CHAPTER 4

The Impact of Social Grants on Agricultural Entrepreneurship among Rural Households in KwaZulu-Natal, South Africa

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South Africa is characterized by high levels of unemployment, poverty, and inequality, commonly known as the triple challenges (NPC 2012). Though addressing these challenges has been prioritized in the country's policy rhetoric, all three problems have worsened since the arrival of democracy in 1994, particularly in rural areas (High Level Panel 2017; NPC 2012). The expansion of social grants to reach most of the poor has been one of the government's flagship interventions to address high levels of poverty and inequality (SASSA 2018). As of February 2018, social grants were benefiting more than 17 million poor people in South Africa, representing more than 30 percent of the country's population and more than 50 percent of households (SASSA 2018).

While the role of social grants in alleviating especially extreme poverty and hunger has been acknowledged in South Africa and beyond (Armstrong and Burger 2009; Bhalla et al. 2018; Brugh et al. 2018; Hidrobo et al. 2018; Lowder, Bertini, and Croppenstedt 2017; Woolard and Leibbrandt 2010), concerns have been raised with regard to their potential negative and unintended effects on recipients' social and economic behavior, including the potential entrenchment of a culture of dependency (Devereux 2013; Surender et al. 2010). The undesirable dependency syndrome occurs when assistance provision undermines incentives for the poor to invest their time and resources in economic activities that could help them escape poverty. The income effect of transfers reduces the marginal benefit of further income-generating activities (Binger and Hoffman 1998). However, social cash transfers can positively contribute to livelihood activities by relaxing credit and liquidity constraints (Barrientos 2012; Bezu and Holden 2008; Boone et al. 2013; Tirivayi, Knowles, and Davis 2016).

Levels of entrepreneurial activity are relatively low in South Africa, which has limited the country's ability to address the above mentioned triple challenges (Agbenyegah 2013; Okeke-Uzodike, Okeke-Uzodike, and Ndinda 2018; van der Merwe and de Swardt 2008). Despite efforts by the government to stimulate entrepreneurship, South Africa's Total Entrepreneurial Activity index has remained below 10 percent since the mid 1990s, a level just one-third that of other developing countries such as Brazil and Mexico (Dzansi, Rambe, and Coleman 2015; Fal et al. 2011; Herrington, Kew, and Kew 2015; Singer, Amoros, and Moska 2015). Entrepreneurship levels are lower in rural areas and among women, resulting in higher poverty incidence among these groups (Okeke-Uzodike, Okeke-Uzodike, and Ndinda 2018; Stats SA 2014). In addition to factors such as insufficient financial assistance, lack of skills, and an unsupportive regulatory framework, studies have reported that South Africans generally lack the entrepreneurial drive and exert limited effort to develop capabilities that are crucial for entrepreneurship growth (Agbenyegah 2013; Herrington, Kew, and Kew 2015; van der Merwe and de Swardt 2008). The question then is, to what extent is this low level of entrepreneurialism due to dependency on social grants?

Few studies have directly investigated the relationship between social grants and entrepreneurship in South Africa. Literature on social grants' impact has focused on outcomes such as nonfarm labor supply (Abel 2013; Ardington et al. 2013; Ardington, Case, and Hosegood 2009; Bertrand, Mullainathan, and Miller 2003; Surender et al. 2010; Williams 2007); attitudes toward work (Noble and Ntshongwana 2008; Noble, Ntshongwana, and Surender 2008; Surender et al. 2010); household formation (Klasen and Woolard 2008; Posel, Fairburn, and Lund 2006; Whitworth and Wilkinson 2013); gender and dignity issues (Goldblatt 2005; Holmes and Jones 2010; Patel, Hochfeld, and Moodley 2013; Patel et al. 2012; Wright et al. 2015); and teenage pregnancy (Makiwane 2010; Makiwane and Udjo 2007; Mokoma 2008). The evidence on the impact of social transfers on incentives to allocate labor to off farm activities is of a mixed nature. While some studies (Ardington et al. 2013; Ardington, Case, and Hosegood 2009; Posel, Fairburn, and Lund 2006) have found a positive relationship between social transfers and household labor supply, others (for example,

Abel 2013; Asfaw et al. 2016; Bertrand, Mullainathan, and Miller 2003) show unintended negative effects, in that social transfers reduce incentives to work.

Studies conducted in Latin American and sub-Saharan African countries show that social transfers have improved asset accumulation, input use, production, and labor use (Boone et al. 2013; Covarrubias, Davis, and Winters 2012; Radel et al. 2016; Tirivayi, Knowles, and Davis 2016; Todd, Winters, and Hertz 2010). There is also some evidence of a shift from on-farm to nonfarm work among cash transfer recipients (Asfaw et al. 2012; Gertler, Martinez, and Rubio-Codina 2012; Maluccio 2010), as well as increased investment in microenterprises (Gertler, Martinez, and Rubio-Codina 2012; Handa et al. 2016; Todd, Winters, and Hertz 2010).

The discourse across developing countries in general, and South Africa in particular, has progressed from thinking about social grants as merely a livelihood protection measure to viewing them as a livelihood promotion measure (Mabugu et al. 2013; Surender et al. 2010; Tirivayi, Knowles, and Davis 2016). The argument is that social grants should promote livelihoods and enhance economic activities by easing the financial constraints facing the poor—the so called irrigation function of social security—thus enabling a longer-term and more sustainable improvement in living standards (Covarrubias, Davis, and Winters 2012; Lund 2002; Mabugu et al. 2013; Woolard 2003).

In particular, recent studies (for example, Cirillo, Györi, and Veras Soares 2017; Daidone et al. 2017; Tirivayi, Knowles, and Davis 2016) have identified the need to improve the complementarity between social grants and agriculture, especially smallholder farming, as most of the social grant beneficiaries are poor smallholders. Smallholder farming remains an important livelihood activity among poor rural households in South Africa, especially in more rural provinces such as Eastern Cape, Limpopo, and KwaZulu-Natal (Stats SA 2012a). The literature agrees that the effectiveness of smallholder agriculture in reducing the rural poverty and household food insecurity prevalent in areas such as these provinces can be enhanced if rural households become more entrepreneurial in their farming activities (Díaz-Pichardo et al. 2012; Kahan 2013; Vesala and Pyysiäinen 2008).

This chapter investigates the conceptual and empirical linkages between social grants and agricultural entrepreneurship among rural households in the KwaZulu-Natal province of South Africa. Understanding the theoretical and empirical relationship between social transfers and smallholder entrepreneurship can enable policy makers to improve the design of rural development policy interventions and create synergies between cash transfers and poverty reduction by promoting enhanced agricultural productivity and production. This study performed continuous treatment analyses to understand the impact of the level of dependency on grants on agricultural entrepreneurship. Agricultural entrepreneurship was proxied by entrepreneurial competencies, investment in farm inputs, and income generated from farm activities. Additionally, household labor supplied to farming activities was used to capture the level of households' commitment to farming. Dependency on social grants was defined in terms of the relative contribution of social grant income to household income.

The study moves beyond considering impact as homogenous, as has been the case in recent studies linking social grants to smallholder entrepreneurship and other outcomes (Sinyolo, Mudhara, and Wale 2016a, 2016b, 2017), and examines heterogeneous social grant effects. Because social grants are given to individual household members, and each household differs in terms of the number of social grant beneficiaries, there is a high degree of heterogeneity in the contribution of social grants to household income. Estimating the dose-response and marginal effect functions of dependence, the study identified heterogeneities at different levels of dependence on social grants. This is important, as it can help policy makers identify the optimal levels of grant support that could be implemented

to increase synergies between social grants and entrepreneurship in smallholder farming while reducing the chances of creating a dependency syndrome.

The study results indicate that social grants can potentially play both a positive and negative role in entrepreneurship development in rural areas, depending on the relative contribution of social grant income to total household income. At low dependency levels, social grants were found to have a positive effect on farm labor supply, entrepreneurial competencies, and investment in farm inputs. At higher levels of dependency, a negative effect emerged. The results suggest that social grants can complement other economic activities of the poor, such as smallholder farming. However, for this to happen, the contribution levels of social grants to household income should be kept at low levels. The next section briefly discusses the meaning of entrepreneurship and how it can be measured. The subsequent section presents the data collection process and describes the study area. The models are then described, followed by estimation results. The last section provides the conclusions.

Definition and Measurement of Entrepreneurship

Entrepreneurship is a multifaceted concept that has been defined in various ways in different contexts (see Marcotte 2013 for a review). Most references to entrepreneurship, especially among policy makers, simply equate it with small and medium-sized enterprises or the self-employed (Ahmad and Hoffman 2007; Bauernschuster, Falck, and Heblich 2010; Hoffmann 2007; Nagler and Naudé 2017). Neither of these indicators, however, fully captures entrepreneurship as a whole (Ahmad and Hoffman 2007; Faggio and Silva 2014).

According to Alsos et al. (2011), entrepreneurship can be described in three distinctive but overlapping ways, based on the innovation, business formation and opportunity perspectives. The innovation perspective describes entrepreneurship in terms of new resource combinations that cause market disruptions, while the business formation perspective views entrepreneurship as a process of creating new business organizations. The opportunity perspective, which is relevant in the agriculture context, views entrepreneurship as the identification and exploitation of opportunities (Alsos et al. 2011; Lans et al. 2014). The literature on rural entrepreneurship, in both developed and developing countries, has focused on the business formation perspective, defining entrepreneurship in terms of the enterprises that rural households operate (Nagler and Naudé 2017). While self-employment has been widely used as a proxy to capture entrepreneurship, recent research (Faggio and Silva 2014) shows that these two do not always measure the same economic phenomenon, especially in rural contexts.

In line with the opportunity perspective, this study adopted the definition of the Organisation for Economic Co-operation and Development, which defines an entrepreneur as an individual who seeks to identify and exploit new products, processes, or markets to generate value through the creation or expansion of economic activity (Ahmad and Hoffman 2007; Sinyolo and Mudhara 2018). This definition has several advantages for a study on smallholder entrepreneurship. First, the definition is broader and includes the entrepreneurial activities of individuals or organizations that may not qualify as small businesses or the self-employed in policy rhetoric. Owners of smallholder farms are entrepreneurs in their own right, as running a farm is equivalent to running a firm (Lans et al. 2014).

Second, the definition clearly sets entrepreneurs apart as people doing something different from others, in that they are in the business of creating and/or identifying new processes, products, or markets. Third, entrepreneurship is not only about successfully doing but also about seeking. Both successful and unsuccessful entrepreneurs should be investigated, instead of focusing only on the successful ones, that is, "entrepreneurial stardom" (Faggio and Silva 2014). Failure is a very important part of the

entrepreneurial process, and entrepreneurs who have failed remain entrepreneurs (Ahmad and Hoffman 2007).

The measurement of entrepreneurial activity is a relatively recent and underrepresented area of study that is highly contested (Marcotte 2013). Although several indexes have been developed to measure entrepreneurship levels since the late 1990s, assessment of the various forms and expressions of entrepreneurial activity remains a challenge, even at the national level (Marcotte 2013). None of these indexes are universally accepted, and all have been subject to criticism (Marcotte 2013). This study adopts the competency approach, which has become increasingly popular in examining entrepreneurship among smaller businesses in which the entrepreneur dominates (de Lauwere et al. 2014; Lans et al. 2014; Mitchelmore and Rowley 2010; Phelan and Sharpley 2012; Sánchez 2012).

Entrepreneurial competencies are the underlying knowledge, skills, abilities, personality traits, and know how that allow for the effective discovery and exploitation of opportunities (Alsos et al. 2011; Bergevoet et al. 2005; Langbert 2000). Entrepreneurial competencies refer to activities such as evaluating information, identifying customer needs, scanning the environment, formulating strategies, bringing networks together, taking initiative, introducing diversity, and collaboration (Man, Lau, and Chan 2002; Phelan 2014). Entrepreneurial competencies are strongly linked to business growth and success, and an understanding of the nature and role of such competencies has important consequences for entrepreneurship practice (Mitchelmore and Rowley 2010). As shown by Bergevoet et al. (2005), using the concept of competencies can give insight into the entrepreneurial behavior of farmers and provide a means to evaluate their levels of entrepreneurialism. The competency approach is an appropriate framework for examining smallholder farms in rural areas, as these farms are smaller in size and are dominated by the owner (Man, Lau, and Snape 2008; Phelan and Sharpley 2012; Vesala 2008; Vesala and Pyysiäinen 2008). Challenging the notion that entrepreneurs are born, the competency approach implies that entrepreneurs can be made by supporting the development of these competencies (Becot, Conner, and Kolodinsky 2015; Fisher and Koch 2008).

Entrepreneurship has two distinctive components, both of which can be influenced by social grants (Kahan 2013; Pyysiäinen et al. 2006). The first component, which is not easy to define, speaks of the inner drive or desire to identify and exploit business opportunities and start and run a profitable business. It can be generally described as the entrepreneurial attitude (Pyysiäinen et al. 2006) or entrepreneurial spirit (Kahan 2013; Nafukho and Muyia 2010). Some studies (Agbenyegah 2013; Herrington, Kew, and Kew 2015; van der Merwe and de Swardt 2008) suggest that a lack of entrepreneurial attitudes is one of the major factors behind the low levels of entrepreneurship in South Africa. The second component of entrepreneurship includes the competencies that are required to effectively identify and seize opportunities to initiate, operate, and grow profitable businesses. These competencies can be developed by learning and through experience and can be stimulated by changing the social and business environment and by directly influencing the farmer and his or her personality and capacities (Bairwa et al. 2014; de Wolf and Schoorlemmer 2007; Man, Lau, and Chen 2002).

As already highlighted, social grants may have a positive or negative impact on the entrepreneurialism of beneficiaries. On the positive side, the regularity and predictability of social grants can change the attitudes of people toward risks, encouraging them to take more risks because they are guaranteed a minimum level of subsistence if their entrepreneurship activities do not pay off (Boone et al. 2013). Entrepreneurship is risky, and poor households lack buffers or insurance to protect their consumption or assets against market hazards (Barrientos 2012). Social grant income can potentially relax the credit and liquidity constraints of farm households, resulting in improved entrepreneurship outcomes. Since these poor farm households are often excluded from credit markets, or credit markets

are lacking in their areas, regular and reliable access to social grants can help them overcome the constraints caused by these credit access barriers (Alderman and Yemtsov 2013; Barrientos 2012).

If social grant income is used in production, it can enhance the saving capacity of poor households, provide increased security, and help compensate for insurance market failures, facilitating investment in farm inputs (Barrientos 2012; Boone et al. 2013). Income from social grants can also be used by beneficiaries to cover the costs associated with accessing and exploiting information and opportunities to generate income by successfully participating in the market. For example, several studies (see, for instance, Ardington et al. 2013; Ardington, Case, and Hosegood 2009; Posel, Fairburn, and Lund 2006; Williams 2007) have concluded that additional income from social grants has a positive impact on employment by easing the constraints associated with job searches. Social grants can also help beneficiaries pay for activities that improve their competencies, for example, training.

The negative unintended outcomes are due primarily to the income effect of social grants, as the additional unearned income leads to an increase in the consumption of goods and leisure. If the income effect is strong enough, it can have a negative effect on the propensity to work, as beneficiaries can continue to maintain their utility level through the unearned income (Barrett 2006; Binger and Hoffman 1998). Social grants may hinder entrepreneurship by creating a dependency syndrome (Abel 2013; Devereux 2013), which reduces the desire or drive to engage in business. They may also inhibit the psychological capital development and entrepreneurial spirit of recipients by creating hopelessness and destroying self-confidence and resilience (Kahan 2013). The growing literature on psychological capital theory (Luthans et al. 2006; Luthans et al. 2007; Luthans and Youssef 2004) highlights the importance of hope, confidence, optimism, and resilience in an individual's economic performance. Dependence on social grants may reduce farmers' incentive or motivation to engage in activities that could enhance their entrepreneurial skills.

Research Methods

Study Area Description

The data included a total of 984 rural farming households drawn from 4 out of 11 districts (Harry Gwala, Umzinyathi, Uthukela, and Umkhanyakude districts) across the KwaZulu-Natal (KZN) province in South Africa. The selected districts have a significant number of rural communities engaged in farming activities and are among the poorest in terms of average household incomes (Stats SA 2012b). Social grants and smallholder farming play important roles in the livelihoods of poor rural residents in KZN. KZN has the largest number of households benefitting from social grants (SASSA 2018), and social grants are the second-largest source of income in the province after salaries and wages (Stats SA 2015). Farming is not a large source of income in KZN; it is the sixth most important source after salaries and wages, social grants, remittances, nonfarm businesses, and pensions.

However, most of the rural people in the province are employed or self-employed in smallholder agriculture, producing mainly for subsistence purposes. More than 796,000 (28 percent) of the 2,802,000 households in KZN are directly involved in agriculture (Stats SA 2012b). Stats SA (2012b) reports that while wage employment is the preferred option for many people, household members who fail to secure employment in urban areas return to the rural areas and engage in economic activities such as smallholder farming. KZN is generally characterized by good, reliable rainfall (more than 1,000 millimeters a year) and fertile soil, making agriculture central to its economy (KZNDAE 2012). Although the KZN economy has significant potential in agriculture, current agricultural production is below this potential (KZNDAE 2012). Also, there is much uncultivated land in the rural areas of KZN (KZNPPC 2011), though a shortage of other

economic options makes smallholder agriculture more important in these areas.

Data and Variables

A multistage random sampling technique was used to draw the sample for the study. First, the 4 districts were purposely chosen out of the 11 districts in the KZN province. Second, one local municipality was randomly selected from each district: the Ubuhlebezwe local municipality in the Harry Gwala district, the Msinga local municipality in the Umzinyathi district, the Jozini local municipality in the Umkhanyakude district, and the Imbabazane local municipality in the Uthukela district. Third, a total of 984 rural households were randomly selected from the 4 local municipalities. The lists of farming households were obtained from the respective local offices of KZN's Department of Agriculture. The total sample comprised 411 households from Ubuhlebezwe, 239 from Msinga, 143 from Jozini, and 191 from Imbabazane.

The data were collected during the months of October and November 2014 using a pretested structured questionnaire. Questionnaire pretesting involved 15 rural households and was used to identify and remedy ambiguities or difficulties with regard to questions in the questionnaire. The questionnaire's modules captured information on basic household head characteristics (such as sex, age, marital status, and education level), measures of household wealth endowment (such as household assets, livestock, and land), labor allocation, agricultural production activities, and investment in farm inputs, as well as the crop marketing behavior of the household and its income level and sources. Questions on institutional and organizational support factors such as farmer associations, market access, credit, and extension support were included. The questionnaire also sought to capture self-assessed entrepreneurial competencies. The entrepreneurship questions were asked in 513 of the total 984 sampled households in three of the four districts described above (Umkhanyakude district was excluded). This was because the entrepreneurship section of the questionnaire was more involved and complex, and the research team decided to limit the number of respondents answering the questions in the entrepreneurship module.

The level of dependency on social grants was measured as the proportion of total household income received from social grants. Total household income included income that the household received from different sources, such as employment, remittances, social grants, farming, nonfarm microbusinesses, and arts and culture. To capture the level of income from social grants, the household was asked what social grant types any member of the household received and when each member had started receiving those grants. Questions about investment in farm inputs captured the amount of money the households had used to buy farm inputs such as fertilizer, seed, herbicides, and so on during the 12 months preceding the survey. Income generated from farming activities was captured as net revenue from the sale of crop and livestock output as well as income from hiring out farm implements.

To capture household participation levels in farming activities, following Abdulai, Barrett, and Hoddinot (2005), we used the total number of man day equivalents household members spent on crop farming in the 60 days preceding the survey. The 60 day period was considered short enough for the participants to recall easily so that they would give relatively accurate and reliable responses. The two months under study, October and November, represent the peak period of labor demand for land preparation, cultivation, and planting summer crops. A man day of work was defined as the amount of farm work that can be carried out by an adult male in an eight hour work period. The conversion factors (weights) presented in Panin (1986) were applied to males and females in different age groups and carrying out different farming tasks to calculate man day equivalents.

Self-assessed entrepreneurial competencies were used because, arguably, smallholders best understand their own entrepreneurial

capabilities and skill sets and make production and business decisions based on their perceptions (Lans 2009; Lans et al. 2014; Morgan et al. 2010). The questionnaire included six key subcategories of entrepreneurial competencies, as identified and discussed in Man, Lau, and Chan (2002) and Man, Lau, and Snape (2008). These are strategic, opportunity, relationship, conceptual, organizing, and commitment competencies.

Strategic competencies are those skills that help an entrepreneur set, evaluate, and implement the vision, goals, and strategies of the business, while opportunity competencies are about information seeking and recognizing opportunities in the market (Man, Lau, and Chan 2002). Relationship competencies refer to the ability to collaborate successfully with others. This entails being able to persuade, communicate, and use contacts and connections (Man, Lau, and Chan 2002). Conceptual competencies are those related to understanding complex information, making decisions, and being innovative and a risk-taker, whereas organizing competencies are those related to the organization of resources. Commitment competencies are those that drive the entrepreneur to move ahead with the business (Man, Lau, and Chan 2002).

The specific competencies in these subcategories included those widely accepted in the literature and those considered more relevant to the rural context, as informed by the results of the questionnaire pretesting. The results of the pretest were used to rephrase some entrepreneurship questions whose wording did not seem clear or strong enough to enable differentiation between good and poor ratings, following Man, Lau, and Snape (2008) and Phelan and Sharpley (2012).

Principal Component Analysis

Principal component analysis (PCA) was used to generate the entrepreneurial competency index, with the appropriate weights determined endogenously when merging the 24 entrepreneurial competencies to avoid arbitrary selection of weights. PCA is a multivariate statistical technique used to reduce the number of variables without losing too much information in the process. From an initial set of n correlated variables, PCA creates uncorrelated components as linear, optimally weighted combinations of the initial item responses (Armeanu and Lache 2008; Jolliffe 2002; Norman and Streiner 2008). From a set of variables X_1 through to X_n,

$$\begin{aligned} PC_1 &= a_{11}X_1 + a_{12}X_2 + \ldots + a_{1n}X_n \\ PC_2 &= a_{21}X_1 + a_{22}X_2 + \ldots + a_{2n}X_n \\ &\vdots \\ PC_m &= a_{m1}X_1 + a_{m2}X_2 + \ldots + a_{mn}X_n, \end{aligned} \qquad (1)$$

where a_{mn} represents the weight for the m^{th} principal component (PC_m) and the n^{th} variable.

The weights for the principal components are given by the eigenvectors of the correlation matrix. While the use of PCA assumes that data are continuous, this study uses ordinal item responses. Polychoric correlations were therefore calculated and the resulting matrix used, instead of the Pearson correlation matrix, as the former corrects the statistical error of using ordinal variables in a PCA analysis (Basto and Pereira 2012; Howe et al. 2012).

The variance (λ) for each principal component is given by the eigenvalue of the corresponding eigenvector. The components are ordered so that the first principal component (PC_1) explains the largest possible amount of variation in the original data. The second component (PC_2) explains additional but less variation than the first component and is uncorrelated with the first component (PC_1). Subsequent components are uncorrelated with previous components, while explaining smaller and smaller proportions of the variation of the original variables. The first component is usually used as the summary index for further analysis of the data, as it explains the most variation in the data (Filmer and Pritchett 2001). PCA works best when variables are correlated and when the distribution of variables varies across cases (Morrison 2005; Vyass

and Kumaranayake 2006). Variables with low standard deviations carry low weights, while those with high standard deviations carry high weights (Howe et al. 2012).

The Generalized Propensity Score Matching Method

Various versions of propensity score–based matching methods have been developed to cater for treatments that are not binary, that is, allowing for treatment to be multivalued. For example, propensity score matching (PSM) has been extended to deal with treatment variables that are categorical (Imbens 2000; Lechner 2001) or ordinal (Joffe and Rosenbaum 1999; Lu et al. 2001). The generalized propensity score (GPS) matching technique deals with continuous treatments (Bia et al. 2014; Bia and Mattei 2008, 2012; Flores et al. 2012; Guardabascio and Ventura 2014; Hirano and Imbens 2004; Imai and Van Dyk 2004; Kluve et al. 2012). The GPS technique is an extension of PSM.

The GPS technique was used in this study because the treatment variable, the proportion of household income from social grants, is continuous. The outcome variables were the amount of farm labor supplied to farming, the entrepreneurial competency index constructed using PCA, expenditures on farm inputs, and net income generated from farm activities. The use of experimental or randomized designs is not applicable when studying social grants in South Africa because these grants were not implemented with an experimental design but are targeted to individual household members based on their socioeconomic status (for example, age, income level, health status, etc.) (Patel, Hochfeld, and Moodley 2013).

The GPS is a balancing score, which is the conditional probability of receiving a particular dosage subject to a given set of observable variables (Hirano and Imbens 2004; Imbens 2000; Rosenbaum and Rubin 1983). The treatment effects were estimated using two-step semiparametric estimators of the dose-response function (DRF), following Bia et al. (2014). The first step involved estimating the GPS (R_i) and assessing the common support condition and the balance of the covariates. The DRF was then estimated using the nonparametric inverse weighting kernel estimator proposed by Flores et al. (2012).

Given that the continuous treatment variable—the level of dependence on social grants, GD_i—in this study is a fraction, a beta distribution was used for estimating the score. The bounded nature of the treatment variable is such that the effect of any particular covariate is not constant over its range, implying that there is no guarantee the ordinary least squares regression estimates would lie in the unit interval even after augmenting the model with nonlinear functions of the covariates (Guardabascio and Ventura 2014; Papke and Wooldridge 1996).

The GPS was estimated parametrically, and the beta distributional assumptions were specified as follows:

$$g(GD_i|X_i) \sim \psi[h(\gamma, X_i), \vartheta], \qquad (2)$$

where g is a link function, ψ is a probability density function, h is a flexible function of covariates depending on an unknown parameter γ, ϑ is a scale parameter, and X_i is a vector of the covariates. The common support or overlap region was determined following Flores et al. (2012), while the likelihood ratio test evaluated how well the estimated GPS balances the covariates. The introduction of several pretreatment covariates strengthened the plausibility of the unconfoundedness assumption.

The DRF and the treatment effect function were estimated using a nonparametric inverse-weighting estimator. This involves weighting observations using the estimated scores to adjust for covariate differences. The nonparametric method is flexible and does not impose a parametric structure on the data, which would have led to misleading results if not met (Bia et al. 2014). The estimates of the DRF and treatment effect function

were observed at 10 different levels of social grant dependency, considering increments of 10 percent for the treatment effect estimation.

Empirical Results and Discussion

Generating the Entrepreneurial Competency Index

Table 4.1 presents the means of the entrepreneurial competencies that were considered in this study. The table indicates that the farmers were somewhat negative about their entrepreneurial competencies. The average scores are mostly between 2.5 and 3.5, meaning slightly above "disagree" to just above neutral. The table shows that the farmers were particularly negative about their strategic, conceptual, and opportunity competencies. The average scores for the relationship, organizing, and commitment competencies are slightly higher. Further analysis indicated no differences in the scores by gender, suggesting that male and female farmers face the same challenges in improving their entrepreneurial competencies.

The entrepreneurship competencies listed in Table 4.1 were merged using principal component analysis (PCA) to generate an entrepreneurship index, and the results are presented in Table 4.2. Correlation analysis indicated moderate to higher degrees of correlation among the entrepreneurship variables in the data. All correlation coefficients were greater than 0.3, implying that the correlation matrix satisfies the basic requirement for a successful factor extraction (Norman and Streiner 2008; Tabachnick and Fidell 2001). The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was greater than the 0.8 threshold to be considered reasonable (Antony and Rao 2007; Norman and Streiner 2008). The high KMO measure indicates that patterns of correlations are compact and that factor analysis should yield reliable factors (Field 2005). The Bartlett's test of sphericity result was strongly significant, indicating that it is highly unlikely that the correlation matrix was obtained from a population with

TABLE 4.1—SUMMARY STATISTICS OF ENTREPRENEURIAL COMPETENCIES

Variable	Mean	Std. dev.
Strategic competencies		
Goal and vision setting	2.45	1.42
Strategy formulation	2.85	1.40
Profit orientation	2.84	1.42
Growth orientation	2.72	1.44
Long-term or sustainability orientation	2.70	1.42
Opportunity competencies		
Market orientation	2.78	1.25
Environmental scanning	2.24	1.22
Opportunity recognition	2.88	1.37
Relationship competencies		
Cooperation and networking	3.21	1.32
Using networks and connections	3.04	1.35
Negotiation and persuasiveness	3.19	1.24
Conceptual competencies		
Initiative, creativity, and innovativeness	2.75	1.33
Understanding complex information	2.78	1.35
Risk taking	3.12	1.40
Organizing competencies		
Communication clarity	3.37	1.38
Vision clarity	3.66	1.33
Competitiveness and results orientation	3.21	1.34
Flexibility and willingness to adapt	3.19	1.34
Commitment competencies		
Business passion	3.45	1.33
Long and irregular hours	3.53	1.33
Motivation and ambition	3.50	1.30
Willingness to learn new things	3.51	1.28
Accountability	3.31	1.37
Emotional coping	3.61	1.35

Source: Authors' calculations.

TABLE 4.2—GENERATION OF THE ENTREPRENEURIAL COMPETENCY INDEX, PCA RESULTS

Variable	Principal components		
	PC_1	PC_2	PC_3
Strategic competencies			
Goal and vision setting	**0.780**	-0.124	-0.365
Strategy formulation	**0.776**	-0.173	0.344
Profit orientation	**0.759**	0.447	-0.022
Growth orientation	**0.688**	-0.331	0.331
Long-term or sustainability orientation	**0.800**	0.223	0.051
Opportunity competencies			
Market orientation	**0.773**	0.433	-0.103
Environmental scanning	**0.754**	0.263	0.118
Opportunity recognition	**0.765**	-0.109	0.259
Relationship competencies			
Cooperation and networking	**0.720**	-0.453	-0.068
Using networks and connections	**0.807**	-0.052	-0.160
Negotiation and persuasiveness	**0.730**	0.463	0.037
Conceptual competencies			
Initiative, creativity, and innovativeness	**0.732**	0.060	0.321
Understanding complex information	**0.758**	0.024	-0.026
Risk taking	**0.589**	0.291	-0.106
Organizing competencies			
Communication clarity	**0.745**	-0.314	-0.265
Vision clarity	**0.776**	0.129	0.273
Competitiveness and results orientation	**0.767**	0.106	-0.469
Flexibility and willingness to adapt	**0.813**	-0.029	-0.181
Commitment competencies			
Business passion	**0.715**	-0.043	0.295
Long and irregular hours	**0.806**	-0.207	0.122
Motivation and ambition	**0.797**	-0.248	-0.092
Willingness to learn new things	**0.785**	-0.244	-0.191
Accountability	**0.804**	-0.270	-0.049
Emotional coping	**0.819**	0.205	0.002
Eigenvalue	13.95	1.59	1.15
% of variance	58.11	6.63	4.79
Cumulative % of variance	58.11	64.74	69.53

Source: Authors' calculations.

Notes: Cronbach's alpha = 0.96. Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy = 0.96. Bartlett's test of sphericity was highly significant: $\chi^2 = 11{,}271$; $p < 0.001$. PCA = principal component analysis. Bold means dominant.

zero correlation. The Cronbach's alpha for the multi-item index was higher than the minimum acceptable value of 0.7 (Man, Lau, and Snape 2008). This indicates a high level of internal consistency for the scale, implying that the 24 questions all reliably measured the same latent entrepreneurialism variable. The above tests indicate that a valid PCA can be performed.

Using the Kaiser criterion (Field 2005), PCA yielded three principal components (PCs) that had eigenvalues greater than 1, explaining about 70 percent of the variance in the data. However, only the first principal component (PC1), which explained 58 percent of the variation, was used in creating the entrepreneurship index. PC1 was selected because it explained most of the variation in the data and it had economic meaning. No economic meaning could be attached to the other two principal components. PC1 was strongly correlated with all 24 original variables, suggesting that the 24 competencies vary together, such that when one increases, the others also increase.

Socioeconomic Characteristics of the Sampled Households

Table 4.3 presents the demographic and socioeconomic characteristics of the sampled households, by access to social grants. More than 80 percent of the 984 sampled households had access to social grants. On average, each beneficiary household had more than three social grant beneficiaries, highlighting the importance of social grants among these rural households, in view of an average household size of seven. The beneficiary households had been recipients of social grants for about 9 years, on average, with the minimum reported being 1.2 years. The results show significant differences in socioeconomic characteristics between households that were beneficiaries of social grants and those that were not. While both beneficiary and nonbeneficiary households were headed by people aged over 50 years, the heads of beneficiary households were significantly older than those of nonbeneficiary households. Most of the beneficiary households were headed by females, while most nonbeneficiary households had male heads.

TABLE 4.3—SOCIOECONOMIC CHARACTERISTICS OF THE SAMPLED HOUSEHOLDS (*n* = 984)

Variable description	Mean			*t*-tests (*p*-values)
	All sample (*n* = 984)	Access to social grants		
		Yes (*n* = 829)	No (*n* = 155)	
Socioeconomic characteristics				
Age of household head (years)	56.11	56.65	53.05	0.002***
Gender of household head (1 = male)	0.47	0.45	0.52	0.060*
Marital status of household head (1 = married)	0.46	0.45	0.49	0.232
Household size (number of members)	7.04	7.24	5.97	0.000***
Education level of household head (years of schooling)	4.67	4.43	5.96	0.000***
Nonfarm employment of household head (1 = yes)	0.20	0.18	0.29	0.002***
Nonfarm business ownership (1 = yes)	0.08	0.07	0.14	0.003***
Land size (ha)	1.90	1.78	2.70	0.019**
Livestock (tropical livestock units)	3.53	3.10	5.78	0.079*
Value of assets (000 rand)	82.11	81.64	84.58	0.194
Number of social grant beneficiaries	3.19	3.20	0	0.000***
Years of access to social grants	8.91	9.12	0	0.000***
Total annual household income (000 rand)	46.76	48.02	40.04	0.005***
Social grant income (000 rand)	16.92	19.69	0	0.000***
Proportion of income from social grants	0.38	0.45	0	0.000***
Farm income (000 rand)	6.55	5.79	10.63	0.000***
Proportion of income from farming activities	0.13	0.11	0.22	0.000***
Income from other nonfarm activities	23.62	22.53	29.40	0.003***
Farming experience (years)	18.70	19.04	16.84	0.058*
Hiring in farm labor (1 = yes)	0.37	0.35	0.48	0.002***
Perceived soil quality (1 = good)	0.55	0.55	0.52	0.389
Market access (1 = yes)	0.20	0.20	0.22	0.612
Group member (1 = yes)	0.42	0.41	0.46	0.153
Access to credit (1 = yes)	0.36	0.36	0.33	0.434
Access to extension (1 = yes)	0.46	0.46	0.47	0.731
Access to agricultural training (1 = yes)	0.41	0.41	0.41	0.984
Access to irrigation (1 = yes)	0.46	0.45	0.53	0.074*
Distance to nearest all weather road (km)	17.75	16.14	26.36	0.003**

TABLE 4.3—SOCIOECONOMIC CHARACTERISTICS OF THE SAMPLED HOUSEHOLDS (*n* = 984) *continued*

Variable description	Mean			*t*-tests (*p*-values)
	All sample (*n* = 984)	Access to social grants		
		Yes (*n* = 829)	No (*n* = 155)	
Outcome variables				
Farm inputs (000 rand/ha/year)	3.28	2.52	4.03	0.094*
Farm income (000 rand/ha/year)	11.76	10.93	16.40	0.026**
Farm labor supply (man-day equivalents / ha)	36.37	35.72	39.83	0.016**
Entrepreneurial competency index (*n* = 513)	-0.14	-0.12	-0.33	0.116
Treatment variable				
Access to social grants (1 = yes)	0.84	1.00	0.00	0.000***
Proportion of income from social grants	0.38	0.45	0.00	0.000***

Source: Authors' calculations.

Note: ***, **, and * mean significant at the 1%, 5%, and 10% significance levels, respectively.

Beneficiary households were generally larger than nonbeneficiary households, which could be because larger households are more likely to have at least one of their members receiving social grants, or because access to social grants influences household formation. Table 4.3 shows that heads of beneficiary households had significantly lower levels of education than their nonbeneficiary counterparts. Nonbeneficiary households had access to more land than beneficiary households, and they owned more livestock.

The results also show that few household heads were formally employed and that levels of unemployment were higher among beneficiary households. A small proportion of these rural households owned a nonfarm business, with beneficiary households owning fewer nonfarm businesses than nonbeneficiaries. The limited participation in nonfarm livelihood activities underscores the importance of smallholder farming in these rural areas. However, the results indicate that farming currently makes a minor contribution to the incomes of rural households. Social grants played an important role in the livelihoods of the interviewed households, representing almost half of beneficiary households' incomes—more than four times the 11 percent contribution of farming. Farming contributed twice as much to the income of nonbeneficiary households as it did to beneficiary households.

The survey results indicate limited access to support services such as extension, training, and credit. In particular, the lack of access to credit was highlighted as a key constraint that inhibits entrepreneurship development among farmers. Only 33 percent of the farmers reported that they had accessed credit in the 12 months prior to the survey. Table 4.3 shows that nonbeneficiary households spent more on inputs, generated more farm income per hectare, and allocated more labor to farming than their counterparts. In terms of the entrepreneurial competency index, the results indicated that there was no significant difference between the entrepreneurship scores of beneficiary and nonbeneficiary households.

Determinants of Level of Dependency on Social Grants

Table 4.4 presents the factors correlated with level of dependency on social grants, estimated as a key step in generating the propensity scores. The results show that dependency on social grants is positively correlated with age, with households headed by older individuals being more likely to depend on social grants compared to households headed by younger individuals. This is expected, as older individuals are about to retire or are retiring, and they become eligible to receive the old age grant when they reach 60 years. The results show that the larger the household, the higher the chances of dependency on social grants. This could be because larger families have a greater chance than smaller families of having a member or two who qualify for social grants. This could also indicate that access to social grants influences household formation. For example, researchers (Agüero, Michael, and Ingrid 2007; Armstrong and Burger 2009; Klasen and Woolard 2008) have reported that people move into households in which social grants are received.

As expected, the level of education of the household head was negatively associated with dependency on social grants. Higher levels of education imply more livelihood options and opportunities for generating income from other economic activities and hence less reliance on social grants. Households with employed household heads depend less on social grants, as they depend instead on wages from the household head's employment. The same applies to those who are owners of small businesses, as they can generate income from their business activities. Given that social grants may result in erosion of dignity due to, among other factors, being treated disrespectfully by government officials or being made to feel unworthy by being required to queue for very lengthy periods (Wright et al. 2015), those who have alternative livelihood options, such as the educated, the employed, and owners of microbusinesses, may decide

TABLE 4.4—FACTORS ASSOCIATED WITH DETERMINANTS OF DEPENDENCY LEVEL ON SOCIAL GRANTS

Variable	Coef.	Std. err.
Age of household head	0.003***	0.001
Gender of household head	-0.017	0.018
Household size	0.011***	0.002
Education level of household head	-0.006***	0.002
Marital status of household head	-0.020	0.017
Value of assets (logged)	-0.033***	0.011
Income from nongrant sources (logged)	-0.003***	0.001
Employment status of household head	-0.043***	0.016
Nonfarm business	-0.024*	0.015
Land size (logged)	-0.004	0.007
Livestock	-0.001	0.000
Access to agricultural training	-0.014	0.015
Group member	0.009	0.018
Market access	-0.035*	0.019
Credit access	0.026*	0.016
Access to irrigation	-0.028*	0.016
Distance to nearest all weather road	-0.001**	0.001
Umzinyathi	-0.062***	0.021
Uthukela	0.072***	0.022
Umkhanyakude	-0.077***	0.027
Constant	0.570***	0.123
n	984	
Wald χ^2	199.15***	
Log likelihood	42.81	

Source: Authors' calculations.
Note: ***, **, and * mean significant at the 1%, 5%, and 10% significance levels, respectively.

not to apply for social grants even when they qualify to receive them. Likely for similar reasons, households with access to irrigation and markets depend less on social grants than do those without these advantages.

The negative coefficient on nongrant income indicates that income increases from other sources are associated with decreasing dependency on social grants. This is expected, as eligibility for social grants is based on income levels, among other criteria. The results indicate that the targeting mechanism for the income criterion in the means test is working properly, as it excludes better-off households. As a means-tested program, social grants are intended for the poorest members of society. The significant and negative estimated coefficient of asset values indicates that richer households depend less on social grants than poor households, again indicating that social grants are indeed targeting the poor.

The results indicate that households located far from good all weather roads are less likely to depend on social grants compared to those with closer access to roads. This could be because isolated households lack access to information about the grants and often are without important requirements such as identity cards (DSD, SASSA, and UNICEF 2012). This situation is unfortunate, as it may result in the exclusion of the poorest members of society who need the social grants the most. Another potentially concerning result is that households that reported having used credit were more likely to depend on social grants than those that had not accessed credit. This suggests that these households are becoming more indebted and do not have adequate opportunities to generate income outside social grants. The result may also suggest that credit suppliers, especially informal ones, are extending credit to poor households. Whether or not this is a good thing is a subject for further research. Table 4.4 indicates that rural households from Uthukela district were more likely to depend on social grants than those in Harry Gwala district, while those in Umzinyathi and Umkhanyakude were less likely to depend on social grants than those of Harry Gwala.

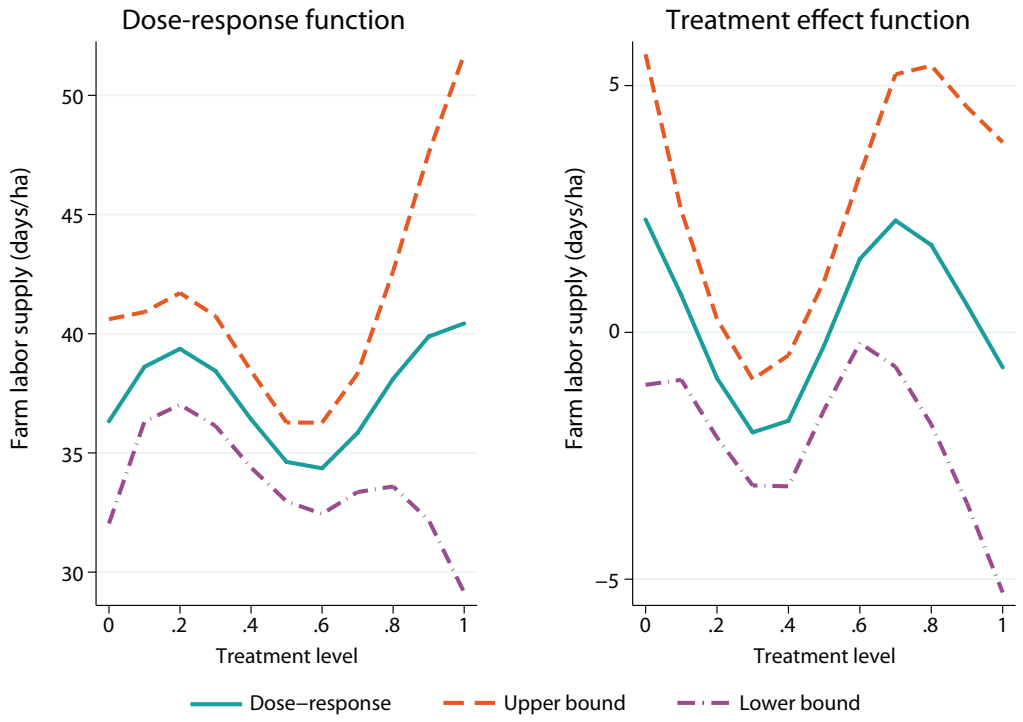
In summary, Tables 4.3 and 4.4 suggest that social grants are efficiently targeted at the poor households that they intend to reach. The study found that households that depend more on social grants are those that are not only poor but have fewer alternative livelihood options (such as the less educated, unemployed, or those that do not own a nonfarm microbusiness). The result is that the social grants are benefiting the poorest of the poor among rural households. Studies such as those by Abel (2013); Armstrong and Burger (2009); and DSD, SASSA, and UNICEF (2012) have also reported that social grants in South Africa are well targeted, in as far as they benefit members of relatively poorer households. However, while social grants are important in addressing extreme poverty, it would be a problem if access to social grants were to create disincentives for these poor rural households to work themselves out of poverty.

Impact of Social Grants on Agricultural Entrepreneurship

The GPS matching approach was used to estimate the heterogeneous impact of social grants on farm labor supply, the entrepreneurial competency index, investment in farm inputs, and farm income generation. Figure 4.1 presents the average dose-response and treatment functions for the impact of social grants on farm labor supply. The DRF reveals how a 10 percent increase in the contribution of social grants to household income affects the household's allocation of labor to farming, while the treatment effect shows the average effect. As indicated in Table 4.3, beneficiary households had been recipients of social grants on average for more than 9 years, and the social grants had been in place before decisions affecting current labor patterns were made. The tests for the common support condition and the balancing property showed that these assumptions were satisfied.

The confidence bands are narrow for treatment values ranging from greater than 0 to 80 percent, suggesting that the results are reliable in the same range. The wide 95 percent confidence bands suggest a high level of uncertainty of the average DRF (Bia and Mattei 2012) above 80 percent, as a result of the small number of dependence levels beyond that point. Thus, the shape of the graph indicating dosages greater than 80 percent is less robust

FIGURE 4.1—THE AVERAGE DOSE-RESPONSE AND TREATMENT EFFECT FUNCTIONS FOR THE IMPACT OF SOCIAL GRANTS ON FARM LABOR SUPPLY



Source: Authors' calculations.

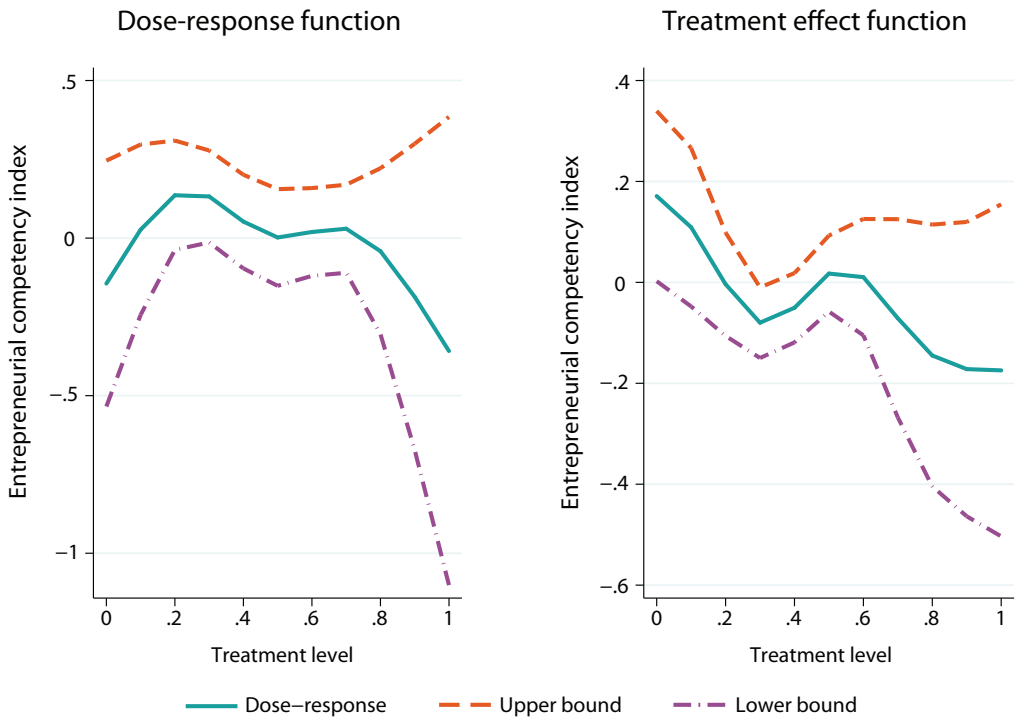
and reliable. The semiparametric estimators are sensitive to small sizes and do not perform well in regions with few observations (Bia et al. 2014). Therefore, the results should be interpreted with caution at dosage levels greater than 80 percent.

The results presented in Figure 4.1 show that the effect of social grants is not uniform at different treatment levels. Figure 4.1 shows that increasing treatment (that is, more dependency on social grants) is associated with increased participation in farming activities at both lower (0–20 percent) and higher (60–80 percent) treatment levels. The implication is that the additional income from social grants, at lower and higher levels of social grant dependency, plays a positive role in household members' participation in farming. As reported by some South African studies in the nonfarm labor participation literature (for example, Ardington et al. 2013; Ardington, Case, and Hosegood 2009; Posel, Fairburn, and Lund 2006; Williams 2007), social grants can help alleviate households' cash constraints, resulting in increased motivation to participate in farming activities. At lower levels, the social grant income is not significant enough to create a dependency syndrome. At higher levels, the households are poorer and have fewer other income sources, so they must participate more in economic activities such as farming to augment their inadequate income.

Figure 4.1 indicates that additional income from social grants results in a decreased incentive to supply more family labor to farming at dosages between 20 percent and 60 percent. This result supports other studies (for example, Abel 2013; Bertrand, Mullainathan, and Miller 2003) reporting that an increase in social grant income increases the reservation wage and lowers labor force participation. This implies that at least some of the social grant income that is in theory targeted toward the elderly, young, or sick ends up being redistributed (as cash or food, etc.) to working age members of the household. The result of this intrafamily redistribution is a significant reduction in the number of man days in which household members engage in smallholder farming activities. However, the decline in labor supply does not occur at the highest dependency levels.

Figure 4.2 shows the impact of social grants on the agricultural entrepreneurial competency index. The graph shows that increasing the contribution

FIGURE 4.2—THE AVERAGE DOSE-RESPONSE AND TREATMENT EFFECT FUNCTIONS FOR THE IMPACT OF SOCIAL GRANTS ON THE ENTREPRENEURIAL COMPETENCY INDEX

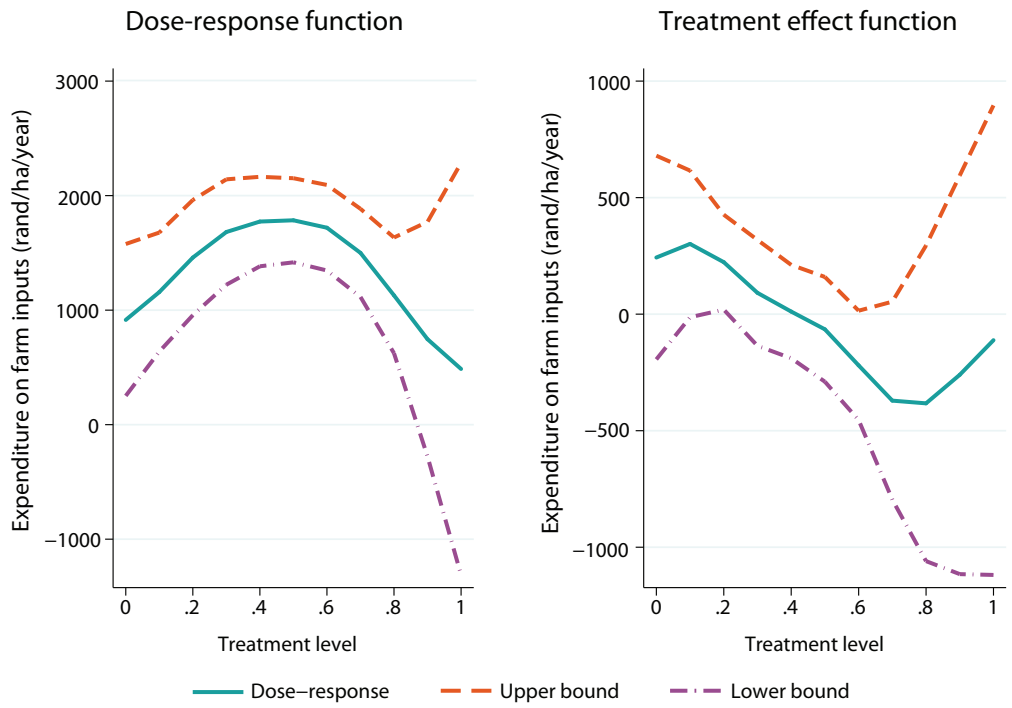


Source: Authors' calculations.

of social grants to household income has a positive impact on farm entrepreneurship at dosages of less than 20 percent. This result indicates that access to social grants can play a positive role in farm entrepreneurship at dependency levels below 20 percent. However, the graph shows that at high social grant dosages (greater than 20 percent), farm entrepreneurship declines with increasing social grant dependency. The GPS results are an improvement on the work of Sinyolo, Mudhara, and Wale (2016a), who reported a negative relationship between the level of dependency on social grants and entrepreneurship after using ordinary least squares. The GPS approach allows us to uncover heterogeneities that cannot be revealed using the homogeneous averages produced by methods such as ordinary least squares.

The GPS results suggest that access to social grants can have a positive effect on agricultural entrepreneurship if the amount of social grant income is kept at a low level relative to total household income. At lower levels, the guaranteed and predictable income from grants allows farming households to take risks and be entrepreneurially oriented. However, once the contribution of social grants increases beyond 20 percent relative to other sources of income, households become dependent and exhibit less motivation to develop their entrepreneurial competencies. For example, increasing the contribution of social grants reduces the pressure on beneficiaries to invest their time or resources in equipping themselves with skills, scanning the market for opportunities, or building and effectively using networks.

FIGURE 4.3—THE AVERAGE DOSE-RESPONSE AND TREATMENT EFFECT FUNCTIONS FOR THE IMPACT OF SOCIAL GRANTS ON FARM INPUT EXPENDITURES



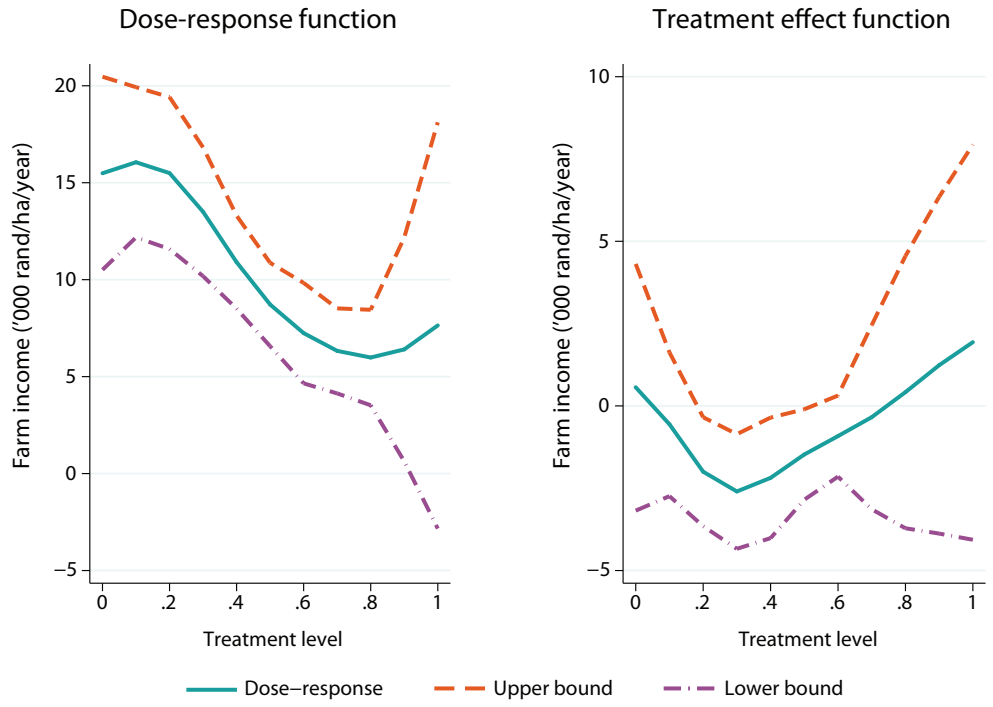
Source: Authors' calculations.

The impact of social grants on households' expenditures on farm inputs is presented in Figure 4.3. The results show a similar trend to the previous figures, indicating that income from social grants relates positively to farm input expenditures at lower levels of social grant dependency. The graph shows that the relationship changes at a treatment level of 50 percent, implying that increasing the contribution of social grants above 50 percent leads to a decline in investment in farm inputs.

The positive relationship is in line with what several authors have reported (for example, Boone et al. 2013; Covarrubias, Davis, and Winters 2012; Mabugu et al.

2013; Todd, Winters, and Hertz 2010), namely, that social grants could positively impact the productive capacity of poor rural households. According to these studies, social grants can improve the livelihoods of the poor by enabling them to invest in longer-term and more sustainable economic activities. In this way, social grants and smallholder agriculture have the potential to complement each other as key livelihood promotion activities among the poor.

FIGURE 4.4—THE AVERAGE DOSE-RESPONSE AND TREATMENT EFFECT FUNCTIONS FOR THE IMPACT OF SOCIAL GRANTS ON NET FARM INCOME



Source: Authors' calculations.

Figure 4.4 shows the relationship between social grants and net income from farming activities. While a minor positive relationship can be observed at lower treatment levels, overall the graph shows a negative relationship between the level of dependence on social grants and income generation from farming. This result suggests that households benefiting from social grants have a higher tendency to be subsistence producers, generating less income from farming and depending more on the social transfers for income. Radel et al. (2016) and Todd, Winters, and Hertz (2010) observed similar results in Mexico. In South Africa, Aliber and Hart (2009); Mabugu et al. (2014); and Sinyolo, Mudhara, and Wale (2017) identified a disincentive effect of social grants on smallholders' commercialization incentives.

Conclusions

Social grants and smallholder farming should play complementary roles in rural areas, as both are important livelihood sources. While the role of social grants in addressing short-term poverty is appreciated, it is important that social grants assist in building entrepreneurship and helping poor households develop capabilities that will enable them to engage in self-sustaining economic activities. The budget pressures in South Africa are high, and more households should be graduating out of government support. This chapter has shown that social grants are well targeted, benefiting the poor who have fewer alternative livelihood options, and that they can potentially play both a positive and negative role in the development of agricultural entrepreneurship in rural areas, depending on households' dependency levels. At

low dependency levels, social grants were found to have a positive effect on farm labor supply, entrepreneurship competencies, and investment in farm inputs. At higher levels of dependency, a negative effect emerged.

The results suggest that social grants can complement other economic activities of the poor, such as smallholder farming. However, for this to happen, the contribution levels of cash transfer programs such as social grants to household income should be kept at low levels. While direct income support for households is important to address hunger and extreme poverty in the short term, it is important that poor households also be afforded opportunities to work themselves out of poverty.