EQUITY SCHEMES IN SOUTH AFRICA: BENEFITS DELIVERED TO FARM WORKERS AS FUNCTION OF COMMERCIAL FARMERS' STRATEGY

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ABSTRACT

With the end of Apartheid, the South African Government created and corrected agricultural factor and product market failures in its attempt to improve the distribution of wealth and incorporate previously disadvantaged farmers into the mainstream of agricultural activities. Some commercial farmers responded strategically to the new equity-based policies on factor and product markets by initiating equity-schemes with farm workers in order to maintain/increase their profits given the new local economic and political environment and global competition. Hence, most equity-schemes are organized according to the commercial farmers' capacities. The purpose of this paper is to analyze the organizational structure of the equity-schemes as a function of the commercial farmers strategy (production vs. marketing).

This study is based on interviews of emerging farmers, former and present farm workers, commercial farmers, non-Governmental Organizations and Governmental agencies. The results show that equity-schemes tend to benefit commercial farmers but the degree to which farm workers' gain access to factor and product markets depends on commercial farmers' strategy. Then, the paper assesses alternative organizational structures of equity-schemes to maximize the benefits delivered to farm workers. Finally, utilizing the Peterson-Wysocki-Harsh Model, the issues of why the Government policies have not accomplished its objectives are discussed and recommendations to broaden the implementation of equity-schemes are suggested.

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"…no true alliance can be built on the shifting sands of evasions, illusions, and opportunism. We insist on presenting the conditions which make it reasonable to fight for freedom. The only sure road to this goal leads through the uncompromising and determined mass struggle for the overthrow of fascism and the establishment of democratic forms of government."
(Nelson Mandela, 1953)

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1. Introduction

The end of Apartheid, dramatically, changed the socio-economic environment in South Africa, including the Agrifood sector. First, the new Government has created and is creating policies that pursue economic equality and economic growth; in the agriculture sector this translates into an attempt to eliminate farm workers' barriers to entry to factor markets so that they can become competitive producers, not just remain unskilled laborers. However, several of these new policies have had negative impacts on commercial farmers and the extent to their positive impact on farm workers is not clear. Secondly, the end of Apartheid meant the elimination of restrictive marketing policies for agribusinesses and the lifting of sanctions against South Africa; hence, South African agribusinesses are now competing globally.

The two groups in the agricultural sector most impacted by these dramatic changes are the commercial farmers and farm workers. Commercial farmers own most of the economic resources (land, capital, knowledge and marketing skills) that, historically, allowed them to participate in the most profitable sector of the South African agrifood supply chains. On the other hand, farm workers inherited no resources (land, capital, knowledge and marketing skills) from the previous regime; thus, restricting their participation in the same supply chains. Some commercial farmers' strategic response to the new Government policies and economic environment is to create equity-schemes with their farm workers. An equity-scheme is a new business institution formed by the equity commitment of the partners who maintain their separate identity and therefore can exit the scheme at any time. The objective for the commercial farmers in participating in these equity-schemes is to retain and/or increase their competitiveness and profitability. The

Government perceives this approach as a way to increase the income of farm workers and encourage them to actively participate in the most profitable part of the agricultural supply chains.

This new business approach has not been widely adopted by the commercial farmers, only 61 equity-schemes have been started during the 1995 to 2001 period (Knight and Lyne, 2001). During that same time there were between 40,000-60,000 commercial farmers (Stuijt, 2001). This small percentage may indicate that the new policies (land redistribution, water licenses, and cheaper capital) are not feasible and/or beneficial to the majority of commercial farmers to enter into partnerships with their former workers.

This paper explores a unique issue in the agribusiness literature. In general, the agribusiness literature focuses on equity schemes as a strategic decision to break barriers to entry into specific markets (Adams et al, 1999; Bouton, Glen et al, 1996; Gow et al, 2002; Rauch, 2001; Jaffee et al, 1995; and Neven et al, 2002). In the case of South Africa, the literature has focused on equity-schemes as a response of commercial farmers to land redistribution and previously disadvantaged farmers empowerment policies (Bashoff, 2000; Eckert et al, 1996; Ewert, 1998; Hamman, 2001; Hamman et al, 1998; Karaan et al, 2000; Kirsten et al, 1998; Knight et al, 2001; Knight et al, 2002; McKenzie, 1996; Ngqangweni, 1996; Surplus People Project, 1999; and Tilley, 2002). This paper extends the literature by addressing the equity-schemes' organizational structure as a function of the commercial farmers' strategy to maintain and/or increase their profitability given the changes in the factor and product markets.

In the next section, the Government policies that have introduced factor and product market failures are reviewed. Section three analyzes commercial farmers' strategic organizational structure response to the policy and economic changes with respect to equity-schemes. The analysis is based on four equity-schemes from the Western Cape of South Africa: Lutouw (wine grapes and cash crops), Thandi (wine and deciduous fruit), Thembani (citrus), and Goedehoop (citrus and deciduous fruit). The data was collected by using semi-structured interviews with commercial farmers, farm workers and other partners involved in the cases. Section four studies how the equity-schemes help farm workers address their constraints. Section five suggests organizational changes to improve equity-schemes in order to increase farm workers' access to factor and product markets. Section six offers recommendations to policy makers to improve factor transfer through equity-schemes.

2. Old and New Market Failures

The end of Apartheid in South Africa brought new Government policies and new market conditions that affected factor and product markets in the agribusiness sector. Many farm workers were expecting to become small farmers with the end of Apartheid. However, farm workers still face barriers to entry to factor and product markets such as: (1) farm workers do not have access to *land;* although the majority of South African population is black (80%), white farmers own 86% of the potential arable land with an average farm size of 1,300 ha per farmer. In contrast, 50% of black farmers have less than 1 ha., 22% have 1-2 ha., and 1% more than 10 ha. (www.gov.za, 2003); (2) black farmers do not have access to *credit*; only 5% of all Land Bank loans were accredited to high-risk customers (black farmers); (3) farm workers have low levels of *education*; 77% of the white farmers have completed high-school while 1% of black farmers have completed high school (www.gov.za, 2003); and (4) black farmers do not have the *knowledge* and the networks to grow and market high-valuable crops, white farmers know the characteristics that a high-value crop should be produced under in order to be sold because of their many years experience of selling to these markets. (5) The sum of these barriers to entry in the factor markets enforced the barriers to entry in the *produce markets*. Currently, black farmers sell principally to rural and informal markets while white farmers sell to urban wholesalers and retailers, and export markets (Weatherspoon et al, 2003). This is a major concern given that supermarkets sell 50-60% share of all food sold in South Africa (Weatherspoon et al, 2003).

The new Government policies were designed to promote wealth redistribution. Their primary focus was to increase the participation of black farmers/farm workers in the more profitable activities of the agricultural sector (i.e. highly-profitable supply chains). These policies created failures and simultaneously eliminated failures in the factor and product markets in order to benefit farm workers; hence, creating factor and product markets barriers to entry for commercial farmers. Examples of these factor (land, water, labor and credit) and product markets failures follow.

Land market failure. Land grants are given to farm workers to buy land. Through the Land Redistribution for Agricultural Development (LRAD) policy, black citizens of South Africa over 18 years old can receive from R 20,000 (US$ 2,500[1]) to R 100,000 (US$ 12,600) (they must contribute a minimum of R 5,000 (US$ 630) that can be in kind, labor and/or cash) for land acquisition, land improvement, infrastructure investment,

[1] The exchange rate is R 7.92 per dollar at April 2003. South African Reserve Bank, 2003.

capital assets and short-term agricultural inputs (Ministry of Agriculture and Land Affairs, 2002). This policy reduces the barrier to entry for the land market for farm workers. However, this policy creates a market failure by making land cheaper for farm workers than for commercial farmers.

Water market failure. The Department of Water Affairs and Forestry (DWAF) gives licenses to storage water only to projects that involve black people. In this case, the Government's policy creates a barrier to entry to the water market for white commercial farmers.

Labor Market failure. With the end of Apartheid, farm workers are free to choose where to work. Therefore, this policy eliminated a labor market failure; labor is no longer captive. Commercial farmers need to compete with other farmers and with other rural and urban non-farm activities to attract labor. The new policy increases the cost of labor for commercial farmers. The new Government also established a minimum wage for farm workers. This creates a failure in the labor market because the interaction of supply and demand does not set the price for labor. In South Africa (given the high unemployment rate of 37%) the minimum wage may be too high relative to the equilibrium wage. Thus, the price of labor that commercial farmers must pay has artificially increased.

Credit market failure. Cheap credit (4-5% below commercial loan rates) is available to projects that involve previously disadvantaged people (black farm workers) as partners. The loans come from Khula (money from the European Union and the South African Government) and the Land Bank. This policy establishes a commercial farmers' barrier to entry to cheaper capital markets. In addition, the new South African Government eliminated the previous subsidies that commercial farmers used to receive.

The policy eliminated a market failure (positive externalities received by commercial farmers) in land and capital markets which has effectively increased the cost of land and capital for commercial farmers.

Product market failure. The Government deregulated the markets in 1994; the cooperatives that used to regulate price and monopolize the commercialization of agricultural products were privatized. Now, many local intermediaries have appeared in the supply chains increasing the transactions costs for commercial farmers. Lastly, the new Government stopped subsidizing commercial farmers' products. The Government, removing a failure of the product market, no longer guarantees a price for products; thus, increasing the volatility of agricultural prices and the risk to commercial farmers.

In addition to Government policies, the end of Apartheid opened the borders for trade and brought *global competition* changing the market's structures and the supply chains. Commercial farmers are now exposed to international competition and global concentration of retailers (supermarkets). Local and foreign retailers are demanding higher grades and standards. To meet these requirements, commercial farmers need to make investments in technology and managerial capacities. Furthermore, agrifood markets are more consumer driven "requiring differentiated product, continuous process innovation, highly specialized product delivery, and customer support services" (Gow et al, 2002).

Moreover, the end of Apartheid means that black people can make claims to the Government for their socio-economic needs. In South Africa there is implicit *social pressure* for wealth redistribution which is warranted given that South Africa has one of the worst Gini coefficients in the world: 59.3 (UNDP, 2002). This pressure along with the recent backlash against commercial farmers in Zimbabwe increases the potential for instability in the farming operations. An instable social environment can increase the costs of production. It also creates uncertainty about the future of current operations.

The redistribution policies established by the new Government affected the factor and product markets faced by farm workers and commercial farmers. The policies did not necessarily address all the constraints faced by farm workers (for example: access to education and lack of knowledge and networks to grow high-value crops). Moreover, in most of the cases the policies ended the benefits commercial farmers used to receive during the Apartheid. Consequently, some of the commercial farmers have responded to these changes in factor and product markets by initiating equity-schemes with their farm workers. The next section analyses the decision process of those commercial farmers who entered into the equity-schemes.

3. Responses to New Barriers by Commercial Farmers

The selection of the equity-scheme as the strategy to reduce or eliminate commercial farmers' barriers to factor markets is studied using the Peterson Wysocki Harsh (PWH) model (Peterson et al, 2002).

The Peterson Wysocki Harsh (PWH) Model (Peterson et al, 2002) states that when a firm makes a transaction[2] it considers the costs of coordination errors and the cost of the governance structure, and adjusts its vertical coordination strategy appropriately. According to PWH the choices for a vertical coordination strategy lie in a continuum determined by the level of intensity of coordination control. Spot markets have the lowest level of intensity of control while vertical integration has the highest. The transitional

[2] Transaction is defined as a shift in a resource's property rights (Staatz et al, 2002)

levels with increasing intensity of control are specification contracts, relation-based alliances and equity-based alliances. The cost of coordination error is a function of asset specificity (how well an asset can be used in other transactions or by other users without sacrificing the productivity of the asset or incurring costs of adapting the asset to the new transaction) and complementarity (that exists when individual activities across a transaction produce a higher output in combination than the sum of the outputs generated by the individual activities; in other words, the marginal product of each activity can not be measured). Higher asset specificity and higher complementarity increase the costliness of coordination errors; and hence, firms will choose strategies with higher intensity of control. On the other hand, firms also consider the cost of the governance structure (the cost of operating the strategy) that is higher in strategies with high intensity of control. PWH states that firms will move from its current strategy if it is too costly in terms of costliness of coordination errors or governance structure. A new strategy will be selected if it is less costly, feasible for the firm (capital availability, control competence, partners availability and institutional acceptability), and its returns (after considering costs and risks) are favorable for the firm relative to the current strategy (Peterson et al, 2002; and Mainville et al, 2003).

By initiating equity-schemes with farm workers, commercial farmers intend to reduce or eliminate the new barriers to factor markets. Some commercial farmers wanted to expand their operations needing to acquire production factors (land, water, labor and credit). The first step in the PWH model is to consider the costliness of coordination errors of that strategy. For some commercial farmers it may be too costly (in terms of coordination errors) to expand without making sure that they will have all the production factors given complementarities among land, water, labor and credit.

The second step of the PWH model is to choose another strategy of coordination if it is less costly, feasible and profitable than the first option. For example: (1) relying on spot markets is not feasible because capital availability and institutional acceptability. It will be too costly for commercial farmers to buy additional land at market prices and socially unacceptable; (2) vertical integration is not possible because commercial farmers can not produce labor or water; (3) the problem with specification contracts is that there are few potential partners (partners availability) with knowledge and capital to produce the crops that commercial farmers need. If commercial farmers contract farm workers, commercial farmers should provide knowledge and capital; a very risky and costly strategy for commercial farmers; (4) a relation-based alliance does not guarantee that commercial farmers will assure all the production factors. The focus of control in a relation-based alliance is the relationship among partners. The distrust (influenced by the Apartheid system) between farm workers and commercial farmers makes the alliance highly unstable; (5) an equity-based alliance is less costly because it reduces the costliness of coordination errors making sure that complementarity among production factors exists.

The third step in the PWH model is to analyze if the selected strategy is feasible. In this case, is an equity-based alliance feasible? Equity-based alliances in South Africa have the following characteristics: there is capital availability (there is cheaper loans for empowerment projects), control competence (commercial farmers can manage/control effectively the alliance because they have the marketing and managerial skills), availability of partners (there is a group of farm workers interested in forming the alliance) and institutional acceptability (it responds to social pressure for wealth redistribution).

The final question in the PWH model is if the feasible strategy's returns are expected to be favorable. Commercial farmers control the management of the equity-schemes, reducing their risks. In addition, commercial farmers design the equity-schemes' to take advantage of their capacities. Equity-schemes also support commercial farmers' strategy to grow horizontally reducing their costs and improving their response to consumers' needs. Through equity-schemes commercial farmers achieve economies of scale[3] and scope[4] in marketing (as in the cases of Lutouw, Thandi, Thembani and Goedehoop). Commercial farmers use their same facilities (packing houses, trucks and contacts) to commercialize a higher volume of product. Furthermore, through equity-schemes commercial farmers can offer more variety of produce or focus on niche markets; hence, increasing their competitiveness as suppliers. Moreover, commercial farmers are reducing their transaction costs[5] (as in the case of Lutouw, Thembani and Goedehoop). Higher volume and variety allows them not to use intermediaries that perform the gathering activity. Commercial farmers use the production of the equity-scheme to complement their own supply contracts. Hence, commercial farmers expect that the equity-scheme will produce favorable returns, given its risk and costs. However, equity-schemes appear not to be beneficial enough for other commercial farmers (the

[3] The average cost of a unit produced decreases as the quantity produced increases (Besanko et al, 2000).
[4] The cost of producing two or more varieties (different goods or services) by a single firm is lower than the cost of producing these varieties by two or more separate firms (Besanko et al, 2000).
[5] Transaction costs include the cost (time and expense) of gathering and processing information about a transaction; and negotiating, writing, monitoring and enforcing transactions (Staatz et al, 2002; and Besanko et al, 2000).

majority). The reasons why other commercial farmers do not establish equity-schemes are analyzed in section 6.

An equity-scheme with farm workers is the commercial farmers' strategy to eliminate barriers to entry to factor markets (water, land, labor and credit) and to keep profiting in the product markets delivering a higher volume or variety of produce with the required quality. Commercial farmers manage the equity-schemes because they have the financial, marketing, managerial and technical capacities. Hence, the equity-schemes are structured to take advantage of commercial farmers' capacities (i.e. commercial farmers' capacities determine the organizational structure of the equity-schemes). However, equity-schemes do not, necessarily, provide explicit mechanisms to guarantee farm workers active participation in the supply chains. Therefore, it is necessary to study the advantages/disadvantages that equity-schemes present to farm workers.

4. Effect on Farm Workers (Outcome)

The previous section showed that commercial farmers initiate equity-schemes to increase their own profitability. For farm workers the equity-schemes have the potential to eliminate barriers of entry to factor and product markets from the prior political regime. This section analyzes the effectiveness of the equity-schemes in terms of improving farm workers access to factors (land, credit, education and knowledge, described in section 2) and product markets (see Table 1 for summary).

The mechanism that defines farm workers access to *land* lies in a continuum, according with farm workers rights to land (level of land tenure) in the equity-scheme. In the lowest level, the commercial farmers own the land and lease it to the equity-scheme, hence the farm workers do not have access to land. In the middle level, the equity-scheme owns the land and not the farm workers. For example, farm workers own the land as long as they stay in the equity-scheme. If they exit the equity-scheme or if the project goes bankrupt, the farm workers lose the land, thus no land tenure. In the highest level, farm workers own the land and lease it to the equity-scheme. In this case, farm workers have land tenure because they will eventually own the land, independently, of the financial performance of the equity-scheme.

The degree of farm workers land tenure is partially dependent on the strategy of the commercial farmers when they initiate the equity-scheme (focus on production versus focus on marketing). In Lutouw and Goedehoop the commercial farmers' strategy is to expand their production and marketing outlets. Therefore, they need to assure that the extra produce (wine grapes, sweet melons, sweet potatoes, kabatchus, citrus and deciduous fruit) will meet the grades and standards of customers. Consequently, in these two cases, the commercial farmers invested in land to control the production and marketing operations. In Thandi, the commercial farmers' strategy is to increase profits from their current operations and gain access to niche markets hence, they do not need to control the additional land. In fact just the opposite happened; commercial farmers gave part of their land (wine grapes) to the equity-scheme; so, the produce from the land contributed could be marketed in the "fair trade" niche. In Thembani, the commercial farmers' strategy is to strengthen their position as marketers of citrus. They are interested in increasing their sources of qualified citrus. Thus, commercial farmers will exit the equity-scheme once it can produce the desired quality then, the farm workers will be the owners of the land.

Farm workers access to *credit* is characterized by different methods arranged in a continuum according to the level of use of developed capital markets (Johannesburg Stock Exchange, foreign investors, multilateral institutions, etc). In the lowest level (less use of developed capital markets), farm workers get land redistribution grants or Government subsidies that are non-repayable. In the next stage, farm workers get financing from NGOs or foundations in which only part of the money is repayable and the interest rates are lower than commercial loan rates. In the next level, farm workers get financing from multilateral institutions (African Development Bank, European Union, World Bank, etc). The total amount of the loan is repayable but at lower rates than commercial loans. In the final level, farm workers access loans from private financial institutions or investors. It is necessary to clarify that access to credit excludes other partners' financial contribution because partners invest in exchange for rights to profits.

The source of financing used by the equity-schemes depends on the strategy of commercial farmers including the size and/or crop of the project (in terms of factors needed: water, land, labor and capital). In Lutouw (300 ha.), the commercial farmers' strategy is to expand their own short term (tomatoes, onions, kabatchus, sweet potatoes, sweet melons) and long term (wine production) production. Lutouw accessed all four types of financing: non-repayable capital (DWAF' subsidy), partially-repayable capital at lower rates (SAWIT), totally-repayable capital at lower rates (Khula), and commercial loans (banks). Lutouw's farm workers get DWAF and SAWIT money because of DWAF (license to access water) and SAWIT (financial investment in empowerment schemes) policy to make sure farm workers are partners in the equity-scheme. In addition, commercial farmers received a Khula loan and to fully fund the project they needed a regular commercial loan. In Goedehoop, the commercial farmers' strategy is to expand their own production (27 ha) by buying a farm where citrus and deciduous fruit are already in production. Goedehoop's farm workers get non-repayable financing (land grant) and have access to financing that is totally-repayable at lower rates (Khula). In this case, the Khula loan is enough to finance the investment, given the smaller size of the project. In Thandi, commercial farmers' strategy is to increase profits by accessing new markets with its current wine grapes production. Thus, they contributed 14 ha of wine grapes (already producing) to the equity-scheme. Thandi's farm workers get non-repayable financing (land grants). The commercial farmers of Thembani have the strategy to increase their sources of citrus by mentoring the establishment of farms. Besides Thembani, this group of commercial farmers financed other independent farm operations: Solly Skotic (40 ha) and Malusi (30 ha). Solly and Malusi were previous farm workers who are currently managing citrus farms owned by the Land Bank. Thembani will purchase 600 ha of land with an established citrus orchard. Thembani's farm workers have access to non-repayable funds (land grants) and totally-repayable funds at lower interest rates (private investors). The size of this project forced the commercial farmers to search for cheap capital markets with the capacity to finance the project. Therefore, commercial farmers are contacting private investors in Germany and the Netherlands instead of local banks. In summary, the strategy of the commercial farmers and the size of the project define the sources of financing that farm workers access through the equity-scheme. Only land grants and NGO's funds are given directly to farm workers. Farm workers gain access to more sophisticated financing mechanisms because they are partners in equity-schemes managed by commercial farmers.

Farm workers access to education and knowledge lies in a continuum according with the strategic positions that farm workers would occupy in the equity-scheme and their existing education level. The majority of farm workers are illiterate, the lowest level in the continuum. These workers may receive basic education (literacy training) to improve the position they occupy in the equity-scheme. In the second level, farm workers are literate and may receive additional training so that they qualify for lower level management positions where reading and basic mathematical and accounting skills are required. In the highest level, with the least number of potential candidates, are those that qualify for university level training. These farm workers will become the marketing and production managers for the organization.

In the cases of Lutouw and Goedehoop, commercial farmers' strategy is to increase their production to commercialize it through their own marketing channels. Therefore, commercial farmers will keep control over the marketing activities and train farm workers in production techniques (irrigation) to guarantee the quality of the produce. Moreover, farm workers receive literacy courses. Farm workers do not occupy strategic managerial or marketing positions. In Thandi, commercial farmers' strategy is to increase their profits accessing niche markets. "Fair trade" label implies that farm workers are the ones in charge of production or transitioning to it. Consequently, some farm workers are receiving university training in production, management and wine making. However, no farm workers occupy strategic positions in the marketing area. In Thembani, farm workers will receive high-school and university training in production and management. Farm workers do not have access to marketing positions because commercial farmers will be in charge of the commercialization.

The level of training farm workers receive is directly tied to the commercial farmers' strategy. In all the cases reviewed, commercial farmers keep control of the marketing activities; thus, effectively limiting farm workers access to strategic marketing knowledge (grades and standards, commercialization processes and contacts).

The kind of markets that farm workers access is characterized by a continuum according with the levels of grades and standards required by the customers. The first and lowest level is the local open markets (where customers do not impose specific grades and standards), the second level is the wholesale market where some standards are imposed, third are the export intermediaries (that require specific standards), and the fourth level is the foreign/local retailers (that are highly strict about grades and standard requirements).

Once again, the type of supply chain depends on the commercial farmers' strategy, contacts, experience and risk aversion. In Lutouw and Goedehoop commercial farmers supplied export intermediaries prior to the equity-scheme and their current goal is to expand their operations. Therefore, farm workers now have access to customers that impose specific standards. In the case of Lutouw, the commercial farmers are also growing cash crops (tomatoes to a processor and onions to the local intermediary). These markets are not very strict with grades and standards. In Thandi, the strategy is to sell apples, pears and wine to "fair trade" markets and it is important to note that this market would not be open to either commercial farmers or farm workers if they do not work together. This export market is highly demanding in terms of grades and standards. In Thembani, commercial farmers need to strengthen their position as suppliers to foreign retailers. Hence, the farm workers now have access to the UK citrus supply chain where the supermarkets are highly strict in grades and standards.

In summary, commercial farmers shape the organizational structure of the equity-scheme. Therefore, farm workers' access to land, credit, education, knowledge and product markets depends on the commercial farmers' objectives. Thus, the following step is to determine mechanisms to improve farm workers access to factor and product markets given that commercial farmers' choose equity-schemes as part of their overall portfolio strategy.

5. Improving Equity-schemes for Farm Workers

As analyzed before, equity-schemes do not necessarily guarantee farm workers access to factor markets. The majority of farm workers do not have land tenure, access to financing other than Government programs, limited education level, and minimum business and strategic marketing experience and knowledge. This section makes recommendations to improve farm workers access to land, credit, education and knowledge through their participation in the equity-schemes with respect to commercial farmers' strategy.

If the objective of the new policy is to transform a group of farm workers into commercial farmers within a certain time period; then farm workers need to resolve their constraints to accessing both production factors and product markets. With the four case studies reviewed, the commercial farmers control the access to these markets. Therefore, the policy chosen should not impose high costs for commercial farmers; so, commercial farmers will still be interested in forming equity-schemes eliminating farm workers' barriers to factor and product markets. Three policies are proposed: (1) outgrower-schemes, (2) equity-schemes separating production and marketing operations, and (3) the intervention of a third party institution. Each one is studied according to the commercial farmers' strategy, costs, and the degree to which it eliminates farm workers' barriers.

Policy (1) recommends the separation of the production and marketing activities; hence, the equity-scheme will operate as an outgrower-scheme. Commercial farmers who want to expand their marketing activities will source from farm workers. In order to get the quality desired, commercial farmers should provide capital, and production and managerial knowledge to farm workers. They are already providing these factors in the current equity-schemes (such as Thembani). The new policy increases the risks and costs for commercial farmers. To diminish commercial farmers' risk, the Government should enforce the contracts signed between commercial farmers and farm workers. To diminish their costs and provide incentives to sign contracts with farm workers the Government could reduce tax rates for those commercial farmers who buy produce from previously disadvantaged people. Farm workers will acquire land applying to Government land grants. The disadvantage of this policy is that commercial farmers will retain the most profitable activities (marketing). Only a few farm workers (those who have more entrepreneurial capacities) have the skills to access the more lucrative local and foreign retailers in the near future. Policy (2) also proposes a separation of production and marketing activities when the commercial farmers' strategy is to expand as producers and marketers. The difference is that there is a clear partnership between the commercial farmers and farm workers. Specifically, two equity-schemes are created; one that grows the crops and the farm workers have the majority ownership; and the other that commercializes the produce and the commercial farmers have the majority ownership. In this case, commercial farmers will transfer production and management techniques to farm workers. Farm workers will have a higher opportunity to learn marketing skills. The problem with this strategy is that it increases commercial farmers' costs (training). Thus, the Government should provide tax incentives to firms that have previously disadvantaged people in strategic managerial positions. This incentive should increase as the percentage of strategic positions occupied by farm workers increases.

The third (3) policy suggests the involvement of a third party institution (private) that has market knowledge and financial capacity. This institution will finance farm workers participation and will transfer technical and market knowledge. Farm workers will apply to land grants to finance the land. In this case, why it is still necessary to have the involvement of a commercial farmer? Third party institutions may have market knowledge but not necessarily market contacts and experience operating in the respective supply chain. Thus, the third party institution will negotiate on behalf of farm workers. Because commercial farmers have marketing experience, they will manage the daily operations of the equity-scheme. The issue is that commercial farmers may decide to exit the equity-scheme at any time. In that case, it is necessary to promote the commitment of the commercial farmers with the success (profitability) of the equity-scheme. Commercial farmers should put their own assets as collateral for a commercial loan. Knight et al. (2002) recommend "temporary moratorium on the sale" of the commercial farmers' shares. However, a temporary moratorium can discourage further investment by the commercial farmers. Putting their own capital at risk, commercial farmers will pursue profit generation. The disadvantage with this policy is that there are not many third party institutions with both the business capacity and the financial budget to support farm workers participation into equity-schemes.

Although an equity-scheme will not solve all the structural problems (some inherited from the prior regime and some inherent to the agricultural characteristics of small farmers) that constrain farm workers' participation in high-value supply chains, the organizational structure of the equity-scheme can be adjusted to provide farm workers' higher access to factor and product markets. Thus, the consecutive step is to suggest policies to increase the adoption of equity-schemes between commercial farmers and farm workers.

6. Policy Recommendations (Why not other commercial farmers?)

It has been shown that the driving force behind the creation of equity-schemes is commercial farmers. Even though equity-schemes can improve commercial farmers' profitability, the majority of commercial farmers (99.9%) are not interested in forming equity-schemes. Therefore, the policies adopted by the new Government have accomplished little in terms of promoting the participation of previously disadvantaged people into the mainstream of agricultural activities through equity-schemes. This section analyzes the reasons why commercial farmers find it difficult and/or non beneficial to enter into equity-schemes and suggests modifications to the Government policies to make equity-schemes more attractive to commercial farmers.

According to the PWH model, if commercial farmers want to expand their operations they need complementarity among production factors; if commercial farmers want to focus on niche markets, they need the asset specificity of labor. In both cases, equity-schemes are less costly (in terms of costliness of coordination errors) than spot markets to acquire production factors. However, some commercial farmers who want to expand or enter new markets through equity-schemes may consider this strategy is (1) not feasible for two reasons:

- A lack of potential partners available (farm workers with education and knowledge to understand an equity-scheme).

- A lack of institutional acceptability (commercial farmers simply may not want to associate with farm workers).

(2) not beneficial for two reasons:

- It is too risky (mutual distrust between farm workers and commercial farmers);

- It is too costly (time) to implement.

In addition, partnering with farm workers indirectly involves politics. It is likely that the Government will support farm workers in case of a dispute with commercial farmers. This increases the potential for farm workers' opportunistic behavior and commercial farmers' risk. Lastly, the time needed to negotiate the equity-scheme with farm workers and Governmental institutions, organize farm workers and train them is too long (Lutouw took 4 years to start operations since the beginning of negotiations). Thus, equity-schemes' returns may not be favorable for commercial farmers. On the other hand, if commercial farmers want to keep the same size of operations (assumes no changes in their customers' needs), they do not need additional complementarity among production factors or asset specificity; hence, the equity-scheme is more costly in terms of its governance structure than commercial farmers operating by themselves.

Government policies can make equity-schemes more attractive to commercial farmers. Equity-schemes are chosen based on commercial farmers need for complementarity or asset specificity. With its current policies the Government creates complementarity among production factors (land, water and credit policies linked to labor) for commercial farmers who want to expand their operations or enter into "fair trade" markets. Can the government create complementarity for commercial farmers who want to keep the size of their activities? Yes, but commercial farmers may exit the agricultural activity (affecting the economic growth of the agricultural sector in South Africa) because they may consider that equity-schemes are not feasible or beneficial (remember that vertical integration is not feasible and relation-based alliances are not beneficial). Therefore, the statements below are is necessary to assess policies to make equity-schemes feasible and favorable.

- To address the lack of benefits and increased risks and costs to commercial farmers, the Government should develop a legal body that regulates equity-schemes, and stresses the role of the Government in monitoring them.

- To reduce the cost of forming equity-schemes, an office that coordinates the interaction among possible partners should be created. The office will work as a center that gathers the profiles of possible partners (Government institutions, NGOs, foundations, financial firms and intermediaries/processors/retailers).

- The Government should have as a priority to elevate the education level of farm workers. It will be more efficient and more productive for commercial farmers to train and organize an educated labor force.

- The Government could provide tax incentives to those commercial farmers who enter into equity-schemes with farm workers. However, some regulations must be in place to assure that farm workers participate actively in the strategic decisions of the equity-schemes.

- To monitor equity-schemes the Government could renew the rights to use water and land depending on the performance of the managerial team depending on the profitability and transfer of knowledge (production, managerial and marketing) to farm workers.

- To increase the returns of the equity-schemes, the Land Bank should participate, actively, as a partner. The Land Bank owns farms that were foreclosed hence, it can contribute land to an equity-scheme to finance the shares of farm workers. Once the Land Bank has recovered the money from its investment (land), it can transfer/sell/subsidize its shares in the equity-scheme to farm workers diminishing the investment necessary for the project, and increasing the returns for the partners.

- To address the feasibility issue due to commercial farmers considering farm workers as inadequate partners, the Government should start an education programs to upgrade the literacy and business skills of farm workers (emphasizing entrepreneurial capacities). Commercial farmers will be more interested in developing equity-schemes with partners that understand the essence of business (profits generation).

The policies of the new Government have not brought a massive creation of equity-schemes between commercial farmers and farm workers. Commercial farmers who want to expand their activities or access to niche markets primarily participate and initiate equity-schemes. Thus, most commercial farmers in South Africa are choosing to either (1) keep the size of their operations the same, (2) pay market rates for financing or (3) purchasing land and other input rights from existing operations.

7. Conclusions

The end of the Apartheid and the new South African Government altered the factor and product markets in the agricultural sector. These alterations intended to create opportunities for farm workers but resulted in compromising commercial farmers' operations with limited impact on improving farm workers situation. As a response, few commercial farmers implemented equity-schemes with farm workers. For those commercial farmers who did create an equity-scheme, it was a business strategy to increase their profitability by eliminating barriers to factor markets, achieving economies of scale and scope, taking advantage of learning curve and diminishing transaction costs. In addition, equity-schemes allow commercial farmers to strategically address consumer's needs.

The ability of equity-schemes to eliminate farm workers' barriers to entry to factors and product markets depends on the commercial farmers' strategy. It is more likely that farm workers will have access to knowledge, credit and have land ownership only if commercial farmers want to focus in marketing activities. However, it is less likely that farm workers will attain marketing skills.

Government policies are not accomplishing their purpose because commercial farmers prefer not to form equity-schemes and the existing equity-schemes do not guarantee the elimination of barriers to factor and product markets for farm workers. The policies should be modified to increase farm workers participation in the most profitable agrifood supply chains making equity-schemes more attractive to commercial farmers and making sure that farm workers access to strategic managerial positions in the equity-schemes.

Table 1. Farm workers access to factor markets in each equity-scheme

	Low	Medium	High
Land	Lutouw Goedehoop	Thandi	Thembani
Credit	Lutouw Goedehoop Thandi Thembani	Lutouw Goedehoop	Lutouw Thembani
Education and Knowledge	Lutouw Goedehoop	Thandi Thembani	Thandi Thembani
Markets	Lutouw	Lutouw Goedehoop Thandi	Thembani

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