The Cities of Hamhung and Chongjin

Hamhung and Chongjin are two of the most important industrial cities in North Korea and anchor the economies of their respective provinces. They are also the second and third largest cities in the country respectively, with Hamhung's 2021 estimated population being 874,682 and Chongjin 760,165.

While both cities are important to the national economy, international cities of comparative size would easily have an annual economic impact of \$50 billion and greater. However, due to the state of North Korea's economy, it is unlikely that either Hamhung or Chongjin contribute more than \$5 billion to the national GDP.

Each city has a unique and often contrasting history, and their differing contributions to the nation ensure that they will remain competitive.

Unfortunately, from a human rights perspective, both cities are matched in that they are each home to a prison camp (Hamhung's <u>Kyo-hwa-so No. 9</u> and Chongjin's <u>Kwan-li-so No. 25</u>). Additionally, during the famine, both cities suffered from factory closures, high rates of unemployment, and greater levels of starvation than in rural areas. Thankfully, the economic situation has improved since the 1990s and early 2000s, and new construction of various types can be seen over the last 10-15 years.

Hamhung's location within a large plain along the eastern seaboard in South Hamgyong Province made it an obvious transportation hub. The fact it is also known as the "hometown of the Joseon royal family" helped ensure its importance. The city has a known history dating back centuries and it was, indeed, the hometown of Yi Seong-gye (Taejo of Joseon) who was born in 1335 and founded the Joseon dynasty that ruled Korea until 1910, when the Japanese finalized their annexation of the short-lived Korean Empire. This and other factors make Hamhung more of a historic and cultural center than Chongjin.

Parts of the old city still exist, like the Kuchon Pavilion (39.918647° 127.520584°) on the mountain that overlooks the core of the city, along the Songchon River. The pavilion is one of the few remaining parts of the city's original defenses and dates to 1108 – attesting to its importance well before the rise of Joseon.

However, it was during the late 19th century, when Korea was forced to open up to foreign trade, that Hamhung became a truly major city. According to the University of Vienna, its population exploded from 10,000 to 100,000 during this time.

By the time of WWII, Hamhung was still largely confined to its original boundaries; overcrowded and poorly laid out. Its urban area covered about 5 sq. km of territory and existed entirely on the right bank of the river. Like all northern Korean cities, Hamhung was destroyed in the Korean War. It was rebuilt with substantial help from the German Democratic Republic from 1955-62, and very little of the city's pre-war layout remains discernible.

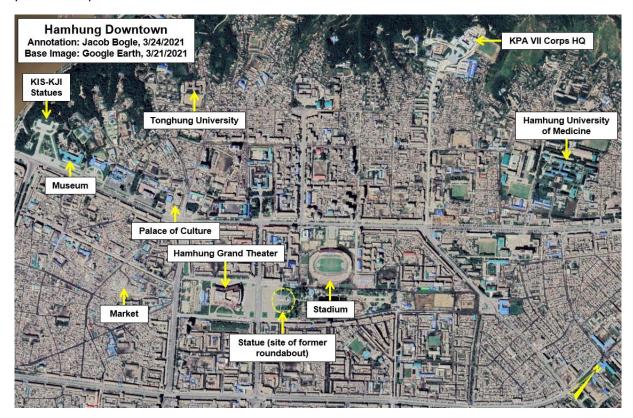


What little of the original road layout remains in Hamhung is marked by the white lines. The black line is an original railway path that still exists. A former roundabout is now occupied by a large monument. This is based off the 1944 US Army map of the city.

The formerly separate city of Hungnam was turned into an industrial base for the chemical sector. The Japanese built the Noguchi fertilizer plant in 1927 which was one of the largest fertilizer plants in the world for the era. Hungnam was administratively joined with Hamhung in 2005. Together, they make up a key industrial and military center. The Noguchi fertilizer plant was destroyed during the Korean War, but the Hungnam Fertilizer Plant (39.838676° 127.621851°) and February 8 Vinylon Plant (39.852544° 127.577553°) were constructed in the years after. Both factories have dual-use purposes and provide substantial amounts of need chemicals for the country's missile and chemical weapons industries.

Reconstruction of the city also meant engineering flood prevention measures and resulted in the construction of several hydroelectric stations in the area, particularly along the Songchong River. This enabled both Hamhung and Hungnam to develop even more industrial sites than during the Japanese occupation. Between the Songchong River sites and the hydroelectric stations of the Jongjin System, there are at least 35 large, medium, and small electricity generating stations along the rivers north of the city.

Hamhung receives 27% more precipitation than Chongjin, which also makes the area excellent for hydroelectric power.



Aside from industry, which I will write more on, Hamhung also has a substantial agricultural and livestock sector that includes one of the largest goat stock-breeding farms in the country. It is spread out among ten or so individual farms in the region. Additionally, as the city is set in one of the largest plains in the country, there are several greenhouses and the Hamhung Tree Nursery & Vegetable Farm which was built between 2017 and 2022. This provides the city with greater access to food than other urban areas, and the tree nursery will help the regime tackle the country's extreme deforestation problem (that contributes to flooding and exacerbates food supply limitations).

There are at least 20 important companies/factories in Hamhung that span various sectors, from the Hungnam Fertilizer Plant (39.841769° 127.626968°) to the Hamhung Orthopedic Factory (39.930461° 127.541108°) to the Hamhung Knitwear Factory (39.925534° 127.557705°). The city is also home to a medical university, a university of hydraulic engineering, a waterpark, a large "grand theater", and at least ten market sites within Hamhung County. The largest market is located at 39.931572° 127.558574° and has approximately 14,700 sq. meters of vendor space in total.

While not as important as Chongjin's three harbors, Hungnam's harbor is large and plays a role in coal shipping and fisheries. Lastly, there are seven <u>fueling stations</u> in the county with all but one having been constructed since 2010.

Chongjin, in contrast with Hamhung's important history, was originally only a small fishing village with about 100 homes, until the Japanese turned into a port city in 1908 to aid them in their conflicts with Imperial Russia, and due to its proximity to Manchuria. The village was quickly turned into a steel-producing city.

The growth of the city accelerated when it was connected to the country's rail network. By 1938, the city had a population of 72,353. During the pre-war years, ironworks were constructed (with ore coming from the Musan mine), timber resources made artificial silk production possible, and the fishing industry continued to grow as well.

After the Korean War (during which the area was bombarded by the *USS Missouri*), help was sent by Czechoslovakia, Poland, and Romania to rebuild the city.

Unlike Hamhung, a fair amount Chongjin's pre-war layout remains despite the city's near total reconstruction. And nearly all of the original street plan for the Sinan district (far east side) still exists.



White lines are existing roads whose layout remains from 1945. The black lines are what remains of 1945 railway paths. And the yellow lines mark out the original pre-WWII coastline. This is based off of the 1946 U.S. Army map of the city.

Chongjin is situated in a much smaller plain than Hamhung and is squeezed against the coast by mountains. This creates problems for food supply (especially during the famine), but the rivers still provide opportunities for hydroelectric power. The Susong River is lined with 16 primary generating stations and several micro-generating stations as well.

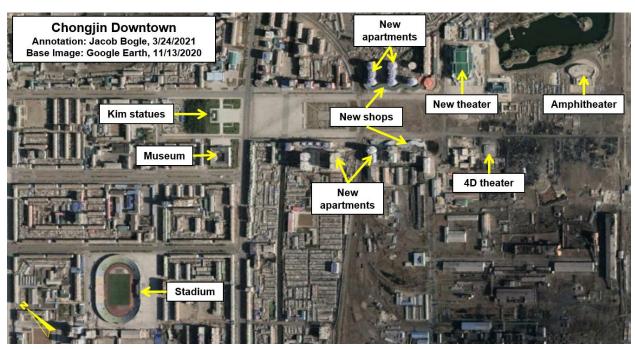
The city is also home to the Chongjin Thermal Power Plant and a power plant based inside of the No. 129 Factory that makes aluminum products. This energy supply is vital to allowing the Kim Chaek Steel Mill and other metalworking factories to exist. As noted earlier, civilian heavy industry, shipbuilding, and fishing are the major economic sectors of the city.

The Kim Chaek Steel Mill replaced what was the Japan Iron Works (Nippon Steel) and reached a theoretical capacity of 6.2 million tonnes of steel and iron products by the 1970s, with Soviet technical help. In 1999-2000, two of the plant's main furnaces were modernized and a new oxygen factory (needed in the production of quality steel) was built in 2006. While the complex hasn't operated at capacity in decades and occasionally shuts down for lack of materials, replacement parts, and other reasons, it is currently in operation and remains North Korea's largest steel mill.

In terms of higher education, the city is home to the University of Light Industry, Chongjin Mineral University, Chongjin Medical University, College of Building Materials, and Chongjin College of Nursing.

While both Chongjin and Hamhung have experienced construction in recent years, Chongjin has undergone a greater level of new building related to civilian needs. The city's downtown area has seen a lot of building and the establishment of a kilometer-long area that has hotels, stores, restaurants, a traditional theater and a "4D Rhythmic" theater, a new amphitheater, and green spaces.

Chongjin also has at least 14 marketplaces.



Militarily, the two cities are important to the country, but Hamhung has a much more integrated role in the KPA's ability to develop and manufacture a wide array of weapons, while Chongjin's importance is based on more of the fact that it is a population center and steel production area.

As mentioned earlier, Hamhung's fertilizer and vinylon plants also serve the country's military. They provide finished and precursor chemicals for rocket fuel (such as UDMH, unsymmetrical dimethylhydrazine) and for their chemical weapons program. The <u>production</u> of rocket fuel supports the regime's drive toward manufacturing solid-fuel rocket engines. Solid-fuel engines cut down on the time needed to fuel missiles (as they're produced with the fuel inside), they are less prone to explosions, and they can allow missiles to be fired from a greater range of terrain.



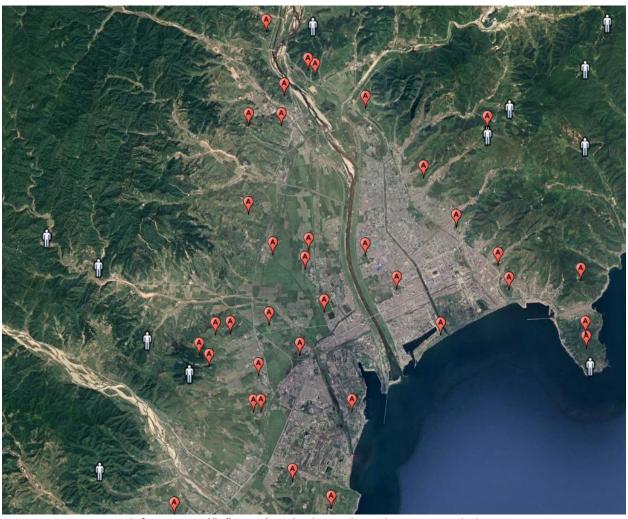
Air defense sites ("A" icons) and other military bases around Hamhung.

The Magunpo Rocket Engine Test Site (est. 2013) lies a short 3.3 km from Hungnam at 39.801521° 127.560700°.

The Hamhung-Hungnam area is also home to the Ryongsong Machine Complex (39.822046° 127.598350°), Hungnam Pharmaceutical Factory (next to the vinylon industrial complex), Hamhung Academy of Science (39.940495° 127.550487°), the massive underground Tonghungsan Machine Plant (39.953379° 127.547075°), and the Chemical Materials Institute (39.957226° 127.558623°). All of these facilities play a role in producing missiles, rocket engines, chemical (and possibly biological) weapons, and much more.

Hamhung is also home to the Toksan Airbase, the headquarters for the KPA Airforce 2nd Air Combat Command, and is where the Kim Jong Suk Naval University (39.868550° 127.686905°) is located.

The practical defense results of all of this military infrastructure is that within 20 km Hamhung is protected by two surface-to-air missile batteries, over a dozen anti-aircraft-artillery (AAA) batteries, over a dozen hardened artillery sites, a number of coastal batteries, and is home to the Army's VII Corps and numerous satellite bases scattered throughout the plain and into the hills around the city.



Air defense sites ("A" icons) and other military bases around Chongjin.

As mentioned earlier, by contrast to Hamhung, the city of Chongjin has limited military infrastructure. Its importance is based on it being a base for heavy industry. As such, the city is ringed with AAA batteries and the mountains hold dozens of bases, some radar installations, and tunnels, but this is common across all of North Korea. I have not been able to find any major military sites (with one exception) that are directly associated with Chongjin in the same way that Hamhung has. That exception is a possible military university located at (41.803332° 129.766275°).

Some small but notable military sites in the area includes a radar station (41.772136° 129.840230°), an underground facility associated with the propaganda broadcaster *Voice of Korea* (41.764391° 129.702757°), and a possible munitions factory 10 km from downtown at (41.835856° 129.691630°)

Along with the inline linked material, this report draws on information from:

Profiles of the cities of DPR Korea (Hamhung), University of Vienna

Profiles of the cities of DPR Korea (Chongjin), University of Vienna

Hamhung's English Wikipedia article

Hamhung's Korean Wikipedia article

Chongjin's English Wikipedia article

Chongjin's Korean Wikipedia article

Mapping information from AccessDPRK 2021 Map, Pro Version

U.S. Army Map Service publications (1944-46), Library of Texas

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--Jacob Bogle

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