

The political economy of agricultural mechanisation: Land reform, tractors and patronage politics Zimbabwe

Toendepi Shonhe

Centre for African Studies

University of Cape Town

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1.0 Introduction

- This article is a historical assessment of agricultural mechanisation, the role of narratives, drivers of mechanisation, the influences of Southern powers, state-business relations in service provisions and access to and patterns of technology in Zimbabwe
- Tracking changes in state policy on mechanisation and how this has influenced production patterns and changes in the lives of the farming families in Zimbabwe,
- Reveal how the government has promoted agricultural mechanisation, the roles of the powers of the Global South, and the politics of agricultural mechanisation.
- Revealing how Zimbabwe's government and the powerful elites have designed and implemented technology policies sheds light on how politics and technology were set to connive and collide as the state-capital relations involved over time.

2.0 Background and context

- Whereas, agriculture mechanisation is a key enabler to agricultural development, policy development has lagged behind, leading to a fragmented approach over the years (see Mrema and Odigboh 1993).
- Increased risk associated with increased drought occurrences, a result of climate change and environmental degradation,
- Enhancing the need for agricultural mechanisation and replacing the dominant 'old hand tool technology' will reverse the negative effects on agricultural production and productivity and
- Will positively revise possibilities for agricultural commercialisation (see Simalenga 2013, 16).
- Yet, the intensification of agriculture in Zimbabwe has historically been tilted in favour of the white minority agrarian economy (Selby 2006; Tshuma, 1997)

3.0 Theoretical considerations

- Anthony (1988, 2 -3) undertook a comprehensive 'assessment of the impact of politics upon the development, diffusion and, and adoption of new technology
- Technology is a powerful tool of economic development and offers a large array of social transformation, institutional development, resource creation, social or political change and state building capabilities
- An important aspect to the study of technical development is 'whose interests does technology speak?' - the whole society or some narrowly defined interest groups?
- Participation of BRICS countries, Brazil, India and China in mechanisation and resource extraction, to whose interests?

Why studying agricultural mechanisation?

- What factors or combination of factors drive African governments' mechanisation policies?
- Is mechanisation driven by: increasing demand (urbanisation, land consolidation, medium-to-large scale land investments), business opportunities, political opportunity, developmental objectives?
- How does the pattern of state-led mechanisation maps onto agricultural domestic politics?
- How does it impact on agricultural commercialisation?
- An important aspect to the study of technical development is ‘whose interests does technology speak?’ - the whole society or some narrowly defined interest groups?

Brazil Cooperatives case study

- The article is based on empirical data collected
 - through in-depth interviews from key informants in Mvurwi farming area,
 - government officials and opinion leaders,
 - archival data from the CSO and the National Archives
 - review of documents from the Reserve Bank of Zimbabwe and government Ministries.

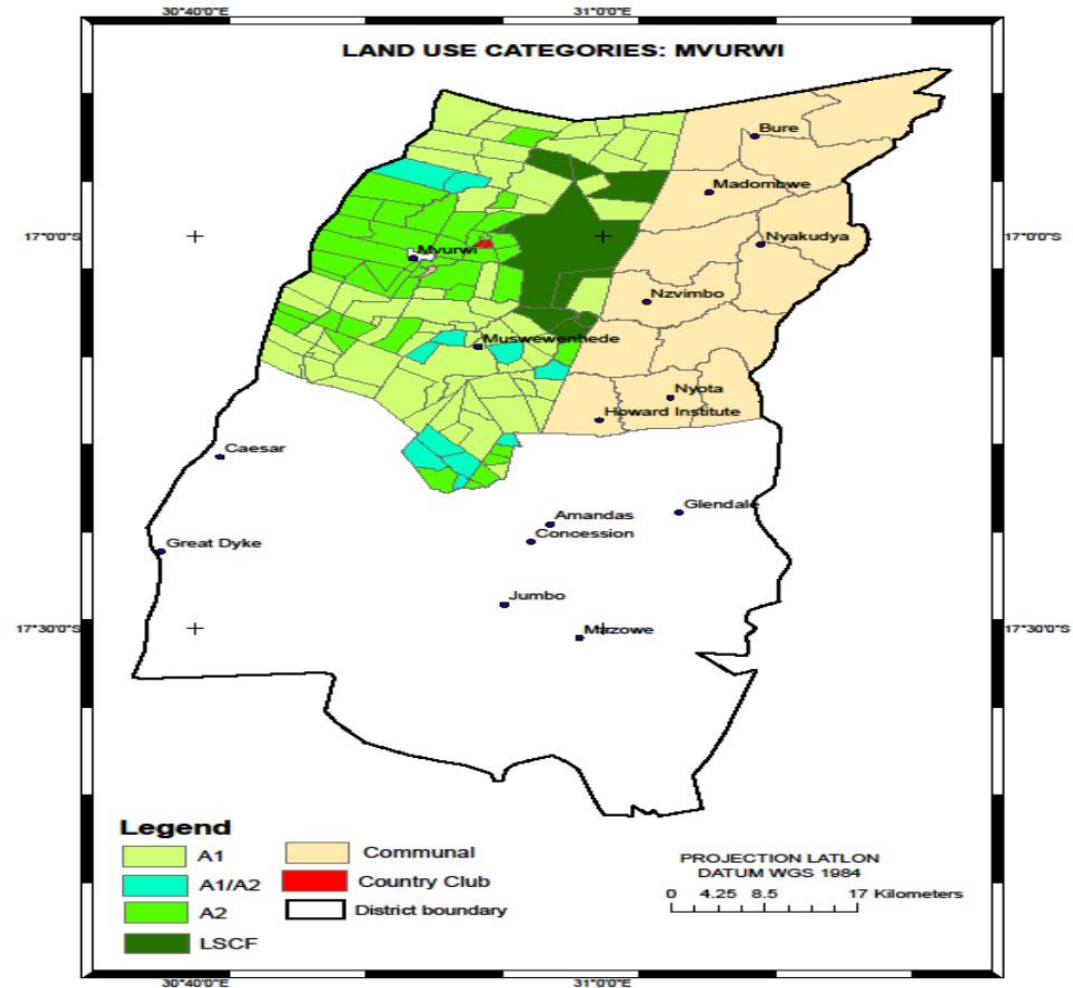


Table 2: Estimated landholdings by farmer groups: 1980, 2000 and 2010

Farm categories	Farms/households (000's)						Area held (000 ha)						Average Farm size (ha)		
	1980		2000		2010		1980*		2000*		2010*		1980	2000	2010
	No	%	No	%	No	%	Ha	%	ha	%	Ha	%			
Family farms	700	98	1,125	99	1,321	98	16,400	49	20,067	61	25,826	79	23	18	20
Small/middle commercial farms	8.5	1	8.5	1	30.9	2	1,400	4	1,400	4	4,400	13	165	165	142
Large farms	5.4	1	4.956	0.4	1.371	0.1	13,000	39	8,691.6	27	1,156.9	4	2,407	1,754	844
Agro-Estates	0.296	0.1	0.296	0.02	0.247	0.02	2,567	8	2,567	8	1,494.6	5	8,672	8,672	6,051
Total	714	100	1,139	100	1,353	100	33,367	100	32,726	100	32,878	100	46.7	28.7	24.3

Sources: Moyo (2011a) *1: Combines Communal, Old Resettlement and A1 Areas. *2: Combines A2 and SSCF areas.

4.0 Changing tractor holding patterns in Zimbabwe

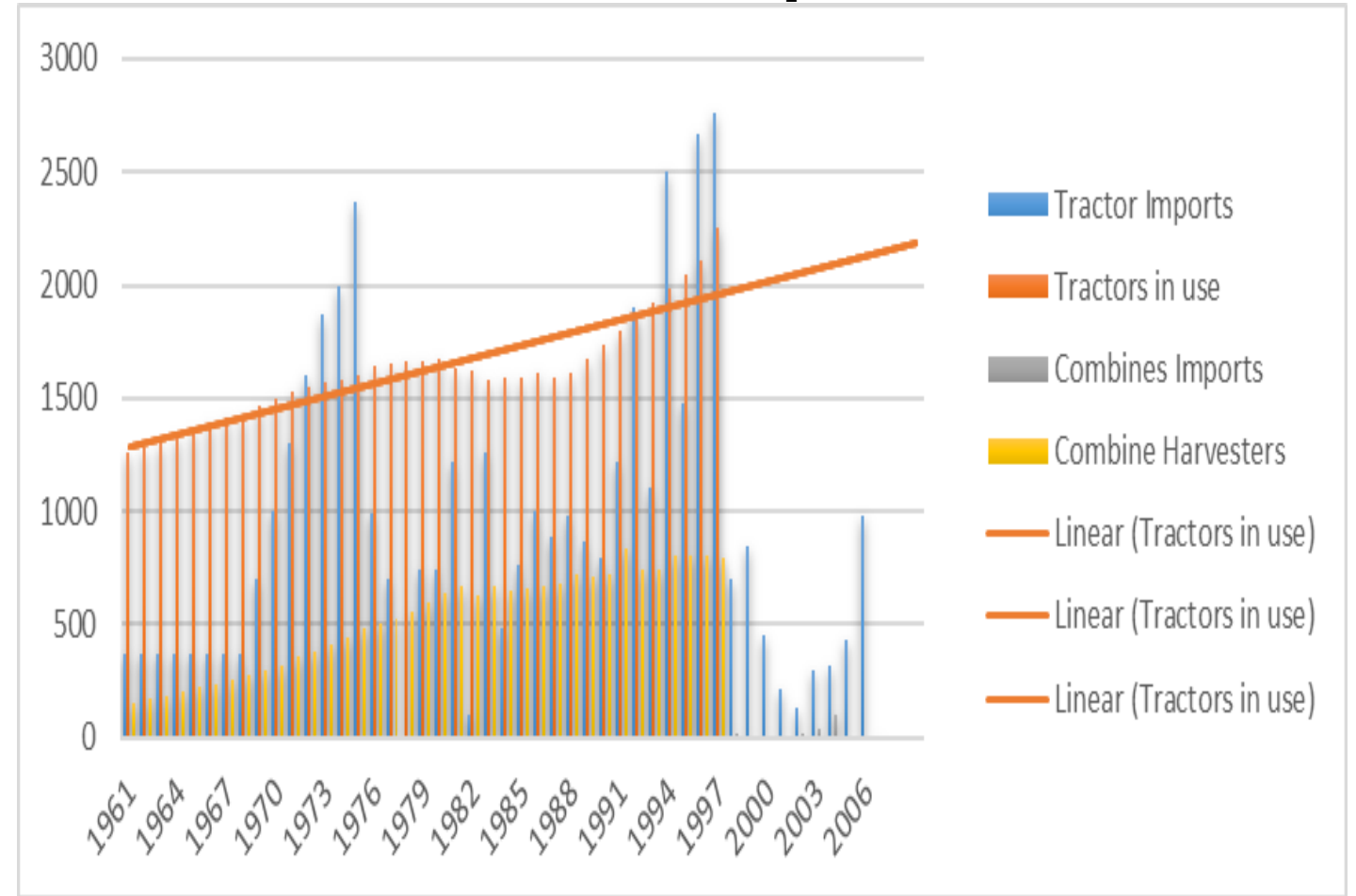
□ Pre-independence patterns

- Land ownership patterns
- Skewed agricultural policies
- UDI -1965

□ Post-independence patterns

- Slow pace of reform implementation due to state-capital complex
- Lack of policy clarity

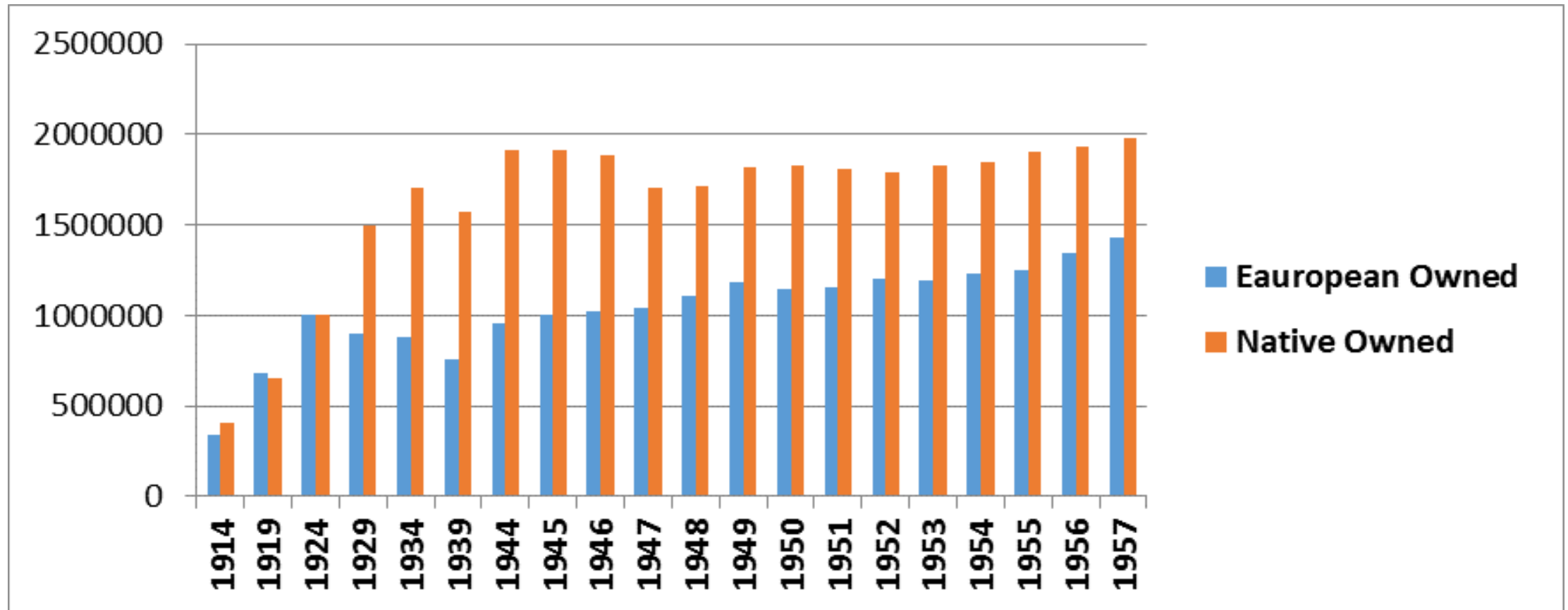
Tractors and Combine Harvesters in use and imported (1961-2007)



FAOSTAT, 2017

Animal drawn power sources: who owns animals, why?

Cattle holdings for Europeans and Natives (1914–1957)



CSO, 1957

Table 4: Animal drawn equipment acquired and distributed under FMP

Sub-programme	Target group	Equipment or implements	Targeted	Phase 2	Phase 3	Total
Farm mechanisation	Smallholder farmers (Communal, Small scale and A1)	Scotch carts	100,000	45,000	33,000	78,000
		Cultivators	100,000	20,000	26,200	46,200
		Planters	100,000	1,000	1,000	2,000
		Ploughs	100,000	50,000	50,000	100,000
		Harrows	100,000	70,000	60,000	130,000
		Knapsack Sprayers	100,000	70,000	47,000	117,000
		Chains	0	200,000		

Source: Author, adopted from RBZ 2008; cited in Murisa and Chikweche 2016

Contestations

RBZ governor's on quasi-fiscal activities

Faced therefore with the circumstances of **sanctions and lack of international financial support**; Faced... with **the drying up** of voluntary funding and support to agriculture by our banks from 2002 onwards due to collateral concerns and stability factors; **Confronted by the need to sustain operations** of certain parastatals while long-term solutions are sought...; and **Faced** with the choice of providing local currency to the Grain Marketing Board to buy maize from our farmers or let that maize rot on the roadside and yet tomorrow be asked to look for scarce foreign currency to feed the nation, and; **Faced** with the inability of conventional budget frameworks and failure of these systems to accommodate and timeously respond to some national emergencies and hyper-inflationary pressures, the Central Bank's **quasi-fiscal interventions** have served the people of this country as a **survival kit** against total economic collapse, against the killer punch of sanctions and as an ongoing test against conventionalism. Without such interventions, only God knows where we would be today and we leave you to speculate. Therefore, faced with these challenges over the last 32 months, **we could not... we cannot... and we will not stand-by as your Central Bank, and let this economy crumble simply because our interventionist policies will go against the grain of certain established norms**; (established by whom you may care to ask?)! (*emphasis is original*)

Contestations and narratives

Opposition:

- Minister Biti - 'Gono to an Al-Qaeda terrorist who deserves to be put before a firing squad' (Biti, 2009)

- Ministry official:

'Moreover, the program was intended to incorporate agro-processing machinery to facilitate the participation of smallholder farmers in the value chain of crops such as sunflower, tomatoes, fruits and some beef projects, but **the rushed takeover and uncoordinated half-baked implementation short-changed the process as it ended up targeting the cropping programme** only. Moreover, the politicisation of the programme through quasi-fiscal activities by the RBZ invited criticism from the opposition such that the entering of the opposition into government through the GNU resulted in a sudden halt of the FAM programme'.

Stock of tractors in Mvurwi in 2017

- The stock of agricultural machinery in Mvurwi reveals a bias towards commercial farming.
 - of the 245 functional tractors in the area,
 - 91 (37%) are held by state institutions; ARDA (12) – 5%, DDF (15) – 6%, private institutions (64) – 26%, and Forester holds 44 (18%),
 - compared to 68 (28%) owned by A1 and A2 sectors (Arex, 2017).



Joint venture mechanisation patterns

JVs involving Chinese, Russian and former white farmers but come with new equipment and technology.



Brazilian Tractor cooperatives

- There are 4 Brazilian Tractor cooperatives have been established on farm endowed with irrigation facilities and intended to be service centres in the country.
- Choice was made to secure bigger tractors from Brazil
- Farmers hire-out tractors to other farmers and use proceeds to repay the loans
- There are no known details of the loans at the local level.
- Who participates?
- Animals remain an important source of power for small scale farmers.



Ongoing agricultural mechanisation efforts!

❑ Emerging State - business relations

- Agricultural mechanisation will be predicated on state coordinated contract farming where maize and sugar beans will be delivered to GMB and cotton will be delivered to the CMB using the stop-order system.
- More countries have now signed agreements for mechanisation programs on the basis of command agriculture South Korea, Romania and India
- 100 000 to be distributed to women farmers in the next five years. Farmers pay deposit of USD2000
 - *But which group of farmers is able to raise USD2000 as deposit?*
 - *Who has irrigation facilities and access to water?*

Contract maize ready for delivery to the GMB, from Mazowe farmer



Source: The Herald, 19
September, 2017

Ideology and patronage politics

- Technology is used for economic development but is often captured by the ruling elites where it is used to develop political constituencies for power retention.
- In the early 1980s, agricultural mechanisation policy fitted squarely into a narrative that large scale commercial farming was more viable compared to small-scale farming (see Biggs and Justice 2006 and Weiner (1988)).
- Targeting Zanu PF members for inclusion into the cooperatives illustrates the extent to which technology relies on some 'actors and forces'
- Implementation must target deserving cases, as part of an agrarian led revolution where access to credit and extension services, supporting infrastructure is as important as farmers' participation in the value chain, a view supported by political economists.
- Markets if left without monitoring, will only advance exclusion and elitist participation

Conclusion

- Agricultural mechanisation is important for commercialisation but must be accompanied by a wide-range of supporting system: financial credit and infrastructural development and farmers training.
- Political interests tend to construct programs to the advantage of elitist groupings, mainly the creation of political support for power retention
- Increased participation Brazil, China and India in agricultural mechanisation in Zimbabwe.
- Does the Brazilian Tractor loan facility advance the elites or farmers' interests or Brazilian commercial interests?
- Mechanisation by global capital is targeting tobacco production of which over 98% is exported in semi-processed form, earning very little for the farmers compared to the global capital.
- Tractorisation and technology impact positively on economic development, not withstanding its politicisation.
- Animals remain important source for traction power in Zimbabwe.
- Land reforms must be aligned with technological advancements to ensure inclusive progress