5 Production, Commerce, and Transportation

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5.1 Production

[77] Tibet, situated on an elevated plateau, is characterized by a very cold climate. The range of natural crops is limited, offering just one harvest each year. As per British measurements, the elevation of Lhasa is approximately 11,800 *chi* 尺 above sea level.[1] Yet, the presence of high mountains surrounding the city leads to a dry climate, with winters that are notably warm. Barley is the primary crop grown around Lhasa, followed by peas as the second most common crop. Other varieties of crops include wheat, mustard, and potatoes. The area is home to a selection of vegetables like leafy greens, cabbage, radishes, cucumbers, lettuce, bulrush, celery, and carrots. Chives and fennel can be found from time to time as well. Vegetable farming is largely undertaken by people from Sichuan, given that Tibetans show minimal interest in vegetables and possess fewer skills in their production. Surrounding Lhasa, the predominant trees are willows and poplars, along with a few walnut trees and other species whose names escape me, which are absent in the Inner Lands. Conifers species, including pines and cypresses, are largely associated with mountainous environments and are not commonly found in plain regions. Fruit trees like peach, apricot, and

1 11,800 *chi* (as standardized during the Republican era), translates to approximately 3,929 meters above sea level. Based on current measurements, Lhasa stands at an altitude of 3,650 meters (11,975 feet).

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apple are often grown in the gardens of the nobility. On Bhaiṣajyarāja Hill,[2] located in the private estate of the Dalai Lama's court physician, numerous peach trees are laden with such an abundant harvest that their branches bend down from the weight. I was invited to visit in the eighth month and had the opportunity to taste some of those peaches, which remained tasty and sweet. Yet, the apples were not as impressive.

The Kham region has similar conditions to those found in Lhasa, although it has a more limited selection of vegetables. A friend of mine who resides in Karze made an effort to raise eggplants and chili peppers, yet the plants withered before bearing any fruit. However, chili peppers are found growing in the Chamdo region, while eggplants are farmed in Lhasa. The Drakyap[3] region also cultivates vegetables, although the output is relatively small. The Kongpo region, which is at a slightly lower elevation than Lhasa, grows apricots that are somewhat sweeter. In the region of Ngari Tö,[4] situated in Posterior Tibet, a specific type of apricot known for its exceptionally high sugar content is considered a premium offering. This fruit is quite expensive and is often served to guests in Lhasa. Generally, these products are meant for local consumption and are unlikely to be exported.

In Tibet, the number of nomadic families surpasses that of farming families by a considerable margin, sometimes by as much as ten times. Their main products include butter, cheese curd, sheep, cattle, hides, and wool, with wool being the foremost export. More than a million *jin* 斤 of wool are transported to India each year.[5] In contrast, products like hides and butter are only available for sale **[78]** within Tibet. Yak tails stand out as another notable export. Tibet is a source of medicinal goods like musk, deer antler, anemarrhena, fritillaria, goldthread, and cordyceps, and it also offers animal pelts, including those from foxes, sand foxes, cats, lynxes, otters, and the skins of tigers and leopards, which are largely distributed by Han traders.

Within the industry sector, various products, such as woven carpets, brocade paintings, wooden items, tormas,[6] and Tibetan incense, are

2 C. Yaowang shan 藥王山; T. Lcags po ri; Chakpori, literally 'Iron Mountain', is a hill in Lhasa near the Potala Palace sacred to Vajrapāṇi and features over 5,000 rock carvings. A Kadampa monastery established there in the twelfth century later became Sakya in the thirteenth. In 1695, Desi Sanggye Gyatso (1653-1705), regent to the fifth Dalai Lama, and Nyingto Yonten Gonpo founded the Chakpori Medical College. The college was destroyed in 1959 during the Chinese invasion of Lhasa but was reestablished in 1992 in Darjeeling under the fourteenth Dalai Lama. Fazun refers to Chakpori in Chinese as 'Medicine Buddha Mountain'.

3 C. Zhaliao 乍了; T. Brag g.yab.

4 C. Ori duo 哦日垛; T. Mnga' ris stod; 'Upper Ngari'.

5 During the Republican era the *jin* 斤, a unit of mass, was standardized to five hundred grams. So, over one million *jin* would amount to over five hundred tons.

6 C. tuima 退瑪; T. gtor ma. A torma (S. bali) is a sculpted dough offering central to tantric Buddhist rituals. These conical figures, often adorned with intricate decorations, are offered to a range of deities – from protective spirits to buddhas – to obtain blessings or avert obstacles. Ritual texts (S. balividhi) describe their construction and use, with variations in shape and materials depending on the recipient. In Tibet, tormas became a medium for elaborate butter sculptures, some so large that ladders were required to complete their intricate designs. A prominent ritual, tordok (T. gtor bzlog), performed at the end of the year, symbolically channels accumulated negativities into the torma, which is then burned in a dramatic ceremony of sound and light. During the New Year (T. Lo gsar), Lhasa held competitions showcasing the artistry of torma-making. See Chapter Eight for Fazun's account of the butter sculpture competitions held during the Tibetan New Year festivals.

distributed to regions in Qinghai and Mongolia. The mineral resources found in Tibet remain largely underutilized and have not been systematically surveyed. According to local lore, the territories lying to the west of Sakya Monastery in Posterior Tibet are filled with riches in gold and silver. North of Lhasa, riverbeds are said to contain gold deposits – some of which have already been extracted. Gold ore has been discovered near Dakpo,[7] situated east of Lhasa. Still, these findings remain unreported to the proper authorities and have not been put to use. In the areas of Xikang under Han administration, including places like Drewo and Nyakrong,[8] mining activities are mostly under way. However, the output has been minimal due to the use of antiquated methods.

On the border regions between Qinghai and Golok, there is a mountain called Machen Gangri.[9] It is said to be a large gold mine. The local people regard it as a holy and auspicious site, and as such they prohibit any mining. Still, Han people residing in Qinghai tend to secretly mine the area while pretending to harvest medicinal rhubarb. When discovered by locals, significant conflicts can arise, sometimes resulting in casualties. I heard that one year in Golok, amidst one of such conflicts, more than twenty Han people and over ten Tibetans – potentially including Hui nationals – lost their lives, which led to the cessation of clandestine mining operations.

There are also many salt lakes in Tibet. Those in the area north of Nakchu are especially renowned. In Lhasa and neighboring areas, the salt that is consumed is mostly transported from the north. Golok features its own salt reserves, which supply regions like Karze. Around Chamdo, a type of red salt is produced, although it is milder in flavor and not as high in quality as the salt used in Lhasa. Saline wells and lakes, such those found along the Min River 岷江, are also common.[10] Yet, these resources can only cater to local consumption and are insufficient to meet external demand.

The variety of plant species is so extensive that it cannot be fully elaborated upon.

7 C. Dapu 達樸; T. Dwags po.

8 C. Zhanhua 瞻化; T. Nyag rong. During the Republican period, under the Xikang administration, the Chinese name of Nyakrong was Zhanhua. After 1950, it changed to Xinlong 新龙.

9 C. Maqin bangri 瑪勤邦日; T. Rma chen gangs ri. Also known as Anyé Machen (T. A myes rma chen), Machen Gangri is a sacred peak in the Golok region of Amdo and among Tibet's most revered mountains. Rising to an elevation of 6,282 meters, the mountain is regarded as a three-dimensional Cakrasaṃvara maṇḍala and is included in the Tibetan list of twenty-four holy sites (S. pīṭha). It also holds geographical importance as the source of the Yellow River (C. Huanghe 黄河). The highest peak of Anyé Machen is regarded as the abode of Machen Pomra (T. Rma chen spom ra), the presiding deity of Anyé Machen and the region's chief earth lord (T. sa bdag). Like other pre-Buddhist deities, he was incorporated into the Buddhist pantheon after being converted by Padmasambhava. In the fifteenth century, Tsongkhapa, himself a native of Amdo, appointed Machen Pomra as the chief protector deity (S. dharmapāla) of Ganden Monastery. Machen Pomra is traditionally depicted as golden, clad in a cuirass and helmet, holding a lance with a flag, and carrying a mongoose-skin sack while riding a white horse.

10 The Min River flows through Sichuan Province. Its source is in the Min Mountains 岷山, at the eastern edge of the Tibetan Plateau. It descends southward, cutting through the Sichuan Basin, before merging with the Yangtze River near Yibin 宜宾. The river holds historical and agricultural importance, particularly as the site of Dujiangyan 都江堰, a water management system built in 256 BCE that continues to sustain the fertile Chengdu Plain.

5.2 Commerce

[79] Commerce is the backbone of the economy. A brief overview of the different kinds of traders in Tibet and their livelihoods was provided earlier. The main export goods were also mentioned in the previous section. I will now proceed to offer further insights about imports. The main imports from India consist of cotton fabrics, predominantly sourced from the eastern regions, along with woolen items from both eastern and western areas. The primary source of silk textiles is the Inner Lands, although silks from Russia are also available. Precious stones, pearls, and corals are imported from India and the East. Several color pigments are derived from the West. Still, the madder that is used to dye wool in Tibet comes from India and Bhutan. Most of the hardware and sundry goods, along with crystal and white sugars, are mostly produced in India. The primary imports from the Sichuan border consist mainly of tea, with textiles coming in second, while silk products and fabrics are relatively rare. From Xining 西宁,[11] Tibet's main imports include raw silver, silk fabrics, mules, and horses, while gold is not a major import. The various goods brought in by traders from Nepal consist primarily of products from India, along with significant amounts of fabric. There exist also a range of businesses that deal in tea produced in Yunnan.

Several high-ranking Tibetan officials take part in commercial activities to supplement their income and have established branches in India, Shanghai, and Beiping – rarely do people in the Inner Lands become aware of these operations. Notably, the Pomdatsang[12] family firm, which serves as a representative for Tibetan authorities in the business sector, operates various outlets across the Inner Lands. It exports furs and medicinal materials to the Inner Lands and imports primarily silk textiles into Tibet. In Tibet, the firm frequently engages in monopolistic behavior by acquiring complete inventories of specific products and preventing others from making purchases. Those who secretly buy these goods risk having their household confiscated if they are discovered. This is an expression of autocratic power. I am not aware of the occurrence of such practices in other regions.

Tibetans have a pronounced sense of independence, and women from middle- and lower-class families frequently engage in trade or craft production to provide for their own livelihood. In places like Lhasa, Gyantsé **[80]**, and Shigatsé, numerous women earn a living by setting up stalls on the streets. By eight or nine o' clock in the morning, they place their goods along the streets or on boards outside their houses. They remain seated by their items, watching over them while also working on their crafts. When there are no customers around, they come together in groups, sharing laughs and discussions, filling the streets with their chatter. When buyers reach the location, they start negotiating the prices. Their products are usually secured on credit from larger establishments, with payment pushed back for a month or two. They draw on the earnings from this period to cover

11 T. Si ling.

12 C. Bangdacang 邦達倉; T. Spom mda' tshang. The Pomdatsang family, originally traders from Markham (T. Smar khams), relocated to Lhasa and rose to prominence as one of Tibet's most influential family enterprises in the twentieth century. Their success extended beyond commerce, for members of the family attained positions in government service and entered the aristocracy. The family is also referred to as the Pangdatsang. On the Pomdatsang family, cf., in particular, the research of Carole McGranahan 2002; 2003; 2005; 2010; 2015.

their living expenses, and when it is time to repay older debts, they take on fresh ones, always patching one financial obligation with another to make ends meet. Generally, larger businesses tend to avoid participating in retail activities. They delegate the smaller deals to these women. Even the silk offered by Beiping traders is sold in large quantities to significant traders in Nepal and among Muslims. Certain traders even operate without personal capital, acting instead as intermediaries for larger firms and taking a cut of the profits to support their income. As mentioned earlier, herders conduct most of their trading activities in the autumn and winter, bartering items such as wool, butter, and hides for staples like barley and beans.

Additionally, herders who move on the northern route often trade in salt. Throughout the summer, they take their cattle to the saline lakes and pitch their tents in the nearby area. I heard that during the daytime, the lake looks like clear water, but when night falls and the chilly winds blow, it creates salt crystals that harden along the edges and on the surface of the lake. At dawn, they swiftly collect the salt and pack it into leather pouches, since the daytime warmth causes it to dissolve back into water. The same procedure needs to be carried out again the following day. In still, windless conditions, some linger for multiple days, anticipating the formation of salt crystals. Certain others show up one day, load their haul the following day, and depart swiftly. Tibetans believe that the ease or difficulty of collecting salt is determined by one's collection of merits. Once the salt is collected, it is taken back to the pastures, and by the autumn harvest, it is conveyed to regions that cultivate barley to trade the salt for barley. The standard approach is to barter one unit of barley for one unit of salt, while beans and additional products are sold based on prevailing market prices. I heard that this guideline has been in place for many years, and my observations from last year confirmed that one unit was still traded for one unit.

In Tibet, a large part of the main commercial activities **[81]** operates on barter systems. For instance, when one party has tea and another has fabric, they initially determine the value of both the tea and the cloth before swapping their goods. Conversely, smaller financial transactions call for the use of silver coins. Major monasteries frequently accumulate their wealth through business endeavors. For example, a donor could contribute five thousand taels of Tibetan silver to a monastery – roughly equivalent to one thousand Han taels – specifying that a portion of the silver be allocated to each member of the saṅgha every year. The funds in these deposits need to be invested towards business ventures or loaned out with interest, since the original sum cannot be touched. As a result, certain individuals are designated to manage and preserve the funds. Should the number of the saṅgha be large and the available interest insufficient, it falls upon the custodian to compensate for the shortfall. Conversely, when the number [of the saṅgha] is small but the interest is high, the custodian is allowed to keep the surplus. In recent years, the number of monks in large monasteries has been decreasing steadily – since the rebellion in Outer Mongolia [of 1911-12] – but the interest income has risen, which guarantees that there is no shortage of funds. Thus, the administrators of the monasteries have gained significant wealth in less than a year, and many of them are using their financial success to secure these positions.

There is another type of commercial practice among farmers: every year at the end of autumn, once they bring the barley harvest home, farmers take advantage of their leisure time to purchase wool or sheepskin from nomadic

herders. After that, they shred the wool and twist it into yarn, which is then crafted into coarse fabric. Besides using it for their own needs, they can also profit by selling any extra they have. A friend of mine knows a muleteer whose wife is exceptionally skilled in this trade. She does not own any land and avoids using any of her husband's money. Yet, while ensuring her own needs are met, she also finds the time to sew two complete outfits for her husband each year and still manages to save a little money. They started as two people without a single coin to their name, but they have now successfully saved more than two thousand taels of Tibetan silver. The couple is also thinking about starting a tea business in the village of Kang 康, in the vicinity of Drépung Monastery. They talked about this with my friend, who, being kind-hearted, offered them encouragement. I truly admire the two of them and have expressed my appreciation a number of times.

Observing the people on the streets of Lhasa, it feels like everyone is well-versed in the art of commerce. Everyone depends on trade for their livelihood, everyone possesses knowledge of how to earn money, and it seems that most are enjoying financial success. I honestly wonder **[82]** if there exist people who fail to turn a profit. If they do exist, they are likely a minority. Thus, I believe that the economy of the Tibetan people relies heavily on trade.

5.3 Transportation

Several routes exist from Ü-Tsang to various regions, which I have mentioned in a concise manner in the introduction and the geography chapter. Here, I will consolidate and discuss the ideas outlined. Two primary roads connect Xikang to Chamdo: one travels south through Nyachuka, Litang, and Batang, while the other heads north through Dawu, Drango, Karze, Dzokchen,[13] and Dergé. There is an overland route from Yunnan to Tibet that includes a passage through Litang and Batang. There is another route that heads west directly from Batang to Chamdo. There are two main routes from Chamdo to Lhasa: the southern route that leads through Kongpo and other areas, and the northern route that goes through Riwochen[14] and nearby places. A major road stretches from Dawu, Drango, and Karze, moving northwest toward Jyekundo.[15] From Jyeku,[16] one can directly access Nakchukha, and from Nakchu, the route turns southward to Lhasa. Due to its flat terrain and abundant water and grass **[83]**, this route is favored by all traders. And so, traders from places along the southern route, including Litang, often journey through Drakyap to reach Jyekundo, then proceed westward to Nakchu and ultimately to Lhasa. The stretch from Jyeku to Nakchu is primarily desolate wilderness. Given that it is entirely uninhabited, travelers must ensure they have all necessary provisions ready in advance. Traders must band together to form large groups along this route because of its closeness to Golok, where concerns about bandit raids persist. Jyekundo connects Sichuan in the east, Yunnan to the south, Nakchu in the west, and Qinghai to the north.

13 C. Zuoqin 佐勤; T. Rdzogs chen.

14 C. Riwoqin 日窩勤; T. Ri bo chen.

15 C. Jieguduo 結谷垛; T. Skye rgu mdo.

16 C. Jiegu 結谷; T. Skye rgu.

Traders from all directions converge at this location, establishing it as the most important hub in the Xikang transportation network. The primary road connecting Nakchu and Lhasa passes through Shamong,[17] Radreng,[18] and Penpo. Some travelers also take a route that veers slightly more to the east on the route to Drigung. Salt traders traveling on the northern route often choose this route because of the lower amount of people that use it and the greater availability of grass compared to the main road. A direct route also exists connecting Nakchu to Posterior Tibet, although I have not traveled along it and lack specific details about it.

I heard that two paths run from Nepal to Posterior Tibet, and there are three more that link Posterior Tibet to Anterior Tibet. I have not traveled any of these. Again, to travel from Phakri from India, one can take two different routes: the first route passes through Kalimpong, crossing Pedong,[19] Zongtangba 宗塘巴,[20] Rongli Chukha,[21] Lingtam,[22] Phadamchen,[23] Dzuluk,[24] and Nathang,[25] before crossing the Himalayas to reach the Dremojong border. The second route leads through Gangtok[26] and crosses the mountains to Dremojong. From Dremojong, it follows the valley straight up to Phakri. From Phakri, it is then possible to travel eastward to Bhutan or northward to Tsetang without needing to go through Phakri to access Lhasa. Traveling north of Phakri will take you to Gyantsé, while heading northeastward will lead you straight to Lhasa. Phakri serves as the most important hub along the southern routes of Tibet. Both Gyantsé and Shigatsé are important urban centers located in Posterior Tibet. As for the smaller trails, they are as numerous as the hairs found on a cow. Since I have not been able to travel those paths, I will not elaborate further.

[84] In Tibet, the primary modes of transport, apart from walking, include riding mules and horses. In contrast, yaks and donkeys are utilized for moving goods. Indeed, Tibetans seldom ride yaks or donkeys for extended journeys, although nomadic communities sometimes do ride yaks. Yet, on their pilgrimages to Lhasa, women and children from Qinghai are seen riding yaks. When Mongolians enter Tibet through the northern route, they sometimes ride camels for part of the journey. Still, upon reaching Nakchu, they switch to horses or oxen due to the arid and warm climate of Lhasa, as they fear that camels might become ill and perish. In Posterior Tibet,

17 C. Sangyong 桑庸; T. Sha mong. Present-day Xiangmao 香茂.

18 C. Rezhen 惹眞; T. Rwa sgreng.

19 C. Baidong 白東; Pedong is the last town along the Kalimpong-Lhasa route in present-day West Bengal before the Sikkim (Dremojong) border.

20 I was unable to reconstruct the Tibetan name of this town from Fazun's transliteration '*zong tangba* 宗塘巴'. The sinograph *zong* 宗 likely corresponds to the Tibetan term *rdzong*, meaning 'fort' or 'district' in English.

21 C. Sangling quka 桑零曲喀. The name *Sangling quka* may refer to another location along the route between Pedong and Lingtam. The sinograph *sangling* 桑零 might represent Rongli, a town situated on the banks of the Rangpo Chu River. The sinograph *quka* 曲喀 appears to be a phonetic rendering of the Tibetan phrase *chu kha*, meaning 'riverbed' or 'waterbed'.

22 C. Lingdang 零當.

23 C. Badangjin 巴當僅.

24 C. Zelu 則鑪; also known as Zuluk.

25 C. Natang 拏塘; Snar thang.

26 C. Gangtuo 崗陀; T. Sgang thog.

goats and sheep are also utilized for moving goods, but they handle lighter burdens and progress somewhat slowly. Traveling from Meldro Gongkar[27] to Lhasa generally requires three to four days, but using a yak hide coracle boat[28] can shorten the trip to just two days. When making the trip from Lhasa to Jampa Ling[29] in Lhokha, many prefer to use boats, as they are twice as fast as horses, despite the restriction of boats only being able to move downstream. The route linking Phakri to Gyantsé is capable of supporting motor traffic, but this has not been implemented so far. Furthermore, it is feasible to fly from India **[85]** directly to Lhasa in just one day. Two years ago, following the death of a British man in Tibet, there was an attempt to arrange for a plane to retrieve his body, but the Tibetan authorities did not grant approval.[30] Once the Han-Tibetan air route is opened, it is likely that the British will fly on their own. By then, the Tibetan authorities will lack the power to prevent it, and I worry that even our central government might be powerless to intervene. Should a motor road be constructed connecting Qinghai and Nakchu, it is probable that the British will establish a comparable motor road from India to Tibet. In essence, the British in Tibet are keeping a vigilant eye on the actions of the Han, as they are concerned that a Han-Tibetan alliance could jeopardize their own interests. As a result, they are entirely dedicated to inciting tensions between the Han and the Tibetans while seeking to establish an Anglo-Tibetan alliance.

27 C. Meizhuo gangge 梅卓崗格; T. Mal dro gong mkhar.

28 C. pichuan 皮船.

29 C. Jiangba ling 絳巴凌; T. Byams pa gling. The chapel known as Jampa Ling, devoted to the Maitreya Bodhisattva, is located at the western side of Samye (T. Bsam yas) monastery. Tradition holds that the Jampa Ling was the venue for the Samye debate, an important event in the early dissemination of Buddhism in Tibet (T. snga dar) during the rule of Trisong Détsen in the late eighth century.

30 Fazun likely refers to Maurice Wilson (1898-1934), a British pilot, adventurer, and Christian visionary whose ill-fated attempt to climb Mount Everest all by himself remains a remarkable chapter in the history of mountaineering. Born in Yorkshire, Wilson served with distinction in World War I, earning the Military Cross for bravery. Wounded and struggling with postwar trauma, he turned to religious practices such as fasting and prayer, convinced of their transformative power. Determined to prove their efficacy, he set out to combine aviation and mountaineering to ascend Everest solo, despite lacking climbing experience. In May 1932, Wilson flew his Gypsy Moth airplane, *Ever Wrest*, to India via Cairo and Bahrain. When Nepalese authorities denied him permission to fly over their territory, his plane was impounded. Undeterred, he spent the winter in Darjeeling, where he hired three sherpas and devised a new plan. Disguised as a Buddhist monk to avoid arrest, Wilson and his team traveled to Tibet. From the Dza Rongphu (T. Rdza rong phu), a Nyingma monastery on Everest's northern slopes, he launched his daring solo assault. Armed with minimal gear and scant expertise, he climbed to over 6,700 meters (22,000 feet) but succumbed to exhaustion during his final push in May 1934. A year later, as Fazun prepared for his second journey into Tibet through Sikkim, Eric Shipton (1907-1977), the celebrated British explorer and mountaineer, discovered Wilson's frozen body in a crevasse, together with his diary. For a biography of Maurice Wilson, see Roberts 2013; see also the chapter dedicated to Wilson, titled 'The Riddle of the Snows', in Hopkirk 1982, 206-20.