Separating the Soil

Black Earth narratives, geopolitics and the symbolic dimensions of farmland investment

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Introduction

- Land rush (frontier of investment)
- Farmland investment: not a natural outcome of market forces (supply & demand)
- Critical studies focused on the political factors enabling new investment (Harvey; ABD; how coercion creates frontier markets). Applied in agrarian studies.
- Yet, little attention for social & socio-technical factors in making it investable (discourse, socio-cultural legacies, models) and agro-ecological ones
Analyzing farmland investment as a process of assemblage, drawing on;
1) ‘resource making’ (Richardson & Weskalnys 2013, Li 2014) &
2) ‘unfixity of financialisation’ / asset making
3) Actor–Network Theory

Making farmland as an asset requires effort,
Farmland is a unruly natural resource;
localness, agro–climatic context, diseases, pests
Finance wants liquidity → standardization increasingly distanced from lumpy, localized physical object
Introduction (3)

- Making of natural resource & financial asset; result of intentional & unintentional actions and processes
- It can be unmade, ‘erode’ as an asset.

- Argument; Farmland & land/soil not universally fixed -> More elastic, moveable
- Not only capital moves
- Land moves in narratives, virtually and practically. These all have real life implications
Structure

- Soil fetishization

- Soil fetishization $\rightarrow$ ignorance of legacy (social legacy, history of weather volatility)
  - Added difficulty: climate change

- Other examples through space & time of moveability of land

- Conclusions
Examination of investor discourse/actions, & wider legacies and historical narratives

Media analysis, investor documents, website (including images), interviews a.o.

Russia & Ukraine
Black Earth

Source: Wikimedia commons
The Company holds ownership of an extensive land bank of *first class* soil (...). The soil type, Chernozem or "black earth", has a black color & contains a high percentage of humus .... It usually has great depth, over 1 meter, & exhibits a clay like structure which facilitates agricultural field works & is also favorable for retaining water.

–Black Earth Farming company website

..the day of early early ploughing –black to blue-ish, how pleasant is the fat layer on the blade Hello, Black Earth, be masculine, goggle-eyed – eloquent silence *at work’*

–Osip Mandelstam – ‘Black Earth’
Investors’ soil fetishization

- Assessment of yield increase: focus on soil & comparisons: yield gaps
- Black Earth: so fertile, you can’t go wrong
- BEF farm forum
- Dutch Minister of Agriculture
- Reducing farmland investment to ‘land’, & land to ‘soil’

Soil + finance (technology & management) = yield increase = land appreciation

Reduction = separation
Investors’ soil fetishization

- Assessment of yield increase: focus on soil & comparisons: yield gaps
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Soil + finance (technology & management) = yield increase = land appreciation

Reduction = separation
Separation: legacy

- Investor video
Separation: legacy

- Investor video: left out – Soviet legacy
Separation: legacy
Most importantly what’s left out:

The Soviet history of weather & agriculture
Current separation has a long history

BEF Roadshow

Tsarist era expansion into the steppes (Catherine the Great a.o. (Moon 2013:44)

WWII

Soviet era (Virgin lands campaign, bonitet)
Ignorance of weather

- Hardly mentioned in risk assessment & business meeting
- Soon farmland investments affected by weather volatility

- Trigon Agri:
  - July: Inundations ‘delayed & hurt’ early harvest
  - Aug. to Mid-Nov.: ‘dry & very hot’, ‘no significant rain for about 3 months’
  - October: ‘unseasonal frost’

- Affecting harvest of that year & next one
Weather: weather hedging

- Geographical weather hedging
- Basically means that one doesn’t have to take into account agro-climatic circumstances, just look for fertile soil
Source: Kuns, Visser & Wastfelt forthcoming
Weather hedging: limitations

- Weather hedging doesn’t work (exception Ekoniva)
- ‘We tought that the black soil is the best thing….’ ***
- Shrinking, consolidation
Separation: social legacy

- Collective farms;
  - Large farms, large workforce
  - Social institutions, ‘marriage’ farm & village

- Interview(s) farm manager(s)
- annual reports (IMC, etc)
- Investment promotion video
Separation: legacy

- Investor video
Separation: legacy

- Investor video: left out – *Soviet legacy*
Separation: legacy
Separation: agro–ecological

- Current separation has a long history
- Czarist era expansion into the steppes
- USSR: ‘bonitet’
Separation: physical

- In narrative & even in practice;
- CEO; ‘if it were in Western Europe’
- BEF Roadshow
- WWII
Separation: physical
‘Sale of Ukraine’ Swedes prepared to purchase Poltava’s Black Earth’
Moveable farmland

- Other examples through time & space
Emergence of ‘Polders’

- Bogs – drainage for agriculture,
- Polders out of of lakes, riversides and out of the sea.
- Many lakes emerged earlier due to peat or salt extraction
- Movement of land;
  - Binairy through time (appearance, disappearance)
  - Spatially (horizontal, vertical)
Emergence of ‘Polders’
Chronology of a appearing & disappearing Polder: Hedwige

- Mid 16th century; made into farmland (polder)
- 1584; Inundation during war, sea again
- 1907; made into a polder again
- 2016–2019; process of de-poldering ‘giving back to nature’
‘de-poldering’ (Zwin)
‘de-poldering’: Hedwige
Norse in Greenland

- Erosion and peat extraction (‘flaying the field’)

[http://archaeology.about.com/od/lterms/qt/landnam.htm](http://archaeology.about.com/od/lterms/qt/landnam.htm)
Conclusions

- High expectations based on abstract idea of farmland, soil
- Reality: Low productivity, strong volatility, low profits & management
- Standardized comparisons ignored the Soviet history, esp.: social factors & weather & ag.
- Making farmland into an asset requires active work of assemblage, and this process can derail during every step
- ‘Agency’ of soil (living matter, ‘strikes back’)


While farmland is a fixed asset compared with other natural resources, its fixity is relative

Aside from recent increase in liquidity / flexibilization of farmland through asset making,

Farmland in various settings moved, both in discourse & practice and due to human (partly human) action,

Finally also all kinds of more abstract movement, e.g. virtual farmland displacement
Conclusions (III):

- Need to take into account moveability of land
  - In discourses
  - In material practices
    - Horizontal (Black Earth, container farms)
    - Vertical (rooftops)
  - virtual (distant displacement effects) (e.g. Meyfroidt et al 2013) or ‘telecoupling’ (Friis et al 2016, Lui et al 2014)
  - Virtual (statistical) *

- Has consequences for a.o. governance;
  - Opposition FDI vs. Domestic
  - From territory to flow based governance (or mixed)
  - Taking into account displacement effects (& time)

more attention for; spatial dimension of financialisation (‘distancting’, Clapp 2014) & history

  --> Connecting global flows of money & land
Thank you for your attention

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- Island with more land titles than land
- Romania more land in registers than in reality

- Distant displacement of land use (Meyfroidt et al 2013)(virtual or indirect land use change) (Chen et al 2015)
- Virtual land (Belgian article)

- Acidisation → Cerrado

- → making land (soil)
- → from land to farmland
- Low productivity, strong volatility, low profits & management
- Standardized comparisons ignored local factors, history
Case of Ukraine:

Soviet: Annual soil losses in Soviet period 600 million tonnes

Post–Soviet: 500 mln. tonnes annually

Now 40% of farmland with erosion

‘value of eroded soil each year is around one third of the agricultural GDP’ (WB 2014: 5). It means; 10 tonnes of soil for each tonne of grain
Figure 7: Average annual soil loss during the last 30 years from Ukrainian arable land

Source: Bulygin, 2006.
Soil moisture decreases

Location: Bashtanka, In the Steppe

(soil moisture in mm of water in the first meter of soil on May 28 of every year under wheat)

Source: Adamenko 2012, presentation on “Agrometeorological monitoring and climate change in Ukraine.”
Climate change strengthens climate volatility

Figure 1: The climate of Ukraine is changing, 1961-2012
Average annual air temperature deviation from the norm

‘Advanced’ commoditization, resource making
Farmland long excluded from financialisation.

Aspects/requirements of asset making:
1) Potential for profit (outperforming others)
   ◦ baseline material aspects (soil)
   ◦ yield gap
2) Scarcity (real or perceived)
3) Liquidity (easy to buy, sell)
4) Standardization (benchmarks, models)
5) Legitimacy: Framed as acceptable to invest in
Global Investors’ discourse on farmland: scarcity

![Graph showing world population growth and arable land per capita](source: FAO)
## Knight Frank International Farmland Index

<table>
<thead>
<tr>
<th>Location</th>
<th>Price Notes</th>
<th>Average Price/ha</th>
<th>Price Change 2010</th>
<th>Land Value Risks**</th>
</tr>
</thead>
<tbody>
<tr>
<td>England</td>
<td>Average all land types</td>
<td>$22,000</td>
<td>+13%</td>
<td></td>
</tr>
<tr>
<td>Romania</td>
<td>Price dependent on size of holding</td>
<td>$1,560-$3,250</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td>Price dependent on size of holding</td>
<td>$4,550-$8,125</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Ukraine</td>
<td>Five- to 10-year lease rights</td>
<td>$150-$350</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Russia</td>
<td>Price dependent on size of holding and progress of freehold application</td>
<td>$300-$1,000</td>
<td>-10%</td>
<td></td>
</tr>
<tr>
<td>Zambia</td>
<td>Long leasehold</td>
<td>$1,000-$1,500**</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>Dryland double-cropping in Mato Grosso</td>
<td>$7,000</td>
<td>+20%*</td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>Top sugar cane land in Sao Paulo</td>
<td>$12,000</td>
<td>+24%*</td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>Dryland double-cropping in west Bahia</td>
<td>$6,000</td>
<td>+6%*</td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>Native bush with high cattle potential in Para</td>
<td>$300</td>
<td>+11%*</td>
<td></td>
</tr>
<tr>
<td>Argentina</td>
<td>Northern provinces</td>
<td>$1,200-$2,500</td>
<td>+10%</td>
<td></td>
</tr>
<tr>
<td>Argentina</td>
<td>Central provinces</td>
<td>$5,000-$10,000</td>
<td>+10%</td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>Saskatchewan province</td>
<td>$1,300</td>
<td>+7%*</td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>Dryland arable with reliable rainfall</td>
<td>$1,600-$1,700</td>
<td>+2%</td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td>Dairy farms</td>
<td>$23,000</td>
<td>-3%</td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>Quality dryland in cornbelt states</td>
<td>$16,000</td>
<td>+8%</td>
<td></td>
</tr>
</tbody>
</table>

Prices are indicative and will vary widely depending on soil type, local climate and infrastructure. Price changes in local currency could vary widely from stated. *Price change mid 2009-mid 2010. **Risks include normal climate and commodity price fluctuations. Sources: Knight Frank Farmland, Christie Van Oven & Co, AgriEaster, Philip James Associates, USDA Forest Service, Canada Agriculture and Agri-Food Canada.
Investors’ discourse: Russia & FSU

- Large reserves of fertile but abandoned land, very low price.

- “look at the unused farmland in our country: the potential for growth lies literally under our feet!”

- “By the end of 2009, all the main agricultural land in Russia will be taken”

- “It can be stressed without doubt, that their value will only increase”
Interviews with investors & farm managers show;

‘the bad news is that supply of land in Russia greatly exceeds demand.’

It’s by far not as booming as (..) in Romania. (..) Prices of land, they might go up. Especially near the cities... But if it comes to ordinary farmland, it’s not really a topic’.

Conclusions (2)

- Need to critically examine figures, graphs & data (as important elements in investor discourse)
- Surprising fundamental similarity in the opposing discourses on commoditization among investors & opponents (NGOs, critical scholars)
Farmland prices

<table>
<thead>
<tr>
<th>Country</th>
<th>End 2011</th>
<th>Latest</th>
<th>$’000 per hectare, latest</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td></td>
<td></td>
<td>14.9</td>
</tr>
<tr>
<td>Zambia</td>
<td></td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td>Brazil</td>
<td></td>
<td></td>
<td>3.1</td>
</tr>
<tr>
<td>Canada</td>
<td></td>
<td></td>
<td>1.4</td>
</tr>
<tr>
<td>Australia</td>
<td></td>
<td></td>
<td>1.9</td>
</tr>
<tr>
<td>Argentina</td>
<td></td>
<td></td>
<td>6.7</td>
</tr>
<tr>
<td>New Zealand</td>
<td></td>
<td></td>
<td>25.6</td>
</tr>
<tr>
<td>England</td>
<td></td>
<td></td>
<td>24.4</td>
</tr>
<tr>
<td>Uganda</td>
<td></td>
<td></td>
<td>1.0</td>
</tr>
<tr>
<td>Russia</td>
<td></td>
<td></td>
<td>0.8</td>
</tr>
<tr>
<td>Poland</td>
<td></td>
<td></td>
<td>9.1</td>
</tr>
</tbody>
</table>

Source: Knight Frank
Global Investors’ discourse on farmland: scarcity (2)

- Critique of drivers, but hardly of process
From land banking to ‘real farming’

- Investors (globally & in Russia) primarily interested in land value instead of production
- Low appreciation: exit or shift to real farming
- Costs: land tax, risk of losing land, interest on loans
- From ‘Land Fund’ to...
Transformative approach: soil & technology

- investors set out to increase value themselves
- Transformative approach: closing yield gap
- Assessment of yield increase: focus on soil
- Black Earth: so fertile, you can’t go wrong
- Reducing ‘land’ (& farm investment) to ‘soil’

Soil + finance (technology & management) = yield increase = land appreciation

- Low productivity, profits & management
Farmland for sale
Commoditisation & Resource making

- Not a one-way process (e.g. Appadurai)
- a human process (Zimmerman), BUT materiality sets limits (Barry 2005, R &W 2013)!
- a multi-step process
- process of abstraction (separation, reduction, standardisation)
- on material & conceptual levels (concept ‘land’)
- thus natural resource is ‘an assemblage of materialities, relations, technologies & discourses’ (Li 2012)