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Tobacco Farming Following Land Reform in Zimbabwe: A New Dynamic of Social Differentiation and Accumulation

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Tobacco has been central to the agrarian economy of Zimbabwe since the early 1900s, when it became the backbone of the new settler economy following colonisation. Since the land reform of 2000, tobacco has taken on a new impetus, with production now often exceeding that generated by white commercial farming in the 1990s. Today, tobacco is being produced predominantly by smallholders, with those on resettlement land being especially important. Tobacco production is supported by a range of buying companies, auction houses, transporters and contract arrangements, and small-scale farmers are thus tightly connected to a global commodity chain. This article explores tobacco production in A1 (smallholder) resettlement schemes in Mvurwi area, Mazowe district, a high-potential area to the north of Harare. The article is based on a combination of surveys and in-depth interviews with farmers carried out between 2017 and 2019. The article explores who are the winners and losers in the changing dynamics of smallholder tobacco production in these land reform sites and how different groups of farmers combine tobacco with other crops and with off-farm enterprises. Drawing on a simple typology of producers derived from the analysis of survey data from 310 A1 farmers, we examine the role of tobacco in complex patterns of accumulation and social differentiation, looking at class, gender and age dynamics. The conclusion discusses how the tobacco boom is reshaping the agrarian economy and its underlying social relations. This is a highly dynamic setting, influenced by how tobacco production is incorporated into farming systems, how its production is

financed, how and where it is marketed and how it is combined with other crops and other income-earning opportunities.

Keywords: tobacco; accumulation; differentiation; land reform; Zimbabwe

Introduction

Since the early 1900s, tobacco farming has been pivotal in shaping rural accumulation, social differentiation and economic growth in Zimbabwe. The dramatic reconfiguration of landownership following the fast-track land reform programme (FTLRP) was accompanied by changes in land tenure, the profile of landowners, cropping patterns and forms of farm labour. It also had an impact on tobacco financing, marketing and smallholder farmers' accumulation and social differentiation.

Tobacco production is tightly linked to the history of the African peasant economy in Zimbabwe, particularly to colonial dispossession and replacement of Africans by European producers.¹ The Shangwe of Gokwe and Ndebele of Budi districts produced and manufactured tobacco well before European occupation.² Following colonisation, such tobacco growers relied significantly on the trading of raw and manufactured tobacco for their income, which they used to pay the various taxes, rents and fees imposed on them. Colonial administrators viewed African tobacco production success negatively because it undermined the supply of labour needed to work in European farms, mines and industries.³ By the 1920s, European settler farmers had primarily replaced the African tobacco growers.⁴ Tobacco became the main export crop by the 1930s and the leading crop immediately after the Second World War.⁵ Africans who remained in agricultural production focused mainly on maize and other small grains in the 'reserves'.⁶ Up to independence in 1980, tobacco was crucial for the country's economic development but primarily benefited a minority of white commercial farmers.

After independence, this broad pattern persisted. Resettlement attempts were mostly not in high-potential areas and so tobacco was not a major crop.⁷ Following the land reform of 2000, however, the situation changed radically. A trimodal agrarian structure has emerged, dominated by the peasantry (smallholders, 97.8 per cent of farms on 25.8 million hectares), alongside an increased proportion of medium-scale farmers (2.1 per cent of farms on 1.2 million hectares). There has been a significantly reduced number of large-scale commercial farms and agro-industrial estates (0.1 per cent of farms on 1.5 million hectares).⁸

From 2000, the Zimbabwe government's 'Look East' policy undergirded Chinese tobacco merchants' participation in contract farming, which was designed to reverse the effects of capital flight following international isolation by the west after land

1 B. Kosmin, 'The Inyoka Tobacco Industry of The Shangwe People: The Displacement of a Pre-Colonial Economy in Southern Rhodesia, 1898–1938', in R. Palmer and N. Parsons (eds), *The Roots of Rural Poverty in Central and Southern Africa* (London, Heinemann, 1977).

2 *Ibid.*, p. 2.

3 G. Arrighi, 'The Labour Supplies in Historical Perspective: A Study of The Proletarianization of the African Peasantry in Rhodesia', *Journal of Development Studies*, 6, 3 (1970), pp. 197–234.

4 T. Mbanga, *Tobacco: A Century of Gold* (Harare, Zil Publications, 1991).

5 S.C. Rubert, *A Most Promising Weed: A History of Tobacco Farming and Labour in Colonial Zimbabwe, 1890–1945*, Monographs in International Studies, volume 69, Africa Series (Athens, Ohio University Centre For International Studies, 1998).

6 I.R. Phimister, *An Economic and Social History of Zimbabwe, 1890–1948: Capital Accumulation and Class Struggle* (London, Addison-Wesley Longman, 1988).

7 B.H. Kinsey, 'Land Reform, Growth and Equity: Emerging Evidence from Zimbabwe's Resettlement Programme', *Journal of Southern African Studies*, 25, 2 (1999), pp. 173–96.

8 S. Moyo, 'Land Concentration and Accumulation After Redistributive Reform in Post-Settler Zimbabwe', *Review of African Political Economy*, 38, 128 (2011), pp. 257–76.

reform.⁹ Contract farming has since expanded, with 86 per cent of tobacco produced under contract in 2018.¹⁰ The range of companies has also increased, with 19 companies participating in 2016–17, now including Mashonaland Tobacco Company, Northern Tobacco Company, Tabex and TianZe alongside the Tobacco Industry Marketing Board (TIMB), which has entered contract farming. While the insertion of global capital through contract farming can lead to uneven production and circulation and so to adverse incorporation and social differentiation,¹¹ it may also lead to increased availability of finance for smallholder agriculture and, in turn, to increased income from cash-crop sales, which can be reinvested into smallholder agriculture.¹²

A number of studies have examined processes of differentiation in Zimbabwe's rural areas,¹³ including some since the land reform.¹⁴ Analyses highlight the diverse class character of smallholder farming in both the communal areas and resettlement areas, involving mixing agricultural production and off-farm work, with some able to accumulate 'from below' through petty commodity production.¹⁵ Some studies emphasise the consequences for the wider dynamics of accumulation of the insertion of global capital via contracting arrangements.¹⁶ Other studies, including those focusing on tobacco contracting, have looked at the patterns of

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- 9 Y. Sakata, 'Peasants and Transnational Companies after the Land Reform in Zimbabwe: A Case Study of Tobacco Contract Farming in Mashonaland East Province' (PhD thesis, Osaka University, 2016), p. 87; T. Lixia, L. Yan, Z. Wenjie, L. Mukwereza and L. Xiaoyun, 'Blurring the Lines between Aid and Business in the Agricultural Technology Demonstration Centre in Zimbabwe', *FAC Working Paper* 129 (Brighton, Future Agricultures Consortium, 2015).
- 10 Tobacco Industry and Marketing Board (TIMB), *TIMB Annual Statistical Report* (Harare, TIMB, 2018).
- 11 S. Moyo and N. Nyoni, 'Changing Agrarian Relations after Redistributive Land Reform in Zimbabwe', in S. Moyo and W. Chambati (eds), *Land and Agrarian Reform in Former Settler Colonial Zimbabwe* (Dakar, Council for the Development of Social Science Research in Africa [CODESRIA], 2013); Sakata, 'Peasants and Transnational Companies', p. 87; S. Moyo, W. Chambati, F. Mazwi and R. Muchetu, 'Land Use, Agricultural Production and Food Security Survey: Trends and Tendencies, 2013/14', *African Experiences* (Harare, African Institute for Agrarian Studies, 2014).
- 12 I. Scoones, B. Mavedzenge, F. Murimbarimba and C. Sukume, 'Tobacco, Contract Farming, and Agrarian Change in Zimbabwe', *Journal of Agrarian Change*, 18, 1 (2018), pp. 22–42.
- 13 N. Amin, 'Peasant Differentiation and Food Security in Zimbabwe', SSRC Project on African Agriculture, *Working Paper*, 1 (New York, Social Sciences Research Council, 1989); B. Cousins, D. Weiner and N. Amin, 'Social Differentiation in the Communal Lands of Zimbabwe', *Review of African Political Economy*, 19, 53 (1992), pp. 5–24; J.C. Jackson, P. Collier and A. Conti, 'Rural Development Policies and Food Security in Zimbabwe: Part 2' (Geneva, International Labour Office, 1987); H. Coudere and S. Marijsse, 'Rich and Poor in Mutoko Communal Area', *Zimbabwe Journal of Economics*, 2, 1 (1988), pp. 1–25; D. Weiner and T. Harris, 'Agricultural Development in Zimbabwe: Transition in a Labour Reserve Economy', in A. Seidman, KWC Na Mwanza, N. Simelane and D. Weiner (eds), *Rethinking Agricultural Transformation in Southern Africa* (Trenton, Africa World Press, 1991); Kinsey, 'Land Reform, Growth and Equity'; J.W. Gunning, J. Hoddinott, B. Kinsey and T. Owens, 'Revisiting Forever Gained: Income Dynamics in the Resettlement Areas of Zimbabwe, 1983–97', *Journal of Development Studies*, 36, 6 (2000), pp. 131–54.
- 14 M. Neocosmos, *The Agrarian Question in Southern Africa and 'Accumulation from Below': Economics and Politics in the Struggle for Democracy* (Uppsala, Nordic Africa Institute, 1993); A. Harts-Broekhuis and H. Huisman, 'Resettlement Revisited: Land Reform Results in Resource-Poor Regions in Zimbabwe', *Geoforum*, 32, 3 (2001), pp. 285–98; I. Scoones, B. Mavedzenge, F. Murimbarimba and C. Sukume, 'Labour After Land Reform: The Precarious Livelihoods of Former Farmworkers in Zimbabwe', *Development and Change*, 50, 3 (2019), pp. 805–35; I. Scoones, *Land Reform in Zimbabwe: Challenges for Policy* (Brighton, Create Space, 2018); I. Scoones, N. Marongwe, B. Mavedzenge, J. Mahenehene, F. Murimbarimba and C. Sukume, *Zimbabwe's Land Reform: Myths and Realities* (Harare, Weaver Press; 2010); G.D. James, 'Transforming Rural Livelihoods in Zimbabwe: Experiences of Fast Track Land Reform, 2000–2012' (PhD thesis, University of Edinburgh, 2015); C. Oya, 'Contract Farming in Sub-Saharan Africa: A Survey of Approaches, Debates and Issues', *Journal of Agrarian Change*, 12, 1 (2012), pp. 1–33; H. Bernstein, *Class Dynamics of Agrarian Change* (Halifax, Fernwood, 2010).
- 15 B. Cousins, 'What Is A "Smallholder"?' Class-Analytic Perspectives on Small-Scale Farming and Agrarian Reform in South Africa', in B. Cousins, *Reforming Land and Resource Use in South Africa*, PLAAS Working Paper 26 (Cape Town, University of the Western Cape, 2010); Neocosmos, *The Agrarian Question in Southern Africa*.
- 16 F. Mazwi, 'Changing Patterns of Agricultural Financing Following the Fast-Track Land Resettlement Programme: An Interrogation of Contract Farming in Sugar and Tobacco in Zimbabwe' (PhD thesis, University of KwaZulu-Natal, 2019).

class formation within farming communities. For example, in a study of smallholder A1 resettlement farmers in Mvurwi area,¹⁷ four categories of farmers were identified, including accumulators, aspiring accumulators, peasant producers and diversifiers/strugglers, showing that contract farming of tobacco was especially crucial for aspiring accumulators lacking capital. Another study, from Hwedza district, identified four emerging classes: rich peasants – more involved in the marketing of crops and having their productive assets; middle to rich peasants – mainly medium-scale farmers holding 99-year leases and relying on contract farming for tobacco production; middle peasants, producing mainly food crops and hiring out labour; and poor peasants – the majority of whom were in the communal areas and experiencing food insecurity.¹⁸

Building on this work but expanding its scope to look at the intersection of class, gender and age in the dynamics of accumulation, we ask in this study: how has the new agrarian structure emerging after the FTLRP and the re-insertion of capital through contract farming influenced production patterns, accumulation and social differentiation among A1 resettlement smallholder farmers, now dominating the sector? Who are the winners and losers in the changing patterns of smallholder tobacco production in these land reform sites, and how do different groups of farmers combine tobacco with other crops as well as with off-farm enterprises? From this analysis, we ask: what are the longer-term implications of the new tobacco boom supported by contract farming and how is this reshaping the agrarian economy and its underlying social relations?

This article is based on a detailed study of Mvurwi, a high-potential farming area in Mazowe district north of Harare, now dominated by small-scale (A1) and medium-scale (A2) resettlement farms.¹⁹ The article focuses on A1 smallholder resettlement farms, which rely on family management and labour, producing for self-consumption, selling some surpluses, with some family members frequently engaged in off-farm activities and waged labour. Smallholder farmers are characterised by multi-functional production and consumption family units but are increasingly engaging in global commodity markets, in this case through the production of tobacco.²⁰

The rest of this article is structured as follows: the next section discusses the boom in tobacco production since the early 1900s. The subsequent section explains the methods, data collection and data analysis. Then the article discusses the accumulation and social differentiation among smallholder farmers, introducing the typology discerned from the empirical data collected. In the conclusion, we discuss the role of tobacco and the implications for accumulation and social differentiation for Zimbabwe.

The Boom in Smallholder Tobacco Production: The Historical Context in Mvurwi

Even though European tobacco production started as early as the 1890s in Mazowe district, it was only in the early 1920s that tobacco crop production intensified in Mvurwi, replacing cattle ranching as the dominant production focus, notwithstanding the area's less suitable heavy clay loam soils.²¹ By 1922, the interest among white settler farmers in growing

17 Scoones *et al.*, 'Tobacco, Contract Farming, and Agrarian Change'.

18 T. Shonhe, 'Reconfigured Agrarian Relations in Zimbabwe' (Oxford, African Books Collective, 2017).

19 A1 are villagised farmers holding an average of six hectares of arable land and one of residential land in the new and old resettlement schemes; A2 are resettled medium-scale farmers under a capitalist model with landholdings of 20–100 hectares, and some remaining large-scale commercial farmers on their original or downsized farms.

20 S. Moyo, 'Family Farming in Sub-Saharan Africa: Its Contribution to Agriculture, Food Security and Rural Development', *Working Paper*, 150 (Brasilia, FAO, International Policy Centre for Inclusive Growth [IPC-IG], UNDP, 2016); T. Shonhe, 'The Changing Agrarian Economy in Zimbabwe, 15 Years after the Fast Track Land Reform Programme', *Review of African Political Economy*, 46, 159 (2019), pp. 14–32.

21 Rubert, *A Most Promising Weed*; Umvukwes ICA, minutes of the first meeting of the Umvukwe Rangers and Farmers Association (Harare, National Archives of Zimbabwe [NAZ], 1922), NAZ, GEN/TOW-P.

tobacco had increased remarkably, such that, by the 1930s, the crop had assumed a leading position as the main agricultural export commodity for the country.²² By early 1951, agricultural production in the district was more diversified, with 248 farmers growing groundnuts and 237 growing tobacco in the Mazowe district²³ and 94 tobacco growers in Umvukwes (now known as Mvurwi) by 1956.²⁴ The tobacco area increased from 4,625 hectares in 1944²⁵ to 9,140 hectares by 1953, while the maize cropped area increased from 10,450 hectares to 25,303 hectares.²⁶ At this stage, Africans primarily grew burley tobacco; flue-cured tobacco production was reserved for European settlers. An A1 farmer in Mvurwi recalled:

I grew up in a farming family in Chiweshe communal area. During the colonial period, we used to grow maize and burley tobacco, among other small grain crops. Even though my family wanted to venture into flue-cured tobacco farming, this was prohibited by the settler government. Also, while we were being told that the reason for this prohibition was to enable control of oversupply and demand of quality flue-cured tobacco, I suspect that this was part of the comprehensive plan to curtail African farmers' prospects, given that the latter pays handsomely.²⁷

While government support for white commercial agriculture started with the establishment of the Land Bank in 1912, such support increased significantly from the 1960s.²⁸ As a result, the share of the marketed crop by white commercial farmers increased from 30 per cent in the 1960s to 75 per cent by 1978; meanwhile the contribution from black farmers dropped by 40 per cent between 1948 and 1970. Large-scale, white tobacco growers benefited immensely from government support during the colonial period. In particular, following the unilateral declaration of independence (UDI) in 1965, support for the tobacco industry became essential, as the crop had become a key source of both foreign currency and revenue to support the war effort.²⁹ For instance, the *Rhodesian Herald* reported that '[t]obacco farmers had to be bailed out by the Government to the tune of an undisclosed sum, possibly as high as R\$20 million a year in the post-UDI recession (1965–1967)'.³⁰ Government offered support in the form of auction floor price guarantees for both flue-cured Virginia and burley tobacco crops.

In the post-independence period, government support and financing for food and cash-crop production shifted towards the inclusion of African smallholders, generating new processes of accumulation and social differentiation. Yet, a decade later, the Mugabe government accepted a structural adjustment programme designed by the International

22 H. Townsend, *The History of the Umvukwes* (Harare, Umvukwe Women's Institute, 1965).

23 Central African Statistical Office (CASO), 'Report on the Agricultural and Pastoral Production of European Farmers (1950–51)' (Salisbury, Agricultural Section of the CASO, 1952).

24 Central African Statistical Office, 'Report on the Agricultural and Pastoral Production of European Farmers (1955–56)' (Salisbury, Agricultural Section of the CASO, 1957).

25 Central African Statistical Office, 'Report on the Agricultural and Pastoral Production of European Farmers (1947–48)' (Salisbury, Agricultural Section of the CASO, 1949).

26 Central African Statistical Office, 'Report on the Agricultural and Pastoral Production of European Farmers (1953–54)' (Salisbury, Agricultural Section of the CASO, 1955).

27 Interview with A1 farmer JP, Mvurwi, 17 July 2019. All interviews for this article were conducted by the authors.

28 R. Palmer, *Land and Racial Domination in Rhodesia* (London, Heinemann, 1977); C. Stoneman, 'The Economy: Recognising the Reality', in C. Stoneman (ed.), *Zimbabwe's Prospects: Issues of Race, Class, State and capital in Southern Africa* (London, Macmillan, 1988), pp. 43–62; M. Rukuni, P. Tawonezvi, C., Eicher, M. Munyuki-Hungweand and P. Matondi (eds), *Zimbabwe's Agricultural Revolution Revisited* (Harare, University of Zimbabwe Publications, 2006).

29 Mbanga, *Tobacco: A Century of Gold*.

30 'Government Support for Burley', *Rhodesia Financial Gazette*, Salisbury, 10 October 1975; 'Aid for Tobacco Farmers', *Rhodesia Herald*, Salisbury, 20 September 1975.

Monetary Fund, which resulted in the reduction in state support for agriculture and other sectors.³¹ After 2000 and following the implementation of the fast-track land reform programme (FTLRP), economic policies generated mixed outcomes for the resettled farmers. Zimbabwe was cut off from many sources of external finance because of western opposition to the FTLRP, and, in response, the Reserve Bank of Zimbabwe adopted a range of quasi-fiscal activities in an attempt to revive the economy. Sanctions, economic mismanagement and widespread corruption culminated in a period of hyperinflation and an ensuing currency crisis. The adoption of a multi-currency regime in early 2009 and the creation of the government of national unity (GNU) immediately thereafter improved economic conditions temporarily. The liberalisation of agricultural marketing, including the payment for tobacco sales in foreign currency, resulted in the dramatic recovery of the tobacco sector over the following years.

An increasing number of smallholder farmers in the resettled areas and communal areas and farm workers across farming sectors now produce tobacco. Nationally, this rose from a low of 6,310 smallholders in 2000, producing 7,583 million kilograms of tobacco³² to an average of 79,000 smallholder growers over the period 2013–17.³³ In 2019, over 259 million kilograms were produced nationally, earning around US\$5 million,³⁴ much of this from smallholders. In 2019, smallholders contributed 89 per cent of total mass sold, with A1 farmers contributing 33 per cent while communal farmers accounted for 56 per cent. Without alternative financing options, contract farming of tobacco is essential in these tobacco-growing areas.

The dominance of contract farming in tobacco production at the national level is replicated in Mazowe district.³⁵ Before the FTLRP, Mazowe district had just 107 large-scale commercial farmers growing flue-cured tobacco on 8,157 hectares, producing 18.8 million kilograms.³⁶ Yet, by 2017, over 10,000 tobacco growers in the district averaged 1,915 kilogram-per-hectare yield and sold 21.2 million kilograms, worth US\$64 million,³⁷ representing 8.7 per cent of the total national value.³⁸

This major and rapid reconfiguration of the production system towards smallholder tobacco production has inevitably had significant consequences for patterns of accumulation and differentiation. The next section outlines the research design for exploring this.

Study Site, Data Collection and Analysis

Mvurwi farming area is approximately 100 kilometres north of Harare (see [Figure 1](#)) and is one of the hot spots for rising tobacco production by smallholder farmers following the FTLRP. Mvurwi is in agro-ecological region II and receives 700–800 millimetres of rainfall annually.

Our analysis is based on new data collected through a survey of 310 A1 farmers carried out between 2017 and 2019, representing 6.8 per cent of the 4,529 A1 farmers resettled after 2000, complemented by qualitative interviews. Mvurwi area was selected as having important commercial agriculture, both today and in the pre-2000 period. Three farm areas –

31 C. Stoneman, 'A Zimbabwean Model?', in Stoneman (ed.), *Zimbabwe's Prospects*, pp. 3–7.

32 Tobacco Industry and Marketing Board (TIMB), *TIMB Annual Statistical Report* (Harare, TIMB, 2007).

33 TIMB, *TIMB Annual Statistical Report* (Harare, TIMB, 2019), available at <https://www.timb.co.zw/storage/app/media/Annual%20Stats%20Report/AnnualReport2019b.pdf>, retrieved 6 December 2021.

34 *Ibid.*

35 TIMB, *TIMB Annual Statistical Report* (Harare, TIMB, 2017).

36 Scoones *et al.*, 'Tobacco, Contract Farming, and Agrarian Change'.

37 Nationally, tobacco earnings of US\$977 million represented 51 per cent of total exports earnings, ahead of ferroalloys (8.9 per cent), diamonds (7.4 per cent) and chrome ore (6.3 per cent) in 2017; see <https://oec.world/en/profile/country/zwe/>, retrieved 25 September 2019.

38 TIMB, *TIMB Annual Statistical Report* (Harare, TIMB, 2018).

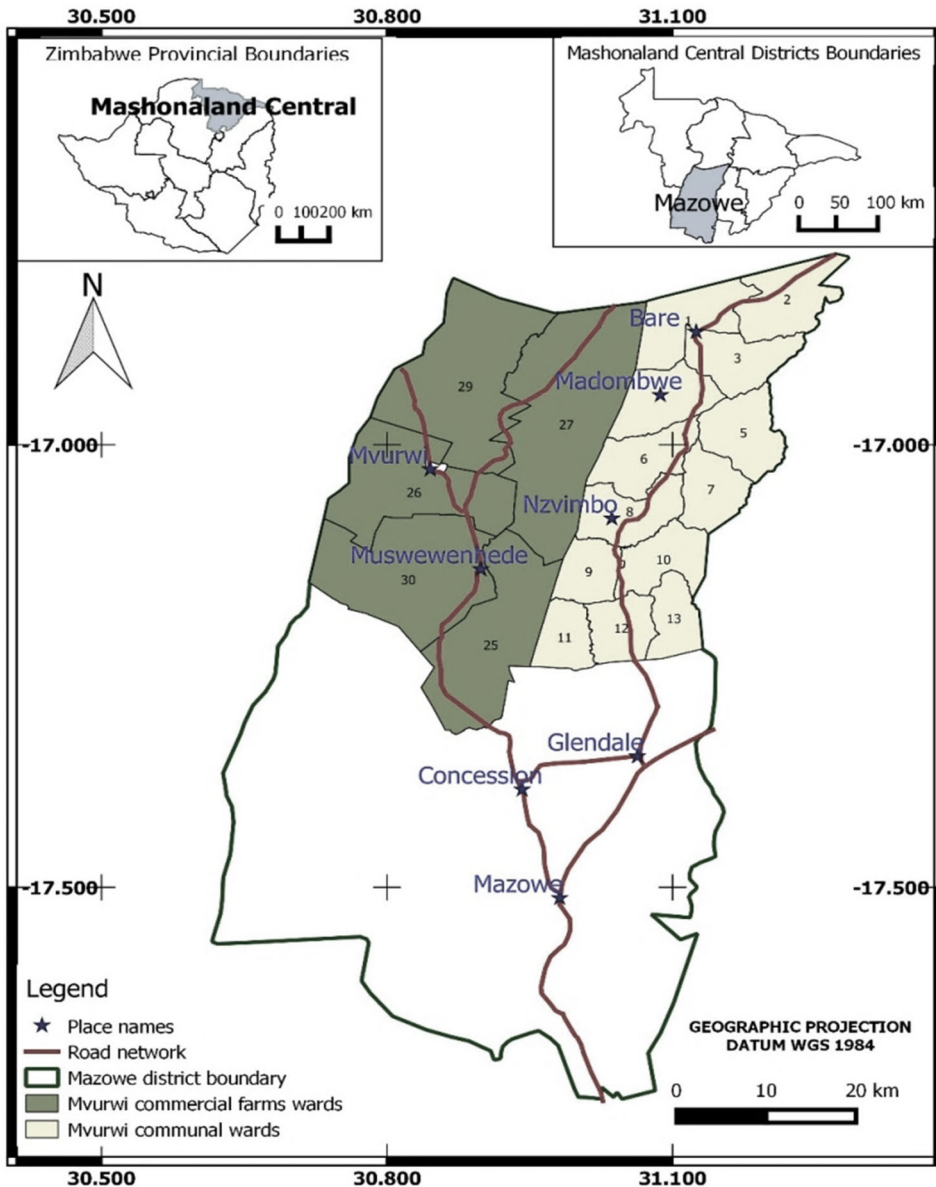


Figure 1. Map of Mvurwi farming area in Mazowe district.
Source: APRA, 2020.

Donje, Mandindindi and Hariana/Ruia A/B – were purposely selected as being broadly representative of the area. Within these farm areas, 310 households were selected randomly using a lottery method, based on a full listing of all legally and illegally settled A1 farmers on the three farms provided by local extension officials and cross-checked with other informants. The study also relied on a documentary analysis, involving archival material from the Zimbabwe National Archives, the Central Statistical Office and Agritex offices in Concession, Mazowe district.

Smallholder farming systems are highly heterogeneous across a range of household characteristics. One way of dealing with this complexity is the construction of farm

typologies using statistical techniques that can stratify households into relatively homogeneous groups, based on selected criteria. The resultant clusters are defined according to a specific combination of underlying features.³⁹ A key advantage is that the analysis can form the basis for targeting specific groups of farmers and tailoring interventions to their dominant characteristics, linked to class, gender and age.⁴⁰

Characterising smallholder farming households involves a large number of highly correlated variables. In this study, we adopted a methodology that combines principal component analysis (PCA) and cluster analysis (CA) to derive a farm typology of six clusters.⁴¹ PCA is a common multivariate technique that is used to reduce datasets with a large number of correlated variables into smaller datasets of uncorrelated variables called principal components (PCs). Out of the original 16 variables, a total of six PCs were retained. The statistical techniques used to transform the original dataset into a usable set of farmer categories for further analysis are described in [Appendix 1](#). A review of literature informed the choice of variables used in the smallholder classification process.⁴² Six key variables were identified through statistical techniques (see [Appendix 1](#)). These were ‘marital status of household head’, ‘farming input sources’, ‘food security’, ‘tobacco planted area’, ‘number of male permanent farmworkers’ and ‘total income from crop sales’.

The next step was to perform cluster analysis (CA) on the variables retained. Cluster analysis seeks to define natural clusters in a dataset, ensuring that these groups are relatively homogeneous within themselves, but differentiated between each other, based on the selected variables. Through the CA, six clusters were generated, dividing the full sample into groups of uneven size (see [Table 1](#)). These clusters define a typology of farmers, with each cluster having similar defining characteristics, which are discussed in detail below.

To complement the survey data, we undertook fifteen in-depth interviews, combined with three focus-group discussions across the A1 sites. Purposive sampling was relied upon for the selection of respondents for both the in-depth interviews and focus-group discussions. Five in-depth interviews were carried out in each of the three farms where the survey was carried out, and one focus-group discussion was held in each farm, each consisting of 15 participants selected from a census list of resettled A1 farmers, agricultural extension officers, contracting merchant workers and traditional leaders.

39 J.C. Bidogeza, P.B.M. Berentsen, J. De Graaff and A.O. Lansink, ‘A Typology of Farm Households for the Umutara Province in Rwanda’, *Food Security*, 1, 3 (2009), pp. 321–35; D.G. Nyambo, E.T. Luhanga and Z.Q. Yonah, ‘A Review of Characterization Approaches for Smallholder Farmers: Towards Predictive Farm Typologies’, *Scientific World Journal*, 2019 (2019), available at <https://doi.org/10.1155/2019/6121467>, pp. 1–9.

40 V. Mutyasira, ‘Prospects of Sustainable Intensification of Smallholder Farming Systems: A Farmer Typology Approach’, *African Journal of Science, Technology, Innovation and Development*, 12, 6 (2020), pp. 727–34; R. Kidane, M. Prowse and A. de Neergaard, ‘Bespoke Adaptation in Rural Africa? An Asset-Based Approach from Southern Ethiopia’, *European Journal of Development Research*, 31, 3 (2019), pp. 413–32.

41 *Ibid.*

42 K.S. Kuivanen, S. Alvarez, M. Michalscheck, S. Adjei-Nsiah, K. Descheemaeker, S. Mellon-Bedi and J.C. Groot, ‘Characterising the Diversity of Smallholder Farming Systems and their Constraints and Opportunities for Innovation: A Case Study from the Northern Region, Ghana’, *NJAS – Wageningen Journal Of Life Sciences*, 78, (2016), pp. 153–66; S. Moyo, S.W. Chambati, T. Murisa, D. Siziba, C. Dangwa, K. Mujeyi and N. Nyoni, ‘Fast Track Land Reform Baseline Survey in Zimbabwe: Trends and Tendencies, 2005/06’ (Harare, African Institute of Agrarian Studies, 2009); T. Shonhe, *Reconfigured Agrarian Relations in Zimbabwe* (Oxford, African Books Collective, 2017); T. Shonhe and O. Mtapuri, ‘Zimbabwe’s Emerging Farmer Classification Model: A “New” Countryside’, *Review of African Political Economy*, 47, 165 (2020), pp. 363–81.

Table 1. Farmer typology (six clusters) in relation to the six principal component variables.

Sample (%) N = 310	Cluster 1 46.1	Cluster 2 28.8	Cluster 3 3.2	Cluster 4 17.8	Cluster 5 2.8	Cluster 6 1.3
Cluster size (N)	143	88	10	56	9	4
Crop inputs sources	94.4% rely on agro-dealers, 5.6% are supplied by contractors	83.9% buy from agro-dealers, 13.8% are supplied by contractors (32.5% is contracted). 2.3% access government support	90% rely on agro-dealers while 10% are supplied by contractors (38.9% is contracted).	90.9% rely on agro-dealers, 7.3% from contractors (25% is contracted) and 1.8% through government support.	100% buy from agro-dealers.	75% buy from agro-dealers and 25% secure from contractors.
% female headed households	25.5	16.3	20	16.4	12.5	0
Tobacco area planted in 2016/17 (ha)	0.12	1.0	0.9	2.3	0.4	3.9
Mean crop sales in 2016/17 (US\$)	2,483	5,090	6,391	8,348	4,986	3,1246
Average number of male and female permanent workers in 2017	0.5	0.4	1.6	0.9	1.4	2.3
Food security, (% gone for the whole day and night without food in the past 4 weeks)	80	20	0	0	0	0

Source: APRA, 2020.

Agrarian Change, Social Differentiation and a Farmer Typology

Based on our sample of 310 A1 households in Mvurwi, [Table 1](#) highlights the data in relation to the six principal components identified. Meanwhile, [Tables 2–5](#) explore the clusters according to age and educational profiles; pre-land-reform occupations; asset ownership and crop production and sales. In the following sections, we reflect on this data, and explore the six clusters in terms of how patterns of accumulation link to processes of social differentiation.

Cluster 1

This was the largest cluster, representing around half of the total sample. It was also the poorest, with the greatest proportion of female-headed households (25.5 per cent, [Table 1](#)), similar observations were made in Shamva and Hwedza districts, also in Zimbabwe.⁴³ Households in this cluster were most likely to have been communal farmers (64.8 per cent)

43 G.D. James, 'Zimbabwe's "New" Smallholders: Who Got Land and Where Did They Come From?', *Review of African Political Economy*, 41, 141 (2014), pp. 424–40.

Table 2. Farmer typology (six clusters) in relation to pre-land reform occupation.

Sample N = 310	Cluster 1 (%)	Cluster 2 (%)	Cluster 3 (%)	Cluster 4 (%)	Cluster 5 (%)	Cluster 6 (%)
Communal farmers	64.8	71.8	33.3	81.8	0.0	50.0
Farm worker	16.2	9.4	0.0	3.6	0.0	0.0
Civil servant	7.0	8.2	44.4	3.6	75.0	25.0
Security Service	4.2	1.2	11.1	1.8	12.5	0.0
Business	3.5	2.4	0.0	1.8	12.5	25.0
Private sector	4.2	7.1	11.1	7.3	0.0	0.0

Source: APRA, 2020.

Table 3. Age profiles and educational qualification of household heads.

Sample N = 310	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6
Distribution of age groups of the household head	46.5% aged 46–65, 22.2% aged 0–35	60.9% aged 46–65	60% aged 36–45	40.7% aged 46–65, 11.1% aged 0–35	50% aged 46–65	100% aged 46–65
% of household heads completed (Form 4) secondary school and above	42.0	42.5	80	50.9	100	75

Source: APRA, 2020.

Table 4. Crop production and sales, 2016–17.

Sample N = 310	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6
Area of maize (ha)	1.5	1.9	1.7	1.9	1.8	4.0
Maize harvested (tonnes)	4.1	53.7	5.3	6.1	5.1	15.8
Maize sold (tonnes)	2.9	41.4	4.2	4.3	2.9	9.7
Area of tobacco (ha)	0.1	1.0	0.9	2.3	0.4	3.9
Tobacco harvested (kg)	458.0	1,330.9	2,550.0	3,228.1	2,250.0	7,937.5

Source: APRA, 2020.

before obtaining their A1 plots and included a significant group of former farm workers (16.2 per cent, [Table 2](#)). There are also a few former civil servants (7 per cent), businesspeople and private-sector workers. The demographic composition is mixed. Household heads in the age range 46–65 dominate, constituting nearly half in this group. There were also around one-fifth who were younger households, who had recently established homes and were often reliant on support from parents or some off-farm work ([Table 1](#)). The cluster also includes some older household heads, who may be ill or infirm, and without support from others. Over half of the farmers in this cluster had a low level of educational achievement, leaving school at Form 2 and below ([Table 3](#)).

With an average of 1.5 hectares of maize and 0.1 hectares of tobacco (slightly over a tenth had tobacco contracts with companies), these farmers produce more food than cash crops, and produce mainly for home consumption, although some still identify themselves as food insecure ([Table 4](#)). On average, households in this cluster sold 2.9 tonnes of maize and more than half a tonne of tobacco. They rely on family labour and few employ workers. Compared to other clusters, crop incomes are low (US\$2,483). They hold, on average, 5.1

Table 5. Average asset ownership per household.

Sample N = 310	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6
Cattle owned (N)	5.1	11.1	5.0	9.9	15.6	10.0
Ploughs owned (N)	0.9	1.3	0.8	1.3	0.9	1.8
Scotch carts owned (N)	0.7	1.0	0.8	1.2	0.8	1.3
Individual water pumps (N)	0.0	0.2	0.0	0.1	0.1	1.3
Televisions (N)	0.5	0.8	0.5	0.9	0.8	0.8
Tractors (N)	0.0	0.0	0.0	0.1	0.1	0.3
Solar panels (N)	1.0	1.1	0.8	1.0	1.1	1.3

Source: APRA, 2020.

head of cattle, with very few purchased in the last five years (Table 5). Remittances amount to only US\$882 on average per household per year, and as a result some must also rely on agricultural employment, including casual labour (*maricho*).

Even though cluster 1 farmers have on average relatively high cattle holdings compared with their communal area neighbours, for example (although with a highly skewed distribution), they are generally asset- and income-poor and reliant on diversified livelihoods for survival. Combining low-productivity farm production with off-farm work of different sorts – ranging from trading to craft work to provision of transport services and artisanal mining – cluster 1 households are often vulnerable, living precarious lives. Some must reduce effort on their own farms to sell labour and so are often dependent on employment relationships with richer neighbours, while some travel further, selling their labour to the medium-scale A2 farms and estates in the area. Households must derive income from multiple sources to make ends meet, with different household members involved in different activities. This often has a gendered dimension. M commented that ‘as women, we end up doing *maricho* for other farmers to be able to buy food for the family and to buy inputs for our pieces of land where we are growing maize’.⁴⁴ While remaining committed to agricultural production, households in this cluster might be characterised as members of the ‘fractured classes of labour’⁴⁵ or as precarious ‘worker peasants’⁴⁶, as they are reliant on diverse forms of temporary waged work alongside farming.

Cluster 2

Households in this cluster make up almost one-third of the sample, of which less than one-fifth are female-headed households. Like cluster 1 farmers, they are likely to have been living in the communal areas (71.8 per cent) before land reform, although some are also former farm workers (9.4 per cent) and civil servants (8.2 per cent). However, unlike cluster 1 farmers, one-third of the farmers in this cluster were involved in contract farming in 2016–17 (two-thirds through tobacco contracts and nearly half through ‘command agriculture’, a government-run contract farming arrangement for maize). Reflecting these wider sources of finance, on average 0.4 workers were employed permanently (Table 4). They are generally an older group, compared to most other clusters, with about two-thirds being between 46 and 65 years old. Around one-third of household heads pursued school education up to Form 4.

On average, farmers in this cluster cultivate 1.9 hectares of maize and one hectare of tobacco and earn an average of US\$1,667 and US\$1,331 from these crops, respectively.

44 Interview with A1 farmer MP, Mvurwi, 26 July 2019.

45 H. Bernstein, ‘Is There an Agrarian Question in the 21st Century?’ *Canadian Journal of Development Studies/Revue canadienne d’études du développement*, 27, 4 (2006), p. 455.

46 Cousins, Weiner and Amin, ‘Social Differentiation’, p. 5.

Income from crop sales, including from other crops, is the major differentiating factor between this cluster and cluster 1, as more tobacco is grown. Cluster 2 farmers, therefore, have begun to increase their agricultural productive assets and capacities, especially following the improvement of the economy between 2009 and 2016 and the rise of contract farming. They have relatively large cattle holdings, averaging 11.1 head, although a few still own no cattle and must borrow or hire cattle or tractors for ploughing. Through income from farming, they have been improving their homes and purchasing farm equipment.

While still income- and asset-poor, cluster 2 farmers are accumulating more than their counterparts in cluster 1, largely through tobacco production. However, the total area cultivated is relatively small, so there are limits to accumulation. Nevertheless, even small areas of tobacco can generate important levels of income. Maize is also important both for household food provision and generating income. Households in this cluster can be characterised as petty commodity producers, combining subsistence production with market engagement and selective accumulation from below. Compared to cluster 1, there is also less reliance on diverse forms of waged labour and off-farm income-earning activities.

Cluster 3

This cluster makes up less than one-tenth of the sample but is characterised by greater wealth and more investment in agriculture. Before land reform, household heads in this cluster were most likely to be civil servants (44.4 per cent), while many also came from nearby communal areas (33.3 per cent). Some also previously worked in the security and business sectors (11.1 per cent each) and none were formerly farm workers. Within this group, almost 40 per cent are involved in contract farming, while almost one-fifth of the women also do so. Contracting companies usually limit their risk by putting a ceiling of one hectare per farmer, prompting some men to encourage their wives to gain access to finance through a separate contractual arrangement. The majority of the household heads are aged 36–45. They are generally well-educated, with 80 per cent having completed the fourth form, sixth form, college diplomas or bachelors' degrees. Cattle ownership is high, with one-third owning four–eight and one-fifth owning more than nine head of cattle. Half the households in this cluster use their oxen for ploughing, while four out of ten use hired tractors and one-tenth rely on their tractors for land preparation.

In 2017, farmers in this cluster cultivated an average of 1.9 hectares of maize and 1.0 hectares of tobacco. They produced 5.3 tonnes of maize, selling 4.2 tonnes, and alongside they harvested 2.6 tonnes of tobacco. On average, farmers in this cluster earn an average of US\$6,391 from cropping, but this is complemented by high earnings from remittances (US\$3,880) combined with off-farm self-employment. Cluster 3 households, therefore, straddle farm and off-farm livelihoods and are extensively involved in off-farm but local self-employed income-earning, including via transport services, tractor hiring and trading stores, with both men and women engaged in a range of activities.

Compared to the poorer worker peasant households in cluster 1, these households are relatively well established, often midway through the demographic cycle, with resident, school-age children. While some accumulate through farming in good years, they are not as reliant on farming as the petty-commodity-producing households in cluster 2. Cluster 3 is a hybrid category, with aspirations to farm-based accumulation, primarily through investments from diverse sources of off-farm income, but for now they combine on- and off-farm income sources.

Cluster 4

This cluster represents around one-fifth of the total sample, with the highest proportion of those formerly from communal areas (81.8 per cent). The remainder come from urban areas,

having previously been engaged with their own business or as private-sector workers. This is the youngest cluster, with four out of ten household heads being under 46. There are fewer female-headed households (around one-fifth), with most women working with their husbands in a family farm. Nearly all household heads in this category have pursued schooling up to Form 4 level. Their focus is on tobacco, and a significant percentage of farmers (nearly four out of ten) are involved in contract farming. In 2017, they grew an average of 2.3 hectares of tobacco and 1.9 hectares of maize, earning an average US\$8,348 from crops. A few workers are employed permanently, nearly one per farm, and most households employ labour on a part-time basis for critical activities such as planting, weeding, harvesting and grading of tobacco.

Asset endowments are relatively low, as these younger farmers are only now beginning to increase production, many facilitated by access to contract farming finance, especially after 2009. Even though the reliance on hired tractors is high, above one-third, more than half of the farmers also use their oxen for land preparation, as households in this cluster own an average of 9.9 cattle. Contracted tobacco farmers are food secure despite their bias towards cash-crop production. For example, K noted that:

even though tobacco demands eight months of my labour time, I still grow it as a cash crop. The advantage is that the money comes at once, and I will be able to make some investments. So far, I use the money to buy stock feed, farming inputs and other assets that I need, even though I still get contract farming assistance from Zimbabwe Leaf Tobacco contracting company. It is easier to get contract finance for tobacco farming than command financing for maize crop from the government. I also use tobacco farming to pay school fees for my children who stay in Mvurwi town.⁴⁷

These younger farmers have often taken up farming after leaving jobs in town. They have relatively small pieces of land (two hectares on average), some of which have been allocated by parents. One 32-year-old farmer observed:

comparing to our family in Chiweshe communal lands and now on the A1 farm, there is a vast improvement. I managed to buy farming equipment, tractor, ox-drawn, mouldboard plough, harrow and a cultivator. I built my main house with the money I got from tobacco farming. I also bought cattle. Whenever I earn some cash from tobacco sales, I try and invest in other businesses to support my farming activities. I can do land preparation and other activities in time, besides supporting my parents and hiring out to neighbouring farmers. My friends are also into other businesses such as transport for school pupils who attend a school in Mvurwi town.⁴⁸

In sum, cluster 4 farmers are often younger families who are beginning to accumulate, having established homes in the resettlement lands. They are reliant on contract farming with agribusiness firms as they do not have other sources of finance. As entrepreneurial farmers, they are upwardly mobile, accumulating through tobacco production. Complementing the tobacco and maize, dominated by men, women also grow other crops, notably commercial horticulture, and engage in a diversity of activities, including trading, craft-making and shopkeeping within the area.

Cluster 5

This cluster represents less than ten per cent of the total sample and is dominated by civil servants (75 per cent). Those with current or former jobs in the security services and the

47 Interview with tobacco farmer PK, Mvurwi, 27 July 2019.

48 Interview with A1 farmer VK, Mvurwi, 27 July 2019.

business sector make up the balance (12.5 per cent each). Some continue working, while others have moved to farming only. Only one in ten are female-headed households and half are between 46 and 65 years of age. Relying on off-farm income to build herds, they own an average of 15.6 head of cattle, the highest of all the clusters. They are educationally well-qualified, with nearly four out of ten holding diplomas and one-quarter holding a master's degree.

As M explained, while he remains employed by the government in Harare, he has invested his salary in funding agricultural production over the years. However, due to this pattern of 'absentee' farming, he admitted that crop sales have remained low.⁴⁹ Another farmer in this cluster observed that, 'I continue to work in Harare because it assures me that in bad years when there is poor rainfall, I will be able to use my salary. Otherwise, in good years, I earn more money from farming than my pay from work in Harare'.⁵⁰

Farmers in this category averaged US\$4,986 from crop sales during the 2016–17 season. They also earned US\$4,610 from salary remittances and US\$1,062 from cattle sales. They plant an average of 0.4 hectares of tobacco and 1.8 hectares of maize. Half of the farmers were relying on their cattle for land preparation and employed an average of 1.4 workers.

In sum, farmers in cluster 5 link rural and urban livelihoods, and some have two homes, with families split between them. In contrast to cluster 3, who also rely on off-farm incomes – and might equally be described as 'semi-proletarians' – cluster 5 households have more formal waged jobs (such as in the civil service), rather than earning income from diverse off-farm self-employment. However, the value of salaries has been declining with the collapse of the economy, so the importance of combining farming with employment is clear. Households in this cluster are investing in rural production, notably through accumulating cattle. However, split locations may undermine crop production due to lack of labour and supervision, and very often household farms are managed by resident women. As often middle-aged people with school-aged children, such a multi-household rural–urban living arrangement makes sense, especially as the rural home is seen as a location for retirement.

Cluster 6

Constituting a small elite of our sample, with just four households, this cluster is older (all ranging from 46 to 65 years), well-educated (all above Form 4) and households exclusively have male heads. These are either formerly communal farmers (50 per cent), civil servants (25 per cent) or urban businesspeople (25 per cent). Many have alternative sources of finance, and just a quarter rely on contracts for tobacco. They till an average area of 4.0 hectares and 3.9 hectares of land for maize and tobacco, respectively, resulting in averages of US\$4,146 and US\$27,100 of income in the 2016–17 farming season. On average, they employ 2.3 workers, with four being the maximum. This cluster of farmers owns an average of 10 head of cattle and 1.3 scotch carts. Tractor ownership is the highest across clusters, with a mean of 0.3. A cluster 6 farmer observed:

as a tobacco farmer, I am better off. I have a higher income as compared to farmers who are not into tobacco farming. Farming changed my welfare positively. I have accumulated tangible assets. I managed to do a lot of remarkable things due to farming. I bought a residential stand in Mvurwi township and built a seven-roomed house. I acquired two tractors and tractor-drawn implements: disc harrow and disc plough. I also bought cattle. I am mechanising, buying tractors and installing irrigation equipment. I have no hassles in input sourcing because I am contracted. Tobacco water requirements are minimal as compared to

49 Interview with A1 farmer BM, Mvurwi, 23 July 2019.

50 Interview with A1 farmer AK, Mvurwi, 21 July 2019.

maize, such that in a bad year in terms of rainfall, tobacco farmers do not suffer from write-offs.⁵¹

In sum, cluster 6 households are in many ways a classic, but still small, ‘emergent rural bourgeoisie’, reliant in this case mainly on the commercial production of tobacco. They produce surpluses for the market; they have ready access to assets, including mechanised farm equipment; they employ permanent and temporary labour and they have the resources to invest and expand. They are politically connected and use these networks to gain access to farming assets and agricultural inputs and thus benefit also from ‘accumulation from above’. Limits on land access, even though there is some renting in of land, restrict accumulation in the A1 areas, but the expansion of enterprises and investments outside the farm, notably in local towns, is significant. This includes investing in real estate and rental properties, transport businesses and retail shops. Households in this cluster are characteristically older men, the modern equivalent of the communal area *hurudza* (rich productive farmers) of the past. Women and younger people connected via kinship networks to such households clearly benefit despite the embedded patriarchal relations, as these households support schooling, have permanent food security and can invest in projects of different sorts.

Social Differentiation: Emerging Class, Gender and Age Dynamics

While these six clusters are, of course, merely the result of statistical convergence across a set of variables, comparing them through exploring both the quantitative and qualitative data allows a sense of the emerging class dynamics in the study area and the drivers of these. The clustering echoes, in many respects, earlier analyses of smallholder class formation in Zimbabwe discussed above.⁵² For each cluster, class characteristics – linked to patterns of accumulation, asset ownership and labour hiring patterns, for example – intersect with gender and age dimensions, creating a complex pattern. The three numerically dominant clusters are characterised respectively as ‘worker peasants’ (cluster 1), part of a ‘fractured’ labouring class; as ‘petty commodity producers’ (cluster 2), combining own and hired labour producing for both subsistence and sale, with some ‘accumulation from below’ and as ‘accumulating entrepreneurs’ (cluster 4), making use of contracts to grow tobacco in particular.

The other clusters make up only one-tenth of sample households but highlight some critical variations in the population. Cluster 6, for example, can be characterised as a small local elite, part of an ‘emergent rural bourgeoisie’, while clusters 3 and 5 combine off-farm work with farming in different ways – two versions of a ‘semi-proletariat’. The former relies on local self-employed activities, straddling farming and off-farm work, while the latter frequently has split households, with (usually) the husband having a formal, often civil service, job in town.

As noted earlier, none of these clusters is exclusive and there is much variation and overlap. Still, some important general tendencies do clearly emerge from the analysis, with implications for how we understand Zimbabwe’s tobacco boom in the smallholder resettlement areas. Gender and generational dimensions to tobacco boom are also evident. As men seek to increase their participation in contract farming, they allow women to participate in contracts or, alternatively, where the husband is straddling farming and urban work, women are able to engage more fully as the lead for agricultural production on the plot. The same applies to the younger households particularly found in cluster 4, albeit

51 Interview with A1 farmer MN, Mvurwi, 23 July 2019.

52 Cousins, Weiner and Amin, ‘Social Differentiation’; Scoones *et al.*, *Zimbabwe’s Land Reform*.

operating on smaller cropped land sizes. Experiences across clusters raises questions about the potential for further accumulation through farming owing to constrained land sizes and limited inheritance opportunities for the next generation.

The clusters – and so the associated patterns of class formation – relate directly to patterns of tobacco production. While nearly everyone grows some tobacco, it is those in cluster 6 (the older, richer elites, making use of their resources, but with some contracting); cluster 5 (those with incomes from formal jobs in town that provide for tobacco financing); cluster 4 (the younger entrepreneurs who are primarily reliant on contracting) and cluster 3 (those who straddle farming and local off-farm work) who produce the most, ranging from 2.5 tonnes to nearly eight tonnes per annum on average. Different sources of financing are important, with those in clusters 2, 3, 4 and 6 relying mostly on agribusiness contracting for tobacco. Households in clusters 3, 5 and 6, by contrast, can make use of their resources, especially from off-farm work. Some, especially in clusters 2 and 6, may also make use of political connections to gain access to resources because of their elite status locally; for example, through gaining access to ‘command agriculture’ contract support for maize.

By contrast, cluster 1 households produce the least tobacco, as they are unable to provide the finance and labour, especially as they are very often working for others, including richer tobacco farmers in the same area. Often through great skill, sometimes derived from having been farmworkers on large-scale farms and estates before, they still generate high yields on their small plots, providing an important source of household income. The petty-commodity-producer cluster 2 households still produced 1.3 tonnes of tobacco on average in 2017, but they are less reliant on it. They have lower yields on average compared to other clusters, except for those in cluster 5 who are also combining off-farm work with agricultural production.

In summary, as the data show, tobacco production in Mvurwi is intertwined with forms of class, gender and age dynamics resulting in diverse livelihood strategies and accumulation trajectories. As we conclude, these findings have important implications for understanding the unfolding patterns of agrarian change in the area, and the role of tobacco in this, within the context of an economy in crisis, worsened by the COVID-19 pandemic.

Conclusion

Land reform from 2000 reconfigured agricultural production dramatically across Zimbabwe, resulting in smallholders dominating ownership and crop production. In the high-potential areas, such as Mvurwi, tobacco production is key. As our results from the A1 smallholder land reform areas show, this has resulted in new patterns of accumulation, associated with a new dynamic of social differentiation and class formation. Our study identified six clusters of farmers through a statistical clustering method, with age and gender differences intersecting with these. As we have discussed, these clusters link to patterns of asset ownership, crop production (with different foci on tobacco and maize), marketing, labour hiring and agricultural financing, including contract arrangements and dependence on off-farm income and employment.

Each cluster is associated with a particular dynamic of accumulation – some very focused on crop production, notably tobacco; some combining agriculture with other sources of income, including local self-employment, urban jobs and remittances. Accumulation may emerge ‘from below’ – through own-farm production and reinvestment – or ‘from above’ – through the deployment of income from urban employment, as well as making use of patronage connections.⁵³ Very often, as the cases show, people combine different routes to

53 Scoones *et al.*, *Zimbabwe’s Land Reform*; Cousins, ‘What Is A “Smallholder”?’

accumulation,⁵⁴ resulting in hybrid categories, such as ‘semi-proletarians’ and ‘worker peasants’.

As discussed, simple assignments of standard class labels are impossible, as the categories emerging from the data are variegated and change over time. As the urban economy improves, then shifts in agricultural production occur and off-farm work opportunities alter. As farm-based accumulation occurs, then poorer farmers and ‘classes of labour’, for example, may transition to petty commodity producers and, for a few, in turn, to richer entrepreneurs. With different contracting arrangements and options for alternative financing and market arrangements (for example, auction floors being set up locally), some may be able to shift out of a dependent arrangement with a contracting company and market through a contractor in search of competitive prices. Equally, all these dynamics are affected by the macro-economic conditions, including the currency crisis, pricing matrix and the crop payment methods. Informal trading arrangements, dominated by *makoronyera*⁵⁵ working in alliance with merchants, may also manipulate the marketing process, affecting the cost and availability of agricultural inputs and the operation of output markets.

All the class categories identified intersect with age and gender. As noted earlier, female-headed households are concentrated, with one-quarter found in the first cluster. They are generally poor, often linking farming with other off-farm activities, including trading, vegetable sales and craftwork, for example. But there are more successful female-headed households too; for example, in clusters 2 and 3, where self-employment is combined with ‘accumulation from below’ through farming. Women within male-headed households also have independent sources of income, including their own contract farming arrangements, and may focus on particular types of off-farm activity or crop production. For example, in some successful petty commodity producer households, women may be in charge of household maize production while men focus on tobacco. This may result in tensions over land allocation, labour and financing within a household, as different objectives are pursued. In those households straddling between on- and off-farm livelihoods, women may take on specialised roles either on the farm or in the non-farm economy.

Age also intersects with patterns of gender and class differentiation. Cluster 1, for example, includes some young households which do not have the resources to accumulate and cannot afford the risk of tobacco contracting. There are also much older households in this cluster too, as infirmity, illness and lack of support from younger relatives via remittances means that, again, options for accumulation are limited. Younger people are also important in cluster 4. As emerging entrepreneurs, they are able and willing to take the risk of a tobacco contract, although they do not have sufficient income to go it alone, in contrast to those in clusters 5 and 6, who have jobs in town or independent wealth.

The tobacco boom in Zimbabwe’s smallholder areas, which has been dramatically accelerated by land reform across A1 farms in the higher potential regions such as Mvurwi, has therefore resulted in opportunities for accumulation for some but not for others. The result is that complex patterns of social differentiation have emerged, with class, gender and age intersecting. This is a highly dynamic setting, influenced by the broader challenges of the Zimbabwean economy. Our study clearly demonstrates how tobacco as a commercial crop can have diverse influences, depending on how it is incorporated into farming systems, how its production is financed, how and where it is marketed and how it is combined with other crops (notably maize for food) and other income-earning opportunities on- and off-farm.

54 M. Mamdani, ‘Extreme but Not Exceptional: Towards an Analysis of The Agrarian Question in Uganda’, *Journal of Peasant Studies*, 14, 2 (1987), pp. 191–225.

55 These are farm gate commodity buyers who purchase agricultural commodities at low prices at the farm for resale in urban centres at far higher prices.

While the headline figures of Zimbabwe's smallholder tobacco boom show significant success in terms of volumes of production and value of marketed output, with important implications for the national economy, not least through the earning of scarce foreign exchange, the impact on the ground is more varied. Some have benefited from the boom while others have been left out, or at least are benefiting through becoming labourers for the more successful farmers. Studies that disaggregate the data and unpack the broader story through engaging with the differentiated experience of the farmers involved are essential if the full picture of tobacco's implications for Zimbabwe's agrarian economy are to be revealed.

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Appendix 1:

Detailed Methodology Explanations

The principal component analysis (PCA) technique was applied to a total of 16 variables, summarised in [Tables A1](#) and [A2](#). Given that our dataset included both continuous and discrete variables, we used the polychoric PCA technique in STATA 14 to transform discrete variables into continuous PCs₅₆ (see [Table A2](#)). The mean value was used while the total variance explained, with an Initial Eigenvalues value above eight out of ten for six variables (see [Table A1](#)) and the communalities variable extraction with six variables selected based on higher-value placement ([Table A2](#)) was applied. The number of variables extracted is guided by the scree plot (see [Figure A1](#)), and the variance explained [Table A1](#). The scree plot's Eigenvalue shows that six components are above

Table A1. Extraction method: principal component analysis (total variance explained).

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadin		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.945	24.658	24.658	3.945	24.658	24.658	2.969	18.557	18.557
2	2.938	18.363	43.021	2.938	18.363	43.021	2.528	15.803	34.360
3	2.194	13.710	56.730	2.194	13.710	56.730	2.164	13.524	47.885
4	1.632	10.200	66.931	1.632	10.200	66.931	2.103	13.141	61.026
5	1.266	7.912	74.843	1.266	7.912	74.843	1.742	10.886	71.912
6	1.176	7.350	82.192	1.176	7.350	82.192	1.645	10.280	82.192
7	.723	4.520	86.712						
8	.690	4.312	91.024						
9	.346	2.162	93.186						
10	.299	1.868	95.054						
11	.190	1.190	96.244						
12	.165	1.029	97.273						
13	.140	.873	98.146						
14	.126	.791	98.937						
15	.095	.592	99.529						
16	.075	.471	100.000						

Source: APRA, 2020.

Table A2. Description of variables used in PCA and communalities variable extraction (those shaded are the 6 PCs retained using Kaiser's criteria).

	Variables	Description	Measurement units	Initial	Extraction
1	Marital status	Whether single, married, divorced separated or widowed	Categorical	1.000	.917
2	Farming input sources	Source of farming inputs for the household	Categorical (kgs)	1.000	.895
3	Food security	Number of months for which a household is food secure	Continuous	1.000	.887
4	Tobacco area planted	Average household tobacco area planted in 2016/7 farming season	Continuous (hectares)	1.000	.882
5	Male permanent farmworkers	The average number of permanent workers employed per household in 2017	Continuous	1.000	.881
6	Total income from crop sales (US\$)	Total sales from all crops	Continuous	1.000	.876
7	Gender of the household head	Whether male or female	Categorical	1.000	.870
8	Female employees	The average number of permanent workers employed per household in 2017	Continuous	1.000	.857
9	Economic activity	Major economic activity for the household (formal, informal and farming)	Categorical	1.000	.855
10	Primary activity	Member's primary activity	Categorical	1.000	.833
11	Farm employment income	Farm wage income for farm labour	Continuous (USD)	1.000	.813
12	Type of legal papers held	Land tenure system for the land held (leases, permits and nothing)	Categorical	1.000	.810
13	Livestock income	Income from the sale of cattle and other animals	Continuous (USD)	1.000	.801
14	Total arable land allocated	Land held by household under the A1 scheme	Continuous (hectares)	1.000	.765
15	Maize area planted	The total land under maize crop	Continuous (hectares)	1.000	.635
16	Cattle owned	No of cattle owned	Continuous	1.000	.576

Source: APRA, 2020.

Table A3. KMO and Bartlett's Test.

Kaiser–Meyer–Olkin measure of sampling adequacy		.600
Bartlett's test of sphericity	approx. Chi-Square	277.212
	df	105
	Sig.	.000

Source: APRA, 2020.

one, indicative of the number of variables that are significant in class differentiation for this database. Six communality variables are then selected (shaded in grey) based on higher values as shown in [Table A2](#).

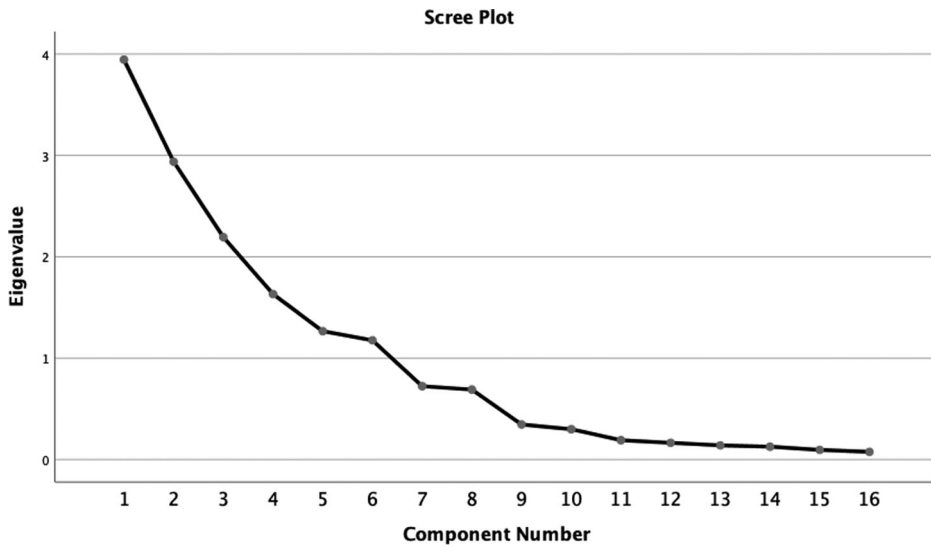


Figure A1. Scree plot.
Source: APRA, 2020.

Ward's hierarchical procedure, which minimises the variance within clusters, was used.⁵⁷ The number of clusters retained from Ward's method was then used as starting values in the K-means clustering method.⁵⁸ The KMO and Bartlett's Test, which gives a significance of 0.0 (Table A3), which is below 0.05 and thus suggests that there is substantial correlation in the data and that the sample adequately represent the study area or population. Statistically derived clusters, of course, only demonstrate patterns, and there are inevitable overlaps between them as clusters are not exclusively defined. To explore the underlying processes that define clusters, therefore, requires a much more nuanced qualitative political economy analysis, as the paper attempts.