Rural Development Strategies as a Path to Decent Work and Reducing Urban Informal Employment: The Case of South Africa

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Abstract: The paper analyses the role and future potential of non-agricultural activities in the rural areas of South Africa. In particular, in the wider context of the recent global economic crisis and national development programmes, it discusses the social and economic impact of a select number of manufacturing and service industries in terms of output, trade and employment, at the same time exploring the potential to generate new and more energy-efficient employment opportunities in the South African rural non-farm economy. The arguments in the paper demonstrate that a significant potential exists to promote and expand non-agricultural activities in rural South Africa provided that specific and targeted strategies are adopted in order to stimulate the growth of the sector and a better quality of employment.

JEL classification: O14, O18, R33.

Resumé: Ce document analyse le rôle et le potentiel futur des activités non agricoles dans les régions rurales d'Afrique du Sud. Dans le cadre plus large de la récente crise économique mondiale et des programmes nationaux de développement, il traite en particulier de l'impact social et économique de certaines branches des secteurs de la fabrication et des services en termes de production, de commerce et d'emploi, tout en explorant la possibilités de créer des emplois nouveaux et plus économes en énergie dans l'économie rurale non agricole sud-africaine. Les arguments avancés démontrent que de grandes possibilités existent pour promouvoir et développer des activités non agricoles dans les régions rurales d'Afrique du Sud, à condition que des stratégies ciblées et spécifiques soient adoptées pour stimuler la croissance du secteur et améliorer la qualité des emplois.

Classification JEL: O14, O18, R33.

Resumen: *:* El documento analiza el papel y el potencial futuro de actividades no agrícolas en las áreas rurales de Sudáfrica. En particular, tomando como referencia el contexto más amplio de la reciente crisis económica mundial y de los programas nacionales de desarrollo, el documento discute el impacto social y económico de un determinado número de industrias manufactureras y de servicios en lo que se refiere a la producción, el comercio y el empleo, a la vez que explora el potencial para generar nuevas y mayores oportunidades de empleo energéticamente eficiente en la economía rural no agraria Sudafricana. Los argumentos presentados en este documento demuestran que existe un potencial significativo para fomentar y expandir las actividades no agrícolas en la Sudáfrica rural siempre que se adopten estrategias específicas y dirigidas a estimular el crecimiento del sector y a mejorar la calidad del empleo.

Clasificación JEL: O14, O18, R33.

The Policy Integration Department

The Policy Integration Department pursues the ILO's decent work and fair globalization agenda from an integrated perspective.

The central objective of the Policy Integration Department is to further greater policy coherence and the integration of social and economic policies at both the international and national level. To this end, it works closely with other multilateral agencies and national actors such as Governments, trade unions, employers' federations, NGOs and universities. Through its policy-oriented research agenda, it explores complementarities and interdependencies between employment, working conditions, social protection, social dialogue and labour standards. Current work is organized around four thematic areas that call for greater policy coherence: Fair globalization, the global poor and informality, macro-economic policies for decent work, and emerging issues.

Director of the Policy Integration Department: *Stephen Pursey*

Rural Development Strategies as a Path to Decent Work and Reducing Urban Informal Employment: The Case of South Africa

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Rural Development Strategies as a Path to Decent Work and Reducing Urban Informal Employment: The Case of South Africa

1. Introduction

1.1. Background

In March 2010 the Economic Development Department of South Africa launched a Medium Term Strategic Plan for the period 2010/11-2012/13. It sets out the primary focus of government economic policies in the next years, namely the creation of an 'employment-generating decent work growth path'[1] in order to promote balanced and sustainable economic development and to improve equity within society. The Strategic Plan takes on particular relevance in the light of some important challenges facing South Africa after the first fifteen years of democratic rule since the end of apartheid,[2] and in the new international economic context dominated by the recent financial crisis.

Despite some positive progress since 1994, the South African economy continues to be characterized by significant structural weaknesses such as high unemployment and large income inequalities[3] along with a widespread poverty especially in rural areas, and an intensive use of natural resources. The emergence of the global economic crisis in 2008-09 has further negatively impacted on the economy, above all in terms of employment. As pointed out by the 2010/11-2012/13 Industrial Policy Action Plan (IPAP, Feb. 2010), 'some 870,000 jobs have been lost in the South African economy since the fourth-quarter of 2008,' and that is most evident in the manufacturing sector.[4] Also in terms of gross domestic product (GDP), the year 2009 registered a growth rate equal to - 1.8 per cent, compared to the growth rates of 3.7 per cent in 2008 and of 5.5 per cent in 2007.[5]

This context is clearly emphasized in a large set of inter-related policies such as the government's electoral mandate for 2009-14 and the medium term strategic plan, which present a series of national programmes and priorities linked to the economic development challenges. They mainly provide the promotion of decent work and sustainable livelihoods

[1] Economic Development Department, *Medium Term Strategic Plan 2010/11-2012/13*, Government of South Africa.

[2] South Africa held its first universal elections in 1994, by marking the end of apartheid.

[3] South Africa presents one of the most unequal income distributions in the world. Its Gini coefficient is estimated at 0,66 on the basis of *All Media and Products Survey (AMPS)* data for 2008, and at the value of 0,7 using Statistics SA's *Income and Expenditure Survey (IES)* data and CPI estimates for the same year, (The Presidency, *Development Indicators 2009*, Republic of South Africa).

[4] IPAP, 2010 (p. 14).

[5] IMF: World Economic Outlook Database, Oct. 2010.

as well as the creation of green jobs to pursue a low-carbon growth path, and a special emphasis on the implementation of a comprehensive rural development strategy.[6]

The government's focus on rural development and food security is crucial as most of rural areas in South Africa are plagued by extreme poverty and underdevelopment. According to the Medium Term Strategic Framework (MTSF), the average per-capita income of 19 million South Africans living in these areas[7] is about 9 per cent of the national average,[8] with a poverty headcount ratio of 77 per cent in 2008 compared to 39 per cent in urban areas during the same year.[9] It reflects a pretty widespread condition in developing and transition countries where poverty continues to remain a predominantly rural phenomenon.[10] In particular, the lack of primary services and adequate economic, social and physical infrastructure along with poor-quality jobs make rural settlements highly vulnerable to the livelihoods risks – from climatic shocks to seasonal variations in the availability of food and employment.[11] This scenario continues to be part of former homelands and rural towns in South Africa, where the past government efforts have not yet effaced the legacy of apartheid based on an inequitable distribution of land ownership. In this perspective, the promotion and implementation of a Comprehensive Rural Development Programme (CRDP) is extremely significant in the light of its primary vision and strategic objectives:

"The CRDP is aimed at being an effective response against poverty and food insecurity by maximizing the use and management of natural resources to create vibrant, equitable and sustainable rural communities".[12]

In more specific terms, the CRDP is articulated in a three-pronged strategy which provides the implementation of a broad-based agrarian transformation, the promotion of an increasing rural development and an improved land reform programme. Central to this strategy is the creation of rural employment through the training of selected community members and pilot sites. Among the different projects and priorities included in the programme, a special emphasis is generated in relation to agricultural production, the improvement of service delivery and rural transport, the empowerment of rural communities – especially the most vulnerable groups – the revitalisation of rural towns and

[6] The other three government's priorities include the provision of an affordable education, a national health care system and a strategy to fight crime and corruption. In addition, the South African government provide specific programmes of national development such as the improvement and transformation of second/informal economy, and the Black Economy Empowerment (BEE), whose aim is to ensure that ethnic composition of the workforce in each institution, private and public, reflects the demographic structure of South African population, (Economic Development Department, op. cit.).

[7] The World Bank Data, "Rural Population Indicator" 2008, http://data.worldbank.org/indicator/SP.RUR.TOTL.

[8] Minister in the Presidency (Planning), *Together Doing More and Better: Medium Term Strategic Framework. A Framework to Guide Government's Programme in the Electoral Mandate Period (2009-2014)*, July 2009.

[9] M. Leibbrandt et al.: *Trends in South African Income Distribution and Poverty since the Fall of Apartheid*, 2010 (p. 38). To estimate the poverty headcount ratio, namely the percentage of population below the national poverty line, the authors use the lower bound poverty line equal to ZAR515 per capita per month. Moreover, with respect to the data sets for 2008 year, the analysis is based on the recent *2008 National Income Dynamics Study (NIDS)*.

[10] IFAD: *Rural Poverty Report 2001,* 2001.

[11] ibid.

[12] Ministry of Rural Development and Land Reform: *The Comprehensive Rural Development Programme Framework*, July 2009 (p. 9).

support of non-farm activities for strengthening of rural livelihoods.[13] Each of these elements is aimed at facilitating integrated development and social cohesion in the wider context of rural poverty alleviation and generation of more productive and decent work opportunities.

1.2. Aim of the Paper

Within the perspective described above, this project intends to contribute to an improved understanding of the linkages between decent employment promotion and rural development, by exploring the role and the future potential of non-farm activities in the rural areas of South Africa. In particular, this paper aims to answer three main research questions: (I) can the rural non-farm economy serve as an effective engine of growth?; (II) to what extent can it contribute to generating more and better jobs in rural areas?; (III) what are the implications for gender dynamics and the most vulnerable groups?

The analysis is placed in the context of the wide literature on economic development that in recent years has drawn growing attention to rural non-farm activities, as they have been considered an instrument of strategic importance for growth of employment and income where conventional processes of industrialization cannot take off. This is evident in the remarkable success of rural industries in China and other East Asian countries[14] as well as in some recent experiences of development in the Indian Sub-continent, which provide strong evidence of the positive role that rural non-farm activities can play in generating employment and increasing income levels in rural areas.

It has been highlighted, inter alia, that the increase in non-farm opportunities can represent an important survival mechanism for the farming households, especially for small and marginal farmers as well as to the landless who cannot derive sufficient income from the agricultural sector. Furthermore, through the capacity to employ a substantial share of the labour force within the rural areas, non-farm activities have been able to contribute to the reduction of rural-urban migration, by lessening the pressure on urban resources and infrastructure and the consequent expansion of urban unemployment and informal employment. This process is considered highly positive as it can lead to a more balanced development between rural and urban areas, by easing rural-urban inequality and income differences and strengthening rural-urban trade linkages.

The contribution of non-farm economy to rural development is thus widely documented and recognized as essential to integrate the agricultural incomes within the emerging and developing countries. In this research, our main objective is to analyse the economic and social potential of a select number of non-farm industries in South Africa, specifically exploring their impact in terms of output, trade and employment. It is also proposed to analyse the promotion of more sustainable sources of employment within the rural non-farm economy, in order to make it an effective and real engine for rural development.

1.3. Methodology

The approach of analysis undertaken for drawing up this paper is mainly based on official documents and reports produced by the Government of South Africa, international organizations and different research institutes.

[13] ibid. (p. 8).

[14] R. Nayyar and A.N. Sharma: *Rural Transformation in India: The Role of Non-Farm Sector*, 2005.

In the first phase of the analysis, a significant amount of information was obtained from the vast literature on non-farm activities produced by research centres such as International Food Policy Research Institute and Overseas Development Institute, along with international agencies such as Food and Agriculture Organization (FAO) and International Fund for Agricultural Development (IFAD).

In the second phase of work, the study of the role of rural non-farm economy in South Africa was primary developed from Government documentation and Quantec database which supplied significant data for the economic analysis of different non-farm industries. In this stage, a relevant support was also provided by numerous research papers produced by the independent institution Trade & Industrial Policy Strategies (TIPS) along with reports of several South African study centres such as the Centre for Social Science Research (CSSR), the Human Sciences Research Council (HSRC) and the Southern Africa Labour & Development Research Unit (SALDRU).

Lastly, the analysis of the quality of job in rural areas from an environmental, social and economic perspective was carried out on the basis of a specific documentary review concerning the implementation of potential renewable energy technologies and energy efficiency measures across different economic sectors. In this phase of analysis, a large share of material on the promotion of green economy and its socio-economic and environmental sustainability was drawn from government documents and energy research centres such as the South African National Energy Research Institute (SANERI). In addition, constant reference was fulfilled in relation to the Agama Energy's national employment projections and manifold ILO sources.

1.4. Outline

To analyse the role of non-agricultural activities in promoting more and better jobs in the rural areas of South Africa, this paper is structured into five main sections.

Following the introduction, Section 2 offers a detailed literature review about the conceptual definition and nature of non-farm activities. This is deepened through the examination of the growth and transformation processes of such activities in Section 3, with particular attention to the agricultural productivity and rural-urban linkages. The role of non-farm sector in rural areas of South Africa is then analysed in Section 4 from an economic, social and environmental perspective. It provides evidence of the current and future potential of several non-farm sub-sectors and enterprises in generating new sources of rural employment and explores the potential for promotion of green and energy efficient non-farm industries. Lastly, Section 5 sums up and concludes further stressing the importance and the potential of a sustainable and decent rural non-farm economy for poverty alleviation in South Africa in the context of the wider national rural development programme.

2. Rural non-farm activities

2.1. Definitions and Characteristics

As expressed in much of the literature on economic development, the term "rural non-farm economy" refers to a highly heterogeneous spectrum of activities which vary in sectoral terms and spatial distribution, levels of productivity and incomes and enterprise size. This diversity – depending on the type of location, agricultural structure and endowment of natural resources – has made and still makes it difficult to develop a standard definition of rural non-farm economy both at the international and national level. Several authors have, nevertheless, tried to delineate the main features of rural non-farm activities. According to Haggblade, Hazell and Reardon,[15] the non-farm economy can be defined as follows:

"The 'rural nonfarm economy' includes all rural economic activity outside of agriculture. Nonfarm activity may take place at home or in factories or be performed by itinerant traders. It includes small- and large-scale activities of widely varying technological sophistication".

As it is evident, one of the primary aspects emphasized above is related to the sectoral dimension of rural non-farm activities. They include agro-processing – often performed on the farm by the members of farm household – and all the other economic activities except agriculture. Based on the International Standard Industrial Classification (ISIC),[16] the latter comprise mining, manufacturing, utilities, construction, commerce, transport, financial, professional and technical activities as well as personal services. As pointed out by Haggblade, Hazell and Reardon, the scale of these activities can vary greatly, from part-time self-employment performed in home-based cottage industries to large-scale production in urban areas of small and medium-size and depot facilities operated by large multinational firms.[17] The type of employment can consequently vary from self- and casual informal employment to regular-salaried formal employment, from permanent to seasonal occupations. Furthermore, almost all the activities in rural non-farm economy are characterized by technological dualism. Alongside a large number of small producers who use traditional technology, it is possible to observe a small number of major industrial units involved in capitalistic modes of production using modern technologies. This last aspect is mainly evident in sectors that are heavily dependent on exports, where highly sophisticated methods are necessary to compete in the international markets.

The sectoral heterogeneity of non-farm activities is also reflected in relation to spatial distribution, varying on the basis of the location of industries in rural areas, small towns or larger urban centers. In particular, domestic cottage industries are mainly widespread in rural settings, while trade and services tend to be more prevalent in towns and urban centers. In this context, considerable importance covers the so-called rural towns that – closely linked to the surrounding rural hinterland – play a key role in the non-farm economy as places for purchasing of inputs and selling of products.

Both in rural and urban areas, it is finally possible to identify a further feature of non-farm activities: the agglomeration of firms in clusters. They represent the geographical and

[15] S. Haggblade, P. Hazell and T. Reardon: *Transforming the Rural Nonfarm Economy. Opportunities and Threats in the Developing World,* 2007 (p. 19).

[16] The *International Standard Industrial Classification of All Economics Activities* is the classification realized by the United Nations Statistics Division for classifying economic data. In this paper, we do refer to the latest available version: ISIC Rev.4.

[17] S. Haggblade, P. Hazell and T. Reardon, op. cit., 2007.

sectoral concentration of firms linked together and with other economic players, and specialized in the production of homogeneous commodities. This phenomenon can emerge as a consequence of different factors such as a confluence of favorable natural conditions or historical and political causes. It plays a key role as it allows the industries to overcome the limits of their size, by enhancing the competitiveness within local and global markets and thereby benefiting from larger markets, scale economies and lower costs of energy.[18]

The spatial distribution of rural non-farm sector also reflects very different levels of productivity and incomes according to the single activities. In particular, labour productivity differs significantly between labour-intensive activities and more specialized capital- and skill-labour activities. Considerable disparity is also evident among different social groups in the access to specific segments of rural-non farm economy. The scarceness of human, physical and financial capital associated with gender, ethnic, caste and social discrimination and with the restrictions on geographic mobility represent factors which prevent the access of the most disadvantaged groups to more profitable activities. This often creates a polarization of the sector, characterized by richer and better educated individuals in the most lucrative parts of non-farm economy and a high percentage of poor households – especially women – dominating the informal and labour-intensive segments of rural non-farm activity, with low productivity and lower incomes. It is evident that the impact on income distribution tends to exacerbate the inequalities, even if the overall outcome is often divergent: in some cases, non-farm earnings can improve equity among the households; in other instances, they can accentuate inequality.[19]

Finally, the quality of rural non-farm economy is influenced by the typology of enterprises. The vast majority of establishments in rural areas are constituted of informal small- and micro- scale firms, employing between five and ten workers and representing the main source of employment within the sector. Alongside the small industries, a growing importance is also covered by large firms which are particularly relevant in agro-processing, trading and export activities, constituting a significant share of output and incomes. They can show competitive or complementary economic interests in respect to the small enterprises and influence their growth process, by highlighting the multiple linkages which can exist between both.[20]

As it is evident from this first introductory part, rural non-farm activities present a heterogeneous and multidimensional nature which can be analysed under different profiles: from sectoral and spatial diversity to profitability levels and enterprise size. Before exploring each of them in relation to the economic and social context of South Africa, the next section will focus on growth dynamics of rural non-farm economy, revisiting some of the main theories which dominate the economic literature on rural development.

[18] S. Haggblade, P. Hazell and T. Reardon: *Strategies for Stimulating Poverty-Alleviating Growth in the Rural Nonfarm Economy in Developing Countries*, 2002.

[19] S. Haggblade: "The Rural Nonfarm Economy: Pathway Out of Poverty or Pathway In?", in International Food Policy Research Institute (IFPRI): *The Future of Small Farms: Proceedings of a Research Workshop*, Wye, UK, 26-29 June 2005.

[20] S. Haggblade, P. Hazell and T. Reardon, op. cit., 2002.

3. Structural transformation and spatial dynamics of non-farm economy

The aim of this section is to show the structural transformation of non-farm economy in the context of rural diversification by analysing the primary growth engines of the sector as well as the spatial distribution which characterizes it, with particular attention to rural-town development.

In the next sub-sections, the two leading theories related to birth and expansion of rural non-farm activities will be presented in the light of the dominating role they played in a large part of political debate in the past two decades. They identify two main types of rural diversification on the basis of agrarian change, respectively concerning the growth and stagnation of agricultural sector: demand-pull and distress-push diversification. In the first case, rural diversification emerges as a result of an increased demand for rural products which, in turn, derives from an increase in household incomes and higher demand from urban areas. In the second case, the process of rural diversification arises in a context characterized by risk, market imperfections and agricultural unemployment. These factors induce rural households to engage in less profitable economic activities – e.g. in terms of labour productivity – motivated by the necessity to avoid further income reductions.

Both these dynamics point out the specific relationship between rural diversification strategies, characteristics of rural households and socio-economic environment within which the process develops. They underline, in particular, the linkages between agricultural growth and non-farm economy and between agricultural stagnation and development of non-farm employment.

3.1. Dynamic Agriculture: Demand-Pull Factors

The theoretical position which analyses the linkages between rural non-farm economy and agricultural growth argues that economic diversification in rural areas – hence the development of non-farm activities – is determined by the evolution of the primary sector, whose positive effects are transmitted to other sectors and territory through regional growth linkages. The growth linkages model was theorized by John Mellor in 1976[21] in relation to the prospects of the Green Revolution in India (1967-78),[22] and it was subsequently applied to the analysis of rural growth, employment and incomes in Asia and in Africa.

A key characteristic of this approach is the primary role attributed to the introduction of technical progress in agriculture, considered as the exogenous factor which pulls the growth process, thus the emergence and development of non-farm activities.

According to the model, when technological modernization is introduced in the primary sector, it causes a significant increase of farmers' incomes which, in turn, fosters an increased demand from the farmers towards consumer and capital goods; inputs to agricultural production; and processing and marketing services related to farm outputs. They respectively represent three different types of growth linkages from agricultural sector: expenditure (or consumption) linkages; backward linkages and forward linkages – both known also as production linkages. In particular, expenditure linkages refer to

[21] J. Mellor: *The New Economics of Growth. A Strategy for India and the Developing World*, 1976.

[22] The Green Revolution, financed by the international organizations, aimed to introduce high-performance technology in the primary sector, with the objective to increase the production, and thus, determine the growth of local industry.

consumption by farmers of items produced in the villages and towns from small-scale and labour-intensive enterprises such as processed food, textiles and utensils. Backward linkages derive from an increased demand by farmers for agricultural inputs and capital goods such as seeds, fertilisers, pumps and farm machinery. These inputs, purchased to intensify the production in surrounding rural settings tend to multiply over time the development of rural industries. Finally, forward linkages result from the supply of agricultural products to agro-processing industries. They include activities such as trading, packaging, transport, storage, rice milling, and food processing.[23]

All these factors, stimulating the production of consumer and investment goods by enterprises, determine the evolution of local economy and the consequent development of new income and employment opportunities in rural non-farm sector. In particular, according to Mellor, the introduction of technical progress in agriculture and the latter's linkages with other economic sectors can generate a virtuous circle that leads from the increase of incomes in primary sector to the economy growth as a whole. Initially, economic growth emerges at the local level through the development of industrial activities and services in small towns and in rural areas. Farm households can benefit both directly and indirectly. On the one hand, growing demand of consumers directly translates in significant opportunities for self-employment, especially in trade and commerce. On the other hand, the rise of rural wages for unskilled labour tends to benefit indirectly the poor households in rural areas.[24] Afterwards, the progressive growth of urban centres led by the linkages between local and national economy, attracts an increasing number of workers from rural hinterland. As a result, the share of agriculture in the economy begins to decrease, losing in the long term the capacity to lead the regional economic development. In this context, the emergence of non-farm activities is seen as a first positive signal of macroeconomic development, constituting the basis of a virtuous circle able to generate a result of overall growth.

In relation to this approach, some authors[25] also reported more recent analysis which identify further types of linkages between agriculture and rural non-farm sector. They mainly refer to factor market linkages and productivity linkages. Factor market linkages include links which can be generated in relation to the seasonality of demand in agriculture and consequent strains within non-farm activities as well as linkages which emerge on the basis of financial flows from agriculture to non-farm economy and vice versa, fostering investments in non-farm sector and the purchase of agricultural inputs respectively. In the second case, productivity linkages comprise some positive macro linkages between farm and non-farm economy. In particular, it has been identified the agricultural productivity as a factor able to improve food security and political stability along with knowledge flows as means to enhance capital productivity in both farm and non-farm activities.

Actually, beyond these and other studies realized in subsequent decades, the growth linkages model to work requires the fulfillment of some conditions.

Firstly, increasing farm-led demand has to be addressed mostly towards consumer goods and locally-produced commodities. Secondly, the agricultural sector has to purchase products from industry and provide it with raw materials. Finally, in rural areas new small-scale and labour-intensive industries have to develop. In this scheme, through the rural location of production is possible to benefit from cheap labour, lower costs of production compared to urban areas, and proximity to the source of demand in terms of purchasing

[23] F. Ellis: *Rural Livelihoods and Diversity in Developing Countries*, 2000; S. Haggblade,P. Hazell and T. Reardon, op. cit., 2007.

[24] S. Wiggins and P. Hazell: *Access to Rural Non-Farm Employment and Enterprise Development*, 2008.

[25] S. Haggblade, P. Hazell and T. Reardon, op. cit., 2007.

power by households. It is assumed that these conditions are fostered by a relatively egalitarian growth in agriculture incomes, as this promotes the demand towards local and labour-intensive goods rather than imported and capital-intensive products.

Some of these conditions, however, have not been empirically observed and the growth linkages approach has been criticized over the years. The main aspect highlighted is the controversial and ambiguous nature of the model, resulting from an excessive emphasis on multiplier effects of demand generated by agriculture growth in the local economy. In particular, it is argued that the existence of a prosperous rural industry in some areas seems to depend on the presence of cheap labour and demand from urban areas rather than on effective linkages with the agricultural sector. In this case, the development of rural non-farm activities emerges as a result of the lack of employment opportunities in agriculture.

3.2. Stagnant Agriculture: Distress-Push Factors

The study of regions without a dynamic economic base has shown that the patterns of growth in rural non-farm sector may appear extremely different in respect to what J. Mellor theorized in the growth linkages approach. Some empirical studies,[26] particularly those carried out in areas affected by the Green Revolution, identified in fact the predominant urban character of the industries supplying consumer and producer goods to rural farmers; the weakness of local commodity linkages in both farm and non-farm production as well as the prevalence of large scale enterprises and a strong variability of labour intensity within and between industries.

These factors – showing deeply different characteristics compared to the original hypothesis of rural located, small size and high labour-intensive industries – contributed to weaken the validity of Mellor's model, highlighting the lack of growth linkages' activation. More specifically, it is argued that technological modernization of agriculture, determining an unbalanced development both territorially and socially, has made the agricultural sector no longer able to occupy the workforce traditionally employed. Agriculture is thereby seen as a stagnant economic sector that generates a low demand for inputs, processing and services, losing over time the capacity to introduce potential structural changes within rural enterprises. In this context, the surplus of agricultural labour leads to investments in non-farm rural activities, causing their development as precarious and informal forms of employment without a substantial capacity to pull the growth process. This scenario, characterized by deterioration of economic conditions, can subsequently motivate migration in search of more favorable job opportunities elsewhere – especially in the informal economy – making urban areas points of attraction for rural population and non-farm exports and labour-intensive activities.

According to this perspective, it is evident that the lack of employment opportunities in primary sector constitutes the main factor of growth for rural non-farm economy.

This emphasizes the importance of considering alternative growth hypothesis compared to the original model theorized by J. Mellor, then followed and applied in subsequent analysis. It is above all necessary to assess the specificity of local rural settings which qualify a certain region or a particular district. They can in fact induce the growth of agriculture or its stagnation, thus influencing the birth and development of rural non-farm economy.

[26] B. Harriss: "Regional Growth Linkages from Agriculture and Resource Flows in Non-Farm Economy", in *Economic and Political Weekly*, Vol. XXII, No. 1 and 2, 3-10 Jan. 1987, pp. 31-46. The author conducted her research in the North Arcot district of Tamil Nadu, in India.

In the context of linkages between farm and non-farm sector, it is moreover possible to identify a spatial component that highlights the rural-urban interactions and the consequent role of small and intermediate urban centers as fundamental engines for the growth of both rural and urban settlements. They fit into the broader scope of rural-urban linkages.

3.3. Rural-Urban Linkages

The importance of the relation between agriculture and rural non-farm activities extends its main socio-economic implications to the linkages between towns and countryside that is rural-urban linkages. They represent linkages across space and between sectors which foster different types of interactions between urban and rural areas. These interactions are possible thanks to the growth of small and medium-sized towns which act as important services centers for rural hinterland, constituting crucial points of connection between villages and large cities. They particularly reflect the spatial dimension of non-farm economy as factor able to absorb surplus of agricultural labor force and avoid the abandonment of rural settings as well as the congestion of major urban centers, consequently promoting a more balanced development between central and peripheral areas.

3.3.1. Rural-Towns Growth

The spatial distribution of non-farm activities assumes interesting features in relation to the so-called 'rural towns', also known as market towns. They play a fundamental role within rural space as places for purchasing of inputs and selling of products, performing marketing, production and service functions as well as providing different types of economic and social facilities.

In particular, one of the main aspects related to small and medium-sized towns and cities is their capacity to act as important centers for the production, processing and distribution of goods and services to surrounding rural hinterland. Farming households can, in fact, purchase their inputs in the nearby urban centers and sell their final items to local markets, strengthening their linkages to the regional, national and global economy.[27] The access to local urban markets is extremely important as it allows rural producers to increase their incomes, reducing vulnerability and improving their livelihood strategies. That is also possible thanks to the presence in the intermediary cities of different types of activities and enterprises which constitute an essential source of employment for rural households. Many of them provide important consumer goods - mostly durables; others produce inputs used in rural areas, primarily but not only for agricultural production.

Such a concentration of economic activities allows small towns to perform a further important function, providing a wide range of services which generally lack in the surrounding rural areas. They mainly comprise health and education services, government, administrative and personal services, transport and communications. The latter two play a key role in the creation of linkages between urban and rural areas. The development and improvement of infrastructure enables, in fact, the reduction of the economic distance from urban centers, facilitating the movement and consequent access to final markets for rural consumers and producers. Likewise, improved communication facilities tend to lower transportation costs, fostering the growth and expansion of rural located industries and reducing rural-urban wage differences. In this context, small and intermediate towns can attract a significant number of migrants through demand for non-farm labour,[28] thus

[27] J. von Braun: *Rural-Urban Linkages for Growth, Employment, and Poverty Reduction*, 2007.

[28] D. Satterthwaite and C. Tacoli: *The Urban Part of Rural Development: the Role of Small and Intermediate Urban Centres in Rural and Regional Development and Poverty Reduction*, 2003.

contributing to alleviate migration pressure on larger cities and consequently reducing development of urban informal employment and urban unemployment.

It is thus evident that the functions of small and medium-sized market towns are manifold and essentially positive. They emerge as key factors able to promote a balanced economic and social development, both in a short and long term perspective.

4. The role of non-farm sector in rural South Africa: current scenario and future potential

After having presented the main characteristics of non-farm economy as well as its growth dynamics in relation to the performance of agricultural sector, this section aims to analyze the role and potential of non-farm activities in the rural context of South Africa. In particular, the emphasis will be placed on the importance of expanding small, micro and medium enterprises (SMMEs) for rural development, simultaneously highlighting the role of some key sectors such as agro-processing and other manufacturing industries, tourism and Information and Communication Technology (ICT). Such an analysis will be completed by a detailed overview relating to the promotion of new green and energy efficient industries in different South African economic sectors, with particular focus on the potential of renewable energy technologies and the adoption of climate change adaptation measures. This will enable to show the economic, social and environmental relevance of non-farm industries for the development of rural areas in South Africa.

4.1. The Contribution of Micro, Small and Medium Enterprises

Within the economic literature, general agreement exists on the importance of promoting SMMEs for the poverty alleviation and the consequent economic and social development. It is, in fact, widely recognized that a dynamic small business sector can stimulate the job creation and economic growth as a whole in both rural and urban areas. Such significance has been also acknowledged as central to economic transformation by the South African government which since 1994 has implemented many national support programmes for SMMEs promotion, mainly in the form of incentive schemes in the areas of marketing and business support, research and development, financial support services and sector development strategies.[29] These initiatives reflect to some extent the role that small, micro and medium enterprises play as a crucial source of livelihoods for millions South African people. As labour intensive industries they, in fact, provide 56 per cent of the national employment,[30] contributing about 43 per cent of total remuneration.[31] Furthermore, according to the Department of Trade and Industry's Annual Review of Small Business 2005-07, it is estimated that micro, very small and small enterprises account for between 27 per cent and 34 per cent of total GDP, with a higher percentage – about 13 per cent – held by the small size entities.

In spite of their larger size and greater contribution to GDP, it is however recognized that the majority of enterprises within the South African context is made up of micro and survivalist firms.[32] They in fact account for between 70 per cent and 80 per cent of all SMMEs,[33] absorbing a significant proportion of unemployed and disadvantaged individuals, mainly in rural areas. In particular, according to a recent analysis carried out

[29] DTI: *Annual Review of Small Business in South Africa 2005-2007,* Aug. 2008; S. Timm, *How South Africa Can Boost Support to Small Businesses: Lessons from Brazil and India,* Jan. 2011.

[30] DTI, op. cit., 2008.

[31] Gauteng Provincial Government, *Lessons Learnt from Working With and Supporting the SMME Sector in the Gauteng Province and Pointers for the Future Strategic Direction of Support to the Sector,* Oct. 2010.

[32] DTI, op. cit., 2008.

[33] A. Berry et al.: *The Economics of SMMEs in South Africa*, 2002.

by the Stats SA Integrated Business Register,[34] it is reported that of 536,000 economically active formal SMMEs present in South Africa in 2007, micro and very small firms represented 82 per cent while large enterprises only accounted for a share of 3 per cent. The most of the employment in South Africa seems thus to be generated from the formation of new micro and survivalist enterprises rather than from the expansion of more established small and medium enterprises (SMEs) or large firms.[35] Furthermore, their importance within the country emerges as particularly relevant in relation to the racial and gender composition. Whereas SMEs appear largely white-owned, micro and survivalist firms are mainly managed by black Africans, whose proportion results significantly high within the informal sector - namely equal to about 88 per cent.[36] Of this percentage, a substantial share is represented by female entrepreneurs that – as shown in the table 4.1 – constituted 48 per cent of all informal business owners in March 2007.

Table 4.1. Gender-by-population group distribution of persons of working age (15-65) **who are owning and managing a business, by sector** (formal/informal) **and survey period** (2005-07) (in percentage)

Gender x Population Group	March 2005		September 2005		March 2006		September 2006		March 2007	
	Formal	Informal	Formal	Informal	Formal	Informal	Formal	Informal	Formal	Informal
Female African	7	48	11	51	11	45	9	46	10	48
Female Other	17	4	18	3	18	4	22	3	21	4
Male African	15	40	17	40	16	42	20	42	21	40
Male Other	61	8	54	5	55	8	48	9	48	7
Total	100 (573,000)	100 (1,250,000)	100 (522,000)	100 (1,518,000)	100 (556,000)	100 (1,429,000)	100 (596,000)	100 (1,490,000)	100 (589,000)	100 (1,331,000)

Note: "Other" population groups include Coloureds, Indians/Asians and Whites.
Source: DTI, *Annual Review of Small Business in South Africa 2005-2007*, 2008.

These figures clearly indicate the economic and social significance that informal and micro enterprises hold for women and Previously Disadvantaged Individuals (PDIs), providing them an important source of income alternative or complementary to agricultural production or a more difficult and widespread condition of unemployment.

In spite of such an economic and social role, small and micro enterprises continue however to operate within overcrowded, low-income and highly competitive local markets, presenting a low growth potential and a high rate of failure, partly stemming from a limited capital base and a general lack of linkages with the surrounding natural resources and local environment.[37] Added to this, they appear largely characterized by a supply-push or necessity-driven nature. Several studies[38] show, in fact, that the major reasons to start up a business in the rural settings are driven by the necessity to search livelihoods for survival rather than by perceived business opportunities, testifying the low entrepreneurial activity rate within rural areas compared to that in urban areas.

[34] Quoted in DTI, op. cit., 2008.

[35] A. Berry et al., op. cit., 2002.

[36] DTI, op. cit., 2008.

[37] ibid.

[38] C.M. Rogerson, 2001; A. Driver et al., *Global Entrepreneurship Monitor (GEM): 2001 South African Executive Report*, 2001; D. Sanchez, 2006.

Each of these constraints stems from a number of economic, social and institutional factors which hinder the full realization of the South African small business potential. Among these, a strong influence is still played by the legacy of apartheid that, relocating the majority of black communities to remote and unproductive areas with limited infrastructure development and reduced access to markets, has determined lower levels of technical and managerial skills amid the black people, severely preventing them from running any type of business. Added to this, a great part of the literature recognizes the inadequacy of government policies and programmes designed to support the needs of rural SMMEs, especially in relation to local economic development. The latter seems, in fact, to have been characterized by a weak level of implementation and a reduced capacity to evolve towards more targeted and effective policies. Specifically, even when support initiatives have been implemented for the smallest size undertakings development, they have had a limited impact on the target groups as a consequence of a significant lack of awareness and knowledge about the services provided – especially in remote and marginalized rural areas.[39]

Such weaknesses have consequently affected the growth of the South African SMMEs sector whose performance does not seem to have been particularly successful in the last decades. The same 2010/11-2012/13 IPAP has been considered as not able to "reflect a clear priority for promoting small and medium enterprises […] as the agent of industrialization",[40] suggesting the necessity to realize a new integrated approach to small business promotion in South Africa in the light of the importance that this sector holds within the country. To the extent that large firms, in fact, do not seem so far to have been able to create jobs on the scale needed to reduce the high unemployment rates,[41] the promotion of an effective small business sector - also and above all in the most disadvantaged and remote rural areas - appears a more and more growing need.

In this perspective, alongside the most recent governmental initiatives aimed at fostering the small business growth and competitiveness through a holistic approach,[42] many other interventions need to be implemented in order to let SMMEs play their expected role in the South African economy. Among these, it is firstly desirable that the government adopts both short- and long-term programmes, at the same time coordinating demand-side and supply-side interventions and enhancing the capacity of rural SMMEs to take advantage of new and emerging opportunities.[43] Similarly, it is necessary that efforts are addressed to help rural micro and survivalist firms to graduate into the formal economy, leveraging appropriate training and financial support systems and improving statistics data on small business sector in order to develop more effective and targeted policies. Along with that, the experiences in emerging economies such as Brazil and India suggest the importance to promote a greater partnership between government and private sector while building policies on clearer and measurable targets as well as proper monitoring systems in order to benefit from a more simplified and effective government's support architecture.[44] It is finally possible to assume that the realization of each of these conditions is likely intended to have a greater and sustainable impact if a joined-up approach is pursued and

[39] A. Berry et al., 2002; D. Sanchez, 2006; W. Ladzani and G. Netswera, 2009; S. Timm, 2011.

[40] J. Laubscher: "Can an Industrial Policy Provide the Impetus?", The New Age (TNA), Nov. 2010.

[41] According to the FinScope survey (2006), it is estimated that only about 10 per cent of all new employment positions were generated by large established firms between 1985 and 2005 (FinScope, *Small Business Survey*, 2006).

[42] See, for instance, the national *Integrated Small Enterprise Development Strategy 2005-2014* (DTI, *Unlocking Potential in an Enterprising Nation. The Integrated Small Business Development Strategy in South Africa 2004-2014*, Oct. 2003; DTI, op. cit., 2008).

[43] C.M. Rogerson, op. cit., 2001.

[44] S. Timm, op. cit., 2011.

implemented. The latter can have a particularly significant role in relation to specific rural non-farm sub-sectors and their economic and social potential.

4.2. Sectoral Dynamics

In carrying out the sectoral analysis of the non-agricultural activities in South Africa, it has been proposed to focus the attention on some specific manufacturing industries and services considered as better able to drive the rural development. They have been analysed through different variables such as output, trade, employment and annual remuneration in order to present their trends over the period 2000-09.

In this context, primary emphasis has been attributed to labour intensive industries such as agro-processing; textile and clothing; wood, paper and pulp. These sub-sectors are, in fact, generally recognized as capable of generating employment on a large scale, representing a considerable source of livelihoods for the most disadvantaged and low-skilled individuals – both in gender and race terms. This potential is particularly relevant in relation to the rural areas as they are still populated by a majority of marginalized and unqualified people, thus suggesting the importance of human-resource intensive industries in supplementing rural household incomes and in constituting a source of employment alternative or complementary to the agricultural production.

Equal significance has been then attributed to a further group of activities composed of metals, capital and transport equipment industries. They are, in fact, estimated to play a leading manufacturing role in many different countries including South Africa, showing a fast growing performance. More specifically, the choice to emphasize the metals sub-sector stems from the well-developed nature and good growth trends that it presents in the South African context combined with quite a wide spread within the rural areas and a potential indirect job creation impact resulting by the manifold linkages with other downstream activities. Similarly, the transport equipment sub-sector – and the motor vehicles and component industry in particular – is characterized by a rapid and outstanding growth globally. It plays a crucial role in many national economies, providing significant direct and indirect employment opportunities. Such a potential might be considered relevant to the rural areas, above all in relation to the more labour-intensive practices within the industry and to the presence of vehicle manufacturing related economic activities such as maintenance and repairs.

Each of these industries within the manufacturing sector can be thus identified as a potential contributor to rural development. Alongside them, the analysis has also picked out some service sub-sectors – specifically tourism and ICT – as significant drivers of economic development in rural areas.

In particular, tourism represents one of the largest and fastest-growing industries over the last decades, generating 9.1 per cent of global GDP and providing more than 258 million jobs.[45] It is thus generally considered as a high-employment potential area - primarily for youth, women, ethnic minority groups and low-skilled workers. The industry furthermore involves a wide range of activities, from part time, less-skilled and low value-added to full time, highly qualified and high value-added occupations, constituting an important source of income for the local people[46] both in the formal and informal sector as well as in other economic activities. It is in fact estimated that one job in the tourism industry can generate

[45] WTTC: http://www.wttc.org/eng/About_WTTC/.

[46] I. Chernyshev: *Keynote, Session III: Employment in the Tourism Industries: Measurement Issues and Case Studies*, Fifth UNWTO International Conference on Tourism Statistics. "Tourism: An Engine for Employment Creation", Bali, 30 Mar. - 2 Apr. 2009.

about one and half additional jobs in the tourism related activities,[47] suggesting the capacity of the sector to promote both direct and indirect employment opportunities. As a human-resource intensive industry, tourism is thus recognized as an important and potential source of economic growth and job creation, representing a significant path to poverty reduction.

A similar impact on the economic development can be also highlighted in relation to the ICT sector. The latter presents in fact a rapid worldwide growth, accounting for an increasing share of the economy in most countries.

Its relevance in economic and social terms is mostly witnessed by different experiences in developing countries, which point out the positive impact of ICT in addressing rural poverty reduction. In particular, case-studies in South Asia – especially in India – have shown that the ICT expansion – and specifically Business Process Outsourcing (BPO) services[48] – can play a fundamental role in generating new jobs in non-urban settings, improving the livelihoods of low-income earners and contributing to women empowerment. Moreover, the rural location of these services has appeared to be profitable for companies and clients that can take advantage of significantly reduced operating and infrastructure costs compared to those in urban areas, suggesting that the promotion of rural ICT initiatives has a significant potential to act as an engine of sustainable development. The successful experiences in India demonstrate in fact that critical challenges such as infrastructure gap, broadband connectivity, community acceptance, training and market skepticism can be overcome through adequate partnership and government leadership as well as through the adoption of different approaches able to fit the specific and not homogeneous rural contexts.

The choice to place the accent on the ICT as well as on tourism and various manufacturing industries is therefore related to manifold factors which deserve to be analysed in their specificity. Based on this, the next section will firstly be dedicated to the analysis of the agro-processing sector in rural South Africa.

4.2.1. Agribusiness

Industry Snapshot

The agro-processing[49] sector can be considered as one of the most promising sectors in terms of economic growth and employment potential within the South African manufacturing industry. It contributes in fact to 10 per cent of national GDP[50] and employs a substantial number of workers – equal to some 234,780 employees in 2009 including the informal labour force.[51] Overall, it represents a complex sector characterized by a diversified industry structure, ranging from production, processing and preserving of meat, fish, fruit and vegetables to the manufacture of beverages and tobacco products.[52] Furthermore, most of the industry is labour-intensive and displays significant up- and

[47] ibid.

[48] BPO constitutes one of the fastest growing segments of the Information Technology Enabled Services (ITES).

[49] The term "agro-processing" refers to the process of transforming primary and raw agricultural products in consumable commodities, namely for intermediate and final consumption.

[50] DTI: *The South African Agro Processing Sector Overview*, 2006.

[51] Quantec Standardised Industry Database, *Industry Trends: Food, Beverages and Tobacco.*

[52] For the purpose of this section, agro-processing sector is defined as the manufacture of food, beverages and tobacco products.

down-stream linkages with other economic activities such as agriculture, commerce and services, therefore playing a key role in fostering and accelerating economic growth.

In spite of this significant economic potential, however, the performance of agro-processing in South Africa has been in some cases disappointing. This mirrors the impact of specific economic and historical factors such as the liberalization of South Africa's trade regime after 1994 and a high level of concentration in both the food processing and retailing structure, characterized by the presence of a small number of large companies controlling a high percentage of production capacity and sales – approximately 70 per cent – and a large number of small stores intended to control the remaining share of turnover.[53] The impact of each of these factors clearly emerges in tables 4.2, 4.3 and 4.4 which show the performance of food, beverages and tobacco industries in relation to the output, trade, employment, and remuneration values in the period 2000-09.[54]

Table 4.2. Trends in food industry (2000-09)

Year	Output (Rand millions 2005-prices)	Exports of goods and services (Rand millions 2005-prices)	Imports of goods and services (Rand millions 2005-prices)	Exports-Imports (Rand millions 2005-prices)	Total Employment: Formal & Informal (number)	Share of Formal Employment (%)	Share of formal employment that is skilled (%)	Annual remuneration per employee (Rand millions 2005-prices)	Annual remuneration per employee/value added (%)
2000	97 016	11 421	7 795	3 627	207 575	93.2	43.6	57 495	58.5
2001	106 292	10 899	7 604	3 295	204 696	92.6	43.3	58 091	52.9
2002	107 695	10 281	7 637	2 644	200 874	93.0	43.1	54 907	51.6
2003	114 850	10 757	8 935	1 822	182 083	93.3	42.8	64 056	52.2
2004	123 408	9 200	10 933	-1 733	178 632	93.6	42.7	73 792	52.9
2005	130 684	10 605	12 073	-1 468	180 097	94.3	42.5	75 420	50.1
2006	133 661	9 957	13 813	-3 856	177 238	93.7	42.4	84 648	51.1
2007	144 889	9 204	16 142	-6 939	174 252	93.0	42.3	91 309	51.2
2008	146 112	8 443	15 244	-6 801	172 977	93.4	42.3	93 344	52.4
2009	148 112	9 834	14 674	-4 840	171 277	93.3	42.2	97 873	55.0

Note: In the tables 4.2, 4.3, 4.4, as well as in the subsequent tables from Quantec Database, the "share of formal employment that is skilled" represents the sum of the percentages of both highly skilled and skilled employment as defined by Quantec Database.

Source: Quantec Standardised Industry Database.

[53] C. Mather: *SMEs in South Africa's Food Processing Complex: Development Prospects, Constraints and Opportunities*, 2005.

[54] In the analysis of the industries presented in this section, it has been adopted the definition of formal and informal employment as expressed by *Quantec Standardised Industry Database*. In particular, it defines "formal employment" as the number of paid employees, including casual and seasonal workers consisting of three main categories: highly skilled; skilled; semi- and unskilled labour. Conversely, "informal employment" is indicated as the number of informal employees.

Table 4.3. Trends in beverages industry (2000-09)

Year	Output (Rand millions 2005-prices)	Exports of goods and services (Rand millions 2005-prices)	Imports of goods and services (Rand millions 2005-prices)	Exports-Imports (Rand millions 2005-prices)	Total Employment: Formal & Informal (number)	Share of Formal Employment (%)	Share of formal employment that is skilled (%)	Annual remuneration per employee (Rand millions 2005-prices)	Annual remuneration per employee/value added (%)
2000	32 713	4 145	1 319	2 826	48 057	86.2	42.3	126 498	38.2
2001	31 117	4 226	1 339	2 886	47 691	81.7	42.2	125 884	37.4
2002	33 525	4 955	1 479	3 476	46 548	78.4	42.2	126 764	38.5
2003	33 454	5 497	1 521	3 976	45 569	75.0	42.2	112 989	38.2
2004	35 102	4 990	1 606	3 384	48 336	70.5	42.1	98 200	38.3
2005	37 456	5 276	1 827	3 448	53 631	67.7	42.1	87 797	38.2
2006	37 076	4 683	2 203	2 480	57 245	65.9	42.1	86 108	38.4
2007	37 467	5 391	3 147	2 243	61 761	62.9	42.1	86 177	39.1
2008	42 389	5 825	3 441	2 385	60 363	64.4	42.1	101 281	42.6
2009	42 714	6 372	3 808	2 563	60 802	60.4	42.1	103 938	46.1

Source: ibid.

Table 4.4. Trends in tobacco industry (2000-09)

Year	Output (Rand millions 2005-prices)	Exports of goods and services (Rand millions 2005-prices)	Imports of goods and services (Rand millions 2005-prices)	Exports-Imports (Rand millions 2005-prices)	Total Employment: Formal & Informal (number)	Share of Formal Employment (%)	Share of formal employment that is skilled (%)	Annual remuneration per employee (Rand millions 2005-prices)	Annual remuneration per employee/value added (%)
2000	10 807	796	60	736	3 055	100	38.4	211 406	12.2
2001	10 279	756	62	694	2 973	100	38.0	205 652	11.9
2002	11 075	566	67	499	2 952	100	37.6	211 583	12.4
2003	10 693	416	67	349	2 856	100	37.3	224 019	13.8
2004	11 220	566	161	405	2 782	100	37.0	221 208	13.8
2005	11 972	897	179	717	2 698	100	36.7	231 058	13.7
2006	11 851	1 033	170	863	2 805	100	36.5	234 639	13.8
2007	11 976	768	240	528	2 896	100	36.4	243 939	14.2
2008	13 549	662	273	389	2 911	100	36.3	289 407	16.1
2009	13 653	976	438	538	2 701	100	36.2	333 760	17.8

Source: ibid.

As it is evident from the tables above, employment rates significantly dropped for food and tobacco sub-sectors from 207,575 employees in 2000 to 171,277 in 2009 and from 3,055 to 2,701 respectively in the same years whereas beverages industry showed fluctuating employment trends characterized by a more steady increase from 2005 to 2009.

In terms of real output is then possible to observe a positive increase for all the three sub-sectors during the considered period. Such an increase was particularly significant for the food industry with a value of 148,112 million South African Rand (ZAR) in 2009 compared to ZAR97,016 million in 2000. Conversely, for beverage and tobacco industries, the output rise was lower and mainly concentrated between 2003 and 2009. Finally, from a trade perspective, the values expressed in the table 4.2 highlight a trade surplus for the food sub-sector between 2000 and 2003, followed by an increasing deficit from 2004 onwards. By contrast, beverages and tobacco industries registered a surplus trade balance during the entire considered period. In overall terms, however, the size of the trade balance for beverages and tobacco appeared significantly smaller than the one of food.

These figures thus point out that the overall performance of agro-processing sector has at times been daunting in the past decades, showing declining trends in different points of time. This largely stems from different factors mainly linked to competitiveness constraints. Most of the sub-sectors continue, in fact, to be subjected to export barriers faced by the adoption of protective trade regimes by developed countries, consequently indicating that the significant potential of the agro-processing sector in contributing to economic development – above all in rural settings – needs to be carefully evaluated in relation to manifold issues linked to the current growth trends and trade competitiveness as well as to specific factor markets such as available skills, infrastructure and technology transfer. The analysis of these challenges is furthermore particularly relevant in the broader context of restructuring of South Africa's agri-food system.

Policy Issues

As in other emerging market economies in Latin America, Asia and Eastern Europe, South Africa has experienced a deep change in its agri-food structure, moving from a fragmented and varied system of small and medium-sized shops to a highly concentrated system in both food processing and food retailing sectors. This transformation process – also known as agro-industrialization – has in particular led to the domination of large supermarket chains that control the most part of the food sales and directly affect all aspects of production and distribution, determining an increased exclusion of small-scale farmers and SMEs from the mainstream of retail chains. Most small food processors are, in fact, unable to satisfy specific criteria requested by the buyer-driven food chains such as high volume, high quality standards and intense competition, consequently being induced to sell their products through informal market channels.[55] Particularly, the difficulties faced by small enterprises concern factors mainly related to retailer supply demands - including too costly standards to meet in terms of auditing process, volume requirements, storage facilities investments and longer payment terms.

The array of these factors clearly suggest that there are still significant growth challenges for small-scale farmers and SMEs in a way that they can be fully integrated within large agribusiness supply chains. That remains, nevertheless, an extremely important aspect as strong linkages between agro-industry and smallholders can play a key role in reducing rural poverty.[56] In this context, some positive examples and opportunities to link commercial sector and small-scale farmers have been identified in the role of private, independent entities such as franchise stores.[57] The flexibility to select food suppliers, in fact, allows these outlets to source commodities characterized by both higher quality and price competitiveness,[58] enhancing the integration between SMEs and large agribusiness chains and facilitating the opportunity to upgrade and become listed suppliers for retail chains. In this perspective, the South African Department of Trade and Industry (DTI) has recently emphasized the necessity to develop a small-scale maize milling industry that is "embedded in a franchising business model" in order to increase the industry competitiveness in local market and in rural areas particularly.[59]

[55] A. Louw, H. Vermeulen, H. Madevu: *Integrating Small-Scale Fresh Produce Producers into the Mainstream Agri-Food Systems in South Africa: The Case of a Retailer in Venda and Local Farmers*, 2006.

[56] UNIDO, IFAD, FAO: *The Importance of Agro-Industry for Socio-Economic Development and Poverty Reduction*, 2008.

[57] C. Mather, op. cit., 2005; A. Louw, H. Vermeulen, H. Madevu, 2006.

[58] C. Mather, op.cit., 2005.

[59] DTI, op. cit., 2010.

Each of these aspects thus demonstrates that the agro-industry plays a fundamental role within the South Africa economy, highlighting the government efforts in promoting the sector as a whole and in fostering and granting market access for small-scale producers. In order to develop an enabling agribusiness environment, it is however desirable that technical and financial assistance is promoted to support the enterprises in their start-up process as listed suppliers to large retailers as well as it results important to promote public-private partnership and partnership with chain partners in order to strengthen capacity building of farmer producers, their organizations and alliances. Finally, providing high-quality analysis to foster agro-industry policy formulation and investment appears a fundamental factor in a context that need to be characterized by good public governance and stable macroeconomic climate.

4.2.2. Other Manufacturing

Alongside the agro-processing sector, other potentially productive and labour-intensive manufacturing industries play a key role in promoting and accelerating rural development. As already outlined in the introductory section, they mainly refer to metals, capital and transport equipment; textile and clothing; wood, paper and pulp.

4.2.2.1 Metals, Metal Products, Machinery and Equipment

Industry Snapshot

Metals and capital equipment industries constitute significant drivers of manufacturing growth and competitiveness in the South African context. They have in fact registered positive growth trends in the last decades, playing a fundamental economic role as providers of intermediate inputs across the entire economy and as sizeable contributors to employment levels. In particular, the metals sector – including basic metals, metal fabrication, machinery and equipment – represents a well-developed industry in South Africa, accounting for about one third of all manufacturing activity.[60] This is largely reflected in the performance of the four sub-sectors which compose the metal industry as a whole, namely basic iron and steel; basic non-ferrous metals; metal products excluding machinery; machinery and equipment.

As shown in the tables 4.5, 4.6, 4.7 and 4.8, it is possible to identify increasing output values for all four industries over the period 2000-08 along with different employment trends for each specific sub-sector. Whereas basic non-ferrous metals and basic iron and steel industries presented, in fact, overall constant values in 2000-09 period, metal products excluding machinery showed increasing employment trends between 2000 and 2007, with a slight decrease in the subsequent two years. The only sub-sector to have registered a significant employment increase during the considered period is represented by the machinery and equipment industry, whose labour force increased from 91,522 employees in 2000 to 113,596 workers in 2009. Finally, in terms of trade, the tables 4.5 and 4.6 highlight a substantial surplus for both basic iron and steel and basic non-ferrous metals. In the first case, the trade surplus quickly increased from 2002 to 2008, slightly decreasing in 2009. In the second case, more fluctuating trends were registered, with a particularly high value in 2004. Different patterns have then emerged for the metal products sub-sector, whose initial trade surplus in the years 2000-02 moved to a remarkable deficit position from 2003 to 2009. A substantial trade deficit has also characterized the machinery and equipment industry over all 2000-09 period.

[60] P. Lundall, J. Maree and S. Godfrey: *Industrial Structure and Skills in the Metals Benificiation Sector of South Africa*, 2008.

Table 4.5. Trends in basic iron and steel industry (2000-09)

Year	Output (Rand millions 2005-prices)	Exports of goods and services (Rand millions 2005-prices)	Imports of goods and services (Rand millions 2005-prices)	Exports-Imports (Rand millions 2005-prices)	Total Employment: Formal & Informal (number)	Share of Formal Employment (%)	Share of formal employment that is skilled (%)	Annual remuneration per employee (Rand millions 2005-prices)	Annual remuneration per employee/value added (%)
2000	54 007	34 128	3 482	30 646	47 364	100	46.0	93 452	51.5
2001	54 414	29 445	3 771	25 674	50 210	100	45.2	93 951	51.6
2002	73 188	35 638	4 102	31 536	52 149	100	44.4	90 136	46.1
2003	74 927	41 022	4 491	36 531	54 537	100	43.8	120 622	44.2
2004	78 581	44 943	4 932	40 011	55 629	100	43.2	108 910	39.6
2005	77 976	47 134	5 959	41 176	54 752	100	42.7	111 412	38.8
2006	80 840	48 967	7 806	41 161	53 027	100	42.3	141 012	45.2
2007	86 846	53 087	9 741	43 347	51 717	100	42.1	140 261	43.7
2008	93 348	54 274	9 793	44 481	53 449	100	41.8	190 978	47.2
2009	70 918	40 105	6 823	33 282	54 668	100	41.6	188 131	55.7

Source: Quantec Standardised Industry Database.

Table 4.6. Trends in basic non-ferrous metals industry (2000-09)

Year	Output (Rand millions 2005-prices)	Exports of goods and services (Rand millions 2005-prices)	Imports of goods and services (Rand millions 2005-prices)	Exports-Imports (Rand millions 2005-prices)	Total Employment: Formal & Informal (number)	Share of Formal Employment (%)	Share of formal employment that is skilled (%)	Annual remuneration per employee (Rand millions 2005-prices)	Annual remuneration per employee/value added (%)
2000	28 499	14 454	8 224	6 231	20 158	96.4	43.7	96 577	20.1
2001	26 054	11 945	3 838	8 107	19 888	96.2	43.2	99 491	22.4
2002	30 605	12 524	4 594	7 931	21 846	96.8	42.7	101 994	21.6
2003	28 877	11 900	5 399	6 501	21 886	97.1	42.2	84 962	18.2
2004	28 219	17 939	6 917	11 022	21 335	97.2	41.8	85 340	18.2
2005	27 843	16 486	6 798	9 687	21 300	97.3	41.5	84 083	18.2
2006	27 736	15 291	9 384	5 907	24 035	97.3	41.2	87 411	18.8
2007	30 739	15 162	7 605	7 556	26 397	96.9	41.0	93 222	20.9
2008	30 768	11 231	7 177	4 054	24 702	97.2	40.9	91 115	19.0
2009	28 555	9 494	4 391	5 103	22 276	96.2	40.7	116 922	23.4

Source: ibid.

Table 4.7. Trends in metal products industry (Excluding Machinery) (2000-09)

Year	Output (Rand millions 2005-prices)	Exports of goods and services (Rand millions 2005-prices)	Imports of goods and services (Rand millions 2005-prices)	Exports-Imports (Rand millions 2005-prices)	Total Employment: Formal & Informal (number)	Share of Formal Employment (%)	Share of formal employment that is skilled (%)	Annual remuneration per employee (Rand millions 2005-prices)	Annual remuneration per employee/value added (%)
2000	43 137	6 861	4 780	2 080	133 744	79.1	58.7	64 441	69.0
2001	47 228	5 293	4 952	341	137 405	77.7	59.8	65 185	66.9
2002	49 418	5 267	5 216	51	141 251	78.9	60.8	80 152	73.2
2003	44 681	4 976	5 036	-60	144 699	80.9	61.7	60 103	67.6
2004	47 031	5 218	5 889	-671	147 608	81.7	62.5	63 416	67.8
2005	48 367	5 930	6 874	-943	147 372	82.8	63.1	67 082	67.7
2006	51 706	6 110	8 380	-2 269	154 379	81.6	63.6	75 285	72.3
2007	51 260	7 106	10 083	-2 977	156 639	80.1	64.0	90 989	82.9
2008	58 495	7 121	11 476	-4 355	147 964	81.1	64.3	81 595	71.1
2009	47 520	5 376	9 057	-3 681	143 309	77.4	64.6	71 825	73.5

Source: ibid.

Table 4.8. Trends in machinery and equipment industry (2000-09)

Year	Output (Rand millions 2005-prices)	Exports of goods and services (Rand millions 2005-prices)	Imports of goods and services (Rand millions 2005-prices)	Exports-Imports (Rand millions 2005-prices)	Total Employment: Formal & Informal (number)	Share of Formal Employment (%)	Share of formal employment that is skilled (%)	Annual remuneration per employee (Rand millions 2005-prices)	Annual remuneration per employee/value added (%)
2000	36 102	16 964	40 801	-23 837	91 522	96.5	54.4	80 989	82.5
2001	38 862	20 724	42 695	-21 972	93 085	96.3	54.9	75 498	76.0
2002	43 582	17 888	44 809	-26 921	95 205	96.5	55.3	79 347	69.1
2003	40 011	17 453	48 171	-30 717	96 809	96.9	55.7	69 034	68.8
2004	42 365	16 953	53 344	-36 390	100 357	97.1	56.0	73 860	69.7
2005	44 692	22 032	62 978	-40 945	104 050	97.4	56.3	81 327	69.0
2006	46 923	29 802	79 738	-49 936	110 592	97.2	56.6	89 197	69.6
2007	48 172	36 501	90 328	-53 827	118 130	96.9	56.7	106 228	79.4
2008	55 316	31 060	96 860	-65 800	118 666	97.1	56.9	102 020	73.0
2009	45 300	19 862	68 355	-48 493	113 596	97.0	57.0	90 061	75.3

Source: ibid.

Policy Issues

As it is evident from the previous analysis, the metals sector as a whole reported an overall positive growth since 2000s onwards. It was expressed in good levels of output and employment and in an improved trade surplus performance, mainly resulting from increasing exports for the basic metals industries. This, added to the capacity of the sector to deploy manifold linkages with other downstream economic activities by influencing the manufacturing competitiveness, has induced the government to identify the metal industry as one of the priority sectors for future growth and development.

Such potential needs, however, to be evaluated in the context of a productive structure characterized by substantially uneven development levels between up- and downstream industries. It in fact emerges that the more labour-intensive downstream activities have over time recorded a poor growth and trade performances compared to the large-scale and

capital-intensive upstream industries, determining an increased production and exports of unbeneficiated or low-value goods and a parallel raise of imported higher-value items.[61]

This general underdevelopment of downstream activities – largely resulting from low investments, weak import-parity pricing and production capabilities – represents an important challenge for the government. In order to allow the metal industry to play an effective role in the South African context, it is in fact necessary to promote appropriate development strategies able to stimulate the growth of the sector and the consequent employment creation. This is also particularly remarkable in terms of social and economic impact on rural settings, where a great part of metal production still remains confined to the local markets at large. In such a perspective, specific interventions aimed at encouraging capital investment and technology improvements, skill development and training as well as the growth of domestic demand, appear fundamental to upgrade the more labour-intensive, downstream industries. They could in fact foster not only a greater competitiveness and higher output levels, but also lead to a sustainable jobs creation in rural areas.

4.2.2.2 Transport Equipment

Industry Snapshot

A similar and to some extent major economic and social role is played by the transport equipment industry which constitutes nowadays the main driver of South African manufacturing. This is witnessed by the overall good trends which have characterized the industry in the last decades, especially in relation to the motor vehicles, parts and accessories sub-sector. As shown in the tables 4.9 and 4.10, it is in fact evident that the real output of the sector presented good trends of growth during the considered period by recording a particularly high value – namely equal to ZAR151,706 million – in 2007. Such a significant growth was also expressed in terms of real remuneration and total employment, whose labour force maintained an average growth of 130,812 employees between 2000 and 2009. By contrast, from a trade perspective, the growing exports of goods and services from 2000 onwards have not led the sub-sector and the transport equipment industry as a whole to a trade surplus balance. Both motor vehicles, parts and accessories and other transport equipment industries were in fact characterized by a strong deficit in the 2000-09 period, highlighting the ongoing high import trends. In this context, the table 4.10 also shows fluctuating employment values for the other transport equipment industry, which at the same time registered increasing real output and remuneration rates. As it is evident, however, the size and the economic contribution of other transport equipment sub-sector are significantly smaller than those estimated for the motor vehicle and component industry, suggesting the latter as the leading automotive sub-sector.

[61] Quantec Standardised Industry Databse; DTI: *Metals Sector Development Strategy*, 2005; P. Lundall, J. Maree and S. Godfrey, op. cit., 2008. Upstream industries include basic iron and steel and basic non-ferrous metals. Vice versa downstream industries comprise the metal products.

Table 4.9. Trends in motor vehicles, parts and accessories industry (2000-09)

Year	Output (Rand millions 2005-prices)	Exports of goods and services (Rand millions 2005-prices)	Imports of goods and services (Rand millions 2005-prices)	Exports-Imports (Rand millions 2005-prices)	Total Employment: Formal & Informal (number)	Share of Formal Employment (%)	Share of formal employment that is skilled (%)	Annual remuneration per employee (Rand millions 2005-prices)	Annual remuneration per employee/value added (%)
2000	104 500	24 671	38 513	-13 842	128 009	100	55.4	75 078	58.4
2001	126 014	26 243	39 971	-13 728	133 088	100	56.0	70 574	50.9
2002	118 896	27 902	43 680	-15 778	133 770	100	56.5	78 717	57.1
2003	120 308	30 380	47 733	-17 353	133 726	100	57.0	67 706	54.0
2004	128 926	31 339	55 623	-24 284	132 817	100	57.5	72 117	54.2
2005	139 063	37 690	72 663	-34 973	134 100	100	57.9	84 019	54.6
2006	145 516	41 710	81 359	-39 649	134 731	100	58.2	97 478	55.2
2007	151 706	42 718	86 910	-44 192	132 059	100	58.4	132 336	62.4
2008	140 936	49 415	77 511	-28 097	130 280	100	58.6	153 312	65.1
2009	100 446	30 603	54 329	-23 726	115 631	100	58.8	150 013	67.7

Source: ibid.

Table 4.10. Trends in other transport equipment industry (2000-09)

Year	Output (Rand millions 2005-prices)	Exports of goods and services (Rand millions 2005-prices)	Imports of goods and services (Rand millions 2005-prices)	Exports-Imports (Rand millions 2005-prices)	Total Employment: Formal & Informal (number)	Share of Formal Employment (%)	Share of formal employment that is skilled (%)	Annual remuneration per employee (Rand millions 2005-prices)	Annual remuneration per employee/value added (%)
2000	3 761	2 647	8 362	-5 715	11 310	100	58.6	80 914	73.6
2001	5 274	2 019	9 961	-7 942	13 162	100	59.3	94 287	77.7
2002	9 780	2 226	9 622	-7 397	14 568	100	59.9	140 997	76.2
2003	10 630	1 696	14 858	-13 162	12 757	100	60.5	169 611	76.5
2004	10 467	1 592	19 720	-18 128	12 853	100	61.1	169 728	76.7
2005	11 631	2 281	15 881	-13 600	12 942	100	61.5	186 523	76.5
2006	10 762	2 622	16 702	-14 080	12 986	100	61.8	215 127	78.5
2007	11 366	2 591	18 053	-15 463	12 999	100	62.1	245 216	82.4
2008	12 578	2 674	21 282	-18 609	13 377	100	62.3	257 049	87.3
2009	13 464	1 786	12 889	-11 103	13 359	100	62.5	275 671	89.1

Source: ibid.

Policy Issues

The growing importance of the automotive industry within the South African economy thus clearly emerges from the overall positive performance which has characterized the sector in the last decades. This can be to some extent indicative of a significant economic future potential triggered by the transport equipment sector, above all in the light of opportunities identified by the government in the more labour-intensive assembly practices of the medium and heavy commercial vehicle sector.[62] Its local component manufacturing might be in fact able to support the growing demand in other economic areas such as construction, infrastructure and agriculture.[63]

[62] DTI, op. cit., 2004; IPAP, op. cit., 2010.

[63] ibid.

That is particularly relevant in relation to the rural settings as the promotion of more labour-intensive industrial segments could encourage the job creation in rural townships surrounding cities. Such employment potential is extremely desirable insofar the transport equipment sector recorded an employment annual growth rate substantially sluggish. Although the industry has maintained good employment levels, it is in fact estimated that the job annual growth rate was on average equal to - 0.54 per cent between 2000 and 2009.[64] Furthermore, the recent economic financial crisis seems to have impacted very negatively on the sector performance as the 2009 year reports declining values for different variables. The transport equipment industry as a whole in fact registered an output decrease from ZAR153,514 million in 2008 to ZAR113,910 million in 2009 and a parallel decline in the labour force from 143,658 employees in 2008 to 128,990 employees in 2009.[65]

These latest figures on output and employment – along with the ongoing and growing trade deficit – highlight a sector currently in crisis and respect to which the government probably needs to realize an improved evaluation by adopting adequate intervention strategies. It appears in fact hardly realistic the estimate carried out by the DTI (2010) of generating approximately 160,000 new direct job opportunities within the sector in the next decade.[66] The increasing drop in new vehicles sales caused by the global recession and the historical low employment annual growth rate suggest that to revive the sector in terms of job creation cannot be considered an easy and predictable objective, though necessary. In this perspective, it is likely that the extension of the Motor Industry Development Programme (MIDP)[67] until the year 2012 and the following implementation of the new Automotive Production and Development Programme (APDP) can constitute important incentives to further stimulate the growth of the sector and the investment levels. Nevertheless, in order to fully develop the economic potential of the transport equipment industry, it is important that the recent economic transformations be carefully assessed and appropriate intervention measures be adopted. Significant challenges remain in fact to be tackled within the sector, mostly in terms of skills gap, poorly efficient economies of scale and weak competitiveness of component base manufacturing.

4.2.2.3 Textiles, Clothing and Leather Industry

Industry Snapshot

If metals and transport equipment industries represent potential sectors in contributing to the generation of new job opportunities in rural areas of South Africa, textiles, clothing and leather sub-sector can be considered as one of the main industries able to promote a productive and integrated rural growth path within the country.

It firstly emerges in relation to the highly labour-intensive nature of the sector and from the importance that it holds as a fundamental source of employment for the most disadvantaged and low-skilled individuals, mostly women and black. The latter are in fact estimated to account for some 82 per cent and 94 per cent of workers respectively in the

[64] Quantec Standardised Industry Database, *Industry Trends: Transport Equipment.*

[65] ibid.

[66] IPAP, op. cit., 2010.

[67] The MIDP aims to increase the international competitiveness and growth of the automotive sector through different interventions such as the raise of local production volume and scale, the expansion of exports, the upgrading and modernization of the industry (DTI, *South Africa Current Developments in the Automotive Industry,* 2004).

clothing industry alone, recording much higher values than those for the entire manufacturing activity.[68]

The role often vital played by the sector in economic and social terms – especially in rural townships and former homelands – appears however weakened by a recent and deep crisis which has hit different areas of the economic activity. Over the last years, in fact, stagnant production trends have been accompanied by declining employment and investment levels and a corresponding increase in retail sales and trade deficit as a result of the appreciation of the local currency and a significant surge in global and illegal imports.

As shown in the tables 4.11, 4.12, 4.13 and 4.14, it can be observed that each sub-sector presented significant low export trends in the recent decade. In particular, textiles and footwear industries reported a long period of trade deficit which has considerably and quickly increased from the early 2000s onwards. Likewise, clothing and leather sub-sectors moved to a deficit position since 2004 and 2007 respectively. These trends in exports have been clearly accompanied by a substantial increase in cheaper – and in some cases illegal and under-invoiced – imports, especially from China. They, in fact, are estimated to be increased by 335 per cent and 143 per cent respectively over the period 2002-04, indicating the Asian country as the first and most important imports source of the South African clothing, textiles and leather industry.[69] Such a great surge in cheaper imported products has also affected the domestic production and employment levels, giving rise to a parallel growth of retail sales and local markets. In particular, the performance in real output reported values generally stagnant between 2000 and 2009, highlighting fluctuating output trends for clothing and textiles industries and a slight increase in output - especially between 2000 and 2008 - for footwear and leather sub-sectors. As it is easy to grasp, however, from an economic and social point of view, the greatest impact caused by the increasing imports has been registered on the employment levels. These are in fact declined significantly for each sub-sector, recording negative annual growth rates for the industry as a whole in different time series.[70] More specifically, it can be observed that leather and footwear sub-sectors almost halved their employment values over the period 2000-09. Similarly, the textiles and labour-intensive clothing industries endured a substantial drop from 79,980 to 59,207 workers and from 145,490 to 89,916 workers in 2000 and 2009 respectively.

[68] E. Vlok: "The Textile and Clothing Industry in South Africa", in H. Jauch and R. Traub-Merz, (eds.): *The Future of the Textile and Clothing Industry in Sub-Saharan Africa*, 2006.

[69] ibid. Other two significant sources of imports were represented by India and Hong Kong.

[70] According to the Quantec Database, between 1990 and 2009 the entire textiles, clothing and leather industry registered an average annual employment growth rate equal to -2.19 per cent, followed by a value of -4.65 per cent between 2000 and 2009 (ibid.*)*.

Table 4.11. Trends in textiles industry (2000-09)

Year	Output (Rand millions 2005-prices)	Exports of goods and services (Rand millions 2005-prices)	Imports of goods and services (Rand millions 2005-prices)	Exports-Imports (Rand millions 2005-prices)	Total Employment: Formal & Informal (number)	Share of Formal Employment (%)	Share of formal employment that is skilled (%)	Annual remuneration per employee (Rand millions 2005-prices)	Annual remuneration per employee/value added (%)
2000	15 677	3 139	4 121	-982	76 980	82.5	46.1	32 801	81.0
2001	15 617	3 005	3 939	-934	80 078	78.8	46.1	29 469	75.2
2002	18 528	2 869	4 413	-1 544	83 126	77.7	46.1	25 451	62.2
2003	18 270	2 625	4 290	-1 665	81 639	77.3	46.1	22 460	62.5
2004	18 037	2 275	4 897	-2 622	76 002	75.0	46.2	29 764	62.7
2005	16 979	2 211	5 325	-3 113	68 204	72.9	46.2	34 558	62.6
2006	16 798	1 896	6 002	-4 106	66 336	71.9	46.2	39 609	64.0
2007	17 226	1 773	6 238	-4 464	68 620	69.6	46.3	47 711	70.9
2008	19 318	1 393	6 191	-4 798	64 070	71.0	46.3	68 434	81.2
2009	15 339	1 232	5 857	-4 625	59 207	67.3	46.4	65 129	82.6

Source: Quantec Standardised Industry Database.

Table 4.12. Trends in wearing apparel industry (2000-09)

Year	Output (Rand millions 2005-prices)	Exports of goods and services (Rand millions 2005-prices)	Imports of goods and services (Rand millions 2005-prices)	Exports-Imports (Rand millions 2005-prices)	Total Employment: Formal & Informal (number)	Share of Formal Employment (%)	Share of formal employment that is skilled (%)	Annual remuneration per employee (Rand millions 2005-prices)	Annual remuneration per employee/value added (%)
2000	16 183	3 894	2 441	1 453	145 490	71.4	50.1	30 167	86.5
2001	15 374	3 998	2 350	1 649	148 975	66.8	50.0	26 406	81.6
2002	16 412	3 538	2 599	939	149 547	66.1	49.9	25 478	76.5
2003	16 297	3 390	3 175	215	145 665	66.8	49.9	28 171	78.5
2004	15 634	2 165	4 576	-2 412	140 340	65.5	49.8	28 326	78.7
2005	14 517	1 396	6 169	-4 774	127 074	63.5	49.8	28 125	77.0
2006	14 489	1 005	8 447	-7 442	122 035	61.8	49.8	31 488	79.8
2007	14 461	679	7 460	-6 781	118 946	59.4	49.8	35 733	83.1
2008	16 970	558	7 513	-6 955	102 725	61.2	49.8	47 816	89.5
2009	14 924	436	8 454	-8 019	89 916	61.1	49.8	50 312	90.5

Source: ibid.

Table 4.13. Trends in leather and leather products industry (2000-09)

Year	Output (Rand millions 2005-prices)	Exports of goods and services (Rand millions 2005-prices)	Imports of goods and services (Rand millions 2005-prices)	Exports-Imports (Rand millions 2005-prices)	Total Employment: Formal & Informal (number)	Share of Formal Employment (%)	Share of formal employment that is skilled (%)	Annual remuneration per employee (Rand millions 2005-prices)	Annual remuneration per employee/value added (%)
2000	3 248	1 617	1 133	484	14 486	83.1	50.2	2 830	62.7
2001	3 100	1 204	957	246	12 198	81.9	50.1	3 779	69.9
2002	4 050	1 974	877	1 097	9 653	83.6	50.0	4 652	43.7
2003	4 330	1 914	918	997	8 938	88.8	49.9	14 131	44.2
2004	4 700	1 548	1 211	337	8 685	93.7	49.9	41 084	44.4
2005	4 413	1 838	1 256	582	8 131	93.6	49.9	39 725	38.9
2006	4 396	1 874	1 570	304	8 346	93.2	50.0	49 859	43.7
2007	4 218	1 708	1 805	-97	8 089	92.7	50.0	68 460	48.0
2008	5 306	1 052	1 686	-634	7 854	93.0	50.0	148 422	72.3
2009	4 379	1 092	1 431	-339	7 911	92.8	50.0	114 698	74.6

Source: ibid.

Table 4.14. Trends in footwear industry (2000-09)

Year	Output (Rand millions 2005-prices)	Exports of goods and services (Rand millions 2005-prices)	Imports of goods and services (Rand millions 2005-prices)	Exports-Imports (Rand millions 2005-prices)	Total Employment: Formal & Informal (number)	Share of Formal Employment (%)	Share of formal employment that is skilled (%)	Annual remuneration per employee (Rand millions 2005-prices)	Annual remuneration per employee/value added (%)
2000	4 812	340	1 917	-1 577	20 653	89.4	55.7	29 420	49.8
2001	4 101	256	2 045	-1 788	17 965	87.8	55.3	30 987	53.1
2002	4 219	227	2 011	-1 784	17 013	88.2	54.9	31 011	50.3
2003	4 840	227	2 181	-1 954	14 810	87.7	54.6	41 196	50.6
2004	5 178	138	2 785	-2 647	12 663	85.6	54.3	48 393	50.6
2005	5 349	120	3 479	-3 359	12 469	84.8	54.1	52 609	50.7
2006	5 391	106	4 287	-4 181	12 629	84.1	53.9	54 034	50.4
2007	5 368	87	4 806	-4 720	12 328	82.6	53.8	54 810	48.7
2008	6 306	71	4 427	-4 356	11 706	83.7	53.7	75 687	64.1
2009	6 063	86	4 417	-4 330	11 799	83.6	53.6	76 387	68.3

Source: ibid.

Policy Issues

As it is thus evident from the analysis of the different sub-sectors that compose the textiles, clothing and leather industry, the social and economic impact of the deep crisis which has hit the sector over the last decade has been mainly expressed in a significant employment loss. The latter – accentuated by the recent financial crisis – is estimated to have primarily affected the micro, small and medium enterprises in rural areas and former homelands, already particularly disadvantaged in terms of high unemployment rates and low wage levels.[71] Within these settings, where textile and clothing activities often constitute the only source of livelihoods for the poorest and most marginalized communities, the social implications resulting by the crisis appear therefore substantial. They largely stem from a number of constraints - such as low capital investment and technological innovation, low levels of skills development, research and development as well as reduced competitiveness

[71] E. Vlok, op. cit., 2006.

- which have prevented the industry from adapting to a more rapid trade liberalization context.

Such factors clearly represent an important economic and social challenge that needs to be addressed through adequate intervention strategies in order to revive the sector growth, primarily in terms of employment generation. In relation to this, the government of South Africa has pointed out the necessity to focus on niche markets and beneficiation of new fibres to foster an improved competitiveness in both domestic and export markets. In particular, through a number of programmes such as the development of new production incentives, the reduction of illegal imports, the promotion of skill upgrading and the commercialisation of new technologies, it mainly aims to promote the creation of new and more decent job opportunities at an estimated rate of "2,000 per annum from 2010."[72] Such a value can to some extent appear ambitious if it is considered that the textile and clothing industry as a whole lost about 43,588 jobs in 2003, 2004 and the first four months of 2005,[73] continuing to record a net reduction until 2009. It is however certain that shifting the industry to a sustainable long-term growth path constitutes a primary objective for South Africa in the light of the highly labour-intensive nature of the sector and its significant indirect job creation impact on other economic activities.[74]

In such a context, an appropriate programme of interventions including the raise of investment incentives, the enhancement of technology and the increase of firm-level competitiveness is particularly desirable. Furthermore, it appears fundamental that the government foster the beneficiation of local and regional raw materials, strengthening the supply-side performance of the industry and reorienting the consumer towards local production. As a last aspect, a greater coordination among the different stakeholders through joint initiatives and vertical integration might be able to ensure improved employment sustainability and sector development performance.

4.2.2.4 Wood, Pulp and Paper Industries

Industry Snapshot

Similarly to the clothing and textile sector, an important role in the development of rural areas in South Africa is played by wood, pulp and paper industries, whose activities show a considerable potential to generate new jobs and increase the income levels for poor rural communities. The forestry, wood, pulp and paper sector has been in fact identified by the government as one of the key industries with major growth potential in regions characterized by high unemployment rates and few economic opportunities. This primarily emerges in relation to the relatively labour-intensive nature of the sector which is able to employ a large share of low- and unskilled workers while representing one of the main raw material supplier to other economic activities.

Such positive features have been reflected in the overall good performance which has characterized the industry over the last decades. As shown in the tables 4.15 and 4.16, increasing output values were in fact recorded for both wood and paper industries over the considered period. In particular, the paper and paper products industry registered an increase in output from ZAR36,293 million in 2000 to ZAR50,941 million in 2008 whereas wood and wood products industry presented an increase from ZAR17,081 million in 2000 to ZAR24,374 million in 2008, then slightly decreasing to ZAR20,310 million in

[72] IPAP, op. cit., 2010.

[73] SACTWU, op. cit., in *The Shopsteward* Special Edition, June 2005.

[74] It is, for instance, estimated that for each primary job generated in clothing and textile industries respectively, 1 and 2.5 jobs can be created in other sectors (E. Vlok, op. cit., 2006).

the subsequent year. The labour-intensive wood sub-sector[75] has also recorded particularly high and increasing employment values between 2000 and 2008. By contrast, the more capital-intensive paper and paper products industry registered fluctuating – but overall growing – employment trends over the considered period.

Along with these positive values in output and employment, a good performance was also registered in terms of trade, in the light of the self-sufficiency of South Africa in the supply of raw material for the production of pulpwood and paper. In this perspective, it can be observed that the wood and wood products sub-sector presented a significant trade surplus over the last decade with the exception of 2007 and 2009 years, characterized by a slight trade deficit. Similarly, the paper and paper products industry showed a surplus trade balance between 2000 and 2006, subsequently registering a trade deficit in 2007 and 2008 and again moving to a surplus position in 2009.

Table 4.15. Trends in wood and wood products industry (2000-09)

Year	Output (Rand millions 2005-prices)	Exports of goods and services (Rand millions 2005-prices)	Imports of goods and services (Rand millions 2005-prices)	Exports-Imports (Rand millions 2005-prices)	Total Employment: Formal & Informal (number)	Share of Formal Employment (%)	Share of formal employment that is skilled (%)	Annual remuneration per employee (Rand millions 2005-prices)	Annual remuneration per employee/value added (%)
2000	17 081	4 446	1 716	2 730	72 084	82.6	39.5	62 685	71.7
2001	17 707	4 235	1 625	2 610	73 339	77.1	38.4	62 016	72.2
2002	19 668	4 434	1 891	2 544	75 810	74.6	37.4	63 896	71.0
2003	19 720	4 171	1 851	2 320	80 763	74.4	36.5	53 081	68.8
2004	20 637	3 672	1 909	1 763	83 966	72.3	35.7	54 750	71.5
2005	21 152	4 121	2 421	1 701	84 370	70.2	35.1	48 986	64.7
2006	21 977	3 296	2 671	625	86 675	68.4	34.6	44 819	59.2
2007	22 063	2 825	2 949	-124	88 258	66.2	34.2	39 431	50.8
2008	24 374	2 464	2 412	53	84 043	67.7	33.9	49 980	61.8
2009	20 310	1 748	1 916	-169	66 493	74.6	33.6	57 473	64.6

Source: Quantec Standardised Industry Database.

[75] It is estimated that about 18.2 individuals are required to generate ZAR1 million in value added within the wood industry (ibid.).

Table 4.16. Trends in paper and paper products industry (2000-09)

Year	Output (Rand millions 2005-prices)	Exports of goods and services (Rand millions 2005-prices)	Imports of goods and services (Rand millions 2005-prices)	Exports-Imports (Rand millions 2005-prices)	Total Employment: Formal & Informal (number)	Share of Formal Employment (%)	Share of formal employment that is skilled (%)	Annual remuneration per employee (Rand millions 2005-prices)	Annual remuneration per employee/value added (%)
2000	36 293	8 945	3 531	5 414	37 931	100	44.4	95 809	47.6
2001	36 820	7 633	3 159	4 473	36 027	100	44.6	99 263	45.9
2002	38 810	6 748	3 275	3 473	35 730	100	44.7	94 302	43.2
2003	38 968	7 540	3 573	3 968	38 956	100	44.8	78 876	42.3
2004	39 834	6 543	3 808	2 736	40 343	100	44.8	91 147	43.7
2005	43 086	6 572	4 535	2 037	34 906	100	44.8	120 609	43.6
2006	44 657	6 767	5 914	853	36 397	100	44.9	127 604	43.4
2007	44 557	6 422	6 483	-61	34 813	100	44.9	144 342	43.0
2008	50 941	6 245	6 428	-182	38 584	100	44.9	182 983	50.9
2009	43 338	5 801	5 497	304	40 034	100	44.9	148 960	53.5

Source: ibid.

Policy Issues

Each of the economic segments that compose the wood, pulp and paper industry highlights the relevance of the sector in generating employment in the poorest South African rural areas as well as the presence of a highly concentrated industrial structure characterized by some large producers such as Sappi, Mondi, Nampak and Kimberly-Clark in the paper sub-sector and Safcol, Masonite, PG Bison and Yorkor in the wood industry.[76] In spite of their relevant role as world-class market players, the presence of these big companies characterized by a vertically integrated industrial structure directly affects small players and new producers in terms of supply shortage and barriers to entry in downstream processing activities. This occurs in an economic environment dominated by uncertainty in investment finance, skills and technology development gap and a lack of coordination among different stakeholders in relation to forestry protocols and water licences issues. In addition, the existence of a demand of raw material that exceeds the supply has so far led to the closure of numerous industries and the consequent job loss.[77]

These factors are thus largely indicative of the necessity for wood, pulp and paper sector to face manifold challenges in order to achieve an improved growth trend and fully contribute to rural development in South Africa. In this regard, peculiar attention has been placed by the government on programmes aimed at increasing the supply of raw materials for downstream activities, promote skills development and technology upgrading, establish clusters for micro, small and medium enterprises competitiveness as well as foster a waste management strategy through wood and paper recycling operations.[78] It is in fact estimated that potential opportunities lie in the recycling of wood and paper waste both in terms of environmental impact reduction and employment generation. Likewise, new plantation forests with 100,000 and 39,000 hectares opportunities in the areas of Eastern Cape and KwaZulu-Natal respectively, has been identified as potentially able to create about 15,600 jobs at the national level.[79] Considered as the biggest employer within the entire

[76] G:ENESIS, Part I: *The Contribution, Costs and Development Opportunities of the Forestry, Timber, Pulp and Paper Industries in South Africa,* 2005.

[77] IPAP, op. cit., 2010.

[78] ibid.; DTI: *Strategic Framework for the Forestry, Timber, Pulp and Paper Industry,* Draft Document 2007.

[79] ibid.

industry value-chain, plantation forestry sector in fact holds - along with wood and paper downstream activities - a fundamental economic and social role in low-income rural areas.

In order to let this role to be maintained and expanded further interventions can be desirable in a future perspective. In particular, it emerges as necessary a more active role by the state in addressing the current problems of supply shortage faced by small players, at the same time fostering the development of a more organized structure for the small and micro enterprises that operate in an informal environment. Added to this, the promotion of a more sustainable resource base appears fundamental to transform the timber production system and consequently provide adequate timber supplies for primary and secondary processing. All this needs finally to be sustained by an appropriate skill development programme and an enhanced coordination and partnership in order to support the sector competitiveness and its ability to adopt adequate implementation strategies to respond to future challenges.

4.2.3. Tourism

Industry Snapshot

Similarly to the manufacturing industries up to now described, also some service sub-sectors show a significant potential to foster the development of rural areas in South Africa. Among these, a key role in economic and social terms is played by the tourism industry. The latter represents, in fact, one of the most dynamic and fastest-growing sectors worldwide, accounting for an increasingly share of the economic activity in most developing and emerging countries, including South Africa. The importance of the sector within the country as well as globally mainly stems from its diversified and labour-intensive nature able to provide employment opportunities for the most vulnerable individuals along with the presence of low barriers to entry and start-up costs and a considerable potential in supporting other economic activities related to it. Based on these features, tourism industry is widely recognized as an important source of job creation and economic growth.

Such a significance has been also expressed by the South African government in some policy documents following the advent of the new democracy in 1994 among which the 1996 White Paper on the Development and Promotion of Tourism in South Africa, the subsequent 1998 Tourism in Growth, Employment and Redistribution (GEAR) and the most recent IPAP (2010), within which tourism is presented as a priority sector for national economic growth and development. Tourism industry in South Africa shows, in fact, a substantial potential arising from the competitive advantages that the country has in natural and cultural resources, especially in the rural areas.[80]

Such a potential has primarily emerged in the positive evolution that has characterized the sector after 1994. With the birth of new democracy, South African tourism industry has in fact changed its position from a domestic-driven and essentially stagnant sector to an international demand-driven and dynamic sector which has experienced a substantial investment growth and entry of foreign players. This is clearly reflected in the tourism sector's contribution to the South African economy which – as shown in the table 4.17 – has registered significant positive trends. The table, in particular, presents estimates on tourism GDP and employment contribution at Rand billion current prices as calculated by the World Travel & Tourism Council (WTTC), which quantifies the total sector contribution to economic national activity by including both its direct and indirect/induced impacts. As a consumption-based services industry which uses inputs from various sectors

[80] J. Viljoen et al.: *Rural Tourism Development in South Africa: Trends and Challenges*, 2007.

and supplies services to others - tourism presents in fact manifold economic effects that prevent it to be wholly classified under a single code.[81] In this context, the table 4.17 highlights increasing trends in relation to the South African direct tourism contribution to GDP – namely the array of internal spending and government individual spending on travel and tourism services.[82] Such a variable in fact registered an increase from ZAR39.9 billion in 2000 to ZAR132.1 billion in 2010 and it is expected to reach a value of ZAR372.9 billion by 2021. When then indirect and induced economic impacts[83] are taken into consideration, these values increase considerably shifting from ZAR85.0 billion in 2000 to ZAR303.4 billion in 2010 and ZAR831.7 billion in 2021.

Similar positive trends can be also identified in relation to the contribution to employment, whose values clearly reflect the labour-intensive nature of the sector. The estimates reported in the table show, in fact, that from the early 2000s the total tourism contribution to employment ranged between 1,026,500 jobs in 2001 and 1,431,600 jobs in 2009. Furthermore, the slight decrease which has characterized the 2010 and 2011 years seems to be intended to record a significant recovery by increasing of 2.5 per cent[84] over the next ten years and reaching a forecasted value of 1,709,300 jobs in 2021. As clearly emerges from these figures, the total tourism impact on employment generation is indicative of the employment multiplier nature of travel and tourism activity as a whole and of its manifold linkages with numerous supporting industries.

[81] PAIRS: *A Framework/Model to Benchmark Tourism GDP in South Africa. What is the Role of Tourism in the Economy and What Drives Tourism in South Africa?,* 2010. Since tourism is not explicitly caught by the United Nations' System of National Accounts, it has been not possible to use the *Quantec Standardised Industry Database* to present data on tourism industry in this section.

[82] WTTC, op. cit., 2011.

[83] ibid. According to the WTTC (2011) definition, the 'indirect' contribution measures the GDP and jobs supported by i) Travel & Tourism investment spending; ii) Government 'collective' spending; iii) Domestic purchases of goods and services by the sectors dealing directly with tourists. Similarly, the 'induced' contribution estimates the GDP and jobs supported by the spending of individuals directly or indirectly employed by the tourism sector.

[84] idem.

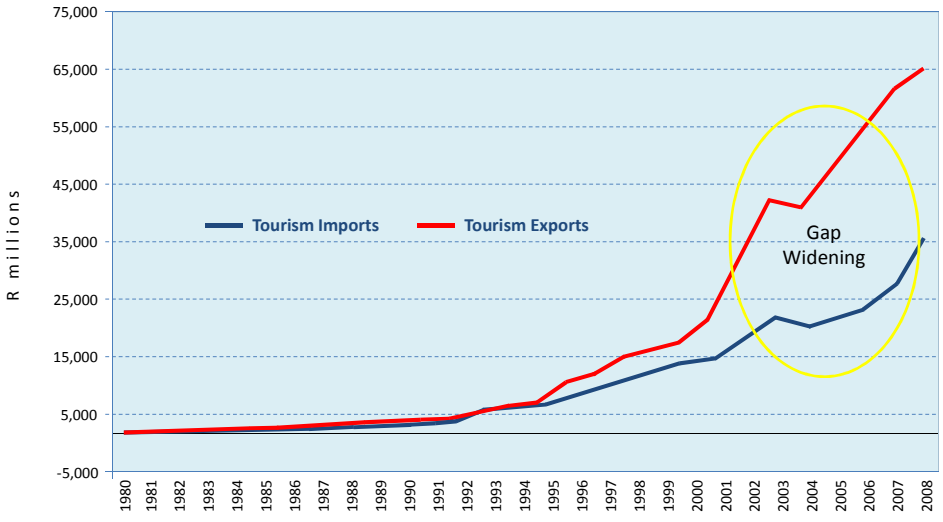
Table 4.17. Trends in tourism contribution to employment and GDP (2000-21)

Year	Travel & Tourism Direct Contribution to GDP (Rand billion at current prices)	Travel & Tourism Indirect and Induced Contribution to GDP (Rand billion at current prices)	Travel & Tourism Total Contribution to GDP (Rand billion at current prices)	Travel & Tourism Direct Contribution to Employment (number – '000)	Travel & Tourism Indirect and Induced Contribution to Employment (number – '000)	Travel & Tourism Total Contribution to Employment (number – '000)
2000	39 883	45 128	85 011	465 500	517 200	982 700
2001	48 134	52 440	100 574	495 800	530 700	1 026 500
2002	60 721	65 798	126 519	539 000	573 700	1 112 800
2003	65 928	72 751	138 679	532 300	576 500	1 108 800
2004	73 136	83 636	156 772	542 100	607 200	1 149 300
2005	81 185	100 404	181 589	574 900	695 300	1 270 200
2006	92 500	124 267	216 767	612 800	801 200	1 414 000
2007	105 676	144 970	250 646	621 700	827 000	1 448 000
2008	117 692	158 399	276 091	642 800	837 000	1 479 800
2009	122 223	168 827	291 050	611 200	820 400	1 431 600
2010	132 058	171 379	303 437	590 200	743 500	1 333 700
2011 E	143 450	184 709	328 159	593 800	740 500	1 334 300
2021 F	372 880	458 862	831 742	790 600	918 700	1 709 300

Source: ibid.

As in the case of contribution to GDP and employment, also in terms of trade balance it is possible to observe a positive performance which has characterized South Africa from the early 1990s and particularly from the beginning of democracy in 1994. This is clearly illustrated in the figure 4.1 that shows growing and improved export trends (annual receipts) since 1990 onwards. They are specifically estimated to account for a value of ZAR65.4 million in 2008 compared to the approximately ZAR35.9 million of imports (payments) in the same year.[85] Such figures thus indicate an increasing foreign tourism spending within the country as well as an encouraging and ongoing South African tourism growth.

Figure 4.1. Tourism imports and exports



Source: Source: South African Reserve Bank (SARB) quoted in PAIRS (2010).

[85] PAIRS, op. cit., 2010.

Policy Issues

The positive and upward economic trends above pointed out, largely suggest the potential of the South African tourism industry in a future perspective, especially in relation to the development of rural areas. The latter, mainly dominated by emerging black-owned small and micro tourism enterprises, represent suitable areas for the tourism promotion and for the spreading of its wide economic and social benefits. Numerous studies undertaken in South Africa have in fact demonstrated that rural tourism development is able to positively impact on the empowerment of local communities, significantly contributing to rural economic growth.[86] In this regard, different initiatives such as community-based projects[87] and sustainable tourism ventures have been implemented since 1994 with the support of national, provincial and local government.[88] They have particularly provided both economic and social benefits by contributing to stimulate additional infrastructure investments and improved skills and income levels as well as the involvement of previously disadvantaged communities.[89]

In spite of these positive spin-offs, however, rural tourism development in South Africa continues to face a number of substantial constraints able to affect the expected impact of tourism on rural settlements and hinder the achievement of government objectives. Among these, a significant lack of implementation capacity at local level along with the dearth of entrepreneurial expertise, adequate business training and access to information and markets as well as a number of difficulties in operationalising community-based rural tourism among which the involvement of local communities, constitute some of the main factors characterizing rural contexts.[90] In such a perspective, the achievement of an improved governance and management of the sector as well as an improved policy coordination and "communication" among the different tiers of government and between public sector and private sector represent significant challenges that South Africa needs to face.

In relation to these aspects, different strategies and economic opportunities have been identified from the South African DTI to stimulate a more comprehensive and balanced growth of tourism industry. Among these, it has been primarily emphasized the development of high growth tourism niches able to boost investments, create new markets and employment opportunities as well as increase South Africa competitiveness and an improved spatial distribution of tourism benefits.[91] Added to this, the strengthening of industry associations is considered particularly important to enhance the tourism market share and positively impact on policy coordination issues and the highly fragmented nature of the sector. Finally, the promotion of a Tourism Export Council aimed at increasing tourism exports and improving the enterprises market access is regarded as capable of fostering additional investments and job creation.[92]

[86] K. Mahony and J. van Zyl: "The Impacts of Tourism Investment on Rural Communities: Three Case Studies in South Africa" in *Development Southern Africa*, Vol. 19, No. 1, pp. 83-103, Mar. 2002; Mohan Gopaul, *The Significance of Rural Areas in South Africa for Tourism Development Through Community Participation With Special Reference to Umgababa*, 2006; J. Viljoen and K. Tlabela, op. cit., 2007.

[87] They aim to involve local people in decision-making process, giving them a substantial power and participation in running tourism services and related activities.

[88] K. Mahony and J. van Zyl, op. cit., 2002.

[89] ibid.

[90] J. Briedenhann and E. Wickens: "Rural Tourism – Meeting the Challenges of the New South Africa" in *The International Journal of Tourism Research*, Vol. 6, No. 3, May/June 2004, pp. 189-203.

[91] IPAP, op. cit., 2010.

[92] ibid.

In overall terms, however, although such initiatives express the high priority focus placed by government and local level institutions on rural tourism growth and development, it is necessary that some primary interventions be pursued and implemented in order to allow tourism sector to fully fulfill its potential in providing new and additional livelihoods and a consequent improved rural welfare. In particular, it is deemed fundamental the promotion of financial assistance, infrastructure development and empowerment programmes which foster wide-scale skills training and basic education to support rural communities and the most marginalized individuals in running tourism operations. In this perspective, a realistic assessment of the commercial viability and the overall impact of tourism projects along with effective planning, management and monitoring systems represent crucial factors to ensure a positive accomplishment of the project and an equitable allocation of the benefits stemming from it.[93] Finally, a close cooperation and collaboration between government, private sector and civil society is extremely desirable in order to allow the policy objectives of tourism development to be fully achieved as integrant part of a wider rural development strategy.

4.2.4. ICT & BPO: The Challenge of Technology

Along with the tourism sector, a further potential service industry able to positively impact on rural development is represented by the ICT. The latter, meant as the array of "all technologies that facilitate the processing and transfer of information and communication services",[94] has showed increasing and fast growth rates worldwide over the last decades, accounting for a total turnover equal to more than US$2 trillion in OECD member countries only.[95]

Such a relevance at the global level is also reflected within South Africa, whose small ICT market share in 2001 – US$10 billion – seems to present encouraging growth trends in both domestic and export markets.[96] The access to different ICT services such as computers and Internet has in fact registered a significant increase throughout the country, rising from 2,400,000 users in 2000 to 5,300,000 in 2009.[97] This progress has however involved mainly the urban centers compared to the most remote and marginalized rural settings. It has been in fact estimated that only 2.3 per cent of rural households within the country have access to a computer and only 5.4 per cent own a landline,[98] consequently indicating that the rural areas of South Africa continue to not be able to fully benefit from the positive impacts of ICT industry.

In this regard, a wide literature and several case-studies in both developing and developed countries however highlight the crucial role that ICT sector can play in empowering rural communities and contributing to rural development as a whole. More specifically, it is

[93] K. Mahony and J. van Zyl, op. cit., 2002.

[94] UNECE: *Towards a Knowledge-Based Economy. Regional Assessment Report*, 2002. ICTs generally refer to computers and Internet, but they are considered to include also more traditional and common technologies such as radio, television, telephones, public address systems and newspapers.

[95] ibid.

[96] SAITIS: *South African ICT Sector Development Framework. Summary*, 2000. Currently, there is a little reliable available information related to the state of ICT industry in South Africa. Furthermore, the difficulty to get specific-related data in terms of Standard Industrial Classification (SIC) hinders the presentation of detailed ICT estimates through the *Quantec Standardised Industry Database*.

[97] Internet World Stats: http://www.internetworldstats.com/af/za.htm.

[98] COFISA, op. cit., 2008; A.K. Wafula-Kwake and D.N. Ocholla, 2007; S. Moshapo and H.E. Hanrahan, 2004.

argued that ICTs can raise market efficiency by addressing information gaps as well as by improving transparency and administrative effectiveness of rural institutions and rural service delivery.[99] Furthermore, providing timely market information and lower transaction costs, the industry is acknowledged able to support and improve the decision-making capacity of rural farmers by enabling them to overcome time and space constraints. The access to more rapid and less expensive communication can in fact largely lessen disadvantages related to the isolation of remote areas, allowing local communities to perform activities more quickly and efficiently and providing them with new and greater job opportunities.[100]

In this perspective, some interesting experiences in different developing countries and particularly in India constitute a relevant model of comparison for South Africa, offering substantial empirical evidences in terms of ICT potential for poverty alleviation and empowerment of the most disadvantaged groups - first of all rural women. Such experiences particularly concern the promotion of pro-poor initiatives through the use of ICT-enabled services such as business processes outsourcing and offshoring (BPO&O), namely the fragmentation of different services into separate processes undertaken by another company or in another country respectively. In India - where the revenue earnings of ICT-enabled services have been estimated to be increased from less than US$1 billion in 1990 to some US$60 billion in 2009[101] - ICT initiatives have had a positive impact in both urban centers and the most remote and marginalized rural areas. An increasing number of rural BPO operations have been in fact established within the country, providing a significant and outstanding example of what is currently known as "social outsourcing".

Among the several cases of ICT and BPO services set-up in different rural areas of the country, particularly relevant is the foundation of Source For Change center in Bagar, a small village in the Rajasthan state. As a rural BPO initiative of the Mumbai-based Piramal Foundation, it promotes empowerment of women through the creation of employment opportunities in the BPO industry. The company provides, in fact, high-quality services such as data entry, application processing, document archival and retrieval, web research and local language call services for its main clients, currently employing 15 rural women between 18 and 35 years old with at least a 10th grade education.[102]

In overall terms, it can be considered a perfect integration of social progress and economic development as – through direct and indirect job creation within the villages – has contributed to reduce the migration to cities while improving the social status of women and their social inclusion. On another hand, it has demonstrated that constraints related to the establishment of BPO services in rural areas can be overcame. Basic educational training, strong government leadership and appropriate partnership with NGOs and local government department can in fact play a key role in facing challenges such as shortage of adequate infrastructure and broadband connectivity, difficulties linked to community acceptance and market skepticism as well as issues relating to the training and recruitment

[99] P. Ngcobo and M.E. Herselman: *Evaluating ICT Provision in Selected Communities in South Africa*, 2007.

[100] S. Wolf: *Determinants and Impact of ICT use for African SMEs: Implications for Rural South Africa*, 2001; COFISA, *Using ICTs to Optimise Rural Development. A Guide*, 2008.

[101] ibid. Based on the Indian experiences, it is estimated that every new job in ICT-enabled services is able to generate 3.6 indirect jobs in other related activities (idem.).

[102] *Source for Change* plans to achieve up to 5,000 women in rural India in the next years through the establishment of further small centers with 30-50 employees: http://www.sourceforchange.in/clients.html.

of right labour force.[103] Based on that, it is evident that there may be scope for more BPO operations based in rural areas, not only in India but also in other developing countries.

In this perspective, South Africa could actually move towards a significant focus on BPO growth in rural settings. The country in fact represents an emerging BPO destination with a growing market share and the ICT-enabled industry is estimated to grow rapidly at a rate of 33 per cent per year, currently employing about 30,000 people.[104] The government furthermore estimates that the sector has the potential to create 100,000 new jobs of which 25,000 direct and 75,000 indirect job opportunities, at the same time contributing up to ZAR1 billion to the South African GDP.[105] Also in terms of policy programmes, there seem to be a special attention to the BPO future growth through strategic implementation actions aimed at investing in infrastructure, overcoming high costs of telecommunications within the country and promoting skills development & training.[106] Such a BPO potential in South Africa could thus create the basis for significant investments in rural ICT-enabled services, in the light of the advantages for both companies and clients in terms of reduced operation costs and salaries. As highlighted in an article from India Knowledge,[107] land prices in rural settings constitute in fact a small portion of prices in big cities while rural incomes represent about half of the salaries paid in urban centers.[108]

In the light of these aspects, the establishment of business processing services in rural South Africa could constitute integrant part of a national development strategy for poverty alleviation. To this end, it is necessary that an enabling regulatory and policy environment be promoted within the country, fostering stronger linkages between direct ICT/BPO interventions and national level programs. In this perspective, rolling out of adequate infrastructure and skills training is fundamental along with the provision of affordable and sample technologies which namely can provide real value to end users and be relatively easy to master, upgrade and maintain at low costs. It is furthermore equally important that the elaboration and implementation of ICT programs be specifically aimed at addressing the needs of most poor and disadvantaged, encouraging and supporting the involvement of local communities. All this needs to be finally realized through a holistic approach which be able to incorporate ICT policies in the broader context of poverty alleviation strategies.

4.3. Development of New Green and Energy Efficient Industries

The potential role of non-farm activities in generating new sources of employment in rural areas of South Africa – as analysed up to now – acquires particular relevance if the quality of non-farm employment is taken into consideration and explored in a wide economic, social and environmental perspective. In order for non-agricultural economy to constitute an effective and real engine for rural development, it is in fact necessary that the jobs generated within the sector be environmentally sustainable and at the same time comply with the principles of decent work. In such a context, the aim of this section is to explore

[103] India Knowledge@Wharton: *It Takes a Village: The Rise of Rural BPO*, 11 Feb. 2010: http://knowledge.wharton.upenn.edu/india/article.cfm?articleid=4450.

[104] Everest Research Institute, *Ready to Compete – South Africa's BPO Capabilities in the Financial Services Sector*, 2008.

[105] IPAP, op. cit., 2010.

[106] ibid.

[107] India Knowledge@Wharton, op. cit., 11 Feb. 2010.

[108] It is however noticed that US$75 to US$85 a month for eight-hour work five days a week can represent a huge amount for rural women whereas such a wage is neither project-based nor seasonal (ibid.).

the potential for the promotion of energy efficient non-farm industries, which can namely be qualified as "green jobs". The latter – according to the ILO definition – are considered to encompass an environmental and socio-economic dimension, respectively related to the mitigation and adaptation to climate change and to the fulfillment of decent working standards in terms of social protection, workers' rights and social dialogue.

In analysing these factors, the section will place specific emphasis on the role of renewable energies and their potential in job creation within different industries as well as on energy-efficient refurbishment and retrofitting measures in the building sector and climate change adaptation initiatives in the South African context. These issues are particularly important as South Africa has recently started to evaluate the opportunity to orientate its development path towards a more sustainable, low-carbon economy. Although the country is not subject to specific targets in terms of greenhouse gas reduction, it recognizes the necessity to promote and improve its energy efficiency through the adoption of cleaner fossil fuels. This is firstly assessed in the light of the national energy-intensive, coal-based industrial path which makes South Africa one of the largest contributor to greenhouse gas (GHG) emissions in the world. It is in fact estimated that the country emits about 7 tons of carbon dioxide per capita annually,[109] with coal representing more than 90 per cent of CO_2 emissions since 1960.[110] This energy-intensive economic structure – largely resulting from the historically low prices of national electricity – emerges as increasingly inefficient and unviable in the future, especially within the current context dominated by significant constraints in meeting a growing energy demand.

The array of these factors has thus led South Africa to formulate a number of strategies and policies aimed at promoting improved economic, social and environmental sustainability. In particular, through its nation-wide climate change response strategy along with the energy efficiency programme and the long term mitigation study,[111] the country has set an energy savings target of 12 per cent by 2015, forecasting greenhouse-gas emission reductions in absolute terms by 2050. This is realized in the scope of a cross-cutting perspective which simultaneously focuses on the national objectives of economic growth and sustainable development. The Government in fact recognizes in green energy investments, significant opportunities to face the challenges of job creation and poverty alleviation. This is particularly relevant as South Africa appears highly vulnerable to climate change effects, especially in the most risk-prone and remote settings such as rural areas. The latter therefore deserve particular attention in the implementation of government programs through the promotion of ad hoc initiatives and the identification of appropriate green technologies. Among these, renewable energy sources are likely to play a remarkable and meaningful role in the rural areas of South Africa.

4.3.1. Potential of Renewable Energy Technologies

Renewable energy technologies are nowadays internationally recognized as having a significant potential to contribute to the promotion of sustainable development in both developed and emerging economies, by responding to the crucial challenges of climate change and energy security.

In particular, in South Africa increasing attention towards the deployment of renewable energy sources has been primarily expressed through the publication of the White Paper on Renewable Energy (2003) which fosters the uptake of renewable energy within the

[109] DME: *National Energy Efficiency Strategy of the Republic of South Africa*, June 2009.

[110] DEA: *Clean Technology Fund Investment Plan for South Africa*, Oct. 2009.

[111] DEAT: *A National Climate Change Response Strategy*, 2004; Scenario Building Team, *Long Term Mitigation Scenarios: Technical Summary*, Oct. 2007; DME, op. cit., 2009.

national economy, targeting the provision of 10,000 gigawatt-hours (GWh) of electricity from such resources by 2013.[112] According to some estimates, the achievement of this target would provide the creation of over 35,000 new jobs, adding about ZAR5,342 million to the GDP and ZAR687 million to the incomes of poor-households.[113] This is largely supported by the implementation of the 2009 Renewable Energy Feed-In Tariff (REFIT),[114] aimed at providing price incentives for the development of renewable energy projects. Based on that, it is evident that South Africa is developing a growing awareness about the importance and potential of renewable energy technologies in terms of both environmental and socio-economic benefits. It is in fact widely agreed that renewable sources not only contribute to reducing greenhouse gas emissions enhancing energy security and resource savings, but they can also play a significant role in generating new and decentralized employment, fostering a labour-intensive growth and attracting new forms of international investments. Furthermore, the possibility for these technologies to be distributed near their point of production enables the optimization of the use of infrastructure for energy distribution, at the same time increasing energy efficiency.[115]

This is of particular relevance in relation to the rural areas which especially in the South African economic context still lack an adequate access to electricity, relying heavily on wood fuel for cooking and heating needs. In these remote settings, more decentralized renewable sources have therefore the potential to provide the energy required, simultaneously promoting job opportunities for unskilled and semi-skilled workforce. The extensive use of such technologies within the country is made possible by the plentiful - and currently unexploited - national natural resources. According to some estimates, they constitute a potential for renewable energy production equal to approximately 87,000 GWh,[116] mainly stemming from a high daily solar radiation along with wind and wave power in specific coastal areas and biofuel resources. In order to show their viable applications in the socio-economic context of South Africa, different renewable technologies will be analysed in detail in the following sub-sections, with the primary aim to explore the potential in promoting new and more green employment opportunities across different economic sectors.

4.3.1.1 Solar Power

Thanks to its high and well distributed levels of solar radiation - equal to a daily average between 4.5 and 6.5 kilowatt-hours (kWh) per square metre (m^2)[117]- South Africa can rely on a significant solar resource potential. The latter can be widely exploited and deployed within the country through different applications such as photovoltaic systems (PV), solar water heaters (SWHs) and concentrating solar power (CSP), generating both environmental and socio-economic benefits. These will be analysed and discussed below along with current barriers and policy options able to encourage adequate use of solar

[112] DME: *White Paper on Renewable Energy*, 2003.

[113] DME: *Capacity Building in Energy Efficiency and Renewable Energy. Report No. 2. 3. 4. – 19*, 2004.

[114] NERSA: *South Africa Renewable Energy Feed-In Tariff (REFIT): Regulatory Guidelines 26*, Mar. 2009.

[115] DME, op. cit., 2003.

[116] E. Visagie and G. Prasad: *Renewable Energy Technologies for Poverty Alleviation. South Africa: Biodiesel and Solar Water Heaters*, 2006.

[117] ibid.

energy in its two more potentially viable technology implementation options in rural context, namely solar PV and SWHs.[118]

4.3.1.1.1 Solar PV

The implementation of PV systems – namely the direct conversion of sunlight into electricity by semiconductors – is a growing industry internationally. In South Africa, it is primarily applied in small-scale rural stand-alone installations for domestic use and farm houses as well as for telecommunication power supplies.[119] The most typical applications are deployed in schools and health centers, and in some cases realized through off-grid hybrid systems where PV is combined with other systems such as wind power, fuel cells and diesel generators to supply mainly electricity to end users in remote rural settings.[120]

Currently, the installed PV capacity within the country is some 11.9 MWp (Megawatt power), generating employment primarily in the non-grid electrification industry, for a total of 25 people employed per MWp.[121] Overall, job opportunities in the sector include different occupational categories such as roofing, electrical work, welding, designing, installation and sheet metal work as well as several activities involved in manufacturing. Among these, the deployment of solar home systems (SHS) for lighting and other electrical equipment like radios and televisions likely represents the most widespread and potential area for job creation in rural South Africa, in the light of an estimated market potential of some 15 MWp over ten years.[122] It is in fact widely recognized that SHSs are dominant PV applications in rural areas of developing countries including South Africa, and can provide significant benefits in terms of improved quality lighting and health, enhanced education and access to information as well as time savings able to facilitate the running of other productive activities.[123]

Along with the opportunities generated by SHSs, a study carried out by the FAO (2000)[124] identifies potential rural PV job creation in numerous cottage industries, commercial and communal services such as artisanal and technical workshops, restaurants, telephone services, basic installation and maintenance of PV systems as well as provision of potable water and basic lighting for schools, health centers and communal buildings. Added to this, the research also emphasized the opportunities in micro-enterprises development, agro-processing and agricultural applications such as water pumping for livestock watering and irrigation, PV electric fences, PV-powered drip irrigation systems and new applications such as aeration pumps for aquaculture and pest control.[125] Based on that, the study clearly highlights the importance and potential of PV as a renewable energy technology able to generate energy-efficient employment opportunities in both agricultural and non-farm economy in rural areas. Through the implementation of a wide range of applications which foster the improvement and access to different services, PV systems can be in fact considered a cost-effective opportunity for rural electrification, at the same time promoting

[118] This section does not focus on concentrating solar power potential (CSP) as currently the technology presents very little development in South Africa, especially in relation to rural areas.

[119] ibid.

[120] D. Dusabe, J.L. Munda and A.A. Jimoh: *Rural Village Electrification in South Africa: Role of Energy Efficiency in Off-Grid PV/DG System*, 2007; B. Ortiz et al., *Potential of Hybrid PV Systems for Rural South Africa-Addressing Income Activities and Water Supply*, 2009.

[121] AGAMA Energy: *Employment Potential of Renewable Energy in South Africa*, 2003.

[122] AGAMA Energy, op. cit., 2003.

[123] B. van Campen, D. Guidi and G. Best: *Solar Photovoltaics for Sustainable Agriculture and Rural Development*, FAO, 2000.

[124] ibid.

[125] ibid.

environmental, social and economic benefits. In South Africa, however, the latter still face significant constraints which hamper a full and effective deployment of PV systems. Among these, high investment and transaction costs, lack of financing mechanisms as well as lack of adequate policies and incentives play a major role.

In such a context, it is considered important to promote improved collaboration among different institutions involved in rural development issues by adopting cross-sectoral policies that encourage an integrated approach to PV application and foster training programmes for its effective use. Furthermore, in the medium to long term, private sector investments are desirable along with information and awareness development.

4.3.1.1.2 Solar Water Heating (SWH)

Alongside the photovoltaic system, a further particularly promising renewable solar technology in South Africa is the solar water heating (SWH). Such a technology, which enables to generate hot water for domestic use or industrial applications, represents a cost-effective option to pursue both sustainable and economic development goals within the country, simultaneously contributing to the reduction of greenhouse gases and the increase of employment opportunities. This is firstly reflected from the enormous potential market for SWH deployment in South Africa[126] - ranging from low to high income groups and commercial sectors - combined with a relatively mature national development of the industry and a well-established, efficient SWH manufacturing infrastructure.[127]

Currently, SWH technology in South Africa is estimated to have an installed capacity of about 500,000 m^2,[128] accounting for 1.3 per cent of solar energy market for domestic use.[129] This reflects a not fully exploited SWH potential within the country and a significant reliance on growing imports that influence the international competitiveness of the industry. The latter however presents a substantial positive impact on South African job creation as SWH represents a labour intensive form of energy technology. It is in fact considered able to generate employment – both directly and indirectly – along the entire supply chain from manufacture to maintenance. In particular, according to government estimates, some 700 people are currently employed in the SWH industry, with a large percentage – more than 50 per cent or 400 people – in the installation stage and the rest in manufacturing and administration.[130]

Based on that and according to some projections carried out by AGAMA Energy (2003), the SWH sector would be able to generate a total of 355,200 jobs by 2020, of which 118,400 direct jobs and 236,800 indirect jobs that would primarily involve small and medium enterprises as well as semi-skilled artisans in manufacture and installation activities.[131] These jobs – like those generated by other renewable energy sources – can be considered "green" in its broadest meaning. Compared to the conventional energy sector, the SWH industry tends to satisfy the conditions of decent work to a greater extent. Particularly, it is not only able to contribute to job creation and skill development representing a safer technology to work with, but it also highlights the potential to better enjoy rights and working standards. This is firstly testified by the creation in 2003 of the

[126] The *2010/11-2012/13 IPAP* estimates that currently there are 11 million houses in South Africa for SWH application (IPAP, 2010).

[127] E. Visagie and G. Prasad, op. cit., 2006.

[128] AGAMA Energy, op. cit., 2003.

[129] DME, op. cit., 2003.

[130] IPAP, op. cit., 2010.

[131] AGAMA Energy, op. cit., 2003. These values are carried out under the most ambitious scenario analysed by the Agama Energy group.

SolarSure association, aimed to acting in the interest of all stakeholders involved in the delivery of SWH services and based on the implementation of some priority areas such as marketing and membership, testing standards and equipment, quality assurance and training through all the sections of the industry.[132] Such factors associated with similar initiatives and national programmes highlight the economic and social sustainability of SWH technology and jobs resulting from it. Furthermore, in environmental terms, SWH application appears highly sustainable as it fosters the reduction of greenhouse gas emissions and energy consumption, at the same time leveraging electricity savings.

Such economic, social and environmental significance is roundly recognized by the South African government that aims to install up to 5.6 million of SWHs by 2020, increasing installations and manufacturing from 35,000 units to 250,000 units and from 20,000 to 200,000 units per annum respectively over the next three years.[133] This could widely benefit both urban and rural areas, although many constraints still remain to be overcome for an effective and successful deployment of the SWH technology. It is in fact estimated that in rural areas poor households can hardly afford the use of electricity connection for water heating even when such electricity potential is supplied.[134] In this context, the absence of sufficient incentives and affordable financing schemes along with a fragmented market hamper an efficacious dissemination of SWHs. In addition, limited customer awareness, low grid electricity prices and high up-front costs constitute among the main factors which affect the technology development in South Africa.[135] In relation to these barriers, alongside government strategic actions aimed at expanding local market size, specific focus on the promotion of attractive financing schemes and SWH capital expenditure subsidies for poor households is recommended as well as the implementation of wider training, information and education programmes. These actions can be carried out through different types of incentives such as rate rebates and lower interest rates along with local government by-laws and efficient monitoring systems.[136]

4.3.1.2 Wind Energy

Similarly to the solar power, wind energy can also play an important role in contributing to South African sustainable development goals, satisfying the growing national energy demand. Although, in fact, the current wind energy capacity only consists of a few small facilities, different studies show that wind power is experiencing a period of rapid growth within the country as well as internationally.[137] As one of the most mature and low-risk renewable technologies, it is characterized by a large and well-established market able to generate local economic opportunities for component manufacture along with suitable local skills and infrastructure.[138]

In particular, in South Africa, programmes for its promotion are under development as the country demonstrates a significant wind potential along the coastline and specifically in the Western Cape Province and in some areas of the Northern Cape and Eastern Cape regions. Such potential is estimated to account for about 80.54 terawatt-hours (TWh)[139] with a current installed capacity ranging between 20 megawatts (MW) and 26 MW, including

[132] E. Visagie and G. Prasad, op. cit., 2006.

[133] IPAP, op. cit., 2010.

[134] E. Visagie and G. Prasad, op. cit., 2006.

[135] DEA, op. cit., Oct. 2009; IPAP, op. cit., 2010.

[136] E. Visagie and G. Prasad, op. cit., 2006.

[137] DEA, op. cit., Oct. 2009; M. Edkins, A. Marquard and H. Winkler, *South Africa's Renewable Energy Policy Roadmaps*, 2010.

[138] ibid.

[139] ibid.

grid-connected, rural mini-grid, off-grid facilities and windmills.[140] The latter constitute the main method of wind power use in South Africa. Some analysis in fact report that more than 22,000 locally-manufactured windmills are presently in operation in the country as a flexible, reliable and low-cost means for supplying water.[141] On another hand, the use of wind power for electricity generation through grid-connected wind turbines is still in an initial development phase.

There are, however, two demonstration projects currently in operation in South Africa which involve the implementation of wind turbines, namely the 5.2 MW Darling Wind Farm and the most recent Eskom's Wind Energy Demonstration Facility in Western Cape Province. The latter, in particular, is expected to comprise up to 100 wind turbines with a potential capacity of 200 MW.[142] This is relevant as wind power potential for electricity generation - supported by a technically sophisticated national grid infrastructure - can stimulate economic activity in rural areas, promoting small and medium wind enterprise development and new sources of employment. In broader terms, wind energy technology is considered able to generate up to 89,600 job opportunities by 2020, of which 22,400 direct jobs and 67,200 indirect jobs.[143] These include opportunities in wind turbine component manufacture; domestic production of transport equipment components such as gearboxes, coatings and motors; technical and professional work involving electrical and structural engineers to design turbines, metalworkers to supply rotors, electrical transformer installers as well as mechanics and computer operators for monitoring the system.[144] Furthermore, new and better employment opportunities can be generated in the ICT industry through the use of green energy from grid wind or other non-combustible fuels, consequently fostering the development and deployment of energy-efficient telecommunication services to both rural and urban users.[145]

Such occupational categories generally require skilled labour to ensure the quality of work and most of them fall within the formal economy, with on average high wage rates. This is also reflected in the previous analysis of non-farm industries that shows component manufacturing – especially in transport equipment sector – to be particularly positive in terms of annual remuneration per employee and share of formal employment, including the skilled labour-force. Similar standards can be observed in the professional services category, making such activities significantly relevant in relation to a decent work perspective. The presence of better working conditions along with the adoption of a safer source of energy such as wind power, allow in fact the jobs generated within these industries to be identified as green. They can widely respond to economic and social sustainability needs, at the same time promoting environmental benefits through the reduction of CO_2 emissions and electricity costs.

Such socio-economic and environmental potential is largely recognized at the South African political level and specific emphasis on wind power technology is expressed in different national documents such as the White Paper on Renewable Energy (2003), the

[140] AGAMA Energy, op. cit., 2003; DEA, op. cit., Oct. 2009.

[141] R. Karottki, J. Schäffer and D. Banks: "Wind Energy in South Africa – Time to Implement" in *Renewable Energy World*, May-June 2001, pp. 74-76, 82-85; AGAMA Energy, op. cit., 2003.

[142] T. Potgieter: *Renewable Energy: Harnessing South Africa's Wind Farm Potential*, TradeInvest South Africa, article published on 22 July 2008:
http://www.tradeinvestsa.co.za/investment_opportunities/681801.htm.

[143] AGAMA Energy, op. cit., 2003; CAMCO & TIPS, *Climate Change: Risks and Opportunities for the South African Economy. An Assessment of Mitigation Response Measures*, 2010a.

[144] ibid.

[145] GeSI: *The Contribution the ICT Industry Can Make to Sustainable Development. A Materiality Assessment by the Global eSustainability Initiative*, 2008.

REFIT programme (2009) and the most recent 2010/11-2012/13 IPAP (2010). In the scope of these documents and under development policies, it however seems to lack an effective action programme for the deployment of modern wind energy applications, in the light of several barriers that hamper its practical implementation. Among these, the difficulties related to obtaining a long-term power purchase agreement are of particular relevance along with high project costs and increasing prices to connect isolated wind power sites to the grid. In addition, lower costs of coal-based production and the absence of suitable financial backing contribute to slowing the promotion of wind power technology within the country. In this context, an appropriate industrial policy supported by adequate planning and financial schemes as well as an active state involvement can play an important and significant role.

4.3.1.3 Modern Biomass Production

Among the main and most promising forms of sustainable energy with a relevant impact on rural areas, biomass production plays a priority role. As and even more than solar and wind power, biomass-based energy is internationally recognized able to stimulate the economic activity and generate significant sources of employment in the most disadvantaged areas of developing countries, including South Africa. In particular, biomass is estimated to account for 5.1 per cent of the total primary national energy supply, of which the majority is intended for rural domestic use through the preparation and marketing of wood fuels.[146]

At the national level, however, opportunities for a more sustainable large-scale use of biomass production have been identified in the bagasse from the sugar industry; in wastes from the wood, pulp and paper industries as well as in the so-called modern biomass, mainly composed of biofuels such as bioethanol and biodiesel. The latter – as modern bioenergy conversion technologies – deserve particular attention in the light of their potential to reduce dependency on expensive oil imports and to contribute to a more energy efficient transport sector along with their flexibility to be deployed on smaller scale than conventional fossil fuels, fostering greater decentralization and employment opportunities especially in rural areas.[147] Currently, the development of the biofuel sector as a new path to respond to the challenges of climate change and energy security is estimated to be growing rapidly worldwide. The International Energy Agency (IEA) (2011) in fact points out that many countries have started to adopt supportive measures such as blending targets, tax incentives and quotas for promoting its effective deployment.[148] Specifically, South Africa has committed to a blending target of 2 per cent by 2013, speculating its future expansion up to 10 per cent as a value able to generate about 125,000 direct jobs, of which a large part would be in rural settings.[149]

Such aspects are indicative of the relatively new character of the technology in South Africa which, despite regulatory and legal barriers, recognizes the potential of biofuels to promote environmental benefits and generating new labour-intensive employment opportunities.[150] The latter are, in particular, assessed to account for the largest number of jobs resulting from renewable energies. According to the Agama Energy study, under the most ambitious targets, biofuels would be in fact able to generate 700,000 new sources of

[146] AGAMA Energy, op. cit., 2003.

[147] ibid.; IEA: *Technology Roadmap: Biofuels for Transport*, 2011.

[148] ibid.

[149] IPAP, op. cit., 2010.

[150] The recognition of such a potential is expressed in different national documents such as the *Accelerated and Shared Growth Initiative for South Africa* (AsgiSA) and the *White Paper on Renewable Energy* (2003).

employment by 2030. Forecasting a 15 per cent replacement of current ethanol and diesel consumption in the transport sector, the research specifically estimates that biodiesel and bioethanol deployment could create 350,000 new direct and indirect jobs. Of these, the majority – 288,000 – would result from biodiesel and the rest – 62,000 – from bioethanol production.[151] This enormous employment potential in the biofuels sector is considered to be largely related to specific characteristics of bioenergy production, namely its relative lower cost per job created compared to other industrial sectors as well as its labour-intensive nature which can require labour up to ten times greater than that needed to produce fossil fuels.[152]

As it is evident from the AGAMA Energy study, most jobs are supposed to be created in the biodiesel sector. The latter demonstrates a significant local job creation potential in both the agriculture and non-farm sectors such as agro-processing, in the light of its broad profitability on small and large scale. In particular, it is mainly the small-scale decentralized biodiesel production through planting, harvesting and processing of oil crops that could positively impact on rural communities and local economic development, by providing job opportunities for semi-skilled small-scale farmers.[153] This is particularly relevant in relation to the South African context as studies show that the country has the potential to produce "1.4 billion litres of biodiesel per annum" from sunflowers, soybeans, cotton and groundnuts without affecting food production.[154] Through the production of biodiesel, South Africa could furthermore take advantage of the generally good quality of employment generated within the sector. By and large, in fact, biofuels are considered be characterized by better working conditions, with wages on average higher than those in other industrial sectors or agriculture and with a larger number of contracts among the workers.[155] In addition, a more energy efficient transport sector - as result of biodiesel implementation - could have indirect positive effects on other industries such as the (eco-) tourism, where employment standards can be particularly high.

Such socio-economic benefits are nationally recognized and the country has started to promote different action programmes to foster a more rapid growth of the biofuel sector as well as to ensure quality certification requirements. However, biofuels implementation requires substantial commitment and coordination between ministries and stakeholders as it is a complex process characterized by high costs and market access barriers. Moreover, being a relatively new technology in South Africa, it lacks adequate technical expertise and capacity as well as appropriate awareness and information about the benefits and opportunities of the industry. In this context, factors such as capacity building, government support for training and awareness campaigns as well as assistance to ensure technology access and transfer appear essential to accelerate the deployment of the technology within the country. In addition, international collaboration and investments through public-private partnerships are desirable along with technical and financial assistance that enables to support the certification requirements, improving credibility and reducing certification costs.[156] Lastly, in order to maximise benefits for rural development, it emerges as necessary to support smallholder participation in biofuel value chains, ensuring that biofuel policies are carried out in close collaboration with rural development and energy strategies.

[151] AGAMA Energy, op. cit., 2003.

[152] ibid.

[153] E. Visagie and G. Prasad, op. cit., 2006.

[154] ibid.

[155] AGAMA Energy, op. cit., 2003.

[156] IEA, op. cit., 2011.

4.3.2. Energy Efficiency Measures

As the renewable energies, energy efficiency is considered to play a fundamental role in satisfying the global goals of sustainable development. It is widely agreed that energy efficiency measures can promote environmental benefits through the reduction of greenhouse gas emissions and local air pollution, at the same time fostering energy security and an improved competitiveness and consumer welfare.

In particular, in the South African context, energy efficiency is gaining momentum and is increasingly recognized as cost-effective way to meet national goals of economic, social and environmental sustainability. In this regard, the government has carried out a National Energy Efficiency Strategy (2005), highlighting significant potential for energy efficiency improvements across all sectors of the national economy and setting a target for energy efficiency savings of 12 per cent by 2015.[157] It includes different economic sectors with specific sub-targets among which a 10 per cent value set for the residential sector.[158] The latter will constitute the focus of our following analysis as the implementation of energy efficiency measures in the building industry and in the residential sector in particular, represents one of the lowest-cost mitigation and highest job creation opportunities within developing countries including South Africa. Alongside it, however, the government could evaluate the opportunity to adopt energy efficiency measures in sectors such as the ICT and textile. The design of more energy-efficient ICT products along with the introduction of ICT services such as teleconferencing and e-commerce able to reduce the impact of environmental externalities as well as the disposal and recycling of electronic waste (e-waste) can in fact significantly contribute to the mitigation of climate change impacts, increasing green job opportunities within the sector.[159] Similarly, the use of organic cotton and other eco-friendly fibers in one of the most ecologically harmful industries worldwide such as the textile one, presents both social and environmental benefits by decreasing pollution and preventing air, water and soil contamination.[160] In addition, the implementation of cogeneration technologies[161] in textile mills can both reduce energy costs and greenhouse gas emissions, at the same time stimulating green jobs creation within rural areas, in the light of relatively low installation costs and suitability in non-urban settings.[162] Each of these energy-efficient measures deserves particular attention in the context of government policies. As in the case of the building sector, they could in fact play a meaningful role in a future perspective.

4.3.2.1 Construction of Energy Efficient Housing and Retrofitting

In the context of energy efficiency-related issues, different studies[163] show that the design of new energy efficient buildings and the refurbishment or retrofitting of existing building stocks[164] has an enormous potential for contributing to the mitigation of carbon emissions, at the same time providing significant opportunities for local employment generation. This

[157] DME: *National Energy Efficiency Strategy of the Republic of South Africa*, June 2009.

[158] ibid.

[159] GeSI, op. cit., 2008.

[160] Z. Khatri and K.M. Brohi: *Environmental Friendly Textiles – A Road to Sustainability*, 2009.

[161] Cogeneration is a high energy-efficiency system that produces both electricity and valuable heat from the use of a heat engine or a power station.

[162] GHK: *Estimating Green Jobs in Bangladesh. A GHK Report for the ILO*, 2010.

[163] R. Kievani et al.: *Green Jobs Creation Through Sustainable Refurbishment in the Developing Countries*, 2010; CAMCO & TIPS, *Climate Change: Risks and Opportunities for the South African Economy. An Assessment of Mitigation Response Measures*, 2010a; GHK, op. cit., 2010.

[164] Refurbishment or retrofitting indicates the process of amelioration of existing buildings through the addition or replacement of existing installations with energy efficient components (ibid.).

is particularly relevant as the construction sector is estimated to be one of the largest global emitters of CO_2 emissions, second only to the industry sector. Specifically in South Africa, building operations are estimated to produce some 23 per cent of greenhouse gases emissions along with 4 per cent generated by the manufacturing of building materials.[165] Furthermore, in the residential sector, about 71 per cent of energy used for heating is estimated to stem from biomass (53 per cent), coal (11 per cent) and petroleum products (7 per cent),[166] hence generating considerable adverse effects on the environment. These factors combined with the significance of the construction industry in economic and social terms[167] highlight the necessity and importance of promoting energy efficiency improvements within the sector.

In South Africa, some projects have already been executed especially in relation to residential housing, emphasizing the priority role played by passive solar design[168] and ceiling installation in new building construction along with the application of insulation material and energy efficiency measures relating to water heating, space heating, lighting and cooking through the refurbishment of existing building structures. Such measures specifically include the implementation of photovoltaic systems for direct lighting and water pumping; the use of petroleum gas stoves for cooking; the adoption of efficient appliances such as conditioners and refrigerators; the implementation of insulation and water heating technologies.[169] As pointed out by some analysis,[170] these activities constitute potential areas of green retrofitting implementation able to generate substantial employment opportunities for a wide range of occupational categories including technicians and engineers for the design; transport and commercial agents; carpenters, plumbers and electricians; unskilled workers for installation and insulation activities as well as maintenance officers and property managers for activities subsequent to the execution of project. In particular, the total job creation potential in the South African building sector is estimated to be equal to 1.7 million employment opportunities over the period 2008-15 based on ZAR400 billion of national investments on infrastructure, including new and existing buildings.[171] This certainly highlights the importance of the building industry which, as a labour-intensive sector, has the potential to generate more and new green sources of employment through the implementation of energy efficiency measures, thus contributing considerably to socio-economic and environmental sustainability within the country. Such potential however needs that adequate supportive measures be fully realized as manifold constraints can hamper its effective implementation. Among these, limited technology and the consequent need to import equipment and materials; the lack of appropriate financial mechanisms and legislation as well as the absence of sufficient expertise and experience among key stakeholders constitute some of the main barriers to sustainable refurbishment expansion in South Africa. In this context, specific policy actions able to better address and support the development of the sector within the country have been identified in the promotion of

[165] CAMCO & TIPS: *Case Study – The Construction Industry's Path towards a Low Carbon Trajectory*, 2010b.

[166] DME, op. cit., June 2009.

[167] Construction industry can be considered a high labour-intensive sector. In particular, estimates show that in 2009 the industry accounted for 712,698 formal and informal workers, of which 414,070 in the building construction and 298,628 in the civil engineering and other construction (Quantec Databse).

[168] Passive solar design refers to the application of "*energy flow principles and climate characteristics of a region in the design, construction and management of houses*" (W.E. Klunne, 2002).

[169] ILO, op. cit., 2010.

[170] ibid.; CAMCO & TIPS, op. cit., 2010b.

[171] ILO, op. cit., 2010.

greater information and awareness raising, an appropriate institutional and financial framework along with targeted interventions in research and development (R&D) and the adoption of an holistic approach which fosters the analysis of both technical and socio-economic aspects for the application of different energy efficiency measures.[172]

4.3.3. Climate Change Adaptation Measures

Alongside the mitigation measures above described, particular attention in the context of sustainable development deserves the role played by climate change adaptation policies. The latter specifically refers to policy strategies aimed at reducing the vulnerability of natural and human systems to climate change effects and can include both anticipatory and reactive measures. Their promotion and implementation at national level is therefore particularly relevant in relation to developing countries as these are assessed to be the most vulnerable to the effects of climate change. In particular, in South Africa the role of adaptation measures is expressed in a number of policy documents such as the South Africa's Climate Change Technology Needs Assessment (2007) and the National Climate Change Response Policy (NCCRP, 2009). Each of them highlights some priority areas or sectors that need to be targeted through climate change adaptation initiatives and identifies the necessary interventions for their implementation. Such areas specifically refer to forestry and agriculture (especially maize production); rangelands; human health; plant, animal and marine biodiversity; and water resources (table 4.18):

[172] ibid.

Table 4.18. Adaptation initiatives and key targeted sectors

Adaptation related interventions	Key Areas/Sectors
- Changes in agricultural management practices such as planting dates and row spacing to counteract the effects of moisture; - Pest management to reduce water pollution; - Livelihoods/crops diversification to reduce vulnerability; - Implementation of seed banks to preserve biological diversity; - Development of information technology to improve the resilience of the sector; - Promotion of genetic engineering to develop more heat and drought resistant hybrids; - Expansion of community based forestry practices; - Development of smaller scale approaches to increase the compatibility with different crops and species;	Agriculture and Forestry
- Improvement of monitoring and forecasting systems for fire hazard and droughts;	Rangelands
- Extension and upgrading of current monitoring and forecasting systems to counteract possible climate change health impacts; - Expansion of treatment facilities and proactive preventive/control measures; - Promotion of health programmes to face the impacts of climate change;	Human Health
- Development and expansion of a biodiversity monitoring network to implement changes and management practices in identified areas; - Implementation of conservation planning and mechanisms to prioritize interventions;	Plant, Animal and Marine Biodiversity
Adaptation related interventions	**Key Areas/Sectors**
- Improvement of meteorological and hydrological monitoring systems to detect the onset of climate change effects on water resources; - Development of a comprehensive, integrated and contingency planning for extreme events; - Promotion of resource management and water conservation measures to increase the amount of surface water runoff and recharge to groundwater; - Promotion of water efficient technologies to increase efficiency and recycling, improve flood warnings, increase reservoir capacity, etc.; - Implementation of public consultation programmes to expand the awareness of climate change impacts; - Revision of operating procedures for all infrastructure to ensure optimal efficiency.	Water Resources

Source: DEAT, *A National Climate Change Response Strategy*, 2004; DST, *South Africa's Climate Change Technology Needs Assessment*, 2007.

Although specific adaptation activities have been identified for the sectors considered as the most vulnerable to climate change and, in spite of the significant number of national, provincial and local institutions involved in the climate change adaptation policy,[173] many aspects still remain to be realized to promote an effective and complete adaptation strategy in South Africa. From the analysis of policy documents, in fact, it firstly emerges that

[173] The institutions involved in the South African climate change adaptation policies include local governments' municipalities, different national departments and committees, as well as research institutions and non-governmental organizations (M. Madzwamuse, *Climate Change Vulnerability and Adaptation Preparedness in South Africa*, 2010).

economic costs of adaptation measures implementation have not been quantified at both national and local level. It thus lacks a parallel assessment of potential economic incentives and future investments that could be adopted to foster a larger national resilience and capacity to climate change impacts. In this context, it is consequently quite difficult to estimate the potential employment opportunities that could be generated through the implementation of adaptation measures. The absence of specific investments plans, in fact, highlights that potentially sustainable job creation in climate change adaptation related activities is still not an integral part of the government policies although different studies[174] show that adaptation measures are able to create jobs that comply with both minimum working standards and environmental needs. This reflects to some extent the overall perception that emerges from the examination of national documents, namely the current national priority given to climate change mitigation measures in driving the development agenda compared to the adaptation initiatives as well as an insufficient dissemination of awareness and information about adaptation activities within the South African context.

In the light of these aspects, it is evident that a greater integration of climate change adaptation policies into local and national development plans is particularly necessary in South Africa. Difficulties in achieving this aim may however concern the presence of a cumbersome policy framework and an inadequate coordination and social capacity for planning, monitoring and evaluation as well as barriers in adopting adaptation technologies such as shortage of technical capacity and lack of knowledge of the technology and its benefits; high establishment, operation and maintenance costs; inadequate macro-economic policies; lack of appropriate financial systems; and relatively weak enforcement legislation mechanisms.[175] In addition, the lower reliable repayment capacities of most end-users of adaptation technologies - generally identified in the poorest communities - can negatively influence the promotion of investments.[176] In this perspective, the support of R&D partnership along with the implementation of both bottom-up and top-down approaches able to act on multiple scales and prioritize the most vulnerable groups and areas of the country in terms of adaptive capacity, can constitute a key way forward to realize an improved and responsive national climate change adaptation strategy. This is particularly important as an adequate balance between mitigation and adaptation policies appears to be crucial in maximizing the environmental benefits in both developing and developed countries.

[174] See, for instance, GHK, op. cit., 2010.

[175] DST: *South Africa's Climate Change Technology Needs Assessment*, 2007.

[176] ibid.

5. Conclusions

The analysis carried out in this paper aimed to explore the links between decent employment promotion and rural development, by focusing on the role and potential of non-farm activities in rural areas of South Africa. In particular, our main aim was to highlight to what extent the non-farm economy can contribute to the social and economic development of rural South Africa, specifically emphasizing the capacity of the sector to comply with decent and energy-efficient work standards in the generation of more and better job opportunities within the country. This was placed within the framework of different national development programmes as well as in the wider context of the recent global economic crisis and its impact on national economy.

Through three distinct levels of analysis – theoretical, quantitative and qualitative – the study has shown the role of some specific industries and the nature of the current policy debate related to them, highlighting the potential for a future expansion of rural non-farm activities in South Africa. It has however been observed that the achievement of this aim will depend on the adoption of specific and targeted strategies able to stimulate the growth of the sector and a better quality of employment within it. More specifically, after the presentation of the main characteristics of the non-farm economy, the analysis of small business and some key manufacturing and service sub-sectors formed the basis to illustrate the social and economic relevance of non-agricultural activities within the South African context. The study firstly found that small, micro and medium enterprises represent an essential source of livelihoods for millions of South African people, providing more than half of national employment and contributing in a substantial way to the total GDP and remuneration. Above all, it has emerged that such industries play a significant social role in relation to women and more disadvantaged individuals, emphasizing the importance of small business not only in economic terms but also in a gender and race perspective.

These meaningful social and economic implications have also been also found in the analysis of specific manufacturing and service industries, namely agro-processing; metals, transport and equipment; textile and clothing; wood, paper and pulp; tourism and ICTs. As shown by the study, most of them present a labour-intensive nature able to generate employment opportunities for a high percentage of vulnerable and marginalized individuals such as women, ethnic minorities, youth and migrants. In addition, the examination of data collected for every sub-sector has revealed that the contribution of the latter to the South African economy is remarkable. It has in particular emerged that in most of the analysed sectors, output trends were on average growing over the considered time period 2000-09. From an employment perspective, however, it has been observed that some manufacturing industries such as agro-processing; textile, clothing and leather deserve particular attention in the context of government policies as they registered declining economic trends, accentuated by the impact of the global financial crisis in 2008 and 2009. Lastly, in trade terms, the data showed a generally positive export performance for numerous industries from 2000 onwards with the exception of machinery and equipment; clothing, textile and leather; and transport equipment sub-sectors, thus indicating the necessity of appropriate intervention strategies able to revive the growth and an improved trade balance. It has been further shown that some of the analysed sectors - such as ICT - even if not yet fully developed in rural settings, present a significant future job creation potential within these areas. The South African government, in fact, estimates that a substantial number of direct and indirect job opportunities can potentially be generated within each industry in the next decade. Although the various estimated values are questionable in the light of the current crisis condition which characterizes some specific sub-sectors, it testifies the importance of rural manufacturing and service industries in a future perspective.

Such non-farm economy relevance in contributing to the development of the South African rural areas is also expressed at a more qualitative level that namely identifies the potential of the considered sectors in complying with the principles of decent work and environmental sustainability. From the data analysis has, in fact, emerged primarily that the share of formal employment for each manufacturing industry is particularly high. Similarly, in terms of wages, the data have shown that most of the analysed industries registered growing annual remuneration trends. On another hand, in relation to the service industries, the analysis has highlighted the wide diversity that can exist in the tourism sector in terms of formal and informal job opportunities, skilled labour force and remuneration, simultaneously identifying the predominantly formal character of the ICT industry which requires significant skills and presents relatively high rural wages.

Alongside these interesting findings that underline some important decent work features within the analysed industries, the study has shown the potential of non-farm economy to generate new and more energy-efficient employment opportunities in South African rural areas. In particular, it has emerged that renewable energy technologies such as solar PV and solar water heating, wind power and modern biomass production are able to directly and indirectly promote a substantial number of green jobs in different manufacturing and service activities among which agro-processing; artisanal, electrical, technical and metal work; transport; component manufacturing and engineering, including opportunities in small and medium enterprises. Likewise, the implementation of energy efficiency measures in sectors such as construction, ICTs and textile shows a high potential to contribute to both the reduction of greenhouse gas emissions and the generation of new green sources of employment, consequently fostering economic, social and environmental sustainability.

Each of the aspects addressed in the analysis has thus highlighted the significant role that non-farm economy can play in contributing to rural development in South Africa. It is however necessary to underline that the complexity of rural settings combined with the specificity of the South African context dominated by the legacy of apartheid, make the promotion of decent and more energy-efficient non-farm activities a challenging target within the country. The latter in fact needs to implement appropriate and targeted intervention strategies that can take such complexity into consideration, at the same time addressing the main decent work deficits in the sector.

In relation to the this aspect and in order to fully develop the socio-economic and environmental potential of non-agricultural economy, particular attention needs to be focused on the informal segments of the sector and their implications in terms of working conditions. Although, in fact, the study has shown a high percentage of formal economy among the different analysed sub-sectors, it is likely that a non-negligible share of informal employment lies within the rural areas. If, on one hand, the lack of adequate data has hindered the presentation of a detailed analysis on employment contribution and its formal and informal nature in rural settings specifically; on the other hand, it is widely documented that a large part of rural employment lacks basic formal economic standards. Besides, through the small business section, it has been observed that the numerous rural micro and survivalist firms able to generate significant sources of livelihoods for the most disadvantaged individuals present a predominately informal nature.

This emphasizes the importance of promoting policies intended to support the gradual integration of rural enterprises in a more legal and formal framework, at the same time stimulating rural entrepreneurship and sectoral potential. In this context, the implementation of appropriate technical and financial assistance along with technology improvements and infrastructure development can play a major role. Furthermore, experiences in other emerging economies such as Brazil and India demonstrate that it is important to promote a better coordination between different stakeholders and a greater public-private partnership at national, provincial and local level in order to support sector

competitiveness and strengthen capacity building of rural workers. To this end, adequate and targeted training, information and education programmes constitute fundamental interventions to empower rural communities and benefit the most vulnerable groups.

Along with that, organizing rural non-farm workers into trade unions and strengthening their voice and representation as well as social protection schemes, appear to be crucial to enable rural people to actively participate in decision-making processes, consequently fostering an effective implementation of programmes at local level. Such an empowering process should also promote an adequate involvement of women and youth, raising awareness of their rights and improving their bargaining power. In this regard and in collaboration with the trade unions, a significant role can be played by rural cooperatives as engines of growing efficiency and competitiveness as well as enablers of social benefits and better working conditions. The promotion of effective linkages between trade unions and cooperatives or other groups of civil society can in fact ensure a greater participation of rural communities at the grassroots level.

In achieving this aim, it is extremely important that the state recognize rural informal workers organizations, fostering their involvement in the implementation of rural development programmes. The integration of worker organizations and specific decent and energy-efficient non-farm policies in the wider context of poverty alleviation strategies constitutes, in fact, a fundamental factor to promote a comprehensive rural growth path. The adoption of an integrated or holistic approach that fosters both quantitative and qualitative aspects of employment promotion by addressing the main decent work deficits in an economic, social and environmental perspective and encouraging local participatory programs is the main way forward to rural development. Only through such an integrated policy strategy will non-farm activities be able to play an effective and real role in the rural areas of South Africa.

References

Abor, J.; Quartey, P. 2010. "Issues in SME Development in Ghana and South Africa", in *International Research Journal of Finance and Economics*, Issue 39, pp. 218-228.

Adger, W.N. et al. 2007. "Assessment of Adaptation Practices, Options, Constraints and Capacity" in *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, (Cambridge, Cambridge University Press), pp. 717-743.

Africa! Ignite. 2010. *Towards Bankable Craft: The Road We've Travelled*, Presentation to the Gijima KZN LED Post-graduate Programme, South Africa, 21 July.

AGAMA Energy. 2003. *Employment Potential of Renewable Energy in South Africa*, prepared for The Sustainable Energy and Climate Change Partnership, 14 Nov. (Johannesburg).

Barrientos, S.; Kritzinger, A.; Rossouw, H. 2004. "National Labour Legislation in an Informal Context: Women Workers in Export Horticulture in South Africa" in M. Carr (ed.): *Chains of Fortune. Linking Women Producers and Workers with Global Markets* (London), pp. 103-130.

Berry, A. et al. 2002. *The Economics of SMMES in South Africa*, Trade and Industrial Policy Strategies (TIPS).

Bolwell, D.; Weinz, W. 2008. *Reducing poverty through tourism*, Working Paper No. 266, Sectoral Activities Programme (Geneva, ILO).

Briedenhann, J.; Wickens, E. 2004. "Rural Tourism – Meeting the Challenges of the New South Africa", in *The International Journal of Tourism Research*, Vol. 6, No. 3, May/June, pp. 189-203.

Brodsky, S. 2010. *South Africa's REFIT Programme – Latest Developments and the Way Forward*, presentation to SANEA (Johannesburg).

Bryan, E. et al. 2008. *Determinants of Adaptation to Climate Change in Ethiopia and South Africa*, International Food Policy Research Institute (IFPRI), Center for Environmental Economics and Policy, South Africa.

CAMCO & Trade & Industrial Policy Strategies (TIPS). 2010a. *Climate Change: Risks and Opportunities for the South African Economy. An Assessment of Mitigation Response Measures*, May.

—. 2010b. *Case Study – The Construction Industry's Path towards a Low Carbon Trajectory*, Dec.

Chaddha, A. et al. 2009. *Textiles & Apparel Cluster in South Africa*, Microeconomics of Competitiveness.

Chamberlain, D. et al. 2005. *Part I. The Contribution, Costs and Development Opportunities of the Forestry, Timber, Pulp and Paper Industries in South Africa*, Final Report, 29 June (Johannesburg, G:ENESIS Analytics Ltd).

Chapman, R.; Slaymaker, T. 2002. *ICTs and Rural Development: Review of the Literature, Current Interventions and Opportunities for Action*, Working Paper 192 (London, Overseas Development Institute (ODI)).

Chernyshev, I. 2009. *ILO/Joint Project on Employment in the tourism industries: Statistics Component. Keynote, Session III: Employment in the Tourism Industries: Measurement Issues and Case Studies*, 5th UNWTO International Conference on Tourism Statistics. Tourism: An Engine for Employment Creation, Bali, 30 Mar. – 2 Apr.

COAG. 2007. *Challenges of Agribusiness and Agro-industries Development*, Committee on Agriculture, 20th Session, Rome, 25-28 Apr.

Cooperation Framework on Innovation Systems between Finland & South Africa (COFISA). 2008. *Using ICTs to Optimise Rural Development. A Guide*, COFISA and Department of Science and Technology, Republic of South Africa.

Dannson, A. et al. 2004. *Strengthening Fam-agribusiness Linkages in Africa. Summary Results of Five Country Studies in Ghana, Nigeria, Kenya, Uganda and South Africa*, Agricultural Management, Marketing and Finance Service (AGSF) Occasional Paper 6 (Rome, FAO).

Davidson, O. et al. 2006. *Energy Policies for Sustainable Development in South Africa. Options for the Future*, Energy Research Centre (ERC) (Cape Town, University of Cape Town).

Davis, J.R. 2004. *The Rural Non-Farm Economy, Livelihoods and Their Diversification: Issues and Options*, (Chatham, Natural Resources Institute (NRI)).

Department of Arts, Culture, Science and Technology (DACST). 1998. *The South African Craft Industry Report*, Cultural Industries Growth Strategy (CIGS), Nov. (Pretoria).

Department of Economic Development (DED). 2009. *Creating an Enabling Environment for the Growth of KZN Craft*, KwaZulu-Natal Integrated Craft Hub Business Plan, South Africa.

Department of Environmental Affairs (DEA). 2009. *Clean Technology Fund Investment Plan for South Africa*, Government of South Africa, Oct.

Department of Environmental Affairs and Tourism (DEAT). 1996. *White Paper on the Development and Promotion of Tourism in South Africa*, Government of South Africa. Available at:
http://www.environment.gov.za/PolLeg/WhitePapers/tourism96.htm
[29 May 2011].

—. 2004. *A National Climate Change Response Strategy for South Africa* (Pretoria).

—. 2010. *Medium Term Strategic Plan 2010/11–2012/13*, Republic of South Africa.

Department of Minerals and Energy (DME). 2003. *White Paper on Renewable Energy*, Republic of South Africa, Nov.

—. 2004. *Capacity Building in Energy Efficiency and Renewable Energy, Report No. 2., 3., 4. – 19. Economic and Financial Calculations and Modelling for the Renewable Energy Strategy Formulation* (Pretoria).

—. 2009. *National Energy Efficiency Strategy of the Republic of South Africa – First Review October 2008*, Government Gazette, No. 32342 (South Africa), 26 June.

Department of Science and Technology (DST). 2003. *A National Advanced Manufacturing Technology Strategy for South Africa*, Advanced Manufacturing Technology Strategy (AMTS) Implementation Unit, Government of South Africa (Pretoria).

—. 2007. *South Africa's Climate Change Technology Needs Assessment*, Synthesis Report, Republic of South Africa.

Department of Sport, Arts, Culture and Recreation (DSACR). Undated. *Gauteng's Creative Industries: The Craft Sector*, Gauteng Provincial Government. Available at: http://www.sacr.gpg.gov.za/Documents/Creative%20Ind/Craft%20Sector.pdf [12 May 2011].

Department of Trade and Industry (DTI). 1995. *White Paper on National Strategy for the Development and Promotion of Small Business in South Africa*, Parliament of the Republic of South Africa.

—. 2003. *Unlocking Potential in an Enterprising Nation, The Integrated Small Business Development Strategy in South Africa 2004-2014*, Government of South Africa (Pretoria).

—. 2004. *South Africa: Current Developments in the Automotive Industry*, Government of South Africa (Pretoria).

—. 2005 *Metals Sector Development Strategy*, Customised Sector Programmes, Government of South Africa (Pretoria).

—. 2006. *The South African Agro Processing Sector Overview*, Kwazulu Natal Trade and Investment Faire and Conference, Durban Exhibition Centre, Durban, 30 Mar.

—. 2007. *Strategic Framework for the Forestry, Timber, Pulp and Paper Industry*, Draft Document, Enterprise Industry Development Division, South Africa.

—. 2008. *Annual Review of Small Business in South Africa 2005-2007*, Republic of South Africa.

—. 2010. *2010/11-2012/13 Industrial Policy Action Plan (IPAP),* Economic Sectors and Employment Cluster, 23 Feb.

Dlodlo, N. 2009. *Access to ICT Education for Girls and Women in Rural South Africa: A Case Study*, Council for Scientific and Industrial Research (Pretoria, Meraka Institute).

Driver, A. et al. 2001. *Global Entrepreneurship Monitor (GEM): 2001 South African Executive Report* (Cape Town, Graduate School of Business).

Durlauf, S.N.; Fafchamps, M. 2004. *Social Capital*, CSAE Working Paper Series 2004-14, Centre for the Study of African Economies, University of Oxford.

Dusabe, D.; Munda, J.L.; Jimoh, A.A. 2007. *Rural Village Electrification in South Africa: Role of Energy Efficiency in Off-Grid PV/DG System* (Pretoria, Tshwane University of Technology) .

EDAMBA. 2009. *Value Chain Linkages in Agribusiness Supply Chains in South Africa*, University of Stellenbosch Business School, Summer School 23-29 July (Sorèze, France).

Edkins, M. 2009. *Large-Scale Rollout of Concentrating Solar Power in South Africa*, Energy Research Centre (ERC) (Cape Town, University of Cape Town).

—; Marquard, A.; Winkler, H. 2010. *South Africa's Renewable Energy Policy Roadmaps*, Energy Research Centre (ERC) (Cape Town, University of Cape Town).

Edwards, L; Morris, M. 2006. *An Evaluation of the Employment Trends in the Clothing & Textile Industry*, University of Cape Town, Oct.

Edwards, L.; Rankin, N.; Schöer, V. 2008. *South African Exporting Firms: What do We Know and What Should We Know?* Munich Personl RePEc Archive (MPRA) Paper No. 16906 (Cape Town and Johannesburg, University of Cape Town and University of the Witwatersrand).

Ellis, F. 2000. *Rural Livelihoods and Diversity in Developing Countries* (Oxford, Oxford University Press).

—; Allison, E. 2004. *Livelihood Diversification and Natural Resource Access*, Access to Natural Resources Sub-Programme, Livelihoods Diversification and Enterprise Development Sub-Programme, LSP Working Paper 9, Overseas Development Group, Jan. (Norwich, University of East Anglia,).

—; Freeman, H.A. 2005. *Rural Livelihoods and Poverty Reduction Policies* (London, Routledge Studies in Development Economics).

Energy Research Centre. 2007. *Long Term Mitigation Scenarios: Technical Summary,* Department of Environment Affairs and Tourism (DEAT), Oct. (Pretoria).

Esterhuizen, D. 2006. *An Evaluation of the Competitiveness of the South African Agribusiness Sector*, PhD Thesis, Department of Agricultural Economics and Rural Development (Pretoria, University of Pretoria).

Everest Research Institute. 2008. *Ready to Compete – South Africa's BPO Capabilities in the Financial Services Sector*, Nov. (Dallas).

Falkena, H. et al. Undated. *SMEs'Access to Finance in South Africa. A Supply-Side Regulatory Review*, The Task Group of the Policy Board for Financial Services and Regulation. Available at: http://www.treasury.gov.za/publications/other/default.aspx [12 May 2011].

FinScope. 2007. *FinScope Small Business Pilot Survey Report Gauteng 2006*, African Response (Bryanston).

Fourie, L. 2008. *Enhancing the Livelihoods of the Rural Poor Through ICT: A Knowledge Map, South Africa Country Report*, Working Paper No. 13 (Washington, DC, infoDev).

Gallat, S. 2007. *Home-Based Agro-Processing for the Commercial Market,* The Rural Poor and Tomorrow's Markets, Parma, 23–24June.

Gama, M.; Ogunronbi, S. 2010. "How Do We Overcome the Urban/Rural Dichotomy?", Department of Rural Development and Land Reform (DRDLR), in *Knowledge Week 2010, South African Human Settlements 2030: Rethinking the Spatial Development Trajectory* (Midrand, Development Bank of Southern Africa (DBSA)).

GHK Consulting. 2010. *Estimating Green Jobs in Bangladesh*, a GHK Report for the ILO, June.

Global Climate Network. 2010. *Low-Carbon Jobs in an Inter-Connected World*, Discussion paper No. 3, March.

Global e-Sustainability Initiative (GeSI). 2008. *The Contribution the ICT Industry Can Make to Sustainable Development*. *A Materiality Assessment by the Global eSustainability Initiative*, prepared by Business for Social Responsibility (BSR), Apr.

Gopaul, M. 2006. *The Significance of Rural Areas in South Africa for Tourism Development Through Community Participation with Special Reference to Umgababa, a Rural Area Located in the Province of KwaZulu- Natal*, Master of Arts, University of South Africa, Nov.

Govender-van Wyk, S.; Wilson, D. 2006. *Utilisation of Commonages for Sustainable Tourism Opportunities for the Poor in Namaqualand, South Africa,* Southern Africa Labour and Development Research Unit (SALDRU) Working Paper No. 06/04.

Government of South Africa, 2009. *The National Climate Change Response Policy*, Discussion Document for the 2009 National Climate Change Response Policy Development Summit, Gallagher Convention Centre, Midrand, 3-6 Mar.

Greyling, E; Smith. R. 2008. *An Innovative ICT Solution to Steer Rural Communities to Global Understanding: a Case Study from Durban, South Africa*, 74th IFLA General Conference and Council, Québec, 10-14 Aug.

Gumede, V. 2000. *Growth and Exporting of Small and Medium Enterprises in South Africa, Some Thoughts on Policy and Scope for Further Research*, Trade and Industrial Policy Secretariat (TIPS), 2000 Annual Forum, Glenburn Lodge, Muldersdrift.

Haggblade, S. 2005. "The Rural Nonfarm Economy: Pathway Out of Poverty or Pathway In?", International Food Policy Research Institute (IFPRI), Paper prepared for the Research Workshop "The Future of Small Farms", Wye, 26-29 June.

Haggblade, S.; Hazell, P.; Reardon, T. 2002. *Strategies for Stimulating Poverty-Alleviating Growth in the Rural Nonfarm Economy in Developing Countries*, EPTD Discussion Paper No. 92, International Food Policy Research Institute and The World Bank, July (Washington, DC).

—. 2007. *Transforming the Rural Nonfarm Economy. Opportunities and Threats in the Developing World*, International Food Policy Research Institute (Baltimore, MD, Johns Hopkins University Press).

Harris, W.R. 2004. *Information and Communication Technologies for Poverty Alleviation*, UNDP-APDIP (Kuala Lumpur).

Harriss, B. 1987. "Regional Growth Linkages from Agriculture and Resource Flows in Non-Farm Economy", in *Economic and Political Weekly*, Vol. XXII, No. 1 & 2, 3-10 January, pp. 31-46.

Herrington, M.; Kew, J.; Kew, P. 2009. *Tracking Entrepreneurship in South Africa: A GEM Perspective*, Global Entrepreneurship Monitor (GEM).

Herselman M.E. 2003. *ICT in Rural Areas in South Africa: Various Case Studies*, June (Pretoria, Technikon).

Howells, M; Skip Laitner J.A. 2005. *Industrial Efficiency as an Economic Development Strategy for South Africa*, American Council for an Energy-Efficient Economy (ACEEE), Summer Study on Energy Efficiency in Industry.

India Knowledge@Wharton. 2010. *It Takes a Village: The Rise of Rural BPO*, 11 Feb. Available at: http://knowledge.wharton.upenn.edu/india/ [14 June 2011].

Industrial Development Corporation (IDC). 2009. *Trends in South African Manufacturing Production, Employment and Trade*, Department of Research and Information.

International Energy Agency (IEA). 2011. *Technology Roadmap: Biofuels for Transport* (Paris).

International Labour Office (ILO). 2008. *Promotion of Rural Employment for Poverty Reduction*, Report IV, International Labour Conference, 97th Session, Geneva, 2008 (Geneva).

—; UNWTO. 2009. *Statistical Joint Project (2007-2009) in the Area of Employment and Decent Work in Tourism Industries*, Fifth UNWTO International Conference on Tourism Statistics, "Tourism: An Engine for Employment Creation", Bali, 30 Mar. – 2 Apr.

International Monetary Fund (IMF). 2010. World Economic Outlook Database, Oct. Available at: http://www.imf.org/external/pubs/ft/weo/2010/02/weodata/download.aspx [20 Oct. 2010].

Internet World Stats. 2009. *South Africa, Internet Usage and Marketing Report*. Available at: http://www.internetworldstats.com/af/za.htm [10 June 2011].

Inveneo. 2006. *Harnessing Rural ICT for Economic Development*, presented to Frontiers of Knowledge in Science and Technology for Africa, 19-22 Nov.

Karottki, R.; Schäffler, J.; Banks, D. 2001. "Wind Energy in South Africa – Time to Implement", in *Renewable Energy World*, May-June, pp. 74-76, 82-85.

Keivani, R. et al. 2010. *Green Jobs Creation Through Sustainable Refurbishment in the Developing Countries*, WP 275, Sectoral Activities Department (Geneva, ILO).

Kelles-Viitanen, A. 2005. *The Role of ICT in Governing Rural Development*, IFAD Workshop, Rome, 15-17 Nov.

Kesper, A. 2000. *Failing or Not Aiming to Grow? Manufacturing SMMEs and Their Contribution to Employment Growth in South Africa*, Trade and Industrial Policy Secretariat (TIPS), Working Paper No. 15.

Khatri, Z ; Brohi, K.M. 2009. *Environmental Friendly Textiles – A Road to Sustainability* . Available at: http://knol.google.com/k/environmental-friendly-textiles-a-road-to-sustainability [18 Aug. 2011].

Kirsten, J.F. 1995. "Rural Non-Farm Enterprises: A Vehicle for Rural Development in South Africa?", in *Agrekon*, Vol. 34, No. 4, Dec., pp. 198-204.

—; Sartorius, K. 2002. *Farm-agribusiness Linkages in South Africa: Empowering Disadvantaged Communities through Links with Agribusiness*, Department of Agricultural Economics (Pretoria, University of Pretoria).

Klunne, W.E. 2002. *Energy Efficient Housing to Benefit South African Households*, in Boiling Point No. 48 (Enschede).

Kuiper, M.; Meijerink, G.; Eaton, D. 2006. *Rural Livelihoods: Interplay Between Farm Activities, Non-farm Activities and the Resource Base*, Contributed paper prepared for presentation at the International Association of Agricultural Economists Conference, Gold Coast, 12-18 Aug.

Kundu, A.; Sarangin, N.; Dash B.P. 2003. *Rural Non-Farm Employment: an Analysis of Rural-Urban Interdependencies*, Working Paper 196 (London, Overseas Development Institute).

Ladzani, W., Netswera, G. 2009. "Support for Rural Small Businesses in Limpopo Province, South Africa", in *Development Southern Africa*, Vol. 26, No. 2, pp. 225-239, June.

Lanjouw, P. 1999. *The Rural Non-Farm Sector: A Note on Policy Options*, Development Economics Research Group (The World Bank).

Laubscher, J. 2010. *An Evaluation of South Africa's Industrial Policy*, Economic Commentary, Sanlam Thinking Ahead.

Louw, A.; Vermeulen, H.; Madevu, H. 2006. *Integrating Small-Scale Fresh Produce Producers into the Mainstream Agri-Food Systems in South Africa: The Case of a Retailer in Venda and Local Farmers*, for Regional Consultation on Linking Farmers to Markets: Lessons Learned and Successful Practices, Cairo, 28 Jan. - 2 Feb.

Lundall, P; Maree, J.; Godfrey, S. 2008. *Industrial Structure and Skills in the Metals Beneficiation Sector of South Africa*, Research Report commissioned by Department of Labour South Africa (Cape Town, University of Cape Town).

Madzwamuse, M. 2010. *Climate Change Vulnerability and Adaptation Preparedness in South Africa* (Cape Town, Heinrich Böll Stiftung Southern Africa).

Mahony, K.; van Zyl, J. 2002. "The Impacts of Tourism Investment on Rural Communities: Three Case Studies in South Africa", in *Development Southern Africa*, Vol. 19, No. 1, Mar., pp. 83-103.

Manufacturing, Engineering and Related Services SETA (merSETA). 2010. *Sector Skills Plan: 2010/11 - 2015/16. Promoting Artisan Development for Employability*.

Mather, C. 2005. *SMEs in South Africa's Food Processing Complex: Development Prospects, Constraints and Opportunities*, Working Paper 3, Trade and Industrial Policy Strategies (TIPS).

McNamara, A. 2010. Key Drivers for Low Carbon Growth in South Africa, Findings from the Climate Change Risks and Opportunities Project, CAMCO & TIPS.

Mellor, J. 1976. *The New Economics of Growth: A Strategy for India and the Developing World* (Ithaca, NY, Cornell University Press).

—; Lele, U.J. 1972. *Growth Linkages of the New Foodgrain Technologies*, Occasional Paper No. 50, USAID-Employment and Income Distribution Project, Department of Agricultural Economics (Ithaca, NY, Cornell University).

—; Lele, U.J. 1973. "Growth Linkages of the New Food Grain Technologies", in *Indian Journal of Agricultural Economics*, Vol. 18, No. 1, Jan. – Mar., pp. 35-55.

Minister in the Presidency, Planning. 2009. *Together Doing More and Better - Medium Term Strategic Framework, A Framework to Guide Government's Programme in the Electoral Mandate Period (2009 - 2014)*, Republic of South Africa.

Ministry of Rural Development and Land Reform. 2009. *The Comprehensive Rural Development Programme Framework*, Republic of South Africa.

Mofokeng, J.L. 2008. *The Contribution of Natural Resource-Based Enterprise Income to Rural Livelihoods: A Case Study of Ikhowe Craft Enterprise in Eshowe, South Africa*, Centre for Environment, Agriculture and Development (Pietermaritzburg, University of KwaZulu-Natal).

Moshapo, S.; Hanrahan, H.E. 2004. *ICT Services for Poor Rural Community Development – What is Missing in Current Implementations?*, Centre for Telecommunications Access and Services (Johannesburg, University of the Witwatersrand).

Mukumbi, K. 2008. *South Africa's Agriculture Broad Based Black Economic Empowerment (AgriBEE) Policy: Implications from a Domestic Content Model*, Master thesis, Department of Agricultural, Food and Resource Economics, Michigan State University.

NALEDI. 2005. *Pulp and Paper Sector Summit - Resource Book*, Research Paper, Oct.

National Energy Regulator of South Africa (NERSA). 2009. *South Africa Renewable Energy Feed-In Tariff (REFIT), Regulatory Guidelines*, 26 Mar.

Nayyar, R.; Sharma, A.N. 2005. *Rural Transformation in India: the Role of Non-Farm Sector* (New Delhi, Institute for Human Development).

Ngcobo, P.; Herselman M.E. 2007. "Evaluating ICT Provision in Selected Communities in South Africa", in *Issues in Informing Science and Information Technology*, Vol. 4.

Okech, R.N.; Gumede, N.P. 2009. "Developing Rural Tourism in South Africa: A Case of Women and Technology in KwaZulu-Natal", in *The Yearbook of the Gheorghe Zane Institute of Economic Researches*, Vol. 18, pp. 113-128.

Olawale, F.; Garwe, D. 2010. "Obstacles to the Growth of New SMEs in South Africa: A Principal Component Analysis Approach", in *African Journal of Business Management*, Vol. 4, No. 5, pp. 729-738.

Ortiz, B. et al. 2009. *Potential of Hybrid PV Systems for Rural South Africa: Addressing Income Activities and Water Supply*, International Solar Energy Society (ISES) Solar World Congress, Johannesburg, 11-14 Oct.

OSEC. 2009. *South Africa, Major Business Sectors*, Swiss Business Hub South Africa (Pretoria).

Pan African Investment & Research Services (PAIRS). 2010. *A Framework/Model to Benchmark Tourism GDP in South Africa. What is the Role of Tourism in the Economy and What Drives Tourism in South Africa?*

Paper Manufacturers Association of South Africa (PAMSA). 2007. *South African Pulp and Paper Industry*, Statistical Data.

—. 2008. *Paper…The Power to Move You - A Perspective on South Africa*.

Parliamentary Monitoring Group (PMG). 2010. *2010/11 – 2012/13 Industrial Policy Action Plan*, Economic Sectors and Employment Cluster.

Pogue, T.E. 2008. *A Sectoral Analysis of Wood, Paper and Pulp Industries in South Africa*, Research Project (Pretoria, Institute for Economic Research on Innovation (IERI)).

Potgieter, T. 2008. *Renewable Energy: Harnessing South Africa's Wind Farm Potential*, 22 July. Available at: http://www.tradeinvestsa.co.za/ [09 Nov. 2010].

Prasad, G.; Visagie, E. 2005. *Renewable Energy Technologies for Poverty Alleviation - Initial Assessment Report: South Africa*, Energy Research Centre, June (Cape Town, University of Cape Town).

Quantec EasyData, *RSA Standardised Industry Database*, South Africa.

Rahman, A. et al. 2005. "ICT based Sustainable Rural Business Opportunities in Developing Countries: A Wireless-Networked RCP—RAP Approach", in *American Journal of Applied Sciences*, Vol. 2, No. 8, pp. 1256-1260.

Ranjan, S. 2006. *Occupational Diversification and Access to Rural Employment: Revisiting the Non Farm Employment Debate*, Munich Personal RePEc Archive (MPRA), Paper No. 7870, 2 Jan.

Reardon, T.; Barrett, C.B. 2000. "Agroindustrialization, Globalization, and International Development: An Overview of Issues, Patterns, and Determinants", in *Agricultural Economics*, Vol. 23, No. 3, pp. 195-205.

Reardon, T. et al. 2006. "Household Income Diversification into Rural Nonfarm Activities", in *Transforming the Rural Nonfarm Economy: Opportunities and Threats in the Developing World* (Baltimore, Johns Hopkins University Press), pp. 115-140.

Roberts, S. 2003. *Manufacturing in the PGDP: Steps to Supporting Employment Generation and Relatively Labour-Intensive Activities in the Eastern Cape*, Corporate Strategy and Industrial Development research project (Johannesburg, University of Witwatersrand).

Rogerson, C.M. 2001. "Towards a Framework for Rural SMME Development in South Africa", in M.M. Khosa (ed.): *Empowerment Through Economic Transformation* (Pretoria, Human Sciences Research Council (HSRC)), pp. 271-298.

—. 2005. *Tourism SMMEs in South Africa: A Case for Separate Policy Development?*, Trade and Industrial Policy Strategies (TIPS), Working Paper 2.

—. 2006. *LED and Route Tourism*, Briefing No. 3, LED Dissemination Project funded by CWCI – an EU-SA Partnership Programme, July.

Sanchez, D. 2006. *Socio-Economic Transformation in South Africa Black Economic Empowerment and Small, Medium and Micro Enterprises*, Working Paper No. 31 (Copenhagen, Danish Institute for International Studies (DIIS)).

Satterthwaite, D.; Tacoli, C. 2003. *The Urban Part of Rural Development: the Role of Small and Intermediate Urban Centres in Rural and Regional Development and Poverty Reduction*, Working Paper No. 9 (London, International Institute for Environment and Development (IIED)).

Scenario Building Team. 2007. *Long Term Mitigation Scenarios: Technical Summary*, Department of Environmental Affairs and Tourism (DEAT), Oct. (Pretoria).

Sen, A. 1999. *Development as Freedom* (New York).

Smith, R. et al. 2006. *Women in the Information and Communication Technology Sector in South Africa* (Pretoria, Meraka Institute).

South African Information Technology Industry Strategy (SAITIS). 2000. *South African ICT Sector Development Framework. Summary,* SAITIS Baseline Studies (Pretoria).

South African Reserve Bank. 2009. *Quarterly Bulletin No. 254*, Research Department, Dec. (Pretoria).

Southern African Clothing and Textile Workers Union (SACTWU). 2005. "Job Crisis in the Clothing, Textile, Footwear and Leather Industry", in *The Shopsteward* Special Edition, June.

Start, D. 2001. "The Rise and Fall of the Rural Non-farm Economy: Poverty Impacts and Policy Options", in *Development Policy Review*, Vol. 19, No. 4, Dec., pp. 491-505.

—; Johnson, C. 2004. *Livelihood Options? The Political Economy of Access, Opportunity and Diversification*, Working Paper 233, (London, Overseas Development Institute).

Statistics South Africa. 2001. *Large Sample Survey of the Manufacturing Industry*, Statistical Release P3002 (Pretoria).

—. 2007. *Food and Beverages Industry*, Statistical Release P6421 (Pretoria).

—. 2008. *Manufacturing Industry (Preliminary)*, Statistical Release P3002 (Pretoria).

Tacoli, C. 2004. *Rural-Urban Linkages and Pro-Poor Agricultural Growth: An Overview*, prepared for OECD DAC POVNET Agriculture and Pro-Poor Growth Task Team, Helsinki Workshop, 17-18 June.

Timm, S. 2011. *How South Africa Can Boost Support to Small Businesses: Lessons from Brazil and India*, Trade & Industrial Policy Strategies (TIPS).

Trollip, H. 2007. *South African Energy Policy & G8 Petersburg Declaration on Global Energy Security*, FES Briefing Paper 11 (Johannesburg, Friedrich Ebert Stiftung).

United Nations Conference on Trade and Development (UNCTAD). 2010. *Information Economy Report 2010 - ICTs, Enterprises and Poverty Alleviation* (New York and Geneva, United Nations).

United Nations Economic Commission for Europe (UNECE). 2002. *Towards a Knowledge-Based Economy: Regional Assessment Report* (New York, United Nations).

United Nations Industrial Development Organization (UNIDO), International Fund for Agricultural Development (IFAD), Food and Agriculture Organization (FAO). 2008. *The Importance of Agro-Industry for Socio-Economic Development and Poverty Reduction*, Discussion Paper: UN Commission on Sustainable Development, 16th Session, New York, 5-16 May.

United Nations World Tourism Organization (UNWTO). 2009. *The Bali Conference: UNWTO Findings and Evaluation*, 5th UNWTO International Conference on Tourism Statistics - "Tourism: An Engine for Employment Creation", Bali, 30 Mar. – 2 Apr.

Van Campen, B.; Guidi, D.; Best, G. 2000. *Solar Photovoltaics for Sustainable Agriculture and Rural Development*, Environment and Natural Resources Working Paper No. 2 (Rome, Food and Agriculture Organization (FAO)).

Verick, S. 2010. *Unravelling the Impact of the Global Financial Crisis on the South African Labour Market*, Employment Working Paper No. 48, Employment Analysis and Research Unit (Geneva, ILO).

Vermeulen, H.; Kirsten, J.; Sartorius, K. 2008. "Contracting Arrangements in Agribusiness Procurement Practices in South Africa", in *Agrekon*, Vol. 47, No. 2, June, pp. 198-221.

Viljoen, J.; Tlabela, K. 2007. *Rural Tourism Development in South Africa - Trends and Challenges*, Human Sciences Research Council (Cape Town, HSRC Press).

Visagie, E.; Prasad, G. 2006. *Renewable Energy Technologies for Poverty Alleviation - South Africa: Biodiesel and Solar Water Heaters*, Energy Research Centre, Oct. (Cape Town, University of Cape Town).

Vlok, E. 2006. "The Textile and Clothing Industry in South Africa", in H. Jauch and R. Traub-Merz (eds.): *The Future of the Textile and Clothing Industry in Sub-Saharan Africa* (Bonn, Friedrich-Ebert-Stiftung).

Von Braun, J. 2007. *Rural-Urban Linkages for Growth, Employment, and Poverty Reduction* (Washington, DC, International Food Policy Research Institute).

Wafula-Kwake A.K.; Ocholla, D.N. 2007. "The Feasibility of ICT Diffusion amongst African Rural Women: a Case Study of South Africa and Kenya", in *International Review of Information Ethics (IRIE)*, Vol. 7.

Who Owns Whom. 2009. *SA Sector Report – Manufacture of Chemicals*, Essential Business Information, Aug. .

Wiggins, S.; Hazell, P. 2008. *Access to Rural Non-farm Employment and Enterprise Development*, Background Paper for the IFAD Rural Poverty Report 2010.

Wolf, S. 2001. *Determinants and Impact of ICT Use for African SMEs: Implications for Rural South Africa*, Paper prepared for TIPS Forum.

World Travel & Tourism Council (WTTC). 2002. *South Africa. The Impact of Travel & Tourism on Jobs and the Economy* (London).

—. 2011. *Travel & Tourism Economic Impact 2011 - South Africa* (London).

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