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FARM SIZE EFFICIENCY, FOOD SECURITY AND MARKET ASSISTED RURAL LAND REFORM IN SOUTH AFRICA

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This paper explores the South African experience with respect to farms size efficiency, food security and the South African market for rural land. The evidence suggests that the South African experience is no different from that which is generally observed internationally. The present situation in South African agriculture subsequently provides both an unique and necessary opportunity for advancing a market assisted land reform program. Managing the imminent debt crisis, increasing efficiency, improving food security and addressing some of the racial imbalances in South Africa's farm sector following market liberalization and the withdrawal of other privileges can be facilitated through a market assisted land reform process, rather than through a much more costly, inefficient and inequitable blanket debt relief program. It will also have the added advantages of increasing employment at a low cost and adding to the rural safety-net. In addition, the market assisted process provides a mechanism for efficient and quick land reform without most of the problems and excessive procedures associated with a state or parastatal-led expropriation and redistribution mechanism.

1. Introduction

South Africa has experienced far-reaching changes in the political sphere over the past year. The birth of a new democracy effectively ended the 'apartheid' era and opened the way for South Africa resuming a full role within the international community. However, these changes are only the beginning and they will also impact heavily on the social and economic spheres of our country.

While it is generally accepted that equality should be the general ethic or guiding principle in the political and social spheres of our society, the consensus seems to favor equality of opportunity as the driving ethic in the economic sphere (Eckert, 1991). Equality of opportunity may sound nice and acceptable to most people, but it does not solve the issue of 'taking sides' or of favoring A over B, especially in South Africa where the *status quo* is a function of exactly the opposite policies, namely that of exclusion and oppression of one group by another (Van Zyl, 1993). In this respect, future equality of opportunity is dependent on the present distribution of rights, privileges, wealth and power, which is a direct result of past policies. To accept the present distribution of ownership of wealth and assets as a starting point is thus to merely implicitly accept these past policies from which they have been derived -- policies which have already been discarded because they have been unacceptable to the large majority of South Africans. Hence, the guiding principle of equality of opportunity automatically questions the *status quo* with respect the distribution of wealth and economic power, and at the very least suggests a comprehensive affirmative action approach to reverse the effects of past policies to ensure an equal starting point.

This presents both a serious dilemma and tremendous challenge to the economist and in particular the agricultural economist in South Africa. Economic tools do not allow the economist to make a choice of A over B in the face of conflict, and even standard concepts like efficiency and cost-benefit analysis become questionable because they are derived from existing distributions of rights, privileges and wealth (Schmid, 1987). But these issues of equity and efficiency are at the very hart of the debate on our future economic system and the basic fabric of our society. Our role as agricultural economists in a future society will depend on how we inform this

present debate on the outcomes of different policies. In this respect we will often have to be subjective, but the issue is to do something, while making explicit our assumptions, than to do nothing and criticize the outcomes.

In the South African agricultural context, the issues of equality of opportunity and existing distributions of rights and power are probably most important where it concerns the ownership of land and water. Issues concerning the redistribution of land thus lie at the center of the debate and it is exactly here that the agricultural economics profession is well placed to make a contribution. However, if one examines the literature and follows the policy debate, the biggest contribution on this crucial issue has come from politicians, lawyers and administrators. With a few exceptions, major contributions by agricultural economists based on sound empirical analysis of the major issues involved are glaring in their absence.

This paper subsequently attempts to address some of the most crucial areas in the field of land reform in South Africa, namely farm size efficiency, food security and the rural land market, following a discussion on the background of the issues involved. A market assisted land reform methodology or mechanism which is most likely to achieve success is subsequently proposed. In this respect it builds on a number of recent empirical studies of productivity, efficiency, food security and land markets, most of which were done (but not exclusively) at the University of Pretoria.

2. Background

(This section builds heavily on a recent comprehensive study of South African agriculture and a number of recommendations by the World Bank (1994) involving a large number of South Africans and several leading international experts in the field).

In its recent study of South African agriculture, the World Bank (1994) came to the conclusion that agriculture in South Africa is widely regarded as a highly sophisticated and successful sector, but that a closer look at the present structure and performance of South Africa's agricultural sector reveals that despite the appearance of efficiency, the sector has followed a pattern of growth that is far from normal due to

widespread distortions introduced during a long history of persistent government intervention. (Some of these distortions are not particular to agriculture, but characterize the entire economy, e.g. sluggish growth in total factor productivity and the high capital-intensity of production in the presence of widespread unemployment. Nonetheless, it appears to be the case that agriculture has produced distortions that have been extremely far-reaching.)

Although agriculture is generally characterized by constant returns to scale and an inverse relation between farm size and productivity, the sector is dominated by relatively large farms that are owned and operated by a comparatively small number of individuals. As a result of this history of distortion, this minority own a startling 86 percent of South Africa's agricultural land. In addition to the equity aspects of this concentration, several analysts (working in a variety of countries) conclude that a large-scale mechanized farm sector generally is inefficient, especially when compared to small-scale family type farm models. Although there may exist very real economies of scale, it is usually the result of policies which favor larger farms over small farms. Furthermore, South African agriculture makes sub-optimal use of labor. Subsidized low interest rates and various tax breaks encouraged the excessive substitution of capital for labor. Additionally, labor-saving technology was extensively promoted by South Africa's farm machinery industry, and seems also to have been adapted by farmers in an effort to imitate North American and West European agriculture. Farming sub-sector and, on the other hand, an emerging commercial small-scale black farming sub-sector.

In sharp contrast, apartheid policies have resulted in the concentration - as of 1985 - of about eight million blacks on 14 percent of agricultural land - primarily in the homelands. Combined with inadequate support services, access to markets and infrastructure these policies caused the virtual elimination of small-scale black agriculture. The history of eliminating black commercial agriculture and small-scale agriculture in general has also prevented the development of a viable, employment-intensive rural economy centered around agriculture. Thus, the usual vibrant and wide range of informal business activities created through forward and backward linkages of agricultural development has never fully emerged in South Africa's rural economy.

The combination of large-farm relative inefficiency in the absence of policy distortions, the inequitable distribution of resources, and the new democracy of majority rule in South Africa have produced a politically unsustainable situation in the rural economy - and one that threatens the future viability of the entire economy. International experience clearly demonstrates that economies with a land distribution similar to South Africa's that do not undertake a radical and rapid reform, are doomed to a debilitating pattern of civil disorder and violence. While acknowledging the difficulty of land reform and settlement processes, failure to execute major land reforms in countries with highly dualistic farm size structures, or delayed implementation of such reforms and continued neglect of native peasant sectors seems to have had far more adverse consequences than the relatively minor risks associated with the process of land reform (Binswanger and Deininger, 1993).

In the light of international experience and the present circumstances in rural South Africa, the conclusion that the World Bank (1994) draws from their work on South Africa is that there are few development options for agriculture and the rural economy available to a new Government in South Africa. South Africa does not have the luxury of unused or under-utilized arable land that would allow resettlement and little change in the size of the white farming sector. Disregarding the option of maintaining the *status quo* means that South Africa needs solutions to the problem of redistributing land and increasing agricultural production that center on increasing equity and efficiency. The thesis is that a successful strategy for the growth and development of the rural economy will require at least three elements:

- removing current distortions in white agriculture to increase competition and induce a shift towards more employment-intensive forms of production, processing and marketing;
- developing a new type of commercial, small-scale agriculture centered around the black family farm to further increase the employment intensity and efficiency in agriculture while, at the same time, urgent attention is given to issues of equity which, if not dealt with, could lead to unrest; and
- fundamental institutional restructuring in order to support the "new agriculture's" mix of, on the one hand, a down-sized and employment-intensive white commercial agriculture.

3. Land reform and efficiency

At least two issues concerning the efficiency of land reform, which have not been adequately addressed in South Africa before, are important when considering land reform in South Africa along these lines discussed above, namely:

- What are the productivity relations in South African agriculture, both commercial and subsistence, and what are the effects of size on these relations? Are large mechanized farms and the present commercial white farms economically efficient relative to smaller holdings? If they are not, smaller farms and equalizing the ownership distribution would enhance efficiency and equity.
- If land reform is the only way to bring about a more optimal distribution of operational holdings, to what an extent can the land market and price mechanism be used to affect the desired changes? This addresses the question why, if large ownership holdings are inefficient, do their owners not split them up and rent or sell them to family farmers, or what prevents the land market from bringing ownership holdings in line with the optimal distribution of operational holdings?

Both these issues raised above need further empirical analysis of the South African situation before anything can be said about the efficiency of a land reform program. International experience, however, is clear (Binswanger, Deininger and Feder, 1993; Kinsey and Binswanger, 1993): (i) economies of scale in agricultural production are often real but 'false' in the sense that it is the result of market and policy distortions favoring large farms over smaller family type farms - in general small family type farms are more efficient than and superior to large mechanized farms in the absence of policy distortions and market failures;

and (ii) a well-functioning land market is not a sufficient condition for large mechanized and relatively inefficient farms to be sub-divided into smaller family-type farms, specifically where economic and institutional distortions favor large farms over small farms. The question now is whether the same applies to South Africa.

A number of studies on this particular topic over the past two years using a variety of analytical approaches – both econometric and non-parametric – shows that the South African experience closely correlates to that observed elsewhere in the world (Sartorius von Bach, *et al*, 1993; Van Schalkwyk, *et al*, 1993; Van Zyl, 1994c; Despins and Van Zyl, 1994). Analyses involving farming in the Ruens, Swartland, Eastern Free State, North-Western Free State, Western Transvaal, Eastern Transvaal Highveld and Vaalharts Irrigation Area over the period 1975 to 1992 clearly show that: (i) where economies of scale exist, it is a function of the policy environment; and (ii) that optimal farm size will not be the same for any two managers – the better the manager, the larger the optimum farm size. It also illustrates how the removal of policy distortions favoring farming in these areas decreased the size of farms on the efficiency frontiers. The results obtained have important implications for structural adjustment of South African agriculture. Results support the immediate repeal of the Act on the Subdivision of Agricultural Land (Act 70 of 1970) and the call for flexibility in policies regarding farm size and structure of agriculture. The analysis also shows the value of proper training and extension aimed at increasing the farmer's managerial ability. The latter should form an integral part of the agricultural restructuring process in a future South Africa, and not legislation controlling minimum farm sizes. In addition, it clearly calls for the removal of policy distortions favoring large farms over smaller farms.

In the homeland sector, two studies by Piesse, *et al* (1994a; 1994b) apply data envelopment analysis (DEA) to 1990/1 and 1991/2 crop year maize production data for South African smallholders in the northern and eastern Transvaal homelands of KaNgwane, Lebowa and Venda. The results show a very wide dispersion of efficiency level between farms in the same regions, but that decomposing the total efficiencies into pure technical and scale efficiencies shows that inadequate farm size is responsible for about half the efficiency losses in KaNgwane and Lebowa and as much as 60% in Venda, where the farms are smallest. Comparing regions shows that although the difference between KaNgwane and Lebowa is not great, once the farms in Venda are compared with the most efficient farms in the other homelands, none of them are on the efficiency frontier and the average efficiency level is only 6.9%, with farm size accounting for 90% of the inefficiency. When incorporating more standard econometric procedures into the above analysis, examination of slack variables shows that fertilizer is not a constraint to production for about two thirds of the farms in Lebowa and Venda and one third in KaNgwane. Labor is the next most plentiful input, while land is the constraint on output that is binding for most farms. This supports the DEA results that farm sizes are inadequate for many producers.

The analyses provide clear answers to the issues in question. *From an efficiency point of view farms should be smaller in the commercial sector and larger in the homeland sector.* However, policy distortions in both

areas prevent the market mechanism to bring about a more optimal farm size distribution. A normative regional programming model of the Western Cape Province which addresses this question arrives at the same conclusion (Van Zyl, 1994b): Under specific circumstances some measure of land reform does contribute to welfare and efficiency of the farming system in the Western Cape, but it may affect output negatively. However, when land reform is forced into the solution beyond the 'optimal' level, it constitutes a social cost with decreases in both consumer and producer welfare. These social costs are, however, surprisingly small, partly because the more lucrative production activities like fruit production are not affected significantly by the reforms. Land reform could thus make a positive contribution to agriculture in the Western Cape under certain conditions, while it can also have negative effects. However, the impact of land reform will be less (given the assumptions underlying the analysis) than that of market liberalization. The results clearly indicate that *when the market decides on optimal farm sizes, a range of sizes form part of the optimal farm structure.*

Land reform's effects on agricultural output as indicated above does, however, raise the related issue of food security. This is subsequently addressed.

4. Land reform and food security

The basic premise of this section is that the majority of South Africans, especially in the rural areas, are food insecure in spite of high levels of national food self-sufficiency. In this context, national food self-sufficiency has little policy relevance. Appropriate policy should rather address the real and most pressing problem in rural South Africa, namely that of crushing poverty and resultant food insecurity. Land reform is one important and powerful tool in alleviating these problems, while at the same time addressing some of the inequities brought about by the racial policies of the past. The argument thus is that land reform, if done correctly, will increase food security in South Africa.

Over the past number of years, there has been growing empirical and policy support for two fundamental premises about the linkages between food availability, poverty and the access to food (Eicher and Staatz, 1992). These premises can be described as the two sides of the hunger equation, namely supply and demand for food. The first premise is that increasing food production, storage and trade can assure food availability, but this will not automatically ensure that all people have enough to eat and end hunger. The second premise is that, because poverty is a central cause of hunger and malnutrition, special efforts are needed to help increase the access and entitlement to food.

Food security is defined for the purpose of this paper as "the ability of a country or region to see that existing food systems provide access to a timely, stable and nutritional rich supply of food to the total population over the long term". This definition, based on the work of Eicher and Staatz (1992), has the implication that both an adequate supply of food and access of the population to that supply, usually through generating effective demand via income growth or transfers, are important. Food security is therefore influenced by both micro- and macro-factors, ranging from the technology and support institutions available to small farmers and

merchants, to monetary, fiscal and trade policies that affect the overall rate of growth and distribution of income. In this respect all factors that impact on either supply or demand for food, be it at the national, local or household levels, are important when discussing food security. South Africa, with its dualistic agricultural sector (Louw and Van Zyl, 1991), is particularly vulnerable in this respect.

Although increasing food production, and therefore a policy of food self-sufficiency, will not automatically ensure that people are food secure and have enough to eat, the South African Government for many years pursued an agricultural policy which had food self-sufficiency as a major objective. Although this objective was to a large extent realized, many people in South Africa are still food insecure (Van Zyl and Kirsten, 1992). Most sources (DBSA, 1993; Committee, 1992) estimates that roughly 50 percent of the population (19 million people) live below the poverty line. According to Simkins (1991) there is substantial poverty among rural coloreds and all black people: 33 per cent of urban blacks, 54 per cent of homeland urban blacks, 58 per cent of rural coloreds, 72 per cent of rural blacks in "white" areas and 84 per cent of homeland rural blacks live under the poverty line.

In order to design policies and to review options on how to deal with the problems of the food insecure, it is necessary to look at who the food-insecure are. Food-insecure households can be members of different socio-economic and demographic groups in different areas. Nevertheless, poverty remains one common characteristic. In South Africa, food-insecure households tend to be larger with a higher number of dependents; food insecurity is higher among the landless and quasi-landless households; women's income has an important influence on the food security situation; and food-insecure people spend a large share of their income on staple food consumption or allocate a large share of their resources to subsistence food production (Cooper and Van Zyl, 1994).

A wide range of alternative policies can be pursued for improving household food security. Characteristics of the food security problem and institutional capabilities need to be considered when making policy choices. Von Braun *et al* (1992) provide an overview of possible policies to address this problem. These policies are: (i) macroeconomic policies; (ii) storage and trade-oriented policies for stabilization; (iii) production-oriented policies and programs; (iv) other income and employment-generation policies and programs; (v) targeted distribution and food subsidies; and (vi) emergency relief programs. In the South African context, land reform should also be included as a strong and desirable policy.

Policies and programs for increasing food production and production of crops for sale can improve food security if they increase or stabilize the real incomes of the food-insecure people. Technological innovation and commercialization in agriculture help to alleviate poverty and improve food security by stimulating growth, improving employment opportunities, and expanding food supplies. Gains in real income lead to improvement in food consumption and nutritional welfare. Agricultural growth further enhances food security by stimulating, through multiplier effects, non agricultural employment and income.

Accepting that the majority of households in the rural areas are resource poor people (households) with only limited or often no access to agricultural resources, the first issue is how to use the available resources so as to alleviate the related problems of poverty and resultant food-insecurity. The important point here is that very little can be done to help rural people if they have no land. The issue thus is to give people access to land. However, in itself, land reform and increased access to land is not sufficient for alleviating rural poverty and food-insecurity. A comprehensive set of support services to facilitate the efficient use of the land is also critical in the process. The rest of the discussion will focus on strategies to improve the food security position of existing small farmers and potential beneficiaries of land reform.

Production constraints facing small farmers could be addressed through the provision of the following six basic elements (Van Zyl and Coetzee, 1990): (1) The provision and financing of inputs and other production factors to small farmers; (2) the provision of mechanization services; (3) the implementation of effective marketing channels to satisfy the specific needs of the small farmer; (4) the transfer of appropriate technology through training and extension services and appropriate research; (5) training of all parties involved and (6) policy formulation to provide the necessary institutional capacity. The success of such a farmer support program lies in the implementation of the program as a total package and part of an integrated approach. The Development Bank of Southern Africa initiated this concept in South Africa (cf. Van Rooyen *et al*, 1987) and implemented the program based on these six principles in a number of areas in South Africa. Initial results of the FSP (cf. Lyne and Ortmann, 1991; Kirsten *et al*, 1993; Kirsten, 1994) indicate that the program contributed to increased household production and household income. The program enabled households to produce enough staples which could release resources that could be used to purchase other foodstuffs and/or durables. This in many cases resulted in a better balanced diet of households and a higher quality of life. A further expansion of this type of program to reach more rural households should be considered as one of the aspects to be considered in a food security policy for South Africa.

The basic conclusion from the above is that rural restructuring and specifically *land reform is necessary but not sufficient to improve the food security situation of the rural poor*, which constitutes the majority of the rural population. Even if this negatively affects food production, there is enough "surplus capacity" to ensure that the food needs of the urban population is not placed at risk.

5. Land markets and land reform

International experience with land reform and rural restructuring, as well as that of South Africa, suggests a design for land reform that relies as much as possible on the existing land market. The need for reliance on market mechanisms stems from the observed weaknesses of non-market oriented programs that typically vest too much control in public sector bureaucracies. These public sector bureaucracies develop their own set of interests that are in conflict with the rapid redistribution of land (Kinsey and

Binswanger, 1993). Nonetheless, non-market interventions may be necessary to ensure successful implementation of any land reform program. It is therefore important to understand the working of the South African land market so that forces driving the market can be identified. It is furthermore important to understand the possible effects of interventions in the land market as it will impose distortions. The magnitude of these distortions should be known beforehand if costly failures are to be avoided.

A comprehensive study by Van Schalkwyk and Van Zyl (1993) examines the underlying factors driving land price changes in South Africa with a structural model of land prices which includes the multi-dimensional effects of inflation on capital-erosion, savings-return erosion, and real debt reduction as well as the effect of changes in the opportunity cost of capital was subsequently developed. The method of approximation and procedure is largely based on that followed by Just and Miranowski (1993) in their computation of farmland price changes in the U.S.A. The model provides a comprehensive framework for analyzing the relative importance of factors determining farmland prices over the past two decades. Free-form econometric investigations cannot estimate coefficients on all variables with sufficient precision to resolve the important issues. The model was estimated for different agro-economic regions and for South Africa as a whole.

After reviewing the historical data, many of the factors hypothesized to affect farmland values appear to have correlations that suggest validity and reflect the results obtained by studies examining each individually. These relationships explain why empirical results based on *ad hoc* and partial analyses are conflicting and imply that a comprehensive and theoretically defensible framework is needed to identify the relative importance of each (Just and Miranowski, 1993).

The results of the model were subsequently used to decompose farmland price changes beginning with the boom of the 1960s. The results show that inflation and changes in the real returns on capital are major explanatory factors in farmland price swings in addition to returns to farming. Additionally, the effects of credit market constraints and expectation schemes are considered explicitly in the analytical model. Data for the period 1955 to 1991 were used for estimation. The results are reported for the summer rain region and South Africa. The model was estimated by the nonlinear seemingly unrelated regression (SUR) method to take advantage of the high correlation of disturbances that exists among regions. Predictions fit the 1955 to 1990 data very closely.

Land price expectations are the most important explanatory force in every agro-economic region. However, the change in land price expectations is explained by changes in previous prices and, thus, indirectly by previous changes in other variables. With extrapolative expectations, the change in price expectations for period t is explained by the change in price expectations and all other variables in period $t-1$, the change in price expectations in $t-1$ by price expectations and all other variables in period $t-2$, etc. Thus, the relative role of variables other than price expectations is crucial in understanding the wide swings in the South African land prices. The contribution of

price expectations in each year is primarily important in understanding the dynamic effects of the other variables.

For remaining variables, the most striking effect is the dynamic role of inflation and the opportunity cost of capital. These two effects are each roughly as important as increased returns to farming. This is well illustrated for the South African 1971 land price take-off period and the 1975 surge. From 1971 to 1973, the inflation rate increased from 6,4% to 9,4% (as measured by the consumer price index). This increase in the rate of inflation explains 35% of the predicted 1972 price increases in the RSA. This effect is the direct effect of capital erosion, i.e., the opportunity cost of a Rand invested in any activity declined because it would be worth 9,4% (rather than 6,4%) less in real terms after one year of use (aside from the rate of return it earns).

Another major force in the 1971 take-off period is the opportunity rate of returns on capital. From 1968 to 1974, the real rate of return on savings dropped from 4,6% with 6,5% percentage points. This caused investment in land to become more attractive by comparison. This effect explains 27% of the predicted land price increase in 1972 for the RSA as a whole. Note that the effect of the rate of interest on debt has a minor effect.

By comparison, the increase in returns to farming explains only 16% of the predicted RSA land price change in 1972. Over the five-year period from 1971 to 1975, the rate of inflation and the real rate of return on capital have effects similar to the effects of farming returns. Following the 1971 take-off period, much of the ensuing land price appreciation was due to the 1968-74 effects working through the system and culminating in price expectations effects. To understand this explanation, note that an initial price increase due to inflation or opportunity cost has a positive effect the following year on price expectations; these higher price expectations, in turn, cause a higher price the following year which then causes higher price expectations to be transmitted to a third year, and so on. While on the surface this explanation may suggest that land price changes are being explained tautologically with land price changes, the adjustment process actually works much like a Nerlovian model. Each external shock has a declining distribution of effects over time reflected through the land price expectation which is the lagged land price. Aside from higher expected returns to farming, inflation and opportunity costs of capital are the only major explanatory forces behind the increased price expectations of 1971-77. By 1979, inflation and opportunity cost had returned to pre-1968 extremes. Land prices started to drop in 1977; a direct effect of high inflation. Furthermore, the land price volatility in the 1980s led to large increases in perceived risk tending to decrease prices further.

The model begins to predict the price turn around of the 1970s beginning in 1977 which is when the reversal of land prices in South Africa occurred. The 1982 shock is primarily due to perceived risk, opportunity-cost and farming returns. From 1973 to 1983, farming returns decreased while the rate of inflation increased. The associated opportunity-cost effect explains about 40% of the 1979 predicted decline for the whole country.

The results of the analysis by Van Schalkwyk and Van Zyl (1993) have important implications for a market-

based rural land reform in South Africa. It clearly demonstrates that the rural land market is not only active enough, but also stable enough to be used as a transfer mechanism for substantial amounts of rural land to the people disadvantaged and excluded by the apartheid policies of the past.

An additional question related to the above, and also concerning land prices, that has to be addressed is: What is the gap between market and productive values of land? The size of the gap between the agricultural and market value of land is of major importance for land reform purposes, especially if the affordability of a basically market-oriented land reform is taken into account. In another paper which will also be presented at this conference, Van Schalkwyk and Van Zyl (1994) use the above information to trace the difference between the market and land-use value of agricultural land in South Africa over the period 1960 to 1992.

From the analysis it is clear that the gap between the average market and agricultural value of South African land showed a general decline since 1984. The decline is attributable to the withdrawal of some of the major support services and policy distortions to the farming community and inflationary conditions which had a negative influence on both sellers and buyers. The inflationary conditions had the effect that land was not an effective inflation hedge since the mid 1980s. The agricultural sector showed a steady decline in its financial performance since 1973. The decline is attributable to the cost-price squeeze which obviously exerts considerable pressure on income. The negative trend was, however, countered by an annual growth in productivity of 4.63% since 1983. This had a positive effect on agricultural land values, thus closing the gap between the market and agricultural value of land.

The conclusion is that the current relatively small gap between the agricultural and market value of South African land makes land more affordable and enhances repayment ability as buyers of land will now find it easier to repay a loan from the productive capacity of the land itself. It also firmly establishes a market assisted approach as a very real and workable option for land reform.

6. Market assisted land reform: A workable option

South African agriculture in general is going through a period of crisis associated with change. In this respect the withdrawal of a number of privileges to large scale agriculture, for example taxation benefits, subsidized credit and price supports which resulted in welfare transfers to farmers (Meyer and van Zyl, 1992; Van Zyl, 1994a; 1994b). This decline in agricultural support, (See the paper by Helm and Van Zyl (1994) on the quantification and composition of agricultural support over the period 1988 to 1993 to be read at this conference) combined with the effects of increasing international agricultural competition under the GATT agreement, have already and will increasingly place agricultural revenues under severe pressure, especially in the grain and livestock sub-sectors. For example, market and trade liberalization will cause the producer surplus in the Western Cape to decrease by 21 percent from 1988 levels (Van Zyl, 1994b).

Given this large impact of market and trade liberalization on the producer surplus and the rapid policy shifts in South Africa towards this scenario over the past two years, as well as the role of land reform in achieving both efficiency and equity objectives in agriculture, it is necessary to explore the possible relationship between market and land reform in South Africa. The point is that the present situation provides an unique situation to alleviate some of the problems caused by market liberalization in specifically grain and livestock production by a market driven (or assisted) land reform program. The details of such a proposal are subsequently discussed.

Some privileges have been withdrawn from the large scale commercial grain farm sector, specifically some of the credit subsidies it enjoyed. Macroeconomic stabilization further resulted in relatively high real interest rates, elimination of remaining tax privileges and an investment pause. Added to this the effects of market and trade liberalization on the profitability of large scale mechanized farms will result in:

- a wave of farm bankruptcies;
- very low demand for land and the collapse of farm land prices;
- demand for blanket debt relief from both the farm and bank sector;
- aggravation of already high urban and rural unemployment; and
- worsening of rural poverty and the nutrition situation. (An additional (well-documented) example of the process described above is the adjustment in the US farm sector in the early 1980s following high real interest rates – more than 30 per cent of all US farmers left the farm sector, despite a well developed financial support system (Tweeten, 1986)).

This process and its results imply a need for increasing safety net actions, both rural and urban. The social impact will be most severe in the rural areas where poverty is already crushing – 75 per cent of the total number of poor is from the rural areas (Kirsten, *et al*, 1994).

The withdrawal of privileges, and the market and trade liberalization process, particularly in the grain and livestock sectors, present both a necessary and unusual opportunity to advance market assisted land reform. Market assisted land reform can help solve some of the problems associated with the adjustment process:

- it can assist in the financial crisis of the commercial farm sector by creating a market for land; and
- it can assist in solving the employment problem by generating self-employment at low cost per job and thereby contributing to the rural safety-net.

Market assisted land reform will increase employment, equity and efficiency of the farm sector, will assist in providing safety-nets and will cost less than blanket debt relief and subsidies. It will also address the racial imbalances in farm ownership in South Africa.

The workings of the proposed market assisted land reform process in an impending debt crisis situation are described in Figure 1. The main features are subsequently discussed.

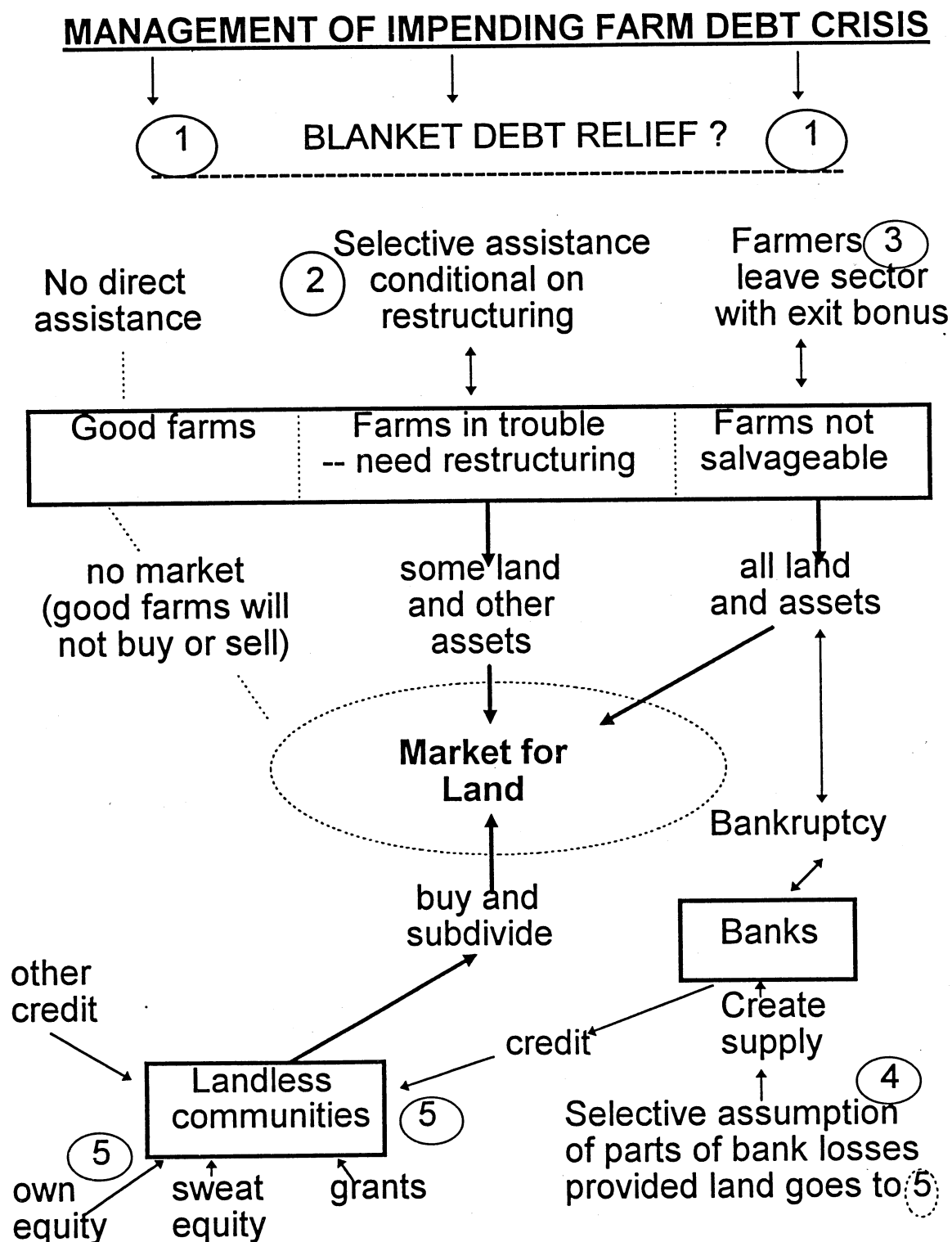


Figure 1: Management of a farm debt crisis through market assisted land reform

The processes described above exert serious downward pressure on farm profitability in specifically the large-scale commercialized and mechanized grain sectors, causing farm debts to increase, farm bankruptcies to increase and farm land prices to fall dramatically. Although all farms are affected, they can be classified into three categories, namely:

- farms which are not salvageable and will go bankrupt;
- farms in financial trouble and unless restructured will also go bankrupt; and
- good farms which will survive the crisis.

The farm debt crisis will spawn a request for blanket debt relief by all farmers, regardless of their category, as well as the banking sector which will also benefit (process 1). However, rather than following this extremely expensive approach which will also keep inefficient farmers entrenched, a market assisted land reform program requires a different approach based on differential assistance of the specific categories of farmers (processes 2 and 3).

Farms in financial trouble, but who can make it with some restructuring, receive selective financial assistance conditional on their restructuring, including the shedding of some land and other assets (process 2). The decision on which farms should be restructured and how is based on their future viability and is made with the assistance of the banking sector.

Farmers whose businesses are not salvageable receive an exit bonus in order to increase the supply of land and other assets (process 3). Good farms receive no financial assistance, but will also benefit in that the whole process of market assisted land reform will stabilize their land prices and value of their asset base. The number of farms in each of the categories is determined by the severity of the debt crisis and the criteria and amount of selective assistance to farms who can only survive with restructuring. Important is that land and other assets will become available for purchase from both the non-salvageable and restructured farms. However, financially sound farms will not buy the land and assets because of high real interest rates and decreasing farm profitability.

The above process of increasing the supply of land and farm assets is further aided by incorporating the bank sector as an active partner and beneficiary (process 4). Banks are encouraged to assist in creating a supply of land by the selective assumption of part of their losses when they foreclose on non-salvageable farms and demand the restructuring of others, provided that the land and other farm assets go to the intended beneficiaries of land reform.

On the demand side of the land market there are the intended beneficiaries of the land reform process, namely the present large number of landless communities and individuals, often farm workers, in the farm and rural sector in general (virtually all of them Colored or Black). A land market is created by providing eligible prospective beneficiaries with a grant and access to credit, combined with their own equity in the form of sweat, assets and financial contributions (process 5). Credit sources to the beneficiaries are the former owners of the land, the former lenders (banks) and contractors (e.g. factories, etc.). Credit could also be linked to the eligibility of part of a bank's loss being taken over (process 4) if it forecloses on former farmer clients. Communities who buy land subdivide it according to their own negotiated agreements. They or individuals should be eligible for partial grants to create the necessary infrastructure or for other approved purposes on condition that they have good quality land.

In summary, it can be stated that *management of the debt crisis, increasing efficiency, improving food insecurity and addressing some of the racial imbalances in South Africa's farm sector following market liberalization and the withdrawal of other privileges can be done by facilitating a market assisted land*

reform process rather than a much more costly, inefficient and inequitable blanket debt relief program. It will also have the added advantages of increasing employment at a low cost and adding to the rural safety-net. In addition, the market assisted process outlined above provides a mechanism for efficient and quick land reform without most of the problems and excessive procedures associated with the usual state or parastatal approach following expropriation.

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