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**Critical analysis of institutional innovations for pro-poor rural outcomes in the Eastern  
Cape: a pluralistic approach**

**Heinrich Gerwel**

**Department of Agricultural Economics, Stellenbosch University**

## **Abstract:**

In many parts of the developing world, poverty and rurality have become synonymous. South Africa is no exception, with a high share of district municipalities with poverty rates above 60% found in rural areas, especially the former “homeland” of Transkei now part of the Eastern Cape Province. The challenge of mitigating and eventually ending the economic and social marginalisation of the rural poor in South Africa is clear. Van Rooyen and Machette argued positively for the role and contribution of the agricultural sector to growth and development in what they term ‘regional development’ in South Africa. Pluralism in approach of how to practise economics and allowing for interdisciplinary influences could prove helpful. This speaks directly to the international call for more pluralism in methods and methodologies for practitioners of academic economics. This paper aims to show that taking an epistemically reflexive approach to the practice of neoclassical (understood here as marginalist, general equilibrium) methods does not preclude a critical analysis. It thus supports Tony Lawson’s view that the chosen method for analysis should be fit for purpose, based on the types of questions posed. Ambitiously, the doctoral research this paper is based on aims to answer both an empirical and epistemological question: can agriculture be shown to contribute to pro-poor growth, and can pluralism broaden our understanding of socioeconomic phenomena?

Critical realism is of the three main ontological approaches generally employed by economists (the other being logical positivism and relativist interpretivism on the opposing ends of the meta-theoretical spectrum) that best lends itself to the revival of critical development research, so as to bring about emancipation of the marginalized, rurally based poor from the institutional and structural conditions that currently preclude them from enjoying pro-poor rural outcomes.

**JEL Codes:** **B41** - Economic Methodology; **B59** - Current Heterodox Approaches: Other;

**O13** - Economic Development: Agriculture; Natural Resources; Energy; Environment; Other Primary Products; **A11** - Role of Economics; Role of Economists; Market for Economists

**Keywords:** Critical Analysis; Agriculture; Pro-poor outcomes; Eastern Cape; Pluralism; Institutional change

## **1. Introduction**

It is generally accepted that in many parts of the developing world, poverty and rurality have become synonymous. South Africa is no exception, with a high share of district municipalities with poverty rates above 60% found in rural areas, especially the former “homeland” of Transkei now part of the Eastern Cape Province (StatsSA, 2016). Development economics is the applied version of the ‘dismal science’ that can be most closely associated with ‘critical development research’ as understood by Schuurman (2009). Rural development still attaches great importance to agriculture as the driving industry for livelihoods in small towns and non-urban spaces. The literature shows that agriculture for development has migrated from development, to agricultural economics

The challenge of mitigating and eventually ending the economic and social marginalisation of the rural poor in South Africa is clear. Van Rooyen and Machette (1991) argued positively for the role and contribution of the agricultural sector to growth and development in what they term ‘regional development’ in South Africa. Todes and Turok (2017) refer to a robust international debate about how best to tackle spatial inequalities within nations and regions. They conclude that enhanced local institutions involving private sector and community stakeholders are essential for spatial policies (such as rural development) to respond to the specific challenges and opportunities encountered in each place. Agriculture plays a key role here as the Eastern Cape has the largest proportion of households engaged in some form of agricultural activity at 27.9% according to the latest Community Survey (StatsSA, 2016). However, formal, large-scale agriculture has shed employment at a rapid rate and small-scale agriculture’s modest contribution to Gross Domestic Product has declined even further since the start of deregulation in the 1980s (Mbongwa, Vink and Van Zyl, 2000; Vink, Kirsten and Van Zyl, 2000).

These seemingly insurmountable challenges require innovative research strategies that exploits the available knowledge resources at our disposal to the best of our abilities so as to bring about positive economic changes to the objective participants of the economic or production systems being analysed. Pluralism in approach of how to practise economics and allowing for interdisciplinary influences could prove helpful (Heise, 2017; Dow, 2007; Ruttan, 1998; Von Mises, 1962). This speaks directly to the erstwhile call of Van Zyl (1988), pleading for more pluralism in method for practitioners of agricultural economics. This paper aims to show that taking an epistemically reflexive approach to the practice of neoclassical (in its marginalist, general equilibrium guise) methods does not preclude a critical interpretation, where one

employs this type of critical reflexivity as a form of retroduction<sup>1</sup>. It thus supports Lawson's (2003) view that the chosen method for analysis should be fit for purpose. Rohne Till and Anderson (2017) conducted a survey of the origins of prominent views of the role of agriculture in development theory. Interestingly, they noted that it appears that the discussion of agriculture in economic development have shifted from being rooted in Development Economics earlier in the period of their analysis, to that the recent attention to agriculture in developing countries is increasingly driven by Agricultural Economics. The South African literature seems to have followed a similar trend, with strong development focus in the Agricultural Economics corpus. This research intends to be a contribution to this body of literature<sup>2</sup> (Greyling, 2012; 2019; Greyling et al, 2018; Vink, Van Rooyen and Karaan, 2013; Van Zyl, Binswanger and Thirtle, 1995; Kirsten, 1994).

Ambitiously, the research this paper is based on congruent aims to answer both empirical and epistemological questions. Are there ways in which the agricultural sector has and can contribute to pro-poor, and more inclusive rural outcomes in the Eastern Cape Province of South Africa? And secondly is there a more pluralist, yet rigorous way to conceptualise the role of agricultural growth in and for development.

I contend here that critical realism<sup>3</sup> is of the three main ontological approaches generally employed by economists (the other being logical positivism and relativist interpretivism on the opposing ends of the meta-theoretical spectrum) that best lends itself to making a part of the revival of critical development research (Schuurman, 2000; 2009). Since the mid-1980s, the hegemonic position held by the so-called grand development theories have been challenged by what Schuurman refers to as "...a loose set of partially descriptive, partly heuristic notions like civil society, social capital, diversity and risk" (Schuurman, 2000: 7). He does not however see how these new relativist notions can reconcile their own aims with those of creating 'freedom', as defined by Sen (1999). These criticisms of development studies, and in this instance, development economics, should invigorate the discipline to "...re-establish its continued relevance to **study and to understand** processes of exclusion, emancipation and development" (Schuurman, 2000: 19; emphasis added). This is done to bring about, not praxeologically, but recursively and in a dialectical manner, emancipation of the objects of analysis (the

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<sup>1</sup> Downward and Mearan (2007) looked at mixed-methods triangulation as a manifestation of retroduction, and explore how disciplinary boundaries may be broken down so as to establish an interdisciplinary social science. .

<sup>2</sup> There is also the contribution to the South African agricultural productivity literature (see Liebenberg et al, 2019; Conradie...\*\*\*\*)

<sup>3</sup> Gay (2007: 15) also posits Neo-Austrian and Keynesian approaches as examples of open-system systems of analysis to examine whether the concept of reflexivity "...helps transcend the methodological distinction between modernism and postmodernism in development economics".

marginalized, rurally based poor) from the conditions that currently preclude them from enjoying pro-poor rural outcomes.

The paper, following this introduction, relates the research design and process of ongoing doctoral work in the department of Agricultural Economics at Stellenbosch University by outlining the research problem and rationale, followed by the aims and objectives of the research. Section three positions this study in the literature and creates a theoretical framework. Section three Section four describes the ontological source to the epistemic search for a critical analysis. Section five outlines the analytical framework and research design and section six concludes.

## **2. Architecture and design of the research**

### ***2.1 Problem statement and rationale***

The importance of agriculture and rural development generally is well recognized in pro-poor development strategies historically and significantly so in South Africa after formation of the Union of South Africa in 1910 (Greyling, Vink and Van der Merwe, 2017). These historical policies had institutionalised social exclusion and active under-development based on the unscientific concept of “race” at their hearts. With high levels of rural poverty, an unacceptable level of income inequality (World Bank, 2018) and increasing levels of unemployment that is mostly structural, South Africa and the provincial government in the Eastern Cape needs a way to implement at scale, effective interventions that support and strengthen initiatives that address the issues constraining the potential for inclusive pro-poor growth in the rural areas of the province at their root. It thus requires promoting a development strategy that is deliberately biased in favour of improving the livelihoods of the rural poor, whilst not undermining aggregate growth of the broader economy. Such a strategy would entail the removal of institutional and policy induced biases against rural areas, and prioritise effective implementation towards greater efficiency of agricultural production systems. The so-called former “homelands” specifically lack the levels of service delivery and economic potential of the metropolitan areas due to a lack in investment in infrastructure along with shedding of jobs in commercial agriculture and light manufacturing (Black, Gerwel and Hasson, 2014; Black and Gerwel, 2014).

Since numerous empirical studies show the significance of improving multi-factor productivity (MFP) growth in agricultural production, the thesis interrogates whether the dualistic South African agricultural sector has shown the removal of institutional and technical constraints in rural areas, so that the entire sector in South Africa generally, and the Eastern Cape specifically can promote inclusive and pro-poor outcomes for historically marginalised rural livelihoods.

Employing Hayami and Ruttan's induced innovation framework as heuristic device, informs the strategy of analysing technical change (in the form of MFP change at magisterial district level), as well as institutional innovation (in the form of the NWGA's intervention with emerging wool growers) in the Eastern Cape Province, for the commercial and "emerging, black" farming spheres of the dualistic agricultural environment.

### ***2.2 Research Questions and central premise:***

Based on these stylized facts, the following questions emerge. Firstly, are there innovative ways in which agriculture could contribute to pro-poor and inclusive economic development in these marginal and marginalized areas? This primary or central enquiry, which slightly rephrased also encompasses the main premise or proposition of the thesis, yields the following secondary questions:

1. Can the abovementioned dualism in the agricultural sector nationally be contextualized for the Eastern Cape in terms of public support institutions so as to problematize the central research question?
2. What are the lessons for the 'emerging' agriculturalists and policy makers from productivity growth rates in the commercial farming regions of the province and can a growth trajectory for emerging agriculture be proposed from such lessons and comparisons?
3. What institutional innovations are required for the wool value chain, specifically in the tribal authority areas of the province, to enable other 'emerging' agriculturalists to exploit new opportunities in the international market or expand into existing local ones?
4. Does the chosen research design and analytical framework provide a novel, yet rigorous way of synthesising the generated research results so as to promote the use of methodological pluralism?

### ***2.3 Propositions as hypotheses:***

The central research question leads to the main proposition:

*Agriculture can contribute to pro-poor rural outcomes, under certain enabling institutional conditions.*

The secondary questions yield specific hypotheses or propositions, which are:

1. The framework created for the empirical analyses enriches the understanding of the underlying phenomenon of rural-based agricultural challenges, including exclusion, and how the thesis aims to address it through empirical work.
2. The generation of disaggregated farm-based MFP results can provide valuable policy, in the form of development strategy, insights in the province that allows for deductive hypothesis testing.
3. An institutionally focussed value chain and cluster based analysis can provide insights as to how the industry can be made more inclusive and sustainable through inductive interpretation of the results.
4. The chosen research design and analytical framework provide a novel, yet rigorous way of synthesising the generated research results and promotes the use of methodological pluralism in agricultural economics as discipline.

### **3. Literature study towards theoretical and analytical frameworks**

The starting premise of a critical analysis is challenging accepted orthodoxies. The attempt here, is to reconcile, or synthesise different traditions under a unifying heuristic, Hayami and Ruttan's extended induced innovation model (1985). Generally, agricultural development, in their view, has remained outside the parlance of development economists, and technical as well as institutional change has been treated as exogenous to the development process (Hayami & Ruttan, 1971). They differ on this point and place technical change, as a dynamic response to existing resource endowments and economic environments that shapes the context of a specific country at centre stage. Hence, they state the following:

The design of a successful agricultural development strategy in each country or region involves a unique pattern of technical change and productivity growth in response to the particular set of factor prices which reflect the economic implications of resource endowments and resource accumulation in each society (ibid: 2).

They go further by acknowledging that agricultural development through technical change occurs within a complex pattern of institutional changes so as to create a socioeconomic environment that enhances the abilities of individuals, private firms and public entities to respond effectively to these new technical opportunities. Most importantly, they make two statements that underlie their theory and informs the premise of the present study. Firstly, they highlight the explicit recognition that the state, or public sector has an important role to play in the process of agricultural development and secondly, the need to recognise that there are

multiple paths through which technological change can occur (Hayami & Ruttan, 1970; Ruttan, 1985).

Hayami and Ruttan explicitly stated later that their purpose in trying to gain understanding of “...the role of resource endowments and market forces in directing technical change was to be able to design the policies and institutions that would lead to more efficient paths of technical change”, once again highlighting the important role the public sector should play in agricultural development (Otsuka & Runge, 2011: 14).

The most important contribution of the expanded Induced Innovation Theory to economic analysis of agricultural transformation is thus treating both technical and institutional innovation as endogenous. In addition, the stylised fact that “...new insights on institutional innovation and diffusion can be obtained by treating institutional change as an economic response to changes in resource endowments and technical change” is also a crucial adaptation for the purposes of the analysis in the thesis (Otsuka & Runge, 2011: 240). However, the cultural endowments or specific institutional context needs to be acknowledged.

In a country with South Africa’s particular political economic and institutional history, the Induced Innovation Theory provides a suitable theoretical lens through which the complexities of political and socioeconomic transformation can be coherently interpreted and analysed towards a critical goal of not only understanding, but seeking caveats through which an emancipatory praxis of the marginalised rural population of South Africa can be achieved (Karriem and Hoskins, 2016; Le Roux, 2006; Gramsci, 1971).

The current research also contends, as does Ruttan (1998, in Otsuka and Runge, 2011: 319), that “[a] functional goal of the social sciences (including economics) is not just to understand human behaviour but to evaluate proposals for institutional reform and to design new and better mechanisms and institutions”. It will also be boldly and ambitiously contended that the current research is a modest contribution to the research programme attributable to their work on extending general equilibrium growth thinking in development economics, which was initiated in the mid-1980s. Its aim was to explore in greater depth what development economists should learn from scholars in the other nomothetic social sciences working in the field of development. It is also a research programme which is a proponent of incentive compatible mechanism and institutional design perspective associated with Leonid Hurwicz (1973), which is here read as being a critical break with the dichotomous juxtaposition of organic versus evolutionary forms of transformation. Ruttan makes this point strongly when discussing the mechanism design approach embodied within their induced innovation framework:

It challenges the adequacy of concepts of spontaneous order and organic and evolutionary approaches to the analysis, design, and implementation of institutional change. It breaks through the disciplinary constraints of neoclassical theory and erodes the relevance of Pareto optimality in normative economics.

Essentially, the research here spans a number of applied fields of economics. It is development focused, engaging with agriculture and its transformation (structural, social, economic and agrarian), relating multifactor productivity, institutional change and inclusive development that uses value chain analysis as a complimentary framework to the structural transformation literature generally associated with development economics as associated with Lewis' (1954) two-sector models (see also Nattrass and Seekings, 2019<sup>4</sup>). It does this from a specific ontological stance, which is highlighted and expounded on below. The aim here is not to critically engage with the literature on which each of the four papers are framed within, but to provide an overarching theoretical or literature roadmap, through which the substantive papers are to be synthesised using the abovementioned heuristic. Van Zyl (1989: 6) espoused the benefits associated with methodological pluralism in agricultural economics, specifically calling for this pluralism together with "...substantive diversity and eclecticism..." within the field. Shiela Dow (2007) examined the burgeoning evidence and arguments, for variety in economics at different levels, and a range of issues which arise. She concluded that

...the growing plurality in mainstream theory and evidence, prompted by the desire to capture more of the complexity of the economy, raises questions about the sufficiency of mathematical formalism as a methodological approach. In other words, there is room also for non-formalist argument, with the mainstream methodological approach only one of a range of possible approaches (Dow, 2007: 26).

In a recent article making an argument for seeking unity in diversity of heterodox approaches through a common focus on political economy, Stilwell (2019) sees progress as more likely to

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<sup>4</sup> Nattrass and Seekings (2019) return to the work of Lewis(1954), who proposed a dualist model of economic development in which 'surplus' (predominantly underemployed) labour shifted from lower to higher productivity work. In practice, historically, this meant that labour was initially drawn out of subsistence agriculture into low-wage, labour-intensive manufacturing, including in clothing production, before shifting into higher-wage work. While this development strategy has become unfashionable in the twenty-first century, the authors challenge the prevailing development wisdom about productivity growth and upgrading. They make the case that labour-intensive growth remains relevant and is essential for inclusive development in surplus labour countries, especially in South and Southern Africa.

result from embracing a pluralist method and pedagogy, as well as pursuing constructive interdisciplinary links.

This engagement with pluralism is done so as to show reflexivity. Some research programmes treat 'reflexivity' as a methodological basis for enhancing objectivity, whereas others consider it to be a critical weapon "for undermining objectivism and exposing methodological 'god tricks'" (Lynch, 2000: 26). Lynch goes further to state that the ethnomethodological version of reflexivity is associated with a particular research programme that appeals to some social scientists, such as the abovementioned interpretivists, and not others, such as the structuralist functionalists. According to this version, investigations of reflexive organizations of practical actions can lead to deep sociological insight. Rather than an abstract concept that is to be a desired virtue for researchers, reflexivity can be seen as an unavoidable feature of the way actions (including actions performed, and expressions written, by academic researchers) are performed, made sense of and incorporated into social settings. However, this simplistic view is elaborated on by Czyzewski (1994), who feels that the acceptance of the notion of reflexive actors does not axiomatically lead to reflexive action.

To illuminate interpretation of this concept within the current research, allow me to begin by saying I feel that 'reflexivity' refers to the awareness of one's own biases or preconceived notions with the aim of "a full understanding of the researcher, the researched and the research context' (Rose, 1997: 305). Kapoor's (2004: 644) discussion of the work of Spivak demanding "vigilant self-implication and painstaking, ethical engagement" recognizes the need to take cognizance of "unequal power relations" when creating a narrative of the Developing World<sup>5</sup>. The important point to ponder at this juncture is that this narration does not take place under 'laboratory conditions', but functions within geopolitical institutions that circumscribe what, and how, this narration is done. Lynch (2004) lists a large number of ways in which reflexivity can be interpreted, but more importantly, the following point arises from that exhaustive exercise:

Each of the reflexivities in my inventory – mechanical, substantive, methodological, meta-theoretical, interpretative and ethnomethodological – involves some sort of recursive turning back, but what does the turning, how it turns, and with what

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<sup>5</sup> Kapoor (2004: 627) is very concerned with (as is Gayatri Spivak) how our (as academics researchers or development practitioners) representations of marginalized groups in the Developing World are directly and intimately linked to our positioning in terms of culture, gender, historical and institutional background, amongst others.

implications differs from category to category and even from one case to another within a given category (Lynch, 2004: 34).

Furthermore, Lynch says that reflexivity is frequently associated with radical, anti-objectivistic programmes, but many conceptions of reflexivity support rather than undermine more conventional programmes of empirical research. Soros (2013: 315), writing in the *Journal of Economic Methodology*, asserts that in no uncertain terms:

I believe that reflexivity provides a strong challenge to the idea that natural and social science can be unified. I believe that social science can still be a valuable human endeavour, but in order for it to be so, we must recognize its fundamental differences from natural science.

According to Dowling (2008), epistemological reflexivity where researchers are required to ask questions of their methodological decision making and are encouraged to think about epistemological decisions regarding the research and its findings, provides a broader definition. The research outlined below acknowledges and seeks to contribute to the project of a reflexive and pluralist economics through the choice of a mixed methods research design, combining quantitative and qualitative data analyses. Each paper is introduced and its main theoretical outline briefly discussed.

***Paper one: Critical analysis of institutional innovations for pro-poor rural outcomes in the Eastern Cape: a pluralistic approach***

Tautological as it may seem, the explanation here is for the current paper being presented! This paper aims to show that taking an epistemically reflexive approach to the practice of neoclassical (understood here as marginalist, general equilibrium) methods does not preclude a critical analysis. It thus supports Tony Lawson's view that the chosen method for analysis should be fit for purpose, based on the types of questions posed. Ambitiously, this paper aims to answer an epistemological question: can pluralism broaden our understanding of socioeconomic phenomena within the context of agricultural production systems, understood through value chain and productivity analyses?

***Paper two: Dualisms and transformations in South African agriculture: institutional changes and the Eastern Cape agricultural support framework***

The paper provides the context within which the productivity growth in the commercial farming areas, as well as the interventions to link emerging woolgrowers to the formal agribusiness value chains are to be understood in the following quantitative and mostly qualitative analyses respectively in the two papers that follows. It also provides a theoretical/analytical framework to the thesis as a body of work within the induced innovation research programme at large.

Further, it sketches a background to the dual agricultural system in South Africa historically and focusses on the commercial agricultural regions. It then describes this dualism, in terms of economic, institutional and political conditions prevalent in the study area, the Eastern Cape and how these factors influenced patterns and mechanisms of agricultural support (Aliber and Hall, 2012; Black and Gerwel, 2014) as institutions (Giddens, 1979; North, 1981; 1990).

The main objective is to sketch the theoretico-conceptual framework for the quantitative and qualitative empirical papers that follow. It asserts that value chain thinking can contribute to the inclusive growth debate and the structural transformation literature more broadly.

***Paper three: Mapping multi factor productivity growth in the Eastern Cape agriculture: technical change over fifty years.***

Disaggregated productivity analysis has only been done for the Western Cape (Conradie et al, 2009). This is done here for the commercial regions of the Eastern Cape, so as to test a number of hypotheses empirically. Mainly, it aims to test whether the fastest growing regions specialised in the dominant provincial products of sheep and wool.

These results are used to test the hypothesis that the districts with the highest average MFP growth rates have an output mix dominated by sheep and wool production, as opposed to wine and deciduous fruit production, the dominant agricultural products in terms of value in the Western Cape. This analysis addresses the technical change component of Hayami and Ruttan's recursive induced innovation model. The reasoning here acknowledges the findings of Olmstead and Rhode (1993; 2009) that induced technical innovation does not reproduce to lower levels of aggregation. However, as is asserted in Chapter Two (and later in Chapter Six), the purpose of employing induced innovation thinking as a heuristic device is not to test whether the technical change component of the pattern model of induced innovation. It is to help create a theoretically linked analytical framework that allows for a critical and reflexive engagement

with the research as process. And, since agriculture (and land affairs) is a provincial competency, a disaggregated productivity analysis is required, since differences in agroecology are masked by using national productivity analyses for informing provincial policy (Conradie et al, 2008). Furthermore, seeing innovations that impact on TFP as either mechanical or biological mask more than it illuminates realities faced by the rural poor.

***Paper four: Conceptualising a pro-poor and inclusive wool value-chain: towards fostering sustainable rural livelihoods for the former Transkei in the Eastern Cape Province of South Africa***

This paper reports on a poverty and pro-poor focused value chain- and cluster analysis, that aims to interpret whether (and how) the National Wool Growers Association's (NWGA) small scale development programme enabled (or constrained) its participants to be integrated into the formal (or tight) value chains in the wool industry. Value chain mapping and analysis, based on the frameworks of Webber and Labaste (2010) and Bolwig et al (2010) and the applications of Porter's Competitive Diamond and clusters (Porter 1990; 1998) will be used to structure the analysis (see also Kaplinsky, 2015; World Bank, 2009; Ponte, 2009).

#### **4. Ontological source of an epistemic search**

Orthodox or mainstream economics is often criticised for not being explicit about its ontological underpinnings, sometimes even for seemingly not contemplating it at all. The Critical Realist ontological perspective informs the analytical framework employed here (Bashkar, 1978; Sayer, 1992; Archer, 1995; Lawson, 1997). Critical realism is a series of philosophical positions on a range of matters including ontology, causation, structure, persons, and forms of explanation. It situates itself as an alternative paradigm both to 'scientific' forms of positivism concerned with regularities, regression-based variables models, and the quest for law-like forms, as is prevalent in orthodox or mainstream economics; and also to the strong interpretivist or postmodern turn which denied explanation in favour of interpretation, with a focus on hermeneutics and description at the cost of causation that is prevalent in sociology and anthropology. Critical realism can be seen as combining a realist ontology with an interpretive epistemology (Bhaskar 1998b; Archer, 1995); although a real world exists, one's knowledge of it is socially constructed and fallible (Bygstad and Munkvold, 2011). This is a view that informs

the strong heterodox critique of ‘mainstream economics’ according to Tony Lawson (1997, 2003), who states that there are considerable doubts about the capacity of many of the strands of the discipline to explain, or even always to address, real world events or to facilitate policy evaluation. Such problems, he asserts, especially beset the “rather dominant ‘orthodox’ project”, that centres on “econometrics and formalistic economic theory” (Lawson, 1997: 3). Fleetwood (2001) concurs with Lawson and argues that the widespread use of functional relations and laws in economics is misconceived, stemming from the inappropriate use of a deductivist mode of theorising; an empirical realist ontology; and a notion of causality as mere regularity or constant conjunction, all of which are associated with functional relations and laws as derived mathematically in the physical sciences.

Not only does critical realism identify the cause of this perceived misconception, it importantly sustains an alternative causal/explanatory mode of theorising underpinned by a stratified ontology and a notion of causality as powers that generate explanatory mechanisms. Lawson (1997) further asserts that instead of following a set order, effects arise due to the interaction between social structures, mechanism and human agency, echoing the idea of “duality of structure” within Giddens’ theory of structuration<sup>6</sup>. Alternatively, it can be stated that critical realism seeks to chart a course between voluntarism and determinism, or tackle Giddens’ “duality of structure” (see Gerwel, 2010). The link discussed here is illuminated by Lewis (2000: 250) who states that,

“[a]t the heart of the critical realist analysis of the ontology of the socio-economic world lies its account of the relationship between social structure and human agency. Social structure and human agency are held to be recursively related; each is both a condition for and a consequence of the other”.

Furthermore, people constantly draw on social structures in order to act and in acting they either reproduce or transform those structures (see Giddens, 1984; Le Roux, 1984; Desler, 1989). Critical realists further maintain that progress (or development in the context of economics) is possible because the intransitive dimension of reality (enduring structures and processes, understood in this context as ‘institutions’) provides a point of reference, against which theories can be evaluated for their usefulness as heuristic devices (Bhaskar, 1978; Lawson, 1997).

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<sup>6</sup> For an application of the theory of structuration to economic and social policy mechanisms, see Gerwel and Le Roux (1984). Simply stated, social structure and human agency can be conceived as follows: “[a]s human action can be constrained or enabled by structural properties, in the same light, reforms of these structural properties can be both constrained and enabled by individual agency of influential human actors” (Gerwel, 2010: 26).

Finally, for critical realists generally, and for this paper particularly, the ultimate goal of research is not to identify generalisable laws through deductive inference (positivism) or to identify the lived experience or beliefs of social actors inductively (interpretivism); it is to develop deeper levels of explanation through identifying mechanisms that, in this study, provides a deeper understanding of how pro-poor rural outcomes, agricultural productivity growth and institutional factors as structures interact through the agency of different stakeholders in the agricultural political economy (Day, 2017; McEvoy and Richards, 2006; Le Roux, 2006; Giddens, 1976).

Causal mechanisms have the potential to make an impact, but the actualisation of the mechanism is dependent upon the variable conditions in which the mechanism operates. Lawson (2003) further asserts that in terms of explanatory value, it is more appropriate to think in terms of the tendencies that are produced by underlying causal mechanisms, than in terms of empirical generalisations within a logical positivist framework, ordinarily associated with economics as science. Gay (2007: 37) asserts that removing the ‘...confusion and incoherence bred of deductivist closed-system economics is among Lawson’s principal aims’. To clarify the distinction, ‘deductivism’ is not the same as deduction, a closely-related but distinct type of argument whereby a set conclusion must follow from a given set of premises. Deductivism adds to deduction the idea that general laws can be assessed by examining specific instances. The closed system approach and negation of the recursive nature of knowledge production, points on which this thesis agrees with heterodox scholars, that orthodox development economics research can adopt as has been done by the agricultural economics fraternity. It is thus asserted that there are distinct benefits of epistemological and methodological pluralism. The idea here is thus not to attempt to supplant the deductive empirical method associated with economics (McEvoy and Richards, 2006; Dow, 2003; Olsen, 2002), but to enhance the analysis with inductive premises that informs the analytical framework and create deeper and broader understanding of complex mechanism within which economic systems operate. The ultimate goal is to find ways, through rigorous (social) scientific interrogation, that the people of the rural or tribal authority areas of the Eastern Cape Province can be assisted to create institutional conditions under which they can use the cultural and resource endowments at their disposal.

#### ***4.1 Epistemological concerns addressing critiques of an empirical nature***

Critical realism has received ample treatment in terms of philosophy and social theory. However, the empirical work based on this approach has been limited, in economics- and social science research in general (Bygstad and Munkvold, 2011). A review on the occurrences of critical realism in social science publications by de Vaujany (2008), from 1979-2006 found that less than 5 % of the published papers included fieldwork, either qualitative or quantitative;

limiting the empirical value associated with the approach. An explicit treatment of this seemingly neglected component of critical realism in economics (Dow, 2003), frames her discussion as follows. Critical realist economists, like Lawson, present their arguments as being in support of an approach to economics rather than a specific methodology. This suggests that the approach can support a range of methodologies. The chosen approach is one which "...puts the focus on ontology first and epistemology second, with ontology determining epistemology" (Dow, 2003: 26). How knowledge is constructed, thus depends on the nature of the subject matter being researched. She further asserts that critical realism can be seen as the dialectical synthesis which emerges out of the thesis of logical positivism and the antithesis of constructivism. Within the constructivist critique of the logical positivist paradigm, associated with Milton Friedman's instrumentalist notion of positive economics (see Gerwel, 2010: 32-39), logic and understanding of facts were seen as specific to particular paradigms or research programmes (Kuhn, 1970; Lakatos, 1970).

From mainstream economics it takes the idea that empirical regularities tell us something, but unlike mainstream economics, these regularities are seen as the starting-point for theory rather than the end-point, as prediction. From constructivism, critical realism takes the understanding that there is no such thing as objective 'facts', only socially-constructed knowledge of the world (Dow, 2003:27).

Because of its open-system ontology, whereby the real is not fully manifest in the empirical, critical realism aims to build up knowledge of the mechanisms at work at the level of the real, even though we do not have direct access to them. We can never be sure that our knowledge is true – theory is fallible – but we can construct arguments in favour of one theory over another, or considering a thematic scheme that is most appropriate as a heuristic device in explaining the mechanism through which events are shaped within the economic systems, under prevailing contexts, within specific institutional arrangements.

Heavily influenced by the view of Ruttan (1998: 25), stating that his own sense relating to the "...most significant advances in knowledge about economic development will continue to emerge from research conducted at the micro-level", the current research aims to be critical of the current status quo, challenging dominant modes of inquiry towards creating a more emancipatory and critical system of knowledge production.

## 5. Conclusion

Conradie et al, drawing on Olmstead and Rhode (1993; 2009) further asserted that Hayami and Ruttan's Induced innovation Hypothesis does not hold up to scrutiny at a more disaggregated level. However, this reading neglects to acknowledge that even though the technical change work they did in comparing the United States and Japan and their respective development paths does not hold up to scrutiny at a disaggregated level, the later recursive pattern model can still be used as a heuristic theoretical framework that acknowledges the importance of institutional change, cultural and resource endowments in influencing the level of technical change in an endogenous manner in general equilibrium analyses.

The majority of research on induced innovation focus on the technical change component of the recursive model discussed above. Seeing the institutional and technical innovations as well as cultural endowments as equally important endogenous processes in economic development is an important extension of general equilibrium analysis (Hayami and Ruttan, 1984). Hayami and Ruttan further see the importance of social science knowledge in the supply of institutional change, similar to how natural scientific research supply mechanisms for bringing about technical change. Taking a critical perspective of what development, and underdevelopment as understood by Rodney (1972) is, this research sees bringing about pro-poor rural outcomes as encompassing, but not being reduced to, better economic and income generating opportunities for the rural inhabitants of the Eastern Cape. Development is also, drawing from Hayami and Ruttan's corpus, again, multifaceted, and is highlighted by a "...dialectical relationship among changes in resource and cultural endowments and technical and institutional change influence the rate and direction of social, political, and economic development" (Ruttan, 2006, in Otsuka and Runge, 2011: 318).

Frans Schuurman (2000), in an extremely thoughtful *Third World Quarterly* article, sees this abovementioned contribution of his as:

[a]n attempt to analyse the most important reasons for the loss of the central paradigms in development thinking. It tries to assess the importance for development studies of several postmodern, post-development and globalization-inspired notions and insights (Schuurman, 2000: 7).

Since the mid-1980s, the hegemonic position held by the so-called grand development theories have been challenged by what he terms "...a loose set of partially descriptive, partly heuristic notions like civil society, social capital, diversity and risk" (Schuurman, 2000: 7). He does not however see how these new notions can reconcile their own aims with those of creating

‘freedom’, as defined by Sen (1999). As cited in the introduction, Schuurman is of the opinion that these criticisms of development studies requires should invigorate the discipline to “...re-establish its continued relevance to **study and to understand** processes of exclusion, emancipation and development” (Schuurman, 2000: 19. Emphasis added).

I see this as a call for reflexive evaluation of the aims<sup>7</sup> of development studies, and an establishment of “...the awareness that only with universal morality of justice is there a future for humanity” (Schuurman, 2000: 19). The perceived move from the hegemonic dominance of neoliberal ideals and conceptions of development is indicative of the systemic problems associated with global corporate capitalism’s current crisis. What must then not be forgotten by us as Third World development agents<sup>8</sup> is the issue raised by Kapoor (2004: 644) relating to the ‘subaltern’. Even though, as relatively underdeveloped (in global terms) individuals, we must remain conscious of the fact that

...our representations cannot escape othering, it argues for us to be scrupulous in so doing, especially in the case of unequal power relationships, i.e. when representing the West’s [North’s] other (the Third World) and the Third World’s [South’s] other (the subaltern).

BY posing the questions highlighted above, the research this paper is based on congruent aims to answer both empirical and epistemological questions. Are there ways in which the agricultural sector has and can contribute to pro-poor, and more inclusive rural outcomes in the Eastern Cape Province of South Africa? And secondly is there a more pluralist, yet rigorous way to conceptualise the role of agricultural growth in and for development. The answer to the first question is an empirical one; however, I would assert that the answer to the second is a resounding yes.

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<sup>7</sup> According to Hoff and Stiglitz (2001: 428), “[f]ifty years ago increases in inequality were seen not only as a natural accompaniment of development (Kuznets 1955) but as actually facilitating development (Lewis 1954). Today we recognize that not only are such increases in inequality not necessary but that they may actually be detrimental to growth—by increasing agency costs in credit and land rental markets, by tending to lead to political regimes that restrict access to education and to markets, and by exacerbating social conflicts”.

<sup>8</sup> “...those of us involved in the field of development (as academics, researchers or development workers)” (Kapoor, 2004: 627).

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