<Note>

Recent Studies of the Determinants of Welfare Expenditures by Local Governments in Japan

Masayuki Hiromoto

Abstract

This article examines recent studies of welfare expenditures by local governments in Japan since the beginning of the 1990s. Previous studies analyzing the determinants of differences in welfare expenditure among local governments have regarded the financial conditions of local governments as an important factor. Some studies, while not proving the validity of their hypotheses, conjectured that residents' ways of thinking and family structures influenced local governments' welfare outlays. This article raises the possibility that local government expenditures on welfare programs are affected by the functionality of social networks, as well as the activities of commissioned welfare volunteers and councils of social welfare.

I. Introduction

One of the heaviest financial burdens for local governments in Japan (i.e., prefectural and municipal governments) is their outlay on welfare programs (*minsei hi*). Total expenditures on welfare programs ranked the largest among expenditures by prefectural and municipal governments, as classified by purpose (*mokuteki betsu saishutsu*) in fiscal year (FY) 2011, according to the 2013 version of *Chihō zaisei hakusho* edited by the Ministry of Internal Affairs and Communications (*Sōmu shō*). Percentages of local government outlays on welfare, education, public debt, and civil engineering were 23.9, 16.7, 13.4, and 11.6 respectively in FY 2011.

The central government has been willing to secure manpower and facilities for welfare programs for the elderly and children since the end of the 1980s. This intention has been manifested in plans such as the Gold Plan, New Gold Plan, Gold Plan 21, Angel Plan, New Angel Plan, and Plans for

Supporting Children and Childcare (*Kodomo kosodate ōen puran*). These plans set numerical targets for manpower and facilities throughout the country. Local governments also made plans to secure manpower and facilities for welfare programs. Amendments of welfare laws have strengthened local government capabilities for welfare programs since the beginning of the 1990s. Local governments evaluate demands for welfare programs and provide appropriate welfare services for residents. These endeavors of the central government and local governments imply that the enrichment of welfare programs has become an important purpose of the nation.

Although the expansion of welfare programs is a nationwide purpose, there are differences in these welfare endeavors among prefectural and municipal governments. These differences then lead to disparities in local expenditure on welfare programs. This generates a critical question: what causes the disparities?

A number of studies have attempted to answer this question. This article aims to explain the previous studies addressing this research question, and highlight their methods and results. The article focuses on existing studies that examine local government outlays on welfare programs for the elderly and/or children since the beginning of the 1990s.

Welfare programs provided by local governments belong to several subfields of welfare policy. Welfare policies for the elderly and children are two sub-fields of welfare in which the enlargement of the roles of local governments is nowadays expected. The early 1990s were the starting point for local governments securing manpower and facilities for welfare according to plans made by the local governments. The discussion in this article aims to determine how the research methods of previous studies can be further developed in order to evaluate the determinants of local government expenditures on welfare programs.

The three sections below summarize the methods and analytical results of previous studies. These studies emphasized the financial conditions of local governments, prefecture residents' ways of thinking, and family structures as determinants of local government outlays.

II. Financial Conditions of Local Governments

There are several indices that reveal the financial conditions of local governments. One of them is the financial capability index (*zaisei ryoku shisū*), which shows a local government's average financial condition for the last three financial years. An index of one or higher signifies that a local government's tax revenues are sufficient to meet necessary expenses; an index below one means that a local government's tax revenues fall short of the amount necessary for the minimum level of government services.

Hasenaka (2006) utilized financial capability indices in examining the relationship between city government outlays on welfare programs for the elderly and city governments' financial situations. The study examined data for twenty city governments that joined the Association of Local Governments for Citizens' Welfare (*Jūmin saido no fukushi gyōsei o susumeru shichōsonchō no kai*) when it was established in 1997. A scatter diagram of the city governments' expenditures on welfare programs for the elderly per aged person and percentages of the elderly in the cities, from FY 1990 to FY 1999, showed that all the city governments whose outlays on elderly welfare programs were large did not have high financial capability indices. This finding implied that the effects of city governments' financial capability indices on outlays for elderly welfare programs should not be overvalued.

Hasenaka also analyzed the relationship between city government outlays on elderly welfare programs and ratios of the elderly within total populations. Scatter diagrams of the city governments' expenditures on welfare programs for the elderly per aged person and percentages of the elderly in the cities in FY 1990, FY 1993, FY 1996, and FY 1999 revealed that city governments with relatively large outlays on elderly welfare programs had relatively high — or at least average — ratios of elderly residents within their populations. However, there were also city governments whose percentages of elderly citizens were relatively high yet whose expenditures on elderly welfare programs were relatively small. These findings signified that the influence of percentages of elderly residents on expenditures for elderly welfare programs should not be overestimated.

The amounts of general revenue sources (*ippan zaigen*) also indicate the financial conditions of local governments. Local taxes and local allocation tax (*chihō kōfu zei*) are the main components of general revenue sources. The central government provides a local allocation tax for local governments whose tax revenues are insufficient. A local government can determine purposes for which general revenue sources, including local allocation tax, are spent without the central government's approval, even though the central government is the provider of the local allocation tax. A large amount of general revenue sources leaves a local government with a large amount of financial discretion.

Nakazawa (2006) selected general revenue sources as an index of local governments' financial conditions. His study examined the relationship between city government expenditures on elderly welfare programs and general revenue sources in FY 1998. Multiple regression analyses were conducted by utilizing data for all the cities, for cities with financial capability indices of 0.85 or higher, and for cities with financial capability indices below 0.85.

The dependent variable was a city government's outlay on elderly welfare programs, minus subsidies from the central government and the prefectural government per aged person. The independent variables were: the city governments' general revenue sources per resident; the amount of central government and prefectural government subsidies for city government welfare programs for the elderly per aged person; the percentage of aged persons in the population; the average number of family members per household; indices of urbanization (numbers of people in tertiary industries divided by numbers of people in primary industries); the total number of days on which home-visit care (*hōmu herupu sābisu*) for the elderly was provided, per one hundred aged persons; and the total number of quotas for homes for elderly people requiring special care (*tokubetsu yōgo rōjin hōmu*) per one hundred aged people.

The three analyses had a common result, in that the independent variable of "general revenue sources" had a positive and significant coefficient. The two analyses of city governments based on their financial capability indices — those with indices of 0.85 or higher and those with indices below 0.85 — also obtained common results, in that the independent variable of "average number of family members" had negative and significant coefficients and the independent variable of "urbanization indices" had positive and significant coefficients. However, the absolute values of coefficients of family members and of urbanization indices for the analysis of city governments with rich finances were larger than those for the analysis of city governments with poor finances. These findings signified that rich city governments could expand welfare programs for the elderly more easily than poor city governments, according to changes in family structures and urbanization. The independent variables of "percentages of elderly people" had negative coefficients in the three analyses.

Moreover, Nakazawa conducted multiple regression analyses by adding two independent variables: the largest amount of city government expenditure on elderly welfare programs per aged resident in the same prefecture, and the average amount of city government outlays on elderly welfare programs per aged resident in the same prefecture. These independent variables were positive and significant in the analyses of city governments with financial capability indices of 0.85 or higher, and of city governments with financial capability indices below 0.85. Nakazawa argued that while a rich city government tended to be affected by the highest city government outlay within the same prefecture, a poor city government was apt to be influenced by the average outlay of city governments in the same prefecture.

Additional studies have attempted to reveal the influence of local governments' financial capability indices and general revenue sources on welfare outlays. For example, Matoba (2008) examined divergence within municipal government expenditures on welfare programs for children per capita, seeking the determinants of such differences. The regions of Chūbu, Kantō, Tōhoku, and Hokkaidō had smaller-than-average municipal government outlays on welfare programs for children per capita in FY 1990, FY 1995, FY 2000, and FY 2004. Matoba calculated correlation coefficients between municipal government expenditures on welfare programs for children per capita and municipal governments' financial capability indices from FY 1996 to FY 2004. The correlation coefficients fell between −0.173 and −0.109. These numbers implied that the relationship between municipal outlays on child welfare programs and municipal financial capability indices was weak.

Matoba conducted multiple regression analyses in order to reveal the determinants of city government expenditures on welfare programs for children per capita in FY 2002.　The independent variables were: city governments' general revenue sources per capita; city governments' local taxes per capita; national subsidies for child welfare programs per capita; the number of persons in tertiary industries divided by the number of persons in primary industries; the total quota of day nurseries per thousand residents; the total quota of day nurseries divided by the number of children enrolled in day nurseries; and logarithms of municipalities' populations.

Multiple regression analyses utilized data for all the city governments, city governments with fewer than fifty thousand residents, city governments with between fifty thousand and two hundred thousand residents, and city governments with more than two hundred thousand residents.　Multiple regression analyses were also conducted using data for city governments in the regions of Hokkaidō, Tōhoku, Kantō, Hokuriku, Chūbu, Kinki, Chūgoku and Shikoku, and Kyūshū.

The results of the analyses by population size showed that city governments with fewer residents tended to have more expenditures on child welfare programs if the city governments enjoyed more general revenue resources, and that city governments with more residents were apt to expend more money on welfare programs for children if the number of persons in tertiary industries divided by the number of persons in primary industries was higher (in other words, if the municipality was urbanized). The analyses by region revealed that city governments whose local tax revenues were higher were inclined to have larger expenditures on child welfare programs in Kantō Region and Kinki Region, which have larger populated areas than the other regions.

Matoba furthermore conducted multiple regression analyses that added two independent variables: the highest outlay on child welfare programs per capita among city governments in a prefecture in the previous FY, and the average of city governments' outlays on child welfare programs per capita in a prefecture in the previous FY.　The results of the analyses showed that the t-values of the two independent variables were significant at the level of 5 percent, and that the regression coefficients of these independent variables were positive. These results imply that city governments tend to follow the expenditure standards formed within a prefecture.

Nakawaza (2009) also paid attention to the effects of the financial capability indices and general revenue sources of local governments. He examined whether the financial situations of municipal governments determined city government expenditures on welfare programs for the elderly per aged person in FY 2001. Several previous studies had found that local governments with good financial conditions tend to make more outlays on elderly welfare programs. Nakazawa verified the relationship between local finances and the outlay on elderly welfare programs after the introduction of Long-Term Care Insurance (*Kaigo hoken*) in 2000. Long-Term Care Insurance is a system that insures the purchase of care services for the elderly. Revenue for the insurance comes from people aged forty and older, the central government, prefectural governments, and municipal governments. The introduction of Long-Term Care Insurance may have caused changes in the outlays on welfare programs for the elderly.

Nakazawa showed that the correlation coefficient between city government expenditures on the elderly per aged person and city governments' financial capability indices in FY 2001 was –0.054. A multiple regression analysis was also conducted. The dependent variable was a city government's outlay on elderly welfare programs per aged person in FY 2001. The independent variables were: a city government's financial capability index; the square of a city government's financial capability index; the percentage of people aged sixty-five and older within the population of a city; average income of city residents; a dummy variable of a city in Tōkyō Metropolis; and a dummy variable of a city in Hokkaidō. The adjusted R-square was 0.035. The t-values of "a financial capability index" and "the square of a financial capability index" were not significant at the level of 5 percent. These results do not indicate that the financial conditions of city governments determined expenditures on elderly welfare programs.

However, if the independent variable of "a reciprocal of a financial capability index" was substituted for the independent variable of "a square of a financial capability index," the t-values of "a financial capability index" and of "a reciprocal of a financial capability index" were significant at the level of 1 percent. The regression coefficients of both of these independent variables were positive. The adjusted R-square was 0.254.

Nakazawa suggested that a city government whose financial capability index is high tends to increase its expenditure on elderly welfare programs, and that a city government is apt to increase its expenditure on elderly welfare programs by following nearby city governments whose outlays on elderly welfare programs are large. A multiple regression analysis was designed in order to verify the suppositions. The dependent variable was a city government's expenditure on welfare programs for the elderly per aged person in FY 2001. The independent variables were: the city government's expenditure on elderly welfare programs per aged person in FY 2000; the highest outlay of a city government within the same prefecture on elderly welfare programs per aged person in FY 2000; and the average outlay of the city governments within the same prefecture on elderly welfare programs per aged person in FY 2000. Multiple regression analyses were conducted for city governments whose financial capability indices were one or higher, and for city governments whose financial capability indices were less than one.

The results of the analyses showed that the financial conditions of city governments were related to city government expenditures on elderly welfare programs. The analysis of city governments whose financial indices were one or higher revealed that although the t-value of "the average of city government expenditures per aged person" was not significant at the level of 10 percent, "the highest outlay of a city government within the same prefecture" was significant at the level of 10 percent. The regression coefficient of "the highest expenditure" was positive. The adjusted R-square was 0.873. The t-values of "the highest expenditure" and of "the average expenditure" were significant at the level of 1 percent in the analysis of city governments whose financial capability indices were less than one. While the regression coefficient of "the highest outlay" was negative, that of "the average expenditure" was positive. The adjusted R-square was 0.508. These results imply that a city government enjoying good financial conditions tended to follow an advanced city government within the same prefecture, and that a city government whose financial conditions were not good was apt to try to approach the average expenditure in the prefecture rather than the highest outlay in the prefecture.

III. Residents' Ways of Thinking

Ichirō Aoki has tried to elucidate the reasons why local governments in the western part of Japan tend to make larger outlays on welfare programs than local governments in the eastern part of Japan. His conjecture is that residents' ways of thinking in those prefectures are different from those in the other prefectures, and that this difference in ways of thinking influences the expenditures of local governments.

Aoki (2009) demonstrated that city governments in the western part of Japan made more outlays on welfare programs for the elderly and children per capita than city governments in the eastern part of Japan in FY 1993, FY 1996, FY 1998, and FY 2002. This tendency was also supported in comparisons of the expenditures in FY 1993 and FY 2002 between the eastern and western parts of Japan, according to the size of city populations.

Aoki denied the influence of local taxes on this disparity of welfare expenditures. City governments in the eastern part of Japan tended to obtain more local taxes per capita than city governments in the western part of Japan from FY 1993 to FY 2002. This fact implied that city governments enjoying sufficient local taxes nevertheless made meager outlays on welfare programs, and that city governments with weak finances made large outlays on welfare programs.

Aoki (2008a; 2008b) contradicted the influence of population density and the influence of the ratio of forest and field areas on city government outlays on child welfare programs per capita in FY 1993, FY 1999, and FY 2004. The analysis utilized data for city governments that had two hundred thousand or more residents. Aoki regarded population density and the ratio of forests and fields as indicators of cities' geographical features. Although there was disparity in city government expenditures on child welfare programs per capita between the eastern and western parts of Japan, there was not a clear contrast in population density and in the ratio of forest and field areas between the two areas. Each part of Japan had variations in population density and in the ratio of forest and field areas among its cities.

Results of regression analyses employing ordinary least squares (OLS) also supported the claim that population density and the ratio of forest and field areas had little effect on expenditures of city governments on child welfare programs. The dependent variable of two types of single regression analyses was the expenditures of city governments with two hundred thousand or more residents on child welfare programs per capita in FY 1999. The independent variables of the two types of single regression analyses were population density and the ratio of forest and field areas. The R-squares of the regression equations for the analyses of city governments with small, middle, and large numbers of residents fell between 0.000553 and 0.045. These R-squares were low. The t-values of the independent variables were not significant.

Aoki (2007) repudiated the effects of household features on the disparity in child welfare expenditures between the eastern and western parts of Japan. Data for FY 1995 could not sufficiently explain the relationship between local government outlays on welfare programs for children and household features, such as the ratio of nuclear households with a child or multiple children at six years of age or younger to total households, or the ratio of nuclear and double-income households with children at six years of age or younger to total households. Aoki stated that these two household features should have less influence on local government expenditures on child welfare programs than the numbers of children.

Aoki (1995) denied that the percentages of children or elderly people within prefectures determined differences in the total expenditures of prefectural and municipal governments on welfare programs for children or the elderly per resident between densely populated prefectures in the eastern part of Japan and thickly populated prefectures in the western part of Japan in FY 1988, FY 1990, and FY 1992. The selected prefectures were Saitama, Chiba, Tōkyō, and Kanagawa in the eastern part, and Kyōto, Ōsaka, Hyōgo, and Nara in the western part. Total expenditures of prefectural and municipal governments on welfare programs for children or the elderly tended to be larger in a western prefecture than in an eastern prefecture. Aoki pointed out, however, that the difference in the percentages of children and the elderly between the eastern prefectures and the western prefectures was not appreciable. Moreover, there was variation in those percentages among prefectures in each area.

Aoki (2007; 2008a; 2008b) conjectured that variations in residents' ways of thinking among prefectures (*kenmin sei*) cause differences in local government expenditures between the eastern and western parts of Japan. This hypothesis supposes that differences in residents' subjectivity, among the two areas, determine local government expenditures. The performance of local governments' duties according to residents' subjectivity causes differences in expenditure among local governments.

IV. Family Structures

Similarly to Aoki (1995; 2007; 2008a; 2009), Murata (2009) also demonstrated that western prefectural and municipal government expenditures on welfare programs for the elderly (per aged person) tended to be higher than those of the eastern prefectural and municipal governments in FY 2005. Murata suggested that differences in family structure may lead to this disparity in prefectural and municipal outlays.

V. Discussion

Previous studies have examined the determinants of local government expenditures on welfare programs for the elderly and/or children. The effects of local governments' financial conditions have been confirmed. New studies should assume that the financial situations of local governments affect local government outlays on welfare programs.

Although not clearly proven in previous studies, differences in residents' ways of thinking and in family structure among prefectures or municipalities may lead to disparities in local government outlays on welfare programs. Of the two factors, residents' ways of thinking, peculiar to a certain prefecture, seems to be a difficult factor to grasp and to employ as an indicator for analysis. However, "social networks" might be utilized in place of "residents' ways of thinking" within analysis. Social networks are formed by persons and organizations within communities. If an area has close social networks, residents can easily help each other. Residents living in an area where social networks do not sufficiently function want assistance from local government rather than from other residents.　Social networks may determine residents' ways of thinking about whether they should ask for help from other residents or from local government.

Family structures also seem to be related to demands for welfare programs.　It is difficult for a small-sized household to anticipate that it may obtain help for the elderly or for children from its family members.　Public welfare services are essential for small-sized households in taking care of the elderly and children.　Therefore, family components may determine a local government's outlay on welfare programs.　Family structures are also relevant for social networks formed by family members.　For example, a parent involved in child rearing tends to form connections with other parents rearing their children (Hiromoto 2012).

There are half-public/half-private actors in the welfare policy field, known as commissioned welfare volunteers (*minsei iin*) and councils of social welfare (*shakai fukushi kyōgi kai*).　How active these actors are in communities may influence local government expenditures on welfare programs.　If the actors provide sufficient assistance for residents in a community, the local government's role in the policy field of welfare can be reduced.

Although commissioned welfare volunteers are nominated by prefectural governors and are commissioned by the Minister of Health, Labour and Welfare, the volunteers are unpaid and half-private.　The volunteers are consulted about daily life by residents, offer necessary support, explain welfare services to residents, assist organizations and persons engaged in welfare activities, and cooperate with administrative welfare organizations. Commissioned welfare volunteers are assigned to each municipality.

A council of social welfare is another example of half-public/half-private actors in the field of welfare.　There are councils of social welfare at the levels of the nation, prefectures, municipalities, and wards of government ordinance-designated cities (*seirei shitei toshi*).　The councils are private organizations controlled under articles of the Social Welfare Act (*Shakai fukushi hō*).　Article 109 of the Act allows municipal and ward councils of social welfare to plan and implement services of social welfare, and to help residents to participate in activities of social welfare.　Article 110 stipulates that prefectural councils of social welfare train workers engaged in services of social welfare, and offer guidance and advice on providing such services. The central government and the local governments financially support the councils. These legal and financial interventions in the councils by the central and local governments generate the half-public/half-private characteristics of these organizations.

Previous studies have not necessarily paid attention to social networks and half-public/half-private actors in the field of welfare. Thus, there is a possibility that analysis of the influence of these networks and actors may obtain new findings.

VI. Conclusion

This review of previous studies suggests some key features for a new analysis of the determinants of local government outlays on welfare programs. A new analysis should presume that the financial conditions of local governments are one of the important determinants. There is room to examine the influence of social networks and half-public/half-private actors on local government expenditures. Examining the effects of these networks and actors on local government welfare expenditures may contribute to a better understanding of tendencies within welfare policy since the beginning of the 1990s.

References

Aoki, Ichirō. 1995. "Chihō bunken e mukete no chihō zaisei shūnyū seisaku no ichi kōsatsu: Heisei 2 (1990) nendo ikō no jidō fukushi hi, rōjin fukushi hi o chūshin ni [A Study of Local Government Revenue Policy for the Recent Decentralization]." *Fuji daigaku kiyō* [The Review of Fuji University]. 27(2): 139–152.（青木一郎「地方分権へ向けての地方財政収入政策の一考察――平成2（1990）年度以降の児童福祉費、老人福祉費を中心に――」『富士大学紀要』）

Aoki, Ichirō. 2007. "Higashinihon to Nishinihon kan ni okeru chihō zaisei kōzō kakusa yōin ni tsuite no ichi kōsatsu: Tokuni jidō fukushi hi oyobi kyōsai kumiai futan kin ni chūmoku shite [A Study on Factors behind the Structural Gaps in Local Public Finance between East Japan and West Japan: Focusing on the Child Welfare Expenditures and the Local Government Disbursements for Mutual Aid Association]." *Fuji daigaku kiyō* [The Review of Fuji University]. 40(1): 39–63.

（青木一郎「東日本と西日本間における地方財政構造格差要因についての一考察——特に児童福祉費および共済組合負担金に注目して——」『富士大学紀要』）
Aoki, Ichirō.　2008a.　“Jidō fukushi hi suijun no tōzai kakusa ni tsuite no ichi kōsatsu: Toshi no kakusa suii oyobi chiri teki jōken no chigai ni shōten o atete (1) [A Study on the Gaps in Levels of Child Welfare Expenditures between East Japan and West Japan: Focusing on the Trends of the Mentioned Gaps in City Government Finances and of the Gaps in Geographical Conditions (Part I)].” *Fuji daigaku kiyō* [The Review of Fuji University].　40(2): 25–46.（青木一郎「児童福祉費水準の東西格差についての一考察——都市の格差推移および地理的条件の違いに焦点をあてて（1)——」『富士大学紀要』）
Aoki, Ichirō.　2008b.　“Jidō fukushi hi suijun no tōzai kakusa ni tsuite no ichi kōsatsu: Toshi no kakusa suii oyobi chiri teki jōken no chigai ni shōten o atete (2) [A Study on the Gaps in Levels of Child Welfare Expenditures between East Japan and West Japan: Focusing on the Trends of the Mentioned Gaps in City Government Finances and of the Gaps in Geographical Conditions (Part II)].” *Fuji daigaku kiyō* [The Review of Fuji University].　41(1): 57–96.（青木一郎「児童福祉費水準の東西格差についての一考察——都市の格差推移および地理的条件の違いに焦点をあてて（2)——」『富士大学紀要』）
Aoki, Ichirō.　2009.　“Nihon chihō zaisei kōzō bunseki: Tōzai kakusa no seikaku ni tsuite no kōsatsu [An Analysis on the Structure of Japanese Local Public Finance: Study on the Feature of the Structural Gaps in Local Public Finance between East Japan and West Japan].”　*Fuji daigaku kiyō*　[The Review of Fuji University]. 41(2): 13–47.（青木一郎「日本地方財政構造分析——東西格差の性格についての考察——」『富士大学紀要』）
Hasenaka, Takashi.　2006.　“Fukushi jichitai ni okeru shakai fukushi zaisei no kōzō: Rōjin fukushi hi no bunseki o chūshin to shite [The Allocation of Social Welfare Resources in the Local Government Association for Welfare: Analysis of Finance of Welfare for the Elderly].”　*Nagoya ryūjō tanki daigaku kenkyū kiyō* [Nagoya Ryujo College, Annual Report of Studies].　28: 171–178.（長谷中崇志「福祉自治体における社会福祉財政の構造——老人福祉費の分析を中心として——」『名古屋柳城短期大学研究紀要』）
Hiromoto, Masayuki.　2012.　“Recent Studies on Social Networks of the Elderly and of Parents Involved in Child Rearing in Japan.”　*Shūdō hōgaku* (Hiroshima shūdō daigaku) [Shudo Law Review (Hiroshima Shudo University)].　35(1): 428–418.（『修道法学（広島修道大学)』）
Matoba, Keiichi.　2008.　“Shōshi ka taisaku ni kakaru zaisei shishutsu no sūryō bunseki: Jidō fukushi hi to gōkei tokushu shusshō ritsu no yōin bunseki o chūshin ni.”　*Sanken ronshū* (Kansei gakuin daigaku). (35): 129–145.（的場啓一「少子化対策にかかる財政支出の数量分析——児童福祉費と合計特殊出生率の要因分析を中心に——」『産研論集（関西学院大学)』）
Murata, Hisashi.　2009.　“Iryō hi, fukushi hi no chiiki kakusa bunseki: Iryō hi no seikōtōtei to tekisei ka ni mukete.”　*Esutorēra* [Estrela].　(189): 32–37.（村田久「医療費、福祉費の地域格差分析——医療費の西高東低と適正化に向け

て——」『エストレーラ』）

Nakazawa, Katsuyoshi. 2006. “Zaigen seiyaku to chihō jichitai no kyōkyū kōdō: Rōjin fukushi hi no kettei kōzō no kenshō [Empirics of Welfare Expenditures for the Aged by Local Governments: Policy Reforms and Fiscal Resource Restriction].” *Kōkyō sentaku no kenkyū* [Public Choice Studies]. (47): 43–54.（中澤克佳「財源制約と地方自治体の供給行動——老人福祉費の決定構造の検証——」『公共選択の研究』）

Nakazawa, Katsuyoshi. 2009. “Toshi saishutsu ni okeru senryaku teki sōgo izon kankei no kentō : Kaigo hoken seido ka no rōjin fukushi hi o taishō ni [The Determinants of Social Welfare Expenditures: The Case of Long-Term Care Expenditure].” *Keizai ronshū* (Tōyō daigaku) [The Economic Review of Toyo University]. 35(1): 189–203.（中澤克佳「都市歳出における戦略的相互依存関係の検討——介護保険制度下の老人福祉費を対象に——」『経済論集（東洋大学）』