“End the Dominance of the Uyghur Ethnic Group”: An Analysis of Beijing’s Population Optimization Strategy in Southern Xinjiang

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***An updated version of this manuscript has been accepted for publication in
Central Asian Survey, published by Taylor & Francis.***

Accepted for publication after peer review: June 3, 2021

*The author would like to thank the four academics who carefully
peer reviewed this manuscript.*

Abstract

Chinese academics and politicians in the Xinjiang Uyghur Autonomous Region have argued that the region’s “terrorism” problem can only be solved by “optimizing” southern Xinjiang’s ethnic population structure. High Uyghur population concentrations are deemed a national security threat. “Optimizing” such concentrations is achieved by embedding substantial Han populations. Scenarios that do not overburden the region’s population carrying capacity entail drastic reductions in ethnic minority natural population growth. The intent to “optimize” the population serves as a basis to assess the intent to destroy an ethnic minority population in part, as outlined in the 1948 U.N. Genocide Convention. The “destruction in part” is assessed as the difference between projected natural population growth without substantial government interference, and reduced growth scenarios in line with population “optimization” requirements. Based on population projections conducted by Chinese researchers, this difference could range between 2.6 and 4.5 million persons by the year 2040.

Keywords

Xinjiang, Uyghurs, ethnic minorities, birth control, population, genocide

1.0 Introduction

In early 2016, the Chinese government abolished its decade-long one child policy, permitting all families to have two children ([PRC Government](#) 2016). Since then, the state has been actively encouraging couples to have more children in what researchers have described as population planning based on “political steering”. Alpermann and Zhan (2018, 2) argue that the State Council’s mid-range population development plan defines birth planning targets to optimize future population growth.

In China’s northwestern Xinjiang Uyghur Autonomous Region (XUAR), high natural population growth rates have long been a subject of concern for the authorities (Zenz 2020a). Mandatory family planning was implemented for Xinjiang’s Han starting in 1975 (Sautman 1997, 6). In 1983, the region sought to limit urban ethnic minorities to two children, rural minority families to three children, and four children if they lived in remote areas (Sautman 1997, 6). The enforcement of these measures sparked demonstrations by Uyghur students in 1985 (Smith-Finley 2013, 142). As a result, predominantly Muslim ethnic groups were permitted to have up to four children (Sautman 1997, 7).

Amid criticisms of preferential policies towards ethnic minorities by proponents of a so-called Second Generation of Ethnic Policy, efforts to roll back preferential birth quotas gradually gathered pace (Leibold 2014). In 2014, after Xi Jinping’s visit to Xinjiang, the region’s party secretary Zhang Chunxian argued that all ethnic groups should have equal birth quotas (Cliff 2016, 204). In 2015, a senior Xinjiang official argued that the region needed to combat “worryingly high birthrates” (Hong-Fincher 2018, 180). In 2017, when large numbers of ethnic minorities were interned in re-education camps, the region issued an updated family planning policy that permitted the Han to have the same number of children as the minorities (Zenz 2018; Zenz 2020a, 10).

Since then, Beijing’s family planning policies in Xinjiang have arguably been draconian. Birth control violations are liable to be punished with internment. Starting in 2018, the term “zero birth control violation incidents” (*weifa shengyu ling fasheng* 违法生育零发生), a concept that was not routinely used elsewhere in the PRC nor in Xinjiang prior to 2018, became a common family planning target in the region. In 2019, Hotan Prefecture, a region with a population of 2.53 million, planned to have no more than 21 birth control policy violations (Zenz 2020a, 12). By 2019, Xinjiang planned to subject at least 80 percent of women of childbearing age in the rural southern four minority prefectures to intrusive birth prevention surgeries, referring to IUDs or sterilizations (Zenz 2020a, 12).

In 2018, the region performed 243 sterilization procedures per 100,000 of the population, compared to 33 for the entire country (Zenz 2020a, Figure 9). In 2019, two counties in Hotan respectively planned to sterilize 14.1 and 34.3 percent of all married women of childbearing age under this project. In 2019, Qelbinur Sidik, a Uyghur women and former re-education camp instructor, said she was told by officials about a government sterilization mandate for every woman of childbearing age. She was then forcibly sterilized even though she had only had one child (Graham-Harrison and Kuo 2020).

2.0 Natural Population Growth in Southern Xinjiang in 2019 and 2020

Between 2015 and 2018, combined natural population growth rates in the four prefectures of southern Xinjiang (Hotan, Kashgar, Aksu, Kizilsu) declined by 72.9 percent (population-weighted average; China Statistics Press 2016, 2018, 2019, tables 3-5 and 3-6). In 2019, rates continued to decline (Table 1). In several counties, they fell to just above or below zero. Prefectures with data for both 2018 and 2019 (Aksu and Kizilsu) and counties for prefectures without such data were weighted by their respective

populations. For Bayingol, which is also frequently considered part of “southern Xinjiang”, the three counties listed in Table 1 were used instead of the prefecture, because only these have an ethnic minority population share of over 50 percent. In the resulting population-weighted sample, the average natural population growth rate fell from 5.19 in 2018 to 1.66 in 2019, significantly lower than in both Xinjiang and the nation. To compare, a Chinese research paper described the 2017 national population growth rate’s decline to 5.32 per mille as “alarmingly low” (Huo et al. 2020).

Region	2018	2019	2020 (plan)	2021 (plan)
National (for comparison)	3.81	3.34		
Xinjiang	6.13	3.69		
Southern Xinjiang counties (weighted sample of counties shown below)	5.19	1.66		
Aksu Prefecture	5.67	1.48		
...Awat County	4.71	0.59		
...Xinhe County	1.29	0.73		-0.50 to -1.00 (est.)
Kizilsu Prefecture	6.39	3.57	-3.14	
Kashgar Prefecture	2.38	n/a		
...Yingjisha County	5.26	1.37		
...Shufu County	1.39	0.20		
...Yopurga County	7.12	0.55		
...Bachu County	n/a	-1.00 to -2.50 (est.)		
Hotan Prefecture	2.96	n/a		
...Qira (Cele) County	2.32	-0.05		
...Yutian County	-0.49	n/a		
Bayingol Prefecture	4.29	3.85		
...Qiemo County	7.57	4.11		
...Luntai County	1.83	1.10		
...Hejing County	2.26	2.58		

Table 1: Natural population growth rates in per mille. Sources: Prefecture and County Socio-Economic Development Reports.

A second sample consisted of 35 counties with ethnic minority population shares over 50 percent, and 28 counties with Han majority populations, all of them with published birth rate figures for 2019.¹ In this sample, the population-weighted average birth rate in ethnic minority counties fell by 50.1 percent in 2019, while the birth rate in the Han counties declined by only 19.7 percent. This is consistent with plans for mass sterilization for 2019 published by counties in southern Xinjiang (Zenz 2020, 16-19).

The 2020 Xinjiang Statistical Yearbook, which published data for 2019, ceased to publish all breakdowns of total populations and population growth by region or ethnicity (China Statistics Press 2020). Similarly, Hotan and Kashgar published neither birth nor natural population growth rates for 2019, breaking with a

¹ Source: Prefecture and County Socio-Economic Development Reports (*guomin jingji he shehui fazhan tongji gongbao* 国民经济和社会发展统计公报). Some counties in the sample are represented by data for the prefecture that governs them.

decade-long practice. However, data from their counties indicate further declines. In Kashgar, Bachu County's 2019 birth rate stood at 4.15 per mille; given an expected death rate of between 5 and 7 per mille, its 2019 growth would likely have ranged between -1.00 and -2.50 per mille.² For 2021, Aksu's Xinhe County planned for a birth rate of 6 per mille or less, which at the county's current death rate of 6.62 would result in negative population growth, possibly between -0.50 and -1.00 per mille.

In Kizilsu, the prefecture planned a 6.14 per mille reduction in its natural population growth rate for 2020, which would result in a negative -3.14 per mille figure ([Kizilsu Prefecture Government](#) 2020). In an August 2020 report, Kizilsu noted that in 2019, not one single person was born outside of the government's plan, and that 88 percent of all women of childbearing age had adopted "long-term effective birth prevention" measures, a term that in southern Xinjiang typically refers to IUDs or sterilizations ([Kizilsu Prefecture Government](#) 2020).

The birth control campaign among the southern Uyghur majority regions has resulted in natural population growth rates near and below zero. Below, it is argued that this may not be a coincidence, given that goals to "optimize" that region's ethnic population structure are most realistically achieved within exactly such a growth rate range.

Beijing's goal of "optimizing the population" informs our understanding of the wider, longer-term intentionality of the state regarding Xinjiang's ethnic minority populations. Population "optimization" discourses when focused on Han often deal with ageing, gender and shrinking work force sizes; when focused on southern Xinjiang's ethnic groups, they are strongly concerned with counterterrorism and national security. In this view, the existence of Uyghur population centers with distinct religion and culture is considered a threat.

3.0 "End Uyghur Population Dominance": The Urgent Perceived Need to Optimize Southern Xinjiang's Ethnic Population Structure

An otherwise unremarkable report about an August 2017 health and family planning work promotion meeting held by Kizilsu's Health and Family Planning Commission references an unpublished family planning document ([Kizilsu Health and Family Planning Commission](#) 2018).³ Issued in 2017 by Xinjiang's New Population Planning Office (*zizhiqū xīn tǒngchóu rénǒubān* 自治区新统筹人口办) its title is: "Minutes of the Work Meeting on Earnestly and Thoroughly Implementing the Spirit of General Secretary Xi Jinping's Important Instructions, Researching and Advancing the Work of Optimizing the Ethnic Population Structure in Southern Xinjiang."⁴ According to a 2017 research publication (Liu 2017) titled "Research on Optimizing the Population Resources of Southern Xinjiang," the central government

² Kashgar's 2018 death rate was 5.56 per mille, while Yingjisha, Yopurga and Shufu Counties reported 2019 death rates of 5.13, 6.60 and 6.66 respectively. Sources: Prefecture and County Socio-Economic Development Reports.

³ While the source is not a government website, the details of the report can easily be authenticated, including the existence of the other mentioned public document: *zizhiqū "guānyú jiāqiáng hé gāijīn nán jiāng sī de zhōu jīhuà shēngyù gōngzuò de yìjiàn"* (xīndāng tīng zì [2017] 38 hào) [Autonomous Region "Opinions on Strengthening and Improving Family Planning Work in the Four Prefectures of Southern Xinjiang]. Or the identity of the hosting vice governor. See in Wuqia County Government. 2018. "Guānyú Kaizhān Wēifā Shēngyù Zhuānxiàng Zhīlǐ "Huitou kān" Gōngzuò De Tǒngzhī [The Notice Regarding "Looking Back" Work on Special Control of Illegal Childbirth]." June 16. <https://archive.is/qXHml>. Kizilsu Prefecture Government. N.d. "Mǎi Liyān Sīmǎyī". <https://archive.is/OnkLp>. The report author of the report, Xu Yanhua, is listed as a Kizilsu government office worker and member of the Family Planning and Health Committee who is, among other things, responsible for family planning policy propaganda. N.d. "Bāngōngshì". <https://archive.is/gmM1v> (compare <https://archive.is/MRxDJ>).

⁴ Chinese: "关于认真贯彻落实习近平总书记重要批示精神研究推进南疆民族人口结构优化工作会议纪要"

in Beijing “attaches great importance to the problem of Xinjiang’s population structure and population security.”⁵

Expressions such as “optimizing the ethnic population structure” (*youhua minzu renkou jiegou* 优化民族人口结构) or just “optimizing the population structure” (in reference to ethnic minority regions and populations) are common to the academic literature on Xinjiang’s counterterrorism work. They are frequently linked to birth control measures.

The sentiment behind these terms was bluntly expressed by Liao Zhaoyu, dean of the institute of frontier history and geography at Tarim University, at a 2015 academic event. When discussing “methods to solve Xinjiang’s problems”, Liao said that in southern Xinjiang the state must “change the population structure and layout, [and] end the dominance of the Uyghur ethnic group” ([International Legal Research Net](#) 2015).⁶ In a 2016 academic publication, Liao argued that the “underlying reason” for Xinjiang’s unrest and terrorism is the high concentration of Uyghur populations in southern Xinjiang. Due to a recent exodus of Han, “the imbalance of the ethnic minority and Han population composition in southern Xinjiang has reached an unbelievably serious degree” (Liao 2016).⁷ At a 2017 academic event, Liao noted that southern Xinjiang’s “current population structure and distribution is not conducive to Xinjiang’s stability,” arguing that the region should “launch an immigration project [of ethnic Han] to promote a great migration” into Uyghur heartlands ([International Legal Research Net](#) 2015).⁸

Liao’s sentiments are echoed by Xu Jianying, a senior research fellow at the Chinese Academy of Social Sciences and high-profile Xinjiang academic whose work and opinions have featured prominently in state media articles (Xu 2019). In 2014, Xu argued in an interview with the Global Times that to counter the “East Turkistan” terror threat, the state must “change southern Xinjiang’s population structure (Xu 2014).”⁹

The link between counterterrorism and ethnic population ratios is expressed even more directly by Xu Zhongcheng, vice dean of the Shandong Police College, and Fan Wangdong, vice director of the same institution. In a 2014 academic publication on counterterrorism in Xinjiang, the authors devote a substantial section to the heading “implementing population adjustments” (Xu and Fan 2014). After comparing the larger and rapidly growing ethnic minority population with the much lower Han population shares, they write:

From the standpoint of long-term counterterrorism strategy, one must adopt intervening measures to effectively adjust the population in a specific area. For example, in areas where ethnic minorities reside, ... improve the quality of ethnic minority populations. Intensify the recruitment of talents, adopt preferential policies to retain the Han population and talented Han, and increase the proportion of the Han population. (Xu and Fan 2014, 46)¹⁰

⁵ Chinese: “优化南疆人口资源问题研究” and “高度重视新疆人口结构和人口安全问题”

⁶ Chinese: “改变人口结构布局，结束维吾尔族一族独大的局面”

⁷ Chinese: “在南疆民汉人口结构失衡严重到不可思议的程度”

⁸ Chinese: “目前的人口结构分布不利于新疆地区的稳定” and “启动移民工程推进大迁徙”

⁹ Chinese: “改变南疆人口结构”

¹⁰ Chinese: “从长期反恐战略看，有必要采取措施介入，对特定区域人口进行有效调节。如在民族地区，提倡优生优育，提高少数民族人口质量。加大人才引进工作力度，通过优惠政策，留住汉族人口和人才，提高汉族人口的比重”

Xinjiang's most high-profile and authoritative voice on this sensitive subject is probably Liu Yilei, deputy secretary-general of the party committee of Xinjiang's Production and Construction Corps (XPCC), and dean of Xinjiang University's Western China Economic Development and Reform Research Institute. At a July 2020 symposium with 300 experts and scholars from all over China, Liu noted that despite all progress, "the root of Xinjiang's social stability problems has not yet been resolved."¹¹ To quote:

...the problem in southern Xinjiang is mainly the unbalanced population structure. Population proportion and population security are important foundations for long-term peace and stability. The proportion of the Han population in southern Xinjiang is too low, less than 15%. The problem of demographic imbalance is southern Xinjiang's core issue (Liu 2020).¹²

In May 2021, Liu repeated these concerns (China Development Institute 2021). In 2018, Liu had argued that "Xinjiang's population structure [and] ethnic structure ... are unreasonable"¹³, and that Xinjiang must "afresh analyze [its] population structure [and] ethnic structure...from a viewpoint of national security" (Liu 2018).¹⁴

Liu's concern relates to the concept of "population security" (*renkou anquan* 人口安全)¹⁵ that is increasingly common in the literature on Xinjiang's counterterrorism and stability maintenance work. In a 2019 publication in the Jiangxi Police Institute Journal, Liang Feifei, a researcher from Xinjiang's Aksu, describes in detail how Han population shares in Xinjiang's border counties have been declining, arguing that these changes "have brought severe challenges to [Xinjiang's] population security" and have created "a huge hidden danger that ... causes ethnic isolation" (Liang 2019).¹⁶ A 2018 publication by Wang Qiaoling from the XPCC Party School notes that since the Han constitute "only 15 percent" of southern Xinjiang's population, "optimizing its population resources" is an "important foundation for ensuring Xinjiang's population security" (Wang 2018).¹⁷ Such accounts bluntly imply that Han populations are an asset to national security, whereas ethnic minority populations represent a liability.

How exactly do Chinese academics conceptualize the relationship between ethnic population ratio and social stability? One of the most sophisticated accounts of southern Xinjiang's population "problem" is found in a 2017 research paper by Li Xiaoxia, director of the Institute of Sociology at the Xinjiang Academy of Social Sciences and designated "special researcher" at the Xinjiang Development Research Center. In January 2021, the Xinjiang Health Commission published a report of hers on Xinjiang's

¹¹ Chinese: "新疆稳定问题尚未从根本上解决". The speech is summarized on Xinjiang University's website at Xinjiang University School of Economics and Management. 2020. "Liu Yilei laoshi canjia 'zhongguo quyu jingji 50 ren luntan' zhuanli yantao hui bing zuowei daibiao fayan [Teacher Liu Yilei participated in the 'Chinese Economists 50 Forum' and spoke as a representative]." July 14. <http://web.archive.org/web/20210220221018/http://ems.xju.edu.cn/info/1055/1661.htm>.

¹² Chinese: "南疆问题主要是人口结构失衡问题。人口比例和人口安全是长治久安的重要基础，南疆汉族人口比重太低，不足 15%。人口结构失衡问题是南疆问题的核心"

¹³ Chinese: "新疆人口结构、民族结构、文化结构不合理"

¹⁴ Chinese: "我们要从国家安全视角下重新研究 ... 分析人口结构、民族结构"

¹⁵ The term is also employed for China in general, but then typically with a broader range of meanings.

¹⁶ Chinese: "近年来新疆边境地区人口变动现状给人口安全带来严峻挑战" and "成为造成族群隔离、影响民族关系、阻碍新疆发展的巨大隐患，威胁人口安全"

¹⁷ Chinese: "针对目前南疆汉族人口仅占该地区总人口 15% 的状况来看，优化其人口资源可以说就是确保新疆人口安全的重要基础"

population development that attacked this author's prior work on birth prevention, and her work has been widely featured in Chinese state media articles in both Chinese and English ([Li 2021](#)).

In her paper, Li argues that:

[...] the population gap between ethnic minorities and the Han continues to widen, which has made the concentration of a single ethnic group in certain regions more obvious. The lack of interaction and exchanges between different ethnic groups and cultures has caused the three factors of ethnicity, religion and land area to become superimposed, thereby strengthening the viewpoint that one ethnic group owns a [particular] land area, [thereby] weakening national identity and identification with the Chinese Nation-Race, [adversely] impacting long-term peace and stability.

Consequently, controlling the growth rate of the ethnic minority population and adjusting the regional ethnic population structure are considered to be important ways to achieve long-term peace and stability in Xinjiang. (Li 2017a, 68)¹⁸

Regarding southern Xinjiang's "population problem," Li further states that:

[T]here is a huge difference in the numbers of Uyghur and Han populations, which can create even greater political risks. Mainly due to the rapid growth and large number of the Uyghur population, southern Xinjiang's monoethnic and monoreligious character became more pronounced. The superimposition of ... land area, ethnicity, religion, and even poverty will strengthen ethnic self-identification and regional identification, diluting identification with the nation and the central government.

[Southern Xinjiang has] a mono[ethnic] concentrated population [and] a dense religious atmosphere, the masses are susceptible to the encroachment of extremist religious thinking [and] reject secular political rule... (Li 2017a, 76-77)¹⁹

Similar to Liu Yilei, Li argues that "the problem of the ethnic population structure in southern Xinjiang" is "one of the roots of the Xinjiang problem" (Li 2017a, 77).²⁰

Li notes that while population migration constitutes a rapid way to change the population structure, getting people to migrate into southern Xinjiang and getting ethnic minorities to move out are "both difficult to implement." She laments that local Han population birth rates are low, and that the Han

¹⁸ Chinese: "少数民族和汉族的人口数量差距不断扩，大致使某些区域单民族聚居状况更为明显，不同民族及文化缺少交往交流，造成民族、宗教和地域三种因素相叠加，从而强化单民族的地域拥有意识，弱化国家认同和中华民族认同，影响长治久安。因此，控制少数民族人口增长速度，调整区域民族人口结构，被认为是实现新疆长治久安的重要路径"

¹⁹ Chinese: "维汉人口数量差异巨大可能形成更大的政治风险。主要基于维吾尔族人口增长快、数量大，使南疆的民族单一性、宗教单一性特征更为突出，地域、民族、宗教甚至贫困等特征叠加，会强化民族自我认同及地域认同，淡化对国家、对中央政府的认同；单化人口聚居，宗教氛围浓厚，民众易受宗教极端思想侵蚀，排斥世俗政权"

²⁰ Chinese: "南疆民族人口结构问题...新疆问题的根源之一"

often leave Xinjiang in search of better fortunes. Li argues that birth control is the best solution because it can "solve the problem of the rapid growth of the minority population."²¹

Soon after Li's publication, Xinjiang set up new initiatives to implement systematic birth prevention campaigns in ethnic minority regions. An increasingly common outcome indicator of these initiatives (from 2017 and especially 2018) was the mandated target to "optimize the population structure", or more commonly to "balance the population structure" (*junheng renkou jiegou* 均衡人口结构) (e.g. [Baicheng County Health Committee](#) 2020; [Gumudi Town Government](#) 2019; [Hotan City Population and Family Planning Commission](#) 2019; [Kuqa County Government](#) 2019; [Xinhe County Government](#) 2020). Family planning documents from Urumqi's Midong District for 2019 mandate the achievement of an "appropriate fertility level" and of "optimizing the population structure" as the two main goals of family planning work in order to achieve the region's "general goal of social stability and long-term security"²² ([Gumudi Town Government](#) 2019). To this end, county family planning offices are tasked for example with the following responsibilities:

Formulate the county's mid- and long-term population development plan and annual plan; be responsible for the macro-control of the county's newborn population and the review of applications for birthing another child due to special circumstances; manage the county's information system for women of childbearing age... ([Kuqa County Government](#) 2019; cf. Nilka County Government 2017; Jiashi (Payzawat) County Government 2016)²³

By the end of 2018, the region was fully equipped to control and forecast population growth at an extremely detailed level. Xinjiang had effectively created the preconditions for "optimizing" its ethnic population structure.

4.0 Beijing's Strategies to Address Southern Xinjiang's "Population Problem"

4.1 Framing the Ethnic Minority "Population Problem"

The sources cited in the previous section represent only a small sample of studies and presentations that explicitly link discourses of population control and of "optimizing" ethnic minority population structures with the topics of national security, stability maintenance and counterterror strategies. The repeated theme that characterizes this body of thought is that Xinjiang's ethnic minority population, its size, density (concentration) and growth represent a latent or even overt threat to the nation's security. The Xinjiang "problem" cannot be solved without "optimizing" or altering this population structure. The focus here is on the core "problem" region of southern Xinjiang, whose ethnic population composition is

²¹ Chinese: "解决少数民族人口增长过快的问题"

²² Chinese (entire section): "以习近平新时代中国特色社会主义思想为指导，坚决贯彻落实党中央、自治区和市委关于计划生育工作的一系列决策部署，紧紧聚焦社会稳定和长治久安总目标，坚持计划生育基本国策，以稳定适度生育水平、优化人口结构为主要目标，持续巩固违法生育专项治理成果，深入开展违法生育“两个彻查”（即全面彻底清查违法生育家庭、全面彻底清查违法生育行为处理到位情况），突出违法生育查处不到位、基层基础工作发展不平衡、“三股势力”对计生工作的流毒未彻底肃清等问题导向，以讲政治的高度，以抓稳定的力度，以钉钉子的精神，切实加强计划生育各项工作，坚决遏制违法生育，为实现社会稳定和长治久安总目标打下坚实的基础。”

²³ Chinese (from Kuqa County): "制定本县中长期人口发展规划和年度计划；负责全县人口出生的宏观调控及申请有特殊情况要求再生育一个子女的审核工作；管理本县育龄妇女信息系统"

described as monoethnic (*minzu renkou danyihua* 民族人口单一化), whereas that of northern Xinjiang is often referred to as “reasonable” (*heili* 合理, e.g. Liu, Guo, and Li 2014, 39; Li 2017b, 72).

A detailed review of this literature shows that related concerns center around the following four themes.

1. Excessive ethnic minority population growth creates a growing rural surplus workforce that suffers from poverty and underemployment. This creates significant risks to social stability. Large numbers of unemployed (or underemployed) young Uyghurs constitute a “severely excessive” rural surplus labor population, created by lax family planning policies, that pose a “latent threat to the current regime.” (e.g. Zhao and Song 2017, 30)²⁴
2. High ethnic minority population density combined with low mobility reduces opportunities for ethnic interaction and breeds a “hardened” society with an “excessively strong atmosphere of religious belief that cannot be diluted,” creating a breeding ground for religious extremism and terrorism (e.g. Lu and Guo, 2017, 194).²⁵
3. High ethnic minority population concentrations create a dangerous sense of identification with their homeland, weakening identification with the Chinese Nation-Race (*zhonghua minzu* 中华民族) and the central government (e.g. Li 2017a, 68).
4. Generally, high ethnic minority population ratios and resulting low Han population shares are a national security risk for sensitive border regions (which includes southern Xinjiang) (e.g. Liang 2019; Wang 2018).

Resolving these issues involves a large-scale transfers of ethnic minority surplus laborers out of southern Xinjiang, to regions with large Han populations. The Nankai Report, a Chinese research report on labor transfers from Xinjiang to other parts of China, noted that such transfers are an ideal method to “reduce Uyghur population density in Xinjiang (Zenz 2021, 14).” Other Chinese studies argue that labor transfers represent a strategic means to “crack open the solidified society in southern Xinjiang” and “push [people] out of their closed state [of mind]” (Lu and Guo 2017, 194).²⁶

However, labor transfers alone cannot significantly change ethnic population structures in southern Xinjiang. For this, the state has to promote large-scale Han in-migration.

4.2 Counterterrorism Through Population Embedding

In May 2014, during the 2nd Xinjiang Work Meeting, Xi Jinping demanded that Xinjiang must “strengthen ethnic interaction, exchanges and blending, promote the establishment of a social structure and environment in which all ethnic groups and mutually embedded” (Li 2017b, 72).²⁷ The Central

²⁴ Chinese: “然而，新疆少数民族计划生育政策相对宽松，维吾尔人口增长较快，农村劳动力严重过剩” and “大量无业维吾尔青年成为对现政权具有潜在威胁的“相对过剩人口”

²⁵ Chinese: “由于人口不流动而本地就业、发展机会不足，使南疆贫困问题极其严重且呈现固化状态，一些落后的传统观念和生活习俗也得不到根本改变，过度浓厚的宗教信仰氛围无法淡化，社会现代性发育迟滞”

²⁶ Chinese: “破解南疆社会固化问题、推动他们走出封闭状态”

²⁷ Chinese: “要加强民族交往交流交融，推动建立各民族相互嵌入式的社会结构和社区环境”

Government Ethnic Work Conference elevated Xi's call for ethnic "embedding" to a "national strategy" (Li 2017b, 72). As early as June 2014, Kashgar prefecture reported the first implementation efforts of the ethnic embedding strategy, which included the establishment of mixed residences, mixed Han-Uyghur schooling, and transfers of Uyghur workers and school students to Han majority regions in eastern China (Wen 2014). Since then, numerous "Unity New Villages" (*tuanjie xincun* 团结新村) and urban "Ethnic Unity Embedded Neighborhoods" (*tuanjie qianrushu shequ* 团结嵌入式社区) have been established especially in southern Xinjiang ([China Wenming Net](#), December 11, 2019; Mou 2016). In a 2018 academic publication, Liu Yilei (introduced in section 3.0) called for the establishment of a "multi-ethnic embedded social governance structure" (Liu 2018).²⁸

A 2017 research paper published by Gao Xuejing and Li Ming, researchers from the Xinjiang Police Academy and the State Forestry Administration Police Officer Training Center, argues that "population embedding" (*renkou qianru* 人口嵌入) is the key strategy to eradicate terrorism by "rapidly optimizing the population structure."²⁹ To quote:

In sum, in order to completely eradicate terrorist crimes in Xinjiang, it is necessary to completely eradicate the soil, the growth conditions, and the environment in which terrorist mobs produce crimes. [To do so]..., it is necessary to rationalize the population structure, optimize the quality of the population, accelerate economic development, integrate ethnic cultures, and strengthen the legal foundation, etc (Gao and Li 2017, 33).³⁰

According to a 2017 academic paper by Li Xiaoxia (introduced in section 3.0), embedding can take place at three spatial levels: regional, community, or family (Li 2017b, 76). Li notes that the most common level at the time of her writing was neighborhood-level embedding because it was seen to promote an optimal degree of interethnic mixing (her paper does not distinguish community from neighborhood levels, but they are presumably similar). A visual scheme of such a form of embedding envisioned for a mixed Han-Uyghur model community in Hotan is shown in Figure 1 (New Land Planning 2018).

²⁸ Chinese: "多民族互嵌式社会治理结构体系"

²⁹ Chinese: "迅速地优化人口结构"

³⁰ Chinese: "综上所述, 新疆要彻底杜绝恐怖主义犯罪, 就要彻底铲除恐怖暴徒产生的土壤、成长的条件和作案的环境; 要彻底铲除恐怖暴徒产生的土壤、成长的条件和作案的环境, 就要合理人口结构、优化人口质量、加速经济发展、融合民族文化和强化法律基础等; 要合理人口结构、优化人口质量、加速经济发展、融合民族文化和强化法律基础等"

Figure 1. Red areas are designated for Uyghur residents, green areas for Han residents.

Specifically, the establishment of embedded communities or neighborhoods requires a careful balancing of “desirable” and less desirable population segments by diluting the latter through an insertion of the former. After discussing the population shares of Xinjiang’s ethnic groups, Gao and Li write in their abovementioned report:

Therefore, optimizing the proportions of the population and improving and enhancing the quality of the population - which is to solve the human problem - is the foundation of solving Xinjiang's counterterrorism (and other) problems. Embedding the population is one of the simplest and most direct ways to solve the human problem.

Specifically, according to the needs of Xinjiang’s counterterrorism and especially of social stability and economic development, through the method of embedding the population, not only through policy-oriented recruitment from outside Xinjiang to absorb the required population, but also [through] increasing the population of a certain ethnic group based on targeted statistical data in Xinjiang. This will achieve the goal of diluting the proportion of the poor population, the proportion of the unemployed population, the proportion of the low-educated population, the proportion of [certain] ethnic populations, the proportion of the floating population, the proportion of the unstable population, the proportion of the population with a criminal history, etc.

[Conversely,] this will also [involve] increasing the proportion of the wealthy population, the proportion of the working population, the proportion of high-quality, highly educated and high-income populations, the proportion of [certain]

ethnic populations, the proportion of the fixed [i.e. permanent resident] population, and the proportion of model citizens, county residents and villagers in the region.

That is to say, within a certain period or time, the population structure in the region can be quickly adjusted to the planned target levels and quantities to promote ... the integration of all ethnic groups. (2017, 27)³¹

Embedding therefore involves a targeted dilution of undesirable population segments, such as low-income, lesser-educated and more traditionally minded Uyghur population segments, who are seen as more susceptible to religious extremism and other “crimes”. To quote from Li Xiaoxia (2017a, 77):

The Uyghur population is concentrated, with strong traditional cultural characteristics and weak modern cultural influence. The population has low [levels of] education [and of] Chinese language, has difficulties to obtain high level employment, [suffers from] low income levels, resulting in low social status, insufficient social development, and many social problems.³²

A subsequent 2019 publication by Li Ming provides more specific pointers. Li argues that embedding needs to establish clear quantitative target indicators, and that the construction of embedded communities requires the authorities to “calculate precise embedding targets.” Similar to others, Li Ming notes that embedded multi-ethnic communities must feature substantial Han population shares, with Han-minority population ratios ranging between 50:50 and 40:60 (Li 2019). The goal of these measures is the creation of a “cultural counterterrorism” (*wenhua fankong* 文化反恐) – a multi-ethnic environment where “religious extremism” is unlikely to take root:

For example, according to the village’s cultural counterterrorism needs, the scope of the population with positive energy in the village should be expanded to 80% or 90% in a planned, step-by-step, and methodical manner, and the scope of the population with negative energy in the village should be reduced to 7% or less than 3%. Increase the transmission speed of “positive culture” by 80%, expand the scope of the spread of positive energy by 80%, and increase the population receiving the positive energy of “positive culture” to more than 90%. All these require precise calculations before corresponding actions can be taken. (Li 2019, 110)³³

³¹ Chinese: “因此，优化人口比例、改善人口素质、提高人口质量即解决人的问题，是解决新疆反恐（包括其他）问题的根本。而嵌入人口，则是解决人的问题的最简单的方法和最直接的路径之一。具体地说，就是根据新疆地区反恐、特别是社会稳定和经济发展等的需要，以嵌入人口的方法，不仅通过政策导向由疆外招聘吸纳所需人口，还可在疆内依靠统计数据有目标地增加某类某族人口，达到稀释地区内的贫困人口比例、无业人口比例、低学历人口比例、民族人口比例、流动人口比例、不安定人口比例、犯罪前科人口比例等目的，也可以扩大地区内的富裕人口比例、工作人口比例、高素质高学历高收入人口比例、民族人口比例、固定人口比例、模范市民县民村民人口比例等等。也就是在一定的时期或时间内，可以把地区内的人口结构迅速调整到计划的指标状态和数量水平，促进各民族交往交流交融”。

³² Chinese: “维吾尔族人口聚居，传统文化特征浓厚，现代文化影响弱，人口受教育程度低、汉语水平低、高层次就业难、收入水平低，造成普遍的社会地位低，社会发育不足，社会问题多。”

³³ Chinese: “例如，根据村的文化反恐需要，把村内的正能量人口规模有计划、有步骤、有方法地扩大到 80% 或 90% 以上，把村内的负能量人口规模压缩在 7% 或 3% 以下，把“正文化”的传递速度提高 80%，把正能量的传播范围扩大 80%，把接受“正文化”正能量的人口提到 90% 以上。这些都要求在精确计算以后，才能采取相应的行动”

Here, persons with “positive energy” or a “positive culture” (*zheng wenhua* 正文化) are those who are more highly educated, more secular and more resistant to the creeping influence of “religious extremist thought”, while those with “negative energy” (*fu nengliang* 负能量) are susceptible to “extremist” thought. Planners must achieve “cultural counterterrorism”³⁴ outcomes based on concrete quantitative ratios and targets (Li 2019, 113).

A 2018 study of the Hotan Unity New Village clarifies that the village counters “hidden dangers for ethnic estrangement” that arise from “extremely serious demographic imbalances” (i.e. Uyghur population dominance) through a Han to Uyghur ethnic population ratio of 50:50, creating an environment where “ethnic boundaries and barriers are gradually weakened and eliminated (Chen, Xu, and Chen 2018, 93).”³⁵

However, the implementation of Xi Jinping’s call for a “mutually embedded” social structure in Xinjiang’s monoethnic strongholds is daunting. Li Xiaoxia (2017b) concedes that “a considerable part” of new Han residents have to be brought in from eastern China. She concludes that southern Xinjiang does not have the required “actual basis for population adjustment”.³⁶

This is not the only problem. Li Xiaoxia (2017b) argues that Xinjiang’s population embedding strategy runs into acute resource limitations such as the high costs associated with the construction of embedded communities, a lack of arable land, and a lack of water resources. Natural constraints mean that the production costs of agriculture and pastoralism in these new villages are high.

Other experts voice similar concerns. Zhang Zhaoxia, a Kashgar native and professor at the Northwestern University for Nationalities, wrote in a 2016 publication that Xinjiang’s embedding strategy faces major obstacles due to severe shortages of arable land, compounded by “water shortages, sandstorms, droughts, desertification, and salinization”³⁷ (Zhang 2016). Zhang’s recommendation is to reverse the trend of Han out-migration and curb ethnic minority population growth.

A 2018 Associated Press report of Hotan’s Unity New Village quotes villagers as saying that despite a planned investment of 1.7 billion RMB (USD 262m), scarce water supplies and other factors meant that they struggled to feed themselves (Wang 2018).

4.3 The XPCC’s Population Expansion Strategy for Southern Xinjiang

So far, Xinjiang has primarily relied on the XPCC to promote Han in-migration into Xinjiang and to increase southern Xinjiang’s Han population share. In 2017, the central government mandated the XPCC to increase its settler population in southern Xinjiang by 300,000 by 2022, a strategy that largely relies on attracting Han from other parts of China through promises of free land, housing, education and government jobs (Ouyang, Zhou, and Li 2020; Bai 2020). Attracting Han to become long-term residents in southern Xinjiang has long been a daunting challenge. Between 2000 and 2015, the region’s Han population (including the XPCC) increased by a mere 123,900, compared to a 2.5 million increase of the

³⁴ Chinese: “文化反恐”

³⁵ Chinese: “呈现极严重的人口结构性失衡特征，为民族隔阂埋下了隐患” and “民族界限和民族隔阂逐步淡化和消除”

³⁶ Chinese: “人口调整的现实基础不足”

³⁷ Chinese: “水资源短缺、风沙、干旱、荒漠化、盐渍化”

ethnic minority population (Liu 2017, 9). Between 2011 and 2019, only 33,676 of the 653,584 increase of the entire XPCC population (not just in southern Xinjiang) stemmed from natural population growth, with the other 94.8 percent coming from in-migration from other provinces (China Statistics Press 2020b, tables 3-3/3-4). Recent data indicates that the new policy is having an impact. Between 2018 and 2019, the XPCC's population in southern Xinjiang had increased by 69,900 persons (China Statistics Press 2020b, table 1-12).

For the government, this is a costly strategy. The construction of basic infrastructure required for additional XPCC populations costs nearly 200 million RMB for each additional 10,000 settlers and 5.9 billion RMB for the envisioned 300,000 settlers (Bai 2020, 29).

However, Li Xiaoxia (2017b) rightly notes that while this strategy increases the share of southern Xinjiang's Han, it typically only achieves a macro-level form of embedding. XPCC settlements function like self-contained islands, although some have significant ethnic minority populations.

In either case, significant changes in southern Xinjiang's ethnic population structure would require an in-migration of millions of Han (see section 5.3). However, southern Xinjiang lacks the environmental and other resources to sustain such an influx.

4.4 The Problem of Limited Carrying Capacity

For years, academics and officials have been researching and debating the problem of “carrying capacity” (*chengzaili* 承载力). Between 2000 and 2009, researchers from the Chinese Academy of Sciences evaluated the population carrying capacity of Xinjiang's different regions in relation to environmental and economic resources (Qian 2020).

In June 2016, a Hotan government report noted that 85 percent of the region's population lived from agriculture, placing considerable pressure on the arable land. The report stated that per capita, the available ecological resources were severely limited and that “the contradiction between population, economy and ecological carrying capacity is very prominent” (Liu 2016).³⁸

A 2016 study of Hotan's carrying capacity was funded by a national research project on establishing an “Early Warning System for Population Security in Typical Minority Areas in Southern Xinjiang under an Adjusted Fertility Policy”. Compiled by Ma Xiaoyu and two other academics at Xinjiang University (Ma, Ma, and He 2016), the study found that Hotan entered a state of “red alert” since 2008, when the population exceeded 1.9 million and hence surpassed the region's resource-based carrying capacity. By 2014, Hotan's population had increased to 2.26 million, while its combined carrying capacity – calculated based on arable land, water resources and economic resources – had decreased to 1.59 million. The authors estimated Hotan's “overpopulation” in 2014 at 668,812 persons and recommended stringent birth control measures to keep the population within the limits of the carrying capacity.

Also in 2016, the Xinjiang government issued a regionwide notice regarding the cooperation of different government units with the region's Family Planning Commission. This included a stipulation for the very mechanism researched and outlined in the 2016 study on Hotan: an “Early Warning System for Population Security” ([XUAR Government](#) 2016). Between 2017 and 2019, Xinjiang's local family planning

³⁸ Chinese: “人口、经济与生态承载力矛盾很突出”

units were charged with “carrying out population [growth] monitoring and early warning [work]”³⁹ (e.g. [Urumqi City Government](#) 2018; [Baicheng County Government](#) 2019).

Similar carrying capacity calculations were conducted by several other scholars, including a group of academics from the XPCC’s Shihezi University. This 2017 study estimated different types of carrying capacities for the entire XUAR based on land area, other ecological resources, and the economy (Liu, Zhi, and Liu 2017). From these, the authors estimated Xinjiang’s “suitable population” (*shiduo renkou* 适度人口) for 2015 at 21.3 million, 2.3 million lower than that year’s actual population. The study expressed particular concern about a continual decrease in the ecological carrying capacity (*shengtai chengzaili* 生态承载力), a figure calculated based on land productivity and the per capita ecological footprint, which decreased from 15.7 million in 2005 to 12.5 million in 2015. This was caused by increased per capita human consumption in the context of rising living standards, which was not matched by increases in related environmental production capacities, leading to a severe overutilization of existing resources. The authors concluded that increases in Xinjiang’s economic carrying capacity are offset by an excessive stress on its natural resources, causing severe imbalances that further endanger fragile ecological resources. A similar study published in 2016 found that Xinjiang’s overall carrying capacity in 2013 stood at 22.4 million, slightly below that year’s actual population of 22.6 million (Zhang 2016).

A 2018 study by two academics from Xinjiang’s Shihezi University specifically calculated the carrying capacity for rural populations (Li and Liu 2018). They estimated that rural Xinjiang’s per capita ecological footprint nearly doubled between 2000 and 2015 due to increased resource use in the wake of socioeconomic and industrial development. The authors calculated that Xinjiang’s rural population first exceeded its ecological carrying capacity in 2013, and that by 2015, this “excess” population had reached 1.9 million persons.

Another study from 2018 makes it clear where the key problem lies: the ecological carrying capacity is especially weak in southern Xinjiang, where limited arable land and water resources are coupled with an excessively high population density in the few inhabitable oasis regions (Zhang and Yong 2018). The study recommends to “resolutely curb population growth” and implement an “ecological migration” of southern Xinjiang’s surplus populations to other regions.⁴⁰

In March 2021, an ecologist from the Xinjiang Normal University told the South China Morning Post: “We have been overpumping groundwater for the increasing population. This will lead to a collapse of the ecological system” (Chen 2021).

These concerns are shared by the government. In April 2017, Wang Pei’An, deputy director of the National Health and Family Planning Commission, toured southern Xinjiang ([PRC Government](#) 2017). The related report notes that he “emphasized the fact that the environmental resources and the socio-economic carrying capacity of the southern Xinjiang region is limited,” making the “implementation of family planning policies” an urgent task. The terminology and related reasoning closely mirrors that of the preceding academic studies on carrying capacity.

Targeted measures such as labor transfers from primary to secondary or tertiary industries, resource optimization, greenhouse technologies and projects that combat desertification and convert desert into

³⁹ Chinese: “开展人口监测预警”

⁴⁰ Chinese: “坚决遏制人口增” and “生态移民”

farmland can increase Xinjiang's ecological and economic carrying capacity. However, they all come with limitations.

A 2009 report commissioned by the Chinese government found that 50 year-long efforts of turning desert into farmland through irrigation had created severe water problems, and that the region needed to pay farmers to halt irrigation and to shift populations into urban centers (Watts 2009). Similarly, a 2020 research paper by a group of Xinjiang-based researchers from the Chinese Academy of Social Sciences argues that Hotan Prefecture's population density of 300.66 persons per square kilometer results in "very high" pressure on local carrying capacity (Huo et al. 2020). Already, the region's water utilization rate is "much higher than the reasonable level." Also, the authors note that if Hotan's population kept growing at average levels seen between 2010 and 2017, the region would have to sustain an unrealistically high economic growth rate of "at least 9.55 percent [annual GDP growth] for the next three decades" to avoid a vastly increasing rural surplus labor force that would drastically overstretch its resource base. In either case, growing urban populations would also need to be sustained by increased agricultural production from surround areas, which would also add further pressure on existing ecological resources.

Similarly, a 2020 publication by researchers from the China Institute of Water Resources and Hydropower Research on water resource utilization in Aksu Prefecture found that that the region's Water Resources Carrying Capacity (WRCC) in 2015 was "severely overloaded", mainly due to water consumption from agricultural production (including cotton fields) and the textile industry (Zhao et al. 2021). This is especially problematic because Xinjiang's labor transfer and economic growth strategy relies on expanding cotton and textile production (Zenz, 2020b). Therefore, southern Xinjiang's limited carrying capacity problem can neither be readily alleviated by increasing arable land (through irrigation) nor through large-scale labor transfers out of agriculture.

Consequently, the state cannot simply add large numbers of Han to the region's existing ethnic minority populations, unless the latter can be controlled or reduced through a combination of cross-regional labor transfers and sustained birth prevention.

5.0 Estimating the Ethnic Minority Population Reduction Resulting from State-Mandated Birth Prevention

5.1 Definition of Intent

The 1948 Convention on the Prevention and Punishment of the Crime of Genocide stipulates that the act of "[i]mposing measures intended to prevent births within the group" constitutes an act of genocide if it is "committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group" ([United Nations](#) 1948). This research does not assess whether the legal requirements for a genocide determination are met, but aims to provide an empirical basis for such a determination.

Based on the evidence discussed above, the government's intent regarding southern Xinjiang's ethnic population can be broadly defined as:

To optimize southern Xinjiang's population structure by increasing the ratio of the Han population in relation to the ethnic minority populations, through in-migration of Han, out-transfers of ethnic minorities, and reducing ethnic minority birth rates, in order to boost interethnic embedding, while simultaneously

ensuring that the resulting total population does not drastically exceed the overall combined economic and ecological carrying capacity.

The “destruction in part” in relation to the imposition of measures designed to prevent births could be assessed as the difference between:

- a) The projected natural population growth rate and resulting total population if such measures were not being imposed by the state, taking into account that family planning preferences of ethnic groups have tended to change over time in line with general socio-economic development.
- b) The projected natural population growth rate and resulting total population with state-imposed birth prevention measures in place, in line with the government’s intent as defined above.

Below, it is estimated that this difference could range between 2.6 and 4.5 million lives.

Specifically, Liu Yilei lamented that the share of the Han population in the five southern Xinjiang prefectures of Aksu, Kashgar, Hotan, Kizilsu and Bayingol stood at less than 15 percent in 2019. In 2018, official figures indicate that this share amounted to 13.2 percent (China Statistics Press 2019, table 3-7).⁴¹ Arguably, the bigger problem are southern Xinjiang’s four Uyghur majority population prefectures, excluding Bayingol (Bayingol’s ethnic minority population was only 46.7 percent in 2018, and only 36.4 percent of the population was Uyghur). In these traditional Uyghur heartlands, the Han population share in 2018 amounted to only 8.4 percent. For the purposes of this research, all references to “southern Xinjiang” are defined as consisting only of these four prefectures, unless stated otherwise.

What would constitute an adequate Han population share for solving southern Xinjiang’s “population problem”? Officials and academics have repeatedly emphasized that northern Xinjiang’s population share is much more reasonable, and this share stood at 56.0 percent in 2018 (Xinjiang’s overall Han share stood at 34.4 percent) (China Statistics Press 2019, table 3-7). If 50 percent of southern Xinjiang’s population was to exist in an embedded form (at a Han:minority population ratio of 50:50), its total Han population share would have to nearly triple to 25.0 percent.

5.2 Projecting Southern Xinjiang’s Natural Population Growth

In order to estimate southern Xinjiang’s future natural population growth rate without the heavy-handed government interference that came into force especially since early 2018, we turn to projection scenarios found in Chinese academic publications.

In a 2020 study published in an international peer-reviewed journal, a group of Xinjiang-based researchers from the Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences (CAS), projected that Hotan’s population would increase from its 2017 level of 2.52 million to between 3.92 and 4.27 million by 2040 (Huo et al. 2020). The team employed the population projection application PADIS-INT and based their projection on Hotan’s Total Fertility Rate (TFR) between 2010 and 2017, which they calculated to be 3.3, and therefore substantially higher than the TFR of 1.8 specified for Hotan in Xinjiang’s 2010 census data. A TFR of 3.3 is comparable to Pakistan, a Muslim nation without family planning. The team created several projection scenarios, assuming that Xinjiang would abandon family planning along with the rest of the nation. The high projection scenario assumed that birth rates

⁴¹ Xinjiang Statistical Yearbook 2019, table 3-7.

would increase when government birth restrictions were removed. The low projection scenario did not assume such an increase, and instead postulated that by 2040, the TFR would gradually fall to the 1.8 level of the 2010 census.

Another projection was conducted by graduate research supervised by Xinjiang University's Ma Xiaoyu (Pang 2018). This study employed 2010 census TFR data. The scenario that assumed no changes in Xinjiang's pre-2017 family planning policies estimated that southern Xinjiang's population (including Bayingol) would grow from 11.58 million in 2017 to approximately 15.3 million by 2040 (by 32.1 percent). In contrast to the CAS study, it did not account for actual population changes after 2010, including substantial numbers of unreported births uncovered by the state after that year (cf. Zenz 2020a, 5, 10).

This present study adopts the more sophisticated and internationally peer-reviewed CAS study's low projection for Hotan, which forecasts a 55.4 percent population increase between 2017 and 2040 (versus 69.1 percent increase for the high growth scenario). The low projection is chosen since Hotan's annual natural population growth (2010 to 2017) was on average 3.5 per mille higher than in the other three prefectures, and to approximate a projection that comes closer to the birth allowances stipulated in Xinjiang's 2017 family planning policy. To further guard against possible overestimation stemming from extrapolating Hotan's data, the low projection's estimate was reduced by 30 percent, resulting in a projected population increase for southern Xinjiang between 2017 and 2040 of 38.8 percent, to 14.35 million. This increase is only slightly above the 2018 Xinjiang University study's 32.1 percent. It estimates southern Xinjiang's ethnic minority population at 13.14 million by 2040 – the baseline figure for estimating population loss due to birth prevention.

The year 2040 was chosen as the target timeframe, because 20 years broadly corresponds to a generation in southern Xinjiang's young population structure. Also, the years between 2020 and 2040 appear to be a reasonable time frame within which the Xinjiang government would expect to achieve significant changes in the population structure and achieve lasting results in its "counterterrorism" efforts. Finally, longer time frames result in progressively less accurate projections.

The extrapolation of population projections for Hotan to the four prefectures of southern Xinjiang is obviously not as accurate as the use of a modeling application with relevant data for each prefecture. However, the CAS study also had to rely on estimation and interpolation due to a lack of detailed data for Hotan. It is argued that the results are broadly sufficient for providing a very general basis for estimating the development of southern Xinjiang's population without the recent most severe forms of state interference. The CAS study took into account a small amount of migration flows as reported in the 2010 census, with minor impact on its projections. This is deliberately ignored here, because it is assumed that the state will engineer much more substantial in- and out-flows in order to "optimize" the ethnic population composition.

5.3 Estimating Ethnic Minority Population Loss from Birth Prevention

The author performed iterative calculations in an Excel spreadsheet in order to estimate southern Xinjiang's population dynamics and ethnic composition by 2040 for different natural population growth rates.

Besides official baseline population figures for 2017 from the 2018 Xinjiang Statistical Yearbook (table 3-7), other variables were:

- Annual Han in-migration
- Han natural population growth in southern Xinjiang
- Ethnic minority out-migration (including labor transfers) to other regions
- Ethnic minority natural population growth

Between 2011 and 2018, the Han population in southern Xinjiang (including the XPCC) fell by nearly 26,000, from 881,149 to 865,203. Plans to increase this population by 300,000 by 2022 include Bayingol, a region with a significant number of XPCC settlements. If 80 percent of this figure (240,000) would go to southern Xinjiang (excluding Bayingol), then that would result in an annual in-migration of 48,000 Han. Given the costs and difficulties of attracting Han to stay permanently in the region, it is unlikely that a sustained annual net Han in-migration would exceed 40,000 per year, and even that is an ambitious number given the historic precedent. For the sake of reaching a conservative estimate, an ambitious figure of 45,000 is assumed for the model.

In section 4.3, we had seen that most of the XPCC's population increase stems from in-migration. Between 2010 and 2018, its natural population growth rate amounted to only 1.37 per mille. For the purpose of this study, a fixed growth rate of 1.5 per mille is assumed, again a conservative figure that likely overestimates cumulative Han natural population growth until 2040. However, this variable has very little influence on the outcomes.

The rate of natural ethnic population out-migration combined with state-induced labor and other population transfers is more complex to estimate. Between 2017 and 2019, an estimated 79,000 Uyghurs and others were transferred from Xinjiang to other parts of China, most of them from southern Xinjiang (Zenz 2021, footnote 51). It is unclear whether these transfers imply a permanent relocation, and it is unlikely that the state would permanently relocate substantial numbers of Uyghurs through this mechanism. The same lack of information goes for labor transfers between southern and northern Xinjiang. In the first 10 months of 2018, 364,000 or 13.3 percent of all labor transfers had destinations outside people's home prefectures, but these are not necessarily permanent relocations, and these types of figures usually include seasonal labor transfers (Zenz 2021, 17). A rare exception is a report that states that in the first 11 months of 2017, Hotan transferred 22,368 laborers to other parts of Xinjiang on a "long-term stable" (*changqi wending* 长期稳定) basis (Zhang 2017). In 2019, 1,800 laborers from Hotan began started work for a 3-year contract in Urumqi (Wang 2020). For the purpose of this model, it is assumed that annually, 50,000 workers are transferred to other parts of Xinjiang (35,000) and China (15,000) in the form of a permanent relocation. It is also assumed that by 2020, 200,000 transferred laborers had been already permanently relocated to other parts of Xinjiang (150,000) and China (50,000). While these are obviously assumptions, these last figures only influence the resulting calculations in relatively small ways. The calculations assume that the natural population growth rate of permanently transferred laborer populations is the same as that for southern Xinjiang.

Table 2 shows five scenarios with different natural population growth rates.⁴² Southern Xinjiang's natural population growth rates for 2018/19 and planned rates for 2020/21 broadly range between 5.00 and -2.50 per mille. It is unlikely that births would be reduced to zero (resulting in a natural population

⁴² The calculations assume that southern Xinjiang's natural population growth in 2019 and 2020 was 2.00 and 1.00 per mille respectively, which is broadly based on the limited available evidence (compare Table 1).

growth rate of -6.37 per mille)⁴³, because that would quickly become noticeable and lead to a gradual collapse of the education system.

Ethnic minority natural population growth rate (per mille)	-5.0 per mille	-2.5 per mille	0 per mille	+2.5 per mille	+5.0 per mille
Southern Xinjiang's ethnic minority population in 2040 (and compared to 2017)	7.48 million (-1.99 million)	7.88 million (-1.58 million)	8.31 million (-1.15 million)	8.76 million (-0.70 million)	9.24 million (-0.23 million)
Southern Xinjiang's Han population in 2040	1.91 million	1.91 million	1.91 million	1.91 million	1.91 million
Han population share in 2040	25.5 percent	24.2 percent	22.9 percent	21.8 percent	20.7 percent
Total population in southern Xinjiang in 2040 (and compared to adapted CAS model projection)	9.38 million (-4.96 million)	9.79 million (-4.56 million)	10.22 million (-4.13 million)	10.67 million (-3.68 million)	11.14 million (-3.20 million)
Ethnic minority population transferred outside of Xinjiang by 2040 (including their natural population growth)	1.13 million	1.16 million	1.20 million	1.24 million	1.28 million
Total ethnic minority population (in southern Xinjiang plus those transferred to other parts) by 2040	8.61 million	9.05 million	9.51 million	10.00 million	10.51 million
Ethnic minority population projection w/o state interference by 2040	13.14 million	13.14 million	13.14 million	13.14 million	13.14 million
Ethnic minority population loss from birth prevention by 2040	4.53 million	4.09 million	3.63 million	3.14 million	2.63 million

Table 2: Southern Xinjiang population projections. See attached spreadsheet.

The results indicate that lower growth rates have several important advantages for the state:

1. Only the lower two population growth scenarios reach Han population shares close to around 25 percent by 2040.
2. The Han population required to achieve the 25 percent target is lower.
3. The resulting total population in southern Xinjiang by 2040 is significantly lower, ranging from 9.38 to 11.14 million (instead of the 14.35 million predicted by the adapted CAS model).
4. For natural population growth rates between -5.00 and 0 per mille, the resulting total population in southern Xinjiang is lower than that of 2018 (of 10.39 million). This reduces the pressure on the region's carrying capacity and renders the policing and surveillance of the population easier and less costly.

⁴³ Southern Xinjiang's average death rate for in 2018 weighted by population was 6.37 per mille. Source: Xinjiang Statistical Yearbook 2019, tables 3-6 and 3-7.

The estimated population loss from suppressed birth rates in southern Xinjiang (excluding Xinjiang's other ethnic minority populations) ranges between 2.6 and 4.5 million.

In the author's opinion, a natural population growth rate between -2.5 and +2.5 per mille represents the most likely range, enabling concealment from international scrutiny, and a functional education system and society while achieving the desired Han population share within a generation and limiting the total population within reasonable limits. This means that the resulting ethnic minority population loss would range between 3.1 and 4.1 million of 13.14 million (24 to 31 percent). Within the 2.5 to +2.5 per mille range, the 2018 graduate research at Xinjiang University that used Total Fertility Rates from the 2010 census without accounting for subsequent population changes or unreported births arrives at lower but still substantial ethnic minority population loss figures of 2.0 to 3.5 million out of a total of projected ethnic minority population of 12.5 million (20 to 28 percent).

A growth scenario of around -2.5 per mille might be most ideal, because it results in a total population that is broadly within the region's ecological carrying capacity, while also nearly achieving a 25 percent Han population share within about 20 years.

Importantly, actual or planned natural population growth in much of southern Xinjiang already broadly ranges between a -2.5 and +2.5 per mille bracket.

6.0 Conclusion

This paper has established the existence of an intent to reduce ethnic minority population growth in order to increase the proportionate Han population in southern Xinjiang. This intent is explicitly espoused by Chinese academics and officials, and to a significant degree reflected in related policies. Involuntary birth prevention measures could result in a loss of several million lives. A smaller ethnic minority population will also be easier to police, control and assimilate.

Arguably, this strategy gives us a clear understanding of the government's long-term intent regarding southern Xinjiang's ethnic minority populations, especially in light of recent natural population growth declines following a large-scale campaign to prevent births.

The most concerning aspect of this strategy is that ethnic minority citizens are demonized and framed as a "problem" that threatens an otherwise "healthy" society (cf. Roberts 2020, 16-17). Some Chinese scholars even called it a "human problem" (*rende wenti* 人的问题). This language is akin to purported statements by Xinjiang officials that problem populations are like "weeds hidden among the crops" where the state will "need to spray chemicals to kill them all" (Zenz 2018, 21). The fact that the region no longer discloses population statistics significantly heightens related concerns.

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