Revamping the productivity of rural firms: a strategy for developing a transformational rural employment, welfare and capital accumulation attitude

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Abstract

The productivity of rural firms in the Eastern Cape province's rural areas was examined in this study. It investigated the way readily available natural resources attract abundant labour to create jobs and reduce poverty. This article aims to define the demographics, examine how working for a rural company can improve an individual's well-being, investigate the advantages of working for a rural company and identify the variables that affect the workers' welfare status. The study also examined the extent to which income, savings and consumption expenditure contribute to an individual's financial well-being when they work for rural businesses. To meet its goals, the study postulated that working for rural businesses could improve the welfare of employees through the accumulation of economic components such as income, savings and consumption expenditure. According to the regression analysis, consumption spending is the most significant economic factor. Even though savings and income did not show much improvement, the findings demonstrate an improvement in the welfare of the respondents who worked for the rural enterprises. This article accordingly makes the following recommendations: adequate funding should be made available for rural areas; appropriate rural institutions should be in place to promote economic development; well-paying jobs that boost local productivity and reduce poverty must be created; and improved skills development that could have positive multiplier effects should be pursued.

Keywords: non-farm, rural employment, poverty, savings culture, welfare, consumption expenditure

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1. Introduction[1]

Non-farm earnings contribute about 35–50% of rural household income across the developing world and over time the rural non-farm economy has grown rapidly, contributing significantly to both employment and rural income growth.[2] Africa has enjoyed consistent economic growth for almost 20 years. The continent's per capita income is gradually increasing, with regional development outpacing the global average. However, there are concerning indications that the continent's quick economic expansion has not led to a decline in poverty; as a result, concerns are mounting about the lack of 'good' jobs being created in Africa's economies, particularly for youths.[3] Africa's production and employment structures have remained substantially unchanged since 20 years ago, notwithstanding the expansion of the continent's economy.[4]

Despite three decades of democratic rule, income poverty and inequality are still prevalent in South Africa, where recent economic growth has not been particularly strong.[5] According to Sulla and Zikhali's (2018) analysis, South Africa trails behind its rivals regarding the inclusiveness of consumer growth.[6] In addition, their report revealed that approximately 50% of South Africa's population is classified as chronically impoverished, with monthly incomes at or above the national poverty level of ZAR992 per person (in 2015 prices).

Moreover, local poverty is not depicted in a better light, as stated by CoGTA.[7] One of the Eastern Cape's four nodes for the Integrated Sustainable Rural Development Programme is the OR Tambo District. With 1 514 306 residents in 2019, the district is the second most populated in the province, behind Amathole, with 26,2% of the total population. The OR Tambo District Municipality is categorised as a

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1   This article was developed from a dissertation stored at the university depository for the degree awarded to one of the authors. Attempts have been made to review the literature and the wording; however, the results have been presented the same as in the original thesis.

2   S Haggblade, P Hazell & T Reardon 'The rural non-farm economy: Prospects for growth and poverty reduction' (2010) 38(10) *World Development* 1429–1441.

3   African Centre for Economic Transformation (ACET) 'Africa Transformation Report: Analysis from Shaanxi province' (2013) 1 *China Rural Economy* 78–89 (in Chinese) (ACET).

4   J Page & A Shimeles 'Aid, employment, and poverty reduction in Africa' (2015) 27(S1) *African Development Review* 17–30.

5   J Seekings & N Nattrass 'State–business relations and pro-poor growth in South Africa' (2011) 23(3) *Journal of International Development* 338–357.

6   V Sulla & P Zikhali *Overcoming Poverty and Inequality in South Africa: An Assessment of Drivers, Constraints, and Opportunities* (The World Bank 2018) 1–148.

7   Cooperative Governance and Traditional Affairs (CoGTA) *or Tambo District Municipality* (September 2020) 6.

Category C2 municipality, which denotes a predominantly rural nature, a low rate of urbanisation and a limited capacity to support municipal staff and funding. Aside from King Sabata Dalindyebo (KSD), all the local municipalities are categorised as Category B4 rural, which reflects a lack of institutional capability and regions with a concentration of tiny centres, few SMMEs, limited market prospects, reliance on outside assistance, and LED activities. OR Tambo's index of the Gini coefficient is 0,56. With barely 15% of the population employed, the vast majority – 66,5% of the population – live in poverty (using the lower poverty level). Phillipson et al[8] claimed that strengthening the ability of people, households, communities and businesses, in addition to managing the movement of resources between towns and rural communities in a way that creates value locally, is essential to sustainable rural development. Therefore, the key to creating a lasting path out of poverty is developing and innovating a multifaceted mechanism for alleviating poverty that is based on households' responses to industry-based poverty alleviation.

This study investigated ways in which to reduce poverty and create jobs in rural communities such as that of Mthatha. It used case studies of two small rural businesses that produce goods using natural resources. The objective was to ascertain whether or not the employees of these companies were competent and economically engaged. The advantages and economic activity these individuals experienced because of working for these companies defined the contribution of firms to people's welfare and showed how they were influencing the lives of impoverished individuals and families in rural areas. The study's specific goal was to:

- identify the demographics of the workforce in rural businesses;
- examine whether working for rural businesses can improve people's welfare and, if so, how;
- ascertain the advantages of working for rural businesses;
- determine the factors affecting the welfare status of those who work for rural businesses.

2.   Literature review

Industry-based poverty alleviation is fundamental to achieving a sustainable route out of poverty. Relevant research on industry-based poverty alleviation has focused on practical experiences, evaluations of effectiveness and development dilemmas, whereas other aspects of

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[8]   J Phillipson et al *Rural economies: Incubators and catalysts for sustainable growth* (Centre for Rural Economy, Newcastle University 2011), available at http://www.ass.gov/policy/docs/ssb/v70n4pl.pdf [Accessed on 3 September 2011].

industry-based poverty alleviation[9] had reported earlier that industry-based poverty alleviation is an important method of promoting economic development in underdeveloped areas.[10] It can enhance the self-development of the poor and provide a route out of poverty.[11] Industry-based poverty alleviation is a hematopoietic method; it can stimulate the endogenous power of rural households in rural areas and achieve sustainable development.[12] Several studies have shown that industry-based poverty alleviation is highly effective.[13] It can improve residents' welfare through job creation and lower food prices and also develop industries.[14] Moreover, industry-based poverty alleviation has a significant positive effect on the growth of agricultural income and the consumption of poor households.[15] However, some scholars have shown that industry-based poverty-alleviation projects have failed in certain regions.[16] They discovered that these projects failed to improve the living standards of poor households and that the idea of poor households continuing to wait for support has not changed. Yet industry-based poverty-alleviation practices still face several difficulties. And government-led poverty-alleviation projects often pursue economies of scale which deviate from the needs of rural households.[17]

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[9]   KY Lv et al '70th anniversary of the industrial poverty alleviation policy: Evolution paths, lessons, and prospects' (2020) 2 *Agricultural Economics* 23–30 (in Chinese).

[10] M Lei, XY Yuan & XY Yao. 'Promoting poverty alleviation in deep poverty-stricken areas by developing industries: based on the survey of L City in Tibet Autonomous Region' (2019) 40(2) *Guizhou Ethnic Studies* 149–161 (in Chinese).

[11] JW Sun & ZD Tang 'Poverty alleviation by industry in China and its experience for the countries on the belt and road' (2017) 54 *Journal of Northwest Normal University (Social Science)* 5–10 (in Chinese).

[12] L Yang et al 'Multidimensional poverty targeting of agricultural poverty alleviation through industrialization' (2019) 29(2) *China Population, Resources & Environment* 134–144 (in Chinese).

[13] CW Huang, Y Zhou & J Liu 'Industry targeted poverty alleviation: Dilemma and deepening path–discussing the Yinjiang experience of industry target poverty alleviation' (2017) 9 *Guizhou Social Science* 125–131 (in Chinese).

[14] X Irz, L Lin & C Thirtle 'Agricultural productivity growth and poverty alleviation' (2001) 19(4) *Development Policy Review* 449–466.

[15] NV Cuong 'Measuring the impact of cash crops on household expenditure and poverty in rural Vietnam' (2009) 16(2) *Asia Pacific Development Journal* 87–112.

[16] LJ Wang, XG Ye & J Chen 'Performance evaluation of industrial poverty alleviation from the perspective of precise recognition' (2018) 28 *China Population, Resources & Environment* 113–123 (in Chinese).

[17] SG Wang et al 'Research on the problem of poverty alleviation projects arrivals households in contiguous poverty-stricken areas – based on the investigation of six counties in three provinces in Wumeng mountain area' (2015) 25(3) *Academic Journal of Zhongzhou* 68–72 (in Chinese).

3.   Methodology

A survey was carried out on two rural businesses in Mthatha. The first is Transkei Quarries, which employs 99 local workers and was founded in 1986, when it was the first business to be owned entirely by black people. In 1965, Brain Wave Sawmill, the second company surveyed, was founded. This is a multigenerational company that employs roughly 96 people from nearby villages, nearby areas and Lwandlana.

3.1   Sampling technique

To ascertain whether and how rural firms have successfully decreased their employees' poverty status through job creation by using two businesses as case studies, the employees of these two rural businesses in Mthatha were invited to answer a questionnaire. For the survey, the employees of both companies were given structured questionnaires that contained mostly closed-ended and very few open-ended items as part of a case study. The questionnaire was broken down into four sections: worker perception, economic activity, job experience and social growth, and personal information. Different options were presented to the respondents using closed-ended questions. The Likert scale was also used to guide the respondents towards a potential response that would make them feel comfortable while nevertheless expressing their exact opinion, and so preventing confusion in their responses. The respondents were able to answer a few open-ended questions using their own first language. Some 83% (n = 82) of the 99 Transkei Quarries employees returned a completed questionnaire, whereas 66 out of the 96 Brain Wave company employees (69%) completed the questionnaire.

3.2   Data analysis

Tabulation, correlation and statistical graphs were used to analyse and evaluate the questionnaire results. Descriptive statistics were once more applied in the data-analysis process using SPSS to examine the goals of saving, spending and insurance for the employees of these rural businesses. To determine whether or not the welfare of those employed by the rural enterprises has improved, binary logistic regression was used. This responded to the third study objective.

The purpose of the regression equation was to test the study's hypothesis. It examined how the explanatory factors affected the dependent variable, the economic welfare of a person, or E_w. The explanatory factors were Y = income, S = savings, Ec = consumption expenditure, Ur = unemployment reduction and Ep = paying for children's school fees or education services. As mentioned above, the link between the dependent and the independent variables was explained using the regression model:

E_w = X_o + X_1 income + X_2 saving + X_3 consumption expenditure + X_4 unemployment reduction + X_5 payment educational services Σ_r,

where E_w represents the economic welfare of an individual

X_o is a constant.

X_1 measures the association between economic welfare and income.

X_2 measures the association between economic welfare and saving.

X_3 measures the relationship between economic welfare and expenditure.

X_4 measures the relationship between welfare and unemployment reduction.

X_5 measures the relationship between welfare and educational services.

Σ_r was the error or disturbance term. This term also represents all those factors that affect the dependent variable besides the stated independent variables but which are not explicitly shown in the model.[18]

We used binary logistic regression to arrive at the welfare change predictors. The majority of the variables contained more than two groups. For instance, there were four income categories and only one observation for the remaining categories. The variables were converted into binary dummy variables that represent whether a trait is present or absent.

Binary logistic regression models show how a binary response variable, *Y,* depends on a set of *k* explanatory variables, $X = (X_1, X_2, ... X_k)$.

$Yi = \beta 0 + \beta 1 Xi + \varepsilon i$ $Y_i = 0,1$

The response functions are

$E\{Yi\} = \beta 0 + \beta 1 Xi$

The binary logistic takes the following specification:

$$\text{logit}(\pi) = \log \frac{\pi}{(1-\pi)} = \beta_0 + \beta x_i + ... + \beta 0 + \beta x_k,$$

The model presents the log odds of the chance of 'success' (welfare improvement, in this case) as a function of the explanatory variables (income, savings, consumption spending and reduction in unemployment). In the logistic regression, the respondents who indicated that their welfare had increased were represented by the number 1, while the respondents who indicated that their welfare had not improved were represented by the number 0.

4. Findings and discussion

Figures and frequency tables illustrating the descriptive statistical results are displayed in this section. Transkei Quarry is referred to as

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[18]   Gujurati 2000.

Firm A and Brain Wave Sawmill as Firm B for the sake of convenience and comparison.

According to Table 4.1, most of the workers in both companies were between the ages of 21 and 45 (Gujurati 1999).[19]

Table 4.1: Demographics of the employees

Demographics	Firm A			Firm B		
	Frequency	%	Cum %	Frequency	%	Cum %
Age groups						
20 and under	1	1,5	1,5	21	26,3	26,3
21–45	50	75,8	77,3	35	43,8	70,0
46–65	15	22,7		24	30,0	
Total	66	100,0	100,0	80	100,0	100,0
Gender						
Male	60	90,9		61	76,3	100,0
Female	6	9,1	100,0	19	23,8	23,8
Total	66	100,0	9,1	80	100,0	
Marital status						
Single	36	54,5	54,5	49	61,3	61,3
Married	26	39,4	93,9	25	31,3	92,5
Widowed	4	6,1	100,0	6	7,5	100,0
Level of education						
Uneducated	1	1,5	1,5	4	5,0	5,0
Primary education	9	13,6	15,2	15	18,8	23,8
Junior secondary	15	22,7	37,9	29	36,3	60,0
High school	36	54,5	92,4	28	35,0	95,0
Tertiary	5	7,6		4	5,0	95,0
Total	66	100,0	100,0	80	100,0	
Main income earner						
No	7	10,6	10,6	61	76,3	76,3
Yes	59	89,4		19	23,8	
Total	66	100,0	100,0	80	100,0	100,0
No of dependants						
0	3	4,5	4,5	1	1,3	1,3
1–3	10	15,2	19,7	30	38,0	39,2
4–6	27	40,9	60,6	37	46,8	86,1
7–9	18	27,3	87,9	6	7,6	93,7
10+	8	12,1		5	6,3	
Total	80	100,0	100,0	79	100,0	100,0

[19]   DN Gujarati *Essentials of Econometrics* 2 ed (McGraw-Hill 1999).

This group consists of 44% of the workers in Firm B and 76% of the workers in Firm A. Remarkably, Firm B employs at least 26% of individuals under the age of 21, whereas Firm A employs only 1,5% of those under that age. In addition, Firm B hired more adults than Firm A. Of the individuals in the 46–65 age range, Firm B employed 30%, compared to Firm A's 23%. The fact that Firm B appeared to have more jobs than Firm A across all age groups could be one explanation for this.

Compared to Firm B, Firm A hired more men. With 121 men overall, it appeared that men predominated in both these companies: men comprised 91% of Firm A's workforce and 76% of Firm B's. This is not shocking because, in rural regions, some jobs are still linked to men while other jobs are linked to women. There were more women working in Firm B than in Firm A (19 versus 6). In Firm A, the proportion of female employees to total employees was 24%, whereas in Firm B, it was just 9%. Most of Firm B's jobs were observed to be tasking. The outcome of this investigation is consistent with the research findings by Shoen[20] among garment factory workers in Bangladesh.

Moreover, both companies were able to hire individuals with different marital statuses. It was noted that a single individual controlled the payrolls of both companies. Firm B employed a slightly higher percentage of single individuals (61%) than Firm A (55%). As a result, Firm A employed a higher proportion of married individuals (39%) than Firm B (31%). Despite being the least common demographic in these rural enterprises, widows made up 7,5% of the workforce at Firm B and 6% at Firm A.

Considering the data about employees' educational attainment, it was found that 54,5% of Firm A's workforce had completed high school with only 35% of Firm B's workforce having done so. Most employees at Firm B had dropped out of junior secondary school. Yet Firm B's unskilled workforce had the lowest value at 5%, matching the percentage of tertiary-educated individuals. In Firm A, almost 8% of the respondents had attained a tertiary-level qualification as against 1,5% labelled uneducated.

In addition, Table 4.1 shows that 89,4% of the 66 respondents at Firm A earned the highest incomes and were the primary breadwinners. In contrast, at Firm B, only 23,8% of the 80 respondents were the primary income earners. Looked at differently, in Firm A, just 10,6% of the respondents said they were not the primary breadwinners in their household, but 76,3% of the respondents in Firm B made this claim. The respondents appear to have relied on their income from these

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20   RF Schoen 'Women and rural industrialization: Garment production reaches old land and new labour in Bangladesh' (2019) 75 *Women's Studies International Forum* (Pergamon).

firms as their primary source, given that the employees of these firms, particularly those in Firm A, were the primary earners. The respondents' income from these rural companies was their only source of support. In addition, it was noted that 46,8% of the respondents at Firm B, or the majority, were responsible for four to six dependants. This is higher than the proportion of responders at Firm A (40,9%) who indicated that they took care of four to six dependants. In both companies, the responders without dependants were in the lowest tier. In this category, Firm B had only 1,3% and Firm A had 4,5% of employees.

The contribution that workers in rural enterprises provide to a household's income is indicated in Table 4.2.

Table 4.2: Wages category

Income	Firm A			Firm B		
	Frequency	**%**	**Cum %**	**Frequency**	**%**	**Cum %**
<R800	1	0,2	0,2	2	2,5	2,5
>R800 but <R2 000	7	10,6	10,8	18	22,5	25,0
>R2 000 but <R4 000	27	40,1	50,9	42	52,5	77,5
>R4 000	31	47,0	56,1	18	22,5	100,0
Total	**66**			**80**		

Many of the respondents were paid between R2 000 and R4 000 in both firms: according to the findings, roughly 40% of Firm A's workforce earned between R2 000 and R4 000, while 52,5% of Firm B's workforce did the same. The South African minimum wage, which was the recently approved wage rate of R3 500/month, was then thought to be something these rural businesses could afford to pay. Those who made less than R800/month were the lowest earners. Expressed differently, at Firm A 0,2% of its workforce earned less than R800/month, compared to 2,5% at Firm B. In Firm B, 22% of the workers were paid between R800 and R2 000, compared to just 10,6% in Firm A.

4.1   Economic activities

Based on the findings in Table 4.3, workers at both companies spent more on necessities (ie, non-durables such as food) than on semi-durables and durables (ie, furniture; Category B).

Table 4.3: Consumption expenditure

Expenditure	Firm A			Firm B		
	Frequency	%	Cum %	Frequency	%	Cum %
On groceries, clothing and electricity (Category A)	4	6,1	6,1	18	22,5	22,5
On groceries, clothing, electricity and furniture (Category B)	31	47,0	53,1	42	52,5	75,0
On groceries, clothing, electricity, furniture and livestock (Category C)	7	10,6	63,7	6	7,5	82,5
On groceries, clothing, electricity, furniture, livestock and educational services (Category D)	20	30,3	94,0	4	5,0	87,5
Other (Category E)	4	6,1	100,1	10	12,5	100,0
Total	**66**	**100,0**		**80**	**100,0**	

Whereas Firm A had 47% of the respondents in the same category, Firm B had a higher rate of nearly 53% of expenditure on Category B necessities. This means that the respondents at Firm B spent more money than at Firm A on necessities and semi-durable goods (Category A). And whereas 22,5% of the respondents at Firm B spent money on necessities, in contrast, only 6,1% of the respondents at Firm A reported spending on Category A necessities. Remarkably, the respondents from Firm A appeared to be more engaged in the economy than those from Firm B: only 5% of respondents at Firm B spent on Category D, compared to roughly 30% at Firm A. This disparity is significant. This could have resulted from people making various decisions and having varied tastes. Moreover, the priorities of each individual or household also have an impact on their budget, in addition to their income. Almost all of a person's demands are met by Category D. To summarise, this outcome indicates that the participants were able to allocate funds towards non-durable, semi-durable and durable goods.

The spending on education, one of the most important social services, is displayed in Table 4.4.

Table 4.4: Level of children's education paid for by the respondents

Level of education	Firm A			Firm B		
	Frequency	%	Cum %	Frequency	%	Cum %
Grade R to Grade 7	24	40,1		39	48,8	48,8
Grade 8 to Grade 12	29	49,2		34	43,8	92,6
Tertiary level	3	5,1		5	6,3	98,9
All levels stated above	3	5,1		2	2,5	101,4
Total	59			80		

The majority of the respondents from Firm A (about 49%) spent their money on the educational needs of children enrolled in Grades 8 to 12; however, about 44% of the respondents at Firm B said they paid for their children's educational expenses in these grades. Approximately 49% of the employees at Firm B spent their money on the needs of children enrolled in Grades R to 7; about 40% of the respondents in Firm A paid for their children's education in these grades.

Compared to other categories, very few respondents at either firm paid for their children's post-secondary education needs: but the respondents at Firm B spent marginally more, at 6,3%, than respondents at Firm A, at 5,1% on tertiary education. Few people at either firm were able to afford to fund all of the educational levels.

According to the results in Table 4.5, the respondents from the two firms had different banking practices.

Table 4.5: Type of savings

Type of savings	Firm A			Firm B		
	Frequency	%	Cum %	Frequency	%	Cum %
Formal banking system	28	66,6	66,6	25	39,7	39,7
Umgalelo/stokvel	13	30,9	97,5	38	60,3	100,0
Other	1	2,4	99,9	0	0,0	100,0
Total	42	100,0		63	100,0	

While the respondents from Firm B were more involved in the informal banking system, the respondents from Firm A banked more in the formal banking system. Of the respondents in Firm A, more than 66% kept official records. This is greater than Firm B's share, which is roughly 40%. Conversely, with an informal savings rate of about 60%, Firm B respondents saved more money informally than Firm A respondents, who saved 31% of their total.

Table 4.6 indicates the means of savings engaged in through insurance by the respondents in Firm A and Firm B.

Table 4.6: Type of insurance

Type of Insurance	Firm A				Firm B	
	Frequency	%	Cum %	Frequency	%	Cum %
Formal insurance from recognised insurance companies	35	63,6	63,6	18	24,7	24,7
Burial community societies	12	21,8	85,4	44	60,3	85,0
Burial societies in funeral parlours	8	14,5	99,9	11	15,1	100,1
Total	55	100,0		73	100,0	

According to Table 4.6 above, only 25% of the respondents from Firm B saved formally, compared to roughly 64% of the respondents from Firm A who had insurance with official well-known organisations. In addition, a higher percentage of the respondents from Firm B (60,3%) insure themselves through informal insurance activities, compared to a mere 21,8% of the respondents from Firm A. Those who take out insurance through professional burial clubs or funeral homes fall into the lowest tier. The percentage for this type of savings for both companies is about 15%.

4.2 Rural welfare attainment

The number of workers who had previous employment and earned less than or equal to R4 000, or earned more than R4 000, is indicated in Table 4.7.

Table 4.7:   Income versus employment status and number of dependants

Firm A

Employment Status	Dependants	Income ≤4000 %	Income >4000 %	Total
Have worked before	None	1,5	1,5	3,1
	1 to 3	6,2	4,6	10,8
	4 to 6	20,0	9,2	29,4
	7 to 9	9,2	13,8	23,1
	≥10	6,2	4,6	10,8
	Total	43,1	33,8	78,5
First time of employment	None	1,5	0	1,5
	1 to 3	1,5	1,5	3,1
	4 to 6	6,2	4,4	10,8
	7 to 9	3,1	1,5	4,6
	≥10	1,5	0	1,5
	Total	13,8	7,8	21,5

Firm B

Employment Status	Dependants	Income ≤4000 %	Income >4000 %	Total
Have worked before	None	2,5	0	2,5
	1 to 3	11,3	7,5	18,8
	4 to 6	27,5	2,5	30,0
	7 to 9	8,8	5,0	11,0
	≥10	2,2	2,5	5,0
	Total	55,0	17,5	72,5
First time of employment	None	0	1,3	1,3
	1 to 3	3,8	1,3	5,0
	4 to 6	5,0	2,5	7,5
	7 to 9	5,0	3,8	8,8
	≥10	2,5	2,5	5,0
	Total	16,3	11,3	27,5

The data in this table indicate that most employees in both companies are previous workers who made less than or equal to R4 000 (43.1% for Firm A; 55% for Firm B).

The largest group of employees in each firm who have worked before and earn R4 000 or less are able to support four to six dependants. This category makes up 20% of Firm A's workforce and 27,5% of Firm B's. The data also reveal that the first-time workers were also able to set aside money to cover four to six dependants' schooling needs. In Firm A, these respondents made up 6,2% of this group; in Firm B, they made up 5%. And 5% of this same group in Firm B were also able to support their dependants' schooling needs.

In similar vein, those who had previously held a job and earned more than R4 000 could comfortably support seven to nine dependants on average. In Firm A, this group made up 13.8% of the workforce, but in Firm B they made up 5%. Interestingly, though, in this latter group of income-earners, the largest group were those who supported one to three dependants (7,5%).

About 1,5% of first-time employees in Firm A and almost 4% of first-time employees in Firm B who made more than R4 000 were able to meet the educational demands of an average of seven to nine dependants.

Table 4.8 shows that most of the employees in Firms A and B who had been employed previously have worked there for an average of two to five years.

Table 4.8:   Time (years) employed at the firm for the 'employed before' and 'first time of employment' groups: respondents employed before versus employment for the first time at the firm

	Firm A Employment (years)					Firm B Employment (years)			
Employment status	<2	2–5	6–10	>10	Employment status	<2	2–5	6–10	>10
Employed before (%)	32,8	33,8	3,0	9,2	Employed before (%)	22,5	30,0	6,3	3,8
First time employee (%)	7,8	6,2	3,1	4,6	First time employee (%)	17,5	8,8	8,8	2,5
Total	40,6	40,0	6,1	13,8	Total	40,0	38,8	15,1	6,3

The respondents at Firm A comprise 33,8% of the sample, while those at Firm B account for 30%. This was the largest group of respondents in both firms.

In addition, and close behind these previous figures, among the employed before group, Firm A had a higher percentage of respondents (32,8%) who had worked there for less than two years than Firm B (22,5%). Just under 9% of Firm A's workforce who had been employed

before have worked there for more than 10 years, compared to only 3,8% of Firm B's workforce.

The larger proportion of respondents – 17,5% – had never held a job before and had worked for Firm B for less than two years, compared to 7,8% of the respondents in Firm A. In contrast, whereas 2,5% of the respondents in Firm B had never worked outside the company and had been employed there for more than ten years, 4,6% of the respondents in Firm A had never worked outside the company and had been employed there for more than ten years.

Based on the data in this table, we can conclude that in both organisations most of the respondents have had prior job experience: Firm A 78,8% versus 21,7% first-time employed; Firm B 62,6% versus 37,6% first-time employed. In addition, it was found that some of the respondents had had more than ten years' experience with the firms and had never been previously employed before: 2,5% in Firm B and 4,6% in Firm A. These people's welfare had to have improved, considering how long they had worked for the firms.

In Figure 4.1 the number of employees managing to make some form of savings is indicated in each of four wage categories: less than R800; between R800 and R2 000; between R2 000 and R4 000; and greater than R4 000 per month.
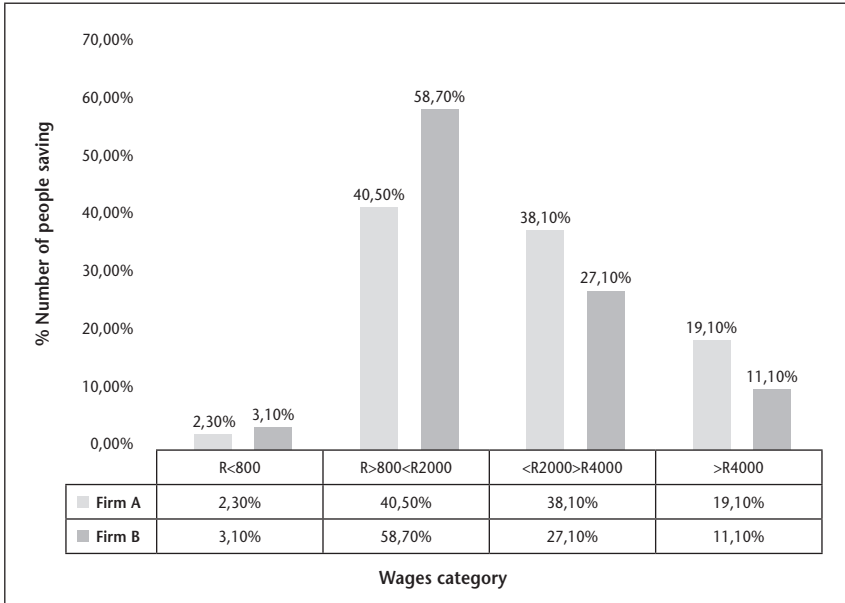

	R<800	R>800<R2000	<R2000>R4000	>R4000
Firm A	2,30%	40,50%	38,10%	19,10%
Firm B	3,10%	58,70%	27,10%	11,10%

Wages category

Figure 4.1: Wage category versus savings

As the bar graphs indicate vividly, the respondents who earned more than R800 but less than R2 000 had the highest savings culture in both organisations, according to the analysis of the Figure 4.1 data: here,

employee savings in Firm B was higher than that of Firm A, at 58,7% versus 40,5%. The second-highest savings group in both organisations is made up of respondents earning more than R2 000 but less than R4 000; but at this earnings level more employees in Firm A (38,1%) than in Firm B (27,1%) fall into this category. Remarkably, the study discovered that the highest earners in both companies (earning more than R4 000) had the lowest savings of the three highest groups of earners: roughly 19,1% of workers in Firm A compared to just 11,1% in Firm B. The reason for this could be that while most respondents in Firm A saved in the official banking system, most respondents in Firm B saved in the 'stokvel' or 'umgalelo' system.

In Figure 4.2 the amounts allocated to savings as opposed to insurance are compared for the employees in the two firms.

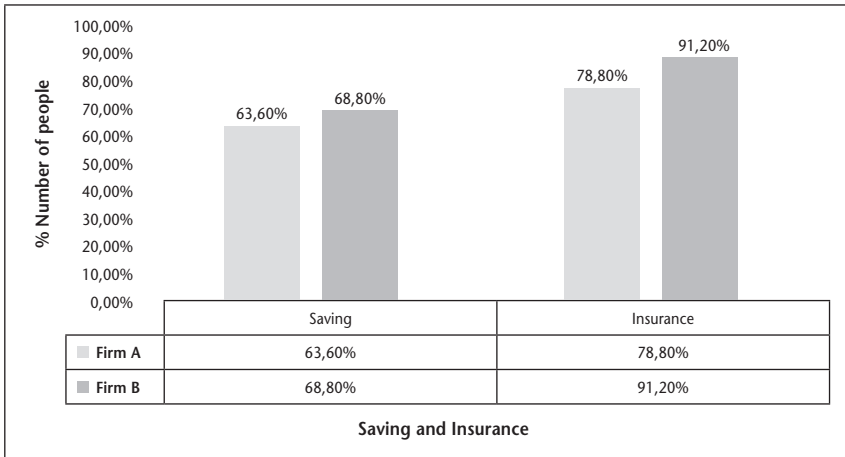|	Saving	Insurance
Firm A	63,60%	78,80%
Firm B	68,80%	91,20%

Saving and Insurance

Figure 4.2: Savings versus insurance

According to the survey, most of the respondents in both firms were able to save money: 68,8% of the respondents from Firm B and 63,6% from Firm A, as shown in Figure 4.2. According to Table 4.5, the largest group at Firm B saved using the informal savings system.

Furthermore, even though most of the respondents in Firm A were primarily involved in investing in informal insurance, 83% of them could insure both themselves and their families. Of the respondents at Firm B 91,2% were able to save in the form of insurance; for Firm A, this number was only 78,8%. Therefore, compared to Firm A, the Firm B percentage is 12% higher. The Firm B respondents were mainly involved in non-formal insurance.

4.3   Determinants of welfare among rural firm employees

Table 4.9 displays the logistic regression statistics that present data derived from omnibus tests of model coefficients.

Table 4.9:   Omnibus tests of model coefficients

	Firm A				Firm B		
	Chi-square	*Df*	*Significance*		*Chi-square*	*Df*	*Significance*
Step 1	50,057	6	0,000	Step 1	70,192	6	0,000
Block	50,057	6	0,000	Block	70,192	6	0,000
Model	50,057	6	0,000	Model	70,192	6	0,000

According to the table, Firm A's chi-square is 50,057 whereas Firm B's is 70,192. Both firms attain significance at the 1% level. This was employed in the test of overall statistical significance and was calculated as the difference between ending and beginning –2 log-likelihood. For both Firms A and B, the chi-square Omnibus tests of the model coefficients show statistical significance, suggesting that the model fits the selected explanatory variable. The statistical evidence of a relationship between the dependent variable (welfare) and the set of independent variables (income, savings, consumption expenditure, unemployment reduction and payment for educational services) is provided by the chi-square model's significance test. In conclusion, since the *p*-value is less than 0,05, the null hypothesis – which states that there is no difference between the model with only a constant and the model with predictors – was rejected.

Table 4.10:   Cox & Snell and Nagelkerke tests

	Firm A			Firm B		
Step	–2 log likeliwood	Cox & Snell r-square	Nagelkerke r-square	–2 log likeliwood	Cox & Snell r-square	Nagelkerke r-square
1	28,490	0,537	0,766	32,531	0,589	0,809

According to Table 4.10, the pseudo-r-square for the Firm A model was 76,6% for the Nagelkerke tests and 53,7% when considering the Cox and Snell r-square. Firm B's were a little higher at 58,9% and 80,9% respectively. Pseudo-r-squares were used in logistic regression to deduce whether changes in the explanatory variables upon entering the model were responsible for the variation in the dependent variable, or ordinary least square (OLS) r-square. Cross-sectional surveys such as the one being conducted are considered satisfactory when the r-square is at least 33%; a higher r-square indicates a better model.[21] This suggests that the model used in the present study worked effectively.

In addition, as indicated in Table 4.11, the Hosmer and Lemeshow test was used to determine the model's goodness of fit, pitting the null hypothesis – that the model is fit – against the alternative – that the model is not fit.

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[21]   FAG Windmeijer 'Goodness-of-fit measures in binary choice models' (1995) 14 *Econometric Reviews* 101–116.

Table 4.11: Hosmer and Lemeshow test of model fitness

Firm A				Firm B			
	Chi-square	*Df*	*Significance*		*Chi-square*	*Df*	*Significance*
Step 1	12,734	7	0,079	Step 1	3,174	7	0,868

The intended result is to be unable to reject the null hypothesis due to low statistical significance. As can be seen from Table 4.11, the *p*-value for Firm A is 0,079. Despite being higher than 0,05, this is still less than 0,1. But the model for Firm B has an extremely high *p*-value of 0,868, even closer to 0,1, and since we were unable to reject the null hypothesis fully, the model appears to be fit.

The presentation and analysis of each firm's binary logistic regression are shown below. The Wald statistical significance test was used to examine and explain the significance of the association between each independent variable and the dependent variable in each of the tables below. The first of these, Table 4.12, indicates the change in the welfare of employees in Firm A.

Table 4.12: Welfare change in Firm A

	B	**SE**	**Wald**	**Df**	**Sig**	**Expo (B)**	**95% CI for Expo (B)**	
Predictors							*Lower*	*Upper*
Consumption – basic+	3,179	1,076	8,724	1	0,003	24,019	2,914	197,986
Unemployed reduction – yes	2,460	1,365	3,246	1	0,072	11,709	0,806	170,146
Employed before – yes	1,388	1,677	0,685	1	0,408	0,250	0,009	6,676
Savings – yes	1,897	1,043	3,308	1	0,069	6,668	0,863	51,523
Paying for educational services – yes	1,953	1,088	3,221	1	0,073	0,142	0,017	1,197
Income – R4 000+	0,037	1,024	0,001	1	0,972	1,037	1,390	7,713
Constant	–1,309	1,931	0,460	1	0,498	0,270		

According to Table 4.12, Firm A's positive coefficients (B) for income, savings, consumption and unemployment reduction translate into a number called Expo (B) that is greater than one when translated. This indicates a high likelihood of the modelled event happening. In this instance, the only factors that showed statistically significant connections with well-being were consumption, savings and unemployment reduction; the results varied in the case of the ability to pay for needs or services related to education. The consumption on non-essential items decreased. Given that the likelihood of the Wald

statistic was 0,003, the result was statistically significant at 1%. It was determined that the consumption B coefficient does not equal zero, rejecting the null hypothesis.

Consequently, this provided credence to the finding that workers at Firm A who consumed a wider range of goods and services were more likely to report an improvement in their welfare.

The null hypothesis, according to which unemployment has decreased, is rejected, as indicated by the Wald statistic (*p*-value of 0,072, which demonstrated statistical significance at the 10% level). Support was shown for the alternative, which suggested that individuals who claimed that unemployment had decreased had experienced better welfare. Based on Expo (B), it can be inferred that a reduction in unemployment raises the likelihood of welfare improvement by 11,709 times.

However, the data also indicate that savings increase well-being, with a Wald statistic *p*-value of 0,069 that is once more only marginally statistically significant at 10%. The likelihood of a welfare improvement increased by more than 6,66 times when savings were present. This suggests that savings, which are currently at pitiful levels in South Africa, were more favourable in these groups. Accordingly, we can conclude that the level of welfare is more likely to be low or not improve if savings are poor.

On the other hand, a negative B coefficient was associated with prior employment and paying for educational services. The transformed log values in that instance were less than one, suggesting a reduced likelihood of an improvement in the level of welfare. After examining the statistical significance of the Wald statistic, it was found that paying for children's school fees or educational services reduces the likelihood of receiving welfare benefits by 85,8% (1–0,142). These findings are statistically significant at 10% (*p*-value = 0,73 is less than 0,10). Paying for children's education is a significant financial burden, particularly considering that the majority of the respondents are low-income earners who would greatly benefit from government or company subsidies for school tuition. For black rural people, funding their educational requirements now may feel like a burden, but it is an investment in their future. Even if paying for educational services may not seem as if it will enhance their well-being right away, it will eventually boost household welfare, even though it might take years for that to happen.

Table 4.13: Welfare change in Firm B

	B	SE	Wald	Df	Sig	Expo (B)	95% CI for Expo (B)	
Predictors							*Lower*	*Upper*
Consumption – basic+	2,879	1,065	7,312	1	0,007	17,794	2,208	143,387
Unemployed reduction – yes	2,834	1,121	6,389	1	0,011	17,022	1,890	153,300
Employed before – yes	3,171	1,005	3,184	1	0,019	23,831	1,693	335,445
Savings – yes	1,794	1,005	10,494	1	0,074	6,012	0,838	43,124
Paying for educational services – yes	4,674	1,443	10,494	1	0,009	0,001	0,001	0,158
Income – R4 000+	0,288	1,284	0,050	1	0,823	0,750	0,060	9,295
Constant	–2,810	1,172	5,752	1	0,016	0,060		

For Firm B employees, the likelihood of better welfare increased by 17,794 when their consumption shifted from basic goods to basic goods plus semi-durable and durable items. There was an indicated statistical significance of 1% based on the Wald statistics (7,312) probability of 0,007. For individuals who reported that unemployment had decreased, the probability of having welfare enhanced increased by nearly the same amount as consumption (by 17,022 times) at a 5% significance level (0,011, which is less than 0,05).

According to the Wald statistic, those employed before working at Firm B had a chance to increase their well-being by 23,831 at a 5% significance level. The people may have accumulated assets and money from previous jobs or may have made more money by enhancing their welfare (depending on experience). Although income had a beneficial impact on a household's welfare, it was observed that at Firm B income was not a statistically significant predictor of welfare. This could have resulted from the fact that everyone defines welfare differently based on their goals and accomplishments.

Like Firm A, Firm B's findings indicated that savings enhances the likelihood of welfare enhancement by a factor of more than six. At 10% statistical significance, the Wald statistic *p*-value of 0,074 is noteworthy. This made it possible to reject the null hypothesis, which states that the B coefficient equals zero. The people at Firm B thought that savings was related to their well-being.

Regarding financing educational services, the people in Firm B believed that there was no way to improve their welfare. The findings supported those of Firm A, showing that paying for your children's

education reduced by more than 99% your chances of having your welfare increased.

4.4   Discussion

Both firms are located in rural regions and the staff members are native to the rural areas they cater to. The benefits from these firms vary and are at the same time similar.

4.4.1 Consumption expenditure

Based on Table 4.12, the consumer expenditure of Firm A's employees had a value of 24,019 for Expo (B), with a Wald statistical significance of 0,003. This was more than one. In contrast, the equivalent value of Expo (B) in Firm B was 17,794, with a Wald statistic of 7,312 and a probability of 0,007, indicating a 1% statistical significance. The results demonstrated statistical significance in both firms, despite the fact that Firm A's significance threshold was different from Firm B's. The respondents who were employed by both companies were active in the economy and thought that working for the companies improved their quality of life. Most intriguingly, they could spend money and purchase a wide range of consumer products. This pertains to items that are semi-durable, durable and non-durable. The ability of these people to provide for their basic needs and put food on the table is evidence that these local firms can reduce poverty and create jobs. This outcome is consistent with the research done by Lei, Yuan and Yao,[22] which stated that achieving success in reducing poverty can also lead to more robust household repercussions. Achieving sustained poverty-reduction goals can be aided by the positive feedback loop that exists between the livelihood response and multidimensional poverty-relief outcomes.

4.4.2 Unemployment reduction

The findings demonstrate that the respondents at both companies thought that their welfare had increased and that unemployment had decreased. The Wald statistic p-value of 0,072 from Table 4.12 for Firm A indicates a significance level of 10%. The Wald statistic p-value for Firm B in Table 4.13 is 0,011, indicating a 5% significance level. Expo (B) was 17,794 for Firm B and 11,709 for Firm A. Compared to the Firm A employees, the respondents in Firm B were more certain that their welfare had improved due to reduced unemployment. The employees at both firms thought that their welfare had improved. This suggests

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[22]   Lei, Yuan & Yao (n 10).

that both businesses were able to help reduce poverty by giving rural poor people jobs. Such a poverty-related policy intervention involving industry in China validates this shift in the workers' job situation.[23]

4.4.3 Savings

Savings contributed to increased welfare for people employed by rural businesses in the case of both firms. The Wald statistic *p*-value for Firm A in Table 4.12 is 0,069, which is statistically significant at 10%, and the Wald statistic *p*-value for Firm B in Table 4.13 is 0,074, which is also statistically significant at 10%. Both organisations' respondents stated that they could budget for future expenses and save money. These respondents thought that saving money would increase their welfare. This was one of the economic determinants or factors that demonstrated economic participation. While providing for savings encourages consumption, it also supports local economic growth and keeps the economy afloat. Welfare cannot be improved without generating savings. The latest World Bank assessment, which supports this outcome, stated that while more work needs to be done, progress has been made in South Africa.[24]

4.4.4 Paying for educational services

According to the respondents in both firms, paying for educational services is insufficient to improve their welfare. The B coefficient in Table 4.12 is negative, yet the Wald statistic *p*-value is 0,73 and shows statistical significance at 10%. Like Firm A, Firm B has a negative B coefficient in Table 4.13, but its Wald statistic is 10,494 and its *p*-value is 0,009, which is statistically significant at 10%. As previously mentioned, paying for educational services may not appear to boost one's well-being directly because it is a long-term benefit; as a result, those who lack understanding may not view it as an investment. The indirect benefits of this may not be as apparent to the respondents. Therefore, in rural communities, education plays a significant role in raising not only one's status, but also that of the household.[25]

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[23]   H Hu, YF Si & LJ Wang 'The impact of industrial poverty alleviation strategies on the livelihoods and household incomes of the rural poor: An empirical analysis from Shaanxi province' (2018) 1 *Chinese Rural Economy* 78–89 (in Chinese).

[24]   Sulla & Zikhali (n 6).

[25]   Sulla & Zikhali (n 6).

4.4.5   Income

As seen in Tables 4.12 and 4.13, income was not thought to have increased the respondents' welfare at either firm: as shown in Table 4.12, the statistical significance was 0,9722, and the Wald statistic was 0,001; as shown in Table 4.13, the statistical significance was 0,823, and the Wald statistic was 0,050. It was intriguing to discover that the same respondents who thought they could spend money now and in the future did not think that having more money would improve their welfare level. Income is a major contributing factor in spending, particularly induced consumption, yet income is rarely enough for an individual. Everybody aspires to be in a particular place in life; therefore, everyone has a distinct perspective on welfare. In so far as the individual has not yet reached their desired goals, welfare will be seen to have stagnated compared to income. Income and consumption usually trend in the same way. Spending on consumption cannot be linked to welfare, whereas income can. The two are directly or favourably related.[26]

5.   Conclusion and recommendation

5.1   Conclusion

Poverty is made worse by several factors, including unemployment. If unemployment receives little attention, therefore, it could exacerbate poverty-based vicious cycles. In addition, work offers a source of revenue: it is simpler for people to participate in economic activities such as spending on consumption when they have a source of income. This therefore makes it possible to determine someone's poverty level more accurately.

The primary outcome of this study was that, during the current investigation period, rural enterprises did indeed offer the rural poor a viable way of life. The fact that the employees of these businesses were actively involved in the economy served as evidence of this. These folks might supply semi-durable and durable goods in addition to fundamental necessities. The employees at Brain Wave Sawmill and Transkei Quarries could eat, save and send their children to school. They were completely involved in the production, earning and consumption cycle of commodities and services that make up the economy. Every working person wishes to take part in these significant activities. The most important thing is improving one's welfare, yet everyone's definition of welfare differs.

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[26]   Phillipson et al (n 8).

5.2　Recommendation

This study aimed to examine how rural businesses may alleviate poverty in rural regions by creating jobs. It set out to identify appropriate strategies for exploiting rural areas' natural resources to absorb labour, which is the most abundant factor. The goal was to reduce poverty and create job opportunities. Poverty can be decreased by strengthening rural businesses that give first-hand recipients employment opportunities.

5.2.1　Appropriate investment meant for rural areas

Investment is another barrier to the growth of local economies in rural areas. One way around this is to select investments with the highest level of assurance. It is prudent to maintain the same pace for suitable businesses contributing to economic growth to expand production, levels of employment and poverty eradication while promoting employment and investment in public goods. Transkei Quarries and Brain Wave Sawmill have demonstrated their productivity and ability to reduce poverty by creating jobs in rural areas.

In these rural areas, both businesses have endured for more than 20 years. Some households' only means of surviving and participating in the economy is through these businesses. Since they began their careers, some of these individuals have worked exclusively for these companies, whereas others had previous employment prior to joining them. It has been observed that businesses such as these enhance the welfare of rural residents. The correlation between consumption expenditure, income, the decline in unemployment and the well-being of the employees of these companies served as evidence for this assertion. These individuals could not have participated in the economy if they were unemployed. The government must therefore invite investors who are prepared to help to reduce unemployment and poverty in rural areas to invest in appropriate business enterprises.

These investors would also be responsible for supplying the necessary infrastructure to support the industrial process. People's welfare will increase as a result and poverty levels may decline as a consequence. Most crucially, many underemployed individuals and home businesses could enter the wage sector and earn higher salaries if suitable firms were encouraged to set up businesses in rural areas. In a number of ways, these rural firms could determine the future economic development of rural areas.

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