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Issues and Implications of Policy Responses Taken by Metropolitan Municipalities to Low Fertility¹⁾

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It is true enough that of late the importance of local-level policy responses to low fertility has gained increasing recognition, but the issues tied to them have been left under-analyzed. This brief discusses the issues that arise from the current policy responses taken at the metropolitan municipal level to low fertility and draws implications for policy improvement. Our analysis of aggregate data on metropolitan municipalities suggests that there were differences in longitudinal changes between fertility variables. The number of national and public daycare centers, though having increased overall, has become more varied even across lower-tier localities in the same metropolitan municipality. Moreover, the childbirth support allowance programs as administered currently at the local level are likely to add to policy inefficiencies and fiscal burden with their potential for increasing inter-local competition for attracting population inflows. These issues call for producing data on the benefits received from the policy programs as they are administered at the metropolitan municipal level, improving the eligibility for support in public childcare as a way to increase the use of daycare centers, considering making use of the Fund in Response to Local Population Extinction, and allocating childbirth support funds on a sliding scale.

1) This brief is an amended version of an extract from *Monitoring of Fertility Policies of Regional Local Government and Its Policy Implications*, a KIHASA policy report authored by Insu Chang and Chanwoo Chung



Introduction

With low fertility trends continuing, municipal-level policy responses, in addition to national ones, have gained increasing traction in recent years. Against this backdrop, the 2021 Implementation Plan for the 4th National Plan on Low Fertility and Aging Society was so developed as to include as its components various subprojects designed to respond to local-level population changes, as shown in Table 1.

There is broad agreement on the need for well-founded responses to low fertility at both local and national levels, but not enough scrutiny has been given to the progress of such policies and what specific issues need addressing. In particular, policy responses taken at the metropolitan municipal level in accordance with local policy implementation plans, have not been accompanied by enough in-depth analysis of changes in local population dynamics and underlying issues. Moreover, there are several persistent issues, such as the central government's preference for region-wide common projects, the worsening climate in which to implement local-level projects, and the increasing difficulty of matching funds with regard to the implementation of common projects.

[Table 1] Subprojects as included in the 2021 Implementation Plan for the 4th National Plan on Low Fertility and Aging Society

	Strategy 4. Adapting to the changing population
Subprojects	4-1-A. Support youth for independent living in the community
	4-1-B. Provide settle-down assistance to baby boomers retiring to rural areas
	4-2-A. Build localized social service delivery systems
	4-2-B. Prevent neighborhood blight
	4-2-C. Create an infrastructure for analyzing quality-of-life disparities between areas
	4-3-A. Lay a foundation for systematic support
	4-3-B. Increase targeted support

Source: 2021 Implementation Plan for the 4th National Plan on Low Fertility and Aging Society.

<https://www.betterfuture.go.kr/front/policySpace/basicPlanDetail.do?articleId=106&listLen=10&searchKeyword=&position=M>

It is important above all to examine issues concerning local populations at the local level so that municipal governments, as policy implementors, can share their understanding and recognition of those issues with the central government, which is also a policy implementor. In this regard, the role of metropolitan municipal governments is multifaceted, extending beyond their primary function as the

main implementor of local-level policies outlined in the “metropolitan policy implementation plan”, to facilitating communication between the central government and their lower-tier municipalities and coordinating and managing policies implemented by the lower-tier localities in their jurisdiction.

An in-depth examination of the issues remaining from the measures that metropolitan municipalities have taken in response to low fertility, a preliminary of primary importance to developing effective policy responses to low fertility, would also offer a perspective from which to address the need to shift the focus of policies on low fertility away from relying on metropolitan municipalities alone toward a collaborative approach systemically involving the central government, metropolitan municipalities, and lower-tier localities.

This brief examines issues that have arisen at the level of metropolitan municipalities with regard to the evaluation of policy responses to low fertility and population monitoring, childcare support, and childbirth support, and draws implications for policy improvement.

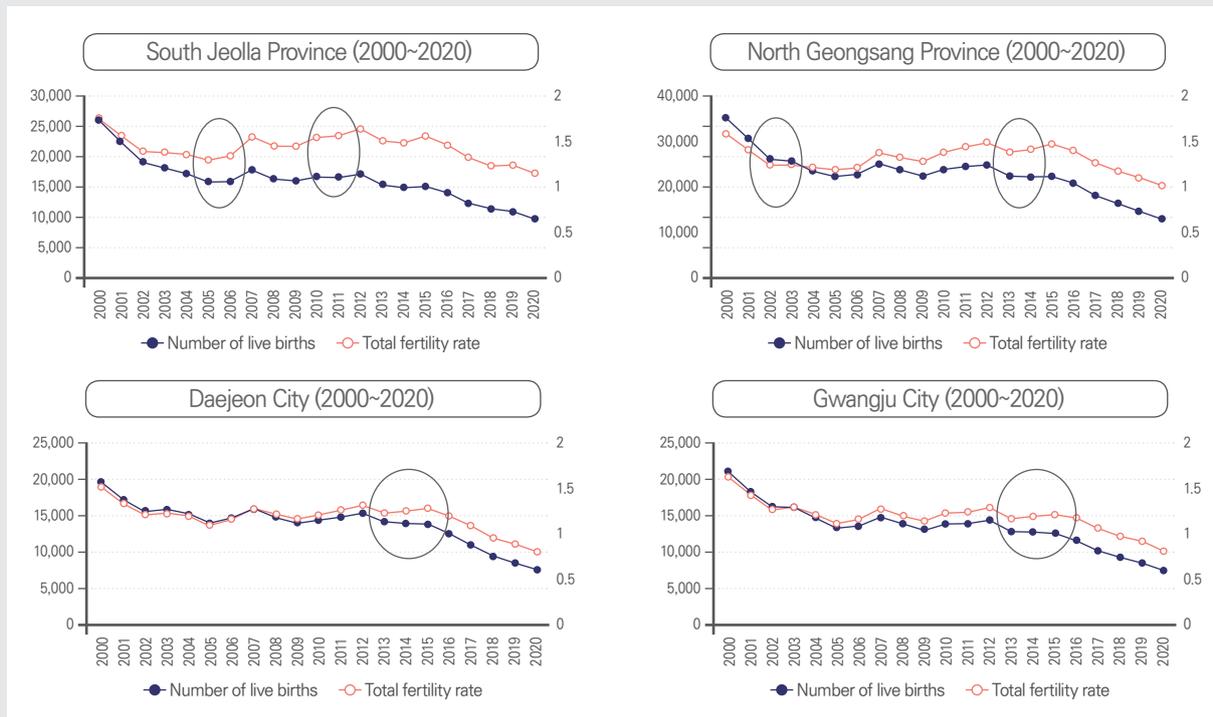
●● Major issues concerning metropolitan municipalities’ policy responses to low fertility

Issues specific to policy assessment and the monitoring of population dynamics

Aggregate indicators that are in frequent use for evaluating the effect of policies on low fertility include the number of live births, the total fertility rate, and the crude birth rate. Of these, the total fertility rate, as pointed out previously by the same author in “On the Total Fertility Rate as an Indicator of Local Population Changes” (2021), with local population dynamics at play, may turn out to differ to an extent from the number of live births. In that sense, local population dynamics, especially those concerning births, need to be monitored with great care.

Figure 1 illustrates trends over the period 2000-2020 in the number of live births and the total fertility rate by metropolitan municipality. While, if with occasional ups and downs, these two variables overall trended downward during the period, there were points of time around which the trajectory of one diverged from that of the other. For example, during specific time periods in metropolitan municipalities such as South Jeolla Province, North Geongsang Province, Daejeon City, and Gwangju City, the number of live births declined while the total fertility rate increased. One reason behind such an outcome could be that in the mentioned regions, the total fertility rates, which are likely to vary depending on the proportion of women aged 15-49, could have declined with a social migration of women in that age range, even as the number of live births increased.

[Figure 1] Comparison of changes in total fertility rate and the number of live births



Note: The left axis represents the number of live births, and the right axis total fertility rates. The encircled portions of the curves suggest that the total fertility rate and the number of live births move in different directions, with one increasing and the other declining.

Source: The author's calculation based on data from Statistics Korea; Insu Chang and Chanwoo Chung. *Monitoring of Fertility Policies of Regional Local Government and Its Policy Implications* (2022)

Therefore, if the total fertility rates calculated for the periods during which they increased even as the number of live births declined, as shown in Figure 1, were used as indicators to evaluate the impact of policy responses to low fertility, they would add to the confusion in judging how effective those policy measures have been. To forestall such confusion would require using a wider range of indicators in addition to analyses of micro-level population dynamics.

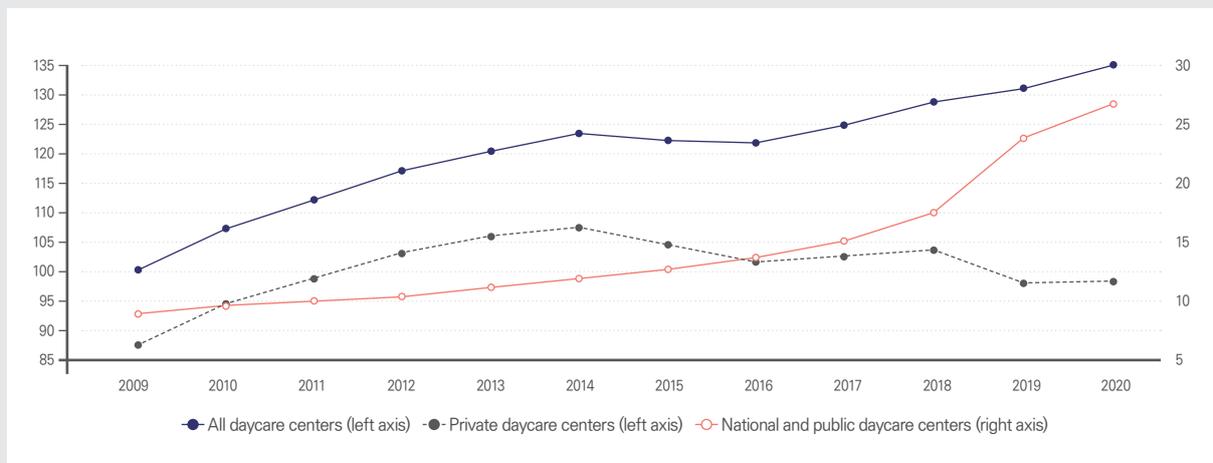
Childcare policy

The unbroken increase in the number of national and public daycare centers in recent years has likely to do with the progress made toward the goal of the 3rd Medium- to Long-Term Childcare Plan (2018–2022) of building up the public component in childcare. The Childcare Plan, comprised of 14 projects running in four policy areas—building up the public component in childcare, overhauling the childcare system, improving the quality of childcare service, and increasing support for parents in childcare—under the umbrella vision of “a society where everyone comes together for the happy growing up of infants and toddlers”, was aimed at, among others, establishing an additional 574 national and public daycare centers. In the five years to

2021, the number of national and public daycare centers has increased by 2,300, exceeding by far the goal set in the plan.

However, there is a need to examine the quantitative growth of national and public daycare centers by region. This, in a sense, is an inquiry into whether the principle of the national minimum, the policy principle that people should be provided with at least the same minimum level of public services wherever they live, is being put into practice.

[Figure 2] Number of daycare centers / national and public daycare centers per 10,000 population of children aged 0-6



Source: The author's calculation based on data from Statistics Korea; Insu Chang and Chanwoo Chung. *Monitoring of Fertility Policies of Regional Local Government and Its Policy Implications* (2022)

The number of daycare centers per 10,000 population aged 0–6 trended upward overall in 228 localities (non-metropolitan cities, gun’s, and gu’s) in Korea in the period 2009–2020. However, there was a statistically significant difference in the number of daycare centers between the Capital Region and non-capital regions. To be specific, the average number of daycare centers per 10,000 infants and toddlers continued along an upward trend, increasing from 100.2 in 2009 to 122.1 in 2015 and to 134.6 in 2020. However, the average over the period under consideration was 130.85 in the Capital Region, compared to 115.76 in the rest, which represents a statistically significant difference of 15.09. The number of national and public daycare centers per 10,000 children aged 0–6 has increased from 8.9 in 2009 to 26.4 in 2020, showing, however, a statistically significant difference of 2.8 between the Capital Region and non-capital regions. Moreover, the difference in the number of daycare centers and the number of national and public daycare centers per 10,000 infants and toddlers has been widening in recent years. The difference between the Capital Region and non-Capital regions in the number of daycare centers per 10,000 infants and toddlers has increased from 10.5 (107.6 vs. 97.1) in 2009 to 13.1 (143.9 vs. 130.8) in 2020. When

it comes to the number of national and public daycare centers per 10,000 population aged 0–6, the difference has increased from 0.4 (9.1 vs. 8.7) to 6.2 (30.8 vs. 24.6).

[Table 2] Difference in the average number of daycare centers per 10,000 children aged 0–6, between the Capital and non-capital regions

Number of daycare centers per 10000 children aged 0–6						
Regions	Estimated number	Mean	SEM	SM	t-statistic	p-value
Capital	792	130.85	1.07	30.28	10.8084	0.0000
Non-capital	1944	115.76	0.77	34.21		

Number of daycare centers per 10000 children aged 0–6						
Regions	Estimated number	Mean	SEM	SM	t-statistic	p-value
Capital	792	16.19	.52	14.89	4.6399	0.0000
Non-capital	1944	13.41	.31	13.92		

Number of daycare centers per 10000 children aged 0–6						
Regions	Estimated number	Mean	SEM	SM	t-statistic	p-value
Capital	792	106.31	1.26	35.48	8.3912	0.0000
Non-capital	1944	97.91	4.69	206.89		

Source: The author's calculation based on data from Statistics Korea; Insu Chang & Chanwoo Chung. *Monitoring of Fertility Policies of Regional Local Government and Its Policy Implications* (2022)

[Table 3] Difference in the average number of daycare centers / national and public daycare centers / private daycare centers per 10,000 children aged 0-6, between the Capital and non-capital regions, for 2009 and 2020

	2009			2020		
	All daycare centers	National and public daycare centers	Private daycare centers	All daycare centers	National and public daycare centers	Private daycare centers
Capital	107.6	9.1	92.40	143.9	30.8	100.96
Non-capital	97.1	8.7	85.69	130.8	24.6	96.83
Difference	10.5	0.4	6.71	13.1	6.2	4.13
t-statistic	2.6803	0.3542	0.3101	3.3619	2.2454	0.1452
p-value	0.0079	0.7235	0.7568	0.0009	0.0257	0.8847

Source: The author's calculation based on data from Statistics Korea; Insu Chang & Chanwoo Chung. *Monitoring of Fertility Policies of Regional Local Government and Its Policy Implications* (2022)

Childbirth support allowance

Views have been put forth as to how childbirth support allowance programs, implemented at the level of lower-tier localities within metropolitan municipalities, effect inefficiencies and bring on an additional fiscal burden. For example, Park²⁾ has argued that childbirth support allowance creates inefficiencies by causing lower-tier localities, particularly those at risk of depopulation, within the same metropolitan municipality to compete for new population inflows, a view deserving of further attention when considering ways to improve policies at the metropolitan municipal level.

The childbirth support allowance program is held to be a locality-led policy response to low fertility and population decline. Of a total of 226 lower-tier localities in the country, 219 (96.9 percent) had a childbirth support allowance program in place in 2020. The figure was higher at 222 (98.2 percent) in 2021. Among the 17 metropolitan regions across the country in 2021, those going through a “population crisis”—population decline, population aging, and a decline in the young population driven by social factors—have spent more on average on childbirth allowances. Also, the number of childbirth allowance recipients per 10,000 population varied significantly across lower-tier localities, even within the same metropolitan region. The average amount lower-tier localities spent on childbirth support allowance in general was especially large in metropolitan municipalities undergoing a population crisis.

Lower-tier localities in those metropolitan municipalities undergoing a population crisis spent more on average, and in more widely varying amounts, on childbirth support allowances. The number of allowance recipients per 10,000 population also varied more widely across lower-tier localities in those metropolitan municipalities at risk of a population crisis. Jinkyung Park. *Tackling Low Fertility Requires*

2) Jinkyung Park. *Tackling Low Fertility Requires Collective Responses Reflecting Regional Characteristics*. Proceedings of the 20th Forum on Low Fertility and Population Aging (2019).

Collective Responses Reflecting Regional Characteristics. Proceedings of the 20th Forum on Low Fertility and Population Aging (2019).

Between 2020 and 2021, the number of childbirth support allowance recipients increased more in metropolitan cities than in metropolitan provinces, which have smaller populations and lower population densities. However, the expenditure on childcare support allowance increased to a greater extent in metropolitan provinces, where the population decline was more severe, which in a sense represents an additional burden on public finances and suggests inefficiencies in spending. Such trends suggest that the central government's financial support for cash schemes such as those childbirth support allowance programs, run by localities at risk of population crisis, needs to be administered on a sliding scale.

**[Table 4] Number of childbirth support allowance recipients per 10,000 population/
total expenditure on childbirth support allowance expenditure in 17 metropolitan municipalities, for 2021**

Region	Number of lower-tier localities	Number of childbirth support allowance recipients per 10,000 population				Childbirth support allowance expenditure in KRW millions			
		Mean	SD	Min	Max	Mean	SD	Min	Max
Seoul	25	51.70	13.76	4.11	81.61	689.18	385.97	274	1900
Busan	16	33.43	14.84	9.13	57.94	286.08	186.08	88	670
Daegu	8	26.39	32.31	0.00	88.41	336.38	711.77	0	2081
Inchon	10	38.04	22.26	6.48	78.46	1155.47	1045.45	41	3500
Gwangju	5	14.36	11.72	3.42	31.63	103.36	62.45	40.8	177
Daejeon	5	23.78	19.06	0.00	43.26	111.00	118.64	0	300
Ulsan	5	64.04	16.49	50.43	91.58	1246.60	921.67	414	2704
Sejong	1	91.76	-	91.76	91.76	4000.00	.	4000	4000
Gyeonggi-do	31	58.61	33.43	6.24	159.55	1838.39	1491.46	240	5950
Gangwon-do	18	107.98	113.12	24.59	486.48	495.72	354.52	30	1174
Chungcheongbuk-do	11	59.29	33.02	21.66	130.65	1036.73	2000.17	100	6968
Chungcheongnam-do	15	85.93	66.30	32.51	299.59	854.60	522.67	200	2010
Jeollabuk-do	14	151.39	276.92	35.73	1102.60	910.61	651.04	250	2300
Jeollanam-do	22	121.02	88.04	28.97	401.04	1357.30	1366.18	178	5015
Geongsangbuk-do	23	249.08	284.71	35.85	1059.97	1556.13	1050.64	140	4259
Geongsangnam-do	18	78.53	37.30	17.69	158.78	1228.17	1452.27	85	6200
Jeju-do	1	54.10	-	54.10	54.10	4047.00	.	4047	4047

Source: The author's calculation based on data from A Casebook of Childbirth Support Policies (Ministry of Health and Welfare & Korea Institute of Child Care and Education) for years 2020 and 2021; Insu Chang & Chanwoo Chung. *Monitoring of Fertility Policies of Regional Local Government and Its Policy Implications* (2022)

[Table 5] Characteristics of childbirth support allowances implemented in 17 metropolitan municipalities (2020, 2021)

Region	Number of childbirth support allowance recipients per 10,000 population (2020)	Number of childbirth support allowance recipients per 10,000 population (2021)	Difference	Allowance per capita	Allowance per capita (2021) in KRW10 thousands	Difference in KRW10 thousands	Average expenditure (2020) in KRW millions	Average expenditure (2021) in KRW millions	Difference in KRW millions
Seoul	42.20	51.70	9.5	34.62	47.18	12.56	515.84	689.18	173.34
Busan	26.00	33.43	7.43	61.33	63.80	2.47	198.03	286.08	88.05
Daegu	25.98	26.39	0.41	24.42	30.52	6.1	359.28	336.38	-22.9
Inchon	31.89	38.04	6.15	125.30	160.98	35.68	972.60	1155.47	182.87
Gwangju	8.05	14.36	6.31	22.16	38.31	16.15	52.74	103.36	50.62
Daejeon	14.43	23.78	9.35	13.94	15.00	1.06	94.62	111.00	16.38
Ulsan	58.49	64.04	5.55	79.63	84.06	4.43	1090.40	1246.60	156.2
Sejong	100.84	91.76	-9.08	118.74	120.12	1.38	4156.00	4000.00	-156
Gyeonggi-do	49.88	58.61	8.73	93.48	102.15	8.67	1576.47	1838.39	261.92
Gangwon-do	95.52	107.98	12.46	85.55	93.43	7.88	379.42	495.72	116.3
Chungcheongbuk-do	57.17	59.29	2.12	82.52	123.20	40.68	944.91	1036.73	91.82
Chungcheongnam-do	63.82	85.93	22.11	103.25	127.59	24.34	723.20	854.60	131.4
Jeollabuk-do	160.33	151.39	-8.94	144.19	148.61	4.42	788.93	910.61	121.68
Jeollanam-do	117.59	121.02	3.43	174.10	186.12	12.02	1172.66	1357.30	184.64
Geongsangbuk-do	244.47	249.08	4.61	112.24	138.70	26.46	1256.91	1556.13	299.22
Geongsangnam-do	71.80	78.53	6.73	114.43	131.11	16.68	1089.84	1228.17	138.33
Jeju-do	60.07	54.10	-5.97	127.66	111.49	-16.17	5116.60	4047.00	-1069.6

Source: The author's calculation based on data from A Casebook of Childbirth Support Policies (Ministry of Health and Welfare & Korea Institute of Child Care and Education) for years 2020 and 2021; Insu Chang & Chanwoo Chung. *Monitoring of Fertility Policies of Regional Local Government and Its Policy Implications* (2022)

Concluding remarks

Need for improvements in data

The use of indicators and continued monitoring as a means to effectively capture local population dynamics should be taken seriously. To more accurately evaluate the impact of policies implemented at the metropolitan municipal level and the benefits they provide, it is necessary to improve both the

quality and quantity of data on local childbirths. It is especially important to produce data in such detail as to enable one to determine to whom benefits are delivered and by means of what specific policies.

Need for improving the eligibility for support in public childcare as a way to increase the use of daycare centers and using the Fund in Response to Local Population Extinction

Article 21 of the Special Act on Support for Areas with Declining Population specifies that priority be given to areas with population decline in the establishment of national and public daycare centers, the conversion of existing private daycare centers to national or public ones, and the provision of necessary administrative and financial resources. In order to achieve this, we must go beyond merely building out the infrastructure of childcare to working, based on a comprehensive grasp of the needs particular to different localities, to ensure that this growth is both substantive and in quality.

It is also important to redefine in detail which localities with what characteristics should be targeted by which policies, taking into consideration the characteristics of localities that are outlined in the Act as eligible for support. The rationale is that even people living in the same area with a declining population divide into groups with different sociodemographic characteristics that, depending on the policy applied, have varying rates of childcare service receipt. The need for such fine-level support gains added relevance given the current state of local-level childcare infrastructure and the existing lacunae in childcare services. One of the available resources that policymakers may consider making use of is the Fund in Response to Local Population Extinction.

A sliding-scale subsidy program for childbirth support payments

Regarded as inefficient not only for the metropolitan municipalities and lower-tier localities that administer them but also for the country as a whole, the current childbirth support allowance programs need improvements. Localities at severe risk of population decline, especially those with long-term migration outflows of young people, may see their fiscal health worsen as they are more likely than other localities to spend heavily on childbirth support allowance programs and to continue relying with desperation on such programs as a mainstay policy effort to attract population inflows. Such allowance programs, implemented by most metropolitan municipalities and their smaller localities, are being administered without matching grants from the central government. These programs are likely to add to the fiscal burden on those local governments, as they consist of cash payments closely tied to the demands specific to the localities concerned and are thus, as a policy, difficult to make changes to and require sustained implementation. Policymakers may consider providing financial support in the form of additional or sliding-scale subsidies for those localities facing a population crisis. “This support could be based on, for example, the degree of underdevelopment in each locality. Such financial support, provided by the central government to socioeconomically vulnerable areas, would not only enable those localities to carry on with their cash assistance programs more smoothly, but also place them in a better fiscal position to handle their own policy initiatives and, as a result, leave them with a financial basis on which to come up on their own with additional policy responses to low fertility.