

GOVERNANCE FOR FOOD SECURITY UNDER CLIMATE CHANGE: STRATEGIC SHIFTS FOR THE FOOD RETAIL SECTOR IN BRAZIL AND SOUTH AFRICA¹

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ABSTRACT

Governance in the food system has become a key topic of discussion in light of the 2007-08 food price crisis. Of special importance has been the shift to include the role that non-state actors are likely to play in achieving food security under global environmental change (GEC). This paper aims to compare private sector food system governance trends in two emerging economies, Brazil and South Africa. It focuses on practices around adaptation, an area largely neglected in climate change discussion, yet a critical factor in coping with the societal consequences of GEC. This study identifies several processes, particularly within the retail sector, that could indicate mechanisms through which 'good governance' can be translated into practice.

INTRODUCTION

A dominant shift in food system governance from the public to private sector has taken place, bringing with it questions of the role that non-state actors are likely to play in food system adaptation to global environmental change (Liverman et al 2009). Food security is underpinned by the system through which food is produced, processed, distributed, sold and consumed and is thus threatened when this food system is stressed (Gregory et al 2005). Over the past decade the number of undernourished people worldwide has steadily climbed upward, exacerbating the problems of an already fragile global food system. The impact of global climate change is expected to be a major additional stressor over the coming years (FAO 2009).

The 2007-08 global food price crisis, followed by the financial crisis in 2008, has led to many discussions around governance issues and strengthening governance mechanisms for world food security (FAO 2009). At the time of writing, riots in Maputo have broken out over an increase in the price of bread, sparking a fresh wave of concern over the stability of food prices as producer countries face increasing environmental and economic uncertainty. Under these pressures, the role of business in food security has been identified as vital,

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resulting in a shift towards including the private sector as a key player in attaining food security goals such as the first Millennium Development Goal (MDG) of reducing poverty and hunger. One of the key documents highlighting this critical role is the UN Private sector food sustainability guide, which provides guidelines on where in the food system action is required and how businesses at all points along the value chain can contribute towards achieving sustainability in the food system with the object of global food security (UN 2009).

The role of business in climate change is a more advanced discussion, but which to date has focussed largely on mitigation strategies for lowering carbon emissions, whilst adaptation has been centred on corporate social and environmental responsibility/carbon emissions transparency (Schelling 2007). Recently, some authors have critiqued this approach and have argued that climate change is now a business problem directly affecting companies operations, not just shareholder investment, which calls for a strategist's approach rather than that of a philanthropist (Porter and Reinhardt 2007).

Combining insights from both sides of the debate, this paper provides an analysis of governance for food security under climate change in the retail sectors of Brazil and South Africa. Using an Earth System Governance (ESG) approach focussing on adaptation, it investigates the main proposals for food security governance under climate change, identifies significant steps that are being proposed or undertaken in the retail sector and compares these processes and their proposed impacts in the two countries. Through this process, it aims to start bridging the divide between theoretical concepts of governance involving the private sector and its implementation in corporate governance.

METHODOLOGY

This paper uses a two-step procedure. We first provide a synopsis of the concepts of governance and where ESG approach is located relative to traditional ideas of corporate governance. Secondly, we analyse the ongoing actions of three major food retailers in Brazil and South Africa that deal with climate change and food security issues. Our analysis is informed by the food systems group of the ESG project where they focus on food governance that is designed so as to maximize flexibility and adaptation to GEC that draws from local knowledge and institutions that facilitate adaptation at other scales (Biermann et al 2009). This is done through an analysis of company reports, websites, news articles and interviews with key informants. We then compare the findings for the two countries in order to identify trends in governance that could be used to bridge the gap between theoretical and practical conceptions of governance for food security under climate change in emerging economies.

THE PRIVATE SECTOR AND FOOD SECURITY

In order to understand better the role of the private sector in food security, one should first understand the interaction between this sector and food regimes. The first food regime started in 1870 and was orientated to production; the nation state and farmers were the main agents responsible for decisions with little influence from the consumers and no care for the environment. The outputs of production were mainly basic foods. The second food regime started in 1950 and was orientated towards consumption. Since the outputs were basic and processed foods, consumers started to influence production with their desire for durable processed foods and the power of decision-making changed to the processing companies. The

environment was a factor, but only in order to maximize profit. The third food regime from 2000 represents a major shift in power relations within the food supply chain.

With the globalization and expansion of the supermarket chains, processing companies are now forced to sell their processed products to a few major supermarket chains that exert a huge buying power in an ever more concentrated food market. Power has changed hands again and now lies with the retail sector. In this regime, the outputs are basic, processed and manufactured food products that must attend highly exigent customers worried about food safety and sustainability. Due to consumer demand, the environment has become of major importance in business strategies and companies must ensure their social and environmental sustainability. (Dixon 2003; Burch and Lawrence 2005; McMichael and Friedmann 2007; Guivant 2009).

The food security literature has developed over the past 20 years shifting the emphasis between the different sectors. Currently, the role of functioning markets as integral to food security has become increasingly recognised, and with this, the role that the private sector plays within these markets as a source of system resilience under stresses (Devereux and Maxwell 2001). It has come to recognise that companies are involved at every point of the food value chain from inputs through the retail and are thus vital actors within the structure of the food system. Due to horizontal and vertical integration, these roles are often played by different arms of the same company, resulting in immensely powerful food clusters like that of Cargill, ADM and Bunge in the grain market (Meijerink and Danse 2009).

The important role of food retailers and their influence throughout the value chain has also entered food security dialogue (Reardon et al 2003; Weatherspoon and Reardon 2003; Arda 2007). For example, their procurement policy affects what crops are lucrative and from where they are sourced. This is often based on which producers can meet their requisite quality and safety standards (Reardon et al. 2003; Arda 2007). On the other end of the spectrum, they determine what food products finally reach consumers as well as whom these consumers are, based on their location within the company's distribution network. Furthermore, the amounts of capital in these large-scale ventures, and their incentives to maintain a system in which they can continue to profit, provides the perfect opportunity for interrogating how private sector actors can contribute to the overall adaptive capacity of the food system.

THE FOOD RETAIL SECTOR IN BRAZIL

A good understanding of the history of the food retail sector in Brazil is paramount in order to grasp its current characteristics and demonstrate the developments it has undergone through constant changes and adaptations, even in times of trouble. When the concept of supermarkets first arrived in Brazil, consumers were surprised by a format where they could wander through corridors full of different products such as fruits, vegetables, meat and processed foods, all in a single location. The first supermarket was built in 1950 and by the end of 1970 there were more than 3000 stores. Even with the pressure from various economic problems such as price freezes, in the 1980s the supermarkets were already Brazil's main food distribution channel with 13646 stores spread throughout the country. (Souza, 2002)

The opening of the market started in the 1990s with the entry of major global players such as Sonae (1995), Jerônimo Martins (1999), Royal Ahold (1997) and the American giant Wal-Mart (1995), forced the national companies to compete with them. This started a series of mergers and acquisitions (among national companies and between national and

international companies) that consolidated Brazil as a target for global players in this sector (Souza, 2002).

Today, the Brazilian food retail sector is composed of more than five hundred companies, but most of the revenue is concentrated in a few major players. A survey from the Brazilian Supermarkets Association analyzing the twenty biggest supermarkets shows that the three major players (Walmart, Carrefour and Pão de Açúcar) are responsible for approximately 75% of the revenue currently topping R\$80 billion (ABRASNET 2010). In the 2009 Stores Global Powers of Retailing report, these companies placed 1st, 2nd and 106th respectively. With 85% of consumption happening through this channel, the sector is highly important for both the public and the economy of the country and we can also infer that severe impacts in its supply chain could lead to food shortages and a major loss of taxes.

Therefore, studying how climate change impacts are dealt with by these actors, and how the government includes this sector in its Climate Change National Plan, is essential for understanding food security in the country where the main strategy is the government-led 'Zero Hunger' program which provides support to around a third of Brazil's population (FAO 2009). In this document, although the issue of food security is acknowledged, the assessment of impacts and mitigation/adaption proposals only contemplate the producers.

THE FOOD RETAIL SECTOR IN SOUTH AFRICA

The Latin American food retail story that started in the mid 1990s, which featured giant waves of FDI by global multinationals such as Ahold, Walmart, and Carrefour, has only just begun in Africa and there are definite pockets growing in southern and eastern Africa (Weatherspoon and Reardon 2003; Arda 2007). According to a study by Reardon et al (2003), post-Apartheid South Africa has become the African front-runner with roughly a 55% share of supermarkets in overall food retail. South African retailing is composed of two different sectors: the informal sector comprising hawkers, small stands and spaza shops and the formal sector, which we focus on here. This formal sector consists of large format hyper and supermarkets, smaller superettes and then 'non-major' stores like convenience stores, urban counter and self-serve stores (Weatherspoon and Reardon 2003). The progression of these stores is similar to that of retailers in Argentina and Costa Rica where the format started with supermarkets and then moved to hypermarkets and then convenience stores and geographically started in high-income areas and in major cities and then moved into rural towns and townships where they also catered to middle and lower income strata (Weatherspoon and Reardon 2003).

South Africa's two top retailers, Pick 'n Pay (est. 1967) and Shoprite Checkers (est. 1979), have approximately 40% of the sector each and have also invested heavily in other African countries as well as India, Australia and the Phillipines (Reardon et al 2003). As Johannesburg Stock Exchange (JSE) listed companies, they ranked 127th and 129th respectively in the Stores global survey making them extremely important players in the South African economy. The two companies completing the large formal retail sector in South Africa are Woolworths and Spar with Massmart and Metcash being the two main wholesalers (Louw et al 2006). With growing urbanisation and a burgeoning middle class, food retailers play a significant role in the country and are prime actors in the agri-food chain for innovation around development issues (Louw et al 2006) and potentially climate change adaptation. That being said, this "rapid rise of supermarkets" has also extended into poor neighborhoods and the new trend in the region is of "supermarkets to the poor" making them

important both from a food security perspective, as well as for rural development (Weatherspoon and Reardon 2003: 1).

CLIMATE CHANGE

Anthropogenic global climate change represents one of the greatest challenges for the 21st century, both in terms of mitigation (curbing greenhouse gas emissions) and adaptation (adjusting to the projected changes that are already likely to occur). Given the scientific uncertainty still surrounding the consequences of climate change, adaptation is a particularly difficult area to tackle because it requires action now for an unknown future. However, despite these uncertainties, the Fourth Assessment Report (AR4) of the International Panel on Climate Change IPCC (Easterling et al 2008) still reports robust findings that climate change will affect all four elements of food security (availability, access, stability and utilization), although the biggest direct impact will be on agricultural production, which is what we summarise below.

As the climate changes, areas of land suitable for cultivating crops shift accordingly therefore making it necessary either to shift cultivation to another area or to cultivate a different crop more suitable to the new conditions. As this is a dynamic process occurring over many years, decision-making in this regard can be extremely difficult, and so the adaptation needs to take place throughout the supply chain. Climate change (represented in this case by rising average temperature, changes in rainfall and an increase in extreme events) is projected to have an unequal effect on global agriculture with developed countries likely to benefit from climate change due to increased productivity, whilst the developing world is likely to face negative consequences (Fischer et al 2002). Africa is predicted to suffer the most because climate change will add stress and uncertainty to crop production where many regions are already vulnerable to climate variability (Slingo et al 2005). Wheat production is likely to disappear altogether from Africa by 2080 (Fischer et al 2002) and significant reductions in maize production in southern Africa have been projected (Jones and Thornton 2003) with South Africa suffering the highest gross loss of 871, 500 tons of maize in 2055. Although maize (-28.5%) and wheat (-15.7%) are the two crops that are hardest hit in southern Africa, decreases in sugar cane (-5.5%) and soybean (-8.0%) production are also predicted to occur by 2030 (Lobell et al 2008¹).

In Brazil, a study from Embrapa (2008) shows declines by 2070 in both arable area and crop value of rice (-14,3%; -R\$530 million), maize (-17,42%; -R\$1,5 billion), cotton (-15,71%; -R\$401 million), coffee (-27,6%; -R\$1,7 billion), beans (-12,75%; -R\$360 million) and soybean (-34,86%; -R\$5,47 billion) even in the best case IPCC scenario with a temperature increase of 1.4°C to 3.8°C by 2100 (B2). Although an increase in both arable area and crop value is projected for sugar cane (+143,4%; +R\$24,3 billion) and cassava (+16,61%; +726,4 million) mainly due to new areas becoming suitable for these crops, this will not compensate for the losses from other crops and the impact that this will have on food security in the country.

CONCEPTS OF 'GOVERNANCE'

According to the United Nations Development Program (UNDP), governance is generally defined as a system of values, policies and institutions by which society organizes collective decision-making and the political, economic, socio-cultural and environmental actions occur through the interaction between state, civil society and the private sector (UNDP 2002). It further comprises the mechanisms, processes and institutions through which

citizens and organized groups articulate their individual interests, assess their differences and exercise their legal rights and obligations (UNDP 2002). This is oriented towards a particular understanding of governance and can be linked to progressive developments from a hierarchical 'management' approach to a more 'adaptive governance' (e.g. see Brunner et al 2005). However, there are various types of governance even within this interpretation, all of which are ultimately influenced by international pressures and trends (UNECA 2007). Otobo (2000) conceptualizes these as a set of concentric rings, with the outer ring being political governance providing economic orientation and infrastructure, the next ring being economic governance providing the context with corporate governance lying in the centre. As such, it draws from trends in other spheres of governance, but at the same time functions within parameters specific to the corporation such as goals oriented towards profit-generation and investment.

This is encapsulated in the more practical definition of corporate governance as "a set of relationships and arrangements between company's management, its board, its shareholders and other stakeholders" (OECD 2004: 11) although many other definitions exist (see UNECA 2007). It provides the structure and mechanisms for strengthening investor confidence by tracking company performance across a spectrum of indicators and is therefore important not only for achieving company goals, but also for the smooth functioning of the market economy (OECD 2004). The primary concern of corporate governance has been to protect shareholders from managers exercising their power to further their own interests and not those of the equity holders (Tosi 2008). However, the notion of accountability has been extended beyond these narrow interests to include those of other stakeholders (Collier and Roberts in Roussouw and van der Watt 2002). According to Roussouw and van der Watt (2002), this can be further expanded to a view of the company as a social institution that has responsibilities towards those normally excluded from the corporate vision such as the disadvantaged and the environment, putting pressure on boards to account for more than just shareholder interests.

Corporate governance can be understood to lie across a spectrum from the normative through to the more practical understanding around power-interactions and structure. Practically, especially in Anglo-Saxon terms, it is still often understood through the relationship between management and owners and innovations have largely focused on this area (e.g. Tosi 2008, Filatotchev 2008). Another version of corporate governance focusing on power relations has emerged from globalization and the birth of multinational corporations with value chains that span the globe. Gereffi et al (2005) identify five types of global value chain governance based on the three variables of transaction complexity, the ability of transactions to be codified and the capability of the supply base. The focus of this paper is, however, on the more normative end of the scale and the extension of the concept of corporate governance to include a variety of stakeholders. Initiatives like the Global Reporting Initiative (GRI) pioneered in 1997, which has generated international best practice norms around sustainability reporting and the establishment of the World Business Council for Sustainable Development (WBCSD) are examples of this shift towards an inclusive understanding of corporate governance. The development of codes of good practice has been a key mechanism behind this shift and is often country specific (see Doidge et al 2007). As individual countries face different pressures for corporate reform, innovative, adaptive and sometimes even mal-adaptive solutions are generated. In this paper we look at governance in Brazil and South Africa in order to identify certain trends towards adaptive food governance.

Our analysis stems from the ESG concept of governance, which consists of a broad and inter-related system of regulations, both formal and informal, through the participation of a diverse network of actors whose main objective is to guide and direct the formulation of a normative context of sustainable development for the prevention, mitigation and adaptation to global environmental change (GEC). The governance process is analyzed from the perspective of the interrelated problems of the *architecture* involved, the role of *agents* in the structure, the importance of *adaptation* to environmental changes, the need to ensure *accountability* and the examination of ways of *allocation* (Biermann et al 2009). ESG has its foundations in systems thinking which is employed when addressing “complex problems with multi-causality resulting from interactions among interdependent components” (Ericksen 2008: 237). As food systems are characteristically entities in which human and natural systems interact, Ericksen (2008) suggests that food systems can best be conceptualized as socio-ecological systems (SEs). This frames environmental change consequences for food systems in the context of socio-economic and political change in order to understand the effects of the multiple stresses that interact with food systems, which can sometimes make them or their components vulnerable (Ericksen 2008). Although a systems approach deals with the complex nature of food systems, it raises a related issue of defining the historically contested concepts of system vulnerability, adaptive capacity and resilience.

In this paper, the ‘*adaptiveness*’ element of ESG is of particular interest because it is oft overlooked due to the difficulties associated with defining what adaptive capacity is. Here, we define adaptive capacity as an element of system resilience, which allows it to change and thus cope with a *future* stress like climate change rather than to stresses that it currently faces, which make it vulnerable in the present. The ability to undergo the changes required to maintain food system resilience under future impacts will include an ability a) to adjust to a change, b) to buffer potential damages limiting its ability provide food security, and c) to take advantage of opportunities offered by this change (IPCC 2007). Adaptive capacity is the most dynamic element of vulnerability because it is where interventions can take place through strategic management and the anticipatory creation of new structures, policies and mechanisms to cope with projected changes. It is also where ongoing adaptive learning occurs at multiple levels. ESG combines these systems concepts and applies them to holistic thinking around governance. Recent work by Bohle et al (2009) on the informal rules governing the urban food sector in Dhaka, Bangladesh combines the concept of adaptive capacity with ESG and has the following definition of adaptive food governance:

“Food governance can be defined as the interrelated and increasingly integrated systems of formal and informal rules, rule-making systems, and actor-networks at all levels of the food system (‘from farm to fork’) that are set up to steer food systems toward adaptability and resilience, within the normative context of food security and food as a human right. Adaptive food governance, from this perspective, has to be based on such rules, rule-making systems, and actor-networks that can tackle the problems of complexity, uncertainty, fragmentation, and violence of vulnerable food systems under the impact of ‘double exposureⁱⁱ’” (Bohle et al 2009: 53).

However translating concepts like adaptive capacity from systems thinking to the more practical focus of corporate governance is difficult. In this paper, we therefore aim to identify concrete examples where private sector responses to vulnerabilities in the food system can be indicative of adaptive capacity and illustrate how these adaptive food

governance trends could be further developed. In the next section, we set out current practices and processes in the South African and Brazilian food retail sectors that can be said to underlie adaptive capacity and thereby identify mechanisms through which this translation of ESG can be incorporated in the more general understanding of good corporate governance by dealing with the critical issue of ensuring food security under climate change.

GOVERNANCE IN THE FOOD RETAIL SECTOR

There are interesting elements of contrast between the Brazilian and South African corporate governance, which significantly impact adaptive strategies in the food retail sector. Here we outline some of the key features that define each country's corporate governance strategy and how well equipped it is for dealing with climate change and food security pressures adaptively.

From 1950 to 1990, the Brazilian economy was centered on the domestic market and the government was the main direct investor and regulator of private investments. After 1990, the opening up of Brazilian markets and the privatization of many government-owned companies attracted international investors that brought different governance models and questioned the ones that were traditionally used in the country. The economic scenario became a lot more competitive, and most of the companies saw the adoption of governance structures as a mean to increase corporate performance (Rabelo and Vasconcelos 2002).

One of the key events in Brazilian governance history was the foundation of the Brazilian Institute of Corporate Governance (IBGC) in 1995. Its purpose was to be the Brazilian reference of corporate governance and to contribute to the sustainability performance of organizations by influencing the agents towards greater transparency, fairness and accountability. The institute published the Brazilian Code of Best Practices in Corporate Governance in 1999. This first version centered mainly on the functioning, composition and powers of the board, reflecting clearly dominant international trends at the time. The second version, published in 2001, included recommendations for other agents of governance: the board of directors, the supervisory board, managers, independent audits and it discussed the principle of accountability. However, the issue of sustainability was still not present. Three years later, the third version, which included the principle of corporate responsibility, was released. This version highlighted the sustainability of organizations through contributions on values and directions for business strategy (IBGC 2010)

After 2001, the organizational environment in Brazil went through a series of changes, including an increase in the number of small investors in the stock market, the emergence of widely held firms, mergers and acquisitions of large companies and the economic crisis of 2008. All these changes brought to surface some of the weaknesses of Brazilian organizations and their governance systems, thereby necessitating the actual adoption of good corporate governance practices (IBGC 2010). This scenario led to a fourth revision of the code published in the second semester of 2009 that maintained the concept of corporate responsibility of the third version and stated that:

“The ‘social function’ of the company should include the creation of wealth and employment opportunities, qualification and diversity of the workforce, encouraging scientific development through technology and improvement of quality of life through educational, cultural and care actions and environmental protection” (IBGC 2009: 10).

Brazil also has a large history regarding the protection of the environment, although most of it derives from government-led governance implemented through model environmental legislation. As environmental awareness increased, society began to demand a more active participation from companies and to question how sustainable their actions were. In Brazil, this movement culminated with the creation of Bovespa's (Brazilian Stock Exchange) Corporate Sustainability Index which since 2005 functions as an investor tool to identify companies that are socially responsible, sustainable and lucrative. It is considered that these companies create long-term shareholder value as they are more prepared to face economic, social and environmental risks.

Government leadership is also particularly felt in the climate change discourse and through the Climate Change National Plan, the Working Group on Climate Change Impacts on Brazil and the Role of the Environment National Council (CONAMA) in the adoption of adaptation measures. They comprise a portfolio of mitigating and adaptive actions in order to reduce, avoid, and eventually adapt to the many impacts of climate change. It is important to highlight that mitigation is still the highest priority as it is the only means through which to halt or slow down the effects of climate change.

Concerning adaptation, the government works on two levels. The first level refer to the creation of adaptive capacity through a series of actions such as increasing knowledge about the impacts of GEC and the vulnerabilities of the country, improving quality of life by providing better housing, food, health care, education and jobs as the poorest populations are more vulnerable to and more impacted by climate change. It also promotes sustainable development and in the Climate Change National Plan it states that the government believes "It is consensus among scholars that the promotion of sustainable development is the most effective way to increase resilience to climate change" (Climate Change National Plan 2008:102).

The second one is more specific and refers to the implementation of adaptive measures through actions that reduce vulnerabilities, explore opportunities originated by climate changes and large investments in infrastructure, risk management systems, information gathering and diffusion and increase of institutional capacity. However, since the National Plan states that there aren't reliable climate scenarios for Brazil yet capable of directing specific adaptive actions as these scenarios are still in the development stage, there are few specific actions currently taking place and most of the actions are still on the first level.

With some of the effects of a changing climate already becoming evident, the need for specific adaptive actions is becoming increasingly important. Even though most of the actions stem from the Government, it is possible to identify some being led by the private sector. Through the analysis of the sustainability reports of the leading food retailers in Brazil (Grupo Pão de Açúcar, Carrefour and Walmart), we infer that they are already following the recommendations set out in the fourth Brazilian Code of Corporate Governance as they confront the issue of corporate responsibility in all of their social and environmental projects. Unfortunately, the retail sector appears to strictly follow the governmental National Plan as they focus only on building adaptive capacity through the promotion of sustainable development and neglects any specific adaptive actions perhaps necessary to ensure food security in the country.

Similarly, the South African government has the 2004 Climate Change Response Strategy with sector specific plans for climate change mitigation and adaptation. The Climate Change Policy and White Paper is due by the end of 2010 and is aimed at building on a broad understanding of what a whole range of stakeholders can do to reduce GHG emissions. This document is clearly focussed on mitigation, which is indicative of the fact that at the government level, although there is a recognition of the importance of taking action on climate change, progress is slow. However, at the business level, much more cutting-edge activity can be discerned. This private sector-led response (in contrast to Brazil's government centred approach to climate change) has its roots in how corporate governance has developed not only in South Africa, but also on the continent.

There is a widely held belief that good corporate governance can result in economic success and long-term sustainability (Armstrong in Roussouw 2005). However, in Africa despite the recognition of the need for accountability, transparency and market discipline especially in order to attract foreign investment and join the global community, very few mechanisms are available to instigate this shift. There is very little incentive to join stock exchanges, few regulatory frameworks exist and most State-owned enterprises set a pretty bad example of corporate governance although post IMF structural adjustment privatisation did not seem to fare any better (Roussouw 2005). The solution seemed to lie in the establishment of corporate governance codes and the springboard for this came from the 1994 post-Apartheid revision of corporate governance in South Africa.

South Africa holds a unique position in Africa because of its relatively better-developed and globally-integrated business sector, which gives it a leading role in advancing good corporate governance in the region (UNECA 2007). One of the key developments in corporate governance in South Africa has been the establishment of the King Code on Corporate Governance (referred to as King I, II and III published in 1994, 2002 and 2009 respectively). This was initiated by the Institute of Directors (IoD) in South Africa and comprises a set of non-legislated principles and guidelines for company reporting in line with the GRI. These are unique because of the distinct situation of governance in South Africa that was situated in a "highly turbulent and fluid context... where South African companies [needed to meet] international corporate standards without neglecting their allegiance to the African continent" (Roussouw and van der Watt 2002: 301). In the attempt to meet on the one hand the requirements of international standards and institutional investors and on the other, Mbeki's concept of the African renaissance and the transformation of South African society, the King codes formulate an inclusive concept of corporate governance which include non-financial measurements as well as ethical and moral considerations (Roussouw and van der Watt 2002). The King code and its successors has been assimilated into South African corporate culture and the Johannesburg Stock Exchange (JSE) requires all listed companies to provide a narrative statement on how (and if not why) they have complied with the principles and as a result South African companies have become regarded as among the best governed in emerging economies by foreign investors (IoD 2009). South African business faces various domestic challenges from affirmative action pressures and Black Economic empowerment to social issues of the HIV/AIDS crisis and poverty (Roussouw and van der Watt 2002) and governance therefore needs to be fluid and adaptable. In the food sector, land reform issues have become of critical concern for many companies and their corporate strategies have needed to become flexible to these uncertainties. With its revision every couple of years, the King report is a perfect example of a voluntary mechanism through which corporate governance can be formulated to reflect the more broader needs of society although it is by no means flawless.

The institutionalisation of the governance principles in the King report has meant that the code has become a key mechanism for translating between new normative concepts of governance into practical standards implemented by company boards. This is clearly evidenced in the latest King Report where ‘Sustainability’ was incorporated as one of the three key aspects of the report: “Most importantly current incremental changes towards sustainability are not sufficient- we need a fundamental shift in the way companies and directors act and organise themselves” (IoD 2009: 9). In our survey of food retailers’ sustainability reports, this focus is clearly evidenced with ‘sustainability’ being incorporated as the 7th corporate value of Woolworths, which was also ranked 18 out of 399 South African companies analysed for their uptake of King III.

However corporate action around climate change and food security in South Africa is not limited solely to the codification of normative principles, but has become action-oriented too. In February 2009, a food security forum that comprised an array of stakeholders from government through to academics, NGOs and business was convened in Johannesburg. This came just after the South African food sector had been rocked by allegations of collusion around fixing bread prices, which had led to various companies paying hefty fines after an investigation by the competition commission. Combined with the global food price crisis, the issue of food security in the country was brought into wide focus and the results from the forum showed evidence that a definite shift had occurred in how business recognised its role in ensuring food security in the country. The two retailers that were present (Pick ‘n Pay and Woolworths) have shown evident concern to develop their role in promoting sustainable behaviour, not only within their companies, but in the wider community.

Below is a summary table of some of the key projects being put in place by the leading food retailers in Brazil (Grupo Pão de Açúcar (GPA), Carrefour (CAR) and Walmart (WAL)) and South Africa (Woolworths (WOL), Pick ‘n Pay (PNP) and Shoprite Checkers (SCH)). These all indicate a shift of focus towards sustainability issues, however the level of commitment towards an adaptive food governance varies between the projects:

Table 1. Retailers’ actions regarding sustainability

Name	Classification	Governance Trends	Concepts of Good Governanceⁱⁱⁱ
Sustainability Pact (WAL)	Mitigating Social Environmental	Incorporation of environmental and social issues into the business model	Triple bottom line ^{iv} Self-regulatory practices Partnerships
Personal Sustainability Project (WAL)	Mitigating Social Environmental	Dissemination of sustainability concepts through their application on day-to-day bases by the company’s employees.	Awareness raising
Sustainability Index (WAL)	Mitigating Environmental	Establishment of a sustainability index to measure in an objective way de environmental performance of each product. Delegated to Arkansas University.	Triple bottom line Self-regulatory practices
Door-to-door sustainability	Mitigating Environmental	Partnership with suppliers seeking to reduce environmental impact in	Triple bottom line Self-regulatory

(WAL)		the product life cycle (from manufacture to disposal)	practices Partnerships
Green stores (GPA)	Mitigating Environmental	Construction of stores with less environmental impacts following the LEED (Leadership in Energy and Environmental Design) and USGB (United States Green Building Council) standards.	Triple bottom line Capacity building
Food banks (CAR)	Adaptation Social	Regular donation of food to five food banks that reach 40k people. The goal is to donate to 20 food banks by 2011.	Triple bottom line Capacity building
Sustainable Food Initiative (CAR)	Adaptive Environmental	Creating customer awareness around sustainability issues in the food supply chain	Awareness raising
Product Development (All)	Mitigating Environmental	Products from owned brand are highly sustainable.	Triple bottom line Capacity building
Sustainable Connections (All)	Mitigating Adaptive Social Environmental	Incorporation of environmental and social issues into the business model Partnership with government	Triple bottom line Self-regulatory practices Partnerships
Eco-efficient internal processes (All)	Mitigating Environmental	Adoption of internal processes that reduce the environmental impact of the company's commercial and administrative activities and reduce usage of natural resources.	
The Good Business Journey (WOL)	Adaptive Mitigating Social Environmental	Incorporation of environmental and social issues into the business model Broad engagement with all stakeholders	Triple bottom line Self-regulatory practices Business partner outreach
Eduplant (WOL)	Adaptive Mitigating Social Environmental	Partnership with an NGO (Food and Trees for Africa) Building adaptive capacity in communities through skills provisioning Focusing on food security holistically and in the long-term Utilising current sustainability practices	Triple bottom line Local capacity-building Human rights
Water Neutral Scheme (WOL)	Adaptive Social Environmental	Partnership with NGO (WWF) Partnership with government (Working with water programme) Long-term (20 year commitment) Adaptive to climate change as water scarcity is projected to be a key pressure on the region	Triple bottom line Local capacity-building Partnerships

Farming for the future (WOL)	Adaptive Environmental Social	Incorporates whole supply chain Empowers farmers All farmers that supply produce and aren't already organic have signed on to grow all crops in this way by 2012, therefore impact outside their own supply chain	Triple bottom line Human capital formation Business partner outreach
Development Fund (PNP)	Social	Social responsibility initiative developing capacity in the supply chain	Triple bottom line Awareness raising Business partner outreach Human capital formation Local capacity building
Organic Freedom Project (PNP)	Adaptive Social Environmental	Stakeholder engagement Creating customer awareness around sustainability issues in the food supply chain Long-term impact on supply chain	Triple bottom line Local capacity building Human capital formation Partnership

Source: Authors own

CONCLUSIONS

This paper presented an analysis of governance for food security under climate change in the retail sectors of Brazil and South Africa where major governance shifts around climate change and food security have been identified in various studies. In this way, the research used an ESG approach focusing on adaptation, although the overall issue of sustainability became an over-riding theme. As the two host countries of the UN Conference on Environment and Development in 1992 and 2002, Brazil and South Africa are critically placed for spearheading governance around climate change. This study reveals that although progressive steps have been taken, a lot remains to be done in this area.

In Brazil the top three retailers have many projects geared towards environmental issues, but even though food security is one the government's main concerns (e.g. the Zero Hunger Project) there are less private sector projects focussing on this issue. One of the possible obstacles to private sector action in this regard is that the Brazilian government has a dominant hold over all the adaptation actions in Brazil, indicative in governmental documents like the Climate Change National Plan as well as the role of CONAMA in the adoption of adaptation measures. On the other hand, in South Africa, although there is still relatively little exchange between the public and private sectors, the private sector is encouraged to take the initiative on social and environmental issues. Progressive legislation (E.g. National Environmental Management Act of 1998, Black Economic Empowerment Act of 2003) has also been instrumental in mainstreaming environmental and social issues in the country, resulting in the development of sustainable business models that take into account these legislative pressures. Businesses have therefore taken the initiative to institute anticipatory projects that deal with social and environmental issues, both because there is an enabling

environment to do so, but also because there is a dearth of capacity in the public sector to carry out this role. Social and environmental responsibility has thus landed on the shoulders of the private sector in lieu of government-driven social safety nets, which require vast resources and take time to implement. Spearheaded by the King code, a critically flexible and progressive instrument for steering corporate governance trends, South African businesses have to a large extent stepped up to the plate, proving that in the presence of ‘good governance,’ market forces can be harnessed for driving change and building adaptive capacity within the traditional business model. Although it is still early days, the different regimes in South Africa and Brazil can provide an example of the relative benefits of voluntary market driven mechanisms versus government led top-down approaches to food governance, and which is more or less adaptive.

Although the sustainability arena is subject to a lot of window-dressing, there is evidence of trends towards ‘good governance’ in the food retail sector, most notably by Woolworths and Pick ‘n Pay. These retailers are committed to sourcing 90-95% of their fresh produce from the local suppliers and have therefore instituted projects that build the resilience of the overall food supply chain in South Africa through various environmental and social upliftment projects, thereby securing their own interests. An interesting observation is that where there are projects that concentrate on building resilience within communities (thereby increasing adaptive capacity); these focus on the production end of the supply chain rather than on consumers. The only projects that involve consumers are those that raise awareness about climate change and sustainability issues, which is necessary, but only a cursory utilization of the power for change that retailers have on the consumption end of the chain. With increasing urbanization, looking at vulnerable consumers will be vital for any strategy concerned with climate change and food security.

A key conclusion that can be drawn from this brief analysis is how key events or ‘tipping points’ are critical is the transfer of ‘good governance’ norms to corporate governance. In South Africa, the intersection of the high international food prices in 2007/08, the competition commission enquiries in 2008 and the King III report in 2009 created a perfect storm for triggering transformative progress around food security in the private sector. This was identified by specialists in the field and culminated in the food security workshop, which brought various stakeholders together to focus on the problem. The international hype around climate change has played a similar role for diverting attention to environmental and sustainability issues, however the focus of the private sector is still heavily on mitigation (Vogel 2009). It is therefore necessary to harness the energy around these processes to instigate a focus on climate change adaptation too, making sure that this is not seen as mutually exclusive to mitigation initiatives. The current projects aimed at social upliftment contribute significantly to overall adaptive capacity within the South African and Brazilian food systems, but as yet do not make the necessary links between various pressures to be seen as systemic solutions.

The relevance of these observations is not limited to the two countries under consideration. Two of the three major retailers in Brazil, Walmart and Carrefour, are part of a huge global supply chain and as such they are two of the biggest transnational food corporations of the world. These corporations have considerable potential for enhancing food security under climate change, but are still lagging behind in interpreting the ‘adaptiveness’ element of ESG into their operations. They therefore have a lot to learn from achievements that have been made in the South African market and then to transfer these internationally, creating industry norms. The South African companies, themselves, are already big players in

the African food market and their role is only likely to increase into the future as the sector develops, making it crucial that their expansion brings with it the blueprint for an adaptive food governance. Further research using more in-depth studies around the opportunities and constraints offered by the ESG, climate change and food security discourses to these actors is required in order to construct a framework for establishing an adaptive governance for food security under climate change. This study showed that these adaptive trends are in evidence, but that they require refinement before they can be considered normative.

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ⁱ All figures are median estimates based on data from the authors, received April 2009.

ⁱⁱ Double exposure is a term used to refer to the impacts that systems face from both global environmental change and globalisation (O'Brien and Leichenko 2000)

ⁱⁱⁱ These are modelled on the general concepts and principles of good corporate citizenship and behaviour laid out by UNECA (2007:18).

^{iv} A term coined in the King II Report (2002) to incorporate the three pillars of sustainable development (social, economic and environmental) into corporate governance parlance