The U.S. Military Base Relocation and Its Impact on the Host Cities in South Korea.

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1. Project Overview:

U.S. Forces Korea (USFK) has been stationed in South Korea since the Korean Armistice Agreement was signed in 1953. Their presence has had both positive and negative impacts on the development of host cities for the last 70 years. In 2002, the USFK and the South Korean governments agreed to relocate and consolidate U.S. military units nationwide into a few large installations, which began in 2005. As a result of the Land Partnership Plan, 69 out of 80 U.S. military installations in South Korea are closed as of 2023, and their land ownership was transferred back to South Korea.

Camp Humphreys in Pyeongtaek (city) expanded its area by more than 200 percent and became USAG (U.S. Army Garrison) Humphreys, which is the largest U.S. military base overseas. This expansion is expected to benefit Pyeongtaek as an international city. This expansion is expected to benefit Pyeongtaek as an international city. However, Camp Hovey and Camp Casey in Dongducheon (city) have almost closed, and only a quarter of U.S. troops are now stationed there. The city seems to face considerable difficulty as the local economy has highly depended on local U.S. bases.

Based on these issues, this project addresses the question: How has the U.S. military base relocation affected Pyeongtaek and Donducheon in socioeconomic aspects? The hypothesis is that Dongducheon is experiencing decaying after the base closures while Pyeongtaek is not. To test this hypothesis, the factors are selected in accordance with the Korean Special Act on Promotion of and Support for Urban Regeneration. According to the act, three factors with five criteria are used to identify whether a particular community is in the phase of decay or not. The three factors are 1) Physical Environment, 2) Demography, and 3) Economy. The project examines data of 2007 and 2019 to compare the early phase of the relocation process to the current situation. By providing interactive web maps with various figures, it is expected to reveal the impact of the base relocation and contribute to the future countermeasures for 11 communities where base closures are planned.

2. Tools:

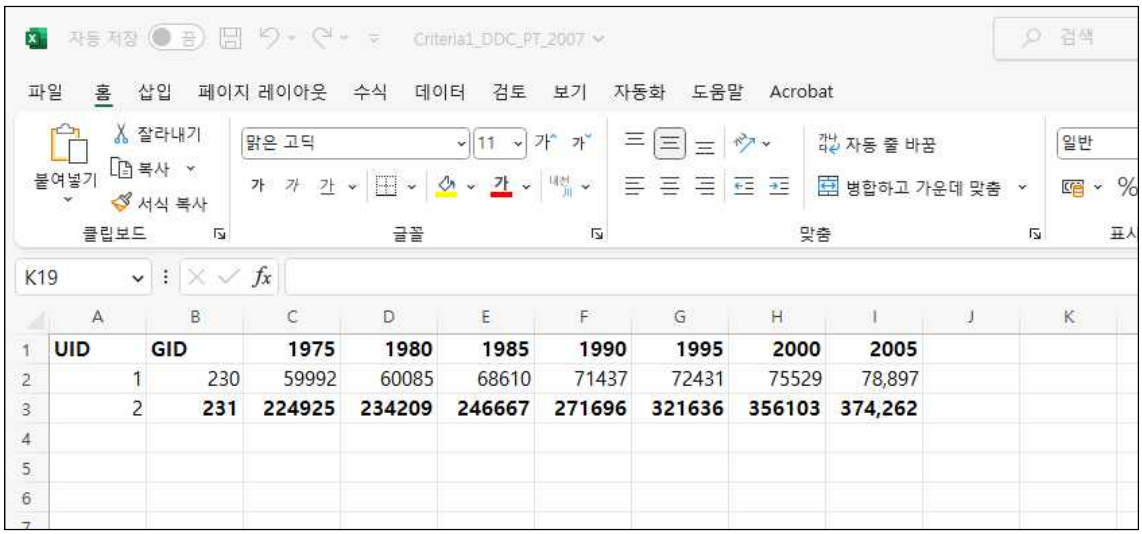
- ArcGIS Pro 3.0
- Tableau
- Microsoft Excel

3. Process:

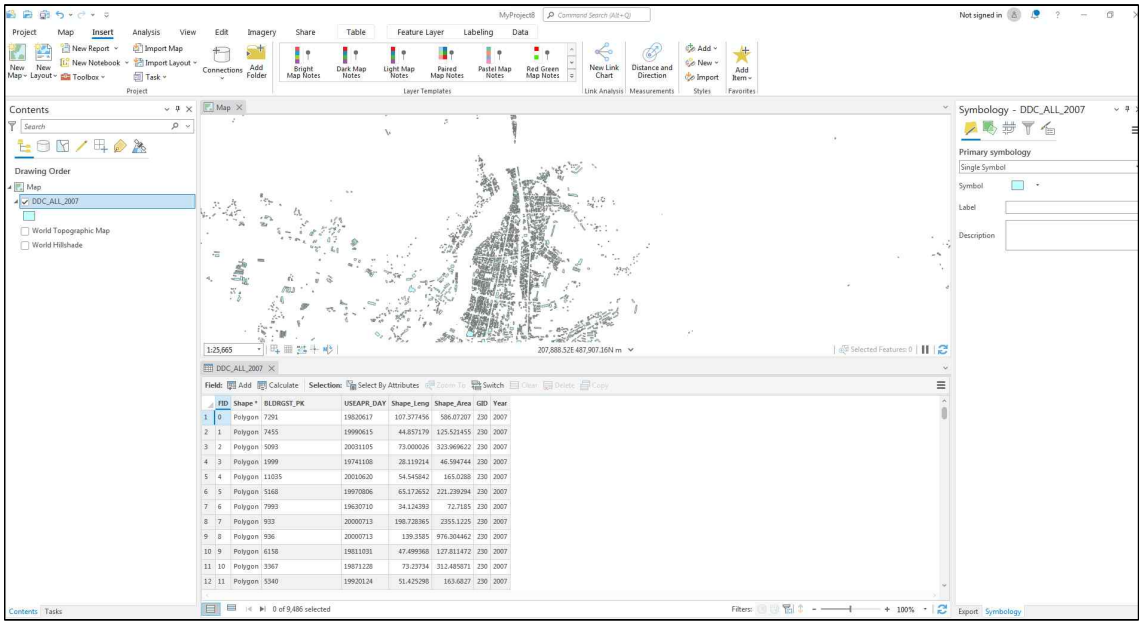
3.1 Data Massaging

I would like to get some advice from you all who will read this. Being a newbie in GIS, I think I did data cleaning too extremely. This in turn made me struggle with data connection and union and finally gave up making fancy interactive maps I hoped to make.

I did most of cleaning jobs on ArcGIS and Excel. Here are some examples my massaged data.

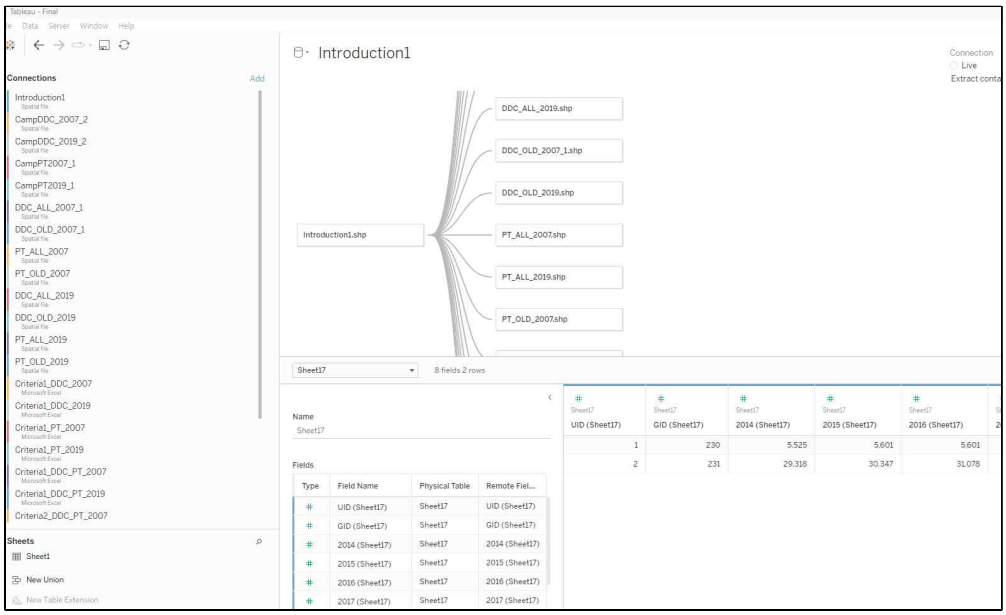


UID	GID	1975	1980	1985	1990	1995	2000	2005
1	230	59992	60085	68610	71437	72431	75529	78,897
2	231	224925	234209	246667	271696	321636	356103	374,262



3.2 Working on Tableau

I used only one data as a base source and one feature to make connections. At the end of the work, I got connections like “1:21.” This made my computer so slow.



What I most try hard was making an map-table connected interactive dashboard. Maybe due to data connection problem I kept failed and I manually pull a table made with Excel.

4. Result

My final outcome is available at: https://son1101.github.io/LA558_Son/Final/Final.html