

Is Korea's Social Services Employment Increasing Too Fast?

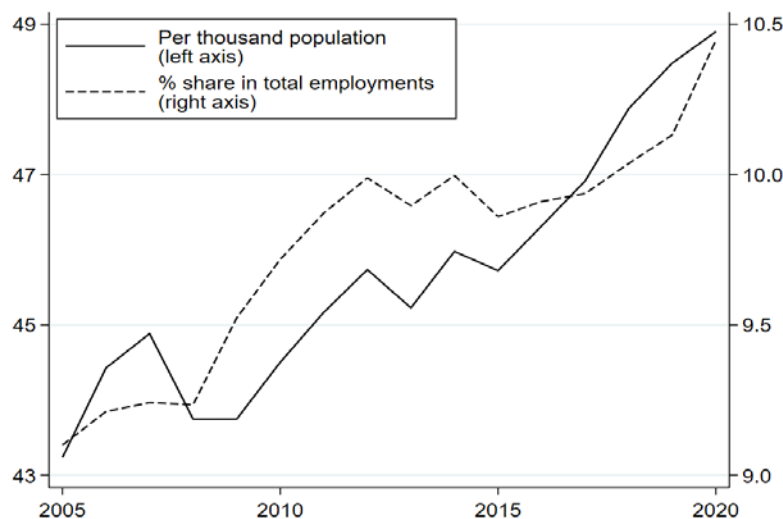
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I. Introduction

Employment in social services is on an increasing trend in the developed world.¹ The average among the OECD countries, for instance, was about 43 employments per thousand population, or about 9.1 per cent of total

employments, in 2005. In 2020, it has risen as high as 49 employments per thousand population and 10.4 per cent of total employment, as Figure 1 shows.

Figure 1. Recent Trend of Social Services Employment: OECD Average



Note: For each year, the values are the cross-sectional average of countries the data is publicly available from the source.

Sources: OECD and author's own calculations.

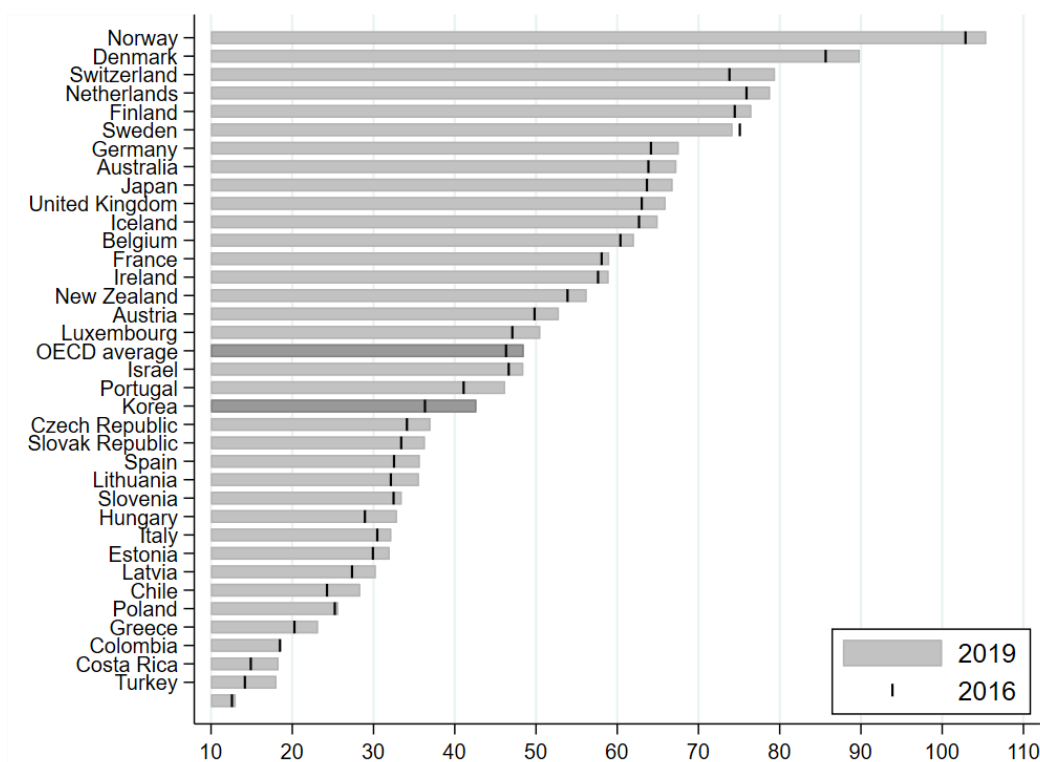
¹ Following Joe et al. (2021), I define the social services sector as Section Q of the ISIC (International Standard Industrial Classification of All Economic Activities) Re-

vision 4. A major merit of this definition is the availability of data for cross-country comparison. See Joe et al. (2021) for more on the definition of the social services sector.

In 2016, right before the previous Korean administration was inaugurated in 2017, Korea had 36.3 employments in social services per thousand population, far below the OECD average, as Figure 2 shows. Since then, social

services employment grew the fastest in Korea among the OECD countries, narrowing its gap from the OECD average. By 2019, for instance, social services employments per thousand population increased by 6.3, while the average among the OECD countries was 2.7.

Figure 2. Social Services Employment per Thousand Population



Notes: Data is not available at the OECD for Canada and the United States. Value for Australia in 2019 is of 2018 due to lack of data.

Sources: OECD and author's own calculations.

Is Korea's fast increase "natural" or justifiable? As an attempt to shed some light on this issue, I estimated the determinants of the size of social services employment and used the results to compare the observed (i.e., actual) change with

the predicted change (Joe et al. 2021 and Joe 2022). This exercise supports Korea's speed of increase; that is, it was no faster than what is predicted by the estimated models. This Brief summarizes these exercises.²

² Joe et al. (2021) contains more than this empirical exercise, including case studies of representative countries for each category of the commonly used

categorization of welfare state regimes, namely Germany (Conservative), the United Kingdom (Liberal), Sweden (Socio-democratic) and Japan (East-Asia).

II. Empirical Setting and Data

Both Joe et al. (2021) and Joe (2022) estimate the following regression:

$$\log(SS_{jt}) = X'_{jt}\beta + \alpha_j + \delta_t + \epsilon_{jt}, \quad (1)$$

where subscripts j and t index, respectively, country (cross-sectional unit of observation) and year (time-series unit of observation). The explained variable, SS , is the number of employments in social services per one thousand population. α captures the time-invariant factors of the country that affect the size of social-services employment that are unobservable

(i.e., country-fixed effect). δ captures the factors that commonly affect the size of social-services employment across countries in that year (i.e., year-fixed effects). ϵ captures the factors that affect the size of social services employment of the country in that year that are not explained by other variables (i.e., disturbance). X contains those variables that are considered in the related literature as major determinants of the size of social-services employment, namely income level (GDP per capita), share of old-age population, economic activity by female, labor market situation and the size of government.³

Table 1. Descriptive Statistics

Variable	Mean	Standard deviation (overall)	Number of observations	Number of countries	Average years
(a) Joe et al. (2021)					
SS	45.7	22.1	510.0	36.0	14.2
logSS	3.7	0.5	510.0	36.0	14.2
GDP per capita	34606.8	20956.9	510.0	36.0	14.2
log(GDP per capita)	10.3	0.6	510.0	36.0	14.2
% share of age ≥ 65	16.1	4.2	510.0	36.0	14.2
Female labor market participation rate	53.8	7.7	510.0	36.0	14.2
Total employment rate	67.3	6.9	510.0	36.0	14.2
% share of government expenditure in GDP	19.4	3.6	510.0	36.0	14.2
(b) Joe (2022)					
SS	45.6	22.1	515.0	36.0	14.3
logSS	3.7	0.5	515.0	36.0	14.3
GDP per capita	39530.0	16526.4	515.0	36.0	14.3
log(GDP per capita)	10.5	0.4	515.0	36.0	14.3
log(GDP per capita), 1-year before	10.5	0.4	479.0	36.0	13.3
% share of age ≥ 65	16.1	4.2	515.0	36.0	14.3
Female employment rate	49.6	8.2	515.0	36.0	14.3
Total employment rate	67.3	6.9	515.0	36.0	14.3
Total employment rate, 1-year before	67.2	6.8	479.0	36.0	13.3
% share of government expenditure in GDP	20.5	3.9	515.0	36.0	14.3

Sources: Joe et al. (2021), Table 4-1 and Joe (2022), Table 1.

3 To measure the economic activity by female, Joe et al. (2021) uses female labor market participation

rate, while Joe (2022) uses female employment rate. See Joe (2022) for the difference.

Equation (1) is estimated using the panel data of the OECD countries during 1991–2020.⁴ To mitigate the potential endogeneity of certain explanatory variables, Joe (2022) uses lagged variables as instruments. Table 1 describes the data.

III. Results

Table 2 summarizes the main results. The signs of the estimated coefficients are as expected; that is, income level, measured by GDP per capita, share of old-age population, who are

the main consumers of social services, economic activity by female, who tend to supply the equivalent of social services at home, and the size of government are estimated to increase the size of social services employment per population, while labor market condition, measured by total employment rate, is estimated to decrease it. This last effect can be explained by the fact that governments, including in Korea, use social services employment as an active labor market policy; and, as such, they use it more when jobs are scarcer.

Table 2. Results

	Joe et al. (2021)	Joe (2022)	
	(1: OLS)	(2: OLS)	(3: IV)
log(GDP per capita)	0.802** (0.235)	0.746* (0.381)	0.752* (0.429)
% share of age≥65	0.031*** (0.007)	0.045** (0.018)	0.046** (0.020)
Female economic activity	0.021*** (0.004)	0.025*** (0.006)	0.027*** (0.008)
Total employment rate	-0.010* (0.004)	-0.020** (0.010)	-0.023* (0.013)
% share of government expenditure in GDP	0.044* (0.017)	0.032** (0.014)	0.033** (0.014)
N obs	510	515	479
R-squared within	0.709	0.696	

Notes: * <0.1, ** <0.05, *** <0.01. Female economic activity is measured, respectively, by the female labor market participation rate in Joe et al. (2021) and by the female employment rate in Joe (2022). Country-clustered standard errors are in parentheses.

Sources: Joe et al. (2021), Table 4-2 and Joe (2022), Table 3.

Based on the estimation results, Joe et al. (2021) predicts the change in the number of social services employment per one thousand population for Korea between 2016 and 2019 to be around 18 per cent, which is larger than the actual change of 16 per cent. Similarly, Joe

(2022)'s prediction for the change between 2016 and 2020 is around 25-27 per cent, while the actual change was 22 per cent. These exercises imply that the recent, government-initiated expansion of social services employment in Korea is not exaggerated, when considering

⁴ For Korea, Joe et al. (2021) use data for 2004-2019, and Joe (2022) adds 2020.

the concurrent changes of the factors that are considered to be main determinants of social services employment. **KIEP**

References

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