18***	1.74
Log income	10.24***	1.66	14.50***	3.10
Education level diversity	101.30***	26.37	136.02***	26.78
Poverty rate	47.02**	22.65	78.61***	24.23
Welfare budget	-0.05	0.08	-0.22**	0.10
Size of Public program	0.08	0.22	0.04	0.20
Expenditure on public program	0.00	0.00	0.00**	0.00
Log population density	-1.06	1.31	1.36	1.43
Log service density	0.13	0.40	0.12	0.37
Constant	-145.60***	34.31	-283.38***	54.65
Year dummies?	No		Yes	
Obs	196		196	
Adj R-squared	0.46		0.55	

Note: *** p<0.01; ** p<0.05; * p<0.10

국문초록

우리나라 사회서비스는 그동안 전자바우처의 도입 등 시장기제에 의한 양적 확대를 목표로 해 왔다. 이렇게 조성된 사회서비스 시장에서 국가와 비영리 조직, 그리고 영리조직들은 동일한 유형의 서비스를 함께 제공하게 됨에 따라, 이들에 의한 사회서비스의 지역적 분포가 어떠한 양상을 보이는지는 공공서비스 전달체계의 효율성과 형평성 모두의 측면에서 중요한 정책적 함의를 지닌다.

이와 같은 사회서비스의 공급주체로서 공공, 비영리, 영리 부문 간 관계와 역할에 관한 논의들은 주로 공공경제학에서 출발한 Steinberg (2006)의 'Three-Failures Theory'를 둘러싼 논쟁을 통해 발전해 왔다. 그 중에서 특히 이론적·경험적 쟁점이 되어 온 부분은 비영리 조직들이 과연 사회서비스 공급에 대한 정부와 영리 조직의 기능을 보충하는 보충적 대체관계인지 혹은 비영리 부문 특성 상의 자원의존도에 따른 중복적 보완관계일 것인지에 관한 문제이다. 그러나 이에 관한 대다수의 실증연구들은 비영리 조직 만을 분석 대상으로 하거나, 영리 조직을 포함할 경우 정부나 지역사회적 특성 등 비금전적 요인들을 고려하지 않음으로써 해당 서비스의 전달체계를 부분적으로만 파악하는 분석 상의 한계를 보여 왔다.

이러한 배경에서 본 연구의 목적은 영리 조직들과 비영리 조직들의 진입 양상들을 동일한 사회서비스와 지역사회적 조건 하에서 함께 비교함으로써, 기존 연구 쟁점에 대한 다각적 접근 가능성을 검토하는 것이다. 연구의 이론적 기반에 따라 다섯 가지 가설들을 설정하였으며, 영리와 비영리 사회서비스 조직들의 진입 수에 대한 순서형 프로빗 모형을 통해 이들을 검증하였다. 본 연구를 위한 실증데이터는 2012년부터 2019년 사이 새로 진입하는 노인돌봄종합서비스 제공 기관들에 관하여 구축한 서울시 차치구별 데이터를 이용하였다.

분석 결과 지역의 소득수준은 영리 기업들의 진입 수준과 정의 상관관계를 보이는 반면, 비영리 조직들의 진입 수준과는 부의 상관관계를 보이는 것으로 나타났다. 그러나 인구의 이질성을 나타내는 교육수준 이질성과 빈곤율은 영리 기업들의 진입 수준에는 부의 상관관계를 보인 반면, 예상과 달리 비영리 사회서비스 조직들도

교육수준의 경우에는 부의 상관관계를 보여 정부의 중위투표자선호에 대한 보충적 기능은 작동하지 않을 가능성이 높은 것으로 나타났다. 이 연구의 경험적 발견들은 three-failures theory를 둘러싼 비영리-영리, 그리고 비영리-정부 간 관계들을 부문간 비교적 관점에서 바라볼 수 있는 가능성을 시사하였다. 또한 서울시의 노인돌봄종합서비스의 향후 정책적 개선을 위한 시사점을 도출하였다.

주요어: 비영리조직, three-failures theory, 사회서비스 전달체계, 서울시 노인돌봄종합서비스

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