

Review

Institutions and Agricultural Development: the case of the North West Province in South Africa

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Generally spoken, agricultural development initiatives have not been translated into the upliftment of the rural poor which is primarily due to a very low level of success of these initiatives. It is believed that the institutional framework is critical in determining the success of agricultural development. In this study an institutional analysis is applied to analyse the current institutional framework revolving around agricultural development in the North West province of South Africa. Results from this institutional analysis revealed that the institutional environment adequately supports agricultural development, however, proper governance structures lacks behind. Based on this finding, recommendations were made on new institutional structures and arrangements that will improve governance and subsequently the level of success of agricultural development. Among the many recommendations, it was suggested that government should engage into public-private partnerships, new rural finance systems should be considered and shortcomings in human capacity should be addressed through participatory partnerships.

Key words: Institutions, agricultural development.

INTRODUCTION

Agricultural development has been targeted by the South African government as the main mechanism for improving the livelihoods of the rural poor. It has instigated various policies and programmes that focus on redressing the historical injustices of the past. However, it seems reasonable to argue that to date the majority of these development initiatives have not translated into improvements in agricultural productivity or the livelihoods of the targeted beneficiaries. This is largely attributed to the low level of success of these initiatives. A recent official statement by government indicated that approximately 90% of all land reform projects targeted at agricultural development have failed.

This low level of success has seen government launching

several support programs in an attempt to rectify the situation. Support programs that were introduced by government include: research, technology development, technology transfer, bulk infrastructure support, land-care projects, land redistribution and administration, food safety programmes, food security initiatives, environmental impact assessments, input and capital equipment, environmental planning, pollution control, biodiversity planning, wildlife trade and hunting industry development and regulation and human resource development programmes.

Stemming from this low success rate, one might argue that the wrong challenges or success factors were addressed in an attempt to rectify the failure of

agricultural development. For instance, Van Schalkwyk et al. (2009) argued that insufficient institutional support services could be regarded as one of the main reasons for agricultural development failure, especially in the North West province (NWP). This is supported by Francis (2002), who reported that since the reincorporation of the former homelands of Bophuthatswana, institutional transformation in agriculture has been slow.

This includes amongst others, the institutional frameworks governing natural resource management, land tenure systems, farming and grazing management practices, conservation measures, capital and commodity markets, the labour market and access to social welfare. Francis (2002) elaborated by suggesting that the failure of local institutions, especially the lack of accountability and legitimacy in local institutions, generates severe collective action problems around local economic development. Appropriate institutions and institutional arrangements are therefore of utmost importance for the success of agricultural development.

In this context, the article will focus on the institutional environment that confines upcoming farmers in the North West Province NWP. An institutional analysis approach will be used to analyse and recommend on the improvements that could improve the success of agricultural development in the case of the North West Province NWP. The following sections will detail on the methodological approach of the institutional analysis, the institutional shortcomings, recommendations and finally some concluding remarks.

INSTITUTIONAL ANALYSIS

Valentinov and Baum (2008) were of the view that alternative institutional structures than those existing in urban areas might be needed to improve the success of agricultural development. This may also apply to the North West Province NWP; with institutional shortcomings being regarded as the main reason for the high level of failure (Van Schalkwyk et al., 2009). Moreover, Herrera et al (2005) reported that little work has been undertaken or progress made in applying the theoretical developments of the concept of the new institutional economics (NIE) to an ex-ante analysis of proposals for institutional changes. Hence, the NIE concept insists that institutional analysis must be guided by what Coase (1964) calls: 'comparative institutional analysis', which basically consists of comparing institutional environments and institutional arrangements in terms of specific economic or other desired efficiency criteria to determine which one performs better. This has seen most of the past institutional analysis focusing on the research program of transaction cost developed by Williamson (1996). Herrera et al (2005) highlighted that transaction costs provide a key for understanding alternative forms of economic organization

and contractual agreements. Institutional performance is then measured according to the cost of conducting transaction in one organisational or contractual form relative to the others.

Schmid (2004) was of the view that because of the fact that performance is a derivative of the institutional choice, 'comparative institutional analyses' may not always be feasible. This is especially true when the only available information is the performance of the current institutional setting.

Herrera (2005) was of the same view, arguing that because of limitations to accurately predict the future performance of alternative institutional settings, comparisons are not always possible. Besides, Schmid (2004) suggests that contrasting the performance of an institutional setting currently in place with another desired structure, says nothing about how to put alternatives in place.

Thus, when the emphasis shifts from evaluating institutions to improving the current scenario, the traditional approach to institutional analysis is of limited applicability. Herrera (2005) suggested that a generic four-step methodology for institutional analysis should be applied to overcome the methodology deficiency of the traditional "transaction cost" approach. The rest of this section will give a summary of the methodology that was developed by Herrera (2005). See Herrera (2005) for a detailed review of the model.

The methodology entails the combining of four steps, or stages, of research with the well-known/ reputable three-level scheme of institutions of Williamson (1996) (Figure 1). According to Figure 1, the first level operates at the institutional environment, the so-called "rules of the game" or constitutional level. The second level works more at the institutions of governance and constitutes the locus where transactions take place.

The third level is where individuals make decisions about the allocation of resources, and individually or collectively participate in the other levels condition by their preferences and cultural assumptions. The direct implication of this is that ultimately the allocation of a resource is constrained by a particular institutional environment, which in turn calls individuals to design a variety of institutional arrangements, which allow them to interact within their organizations or with authorities.

The proposed methodology for the institutional analysis in this study was thus adopted from Williamson (1996) and amended by Herrera (2005) (Figure 1). The first level deals with the institutional structure, with the objective to improve the knowledge of the structures, actors and rules that conform a specific economic system. Schmid (2004) suggest that this level is a description of "the situation". Thus, in order to propose improvements to the institutional structure, a first task should be to understand the structures involved with rural agricultural development in the North West Province NWP. The second step consists

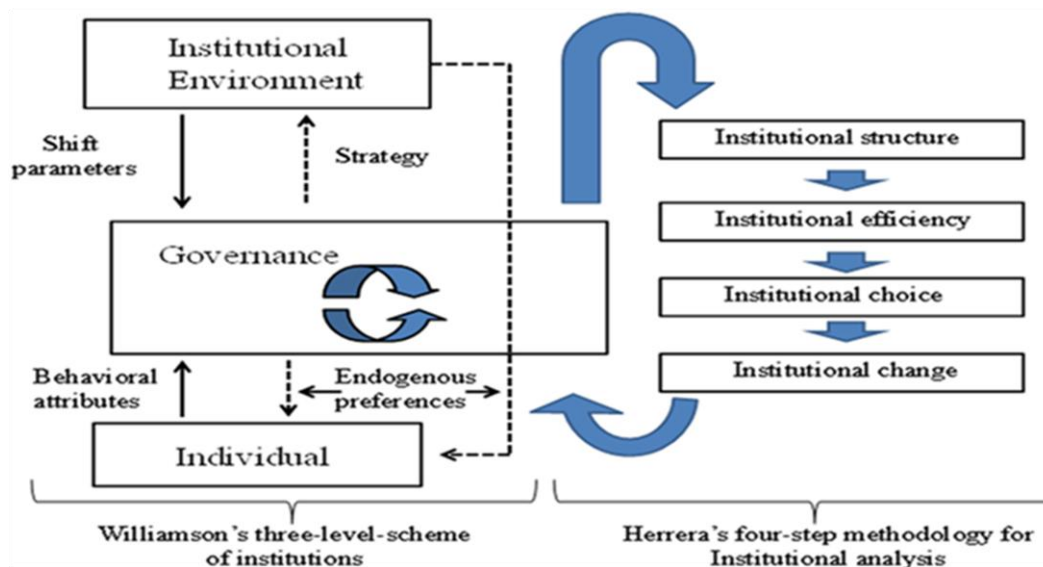


Figure 1. A conceptual model for institutional analysis; Source: Williamson (1996) and Herrera (2005)

in assessing the effectiveness of the institutional structure. This will determine whether the current institutional structure is producing a socially and economically desirable outcome. If not, this would suggest the need to move towards a new institutional equilibrium. The third step is institutional choice or the process of designing institutional arrangements or structures. The focus here is on looking for arrangements that could contribute to improving the current performance of the institutional structure. The fourth step is institutional change. This is defined as the process of moving from a socially and economically undesirable institutional equilibrium towards a new one.

FIELD RESEARCH

To account for the information needed for the institutional analysis, 21 workshops were held throughout the North West Province NWP. The workshops were structured in the form of panel discussions with role-players from the public and private agricultural sector. The workshops were attended by representatives from organised agriculture, farmers' unions, cooperatives, input suppliers, banks, and government officials, commercial and small-scale farmers. The workshop sessions were guided by a discussion leader and orchestrated according to the SWOT methodology. The SWOT methodology advises that the objective of the project/study must firstly be specified (that is improvement of agricultural development in the province). Following the specification of the objective, internal and external factors that are favourable or unfavourable to the achievement of the objective is identified.

The internal and external factors are grouped into strength, weaknesses, opportunities and threats. The strengths refer to attributes that are helpful toward the achievement of the objective, with the weakness that highlights the factors that might negatively influence the set objectives. The opportunities relate to the strengths, and highlight the factors that could assist in achieving the objective with threats accounting for factors that have the potential to negatively impact on the achievement of the objective.

From this, conclusions were made on the efficiency of the institutional structure that is supporting agricultural development in the province. The field research also formed the basis for the process of designing alternative institutional arrangements, that is, institutional choices. In addition to the primary data, a literature review was conducted to obtain a better perspective of the current institutional structure (that first step of institutional analysis) that support agricultural development in the province.

In line with the steps of the methodological frame work the following section will deal with the institutional structure of agricultural development in the North West Province NWP. This is followed by a discussion on the efficiency of the institutions and finally the institutional choice and possible changes are discussed.

INSTITUTIONAL STRUCTURES SUPPORTING AGRICULTURAL DEVELOPMENT IN THE NORTH WEST PROVINCE

Williamson (2000) highlighted that the NIE is primarily

Table 1. Institutional structure responsible for rural agricultural development in the North West Province.

		National Agricultural Acts
Institutional Environment: The rules of the game	The	Provincial Agricultural Legislation; Strategic Plan for South African Agricultural; Accelerated and Shared Growth Initiative of South Africa (ASGISA); Provincial Growth and Development strategy (PGDS); Agricultural Black Economic Empowerment Programme (AgriBEE); Micro Agricultural Finance Institutions of South Africa (MAFISA); Land Reform; Agricultural Program of Action (APoA); South Africa's National Biodiversity Strategy and Action Plan (NBSAP); Environmental Poverty Relief Programme (EPRP); North West Environmental Implementation Plan; World Summit on Sustainable Development (WSSD); Support for Environmental and Sustainable Development in the NWP (SESDNW).
Structures of Governance		National Government: Department of Rural Development & Land Reform, Department of Agriculture, Forestry and Fisheries; Provincial Government: Department of Agriculture, Conservation, Environment and Rural Development; District and Local Municipalities; Agribusinesses; Producer organizations; Organized agricultural; Cooperatives; Commercial Banks; NGO's.
Perceptions of individuals		Good institutional environment coupled with poor governance

concerned with the institutional environment (that is rules of the game) and governance structures. It is also these two levels that are of importance in order to ensure that agricultural development in the NWP is conducted in a sustainable way. Table 1 summarizes the main institutional structures (that is, institutional environment and governance structures) supporting agricultural development in the NWP. The formal rules of the game that is, national policies and legislation guide Provincial and local level agricultural development initiatives in the NWP (Table 1). The constitution however, allows provinces to establish provincial legislation, and local governments to enact by laws. Thus, National and Provincial policies, initiatives and priorities that pertain to the agricultural sector in general have an impact on the design and implementation of any provincial agricultural development plans and initiatives. Moreover, the findings from the workshop revealed that the general feeling amongst the major role players is that the institutional environment in the province is satisfying. In other words, the major role players involved with agricultural development believe that the rules of the game that is, rules that guide agricultural development in the province are adequate and supportive towards

ensuring the success of agricultural development initiatives in the province.

The governance of agricultural development initiatives in the North West Province NWP rests primarily at the different levels of government (Table 1). The government of South Africa is divided into three democratically elected spheres: national, provincial and local municipal. Local government (include both district councils and local municipal councils) is primarily concerned with the co-ordination and implementation of development initiatives in the NWP (North West Provincial Government, 2007). Thus, in reality, these governance structures have to address the development issues (poverty, income differences, aggravate social problems, uneven land distribution, etc.) in the province.

The provincial government co-ordinates and supports the actual implementation of agricultural developmental activities at municipal levels. However, the provincial departments responsible for the actual implementation of agricultural development initiatives are lacking the necessary technical capacity (North West Provincial Government, 2008). District municipalities have the responsibility to co-ordinate and support weaker local

municipalities in their agricultural development efforts. Despite efforts to increase the capacity of local governments by creating larger and more resourceful entities through the merging of districts and local municipalities, they still lack the technical capacity and resources to address rural agricultural development in their areas (North West Provincial Government, 2008).

In addition, several private sector institutions and organisations have included agricultural development in their mandate (Table 1). However, these mandates differ amongst the different institutions, which resulted in support by various means, ranging from mentorship to the provision of inputs to research and technology assistance. Due to the different types of support to agricultural development, the role of these private institutions is very important for the overall success of agricultural development in the province. However, it should be noted that the relationships between private institutions and government, who is primarily responsible for agricultural development and determining the institutional environment, is not thriving. As a result, most private sector institutions are required to operate within the institutional environment as set by government which, in several instances, limits their abilities and efforts.

INSTITUTIONAL EFFICIENCY

As discussed, assessing institutional efficiency relates to the second level of the four-step methodology for institutional analysis as depicted by Herrera (2005). The concept of efficiency used in this paper is that of the NIE, which relates efficiency to performance. The efficiency of institutions supporting agricultural development in the province will be determined based on whether they are producing socially and economically desirable outcomes. This approach will be followed given the impossibility of testing which institutional alternative performs better, since performance is a derivative of the institutional choice (Schmid, 2004).

Results from the workshops revealed that the current institutional environment is well established. Thus solid and efficient laws, legislations and property rights are in place. However, it was identified that the institutional governance structures, which is responsible for the coordination and implementation, have largely failed agricultural development. It should be noted that the findings from the workshops indicates that private institutions proved to be somewhat more efficient in the implementation of agricultural development initiatives in the North West Province NWP. Hence, the general outcome of the analysis of institutional efficiency is undesirable. Poor governance is foremost a result of institutional deficiencies in the province. Findings from the workshops suggest that poor governance have contributed towards the following shortcomings:

1. Unreliable infrastructure,
2. Lack of access to financial institutions by rural agricultural development beneficiaries,
3. Lack of timely and adequate supply of inputs,
4. The lack of institutions and institutional arrangements ensuring market access to beneficiaries.
5. Inadequate institutional capacity for research and extension, and
6. Institutions developing human capacity.

Thus, poor governance is believed to constitute a serious obstacle for the success of agricultural development in the North West Province NWP. One might therefore argue that the responsible institutions are not reflecting a state of equilibrium, which has resulted in undesirable social and economical outcomes for rural agricultural development in the province. Thus, to improve current situation the institutional setting needs to be changed. This implies that alternative institutional arrangements could contribute to the improvement of the current institutional performance.

INSTITUTIONAL CHOICE

Institutional choice should be guided by the need for improved institutional efficiency in the province. As early as 1997, the North West government assessed their resources and institutions, and acknowledged that they have little to contribute to ensure the success of agricultural development in the province without a cooperative government and public/private partnerships (North West Government, 1997). Despite this acknowledgement, few attempts have been made since to engage to improve the situation.

Therefore, public-private partnerships could be seen as institutional changes that could address some of the concerns raised during the workshops. However, from literature it is evident that alternative institutional arrangements or structures like rural financing system, equity sharing models etc. can also be used to address specific shortcomings that hamper the success of agricultural development. These structures and their application in the NWP will be discussed in the following section.

INSTITUTIONAL CHANGES

Infrastructure

Foremost amongst the deficiencies listed in the field workshops due to unacceptable governance, is the state of infrastructure. The Department for International Development (DFID, 2003) reported that an effective infrastructure is essential to nearly every aspect of agricultural development. Likewise, the World Bank (1994)

stated that the adequacy of infrastructure helps to determine one country's success with development initiatives. Based on this, one might argue that the most important factors in ensuring efficient governance in the NWP lies with its physical infrastructure and the condition thereof. The specific infrastructural weaknesses that were identified during the workshops include the condition of the roads and railway system as well as the deprived state of the water, electricity and telecommunication supply.

Roads

Green et al (2002) highlighted the important role that road and public transport play in supporting development initiatives. However, Leinbach (2000) has argued that investments in transport, especially if confined only to road transport, as is commonly the case, without a corresponding effort to improve services more broadly remains as a 'necessary but not sufficient' condition for change to occur. He noted that many other factors intervene to condition people's actual behaviour and that transport investment rarely acts as a catalyst for change in rural development as is commonly supposed. Wilson (1973), on the other hand, argued that where transport is a 'binding constraint' or is operating in an environment of 'prior dynamism', that is, where factors are ripe for change, investment may act as a catalytic agent for rural development. This is surely the case in the North West Province NWP, with the poor condition of roads, especially in the rural regions of the province, being a binding factor that inhibits the success of development. A number of other authors (Dawson and Barwell, 1993; Howe, 1999; Lebo and Schelling, 2001; Starkey et al, 2002) have also pointed out the importance of more efficient transport services as an essential mechanism for efficient governance concerning successful rural development.

Results from the workshops revealed that most of the roads are in a deprived condition. Moreover, it is clear from the workshops that the communities (both formal and informal) rely on the provincial government to maintain and upgrade the road infrastructure in their respective regions. The inability of government officials to adhere to this responsibility results in higher levels of transaction cost. This relates to the second level (governance) of the three-level scheme of institutions as presented by Williamson (1996). Hence, increased transaction cost in itself can have devastating effects on agricultural development in the NWP as it the margins in the agricultural sector are generally low. Hence, this will lead to lower levels of profitability and consequently to non-sustainable farming practices.

Moreover, the debate on road conditions in the North West Province NWP should be re-orientated; away from a focus on investments towards more holistic changes in the transport conditions, as this will be a key component for

future rural development. Ling and Zhongyi, (1996) reported that China, which had the world's largest programme of investment in rural roads for the purpose of addressing rural development, changed its focus in the 1990s so that broader social development objectives were integrated in road investment decisions. This means that roads and social infrastructure needs are addressed simultaneously. Investments made by government to maintain and upgrade roads should therefore not only have economic growth as a priority, but should also take into consideration the social impacts of such investments. Garvin (2005) reported that infrastructure owners worldwide are turning to the private sector to help with infrastructure expansions and modernisation. Therefore, to improve governance (that is, lower transaction cost) in the province, one institutional choice that government should consider is to form partnerships with local communities, businesses and farmers as a means of improving or maintaining road infrastructure in the different regions of the province. For instance, government could contract farmers in meeting its obligation to maintain especially secondary roads in the province.

Water supply/availability

The concern of poor water supply and quality that was raised during the workshops can be addressed through the revitalization of the Water User Associations in irrigated agricultural areas. According to a study by Qiao et al 2008), water user associations were found to be the best solution in areas in China that experience shortages of water resources, poor management of water, inefficient use of water resources, etc. Moreover, the authors concluded that water user associations safeguard farmers' interests, help to reduce labour inputs and disputes about water, reduce irrigation costs and promote efficient water use. This reflects on improved governance and subsequently the reduction of transaction cost. The entire local infrastructure should be developed with maximum participation by the benefiting and surrounding communities.

Telecommunication

The availability and reliability of telecommunication infrastructure is yet another concern that was raised during the workshops in the province. Technological advances in this field have seen farmers increasingly using new forms of communication and sourcing information, such as sms, emails and the internet. This is done as a way to source market information or stay up-to-date with current market and production affairs (Rao and Pattnaik, 2006). This also relates closely to the second level of the economics of institutions namely governance.

It is also at this level where small-scale and commercial farmers involved in the production, marketing and distribution of agricultural products might need protection against opportunistic behaviour in the sector.

Milagrosa (2007) and Jordaan et al. (2008) suggested that most of the interventions against opportunistic behaviour entail price and pricing strategies. Thus, uncomplicated and frequent access to information would assist small-scale producers in rural areas to protect themselves against opportunistic behaviour from speculators and other marketing agents by being informed of market dynamics in supply and demand reflected by prices. Moreover, Malecki (2000), as cited by Beugelsdijk and Schaik (2001), suggested that once the networks for information flow are established, information becomes less expensive. This will lower transaction cost, thus contributing towards higher profitability and success in agricultural development. Hence, the formulation of public-private partnerships is yet again an institutional choice and possible change that could improve the current situation.

Production limitations

Several production related limitation was pointed out during the workshops as factors that constitute an obstacle for the success of agricultural development in the province. The participants were of the view that these limitations are due to the ineffective functioning or lack of institutional structures and governance systems. These include: the lack of production inputs and finance and markets. The following are recommendations on potential institutional alternatives/changes that could address the concern of these production limitations.

Rural finance system

It became clear from the workshops that traditional credit institutions in the North West Province NWP have failed to provide small-scale farmers with the necessary financial support. This highlights the need for institutional change and innovation regarding alternative finance systems. The World Bank (1998) suggests that a rural finance systems is a mechanism that can be used to overcome the problem of production capital for agricultural development. Moreover, the rural finance systems include various forms of banking arrangements, cooperatives, mutual benefits societies and solidarity groups, etc. Findings from the World Bank (1998) suggest that these types of rural finance mechanism generally attract a sizable clientele and that they have had a good loan recovery record. In contrast, a study by the Bank of Mozambique (2008) challenged the effectiveness and sustainability of most of the rural finance mechanisms highlighted by the World Bank. This saw international NGOs (CARE International) piloting the introduction of proven micro-credit facilities

suitable for coping with rural finance intermediation obstacles. These include; accumulative savings and credit associations (ASCAs), rural finance associations, village banks and other community, group or member based lending facilities. However, due to financial repression and an unsustainable approach to rural finance and economic development, exacerbated by the intensified civil war in Mozambique, no meaningful conclusions could be made as to which finance system would improve credit supply in the rural regions of Mozambique (Bank of Mozambique, 2008).

Yaron et al (1998) argued that the traditional subsidised programmes used by government as a mechanism of finance to serve agricultural development in rural areas generally fails. This is also evident in the North West Province NWP, with most government credit programmes having failed to yield the desired outcomes. On the other hand, Yaron et al. (1998) found that the introduction of well-designed and self-sustaining rural finance systems like village banks was highly successful in improving rural development in Indonesia. Giehler et al (2010) came to the same conclusion in their study, which showed that village banks were a workable solution for microfinance in the rural regions of China.

Similar to the above, Westley (2004) strongly proposed village banks as a financial system to address finance shortcomings in rural regions. He elaborated by stating that the introduction of rural village banks may work better than trying to lure urban commercial banks out to rural areas with a lack of lending experience that may constitute a formidable barrier to their entry into rural markets. Nigrini (2001) was of the same view, arguing that the characteristics of the rural areas such as poor infrastructure, low population density, high levels of illiteracy, and limited business activities further restrain formal financial institutions from addressing the financial needs of the rural population. Moreover, results from research in Latin America revealed that village banks have a stronger poverty focus; therefore, by introducing, strengthening or expanding the concept of village banks may help to alleviate social problems at the same time that it extends the reach of the rural finance system (Westley, 2004).

Furthermore, Nigrini (2001) argued that many researchers emphasise the importance of utilising a community's resources such as villagers' skills, imagination, initiatives and financial potential to establish self-help institutions that address their needs. He elaborated that a community of people, by identifying their own potential, gain confidence in themselves and their capacity to meet their own economic needs. This puts dwellers into perspective the statements of Terluin (2001) as cited by Valentinov and Baum (2008), where he argued that alternative institutional structures than those of urban areas might be required to satisfy the needs of rural farmers.

Moreover, Cross and Coetzee (2001) advocated the importance of decentralised financial services, that is, financial services organised by the local community. They elaborated by arguing that these self-help groups emphasise intermediation at the local level, that is, they mobilise local financial, human and social resources and provide services such as savings and credit facilities. The solidarity and trust that exist among members of the community, as well as local knowledge, management and pressure, decrease the adverse selection and moral hazard problems that are often associated with local financial intermediaries (Cross and Coetzee, 2001). Therefore, village banking is one amongst various rural finance institutions that could be considered as a potential institutional choice/ change for the improvement of rural agricultural development in the North West Province NWP.

Equity sharing

In addition, Narayansuwami, (1991) argued that it is widely recognised that the access of physical, technical and financial resources is not always a sufficient condition for rural development. In some instances, the strengths and weaknesses of organisational set-up as well as behavioural factor play a significant role in determining the nature and pace of rural development (Narayansuwami, 1991). Moreover, Nepal (2009) argued that local producers have been overlooked in development theories for a long time mainly because of a technocratic understanding of development.

Finally though, development planners began to search for reasons for the unsatisfactory results of past development strategies and have formulated new strategies that enhance local organised efforts. Amongst his findings, Nepal (2009) noted that the promotion of local organisations of producers is an important mechanism for involving people in rural development. People can then influence decisions through their joint efforts and common voice. Producer organisations have provided ownership to local people in development activities to ensure a fair share of benefits. In this context, equity sharing can be seen as a viable mechanism for insuring participation in rural development (Nepal, 2009).

De Lange (2004) was of the same view, arguing that equity schemes allow previously disadvantaged people to enter into agriculture at a lower risk. Besides, Boyce (2006) stated that equity schemes are a mechanism that raises the income and broadens the ownership base of land in South Africa, and it is for this reason that the Department of Land Affairs (DLA) has integrated equity schemes into government programmes that seek to contribute to rural development.

A debate however exists about the merits and demerits of equity schemes in generating the expected results with

regard to rural development. One view is that, equity schemes exist in the interest of commercial farmers as the way of spreading the risk of farming business to the workers (Fast, 1998; Mayson, 2004) as cited by Boyce (2006). Moreover, Fast (1999) particularly points to the danger of losing this lifetime investment opportunity for farm workers if the scheme goes into liquidation.

The other view is that equity schemes are the best mechanisms to provide the poor with an opportunity to participate in the farming business (Lyne and Knight, 2004; Boyce, 2006). In addition, Lyne and Roth (2004) argue that the emergence of equity sharing schemes in which previously disadvantaged employees acquire shares on the commercial farms in which they work, has opened exciting prospects for redistribution of wealth and income streams while empowering workers and improving their productivity, retaining quality management and preserving the credit-worthiness of the farming enterprise.

In the North West Province NWP, farm workers and labour tenants can also benefit, especially through equity sharing projects. According to Van Schalkwyk et al. (2009), several agricultural equity sharing projects exist for emerging or existing farmers in the North West Province NWP. Thus, equity sharing can offer an alternative institutional arrangement that can improve the success of rural agricultural development.

Human capacity

Insufficient education and training of beneficiaries also was identified during the workshops as one of the human related factors inhibiting growth and development in the province. Gomes and Camara (2004) argued that the education of rural people is of utmost importance to ensure successful rural development. Moulton (2001) stated that without education and training, by definition, a person cannot comprehend the instructions on a bag of fertiliser. This emphasizes the importance of addressing education and training in the province. Gomes and Camara, (2004) argued furthermore that education and training strategies need to be integrated with all aspects of sustainable rural development, through plans of actions that are multi-sectoral and interdisciplinary. This means institutional choices that will facilitate a process through which new partnerships could be created between people working in agriculture and rural development, and people working in education.

Therefore, it is proposed that the institutional arrangement on education and training should foresee for an integrated research training programme based on learn-by-doing processes. Learn-by-doing programmes are not a new phenomenon in the field of education and training for rural people, with the so-called farmer field schools that have proved to be very successful in other African countries (Chain Empowerment, 2010).

In addition, Asiabaka (n.d.) argued that in many of the traditional learning models, problem definitions tended to be skewed towards research interests more than to farmer-perceived problems, whereas learning by doing is more focused on supporting small-scale and emerging farmers according to their specific key constraints. He elaborated by arguing that traditional training systems viewed farmers, extension officers and researchers as three separate strata and the links between them have normally been weak or non-existent. Therefore, the programme should integrate research, training and direct field production. This will enable participants to test new techniques learned, with a dynamic curriculum that could be modified accordingly to accommodate emerging issues.

Conclusions

Deficiencies within institutional governance are regarded as the main reasons for the failure of agricultural development initiatives in the North West Province NWP. As a result, the article used institutional analysis as a means of addressing the concern.

Results from the institutional analysis revealed that the institutional environment (that is, rules of the game) is adequate and supportive towards ensuring successful agricultural development in the North West Province NWP. However, institutional shortcomings and subsequently the governance of these supporting structures were regarded as the major obstacle for success. From this, several suggestions have been made as to how institutional deficiencies and governance could be addressed to ensure higher levels of success. These include the formation of public-private partnerships, water user associations, rural finance systems, equity sharing and a participatory approach for education in the province. However, it is of utmost importance that the cooperation between the different institutions involved in the agricultural sector be improved for the recommendations to effectively contribute towards the success of rural agricultural development.

Finally, although various elements of the NIE have already been applied in the context of agricultural, this paper has shown how institutional analysis could be used to address the concern of rural agricultural development failure. In most instances, the reasons for failure relate to the institutional environment that confines development beneficiaries. Improvement of the institutional environment is therefore of utmost importance, which relates to the importance of institutional analysis.

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