

THE NATURAL RESOURCE CURSE IN XINJIANG

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Abstract

Natural resource abundance may have political or economic consequences. Some argue that natural resource abundance can have a negative effect on democratic transition and the consolidation of democracy. Such effect is conceptualized as “natural resource curse” in political aspect. But the mechanism through which natural resource stock leads to a less democratic regime with more authoritarian features is not yet fully clarified. In this paper I will use a case study about Xinjiang to test my theory. That is, distributional inequality between Han Chinese and the ethnic minorities over the resource revenue results in more resistance from the Uyghurs, thus the government responds with a stricter social control. This paper is aimed at offering both a theoretical creation and an explanation for the current instability in Xinjiang.

Key Words: Natural Resource Curse, Xinjiang, Uyghurs, Political Economy

1. Introduction

The Xinjiang Uyghur Autonomous Region has never been such a hot topic among scholars and politicians as it is now. Previously famous for its splendid scenery and delicious fruits, the region is now one of the most dangerous places in China under the threat of terrorist attacks. When President Xi Jinping was visiting Xinjiang and emphasizing a hardline policy against any terrorists and separatists in April 2014, he might not have been expecting another terrorist attack in Urumqi, the capital of the region, soon after he left the city. If someone is looking for any violent resistance that is directly targeted at the rule of the Chinese Communists in this country, Xinjiang can hardly be excluded.

The Chinese Communist Party after the Cultural Revolution upholds a creed that economic development is the best and final solution to all political and social problems, the so-called “Development is the Absolute Principle” (*fazhan jiushi ying daoli*). In contrast to the impression that Xinjiang’s economy falls far behind from coastal areas, its economic development has been very impressive since the 1990s. Oil and gas production is the pillar industry of Xinjiang,¹ and in the opinion of the

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authority and many people as well, it is supposed to bring prosperity and stability to the region. Obviously this is not true. We can't help but wonder whether there are some political consequences of resource abundance and the ongoing resource exploitation in Xinjiang.

Both economists and political scientists have been studying the so-called "natural resource curse" for years, as they observe in many Middle Eastern and African countries that natural resource may not necessarily be a good thing for political or economic development. The second largest oil producing country in 2014, Saudi Arabia, along with her oil-rich neighbors, cannot be counted as democracies.² The largest oil producer today, Russia, is more of a hybrid regime than a mature democracy. Another resource-dependent country Nigeria is not only suffering from political instability but also from economic downturn, high government debt rate, poverty, pollution, etc. In the field of political economy, the argument that natural resource has a negative impact on either political democratization or economic growth, or to both simultaneously, is conceptualized as the "natural resource curse". If we are to find out whether the natural resource also has some negative effects in Xinjiang, the natural resource curse may serve as a good theoretical framework for causal analysis.

This paper argues that the natural resource curse also exists in Xinjiang. Following this introduction, the second section will provide a literature review about theories and empirical studies of natural resource curse. The third section of this article will begin with a brief introduction to the contemporary politics, economy and society of the Xinjiang Uyghur Autonomous Region, with a focus on Xinjiang's energy development in recent years. I will then employ both quantitative and qualitative methods to present a causal link between resource abundance and authoritarian rule: natural resource abundance and resource exploitation generate distributional inequality, since many Uyghurs youth who cannot speak Mandarin Chinese fluently are disadvantaged in the job market; then the Uyghurs have an incentive to challenge the current regime, by means of mass protests and violence, including terrorist attack; the government responds with more repression, thus strengthening the authoritarian rule. The conclusion section will offer some further discussions and the possible solution to the resource curse in Xinjiang, based on the causal link

¹ "Energy Industry of Xinjiang is Playing a More Important Role in National Economy [xinjiang nengyuan gongye zai guomin jingji zhong de diwei tuxian]," Xinjiang Statistical Bureau, available at: http://dss.gov.cn/Article_Print.asp?ArticleID=244017. Last accessed: April 5th, 2014.

² According to *Regime by Type 2013, Polity IV Project*, Saudi Arabia, Kuwait, Bahrain, Qatar, UAE, Oman, and Iran are categorized as "autocracy", while Egypt and Jordan are categorized as "closed anocracy". Iraq and Yemen are considered being "open anocracy", but these two countries are currently suffering from civil war.

provided in Section Three.

2. Literature Review

A large body of scholarship has been studying the so-called “natural resource curse”. The traditional thought is that natural resource abundance has a negative effect on political democratization. Ross starts this stream of literature. He points out that there exist three causal mechanisms through which oil does have anti-democratic effects: a “rentier effect”, which suggests that resource-rich governments use low tax rates and patronage to relieve pressures for greater accountability; a “repression effect”, which argues that resource wealth retards democratization by enabling governments to boost their funding for internal security; and a “modernization effect”, which holds that growth based on the export of oil and minerals fails to bring about the social and cultural changes that tend to produce democratic government. He tests all these explanations and finds them robust.³ Many other scholars also employ statistical methods to support the existence of such a curse effect. For example, Jensen and Wantchekon wrote one of the most cited papers in this field, and presented empirical evidence suggesting a robust and negative correlation between the presence of a sizable natural resource sector and the level of democracy in Africa.⁴ One can also find similar conclusions (though the explanations may be slightly varied) made by a number of authors.⁵ Interestingly, Ross later rejects two of the three explanations given earlier using improved empirical estimation strategies—only the “rentier effect” remains plausible.⁶

However, in recent years, more and more empirical researches cast doubt on the traditional thought. They believe that the negative effect of natural resource abundance does not exist, or even that resource stock helps to promote democratization. Among this stream of literature, Haber and Menaldo’s work is

³Michael Ross, “Does Oil Hinder Democracy?” *World politics* 53 (Apr. 2001): 325-361.

⁴Leonard Wantchekon, “Why Do Resource Dependent Countries Have Authoritarian Governments?” *Journal of African Finance and Economic Development* 5 (2, 2002): 57–77.

⁵See Wantchekon, “Why Do Resource Dependent Countries Have Authoritarian Governments?” Benjamin Smith, “Oil Wealth and Regime Survival in the Developing World, 1960–1999,” *American Journal of Political Science* 48 (Mar. 2004): 232–246. Ellis Goldberg, Erik Wibbels and Eric Mvukiyeh, “Lessons from Strange Cases Democracy, Development, and the Resource Curse in the US States,” *Comparative Political Studies* 41 (Apr. 2008): 477–514. Catherine Norman, “Rule of Law and the Resource Curse: Abundance versus Intensity,” *Environmental and Resource Economics* 43 (Aug. 2008): 183–207. Michael Ross, “Oil and Democracy Revisited,” Unpublished paper, 2009. Silje Aslaksen, “Oil and Democracy: More than a Cross-country Correlation?” *Journal of Peace Research* 47 (Jul. 2010): 421–431. Kristopher Ramsay, “Revisiting the Resource Curse: Natural Disasters, the Price of Oil, and Democracy,” *International Organization* 65 (Jul. 2011): 507–529.

⁶Ross, “Oil and Democracy Revisited.”

worthy of mentioning in detail. They point out that previous empirical tests that have been used to test the resource curse hypothesis do not tend to employ time series–centric methods, nor specify counterfactual paths of political development; after improving the estimation strategy, they find that increases in resource reliance are not associated with authoritarianism. In fact, in many specifications they generate results that suggest a “resource blessing”.⁷ Similarly, Wacziarg finds strictly no evidence in favor of the so-called “First Law of Petropolitics”, using a variety of time series and panel data methods over a wide range of country subsamples and time periods.⁸

The major problem of these empirical researches is that they can only report the effect of natural resource on average, but fail to explain why the resource curse occurs in certain countries while resource blessing is existent in others, like Norway. These countries’ varied paths from resource wealth to political and economic outcomes suggest the need for conditional theories of the resource curse.⁹ Ross himself also agrees with Dunning at this point, and admits that the empirical analysis tells us something about the average effect that oil wealth has on democracy, but surely the ultimate effect of oil wealth will vary under different conditions—and identifying these conditions lies at the frontier of research on this problem.¹⁰ Obviously, large-n regression is not a very useful method to identify such conditions. Therefore, we must also have a close look at relevant propositions made by formal modelers, who have been contributing to our understanding about the causal mechanisms.

Much work has been done to explore the mechanisms through which resource stock has a negative effect on the endurance of democracy. Wantchekon shows that when the state institutions are weak so that budget procedures either lack transparency or are discretionary, resource windfalls tend to generate and consolidate incumbency advantage in democratic elections; such an advantage could incite the opposition to resort to political violence in competing for political power, thereby generating political instability and authoritarian governments.¹¹ Similarly, Caselli argues that countries with large amounts of natural resources experience power struggles, in the sense that potential challengers have a stronger incentive to seek to replace the existing government by means of *coup d’etats*, or other forms of forced change in leadership. As a result, “the greater probability of

⁷Stephen Haber and Victor Menaldo. “Do Natural Resources Fuel Authoritarianism? A Reappraisal of the Resource Curse,” *American Political Science Review* 105 (Feb. 2011): 1-26.

⁸Romain Wacziarg, “The First Law of Petropolitics,” *Economica* 79 (Oct. 2012): 641-657.

⁹Thad Dunning, “Resource Dependence, Economic Performance, and Political Stability,” *Journal of Conflict Resolution* 49 (Aug. 2005): 451-482.

¹⁰Ross, “Oil and Democracy Revisited.”

¹¹Wantchekon, “Why Do Resource Dependent Countries Have Authoritarian Governments?”

losing power to a successful challenger reduces the effective rate of return to investing in the country's development for the existing elite, and may induce them to undersupply human capital, infrastructure, contractual enforcement, and the rule of law."¹² These formal models are aimed at explaining why resource curse happens in some country but not others, and they do contribute much to our understanding on this topic. However, it doesn't mean that students of petropolitics have nothing to do any more. First, I would argue that treating leaders (or elites) as resource holder and the masses as challengers in the competition over resource revenue may result in a fallacy of oversimplification. In countries enjoying resource blessing, leaders still enjoy much more than the masses. Drawing a sharp line between leaders and masses may obfuscate who is the real challenger and who have the incentive to rebel. As Rosser suggests, existing explanations for the resource curse do not adequately account for the role of social forces or external political and economic environments in shaping development outcomes in resource abundant countries.¹³ Among these social forces or political environment, ethnic tension is an important intermediate variable. Sudan, for example, is marked by tribal strife over oil; and in Aceh, Indonesia, regional separatism has been fanned by secrecy about oil payments and public misunderstanding about their scale.¹⁴ If distributional inequality over resource revenue exists between different ethnic groups, the negative effect of resource abundance may become much more significant. The second criticism against these deductive models (and also formal models used widely in many other topics) is that although they are always perfectly self-consistent, empirical support is far from sufficient. Therefore, in this paper I will not only incorporate ethnic tension in the theoretical framework, but also try to provide an empirical case to present the observable causal process.

A case study about Xinjiang would be intellectually beneficial. In order to "test" a theory by using the method of case study when we have only one case at hand, "congruence procedures" and "process tracing" are needed. When using congruence procedures, the investigator explores the case looking for congruence or incongruence between values observed on the independent and dependent variable and the values predicted by the test hypothesis.¹⁵ For example, in our case, if distributional inequality over resource revenue truly causes more resistance from the Uyghurs and the government responds with more repression as our hypothesis

¹²Francesco Caselli and Tom Cunningham. "Leader Behaviour and the Natural Resource Curse," *Oxford Economic Papers* 61 (Jul. 2009): 628-650.

¹³Andrew Rosser, *The Political Economy of the Resource Curse: A Literature Survey* (Vol. 268). Brighton, UK: Institute of Development Studies, 2006.

¹⁴Thomas Palley, "Lifting the Natural Resource Curse," *Foreign Service Journal* 80(Dec. 2003): 54-61.

¹⁵Stephen van Evera, *Guide to Methods for Students of Political Science* (New York: Cornell University Press, 1997), 58-63.

predicts, we should observe the increase, or at least, variation in these key variables: resource production, distributional inequality, minority resistance (measured by the frequency of mass protests and terrorist attack, etc.), and government repression (using proxies like security budget, Internet access control, etc.). However, correlation is different from causality. We should also present how these variables are connected with each other, and that's why process tracing is needed. In process tracing, the investigator explores the chain of events or the decision-making process by which initial case conditions are translated into case outcomes.¹⁶ Therefore, in our case we should present how resource abundance in Xinjiang leads to a strengthened authoritarian regime step by step.¹⁷

Some may also criticize that Xinjiang—a provincial unit but not a nation—is not a proper case, as almost all other works about this topic are based on the analysis of national variations. This is not true. For example, Goldberg et al. point out that the American states look a lot like “contemporary accounts of many mineral economies: economic decisions were driven by the prospect of huge returns in oil, rent seeking was prevalent, and state governments colluded with private firms and each other to maximize the rents they might extract from the oil industry.”¹⁸ If we consider the fact that almost half of the total value-added of the industrial sector in Xinjiang is from the oil industry (Xinjiang Statistical Yearbook, 2013),¹⁹ and that oil and gas

¹⁶Van Evera, *Guide to Methods for Students of Political Science*, 64.

¹⁷Jensen and Wantchekon argue that executive discretion over resource rents leads to both less political liberalization (transition of democracy) and a greater likelihood of democratic breakdown (consolidation of democracy). They use various “proxies” to measure different dependent variables. In this paper, the likelihood of democratic transition rather than the likelihood of democratic breakdown is more relevant, as China is clearly not yet a liberal democracy like many western countries, but under a typical authoritarian regime. Besides, they treat the likelihood of democratic transition (the level of democracy) and the likelihood of being an authoritarian (the level of authoritarianism, or the endurance of authoritarian rule) as the same indicator, as they are on the same regime type spectrum. Similarly, I am not going to differentiate the level of democracy with the level of authoritarian rule, following the tradition in resource curse literatures. See Nathan Jensen and Leonard Wantchekon. “Resource Wealth and Political Regimes in Africa,” *Comparative Political Studies* 37 (Sep. 2004): 816-841.

¹⁸Goldberg et al., “Lessons from Strange Cases Democracy, Development, and the Resource Curse in the US States,” 477-514.

¹⁹In the year of 2012, the total value-added of the industrial sector was 285.006 billion RMB in Xinjiang. Among them oil industry contributes 138.617 billion, coal mining contributes 14.161 billion, production of electric power (which is indirectly related to resource exploitation) contributes 25.762 billion. See “Statistical Communiqué on the 2012 National Economic & Social Development of the Xinjiang Uygur Autonomous Region,” in *Xinjiang Statistical Yearbook 2013*, p.10.

exploitation represents almost half of Xinjiang's fiscal revenues,²⁰ there is no reason why we should exclude such a provincial unit in our discussion on the resource curse. Therefore, there's no substantial difference between studying a nation-state and a provincial unit.

3. The Natural Resource Curse in Xinjiang

In this section I will elaborate how natural resource abundance, distributional inequality, ethnic tensions, and tighter authoritarian control are related in the case of Xinjiang. Before we go into causal analysis, a brief introduction to contemporary Xinjiang with a focus on the development of the energy industry is provided.

3.1. Natural Resource Abundance in Xinjiang

The Xinjiang Uyghur Autonomous Region (also called XUAR for short),²¹ one of China's five autonomous regions for ethnic minorities, situated in the border area of northwest China and the hinterland of the Eurasian Continent, occupies an area of 1.6649 million sq km, accounting for one sixth of Chinese territory. As an important section of the ancient Silk Road, it has a land border of 5,600 km bounded by eight countries.²² In 2012, Xinjiang has a resident population of 22.32 million. Among them 8.47 million are Han Chinese, the majority ethnic group in China, and 10.52 million are the Uyghurs, the most populated ethnic group in the region.²³ If we compare the Sixth National Population Census conducted in 2010 to the Fifth Population Census conducted ten years ago, Han Chinese population increases by 16.77%, while the increase rate for minorities is 19.12%.²⁴ Besides the Uyghurs and Han Chinese, there are many other ethnic groups in Xinjiang as well, mainly the Kazak, Hui, Mongolian, Kirgiz, Xibe, Tajik, Uzbek, Manchu, Daur, Tatar and Russian.

²⁰Nicolas Becquelin, "Staged development in Xinjiang," *The China Quarterly* 178 (Jun. 2004): 358-378.

²¹Independence activists also use "East Turkistan" to refer to the region. I agree that both "East Turkistan" and Xinjiang (which means "new territory" in Chinese) are linked with politics. But in this paper I will follow the mainstream in official documents and academia, which is Xinjiang.

²²"History and Development of Xinjiang," Information Office of the State Council of the PRC, May 2003, available at: <http://www.china.org.cn/e-white/20030526/>. Last accessed: April 5th, 2014.

²³Statistical Bureau of Xinjiang Uyghur Autonomous Region, *Xinjiang Statistical Yearbook 2013* (Beijing: China Statistics Press, 2014).

²⁴"Main Data Bulletin about the 2010 Sixth National Census in Xinjiang [xinjiang weiwuer zizhiqu 2010 nian diliuci quanguo renkou renkou pucha zhuyao shuju gongbao]," Xinjiang Statistical Bureau, May 6th, 2011, available at: http://www.stats.gov.cn/tjsj/tjgb/rkpcgb/dfrkpcgb/201202/t20120228_30407.html. Last accessed: April 5th, 2014.

The Gross Domestic Product (GDP) of Xinjiang in 2012 is 7505.31 million RMB, and the GDP per capita is 33796 RMB in that year.²⁵

Xinjiang is important for China not only because of its geographical position but also its abundance of coal, crude oil, and gas. Xinjiang has 40% of coal reserve, 22% of petroleum reserve, and 28% of gas reserve in the country.²⁶ Besides, the coal deposits in Xinjiang are of higher quality compared to deposits in other provinces, as it contains less sulfur, while the oil deposits are more accessible because most of them are located in shallow and middle strata oil-reservoir. Oil-gas fields in Xinjiang are concentrated in Karamay, Tarim Basin, and Turfan Basin. They are 3 of China's 17 major gas-oil fields on the land, and are among the most productive ones.²⁷ Energy development is no doubt a growth engine for Xinjiang's economy (See Figure 1). Ever since the 1990s, in the effort to boost the provincial economy—in part to attract and support a larger population—an economy strategy was devised to “rely on two pillars”, “one black, one white” (*yi hei yi bai*): oil exploitation and cotton cultivation.²⁸ This is the so-called “Twin Strategy”, which China's plans to “Develop the West” (*xibu dakai fa*) are built on.²⁹ Becquelin also indicates that “by far the two most critical projects designated as part of Xinjiang's campaign to Open Up the West are the west to east natural gas pipeline and the comprehensive rehabilitation of the Tarim River,” both of them are energy related projects.³⁰ The West-East Gas Pipeline is now not only transferring 12 billion cubic meters of natural gas annually from Xinjiang to coastal areas where demand for energy is the highest, but also connected to the gas field in Turkmenistan, and possibly Iran in the future. As a result, oil and gas exploitation represents almost half of Xinjiang's fiscal revenues.³¹ We can't help but wonder what social and political consequence of

²⁵Statistical Bureau of Xinjiang Uygur Autonomous Region, *Xinjiang Statistical Yearbook 2013*.

²⁶“The Blowout-type Development of Energy Industry Has Taken Up in Xinjiang [xinjiang nengyuan chanliang de jingpen dashi yicheng],” available at: <http://www.musilin.net.cn/2010/0805/47075.html>. Last accessed: April 5th, 2014. “Xinjiang's Oil Reserve is as much as 22% of the Country [xinjiang shiyou ziyuanliang zhan quanguo 22E%],” available at: <http://oil.in-en.com/html/oil-08270827182117453.html>. Last accessed: April 5th, 2014.

²⁷“Location of Oil Reserve in China [zhongguo shiyou fenbu],” CNPC, available at: http://www.cnpc.com.cn/News/zxwx/sybk/syys/sysh/201310/20131011_C191.shtml?COLLCC=7320640&COLLCC=2517866373&. Last accessed: April 5th, 2014.

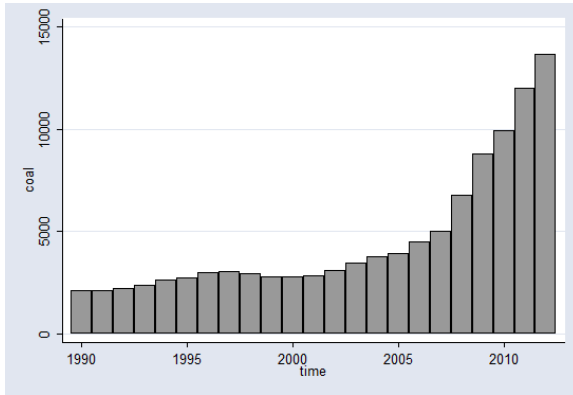
²⁸Nicolas Becquelin, “Xinjiang in the Nineties,” *The China Journal* 44 (Jul. 2000): 65-90.

²⁹Graham Fuller and Frederick Starr, *The Xinjiang Problem* (Central Asia-Caucasus Institute, 2004), 69.

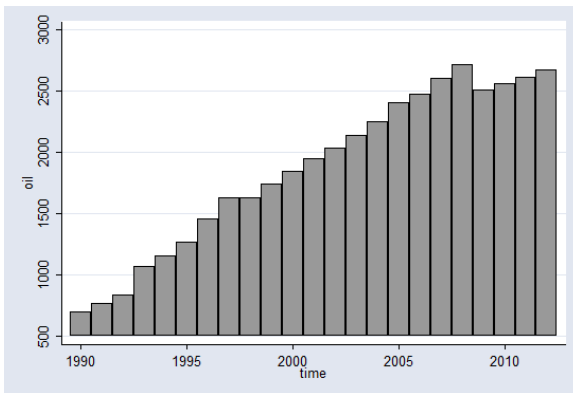
³⁰Becquelin, “Staged development in Xinjiang,” 358-378.

³¹“Xinjiang Enticement,” *Energytribune*, available at: <http://www.energytribune.com/5028/xinjiang->

natural resource abundance would be in such a region.



Crude Coal (10000 tons)



Crude Oil (10000 tons)

enticements#sthash.BMnWbjsu.8A4ZlX2B.dpbs. Last accessed: April 5th, 2014. Also see: Nicolas Becquelin, "Staged development in Xinjiang," 358-378.

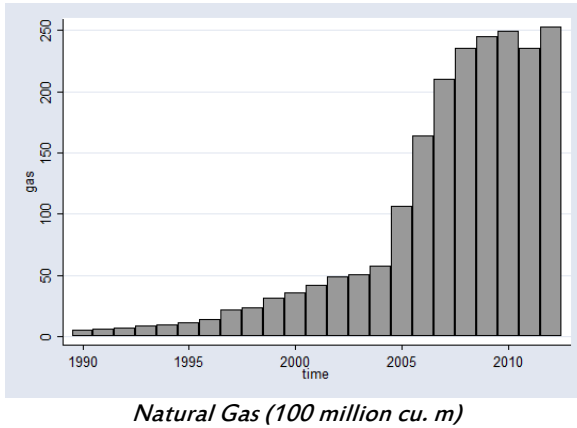


Figure 1. Output of Major Energy Products in Xinjiang since 1990

Source: Xinjiang Statistical Yearbook 2013

3.2. Distributional Inequality over Resource Revenue

The development of energy industries leads to a rapidly growing economy in Xinjiang (See Figure 2). But the local residents in Xinjiang, particularly, the Uyghurs, may not enjoy the benefits of oil and gas exploitation. Some activists claim that those involved with the development of energy wealth are mainly Han Chinese, rather than the Uyghurs, and the profits go mainly to Beijing.³² But the fact that the profits go mainly to Beijing cannot explain the anger of the Uyghurs. As Xinjiang's "public economy" (*gongyou jingji*) is in a dominant position,³³ particularly in resource related industries, it would be a strange thing if the profits were not "going to Beijing" and into the pocket of big oil companies like CNPC and Sinopec. But in fact, you can hardly find any Han people complaining about that, even though many of them are also ordinary people like the Uyghurs. The problem does not lie in how much the central government or state-owned companies gain from Xinjiang's abundance in coal, oil and gas, but in how little the Uyghurs receive compared to their Han neighbors in Xinjiang. The key point is, resource exploitation brings a large number of migrants from other provinces, and these migrants deprive the Uyghurs (and also many local Han people who have lived in Xinjiang since early 1950s) of employment opportunities. All these happen mainly because of an irreversible process of marketization: no one can get a job for sure in a relatively

³² Fuller and Starr, *The Xinjiang Problem*, 69.

³³ Heavy industry contributes almost two-thirds of the XUAR's GDP, and over 80 per cent of its industrial assets are under the management of state-owned enterprises. See Becquelin, "Staged development in Xinjiang," 358-378.

free market. In this section, I will first provide some empirical evidence on the correlation between energy development and migration boom in Xinjiang, then show why the newcomers have annoyed the Uyghurs.

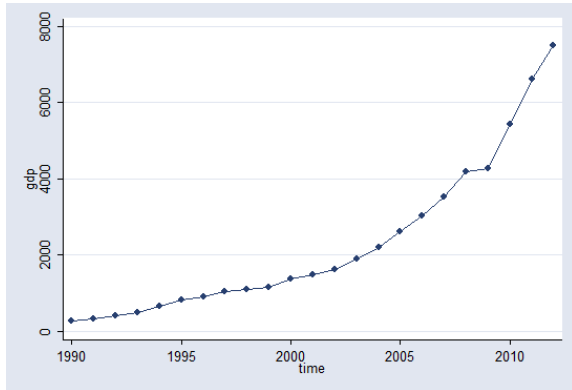


Figure 2. GDP of Xinjiang (100 million RMB)

Source: Xinjiang Statistical Yearbook, 2013

Human rights activists have been criticizing that the oil industry is now completely run by Han, and resource exploitation has brought most of its workers from other parts of China, thus deprived local minorities of employment opportunities.³⁴ If we compare the ethnic minority proportion in areas where either oil or gas production is reported with areas without significant resource production, we do find that the minorities are usually outnumbered by the Han people in oil or gas-rich prefectures (see Table 1).³⁵

³⁴“Uyghur Homeland, Chinese Frontier: The Xinjiang Work Forum and Centrally Led Development,” available at: <https://uhrp.org/press-release/new-report-uhrp-uyghur-homeland-chinese-frontier-xinjiang-work-forum-and-centrally-led>. Last accessed: April 13th, 2015.

³⁵The *Xinjiang Statistical Yearbook of Energy Development 2007* [xinjiang nengyuan tongji nianjian 2007] is the only source that we can know about the geographical allocation of resource production. In Table 1 I also exclude the four cities directly under the jurisdiction of XUAR government, as they are under the control of Xinjiang Production and Construction Corps (XPCC) that is a semi-military organization. See the following discussion about XPCC.

Table 1. Ethnic Minority Rates and Energy Production

	Percentage of Ethnic Minorities in 2010	Oil or Gas Output Reported in 2007
XUAR	59.52	Not Applied
Urumqi City	25.09	Yes
Qaramay City	18.35	Yes
Turpan Administrative Offices	74.98	Yes
Hami [Kumul] Administrative Offices	30.65	No
Changji Hui Autonomous Prefecture	24.69	No
Bortala Mongolian Autonomous Prefecture	35.04	No
Bayangol Mongolian Autonomous Prefecture	40.71	Yes
Aksu Administrative Offices	77.11	No
Kizilsu Kirgiz Autonomous Prefecture	93.22	No
Kashgar Administrative Prefecture	92.00	No
Hotan Administrative Offices	96.41	No
Ili Kazak Autonomous Prefecture	64.78	No
Tacheng [Tarbagatai] Administrative Offices	34.27	No
Altay Administrative Offices	61.45	No

Source: The Sixth National Population Census and Xinjiang Statistical Yearbook of Energy Development 2007

In order to confirm whether the natural resource industry has brought too many workers from other provinces, I make use of the demographic information at the county level in the fifth and sixth national population censuses conducted in 2000 and 2010,³⁶ respectively, and estimate simple “first-differenced equations”.

³⁶The seven municipalities directly under the jurisdiction of the Autonomous Region Government are excluded, as they are under the direct control of the Xinjiang Production and Construction Corps (XPCC). Thus these municipalities are more of a semi-military organization where migration registration is much stricter than in other administrations. Moreover, missing data problem also occurs to these samples.

Table 2. Variable Descriptions

Dependent Variable	
$\Delta mipop$	= migration population from other provinces in 2010 – migration population from other provinces in 2000
Independent Variables	
$\Delta segdp$	= GDP of secondary sector of Xinjiang in 2010 – GDP of secondary sector of Xinjiang in 2000, billion RMB
Δgdp	= GDP of Xinjiang in 2010 – GDP of Xinjiang in 2000, billion RMB
$\Delta enpop$	= population working in energy industry of Xinjiang in 2010 – population working in energy industry of Xinjiang in 2000

Sources:

Xinjiang Statistical Yearbook, 2001, 2011.

National Population Census, 2000, 2010.

Table 3. Estimation Results

	Model 1	Model 2	Model 3	Model 4
$\Delta segdp$	3167.94*** (315.47)		3000.14*** (237.67)	
$\Delta enpop$		151.28*** (28.21)	132.93*** (16.54)	73.16*** (13.04)
Δgdp				2151.68*** (115.48)
Constant	-3520.29 (2695.18)	6051.86 (3321.539)	-1707.492 (2035.16)	-5589.19*** (1582.11)
Number of Observations	84	84	84	84
Prob>F	0.00	0.00	0.00	0.00
R-square	0.55	0.26	0.75	0.86
Adjusted R-square	0.55	0.25	0.74	0.86

Note: The numbers in parentheses are standard errors. *p < 0.05. **p < 0.01. *** p < 0.001.

Although the data on the output of the energy industry is not available at county level, the population working in energy-relevant industry can be the proxy of the development of the energy industry. From Model 1, we can tell that industrialization

in general significantly affects the increase of migrants from other provinces: a one-billion increase in the GDP of secondary industry in ten years is associated with approximately 3200 more migrants in the local area. From Model 2, we can tell that the development of natural resource industry alone can also attract migrants, even though these newcomers may not necessarily directly involved in the production of oil or gas. It is reasonable that energy exploitation may have some positive spillover effect, like attracting migrants to open restaurants or providing other services around, or these people are simply the family of employees working in the energy industry. Controlled for different economic indicators (Model 3 and 4), the positive effect remains highly significant, even though it is less salient, since many other economic activities can also attract migrants. Thus, it is evident that between 2000 and 2010, the development of the energy industry, along with the industrialization in a broad sense, is responsible for the migrant flood in Xinjiang.

Concerning the question whether such migration flood has changed local ethnic compositions, I use the same data set and calculate the correlation between the absolute change of minority rates and the change of migrant rates as a percentage of local population. The correlation is -0.64, which indicates that migrants from other provinces did largely reduce the rate of ethnic minorities in Xinjiang as is expected.

Many scholars have also been studying the difference between the Han people and the Uyghurs in terms of income level in an effort to assess the impact of migration boom, and they do have a similar conclusion that in fact, looking at the so-called high-status jobs, particularly, the administrative jobs in the government and other public sectors, one could hardly find any ethnic differences in terms of salary level. Minorities are not discriminated by receiving a lower salary in these positions, if we examine various data sets spanning from the 1980s till present day.³⁷ The problem is, most minorities are not working in the public sectors where the salary level is basically the same across different ethnic groups. According to Layne and Liang's studies, Han Chinese occupy 71% of the high-end jobs such as officials and managers and 57% of professional jobs, while Uyghurs only comprise 17% of government officials.³⁸ Han people are particularly overrepresented in two major

³⁷ Emily Hannum and Yu Xie, "Ethnic Stratification in Northwest China: Occupational Differences between Han Chinese and National Minorities in Xinjiang, 1982-1990," *Demography* 35 (Aug. 1998): 323-333. China Layne and Zai Liang, "Migration, Occupational Attainment, and Han-minority Relations in Xinjiang, China," Paper presented at the American Sociological Association Annual Meeting, Boston, 2008. Xiaowei Zang, "Uyghur-Han Earnings Differentials in Urumchi," *The China Journal* 65 (Jan. 2011): 141-155. Xiaogang Wu and Xi Song, "Ethnic Stratification amid China's Economic Transition: Evidence from the Xinjiang Uyghur Autonomous Region," *Social Science Research* 44 (Mar. 2014): 158-172.

³⁸ Layne and Liang, "Migration, Occupational Attainment, and Han-minority Relations in Xinjiang, China."

economic sectors: the oil industry and the Xinjiang Production and Construction Corps (XPCC),³⁹ which together had Han Chinese as over 95% of their labor force.⁴⁰ The preference of XPCC is not a secret. According to materials posted on the XPCC's Personnel Testing Authority, the Corps would hire 840 civil servants from the Xinjiang through its 2006 recruitment exam, of whom 38 would be ethnic minorities and the remainder all Han Chinese.⁴¹ Therefore, it would be meaningless if we only look at the salary level of the Uyghurs in high-end positions. We should instead pay more attention to those working as construction workers, farmers, etc., as these jobs are directly the target of migrants from other provinces.

But I would disagree with Ilham Toxti, who firmly believes that the migration boom mainly is the result of political consideration, which is to assimilate the Uyghurs through encouraging more Han people to work and live in Xinjiang.⁴² Instead, I would argue, based on the estimation results above, it is the market that is responsible in the end. Though some label this type of migration "ethnic genocide" or "demographic annihilation," Zhu and Blachford believe it is the self-initiated/market-driven migration that has a very direct impact on both demographic and employment situations in ethnic minority areas.⁴³ As they suggest, "the real problem is, market mechanisms do not provide solutions to deal with the negative outcomes of economic competition but may in fact exacerbate problems." And the difficulty for government is that "its intervention and regulatory power is constrained because of market mechanisms and private ownership domination in investment and business projects": many jobs demand certain skills and education levels that many Uyghurs do not have, and many Han employers prefer hiring

³⁹The XPCC is a semi-military governmental organization that has its own administrative and judicial system in certain cities and settlements in Xinjiang. It was founded in 1954 by Wang Zhen, and has been playing a key role in maintaining the stability in Xinjiang. In 2012, XPCC has a population of 2648636, with an agricultural population of 1192468. See Statistical Bureau of Xinjiang Uygur Autonomous Region, *Xinjiang Statistical Yearbook 2013*.

⁴⁰Yuchao Zhu and Dongyan Blachford, "Economic Expansion, Marketization, and Their Social Impact on China's Ethnic Minorities in Xinjiang and Tibet," *Asian Survey*, 52 (4, 2012): 714-733.

⁴¹"Civil Servant Recruitment in Xinjiang Favors Han Chinese," Congressional-executive Commission on China, July 25th, 2006, available at: <http://www.cecc.gov/publications/commission-analysis/civil-servant-recruitment-in-xinjiang-favors-han-chinese>. Last accessed: April 5th, 2014.

⁴²Ilham Toxti, "Is There no Need to Rethink about China's Policy towards Ethnic Minorities [zhongguo de minzu zhengce bu xuyao fansi ma]?" available at: <http://chilanbagh.wordpress.com/2010/10/28/%E4%B8%AD%E5%9B%BD%E7%9A%84%E6%B0%91%E6%97%8F%E6%94%BF%E7%AD%96%E4%B8%8D%E9%9C%80%E8%A6%81%E5%8F%8D%E6%80%9D%E5%90%97%EF%BC%9F/>. Last accessed: April 5th, 2014.

⁴³Zhu and Blachford, "Economic Expansion, Marketization, and Their Social Impact on China's Ethnic Minorities in Xinjiang and Tibet," 714-733.

people with whom they find it easier to communicate.

In a relatively free market where companies, including state-owned ones, emphasize efficiency, Han Chinese do have more advantages simply because they can speak Mandarin Chinese more fluently than the Uyghurs, for whom Mandarin is a completely different language. According to a survey, only 19.88% of the Uyghurs have the ability to speak Mandarin, ranking the 50th among the 54 minorities surveyed.⁴⁴ The difficulty for the Uyghurs to master Mandarin also has a negative effect on their education level, which directly reflects an employee's human capital. That is the reason why the ADB report of 2001 identifies language policy in Xinjiang as one of the most fundamental obstacles to the upward mobility of the Uygur.⁴⁵ More than a skill indispensable for job-hunting, language also matters for building connection with government in a "state-capitalism" country like China. Vicziany and Zhang's case studies examine how Han Chinese businessmen and ethnic minority businessmen differ in terms of the connection with government officials inside and outside Xinjiang. As they suggest, language serves to be an obstacle for Uyghurs businessmen in developing good relationships with government officials, thus talented Uyghurs can only turn to private sectors like opening a restaurant. On the other hand, Han businessmen in Xinjiang like Sun Guangxin who is now one of the richest men in China can earn much more in a state-capitalism system, as they can use their influence in the government to participate in the highly profitable oil drilling or real estate business. Besides, Sun's experience in the army is also very helpful for his business. The result is, some Uyghurs businessmen even decide to shift their investment away from Xinjiang to foreign countries like Turkey, and they do believe that they will face less constraints abroad.⁴⁶

Unfortunately, this situation is not going to change in the short term. Zhu and Balchford say that in the end there are few policy options available to the government: restriction of migration to Xinjiang and Tibet will not be a viable policy option, for both normative and practical reasons.⁴⁷ In addition to the unemployment problem, the larger and larger income gap between the two ethnic groups in Xinjiang also contributes to increasing distributional inequality. Wu and Song analyze a sample from the 2005 mini-census of Xinjiang to examine ethnic

⁴⁴Enze Han, "External Cultural Ties and the Politics of Language in China," *Ethnopolitics: Formerly Global Review of Ethnopolitics* 12 (Mar. 2013): 30-49.

⁴⁵*Asian Development Bank. The 2020 Project: Policy Support in the People's Republic of China—Final Report and Policy Directions* (Manila, 2002), 276-277.

⁴⁶Marika Vicziany and Guibin Zhang. *The Rise of the Private Sector in Xinjiang (Western China): Han and Uygur Entrepreneurship*. In the 15th Biennial Conference of the Asian Studies Association in Canberra, 2004.

⁴⁷Zhu and Blachford, "Economic Expansion, Marketization, and Their Social Impact on China's Ethnic Minorities in Xinjiang and Tibet," 714-733.

stratification in China's labor markets, with a special focus on how ethnic earnings inequality varies by employment sector. They find that the Han-Uyghur earnings gap was negligible within government/public institutions, but increased with the marketization of the employment sector; it was the largest among the self-employed, followed by employees in private enterprises and then employees in public enterprises.⁴⁸ Considering the fact that most Uyghurs are not working in public sectors or administrative positions of state-owned companies, we can conclude that the majority of Uyghurs has a lower income level compared to the Han Chinese, which exacerbates the distributional inequality between the two ethnic groups in addition to the unemployment problem among the Uyghurs. As marketization continues irreversibly, it is possible that the income gap will become larger, and the future is not very optimistic.

In this section, we can see that the natural resource abundance in Xinjiang is not improving the life of the Uyghurs. Instead, it brings too many migrants from other provinces in China who have more advantages in looking for jobs when they compete with the local minorities—the fluency in Mandarin makes migrants (including floating workers) more favorable in the job market.⁴⁹ Indeed, against the background of marketization, the era when minority graduates could be offered a job for sure by the government is gone forever.⁵⁰ We now see natural resource doesn't necessarily lead to a better life. But how does it turn out to be a “curse”? How are the dissatisfactory and anger of the Uyghurs related to the strengthening of an authoritarian regime? The next section will continue to trace the causal link and lay out the whole picture of the causal mechanism.

3.3. Challenges from the Uyghurs and Strengthening of the Authoritarian Rule

As we mention in the literature review about the natural resource curse, natural resource itself provides an incentive for “losers” in oil or gas exploitation to rise and challenge the position of those who benefit most from energy industry. This sort of rebel incentive has been treated as the link between natural resources and civil

⁴⁸Wu and Song, “Ethnic Stratification amid China's Economic Transition: Evidence from the Xinjiang Uyghur Autonomous Region,” 158-172.

⁴⁹Migrants can be categorized into two groups: permanent migrants and floating migrants (floating workers). While the former have local household registration status (*hukou*), the latter is living without it. According to population census conducted in 2000, Xinjiang has 1.917 million floating migrants, approximately 10.4% of the provincial population. The share of floating population in Xinjiang is the highest among all western provinces, and one of the highest across the nation. See Zai Liang and Zhongdong Ma, “China's Floating Population: New Evidence from the 2000 Census,” *Population and Development Review* 30 (Sep. 2004): 467-488.

⁵⁰This can partly explain why many people in the minority ethnic groups miss Mao Zedong's era, when there was no need for graduates to look for a job in a planned economy.

war.⁵¹ If ethnic tension is relevant to this issue, in other words, if one can draw a sharp line between ethnic groups that enjoy most revenue from natural resources and those that almost gain nothing, it is predictable that the conflict over the resource revenue will be more severe than in places where ethnic tension is not existent.

Table 4. Major Terrorist Attacks in Xinjiang since the 1990s⁵²

Year	Date	Place
1990	April 5 th	Akto County, Kizilsu Kirgiz Autonomous Prefecture
1992	February 5 th	Urumqi
1993	June 17 th	Kashgar
1997	February 5 th	Yining City, Ili Kazak Autonomous Prefecture
	February 25 th	Urumqi
2008	August 4 th	Kashgar
2009	July 5 th	Urumqi
2012	February 28 th	Yecheng County, Kashgar
	July 18 th	Hotan
2013	April 23 rd	Bachu County, Kashgar
	June 26 th	Shanshan County, Turpan
	August 20 th	Yecheng County, Kashgar
	November 16 th	Bachu County, Kashgar
	December 15 th	Shufu County, Kashgar
2014 ⁵³	December 30 th	Shache County, Kashgar
	January 24 th	Xinhe County, Aksu
	February 14 th	Wushi County, Aksu

This is exactly what's going on in Xinjiang, and we have a good indicator to measure the strength of "resistance" of the dissatisfied Uyghurs—the frequency of terrorist

⁵¹Paul Collier and Anke Hoeffler. "Greed and Grievance in Civil War," *Oxford Economic Papers* 56 (Aug. 2004): 563-595. Päivi Lujala, "The Spoils of Nature: Armed Civil Conflict and Rebel Access to Natural Resources," *Journal of Peace Research* 47 (Jan. 2010): 15-28.

⁵²Source: Wenmu Zhang, "The Silk Road and Security in West China [sichou zhilu yu zhongguo xiyu anquan]," *World Economics and Politics* (shijie zhengzhi yu jingji) 403 (3, 2014): 4-27.

⁵³The data was collected until March, 2014. In fact, since 2014, the Chinese authority has imposed more restrictions on the report on violence in Xinjiang, thus the information has become less available and the validity is also more questionable thereafter. See "US anti-terrorism report criticizes CCP [mei fankong baogao zhipi zhonggong]," Uyghur Human Rights Project, available at: <http://chinese.uhrp.org/article/1272325244>. Last accessed: February 19th, 2016.

attacks. The Chinese government has been accusing the East Turkestan Islamic Movement (ETIM) of being responsible for terrorist attacks inside Xinjiang, and in recent years, outside the autonomous region. It is reported that the ETIM has close connection with the fundamentalists from the Taliban, who has been offering the Xinjiang separatists with training programs, weapons, and financial support. ETIM has also been listed as a terrorist organization by the U.S. government since 2002. Although the terrorists in Xinjiang are mainly driven by religious fanaticism, the larger and larger income gap between the Han people and ethnic minorities also attracts many young Uyghurs to resort to violence. Then, we must clarify whether ethnic tensions in China are on the rise in recent years, in particular, whether they are on the rise in Xinjiang along with the ongoing energy development. The answer is yes, but only in Xinjiang.⁵⁴ The following table shows the frequency of terrorist attacks in Xinjiang since the 1990s.

From Table 4 we can see that since 2008 there has been an increasing tendency in terrorist attacks. Most of these attacks happened in Southern Xinjiang, where most residents are the Uyghurs rather than Han Chinese. Besides, in recent years, the threat of terrorism is not limited in Xinjiang. For example, the crash incident in Tiananmen in 2013 and the Kunming massacre in March 2014 both show that any place in China can be the target of terrorists. Therefore, using the frequency of terrorist attacks as a “proxy” to measure the strength of resistance of Uyghurs, we can conclude that the ethnic tensions are on the rise in Xinjiang, and the challengers will not easily give up their ambition in the revenue generated by oil exploitation. Confronted by the challenges from ethnic minorities, what kind of policy the government is likely to adopt? As is mentioned above, political scientists and economists have contributed much to our understanding about the political “curse” of natural resources, and they have generalized some important concepts. Among them the widely discussed ones include the so-called “rentier effect” and “repression effect”. The “rentier effect” means that resource-rich governments use low tax rates and patronage to relieve pressures for greater accountability. In contrast, the “repression effect” argues that resource wealth retards democratization by enabling governments to boost their funding for internal security.⁵⁵ We can say that almost all debates in this field originate from these two concepts. They are not only useful for theoretical discussion, but can also help us explain the reaction of the Chinese government—both central and local—when the situation in Xinjiang deteriorates because of the challenges from the Uyghurs. “Patronage” and “Repression” are just like “Carrot and Stick”. Indeed, this has been

⁵⁴“Are Ethnic Tensions on the Rise in China,” A ChinaFile Conversation, available at: <https://www.chinafile.com/are-ethnic-tensions-rise-china>. Last accessed: April 5th, 2014.

⁵⁵Ross, “Does Oil Hinder Democracy?” 325-361.

the approach the Chinese government adopts to govern this resource-rich region.⁵⁶ On one hand, it is not a strange thing that an authoritarian regime will choose to impose more control over the society when the stability is threatened, and the Chinese government is no exception. Sometimes such social control methods may do harm to the rights of citizens. The best indicator to measure accurately how much the Chinese government has strengthened its control in Xinjiang is the budget for “managing the stability” (*weiwen*): according to official statistics released in January 2013, regional authorities allocated 9.34 billion RMB to the public security sector in 2012, a 23-percent increase over 2011.⁵⁷ Besides, we can also see some other evidences that directly reveal a harder policy in Xinjiang. One of them is the information blockade that was introduced after the street riots on July 5th, 2009. The SMS system was completely shut down for almost 7 months, while it took 10 months to restore the very basic access to the Internet. Before the restoration, Xinjiang was almost isolated from the outside world.

Another good measurement of the level of authoritarian is the frequency of mass protests that broke out in Xinjiang. I have to emphasize that the number of mass protests in Xinjiang, and in many other provinces of China as well, is *negatively* related to the strength of authoritarian rule. The reason is that collective activities are most worrisome for the Chinese government, whose censorship program is aimed at curtailing collective action by silencing comments that represent, reinforce, or spur social mobilization, regardless of content.⁵⁸ According to a report by Li and Tian, Guangdong, which is supposed to be the most “open” and “freest” province partly because of its proximity to Hong Kong, has nurtured more mass protests in the past 13 years than any other province. There have been 267 mass protests with more than 100 participants in the past 13 years in Guangdong. In contrast, at the same period, the number is 5 in Xinjiang.⁵⁹ Bovingdon gives his explanation in this way: officials and public security personnel have kept a tight lid on public protest in Xinjiang; as a consequence, most protest has been individual or private. He also notices that the frequency of protests in Xinjiang was declining

⁵⁶“Xinjiang Enticement,” Energytribune, available at: <http://www.energytribune.com/5028/xinjiang-enticements#sthash.BMnWbjsu.8A4ZIX2B.dpbs>. Last accessed: April 5th, 2014.

⁵⁷ “Report on Xinjiang 2012 Budget Implementation Situation and 2013 Draft Budget [xinjiang 2012 nian yusuan zhixing qingkuang he 2013 nian yusuan cao’an de baogao],” available at: http://www.gov.cn/gzdt/2013-02/19/content_2334747.htm. Last accessed: July 8th, 2014.

⁵⁸Gary King, Jennifer Pan, and Margaret E. Roberts, “How Censorship in China Allows Government Criticism but Silences Collective Expression,” *American Political Science Review* 107 (May 2013): 326-343.

⁵⁹Lin Li and He Tian. *Annual Report on China’s Rule of Law 2013* (zhongguo fazhi fazhan baogao 2013), (Beijing: Social Science Documentation Publishing House), 2014.

while they were on a dramatic rise in the rest of China.⁶⁰ Thus, it is reasonable to interpret the declining frequency of mass protests in Xinjiang as a sign of strengthening social control and authoritarian rule. Besides, we can also see many other implications for “repression”.

When more “repression” is introduced, one can see more authoritarian features in the regime. But that is not the whole story. No regime can survive without any support from the people. In the case of Xinjiang, the Chinese government not only suppresses the resistance of the Uyghurs, but also uses patronage to improve the situation and appease the anger. Less than one year after the July 5th riots, in May 2010, top central government and Communist Party leaders held a “work forum” to set state economic and political objectives for Xinjiang. The meeting marks the first work forum directed at the XUAR (authorities have held five similar work forums to date addressing the Tibet Autonomous Region and, recently, other Tibetan autonomous areas of China). The forum stresses development and stability as dual goals.⁶¹ In terms of economic and social development, some reform methods are raised. First, 19 provinces and municipalities, places in the rest of China that get particular benefits from Xinjiang’s oil and gas, have been designated as Xinjiang partners. They are required to contribute 0.3 to 0.6 percent of their fiscal revenues from 2011 to 2020 to support Xinjiang’s development. Starting in 2011 the region will receive more than \$10 billion in financial aid from this program. Second, producers of crude oil and natural gas in Xinjiang will be levied a new 5 percent tax. This new tax system will be based on sales price instead of volume as it was before. The new tax system, which went into effect on June 1st, 2010, is aimed at increasing revenue for the local government and is part of the support package unveiled at the central work forum held in Beijing in May.⁶² CNPC’s annual crude oil production in Xinjiang are 18 million tons, while Sinopec produces 7 million tons each year. If the resource tax is collected at 5 percent, CNPC and Sinopec, China’s top two oil companies, will add 5 billion RMB (\$732 million) in tax revenue to the region annually as oil prices stabilize at \$80 per barrel.⁶³ The central government expects that by increasing fiscal transfer and resource taxes, the local governments in

⁶⁰Gardner Bovington, *The Uyghurs: Strangers in Their Own Land* (New York: Columbia University Press, 2010), 21-22.

⁶¹“Central Leaders Hold Forum on Xinjiang, Stress Development and Stability as Dual Goals,” Congressional-executive Commission on China, available at: <http://www.cecc.gov/publications/commission-analysis/central-leaders-hold-forum-on-xinjiang-stress-development-and>. Last accessed: April 5th, 2014.

⁶²“Xinjiang Enticement,” Energytribune, available at: <http://www.energytribune.com/5028/xinjiang-enticements#sthash.BMnWbj5u.8A4ZIX2B.dpbs>. Last accessed: April 5th, 2014.

⁶³Li Woke, “Xinjiang Reportedly to Pilot 5% Tax on Gas, Oil,” available at: <http://www.globaltimes.cn/business/china-economy/2010-05/535762.html>. Last accessed: April 5th, 2014.

Xinjiang will have more funding to provide public goods, like education, medical service, low-rent housing, etc. As a report by the Uyghur Human Rights Project comments, the work forum has slightly realigned the previous Great Western Development Drive (GWDD in short, *xibu dakaifa* in Chinese) policies when viewed from the grassroots. The new policies' small shift has been toward more investment in human development and more spatially dispersed infusions of capital, which differs from the GWDD large-scale investment in natural resources predominately located in the north of the region.⁶⁴ What's more, the Xinjiang government also tries to tackle the unemployment problem directly. For example, in state "redistributive agencies" like public institutions and work units (*danwei*), ethnic differences in employment and job attainment have become very limited and actually favors ethnic minorities. This situation reflects the fact that the state's affirmative action policy continues to benefit local ethnic minorities in certain parts of the state sector.⁶⁵

This is the "rentier effect" approach that generates the political natural resource curse. Supporters for patronage approach assume that taxpayers tend to care less about democracy and political rights as the government can offer good subsidies. But more field research is still needed to explore the political attitude and political culture in Xinjiang, particularly among the Uyghurs, when they are offered so many good deals.

4. Conclusion and Further Discussions

In Section Three I developed a causal theory in order to explain why a political

⁶⁴"Uyghur Homeland, Chinese Frontier: The Xinjiang Work Forum and Centrally Led Development," available at: <https://uhrp.org/press-release/new-report-uhrp-uyghur-homeland-chinese-frontier-xinjiang-work-forum-and-centrally-led>. Last accessed: April 13th, 2015.

⁶⁵Xiaowei Zang, "Uyghur-Han Earnings Differentials in Urumchi," 141-155. Patronage may have some positive effect. Fiscal transfer from other more prosperous provinces and investment from the central government have mitigated the negative effect of natural resource abundance on economic development. One of the major causes of an "economic curse" is the crowd-out effect of resource exploitation: resource abundance attracts too much governmental investment that is supposed to be used in promoting the development of private sectors and long-term economic growth, see: Andrew Rosser, *The Political Economy of the Resource Curse: A Literature Survey* (Vol. 268) (Brighton, UK: Institute of Development Studies, 2006). Xinjiang can avoid the economic tragedy of Nigeria because it has the financial support from the central government. Moreover, those "patronage" methods that are aimed at improving the lives of poor Uyghurs may also generate some "positive externality": an economy can always benefit from a higher education level of employees. Therefore, there is no economic curse in Xinjiang at this moment, but there is indeed a political curse of natural resources instead.

natural resource curse exists in Xinjiang. The whole logic can be generalized as follows: natural resource abundance and resource exploitation attracts so many migrant workers from other provinces that local minorities, in particular, many Uyghurs youth, are deprived of employment opportunity, since they cannot speak Mandarin Chinese fluently and are disadvantaged in the job market; the unemployment problem is actually a form of distributional inequality, which serves as an incentive for the Uyghurs to resist and challenge the current regime, by means of mass protests and violence, including terrorist attacks; the government responds with “carrot and stick”, imposing strict control over the society as well as offering patronage; these methods will strengthen the authoritarian rule, but more field research is needed to clarify whether the Uyghurs will give up their appeals when patronage is offered. The whole framework can be simplified as the following path graph (see Figure 3).

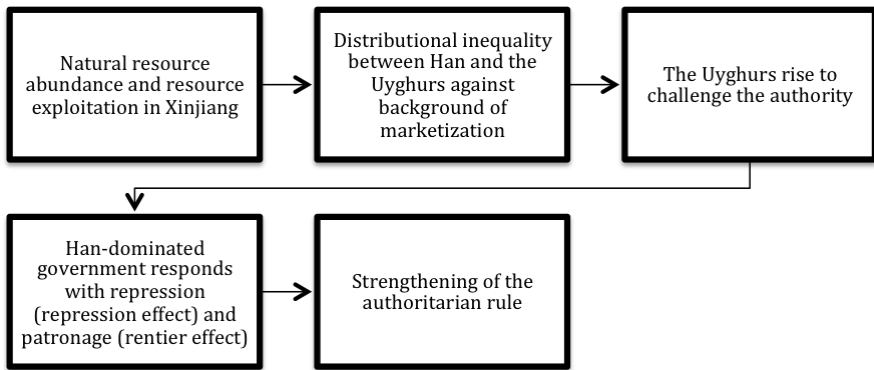


Figure 3. Path Graph of the Conclusion

A case study on Xinjiang can not only consolidate the theory of political natural resource curse and extend the literature to a wider empirical pool, but also invite more research on the political and economic outcomes of resource exploitation. Specifically, future researchers could consider to work on the following directions that this paper is unable to cover because of length or methodological limits. First, since the causal chain is generalized through studying only one case, it may not be able to explain other cases, thus at this stage should not be regarded as being decisive or universal. More large-n empirical work or formal modelling is needed before we can fully understand how factors like resource abundance, distributional inequality, regime type, and ethnicity interact in leading to a resource blessing or resource curse. Second, this paper does not examine the so-called “modernization

effects" that holds that growth based on the export of oil and minerals is not likely to bring about the social and cultural changes that tend to produce democratic government.⁶⁶ To capture the causal mechanism of such effects, anthropological field research is indispensable even though it is expected to be restricted by the authority. Third, I do not address exclusively the economic effects of energy industry development here,⁶⁷ but hypothesize economic factors as the intermediate variable in the causation theory. Whether Xinjiang can continue to be one of the growth engines of China is worthy of further investigation that may lead us to more progress in theorization in this field.⁶⁸

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⁶⁶Ross, "Does Oil Hinder Democracy?" 325-361.

⁶⁷See, for example, Richard M. Auty, *Sustaining Development in Mineral Economies: The Resource Curse Thesis* (New York: Routledge, 1993).

⁶⁸Despite the lowering growth rate of China in recent years, the GDP growth rate of Xinjiang in 2014 is still as high as

10%, much higher than the national average of 7.3%. The official data of 2015 is not available yet, but it can be expected that, in addition to the so-called "new normality" in which China's economy is shifting from investment-led to consumption led-growth, the low oil price in the international market can also have a negative impact on the energy industry in Xinjiang. Under this new scenario, resource abundance may turn out to be a curse. More empirical observation is still needed before we can reach a conclusion on this aspect.

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