

## **Unequal power relations in small-scale land acquisitions: The case of short-term contracts for watermelon production in Myanmar**

Access to and disbursement of land has historically been subjected to power and politics. The recent discussion of this controversial topic is the narrative of large-scale land acquisitions, which covered under the guise of industrial agricultural investment, is better known as land grabbing. The increasing land demand, driven by the past global economic crisis in 2007/2008, and population growth, lead to an enormous pressure on land to produce food, feedstock and fuel crops. The media and scientific community shed light on the negative social implications of these land deals, e.g. land dispossession from poor households. Advocates, on the other hand, claim that investment on land boost rural development through job creation and access to capital and markets. Yet, this debate has been silent on the effects of land acquired by short-term agreements, in land size and capital. In part, because there is so far not an accepted definition of land grabbing since it occurs in different contexts, within new frames of land control conditions and away from conventional settings, often involving complex social relations.<sup>1-3</sup>

The term of land grabbing is associated with the purchasing or leasing agreements of large areas of arable land in developing countries with the purpose of agricultural development. Just to mention, to this day, about 3 million hectares have been leased in South Sudan, 2 million hectares in Mozambique, 1 million hectares in Ethiopia, while 3 million hectares in Indonesia.<sup>1</sup> These large-transfers reflected in an estimated of 45 - 227 million hectares leased globally are often in countries with weak governance and without consultation or compensation to local communities and for large periods of time. This leads to a change in the nature of land rights and enables an overexploitation of natural resources.<sup>4-7</sup>

Myanmar, the largest country in South-East Asia, is privileged by its vast natural resources with fertile land, different agro-ecosystems and enormous water supply.<sup>8</sup> This makes Myanmar a potential agent to meet the energy and food demand of its regional market.<sup>9</sup> However, it is considered one of the poorest countries in the world. 70 percent of its total population live in rural areas, from which 55 percent have access to safe drinking water, 64 percent to sanitation and 34 percent to electricity while 25.6 percent live under poverty line (1.25USD/day), largely depending on agriculture for their livelihoods.<sup>10,11</sup> Furthermore, agriculture represents 34.8 percent of national gross domestic product (GDP), 61.2 percent of employment and 30 percent of exports by value.<sup>8,12</sup> Currently, with the ongoing political changes, the country is experiencing a large flow of local and foreign investments, threatening the livelihoods of the rural population.<sup>13</sup> Officially, land concessions in Myanmar have increased in just one year (2011/2012) to about 2.5 million acres while foreign direct investment (FDI) is estimated to be approximately 4 million USD in 2015.<sup>10</sup> These land concessions are underestimated as they do not capture informal land deals, particularly at the border areas, and only captured large-scale projects on extractive sectors (e.g. hydropower or mining).<sup>14</sup> In addition, there is little evidence on foreign investments on the agricultural sector and their impact on rural households' livelihoods. Only few studies show that local people have been displaced due to these land transfers.<sup>10</sup> We close

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<sup>1</sup> Land Matrix, Global map of investments. Retrieved on February 03th, 2015, from: <http://www.landmatrix.org/en/get-the-idea/web-transnational-deals/>

this gap by providing an exploratory study of renting land out, in short-term contracts, for watermelon production by Chinese agribusiness men in Myanmar. We focus on China since it is the largest investor in Myanmar, and both countries have established social linkages in the ground that facilitate informal land deals. By employing a mixed methods approach, we show the dynamics of the process of renting land and their impacts on income and food security of rural households. In this way, we also contribute to the understanding of small-scale land grabbing.

## **Land investment context in Myanmar**

Myanmar has experienced different periods of political and economic transitions since its independence as a British colony in 1948.<sup>15</sup> The economy has been largely affected during the socialist system (1962/1988) which was characterized by centralization and control, predominantly on agriculture.<sup>15,16</sup> Since 2011, the political situation of the country gave a dramatic change. From being an isolated country with one of the worst oppressive social policies in the world, it has been transformed to a neoliberal capitalism system that seeks to industrialize the country and presents land as a commercial commodity.

The land market in Myanmar has opened up with the recent modifications to three laws: 1) the Vacant, Fallow and Virgin Management law, 2) the Farmland law, and 3) the foreign direct investment law. Provisions in the Farmland Law and Vacant, Fallow, Virgin Land Management Law (VFV) facilitate land transactions to foreign investors without protecting farmers' livelihoods. On the one hand, the VFV law grants land from 5,000 acres up to 50,000 acres for an initial period of 30 years with government loans.<sup>13</sup> On the other hand, the farmland law, attempts to promote tenure security through the issuing of a land use right or "right to work" (also known as Form-7) while letting the government be the ultimate owner of land. There is however, uncertainty on how it would contribute to a tenure security, as yet 40 million rural households do not have this form.<sup>10</sup> In addition, the law allows farmers to transfer the "right to work" to a foreign entity only with the authorization of the government (Farmland Law, Chapter IV, section14). This is not practiced at all at village level, mostly because there is no recognition to customary rights and there is no detailed information on how farmers should require such permission.<sup>10,14</sup>

The Foreign Investment Law (FIL) allows 100 percent foreign capital and lease periods up to 70 year, with restrictions to agriculture sector. Through this law, the government aims to promote joint-ventures with local entrepreneurs. However, foreigners use local partners as proxies that operate as local companies, and in this way foreigners invest in agriculture.<sup>10</sup> Through this channel, foreign investors avoid taxes and time-consuming formal processes.<sup>10,14,17</sup> Furthermore, the law established that environmental assessments should be performed only for agricultural activities that required large areas of farmland; neglecting the small transfers. Altogether, the modifications to these laws make the rural population vulnerable as customary laws are predominantly in the rural areas, and farmers lack of formal education to understand this bureaucracy.



### **Case study: short-term contracts of renting land out for melon production**

Since 1998 Chinese agribusiness investors (hereafter melon investors) have been leasing land from paddy farmers in Central Myanmar for the production of Seedless Watermelon (*L. Citrullus lanatus*) (hereafter melons) to supply Chinese demand. Land and water scarcity in China has motivated investors to explore and complete business overseas. These activities have been possible through the agricultural cooperation deals signed between China and other countries. For example, the opium replacement special fund has promoted large-scale rubber plantations in Laos and Myanmar. In addition, the close ethnic and kinship relations between Burmese farmers and Chinese people at the border of Muse have facilitated informal land acquisitions.

The demand for melons in China has increased considerably, particularly to supply the Chinese New Year market. However, the price for melons is volatile. In the year 2013/2014, the price for melons reached a value of 6 CNY (0.96USD) per kilo while this year (2015) it ranged between 1 and 3.4 CNY (0.16 and 0.54USD).<sup>2</sup> At the time of the study one ton of melon was worth 2,200 CNY (334USD). Yet, it has been observed that trucks transporting melons, worth a value of 8,000 USD each, arrive on daily basis at the border of Muse to be shipped to Sweli (Ruili, Yunnan).<sup>18</sup> This business opportunity is

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<sup>2</sup> “Melon market bounces back”. Retrieved on February 22nd, 2015, from: <http://www.mmtimes.com/index.php/business/13210-melon-marketbounces-back.html>

attracting Chinese business men, which through informal deals are renting land in seasonal terms in the uplands of Myanmar.

The study area was in Tada Oo Township, Mandalay Region. It is located close to the Yangon-Mandalay express way and Mandalay-Muse highway; it is also near the International Mandalay airport. This area is considered one of the driest and poorest region in all South-East Asia.<sup>10</sup> The landscape is covered by flat plains with clay and sandy loam soils, with temperatures up to 43°C and variations of rainfall between 500mm to 1000mm.<sup>8</sup> Traditionally, rural population depend on farming, which production maintains the national demand of grains, pulses and oilseeds.<sup>15</sup>

The agro-ecological conditions and access to roads make the area ideal for melon production. According to the Tada Oo Township Management, since the past three years the number of registered acres rented to melon investors has increased in the past three years:

**Table 1 Number of acres leased for melon production**

Year	Number of Acres
2011-2012	1,562
2012-2013	2,155
2013-2014	3,285

Source: Tada Oo Township Management

Yet, there is a discrepancy with the actual number of acres rented as many fields are leased without Township authorization. Furthermore, there is little involvement from the village head and Township Manager in the land deals. By employing the Net-Map Tool methodology, we capture the process on which land is renting out to melon investors in Chuang Kwa Village. Through this method, we organized focus group discussions and in-depth interviews with key actors (e.g. village head), villagers and farmers, who provide insights on the consultation process. According to them, the process starts with the selection of fields. During March every year a melon investor visit the village together with a Chinese agronomist. The visit has the purpose to search fields with fertile soil and easy access to water. Soil fertility is measured by pH tests performed by the expert, who then, would advise which fields to rent. As a second step, melon investors will hire a translator from Shan State, with Kokang Chinese ethnicity, to establish the contact with a local broker from the village. This ethnic group (Kokang Chinese) lives in the North of Shan State and represents the access to markets and capital for farmers and traders in the borders between Myanmar and China given their cultural ties and ability to speak both languages Burmese and Chinese.<sup>14</sup> Once the contact between the melon investors and local brokers is established, a land lease negotiation takes place.

Usually, melon investors lease a field for a period of 4 to 6 months (from August to February) with a minimum pay per acre. The compensation is estimated to range from 280,000 kyats (280USD) to 300,000 kyats (300USD).<sup>19</sup> The melon investor would provide an advance payment for the farmers and a fee to the local broker. Throughout this process, the local broker is informed, based on the agronomist assessment, about the selected fields. Then, this actor would find out the owners of the fields and extend to them the interest of the melon investors. In the final stage of the process, the local

broker will gather all the owners of the fields in his house. It is assumed that all farmers have agreed to rent. Then, a statement is read in which only the rental period, the field number, land size, the compensation and purpose is indicated. Individually, farmers will sign this statement. This verbal communication is common in the village since farmers are traditionally governed by customary law and the trust in the local broker facilitates these deals.



There is a general willingness to rent fields to melon investors. Farmers expressed that low rainfalls in past years causes vulnerability to droughts which may result in bad harvest. Furthermore, farmers' total income is not sufficient to invest in their fields. Large part of the household income is spent on food and health. Thus, farmers rely on loans which are a difficult to obtain. Today, an official agricultural loan for paddy production is just 100,000 MMK (100USD) while for other crops is 20,000 MMK (20USD) for the season. Moreover, farmers are obliged to repay it after harvest. This can only be possible if the harvest was good. Finally, the lack of infrastructure prevents farmers been connected to large markets, where they could benefit from information, particularly on agricultural techniques and market prices.

### **Mechanisms to access and control land by melon investors**

Farmers in the study area have traditionally grown paddy and oilseed crops. Given that farmers have lived in isolation for many years and no extension services are accessible, there is a lack of information about agricultural technologies and other crops cultivation, such as melons. This new trend of foreign cultivation in the village was enthusiastically welcomed by farmers, with the hope that their living situation and their knowledge on agriculture will improve. However, in-depth interviews reveal that after few years of renting land out, the experience is different. There were critics on the

way melon investors use and manage the rented fields. Since there is not direct contact between farmers and investors, all the communication is channeled through the local broker. Villagers and landholders are requested to not visit the rented fields and to not grow melons in the season prior the rental period. No reasons are given, except *“this crop is grown only by Chinese investors”*. This unwritten rule is followed given that farmers are concerned with the consequences of doing otherwise.

Farmers have also observed that the cultivation practices by melon investors relied on heavy use of chemical fertilizer and machinery. Usually, farmers would apply 50-100 kg of animal manure per acre in a paddy field, while melon investors apply on average 400 kg of compound fertilizer (15% nitrogen, 15% potassium, and 15% phosphate). The remaining fertilizer in the fields has led to an increase of yields of the next groundnut or sesame production. However, farmers mentioned that after 2 or 3 years of this practice, their production has reduced almost half. According to a fertilizer trader, the field would need 3 fallow years to recover their soil fertility. The use of machinery has also contributed to increase soil erosion. This has change the way farmers prepare their land, as traditionally they employ bullock carts. The tractors are used to plough the land and turn the soil cover to a depth of more than 6 inches (15.2cm). In addition, it has been observed an increase of soil salinity in the rented fields. This might be associated with the use of groundwater for irrigation to the melons. The combination of the soil erosion and high levels of evapotranspiration lead to this increase on soil salinity that affect farmers crop production.<sup>8</sup> Likewise, in some fields, farmers have found that a pump well was built without their consent. This pump well serves to supply groundwater to melon fields. Melon investors have requested a compensation of half its cost up to 200,000 - 250,000 MMK (200 - 250USD) for using the pump, which would be blocked if the farmer is not able to pay for it.

#### **Box 1: Leasing land or not alternative**

A 57 years old man, owns a field of 7 acres (2.8ha) since 35 years, 4 acres were heritage from his parents. He has been a farmer all his life and has never thought on renting or selling his land before. However, the location of his field is surrounded by lands which are currently rented by melon investors. During this rented period, he was not allowed to enter his field by bullock cart, or even by foot, so he found difficulties on cultivating his own crops, in this way, he felt that the best option was also to lease his land. He said that the 300,000MMK (300USD) paid is not enough; if weather is good, he could earn much more by growing sesame and groundnuts. He has reduced the land where he used to produce food for own consumption, as he is now leasing 5 acres (2ha). Although his contract is for 4 months, he noticed some drastic changes after leasing his land, soil was rigid and hard to plough, there was plastic all over his land and more weed and insects than usual. He also found out a new well in his field, which he is not able to use unless he pays a fee of 250,000MMK (250USD). *“When we sign a contract, we only agree on renting the land, but it seems that Chinese also rent the water without income...I do not have a copy, we just sign a piece of paper without official stamp”*. During the year his land is not rented, he grows his usual crops, albeit he was instructed to fallow their fields. The last harvest, he experienced a 50% yield decrease. *“I do not have an option, if I don't rent my land, I can't work on it either. But now, the soil is so damaged that my production has been reduced to half”*.

In regards to job creation, by focus group discussions we found that landless villagers are given the opportunity to work during the melon cultivation period. These villagers usually practice blacksmithing; in the case of men, while women make baskets for a small amount of money. Working on the rented fields gives them an income of 2,000-3,000 MMK (2-3USD) per day. For men, daily wage ranges: 2,000-2,500MMK (2–2.5USD), for women 1,800–2,000MMK (1.8-2USD). If workers stay in the plantation throughout the season, they get a bonus of 5,000MMK (5USD). However, workers are only paid after the harvest season and are forced to work continuously throughout the day. Contract terms are similar to lease land agreements. Melon investors hire workers through a group leader. A group leader is a trusted person from the village who is contacted by melon investors to look for workers, and might even give an up-front payment. He or she will not work in the field, but would just gather workers. Yet, the management, including fertilizer application, is performed by Chinese workers that live in the village during the rental period. Melon investors hired them since “...*is better, they are more reliable people, and they know each other, besides they have the nature of work, so no explanations are necessary to be given...*” as explained by a field supervisor. There is also little interaction between these workers and villagers.

## What are the effects of renting land out on farmers’ income and food security?

We conducted a household survey among 192 smallholder farmers. From these, 82 farmers have rented their land to melon investors in the past three years. 110 farmers have not rented their land at any point in time. We randomly selected these groups to be able to conduct a treatment effect analysis. The basic idea is to match these two groups, which are similar in their demographic and socio-economic characteristics, but one group has taken part in a treatment, in this case, renting land out for melon production.<sup>20</sup> Thus, the difference is attributed to the treatment. For the statistical analysis, we employ the propensity score matching (PSM) method. We are interested on estimating the change on the household income and food security. Income is the sum of farm and off-farm income, while food security is explored through the Food Consumptions Score (FCS) from the World Food Program and the number of months the household does not have enough income to buy food. The FCS is a proxy indicator that reflects a household’s frequency consumption of different food items in a 7-day recall period before the survey. It is calculated by the sum of a weighted frequency of intake of 8 food groups.<sup>21</sup>

**Table 2 Average Treatment Effects**

Variables		Treated	Control	Difference	S.E.#	T-stat	R-bounds ( $\gamma$ critical)
Food Consumption Score	Unmatched	74.42	64.38	10.03	2.18	4.59	1.85-1.9
	ATT	72.8	65.77	<b>7.02</b>	2.68	2.18	
Number of months not enough income to buy food	Unmatched	0.5244	0.6455	-0.12	0.12	n.a.	
	ATT	0.5692	0.6233	-0.0541	0.1372	n.a.	

Total Income_pp (MMK)	Unmatched ATT	917,382.1 815,666.3	486,740.0 600,716.3	430,642.0 <b>214,950.1</b>	81,179.3 109,322.5	5.30 1.91	1.25-1.3
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# Standard errors after bootstrapped (250 replications)

Nr. of treated: 65; Nr of untreated: 110 (17 cases lost to common support (8.8%))

Source: *Own data*, calculation using *psmatch2* and *rbounds* in Stata.

Results indicate that consumption patterns have changed for those farmers renting land. A typical meal in the village is a big portion of rice with chickpeas and fish paste, at times with vegetables. This meal is consumed at least twice per day, while meat is usually consumed 1 – 3 days a week and in small portions. Table 2 shows that on average, households renting land have increased their food consumption compared to those that do not rent land. One explanation might be that the income increase have allowed farmers to purchase motorcycles which allows farmers to access the closest market and therefore, increase their diversity of food. Furthermore, we observe that farmers renting land have reduced their months on not having income to buy food, but there is not a statistically significant difference among groups. Finally, we observe that income has increased on average on those households who rent their land out. The casual effect of renting land on per capita income is 214,950kyats (215USD). This additional income has allowed farmers to purchase physical assets that they were unable to afford before, particularly motorbikes, livestock (cows and pigs), mobile phones, and gold. Only two farmers mentioned purchasing few acres of land, and only three farmers have bought a small tractor.

## Discussion and concluding remarks

The present case study shows socio-economic and ecological trade-offs of renting land out to Chinese agribusiness men. We find that these short-term land acquisitions differ from the typical characterization of land grabbing, yet it show patterns on how foreign investors access and control land at small-scale. First, large-scale land transfers involved often the participation of Government and private foreign companies. In these small-scale land acquisitions local people are crucial for foreign investors to access land. We find that cultural ties facilitate these land deals. We also show that contrary to the social effects of land grabbing of displacement and dispossession of land by foreign investors; farmers in Chuang Kwa are given the option to rent or not their land. Farmers' decision to not rent is respected, only for those farmers whose fields are located between rented fields, may end up being indirectly forced to rent.

In addition, the compensation for renting land is similar income if farmers would cultivate their traditional crops. For example, one acre of groundnuts give farmers a profit of 250,000 MMK. Suggesting that farmers might have a “fixed income” and could also look for off-farm jobs. These deals would benefit large-holder farmers (above 10 acres), since they do not have the capital, labor and technology to invest in their field. However, this “fixed income” is not guaranteed on a yearly basis. Melon investors rent the fields in alternate years, if soil is found poor; they would rent different fields with fertile soil. Therefore, it might be that on the long-term these economic benefits on farmers' welfare may not continue. Often, the large environmental damage in the future (e.g. soil

impoverishment and groundwater depletion) would not compensate these short-term benefits, since the land would not be productive for farmers agricultural production, thereby making farmers worse off.<sup>22</sup>

These environmental externalities may remain overlooked for a long time, given that farmers are willing to rent their land for the rental compensation that equals their average earning, and that has improved their income and food consumption, although in the short term. Thus, what matters at the end, is not the rent of land per se, but the conditions, motivations and incentives by which farmers are renting their land.

As a counter measure of sorts, much emphasis has been given to the contribution of land tenure security to farmers' rights protection. However, as showed in here, this is not contributing to farmers' bargaining power for the use and management of their own lands, which has been transformed by the investors.<sup>23,24</sup> Therefore, it is important is to know who has access and control over the land rather than to focus on property rights. The "right to work" which is considered as a land title, has not function on these land transactions, as these are negotiated by informal ways and without governmental supervision. Since there is no formal written contract, the responsibilities between the investor and the farmer are not clear. This leads to an overexploitation of the water and mismanagement of soil resources. To empower farmers in these land deals, and considering their lack of formal education, civil society organizations (CSO), could channel information the implications of foreign investments. This could be done through illustrative posters or manuals that can facilitate the understanding of consultation process and the rights of farmers. At the same time, environmental and extension agencies should provide trainings or campaigns on sustainable agriculture practices. Once farmers are well informed, there should be a formal contract, were rights and responsibilities, are well defined. This is of particular importance since it appears that melon investors rent fields depending on the geographic location (e.g. access to water) and soil fertility. The contract should also make accountable key actors in the role to facilitate such land transfers. For example, it should be defined the role of the local brokers. Furthermore, and equally important is the incorporation of labor terms into these legal agreements. The Land Core Group, which is an advocacy coalition of national and international organizations in Myanmar, could be the vehicle to bring these issues into the national agenda.

In the light of the land reform process taking place in Myanmar, there is an opportunity to revise and enforce statutory provisions on the farmland law and foreign investment law to reduce farmers' vulnerability to this inequality of power. In specific, the Farmland law Chapter IV, section 14 and Chapter VI, section 55, that mandates farmers to not exchange their land use right to foreigners without government authorization, should detail the way these formalities proceed and decentralize responsibilities (e.g. Township Managers could supervise and give consent to these land transactions). In addition, the Foreign Investment Law Chapter XV, section 108 that restrict investment in agriculture yet, allows joint ventures or contract farming between foreigners and farmers must establish terms and conditions, with a strong emphasizes on land use management (e.g. use of fertilizer and water use).

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