



The Case for Kaesong: Fostering Korean Peace through Economic Ties

Asia Report N°300 | 24 June 2019

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Table of Contents

Executive Summary.....	i
I. Introduction	1
II. The Kaesong Industrial Complex’s Political Rise and Fall	4
III. The Complex’s Past and Potential Economic Benefits.....	9
A. Benefits for the South	9
B. Benefits for the North	12
IV. The Complex’s Operational and Political Challenges	15
V. Prospects for Reopening the Complex	17
A. Prospects in South Korea.....	17
B. Prospects in North Korea.....	19
VI. Conclusions and Recommendations	22
APPENDICES	
A. Map of Korean Peninsula	24
B. Questions and Answers about Crisis Group’s Quantitative Analysis of South Korean Complex Firms	25
C. Timeline of Events Leading to the Kaesong Industrial Complex’s Closure.....	30
D. About the International Crisis Group	31
E. Crisis Group Reports and Briefings on Asia since 2016	32
F. Crisis Group Board of Trustees	33

Principal Findings

What's new? In 2016, South Korea shuttered the Kaesong Industrial Complex, breaking a modest but productive connection between the two Koreas. Crisis Group's analysis sheds new light on the economic performance of firms operating at the Complex, demonstrating that the benefits for the South were greater than previously understood.

Why does it matter? Beyond helping restart the stalled peace process, a deal to reopen the Complex in exchange for a proportionate step toward denuclearisation by North Korea could produce mutual economic benefits that help sustain South Korean support for talks and encourage Pyongyang's commitment to peaceful relations.

What should be done? As part of any deal to reopen the Complex, Seoul and Pyongyang should take steps to address problems that previously kept it from reaching its potential. The more efficiently, profitably and fairly it works, the better the Complex can help foster and maintain stable peaceful relations between the Koreas.

Executive Summary

The Kaesong Industrial Complex was the most successful joint economic initiative launched by North and South Korea during the South's pro-rapprochement "sunshine policy" era (1998-2008). As this report shows, this inter-Korean manufacturing zone, which operated from December 2004 to February 2016, was more economically beneficial, in particular for the South, than was recognised at the time. Reopening Kaesong as part of a package of mutual steps – including proportionate North Korean measures to circumscribe nuclear and missile capabilities – could therefore have multiple benefits. Not only might it generate badly needed momentum for stalled peace talks, but it also could begin bringing the economies of North and South closer, serving as an ongoing reminder to key constituencies in both countries of the benefits of building a sustainable peace on the peninsula.

In order to understand why reopening Kaesong should be attractive to both Seoul and Pyongyang, however, it is important to look at the history of the Complex and the benefits it generated – as well as what those benefits meant to each country. For the North, the benefits were clear enough: foreign investment in its infrastructure, employment for its people and much-needed revenue in hard currency.

But for many South Koreans, the benefits were less clear. One reason may be that the Complex operated for most of its tenure against the backdrop of declining inter-Korean relations. Time and again in the Complex's twelve-year history, North Korean actions shook faith in the South that joint ventures like Kaesong could help reduce inter-Korean tensions. These actions included four nuclear tests (2006, 2009, 2013 and 2016), the shooting of one unarmed South Korean citizen (2008) and five-month detention without charge of another (2009), and the sinking of a South Korean naval vessel and shelling of a South Korean island (both 2010). In 2013, following its third nuclear test, Pyongyang closed the Complex's doors for five months for reasons that remain unclear. In 2016, as tensions on the peninsula mounted in the wake of the North's fourth nuclear test, South Korea shuttered the Complex altogether.

But another reason the picture for South Koreans is clouded may be the paucity of data analysis showing how the Complex benefited the South Korean firms that invested in operations there. In this report, Crisis Group seeks to fill that gap. The analysis presented here shows how – despite deepening political challenges and even as other engagement efforts fell by the wayside – the Complex offered meaningful economic benefits to the South as well as the North. Focusing on the period 2007-2014, this report demonstrates that South Korean firms with subsidiaries operating at Kaesong showed average annual increases in revenues (by 8 per cent), fixed assets (by 26 per cent) and profits (by 11 per cent). These growth figures are all the more striking given that during the same period other South Korean firms in the same industries were in decline.

The purpose in airing these figures is not to suggest that reopening Kaesong would benefit the two Koreas equally. Even in its strongest years of operation, the revenues that the Complex produced for South Korean firms were only a fraction of 1 per cent of South Korea's gross domestic product. By contrast, the hard currency receipts that the Complex generated for the North – possibly over \$100 million a

year at the peak of operations – were much more significant. In this sense, reopening Kaesong would unquestionably be a concession to the North.

Nevertheless, a fuller appreciation of how the benefits of Kaesong flowed in both directions during its last period of operations – and the prospect that this would happen again should Kaesong reopen – has important implications for the peace process. While the South Korean government has long made it plain that they would like to clear the way for Kaesong to reopen, there is still work to do in generating political support among the South Korean public. Information about how much a reopening could benefit South Korean firms may help sustain public support for ongoing talks that could help bring about that result. Moreover, should the Complex reopen, it presents a new opportunity for deepening North-South economic cooperation that can help cement ties between the two nations and create a counterweight to future escalatory cycles.

Of course, there are lessons to be learned from the joint venture's last incarnation should it reopen. While fully insulating operations from political tensions on the peninsula may not be possible, the two countries should make every effort to buffer it from those risks, so that it has the opportunity to reach its potential. It will also be important to loosen economically inefficient controls that constrained operations during the Complex's first incarnation. Taking steps where feasible to expand direct communication between managers in North and South Korea, allowing South Korean firms greater control over hiring and training, and increasing protections for workers would make the Complex work more fairly, efficiently and profitably – and help it become a model and driver of peaceful cooperation between two nations struggling to leave war behind.

Seoul/Brussels, 24 June 2019

The Case for Kaesong: Fostering Korean Peace through Economic Ties

I. Introduction

The Kaesong Industrial Complex (hereafter the Complex) was a bold inter-Korean engagement project that North and South Korea established during the “sunshine policy” era of liberal government in Seoul. Premised on the notion that economic cooperation could help achieve Korean peninsula stability, the Complex operated from December 2004 to February 2016, straddling the transition from liberal (1998-2008) to conservative (2008-2017) rule in the South. The sunshine policy’s author, South Korean President Kim Dae-jung, envisioned that the Complex would encompass a diverse array of South Korean manufacturing firms. The North would provide land and labour, and the South would bring technology, capital and materials, as well as the necessary electricity, communications, transportation and banking services.

In President Kim’s vision, the Complex would grow to house many hundreds of South Korean firms and encourage unprecedented cross-border trade. Located near the border city of Kaesong (Korea’s capital from roughly the tenth to 14th centuries), the Complex was to herald a new era for inter-Korean relations.¹

It did not. While the Complex proved to be more durable than most sunshine policy initiatives, it was ultimately shuttered in 2016 following North Korea’s fourth nuclear test and amid assertions by President Park Geun-hye that hard currency receipts from the venture were funding North Korea’s nuclear program. And relations had not yet bottomed out.

When Pyongyang ramped up its nuclear and missile testing over the course of 2016 and into 2017, tensions with the U.S. and South Korea sky-rocketed, exacerbated by a dangerous war of words between U.S. President Donald Trump and North Korean leader Kim Jong-un, before they gave way to welcome de-escalation in 2018. Undergirding the de-escalation was an informal mutual freeze – first agreed to in order to create a good atmosphere for the Winter Olympics hosted by South Korea in February 2018 – of certain activities that each side found to be especially provoca-

¹ In rough parallel with the Complex, the Koreas created openings for South Korean tourism in the North at scenic Mt. Kumgang and, later, Kaesong, the culturally significant ancient capital of the Koryo dynasty. The Mt. Kumgang arrangement began on a limited basis in November 1998, using a cruise ship to ferry passengers back and forth to the South, and was expanded to allow for overland travel from February 2003. Tourism at Mt. Kumgang ceased in 2008 when a North Korean soldier shot an unarmed South Korean tourist on the site. Kaesong tourism formally launched as a pilot in August 2005, but North Korea’s first nuclear test in 2006 postponed the commencement of tours, which did not begin until 2007. The project lasted less than a year. Along with the Complex and tourism, Seoul nurtured the growth of several smaller economic projects in the sunshine policy years, some of which had been launched under previous administrations. Christian J. Park, “Crossing the Border: South Korean Tourism to Mt. Kumgang”, in Valerie Gelezeau, Koen de Ceuster and Alain Delissen (eds.), *De-bordering Korea: Tangible and Intangible legacies of the Sunshine Policy* (London, 2013), pp. 34-49.

tive. Those included the testing of nuclear weapons and certain missiles in the case of Pyongyang, and most joint U.S.-South Korean military exercises in the case of Washington.

The period of relative calm that followed has also been marked by a number of leader-level summits – two between Kim and Trump and three between Kim and South Korean President Moon Jae-in. It was also marked by a series of modest confidence-building measures from North Korea, including the destruction of its nuclear test site at Punggye-ri and the return to the U.S. of the remains of 55 fallen service members who served in the Korean War.

But the fledgling rapprochement appears to have stalled. The first Trump-Kim summit – held at Singapore in June 2018 – produced a high-level joint statement on general principles relating to denuclearisation and normalisation of relations but did not spawn a meaningful diplomatic process to put flesh on the bones. And the second Trump-Kim summit – held at Hanoi in February 2019 – ended in failure. North Korea pushed for extensive sanctions relief in return for relatively modest steps on denuclearisation relating to the verified closure of some or all of the Yongbyon nuclear facility. For its part, the Trump administration took a similarly unbalanced position – seeking from Pyongyang full denuclearisation, after which it would grant comprehensive sanctions relief.

Given that maximalist approaches in the style of the Hanoi summit are almost certainly doomed to continue to fail, Crisis Group has encouraged the parties to consider a modest deal to create momentum for the broader peace process. Such a deal might involve, inter alia, the verified closure of all or part of the Yongbyon nuclear facility by North Korea in return for a reopening of the Kaesong Industrial Complex (a step that would, among other things, require multilateral sanctions relief).²

Against this backdrop, this report offers support for the idea that reopening the Complex, while primarily benefiting Pyongyang, is a step from which Seoul also would gain. In casting new light on the economic benefits that firms previously operating at the Complex enjoyed, it looks both to original data from the Complex and data from the wider South Korean industrial economy. In so doing, it shows that the Complex was a win-win proposition, if a modest one, for both Koreas during its twelve years of operation. Recognising the troubled history of inter-Korean economic engagement, the report also offers specific lessons for how to improve upon the Complex's past operation to improve its benefits to both countries should it reopen.

² As Crisis Group has recommended elsewhere, the U.S. could sweeten the deal by agreeing to a declaration formally ending the Korean War, and the two sides could begin discussions on opening diplomatic liaison offices in each other's capitals. Another possibility would be to agree to the simultaneous restarting of Mt. Kumgang tourism. Crisis Group, *Watch List 2019 First Update*, 17 April 2019. For additional background and analysis on the recent situation on the Korean peninsula, see Crisis Group Asia Reports N°293, *The Korean Peninsula Crisis (I): In the Line of Fire and Fury*, 23 January 2018; and N°294, *The Korean Peninsula Crisis (II): From Fire and Fury to Freeze for Freeze*, 23 January 2018. See also Crisis Group United States Report N°1, *Deep Freeze and Beyond: Making the Trump-Kim Summit a Success*, 12 June 2018; and Crisis Group United States Briefing N°1, *Time for a Modest Deal: How to Get U.S.-North Korean Talks Moving Forward*, 17 December 2018.

In addition to extensive original data analysis, the report draws on interviews with South Korean officials, business leaders and Complex plant managers and North Korean defector-migrants. Crisis Group conducted the interviews primarily in Seoul in 2018 and early 2019. The report also builds on past Crisis Group reporting and analysis on the situation on the Korean peninsula.

II. The Kaesong Industrial Complex's Political Rise and Fall

The history of the Complex spans two decades. Its original proponent was Chung Ju-young (1915-2001), founding chairman of the Hyundai Group.³ Chung and his fifth son Chung Mong-hun (1948-2003) met then-North Korean leader Kim Jong-il on 29 June 2000, two weeks after the first inter-Korean summit on 15 June. The same year, Hyundai Asan (a newly formed arm of the Hyundai Group), the Korea Land Corporation (a South Korean state-owned entity) and the North Korean government agreed upon the details of the joint industrial venture.⁴ In November 2002, North Korea enacted the Kaesong Industrial Complex Act, creating a formal legal basis for the Complex, and in April 2004, the South Korean Ministry of Unification officially approved the project.⁵ The Complex opened later that year on North Korean land leased by Hyundai Asan for a period of 50 years.⁶

The concept behind the Complex was that the South would bring technology, capital and materials – as well as the electricity, communications, transportation and banking services necessary for its firms to operate inside North Korea – and the North would provide land and labour. Pyongyang was to provide the land free for the first ten years, with Hyundai Asan paying modest rent thereafter. It was also to recruit the workers, who were to be paid approximately \$55 per month in 2006, the first year of full operations, rising by approximately 5 per cent per year thereafter to reach \$170 per month in 2015.⁷ Twelve South Korean firms operated in the Complex at first, employing approximately 6,000 North Korean workers.

³ Chung, who was born in 1915 in what would later become North Korea, famously gave several hundred head of cattle to North Korea in 1998, ostensibly to promote peace and reconciliation. “In drive for unity, Hyundai founder takes cattle to North Korea”, *The New York Times*, 17 June 1998.

⁴ The Korea Land Corporation is now the Korea Land and Housing Corporation, or LH (한국토지주택공사). Chung Mong-hun was a member of the delegation that accompanied Kim Dae-jung to Pyongyang for the first inter-Korean summit. He committed suicide in 2003 after testifying to his role in an illegal cash transfer to the North Korean government that both secured the summit and won Hyundai Asan contracts for “a tourism enclave, an industrial park [the Complex], a sports complex, dams, an airport, telecommunications infrastructure and power generation”. “Indicted Hyundai executive plunges to death in Seoul”, *The New York Times*, 4 August 2003. While the disclosure of the corruption became fodder for critics of the Complex and engagement more generally, it never threatened the viability of the venture.

⁵ Chang Woon Nam, “Kaesong Industrial Complex: The Second Free Economic and Trade Area in North Korea”, *Internationales Asienforum*, vol. 43, no. 3-4 (2012), pp. 351-371.

⁶ The lease is still valid. In December 2015, as the initial free period of the lease was expiring, the two sides agreed on price of \$64 per 100 sq m per year until the end of 2019. The office of the Kaesong Industrial District Management Committee (an arm of the South's Ministry of Unification that supervises all Complex-related matters) in the Complex is now staffed by both South and North Korean government employees. But there is no production activity and no South Korean businesspeople are present.

⁷ For purposes of comparison, the average monthly earnings for South Korean workers performing similar tasks (or in similar occupations) were \$1,640 in 2015. A minimum wage worker in South Korea would have made about \$800 per month that year. In North Korea, the Complex workers' outside options would have been primarily in private market activity, not salaried work. There is no reliable figure, but a regional expert estimates, based on figures for North Korean GDP per worker,

Backers of the Complex in the South hoped that it could help develop new bonds between North and South, but they also knew that there would be periods of political turbulence. Their operating assumption appeared to be that the Complex would continue operating come what may.

The original Complex plan foresaw a project that would cover four geographical “sections” – all contiguous regions of one site in Kaesong – that would be developed in three stages. The first developmental stage (2003-2007) involved the physical construction of the factories and a residential area in the first section. The second stage (2007-2009) was to have seen the Complex expand geographically into additional sections and link its relatively simple production activities to more complex operations in South Korean industrial zones around Seoul and Incheon, which would use Kaesong’s low-cost outputs to make goods at more attractive margins. The third stage (starting in 2009 and continuing indefinitely) was to have involved bringing into the Complex multinational companies with an emphasis on those working on information and communication technologies.

The project never moved past the first section and the first stage. After North Korea’s first nuclear test in October 2006, President Roh Moo-hyun’s administration recoupled inter-Korean economic exchange and humanitarian assistance to domestic and international security concerns. The South essentially froze and ultimately abandoned plans to expand the Complex.⁸ The Roh administration’s end in late 2007 marked the denouement of liberal, engagement-oriented policies in South Korea for almost a decade.⁹

The landslide election win of Roh’s successor, conservative former Seoul mayor Lee Myung-bak, triggered a return to deep scepticism about North Korean intentions at the top of South Korean government. His administration stalled the implementation of agreements concerning the Complex, including agreements related to its expansion.¹⁰ And then relations between the two countries became even more fraught.

From 2008 through 2010, a series of incidents further charged the political atmosphere. During Lee’s first summer in office, in July 2008, a North Korean guard shot an unarmed South Korean tourist, Park Wang-ja, at Mt. Kumgang, bringing an abrupt end to inter-Korean tourism not only at the mountain resort but soon also in Kaesong.¹¹ In 2009, North Korea detained a South Korean employee of Hyundai

that this activity might have produced earnings of roughly \$90 per month. Crisis Group correspondence, regional expert, June 2019.

⁸ “북한 핵실험 관련 정부 조치방향”, 국정감사 보고자료, 통일부, 2006년 10월 26일 [“Government measures relating to North Korean nuclear test”, report to legislative audit, Ministry of Unification, 26 October 2006].

⁹ South Korea has a single-term presidential system. Therefore, Roh was not on the ballot in December 2007. Instead, a businessman and conservative former mayor of Seoul, Lee Myung-bak, trounced the leftist Chung Dong-young at the polls, taking 48.7 per cent of the vote to Chung’s 26.1 per cent.

¹⁰ Crisis Group interview, Kim Jin-hyang, president and chairman of the Kaesong Industrial District Foundation, Seoul, January 2019.

¹¹ Kim Jong-il tried to quell concerns by guaranteeing the visitors’ safety during an August 2009 meeting with Hyundai Group chairwoman Hyun Jung-eun, a visit that yielded the release of the detained Hyundai Asan employee, Yoo Seong-jin. “Kim Jong-il meets with Hyundai chief”, Institute for Far Eastern Studies NK Brief, 24 August 2009. But the Lee administration said North Korea

Asan, Yoo Seong-jin, incommunicado and without charge, for 137 days. Because Yoo was in North Korea on Complex-related business, his detention also foregrounded concerns that the legal safeguards for Complex employees were insufficient to protect South Koreans working there; investors also worried about whether their money would be safe.¹² Concerns about working with and in North Korea spiked yet further after the North sank a South Korean Navy corvette (the *Cheonan*) in the West/Yellow Sea in March 2010, killing 46 sailors, and shelled a South Korean island in November of the same year, killing two marines and two construction workers.

The South Korean public's view of North Korea could only suffer as a result of these actions.¹³ Deaths, detentions, nuclear tests and the shelling of South Korean territory each played a role in darkening the mood. The public also developed a general sense that South Korea had gained little from the engagement years while North Korea had gained a lot. Many perceived the sunshine policy as facilitating the unidirectional transfer of resources from South to North in a manner that transgressed values of fairness and reciprocity.¹⁴ Popular suspicion had it that resources transferred to the North were being diverted to fund military programs. North Korea's second nuclear test in May 2009 underscored the stakes in this concern.

And yet, even as it soured on the sunshine policy writ large, the public continued to support the Complex at this stage. Although plans to expand the Complex did not survive the downturn in inter-Korean relations, the industrial park continued to receive bipartisan political backing in South Korea. For liberals who believed in the potential for peaceful coexistence with North Korea, that support had an ideological component. For conservatives, who were sceptical of North Korea as a general principle, it seemed untenable to close the Complex because of their commitment to commerce and keen awareness of the investment-related costs already incurred by Complex firms.¹⁵

The Complex thus weathered the turbulence surrounding Kim Jong-il's death in 2011 and his son Kim Jong-un's subsequent rise to power. It even grew, expanding from 18 firms employing 6,013 North Korean workers in 2005 to 123 firms with 53,448 workers on the payroll by 2012.¹⁶ Even as unilateral South Korean sanctions (known as the 5.24 Measures because they were enacted on 24 May 2010) closed off

would need to apologise for the killing for the South to permit tourism once more. Pyongyang did not do so; indeed, it demanded an apology from Seoul. "North Korea blames South in shooting", *The New York Times*, 13 July 2008.

¹² You Jee-hye, "Legislative Reform of the Kaesong Industrial Complex in North Korea", *Pacific Basin Law Journal*, vol. 29, no. 1 (2011), pp. 36-74.

¹³ Steven Denney, "Young South Koreans' realpolitik attitude toward the North", *The Diplomat*, 16 January 2016.

¹⁴ Hyun-key Kim Hogarth, "South Korea's Sunshine Policy, Reciprocity and Nationhood", *Perspectives on Global Development and Technology*, vol. 11, no. 1 (2012), pp. 99-111.

¹⁵ As one media analysis of options for responding to the *Cheonan* sinking of 2010 noted at the time, "If we close the Kaesong Industrial Complex it will deal an economic blow to North Korea, but South Korean firms and the government will see equivalent losses". "안보리 추가제재, 가장 효율적 개성공단 중단은 정부도 부담", *조선일보*, 2010년5월24일 ["Most effective additional UN Security Council sanction, closure of Kaesong Industrial Complex a burden to government", *Chosun Ilbo*, 24 May 2010].

¹⁶ Ministry of Unification statistics. See also Mark E. Manyin, "The Shutdown of the Joint North/South Korean Kaesong Industrial Complex", CRS Insight, 11 February 2016.

all other inter-Korean trade following the *Cheonan* sinking in 2010, business at Kaesong continued. This resilience in the face of political pressure was a particular strength of the Complex.¹⁷

In 2013, however, North Korea made two tactical decisions that circumscribed the South Korean government's room for manoeuvre regarding the Complex. On 12 February, it conducted its third nuclear test, creating an immediate challenge for the conservative administration led by Park Geun-hye that had just come to power in Seoul in January. Second, against the backdrop of withering criticism of the test from Seoul, Washington and Beijing, the North reacted by shuttering the Complex – first by prohibiting South Koreans from entering the country, and then five days later by withdrawing North Korean labour.¹⁸ The Complex remained closed for five months.

It is not clear why North Korea took these steps and to this day theories abound. It may simply have been one of a limited range of reactions available to signal discontent with the international condemnation of its nuclear test, which included fresh UN Security Council sanctions adopted in early March.¹⁹ However implausibly, Pyongyang may also have perceived security risks.²⁰ The current South Korean president of the Kaesong Industrial District Foundation (an arm of the South's Ministry of Unification, which supervises all Complex-related matters) believes that the South Korean government's threatening actions – in particular, conducting special forces exercises in early April to practice extraction of South Korean workers from the Complex – made closure more likely.²¹ Another possible explanation – suggested by an anonymous North Korean source to the specialist media outlet *Daily NK* – is that prior to his death in December 2011, Kim Jong-il had ordered his son to find a way to bring about the Complex's closure because he was concerned that exposure to South Korean culture might disrupt North Korean social stability.²²

South Korean public support for the Complex remained stable during the April-September 2013 closure, with more than half of respondents in a May 2013 poll sup-

¹⁷ "Koreas restart operations at Kaesong industrial zone", BBC, 16 September 2013.

¹⁸ "N. Korea to withdraw all its workers from Kaesong complex", Yonhap, 8 April 2013; "N. Korea says all workers must leave complex it runs with South Korea", *Washington Post*, 8 April 2013. A senior North Korean official, then-United Front Department head Kim Yang-gon, visited the Complex on 8 April, then issued the labor withdrawal notification in a statement later the same day. North Korean laborers, ordinarily bussed into the Complex each morning, simply did not turn up for work the following day.

¹⁹ The Security Council imposed the sanctions, pursuant to Resolution 2094, on 7 March 2013, a month before the Complex closure. "North Korea to consider closing Kaesong Complex after worker recall", *The Guardian*, 8 April 2013.

²⁰ Preceding the closure, North Korea made repeated references to alleged South Korean government plans, supposedly drawn up by Minister of National Defence Kim Kwan-jin, to stage a confrontation at Kaesong in order to justify war with the North. Alexandre Mansourov, "Fear prevails over greed: the Kaesong shutdown", 38 North, 21 May 2013.

²¹ Crisis Group interview, Kim Jin-hyang, president and chairman of the Kaesong Industrial District Foundation, Seoul, January 2019; "김관진 '개성공단 인질 사태 땀 구출작전'... 정부, 대응 매뉴얼 재점검 긴박" [Kim Kwan-jin, "Rescue strategy in Kaesong Complex hostage situation'... imminent government re-examination of response manual"], *Kyunghyang Sinmun*, 3 April 2013.

²² "Kim issued 'close Kaesong' order", *Daily NK*, 29 April 2013.

porting its reopening.²³ The administration of South Korean President Park Geun-hye pursued this option. The two sides reached agreement on reopening the Complex in September 2013, with combined losses of more than \$200 million on the balance sheets of the firms operating therein.²⁴ Under the reopening agreement, North Korea consented to give firms in the Complex a tax break in compensation for losses incurred, and the two countries pledged to form a committee made up of officials from both governments to “internationalise” the Complex by attempting to attract foreign investment.²⁵ Pyongyang and Seoul also each promised not to shut down the Complex again without the other’s permission. North Korea’s reasons for agreeing to reopen the Complex were as opaque as its reasons for the closure.

But although the Complex survived the 2013 interruption with its political support in the South seemingly intact, there was a price to pay over the longer term. Many in the South came to see the Complex as a hostage to political fortune, which over time had a corrosive effect on elite and public opinion even though the Complex continued to expand. (As detailed below, by 2016 it was playing host to 125 South Korean firms with combined revenues of \$560 million and employing 55,000 North Korean workers.) With North Korea already having set a precedent for closing the Complex on seemingly political grounds, and in light of Seoul’s persistent concerns that the North was using hard currency revenues to fund its nuclear and missile programs, the Park administration decided to close the doors.

In so doing, Seoul lamented that the Complex had been created “with a view to assisting the lives of the North Korean people, providing impetus to lifting the North Korean economy and achieving the shared progress for both South and North Korea”, but that “the efforts of our government have ultimately been wrongly harnessed in the service of upgrading North Korea’s nuclear weapons and long-range missiles”.²⁶

²³ “한국갤럽 데일리 오피니언 제335호, 2018년 12월 2주 (11-13일)”, 한국갤럽, 2018년 12월14일 [“Gallup Korea Daily Opinion, no. 335, wk. 2 of December 2018 (11th-13th)”, Gallup Korea, 14 December 2018]. “개성공단 ‘재개해야’ 54.3% ... ‘중단해야’ 38.6%”, 폴리뉴스, 2013년5월2일 [“Kaesong Complex must be restarted’ 54.3% ... ‘must be closed’ 38.6%”, Polinews, 2 May 2013]. South Korean public opinion of Kim reached a high point in early May 2018 following the 27 April inter-Korean summit at Panmunjeom, when 77.5 per cent of respondents said they thought Kim was trustworthy. “MBC 여론조사 ‘김정은 신뢰 77.5%’”, MBC, 2018년4월30일 [“MBC opinion poll ‘trust in Kim Jong-un 77.5%’”, MBC, 30 April 2018].

²⁴ “South Koreans head back north to reopened Kaesong complex”, *The Guardian*, 16 September 2013. When the Complex was shut down temporarily, firms reported combined losses of 1tn KRW to the South Korean government, but this assumed the permanent loss of fixed assets and inventory. However, the firms recovered the majority of assets and inventory when the Complex re-opened later that year. Crisis Group estimates losses of approx. \$220 million, the amount of forgone revenue for that year.

²⁵ Troy Stangarone, “Zone of Engagement: Can North Korea’s Kaesong Complex Be Internationalised?”, *Global Asia*, 20 June 2013.

²⁶ Hong Joon-pyo, then unification minister, conveyed the decision in a press conference on 10 February 2016. “Seoul shuts down joint North-South Korean industrial complex”, *The Guardian*, 10 February 2016.

III. The Complex's Past and Potential Economic Benefits

Its contentious political history in the South notwithstanding, the Kaesong Industrial Complex yielded considerable economic benefits for both South and North Korea while it was up and running. But the public picture of those benefits is incomplete, particularly for firms from the South, because of persistent shortcomings in analysis of the relevant economic data. Crisis Group's analysis seeks to address those problems.

A. *Benefits for the South*

There has long been a mismatch between what we know about the number of firms that operated at the Complex and the data made public about their performance. During the years when the Complex was operational, the number of South Korean firms there grew from eighteen in 2005 to 125 in 2015. It stands to reason that most of these firms must have been turning a good profit or others would not have been eager to join them. Yet past surveys of Complex firms reported that the majority barely broke even or operated at a loss.²⁷

This report resolves this inconsistency. It uses firm-level data that have recently become available to provide the first credible statistical estimate of the magnitude of benefits to South Korean firms participating in the Complex. We find that on average these "Complex firms" gained significantly in terms of revenue, capital and profit, as compared to similar firms not operating in the Complex.

Previous studies have underestimated the economic benefits to Complex firms due to inadequate data analysis. That analysis tended to overlook that rigorously assessing the Complex's impact on South Korean firms requires combining financial data from both inside and outside the Complex. A combined perspective is necessary because firms entering the Complex were required by Seoul to set up wholly owned subsidiaries – with separate income and financial statements – that transferred finished goods to their parent companies at artificially low prices.²⁸ The parent firms would then resell the goods at market prices. The profitability of Complex firms' operations was thus reflected on the parent companies' balance sheets, not the subsidiaries'.

Crisis Group obtained data on firm-level activities inside the Complex from the Association of Kaesong Industrial Complex Firms and the Kaesong Industrial District Management Committee. We then merged this data with the Korean Enterprise Database, a compendium of South Korean firm-level balance sheets and income statements that does not include information on subsidiaries in the Complex. Combining these two data sets allowed us to consolidate the income and financial statements of the South Korean firms that were present in the Complex.

²⁷홍순직, "경영자의 시각에서 본 개성공단" [Hong Sun-jik, "The Kaesong Industrial Complex Seen from the View of a Manager"], in Philo Kim et al. (eds.), *Kaesong Industrial Complex* (Seoul, 2015), pp. 206-230.

²⁸The basic rationale for deflating artificial "transfer" prices is to make the parent company look more profitable (by buying inputs from the subsidiary at artificially low process and selling outputs at market price) and make the subsidiary look less profitable (possibly for tax reasons or to shield investors in the parent company from bearing costs attributed to the subsidiary).

Using this merged data, this report offers the first-ever empirical analysis of how South Korean firms did or did not benefit from operating in the Complex.²⁹ We report financial indicators for these firms between 2007, after the completion of the first developmental stage, and 2014, the last year for which robust data are available.

To assess whether the changes over this time period are meaningful, we compare the performance of the Complex firms – which tended to be relatively small textile processing manufacturers – to a similar group of South Korean firms outside the Complex using a statistical method called synthetic control to select the comparison group. For each Complex firm, we identify five non-Complex firms whose industry, age, capital, revenue and profits are closest to those of the Complex firm prior to entry into the Complex; these form the comparison group. We interpret the average difference in performance between the Complex firms and their synthetically constructed comparison groups as the firm-level effect of operating in the Complex.

While it is not possible fully to rule out the influence on firm performance of unobservable factors between the Complex firms and their comparison groups, this approach increases our confidence that we are accounting for differences in important observable factors (eg, industry, age and size) that might undermine the analysis if we were comparing Complex firms to the full suite of South Korean manufacturing firms that did not operate at the Complex.

As Figure 1 illustrates – and as further set forth in Appendix B – our statistical estimation reflects that operating in the Complex showed average annual increases in revenues (by 8 per cent), fixed assets (by 26 per cent) and profit (by 11 per cent) as compared to not operating in the Complex.³⁰

Figure 1

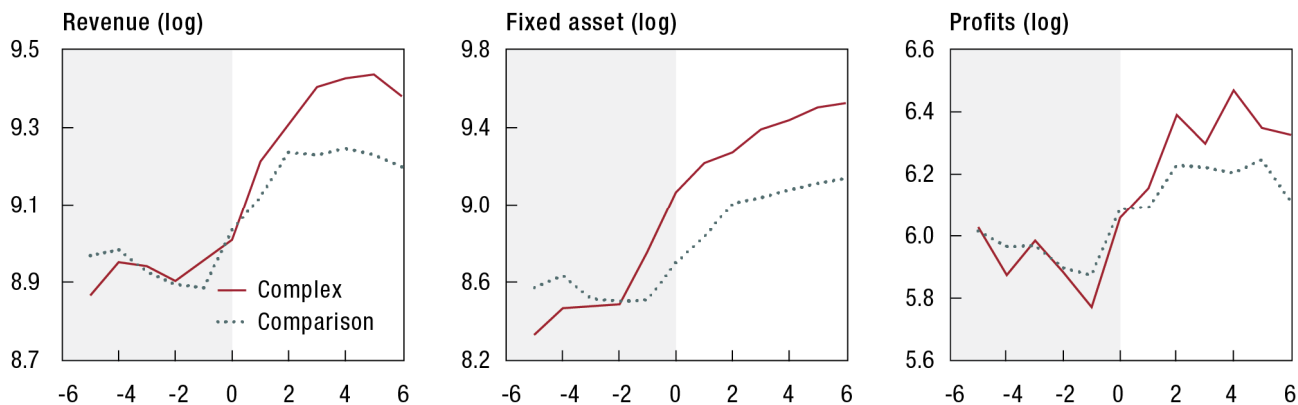


Figure 1 shows the discrepancy in performance results as the difference between the red solid line (Complex firms) and the blue dashed line (comparison group firms) after the Complex firms’ entry into the Complex in 2007 (year 0) on the horizontal axis. Prior to 2007 (year 0), in the grey-shaded area, the two lines are roughly simi-

²⁹ Dr. Yongseok Shin of Washington University in St. Louis led this empirical analysis, with the help of two economists at the Korea Development Institute, Drs. Sunghoon Chung and Minho Kim.

³⁰ In this report, capital refers to the total monetary value of equipment and facilities owned by the parent company and Complex subsidiary. The steep increases in capital reflect South Korean firms’ large investments to increase production capacity by operating in the Complex.

lar because the synthetic control method selects comparison firms based on their similarity to Complex firms. The difference between the two lines in and after 2009 (year 2) is statistically significant at the 5 per cent level. An increase in fixed assets among Complex firms is observable as soon as they start Complex operations, reflecting their initial investments in Kaesong operations, but it takes an additional two to three years for the revenue and profit increases to show up. The lag suggests that workers and managers were adapting to the new environment of the Complex. Consistent with this interpretation, a survey of South Korean managers reported that product quality and labour productivity increased markedly during the Complex's first few years of operation.³¹

South Korean managers saw several advantages to operating in the Complex that appear to explain the significant positive effects for their businesses.³² Importantly, their firms were often seeking to reduce labour costs (which many saw as imperative for remaining competitive and in business during this period). Kaesong allowed them to do this. The alternative would have been moving to China, Myanmar or Vietnam – all countries where workers received lower wages than in South Korea. In 2014, however, average wages in China were 2.9 times the wages paid to workers in the Complex, and in Myanmar and Vietnam about 1.9 times.³³

Moreover, while in the abstract, lower wages might be expected to reflect workers' lower productivity, such was not the case in the Complex. Most South Korean managers interviewed by Crisis Group found the North Korean workers to be disciplined, hard-working and extremely quick learners.³⁴ The fact that employees and managers all spoke the same language may have boosted productivity as well, though this effect is hard to verify. Another important advantage was geographic proximity. The Complex is only 64km from Seoul, and goods could be transported to South Korean production and export facilities within an hour.

To be sure, conditions within Kaesong firms were far from perfect. In particular, labourers were not permitted to unionise, and it is unlikely that they had the right to refuse overtime demands if accepted by their North Korean managers. Yet, the working conditions and perks were comparable to or even better than those available in South Korea (to say nothing of the abysmal standard of North Korean firms beyond the Complex fence). South Korean firms provided meals, snacks, infant care, commuter buses to transport workers from local towns and villages to the Complex and even medical services – unheard of in North Korean manufacturing facilities and far from ubiquitous even in South Korea, especially in the directly comparable small and medium-sized enterprise sector. Finally, the production facilities were new, and there was good lighting and air conditioning.

While the overall effect of its operations on the South Korean economy was tiny – it represented less than 0.02 per cent of South Korean gross domestic product – if it were to reopen and expand the magnitude of positive effects could be greater. Aside from generating sizeable surpluses at the firm level in the ways that our analysis has shown, expanded Complex operations could create a modest number of jobs in the

³¹ Hong Sun-jik, "The Kaesong Industrial Complex Seen from the View of a Manager", *op. cit.*

³² *Ibid.*

³³ *Ibid.*

³⁴ Crisis Group interviews, managers of Complex firms, Seoul, July 2018.

South and more in the North. Though Complex firms marginally reduced the number of employees in the South over time, they did so much less than comparable non-Complex firms in the same industries.³⁵ And an expansion of Complex-style joint ventures would likely lead the participating South Korean firms to hire more people in the South to complement their production in the North, especially in managerial positions.

In addition to these direct potential economic effects of a reopened and expanded Complex, North Korean economic growth could create a multiplier effect in the North that ultimately redounds to the benefit of the South. Specifically, the infusion of capital and technology from the South could – if Pyongyang permits Complex workers to retain some discretionary income – lead to higher levels of domestic consumption in the North and contribute to economic growth that generates many times the amount of the original investment in terms of value. This could create useful popular support for inter-Korean economic engagement in the North and in general foster stronger affinity there for the South.

B. *Benefits for the North*

The primary economic benefit North Korea drew from the Complex was straightforward: hard cash. The Complex provided a relatively small but meaningful income stream, denominated in U.S. dollars, that went directly to the state, while the operational costs North Korea incurred were low. The Complex was a unique – in North Korea – example of an advanced manufacturing base, one that could have been scaled up under tightly controlled conditions, leading to greater cooperation with South Korean firms and advantages for the North Korean economy without sacrificing what the North views as its national security needs. If the Complex had reached the scale intended in the original plans, the income for Pyongyang would have been very significant.

The North Korean state made money from the Complex by receiving workers' salaries in hard currency directly from South Korea. The state then taxed this income, de facto, at a high rate and redistributed the remainder to the workers in domestic currency, coupons and kind.³⁶ The Kaesong Municipal People's Committee of the Korean Workers' Party exercised full control over the North Korean workers in the Complex.

Accurate, verifiable data regarding North Korean earnings from the Complex are impossible to come by given the regime's opacity, so it is necessary to make assumptions in order to assess the level of hard currency receipts that it generated for the North. The total wages of North Korean workers in the Complex in 2015, the year before it closed, were approximately \$123 million.³⁷ This figure is based on the data in

³⁵ See Appendix B for an explanation.

³⁶ North Korea claims in propaganda to have abolished taxation in March 1974. But the state actually enforces many forms of de facto taxation on businesses and individuals. Kim Yoo-sung, "Read my lips: Don't believe North Korea's 'no taxes' talk", NK News, 24 April 2015.

³⁷ Multiplying the annual average wage plus social insurance by the number of workers in 2015 (54,988), one arrives at a figure of \$123 million. South Korean firms' total labour costs were higher. The Complex firms also paid for meals, snacks, uniforms, transportation and child care, which came to approximately \$75 per worker per month. These calculations are based on figures obtained from

Tables 1 and 2, calculated by multiplying the number of workers by the average monthly wage inclusive of social insurance over the course of a year. Given that salaries were paid directly to the North Korean government, North Korean state receipts from the Complex would have approached 100 per cent of that level. Complex firms and the Ministry of Unification have claimed, however, that Pyongyang retained only 30 per cent of worker earnings in the form of tax, with the remaining 70 per cent split again on a 70/30 basis (with 70 per cent of that remaining sum allocated to the workers in the form of essential foodstuffs and coupons for purchases at state-run discount stores and 30 per cent provided in local currency at an artificially low official exchange rate to the dollar).³⁸ There is no reliable way to verify this claim, however, based on available information.

Tables 1 and 2: Kaesong Industrial Complex Workers and Average Wages³⁹

Number of North Korean workers in the Complex, 2005-2015

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
6,013	11,160	22,538	38,931	42,561	46,284	49,866	53,448	52,389	53,947	54,988

Average monthly wages (USD) of North Korean workers in the Complex, 2006-2015.

Figures include social insurance of 15%, paid by firms

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
68.1	71.0	74.1	80.3	93.7	109.3	134.0	128.5	155.5	187.7

Source: Kaesong Industrial Complex Foundation

Besides earning the state hard currency, the Complex offered a way for North Korea to regularly interact with South Korea, to the benefit of both. Correctly or not, many South Koreans took comfort in seeing it remain open, supposing that as long as the two Koreas continued to cooperate there, war could not be imminent.⁴⁰ The Complex was also a source of information on socio-economic conditions below the 38th parallel for non-security arms of the North Korean state that would not ordinarily have access to standard sources such as South Korean media.⁴¹ At the same time,

the Corporate Association of Kaesong Industrial Complex and the Kaesong Industrial District Foundation.

³⁸ Roundtable discussion with delegation of South Korean government and business representatives advocating for reopening Kaesong, Washington, 14 June 2019. As Tables 1 and 2 indicate, in prior years the North Korean income from the Complex would have been far lower – approaching \$5 million in 2006 – even by the same calculation method. Payments made by South Korea to the North to encourage the launch of economic engagement at Kaesong and Mt. Kungang dwarfed the income from Complex operations in its early years. Crisis Group interview, former Complex official, Seoul, January 2018; “III. The Labor Conditions Framework at the KIC”, Human Rights Watch, October 2006; Larry A. Nicksch, “Korea: U.S.-Korean Relations – Issues for Congress”, Congressional Research Service Issue Brief, 16 June 2005.

³⁹ Some doubt the accuracy of the average monthly wage data for 2015. A figure of \$187.70 could be accurate for one month or more of the calendar year, but as an annual average it marks a deviation from the trend.

⁴⁰ “Koreas restart operations at Kaesong industrial zone”, BBC, 16 September 2013.

⁴¹ North Koreans working as go-betweens between South Korean firm managers and their North Korean staff gathered information on the firms and on South Korea more broadly. They then re-

Complex security was manageable from the North's perspective. Because workers remained on North Korean territory, the regime could maintain control over them, while South Korea bore the costs of many of the workers' needs, such as medical care.⁴²

Anecdotal evidence suggests that North Koreans greatly preferred working in the Complex to most other forms of employment.⁴³ According to one defector-migrant from an east coast city, "Everyone in North Korea knew that Kaesong was the best place to work".⁴⁴ According to South Korean managers, workers' health and nutrition markedly improved once they started working in the Complex.⁴⁵

Though other sources of hard currency – coal and ore exports to China, garments processing around Pyongyang, and remittances from North Korean expatriate workers in China, Russia and the Middle East – came to vastly exceed the value of payments received from the Complex, the Complex's contribution to North Korea's hard currency resources was significant.⁴⁶ To be sure, even if the state retained close to 100 per cent of the estimated income of \$123 million of hard currency wage receipts in 2015, its yield would have represented only about 10 per cent of income from coal exports to China. But the Kaesong earnings were nevertheless important to one of the world's least developed economies and to a regime that needed all the cash it could get. This was even more the case when the Complex first came online. North Korea had only recently begun to recover from four years of famine, and it had yet to commence the particularly intensive China-North Korea trade that began in 2009.⁴⁷

ported this information back to the North Korean state. The South Korean Ministry of Unification, frequently denied access to South Korean state intelligence service resources, also benefited from information gleaned from interactions in the Complex. The mutual gleaning of information likely served a number of positive ends. While difficult to measure, the additional insight into the South may have had a generally calming effect in Pyongyang, where faulty assumptions about South Korean attitudes (for example, levels of support or opposition to the regime in the North) have fuelled dangerously escalating tensions in the past. As for the South, access to North Korean labourers likely afforded insight into food security and humanitarian needs, among other things, that Seoul values and might not have otherwise enjoyed.

⁴² The North Korean workers in the Complex also received snacks (eg, Orion Choco Pies and instant coffee sachets) and personal paraphernalia (eg, bathroom tissues and soap) from South Korean firms that many reportedly sold on the black market in North Korea at a premium. Medical services offered on site by South Korean staff were especially popular with North Korean workers, who had limited access to health care outside the Complex fence. In 2015, workers logged more than 300,000 visits to the Complex clinic, or 5.5 visits per worker, per year.

⁴³ Interviews of approximately one hundred North Korean defector-migrants living in South Korea, 2012-2018. Well over three quarters of these interviews were conducted by an analyst acting outside Crisis Group auspices.

⁴⁴ Crisis Group interview, North Korean defector-migrant, Seoul, January 2019.

⁴⁵ Crisis Group interviews, various South Korean CEOs of Kaesong firms, Seoul, July 2018.

⁴⁶ For reference, Chinese imports of North Korean coal amounted to \$1.1 billion in 2012 alone. See the UN Comtrade International Trade Statistics Database.

⁴⁷ Set within an old-fashioned Stalinist system, the North Korean economy grew slowly from its birth in 1948 through the 1980s. But it suffered grave setbacks in the 1990s from which it has never fully recovered. The regime in Pyongyang officially disavows the market economy, though it is now firmly established nationwide. But there are still few employment or revenue-generating opportunities.

IV. The Complex's Operational and Political Challenges

The Complex was never a serene business environment. The North put in place a web of regulations that, compared to special economic zones worldwide, were highly unusual, contributed greatly to economic inefficiency and even led some to conclude that work in the Complex amounted to slave labour.⁴⁸ There were several reasons for the regulations, mostly stemming from the North Korean government's fear of domestic instability and ideological opposition to the spread of capitalism.

Communications restrictions made it difficult for South Korean managers to convey documents to parent firms in South Korea; the internet and cellular phones were both banned, limiting managers to landlines. Managers could bring documents into and out of the Complex, but only using USB sticks subject to North Korean scrutiny on entry and exit.⁴⁹

North Korea's pervasive social controls strictly limited interactions between North Korean labour and South Korean managers (whose number reached a high of 804 in 2015), creating operational bottlenecks and other inefficiencies. The state sought to limit South Korean managers' direct interactions with North Korean workers on the factory floor. In particular, it inserted North Korean "managers" (primarily there for purposes of asserting social, political, and ideological control) to oversee groups of workers. Only these intermediaries had significant business-related conversations with the South Korean managers of the Complex firms.

Complex firms also were not permitted to negotiate wages directly with the workers, making it impossible for firms to encourage high performance at work with the promise of pay raises or bonuses. Instead, South Korean managers gave production instructions and requests to the North Korean managers, and the two governments set uniform wages through regular negotiation. These limitations on Complex firms' tools for motivating higher productivity were exacerbated by the fact that – in contravention of South Korea's own law governing Complex operations – the firms transferred wages directly to the North Korean government, not to the workers themselves.⁵⁰

Moreover, South Korean managers had no say in human resource matters, other than to state to their North Korean interlocutors the total number of workers that they required for operations. Centralised North Korean control of labour allocations

⁴⁸ William Brown, "The economics of Kaesong", 38 North, 18 February 2016. Brown's assertion that work in the Complex amounted to slave labour is firmly rejected by Booseung Chang, who bases his conclusions on interviews with Complex personnel, as well as a worker from a company that managed Complex commissaries for North Korean staff from 2004 to 2006. Booseung Chang, "The real economics of Kaesong", 38 North, 30 March 2016. Also see Ruediger Frank, "The economics of Kaesong: examining the numbers", 38 North, 19 February 2016.

⁴⁹ Crisis Group interview, former South Korean state employee in the Kaesong Industrial Complex, Seoul, January 2019.

⁵⁰ The South Korean government debated the issue of direct payment to workers until 2004, after which it ceased to be a topic of serious discussion. Crisis Group interview, former senior South Korean government official, Seoul, October 2018. The issue of payment had been a concern since the Complex opened. Jay Lefkowitz, "Freedom for all Koreans", *Wall Street Journal*, 28 April 2006. As discussed below, at least some of the practical arguments Pyongyang put forward to resist direct payments in the earlier years of the Complex have been undercut by changes in the North Korean economy, which has evolved in ways that would make such payments more feasible.

made it hard for firms to get the number of workers they needed. North Korea also rotated workers out without warning, and occasionally hindered production at the Complex by reassigning workers when it needed labour for regime-mandated public works projects.⁵¹

The North Korean regime's longstanding ban on internal migration made the situation worse. In the latter years of its operations, the labour demands of the Complex exceeded the capacity of the city of Kaesong, which has a population of fewer than 300,000, and surrounding towns and villages to meet them. The state bussed in supplemental workers from elsewhere, two or three hours each way, but it never permitted them to reside in the Complex or the city or even stay overnight. Anecdotal evidence suggests that even with bussing the number of workers was inadequate for staffing needs once Complex operations hit their stride.⁵² Complex firms responded logically, but inefficiently, by requesting as many workers as possible, as early as possible, in anticipation of future growth.

But the gravest challenge for the Complex was political uncertainty. Although both elite and public support for the Complex in both Koreas was in some ways surprisingly resilient, every incident of political and military confrontation came at a price. Each incident raised questions in the South about the utility of economic engagement and created a pretext for the North to impose fresh restrictions on the number of South Korean personnel permitted in the Complex. These restrictions, together with aggressive North Korean enforcement of customs and immigration procedures, could only sour South Korean opinion on engagement still further. The result was a vicious cycle that eventually took its toll on the Complex's viability.

⁵¹ Crisis Group interviews, various South Korean CEOs of Complex firms, Seoul, July 2018.

⁵² Though South Korean firms had no direct information on such matters, they could deduce from the odometers of the commuter buses that they provided and maintained. In 2014, South Korean firms even offered to build dormitories to house workers from other regions in the North to try and alleviate the shortages, but no progress was made before the closure of the Complex in 2016. Crisis Group interviews, Kaesong Industrial District Foundation officials, Seoul, January 2019.

V. Prospects for Reopening the Complex

A. Prospects in South Korea

Since coming to power in May 2017, the government of President Moon Jae-in has sought rapprochement with North Korea for several main reasons.⁵³ First, his government felt an urgent need to lower the sky-high tensions between North Korea and the U.S., which escalated over the course of 2017. Bellicose actions and provocative rhetoric raised the risk of a war that would have ruinous consequences for the entire Korean peninsula. Secondly, Moon knew that a large proportion of the South Korean public – particularly older cohorts – desire peace and reconciliation with their ethnic brethren in the North.⁵⁴

Of late, the South Korean government has also been responding to a third factor: negative signs in its domestic economy. To be sure, economic growth has been relatively healthy at just under 3 per cent per year since 2017. Moreover, the country just recorded its 21st straight year of current account surpluses thanks to strong exports, and its average wages are rising to match the average for the economies of the Organisation for Economic Cooperation and Development.⁵⁵ South Korea is also facing powerful headwinds, however. These include macroeconomic volatility exacerbated by trade tensions between the U.S. and China, and shrinking markets due to state-supported Chinese competition in key sectors. Some export sectors (including car manufacturing and textiles) are weak, real wages are stagnant, business confidence is in decline and President Moon’s “income-led growth” strategy – involving a series of generous minimum wage increases – has thus far shown few results, a reality that the president has implicitly conceded.⁵⁶

For both policy and political reasons, President Moon needs to deliver tangible economic benefits to key constituencies.⁵⁷ Naturally, these include the country’s politically powerful industrial conglomerates, including Samsung, Hyundai, LG and SK, each of whose CEOs travelled with Moon to Pyongyang in September 2018. But he must also consider the needs of small and medium-sized enterprises, which are the firms most likely to benefit economically from employing North Korean labour.

In economic terms, reopening the Complex would only be a small step in the direction of improving South Korea’s overall economic fortunes. It would not have a major impact on South Korean employment; nor would it reinvigorate the industrial economy. Nevertheless, for South Korean business, Kaesong is effectively the gateway to North Korea. Reopening the Complex would not only signal progress toward

⁵³ For additional background, see Crisis Group Report, *The Korean Peninsula Crisis (I): In the Line of Fire and Fury*, op. cit.

⁵⁴ The desire to reunify, though much weaker among younger cohorts of South Koreans compared to those aged 55 or older, remains politically salient. Steven Denney and Christopher Green, “Unification in Action? The National Identity of North Korean Defector-Migrants: Insights and Implications”, KEI Academic Paper Series, 1 October 2018.

⁵⁵ “S. Korea posts current account surplus for 21 years through 2018”, Xinhua, 15 February 2019; “OECD Economic Surveys: Korea”, OECD, June 2018.

⁵⁶ “Moon hints at possible slowdown of minimum wage hikes”, Yonhap, 17 December 2018.

⁵⁷ The Democratic Party of Korea, Moon’s party, will be judged on his record in both the 2020 legislative elections and the 2022 presidential elections.

de-escalating tensions on the peninsula and in North East Asia, it would also imply the possibility of slowly opening North Korean markets to South Korean trade and investment.

Reopening the Complex is no easy matter for South Korea, though. It would almost certainly have to happen in the context of a broader negotiation to address tensions on the peninsula and the goal of denuclearisation. It would also require relief from stringent international sanctions on North Korea that prohibit joint ventures between North Korea and other nations.⁵⁸

There are other political and practical challenges as well. On the one hand, the Moon administration created some political space to reopen the Complex when it declared in 2017 that Park Geun-hye's decision to close it was illegal because she made it without following proper consultative procedures within the South Korean government.⁵⁹ On the other hand, the 2013 shutdown and the 2016 closure each cast a long shadow. Firms with facilities in the Complex may be pleased to reopen given the potential economic benefits, but they will be reluctant to upgrade existing plants or expand capacity so long as there is a heightened perception of political risk.⁶⁰ Attracting additional firms to the Complex will be difficult, as newcomers will understandably seek guarantees that their investments are safe – guarantees that likely will not be credible without ironclad backstopping by the South Korean government.⁶¹ Moreover, unless major inefficiencies and worker protection issues at the Complex are at least partly addressed, there is little chance that any non-Korean firms will enter, and the task of garnering international support for reopening will be that much more difficult.

The issue of whether Complex firms might be permitted to pay a portion of wages directly to North Korean workers is especially sensitive. During a recent visit to Washington, a South Korean delegation advocating for the Complex to reopen suggested that it might be feasible for Complex firms to make direct in-kind payments to North Korean workers. But it is hard to see this approach as practicable on a large scale and it would be premature to abandon efforts to press for some level of direct cash payments.

First, Seoul, Washington and the Complex firms should press Pyongyang to do better. They can argue that changes in the North Korean economy – which is bigger, more market-oriented and more sophisticated than it was when the Complex opened – make the direct payment of at least some portion of cash wages more feasible than

⁵⁸ As noted above, Crisis Group has recommended that a modest deal relaxing sanctions for the Complex in exchange for the verified closure of the Yongbyon nuclear facility in North Korea could be a first step in a series of phased mutual concessions. Crisis Group Briefing, *Time for a Modest Deal*, op. cit., and Crisis Group, *2019 Watch List Update*, op. cit.

⁵⁹ “통일부 ‘개성공단 전면중단은 박근혜 구두지시 따른 것’”, 한겨레, 2017년 12월 28일 [“Ministry of Unification: ‘Closure of Kaesong Complex done at Park Geun-hye’s verbal instruction’”, *Hankyoreh*, 28 December 2017]. “개성공단 폐쇄. 그 이면엔?!” [“Kaesong Industrial Complex closure, the other side of the story?!”], video, YouTube, 10 April 2018.

⁶⁰ “개성공단기업 경영상황 설문 및 의견조사”, 중소기업중앙회, 2018년 4월 [“Survey of management conditions for Kaesong Complex firms”, K-Biz, April 2018].

⁶¹ Ibid.

would have been the case in the Complex's early years.⁶² They can also argue that allowing at least some portion of wages to go directly to workers would make the Complex more attractive to a wider range of firms, including international ones that are likely to be especially sensitive to criticism that they are exploiting North Korean workers.

While Pyongyang is likely to resist strongly these arguments out of a desire to maximise hard currency revenues and control of workers, Seoul, Washington and the Complex firms can maximise their odds of making progress by presenting a united front in discussions with the North.

Still, if it proves impossible to make meaningful progress on thorny issues at the outset, the parties should not turn away from Kaesong. Instead, they should lay down a marker that these issues will be important to address in due course, and turn to shaping a deal that puts the reopening of the Complex on the table as part of an effort to kick-start peace negotiations. Right now, talks remain stalled as both Washington and Pyongyang wait for the other to make the first move to shake off the torpor that set in following the Trump-Kim summit at Hanoi in February 2019. Drawing from the data analysis presented in this report, Seoul should make the case for putting Kaesong on the table both to Washington and to the South Korean public if and when talks resume.⁶³

B. *Prospects in North Korea*

While the South would see material and symbolic benefits in reopening Kaesong, the benefits for the North would be far greater.

To be sure, even for Pyongyang there are downsides. Pyongyang's main priority is and always has been regime security – not only from external attack, but also from possible domestic unrest. The regime seeks to blot out ideas that, from its perspective, risk infecting the population and thus undermining social control. It will not sacrifice regime security for economic development, no matter how attractive the latter may appear or how dire its straits for lack of hard currency.⁶⁴

Moreover, while the Complex was a highly controlled environment, it was not risk free in the eyes of the regime. It brought access to money and technology, but also opened up space for North Koreans to experience another economic system and dif-

⁶² Direct payment to workers was written into the original legislation governing operations in the Complex. It was not implemented, as North Korea claimed that it would harm the domestic economy. Nowadays, however, North Korean enterprises have a high degree of autonomy, hard currency is used nationwide (it is legal for firms to hold hard currency for trade), and the growth of digital payments may help to facilitate direct payments. Brown, "The economics of Kaesong", *op. cit.*

⁶³ This is a public relations priority for the Kaesong Industrial District Foundation, the South Korean state-backed entity that once administered the Complex and hopes to do so again. Crisis Group interview, Kim Jin-hyang, president and chairman of Kaesong Industrial District Foundation, Seoul, January 2019.

⁶⁴ A necessary precursor for economic engagement is that the North Korean regime conclude that its security is assured. That is one contribution that an end-of-war declaration signed by North Korea and the U.S. could make, though such a declaration would not be a panacea. For more on North Korea's strategic calculus, see Crisis Group Report, *The Korean Peninsula Crisis (I): In the Line of Fire and Fury*, *op. cit.*

ferent culture. Thus, though the Complex provided employment to tens of thousands of North Koreans, it also meant a ready point of unfavorable comparison for ordinary North Koreans between the industrial capacities of the two Koreas.⁶⁵

Finally, in addition to bringing back these risks, reopening the Complex would create potentially delicate dynamics within the small elite circle of military and business leaders who help keep the regime in power. The Complex could be perceived by this elite as a threat to its vested interests if its reopening were to be undertaken as a step toward opening up more areas of the economy.

Still, Pyongyang is likely to see these risks as manageable and outweighed by the benefits of reopening Kaesong. Kim Jong-un has already agreed to reopen the Complex without precondition.⁶⁶ There are multiple reasons for his willingness to do so.

First, though the regime does not openly acknowledge the fact, today North Korea is facing economic challenges that it cannot overcome alone. New economic partners and opportunities are few and far between. There are few routes to gaining access to capital or technology. Pyongyang defaulted on its international creditors over 30 years ago, which would make access to finance a challenge even were sanctions removed.⁶⁷ Thus, there is no easy pathway to raising productivity, product quality, logistics capacity or marketability.

Secondly, Pyongyang's principal ally, China, has enforced UN Security Council Sanctions relatively vigorously since 2017, hitting the previously vibrant cross-border trade in coal and textiles hard and slashing the numbers of North Korean expatriate workers. Elements of North Korea's ruling coalition have suffered economic losses as a result.⁶⁸ These include the usual suspects in any dictatorial system – the military and security services – but also trading companies linked to ministries and wealthy families with longstanding ties to the ruling Kim family.⁶⁹ North Korea's persistent push for sanctions relief is a reflection of the reality that money is tight.

Thirdly, prior to its closure in 2016, the Complex offered the type of economic pathway that North Korea now needs. South Korean firms offered production technology and capital that could dramatically raise North Korean workers' productivity. Moreover, North Korea saw those gains in a controlled setting, preserving domestic security.⁷⁰ And indeed, there is evidence to suggest that the North understands this and has settled on pursuing a highly tailored approach to economic growth that re-

⁶⁵ People of working age in the country were aware that working in the Complex was preferable to working elsewhere, including Chinese joint venture firms based in other locations in North Korea, where working conditions, wages and benefits were considerably worse. Crisis Group interviews, five North Korean defector-migrants, January 2019.

⁶⁶ "New Year Address of Supreme Leader Kim Jong Un for 2019", *Rodong Sinmun*, 2 January 2019.

⁶⁷ "North Korea is told of loan default", *The New York Times*, 23 August 1987.

⁶⁸ Crisis Group interviews, former NGO staff operating in North Korea, November 2018.

⁶⁹ This does not mean that Kim Jong-un or his regime is now facing or likely to face existential risk. The presence of South Korea as a competitor state greatly reduces the cost of extracting elite compliance with regime diktat and promotes regime elite cohesion. But the cost of ruling coalition management is not zero – the regime needs a mixture of cash and monopoly rights to trading opportunities in order to maintain functioning patronage networks.

⁷⁰ "North Korea Presents Favourable Conditions to Foreign Investors", Institute for Far Eastern Studies Policy Brief, 27 July 2012, archived at the blog North Korea Economy Watch. Christopher Green, "Pedal primacy: on the bicycle in Kaesong", *Sino-NK*, 28 August 2012.

lies on a mixture of infrastructure investment plus limited openings in special economic zones – like the Complex.⁷¹

Finally, the potential impact of reopening the Complex and then (presumably contingent on further progress with talks) expanding to similar joint venture projects elsewhere in North Korea could be considerable.⁷² The 55,000 workers in the Complex at its peak operations represented only 0.3 per cent of the working-age population in North Korea.⁷³ Moreover, the Complex made up just 0.6 per cent of North Korean gross domestic product in 2014.⁷⁴ There was ample room for growth.⁷⁵ Over time, were the Complex revived, North Korean workers would acquire additional skills and human capital, as demonstrated by the speed at which they learned on the job when it was operational. Therefore, productivity would rise. Expansion of the Complex and similar industrial parks could also have a positive impact for the North Korean people beyond the Kaesong work force; it could help expand the rest of the economy – possibly generating value in amounts many times greater than the initial investment – as workers would consume more services and goods as their incomes rose. This outcome, however, would be dependent on workers receiving part or all of their wages directly.

Unlike Kim Jong-il, who worried that the introduction of capitalism and economic growth would undermine his rule, Kim Jong-un appears to see things differently. Kim Jong-un is likely aware that economic growth is not merely compatible with his continued tenure but may even be essential for his family to remain in power over the long term.⁷⁶ That may be sufficient motivation to reopen Kaesong should a deal be reachable. But he would almost certainly seek to do so in a way that maintains heavy-handed operational controls while protecting the prerogatives of the patronage networks that help sustain his power. Support from Kim's key constituencies will be more sustainable if they are able to feel the economic benefit of warmer relations with the U.S. and South Korea, while feeling also that their relative privileges within the distorted and inefficient North Korean economy are secure.

⁷¹ Crisis Group e-mail interview, businessperson operating in North Korea, October 2018; Andray Abrahamian, "The ABCs of North Korea's SEZs", US-Korea Institute at SAIS, 2014.

⁷² There are two difficulties. First, firm-level data often lack information necessary for computing value-added from revenue data. Secondly, North Korea produces no official economic statistics, and it is impossible to validate the accuracy of available estimates. Therefore, there is considerable uncertainty surrounding these calculations.

⁷³ Based on 2008 UN census data, the most recent reliable figures available.

⁷⁴ We use the North Korean gross domestic product estimate in Byung-yeon Kim, *Unveiling the North Korean Economy* (Cambridge, 2017).

⁷⁵ In the event that the entire manufacturing sector of North Korea (20 per cent of the work force) could be converted to work in Complex-style joint venture zones, North Korean gross domestic product would rise by 20 per cent (because GDP per worker would double for 20 per cent of the work force). Of course, such an outcome is not remotely plausible; it sets the upper limit for growth via the use of joint-venture manufacturing zones.

⁷⁶ Christopher Green and Sokeel Park, "Kim Jong-un prepares balancing act", *Asia Times*, 22 September 2012.

VI. Conclusions and Recommendations

This report demonstrates with novel analysis that the Kaesong Industrial Complex was a win-win proposition for both North Korea and South Korea, as well as for the labourers who worked there. Using a unique combined data set including Complex firm data and data from the wider South Korean industrial economy, it shows that firms operating in the Complex between 2007 and 2014 did far better in terms of revenue, capital and profit than a comparison group of firms, many of which chose instead to manufacture in China or Vietnam. As such, this report provides the first empirically grounded response to the question, much debated in South Korea, of whether economic engagement can benefit *both* South and North Korea: it can and it did.

Of course, the prospect of mutual benefit will not be sufficient by itself to bring about Kaesong's reopening. UN Security Council sanctions imposed on North Korea since 2016 as part of an international response to the threat posed by Pyongyang's nuclear and missile activities prohibit the Complex's revival. Crisis Group has previously proposed that a modest deal involving sanctions relief would be sufficient to allow the Complex to reopen, on the one hand, and the verified closure of some or all of the Yongbyon nuclear facility, on the other, would be a useful step to generate momentum in stalled peace talks. Such a deal would be based on the premise that North Korea stands to gain far more from a Complex reopening than South Korea, but that it would also be in the broader interest of the peace process for Moon and others in the South who have backed rapprochement to be able to demonstrate its economic benefits for South Korea.

To be sure, Washington is bound to be deeply uncomfortable with any deal that creates a source of hard currency revenue for Pyongyang before it has completely renounced its nuclear program, but adherence to that sort of maximalist position is likely to be counterproductive. Indeed, the danger of maximalist approaches to peace negotiations became clear at the failed U.S.-North Korea summit in Hanoi in February. There, North Korea demanded that all sanctions imposed since 2016 be removed in advance of denuclearisation, while the U.S. proposed that full denuclearisation precede any sanctions lifting. It is difficult if not impossible to imagine a path through the current deadlock that does not involve a measure of risk, concession and gradualism on all sides.

Beyond helping to create momentum for the peace process, reopening Kaesong could also have enduring benefits for peninsular stability. It could act as a driver of dialogue between the parties to the Korean peninsula crisis and encourage further economic and political cooperation. It would also present an opportunity to test the hypothesis that North Korea is committed to changing its economy for the better.

To make the most of the gains to both sides, and to the cohesion that mutual benefits could bring, however, it will be important to work on addressing the flaws that bedevilled the Complex in its original form. Seoul and Washington should press Pyongyang to agree to internet and cellular telephone use within the Complex, even if only on a restricted basis. They should also seek flexibility for Complex firms to make at least a portion of payments directly to workers, possibly using new North Korean digital payments technology, and thereby help alleviate concerns among possible investors about worker exploitation.

Also, while Pyongyang may be reluctant to relinquish any control, Seoul and Washington should press it to yield partial responsibility for hiring and wage level decisions over North Korean workers so that they can be more efficiently managed by the Complex firms – again arguing that this is good business practice and will help attract a stronger group of firms to the Complex. And all parties should agree to allow North Korean labourers to reside within the Complex, facilitating more efficient provision of labour from across North Korea and more widely distributing the benefits of an attractive job opportunity.

These goals will not all be achievable but if Washington, Seoul and the Complex firms present a united front, they may be able to make progress on at least some items, and any gains at all will help make the Complex a stronger, fairer and more successful place to do business.

Of course, there will always, at least in the foreseeable future, be risks to the Complex – and thus to South Korean firms – posed by political uncertainty on the Korean peninsula, since tensions and ideological competition between North and South run so deep. Still, the two sides should work assiduously to buffer the Complex from those risks. The more opportunity the Complex has to reach its potential and benefit both sides, the greater the likelihood that it can become a force for helping bring the two peninsular neighbors into a state of stable, peaceful coexistence.

Seoul/Brussels, 24 June 2019

Appendix A: Map of Korean Peninsula



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Appendix B: Questions and Answers about Crisis Group's Quantitative Analysis of South Korean Complex Firms

Question 1: What kinds of South Korean firms operated at the Complex and why does it matter to Crisis Group's analysis?

Answer: As described in Section III, Crisis Group's approach to qualitative analysis in this context requires us to compare the performance of each firm that operated at the Complex (the Complex firms) with similar firms that did not have operations at the Complex.

As a first step in this analysis, we ask what kind of South Korean firms set up a subsidiary and operated in the Complex. Based on data describing their South Korean operations, these Complex firms were not typical South Korean manufacturing firms. They came from a specific sector. Almost 75 per cent of the 125 firms operating in the Complex at the high point were producing sewn apparel, fashion accessories, leather goods and shoes. These industries account for only a tiny fraction of the South Korean manufacturing sector: less than 2 per cent of total manufacturing value added over the sample period and about 3 per cent of total manufacturing employment.⁷⁷ Moreover, the firms in these industries are also smaller than the average South Korean manufacturing firm. Finally, most Complex firms were "processing firms"; that is, they processed intermediate goods and sold them to other firms that turned the intermediate goods into final products to be sold to consumers.

The characteristics of the industries and firms operating at the Complex were a reflection of the prevailing economic and political environment in North Korea and the region. Complex regulations covering communications – primarily the lack of internet and cellular connectivity – and onerous customs procedures stopped manufacturers of high-tech and other advanced goods from wanting to establish a presence there. International sanctions soon began to prohibit flows of dual-use and "strategic goods", including computers and other electronics into North Korea, including the Complex. Also, the U.S., Japan and the EU did not allow imports of goods produced in North Korea; only when goods processed in the Complex were put through substantive final production processes in South Korea could they be considered "made in South Korea" and exported as such.

Given the specific profile that emerges for the "Complex firms" it stands to reason that we can learn more about their performance by comparing them to the average processing firm in the sewn apparel, fashion accessory, leather goods and shoe industries rather than to the average firm in the overall South Korean manufacturing sector.

⁷⁷ Manufacturing jobs in their entirety account for only 20 per cent of total employment in South Korea.

Question 2: What do data tell us about how the firms that operated at Kaesong are different from other South Korean firms in their industries or in other industries?

Answer: Table 1 compares data for firms that operated at the Complex against data for South Korean firms from the same industry and data for all South Korean manufacturing firms:

Table 1: Characteristics of the Complex firms

The entries for the Complex firms and the other firms in the same industry are calculated from the KED. The entries for the entire manufacturing sector are calculated from the enterprise section of the Mining and Manufacturing Survey, which lacks profits data. In million KRW.

2007	Complex firms	Same industry	All manufacturing
Average revenue	5,893.6	2,246.3	7,864.8
Average employees	35.4	15.5	25.1
Revenue per employee	166.6	144.7	313.6
Average fixed asset	442.7	397.8	2,673.3
Profits	331.1	112.6	–

2014	Complex firms	Same industry	All manufacturing
Average revenue	8,382.7	1,575.3	22,964.0
Average employees	31.6	9.7	44.9
Revenue per employee	265.0	163.1	511.8
Average fixed asset	960.4	249.4	8,199.6
Profits	480.5	102.9	–

Looking at all 125 firms that eventually operated in the Complex, we see in Table 1 that these firms were on average larger than other processing firms in the same industry. The average revenue of Complex firms (column 1) was 2.6 times as large as average revenue of other firms in the same industry (column 2). The complex firms also had more workers (in South Korea, not counting those workers in the Complex), though their revenue per worker was on average similar to that of others in the same industry. They also had similar average amounts of fixed assets (or capital stock), but they had higher profits on average (nearly three times).

What this information tells us is that, overall, from the potential pool of entrants (that is, all South Korean processing firms in sewn apparel, fashion accessory, leather goods and shoes), the firms that entered the Complex were larger and more profitable firms than their peers. This finding is not surprising, since offshoring of manufacturing activities involves significant upfront costs, and large and productive firms are more likely to generate a net benefit from offshoring.

The first two columns of Table 1 also show that Complex firms' revenue, revenue per worker, fixed assets and profits all grew faster between 2007 and 2014 than those of the other firms in the same industry. In particular:

- The average revenue per worker of a Complex firm in 2014 was 60 per cent higher than those in the same industry in 2014 (265 million Korean won (\$239,000) vs 163.1 million won (\$147,000)), though it was much closer to the same in 2007 (166.6 million won (\$180,000) vs 144.7 million won (\$157,000)).

- Likewise, Complex firms and the others in the same industry had on average the same amount of fixed assets in 2007 (442.7 million Korean won (\$480,600) vs 397.8 million won (\$431,900), but by 2014 Complex firms had nearly four times as much as the others on average (960.4 million won (\$867,000) vs 249.4 million won (\$225,100)).
- Furthermore, the average profit of Complex firms grew by about six per cent per year between 2007 (331.1 million Korean won (\$359,400)) and 2014 (480.5 million won (\$433,700)), while the average profit of the other firms in the same industry declined from 2007 (112.6 million won (\$122,200)) to 2014 (102.9 million won (\$92,800)).

By way of context, between 2007 and 2014, the Korean manufacturing sector lost nearly 40 per cent of firms, and hence the figures for 2014 reflect a large degree of survivor bias. In the apparel, fashion accessory, leather goods and shoes industries, the number of firms shrank by 65 per cent over the same period. The Complex firms' growth is even more remarkable against this backdrop.

By contrast, the data comparing the Complex firms to the average firm in the entire South Korean manufacturing sector (column 3) tells a different story, with the average South Korean manufacturing firm showing higher levels of growth in the categories for which data are available.

Question 3: How did operating in Kaesong affect the outcomes of the Complex firms compared to other firms that appeared similar beforehand?

In order to answer this question, we applied the “synthetic control method” referred to in Section III. For each complex firm, we identified five firms that when averaged together have similar characteristics as the Complex firm before it began operations at Kaesong. Comparing average results for the Complex firms to the results for the synthetically produced comparison group produced the data in Table 2 below.

As Panel A demonstrates, the average Complex firm, relative to similar firms that did not enter the Complex, has higher annual revenue (by about 8 per cent), fixed assets (by 26 per cent) and profits (by 11 per cent). These differences are statistically significant and can be interpreted as the positive effect of operating in the Complex.

We then ask whether all the Complex firms benefit equally or some firms benefit more than others. First, we divide the Complex firms into those in labour-intensive industries (food, beverage, apparel, fashion accessories, leather goods, shoes, rubber, plastic and furniture) and compare them to those in capital-intensive industries (all the others). Panel B shows that the Complex firms in labour-intensive firms had large, significant increases in their revenue (by 10 per cent) and fixed assets (by 29 per cent) over their comparison group firms, while those in capital-intensive industries only show positive effects on fixed assets (by 19 per cent).

Table 2

	Effects of operating in the Complex on		
	Revenue (log)	Fixed asset (log)	Profits (log)
Panel A.			
Average for all KIC firms	0.081** (0.038)	0.258*** (0.033)	0.108* (0.064)
Panel B.			
Labour-intensive firms	0.098** (0.046)	0.286*** (0.042)	0.110 (0.078)
Capital-intensive firms	0.030 (0.066)	0.188** (0.051)	0.090 (0.114)
Panel C.			
Small firms (below-median revenue)	0.163*** (0.054)	0.415*** (0.047)	0.312*** (0.090)
Large firms (above-median revenue)	0.009 (0.053)	0.112** (0.045)	-0.093 (0.091)
Panel D.			
Firms with more than 50% production in KIC	0.079* (0.042)	0.336*** (0.036)	0.152** (0.071)
Firms with less than 50% production in KIC	0.090 (0.087)	-0.046 (0.078)	-0.072 (0.150)

*Significance at 10%; ** at 5%; *** at 1%

Second, we divide the Complex firms into small and big firms, depending on whether their revenue prior to entering the Complex was below or above the median among all Complex firms. The effects are reported in Panel C of the table. The data shows that small Complex firms experienced stronger positive effects from operating in the Complex. Their revenue, fixed assets and profits exceed the comparison group firms' levels by 16, 42 and 31 per cent, respectively. The bigger Complex firms show much more muted effect, with only their fixed assets being significantly higher than their comparison groups' – a difference of 11 per cent.

Finally, noting that some firms moved almost all their production into the Complex while for others the Complex represented a small fraction of production, we divide the sample into those that relocated more than half of their production and compare it to those that moved less than half. We find that those that relocated more than half their production into the Complex saw more positive effects than those that relocated a smaller fraction of their production there. The former group of firms had significant effects on revenue, fixed assets and profits, while the other group had only insignificant effects.

One conclusion we therefore draw from the data presented in Table 2 is that, if the Complex were to be reopened and expanded, not all South Korean firms would benefit equally. Small firms in labour-intensive industries that relocate the bulk of their production to Kaesong would be much more likely to succeed than larger firms in capital-intensive industries.

Question 4: Did the Complex firms prosper because they hired low-paid North Korean workers to take the place of South Korean workers?

Answer: Given the financial success of Complex firms, one natural question is whether the Kaesong complex simply relocated jobs from South to North, at the expense of South Korean workers. Comparative data suggests that the answer is no.

While, the number of employees based in South Korea for both Complex firms and comparison group firms did shrink between 2007 and 2014, Complex firms shrank more slowly – from an average of 35 employees to 32 – while the comparison group numbers fell on average from 16 to 10 employees.⁷⁸

Moreover, there is evidence to suggest that the Complex not only benefited the South Korean firms that operated there, but also helped preserve jobs for a significant number of South Korean workers. This is because Complex firms were much less likely to go out of business than firms in the comparison group. Among the 127 firms that at some point operated in the Complex, only one went out of business prior to the Complex's closure in 2016. In the same time period, by contrast, the sewn apparel, fashion accessory, leather goods and shoe industries witnessed an unprecedented pace of business failures. The number of firms in these industries in South Korea shrank by 70 per cent from 10,279 in 2006 to 3,150 in 2016. By way of explanation, South Korean officials shared with us anecdotal evidence suggesting that a significant number of comparison group firms moved their production base to Vietnam to better compete in international markets, but their offshoring was not as profitable as offshoring into the Complex.

⁷⁸ In many developed countries, manufacturing firms were employing fewer and fewer workers over time. Offshoring is one reason, but the driving force is automation or “routinisation”. In the U.S., for example, the average manufacturing establishment had 28 employees in 1990 but only 23 in 2010. Taken from Business Dynamics Statistics, U.S. Census Bureau.

Appendix C: Timeline of Events Leading to the Kaesong Industrial Complex's Closure

June 2000

First inter-Korean summit during the South's pro-rapprochement "sunshine policy" era (1998-2008) leads to August deal on joint industrial venture.

June 2003

After supporting legislation enacted, ground-breaking ceremony held in Kaesong that gets project's first stage under way.

December 2004

Inter-Korean manufacturing zone opens in December, with kitchenware company Living Art first to produce goods.

October 2006

Pyongyang carries out its first nuclear test, forcing South Korea to reevaluate plans to expand Kaesong joint venture.

July 2008

North Korean guard shoots unarmed South Korean tourist at Mt. Kumgang, effectively ending inter-Korean tourism there and in city of Kaesong.

March 2009

North Korea detains South Korean Hyundai employee without charge for almost five months, highlighting risks for South Koreans working at Kaesong.

May 2009

Pyongyang carries out its second nuclear test, arousing popular suspicions that North Korea is diverting resources transferred from the South to its military programs.

March 2010

North Korea sinks South Korean naval vessel, killing 46 seamen. Inter-Korean trade, aside from Kaesong, is constricted by unilateral South Korean sanctions in May.

September 2010

Kim Jong-un is publicly revealed as his father's successor, a post he takes up in December 2011 when Kim Jong-il dies.

November 2010

Following South Korean artillery exercise, North Korean forces shell Yeonpyeong island, hitting both military and civilian targets and killing four.

February 2013

North Korea's third nuclear test triggers strong political pressure from Seoul, Washington and Beijing, prompting Pyongyang to shut down Kaesong.

September 2013

Bilateral negotiations lead to Kaesong's reopening and fitful efforts to attract international capital to the manufacturing zone.

February 2016

Kaesong Industrial Complex is shuttered after North Korea does a fourth nuclear test on 6 January and launches satellite-bearing rocket in February.

May 2017

President Moon Jae-in assumes power on a platform advocating rapprochement with North Korea and reopening of Kaesong. 2016 closure is soon declared illegal.

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June 2019

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