

Can Downsizing Correlate with Community Development? A Complex Adaptive Systems Approach

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Abstract

Studies on retrenchment effects have mostly observed the organisation, the affected, and the survivors, overlooking that of the community. This study explores the effects of involuntary employee retrenchment on community development within the mining sector. Quantitative and qualitative data were gathered for the study by adopting a mixed-method approach using snowball and purposive sampling techniques. To establish the effects of retrenchment on the community, an exploratory factor analysis and content analysis were used, drawing on the philosophies of the complex adaptive systems theory. The findings reveal that retrenched employees suffer a reduction in income and spending. Again, the local community where most affected workers reside suffers major developmental setbacks, mainly due to the non-payment of property and other taxes that are used to develop the community. The study confirms the interconnectedness of organisations and environments: they exist as a confirmation of the complex

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adaptive systems theory. Again, the revelation of the effects of retrenchment which transfers from the organisation to the affected and the community, contributes to retrenchment studies. The study recommends that management negotiates to establish consensus with stakeholders to follow provisions in the Labour Act relative to retrenchment. Again, retrenched staff should learn other employable skills to aid their re-employment. Although engaging employees who have been retrenched was quite difficult due to their scattered nature, this was managed through the use of snowball sampling. A significant implication for organisations and stakeholders in this study is the fact that retrenchment does not guarantee improved performance and can be costly.

Keywords: downsizing, retrenchment, community development, complex adaptive systems theory, mining sector, Ghana

1. Introduction

The mining industry worldwide, including that of Ghana, is undergoing some transformation due to a reduction in market capitalisation and a higher discount rate. During such times, one way firms can stay afloat is to build resilience through agility and flexibility from operating adaptive organisational structures (Valverde *et al.* 2000). For many organisations, flexibility and agility have been synonymised with rightsizing, layering, downsizing, and re-engineering and restructuring (Maramba 2017), all of which result in employee retrenchment and layoffs (Kwamboka *et al.* 2017).

Downsizing implies employee retrenchment, whether voluntary or otherwise, which is expected to elicit savings from cost and asset reduction, which is believed to improve the financial position of the implementing firm (Rico & Puig 2021). Employee downsizing may be carried out alone or concurrently with non-human asset disposal.

The most cited reason for employee retrenchment is redundant job roles (Datta *et al.* 2010). However, most strategists consider employee downsizing as a turnaround and survival strategy that is assumed to have long-term business benefits (Rico & Puig 2021). The implications of employee downsizing and associated layoffs have been widely researched (Datta *et al.* 2010). Several researchers have studied the effects of organizational downsizing on survivors, the affected, and how firms turn around after downsizing. While the findings are inconsistent, it is established that employee retrenchment is cumbersome and potentially ruinous (Rico & Puig 2021). The existing literature pays little attention to the long-term effect of retrenchment on major stakeholders and is criticised for assuming a myopic view of employee retrenchment (Datta *et al.* 2010; Weller 2012). This study contributes to the literature by exploring the economic impact of downsizing organisations on community development. Although a considerable amount of literature focuses on the effects of organizational downsizing, scholarly discourse pays little attention to the downsizing effects that transcend the survivors, the firm, and victims (Datta *et al.* 2010).

According to Datta *et al.* (2010), this gap in the literature significantly reduces the contribution of studies in furthering our understanding of the true consequences of downsizing, especially in terms of community development. Existing literature indicates the need for research into employee retrenchment programs from a multilateral perspective, especially since the COVID-19 pandemic has activated a recessionary business environment across the globe (Barrero *et al.* 2020; McDevitt *et al.* 2013; Datta *et al.* 2010, Gandolfi 2008). Employee downsizing literature can be broadly categorised into three streams: preparing for downsizing, implementing downsizing, and post-downsizing or recovery periods (Datta *et al.* 2010).

Most studies on retrenchment fall within at least one of these categories. However, research on organizational downsizing has mainly focused on implementing organisations,

victims, and survivors (Rico & Puig 2021; Kurebwa, 2011; Macky 2004; Sparrow 2000). Hence, there is a limited understanding of studies that focus on community development through retrenched employees. Specifically, we need studies that focus on the effect of downsizing on the community within which these retrenched employees live, to fill this gap. Addressing this challenge is important because it provides the various means by which the retrenched get to adapt their lives to fit their new environment, hence the need to apply the complex adaptive systems theory which considers the effects the organisation has on its environment in terms of the relationships and interconnection between the different subunits that make a system.

Research questions

The study was directed by the following research questions.

Which retrenchment process did Roley Mines use?

What are the economic effects of retrenchment on affected employees from Roley Mines?

How have the economic effects on the affected employees impacted the development of the community Roley mines?

2. Literature review

This section covers a review of literature from empirical and theoretical sources that are pertinent to this study. The section begins with a historical account of employee retrenchment, refers to the effects of employee retrenchment on victims and concludes with the effects of retrenchment on the community.

2.1 Employee retrenchment from its inception

Retrenchment studies started gaining popularity in the 1980s due to mass public sector layoffs in the USA (Macky 2004). In those days, the motivation for public sector layoffs was to reduce government spending and strengthen the private sector (Burke & Copper 2000), as part of the broader public sector fiscal retrenchment programme. During this era, employee retrenchment was only used as a last resort to salvage struggling institutions (cf. Macky 2004). Private firms practised employee retrenchment around the same time and referred more to it as restructuring or delayering (Macky 2004). In the early 90s 'the leaner the better' slogan caught up with business executives and employee retrenchment continued to be used as a quick-fix to save any business facing a decline (Macky 2004) using downsizing strategies such as hiring freezes and business process re-engineering. Retrenchment continued to be regarded largely as an unwanted business decision that was triggered by the turbulent external environment and as a turnaround strategy (Littler 2000; Cascio 2012).

The great recession that lasted between 2007-2009 smashed the global economy, and more employee retrenchment cases were recorded (Datta *et al.* 2010). Some businesses took advantage of widespread economic downturns to legitimise layoffs (Sánchez-Bueno *et al.* 2020). In most cases, peripheral staff is classified as redundant or laid-off (Kong *et al.* 2019; Allan 2000; Valverde *et al.* 2000). Various euphemisms for employee retrenchment have evolved, and the term 'layoffs' is now classed as colloquial and politically incorrect. Today, restructuring, re-engineering, re-organisation, delayering, downsizing, rightsizing, streamlining, selective shrinkage, rebalancing, outplacing, and de-hiring are all signals of layoffs (Datta *et al.* 2010; Quinlan & Bohle 2009).

2.2 Effects of retrenchment on affected employees

Numerous effects are associated with retrenchment. A declaration of intent to undertake an employee retrenchment programme is enough to put any business in the headlines. While some businesses may be convinced that layoffs are the best way out of a decline and imminent collapse, researchers (such as Rico & Puig 2021; Schmitt & Raisch 2013; Datta *et al.* 2010) agree that, in most instances, this is not the case. Even though declining firms may resort to

retrenchment as a necessary bail-out, the ability of such firms to recover from the turnaround and flourish after downsizing is not guaranteed (Rico & Puig 2021; Datta *et al.* 2010). However, publishing the intention to downsize may lead to a slight rise in share prices in the stock market (Wayhan & Werner 2000) and retrenchment may also promote organisational efficiency and offer short-term financial gains to organisations (Macky 2004).

Although organisations would expect that survivors of downsizing celebrate their inclusion in the survivors' list and express profound gratitude to the employer, the literature has a contradictory report on such effects (Kulkarni 2008; Kivimäki *et al.* 2000; Gilson *et al.* 2004; Sahdev 2003). Lay-off survivors are affected by the downsizing scheme in several ways. Re-engineering and restructuring caused by downsizing may cause increased work overload, reduced salary, and freezes in career progression. Psychologically, surviving employees experience survivor's syndrome (De Meuse *et al.* 2004; Lee 2019; Macky 2004) which is characterised by anxiety, anger, pain of loss and separation, disengagement, and distrust of the employer (Kulkarni 2008). Again, survivors' morale, motivation, and commitment to the organisation may decline during the recovery period following a downsizing exercise (Cameron 1994; Burke & Copper 2000; Yu 2006; Mishra *et al.* 2009). Even though Armstrong-Stassen (2002) found that the effect of downsizing on survivors' behaviour is short-lived, some survivors' responses to downsizing can cause irreparable damage to themselves, their families, and the employer. For example, health complications, substance abuse, and voluntary turnover tend to be higher among employees who survive downsizing (Kulkarni 2008; Kivimäki *et al.* 2006).

For some downsizing firms, the severance package alone may be attractive enough to induce survivors to opt for voluntary retrenchment. Some affected victims may get re-employed or even venture into self-employment after lay-off (Van Dierendonck & Jacobs 2012). However, for most victims of downsizing, retrenchment has many effects beyond the obvious problem of job loss. Victims are likely to suffer stigmatisation, and in certain instances, the shock of retrenchment may discourage some from seeking employment in the formal sector immediately. The careers of some victims are interrupted (Maertz *et al.* 2010) while victims go through an unpleasant melee of emotions. Families of victims may also suffer when their relatives are retrenched, as the earnings of the households of victims will eventually decline if they are not reemployed quickly (Hellerstein *et al.* 2019; Van Dierendonck & Jacobs 2012). Also, the retrenchees' guilt, fear, and betrayal may be transmitted to their families, and the impact is greater when the victim is the primary breadwinner (Blau 2006). The retrenchees may also have to manage their emotions and emotions of their family members (Amundson *et al.* 2004).

Today, for firms to view retrenchment as a strategy, they are obliged to disclose the details of their retrenchment programmes to key stakeholders and actively involve them in the planning and execution stages (Adwan 2021). Common good business principles have compelled organisations to approach layoffs humanely, especially with victims. However, the fact remains, as the current research stream suggests, that employee retrenchment will continue to undergo reforms in the future as non-organisational stakeholders continue to expect fairer business management practices (Cabot-Alletzhauser 2020; Mishra *et al.* 2009).

2.2.1 The Impact of retrenchment on the community

Mass retrenchment and closure of factories that absorb many of the workforce affect the community as many become redundant. The whole community after retrenchment may experience emotional trauma (Classen & Dunn 2012), broken social networks, and the prospect of finding another job becomes difficult. Bidwel & Colhoun (2013) in their work, "the health impact and public health response to major job losses in small communities" in New Zealand observed the impact of job loss on the community using variables such as demographics, business and camaraderie. They observed an estimated 100 families trooping to Australia to find a new job with the influx of new residents to take advantage of cheap rent, who were not welcomed and

brought a lot of conflict. This is especially true when these families included those who contributed to the running of the community. This result was confirmed by Keefe & Ormsby (2005), Dillon (2010), and Pomeroy & Newell (2011) who also researched retrenchment effects on the community. Fitzgerald *et al.* (2002) also noted that this pattern is normally witnessed in communities and towns that have borne the full adverse effect of downsizing, and communities that are labelled as “resource-dependent” that is, rely on one main sector such as mining, forestry and farming.

Kemp *et al.* (2007), in their work “Estimating Socio-Economic Impacts of Mine Closure” estimated the direct impact of mine closure on dimensions such as day care and education, population, housing, community involvement and the local economy based on information from the workforce survey. In their work, it was anticipated that workers living in towns will depart with their partners and children. Children of departing mineworkers were also found to leave their respective daycare and educational institutions. Workers who were leaving ceased their involvement in their respective community groups. Businesses in the community continued to dwindle and were severely affected after the layoff exercise. Businesses such as automobile, car sales, and service stations were affected, and traditional shops such as grocery and clothing were taken over by others. Real estate businesses experienced this brunt, with drastically reduced prices and more rental properties becoming available.

In the case of Lesotho, farming as an alternative source of livelihood following lay-offs has, however, been less than successful, with many farmers reporting relatively higher production while they still had access to wage labour on the mines (Coplan & Thoahlane 1995). The alternative of wives engaging in migrant labour has been unacceptable to most men, who fear losing their wives to employed men in South Africa or in the urban areas within Lesotho (Coplan & Thoahlane 1995:149).

The literature reviewed has portrayed the emotional, social, and economic effects of retrenchment concerning departing community settlers being replaced by new settlers and businesses dwindling and failures (Keefe & Ormsby 2005; Dillon 2010; Pomeroy & Newell 2011; Classen & Dunn 2012; Bidwel & Colhoun 2013) but not on the development of those communities within which these mines are situated, which is a gap requiring research.

2.4 Theory and conceptual framework

This study is guided by the complex adaptive systems theory.

2.4.1 Complex Adaptive Systems Theory (CAS)

A complex adaptive system is an assembly of individual agents with the liberty to act in ways that are not always totally predictable, and whose actions are unified so that one agent’s actions change the context for other agents (Holden 2005). CAS is dynamic and can adjust and evolve *in* a changing environment. It is important to realise that there is no separation between a system and its environment; rather, a system is *closely linked with* all other related systems making up an ecosystem. Within such a context, change needs to be seen in terms of *co-evolution with* all other related systems, rather than an *adaptation to* a separate and distinct environment (Chan 2001).

According to Chan (2001), CAS has several characteristics, elucidated as:

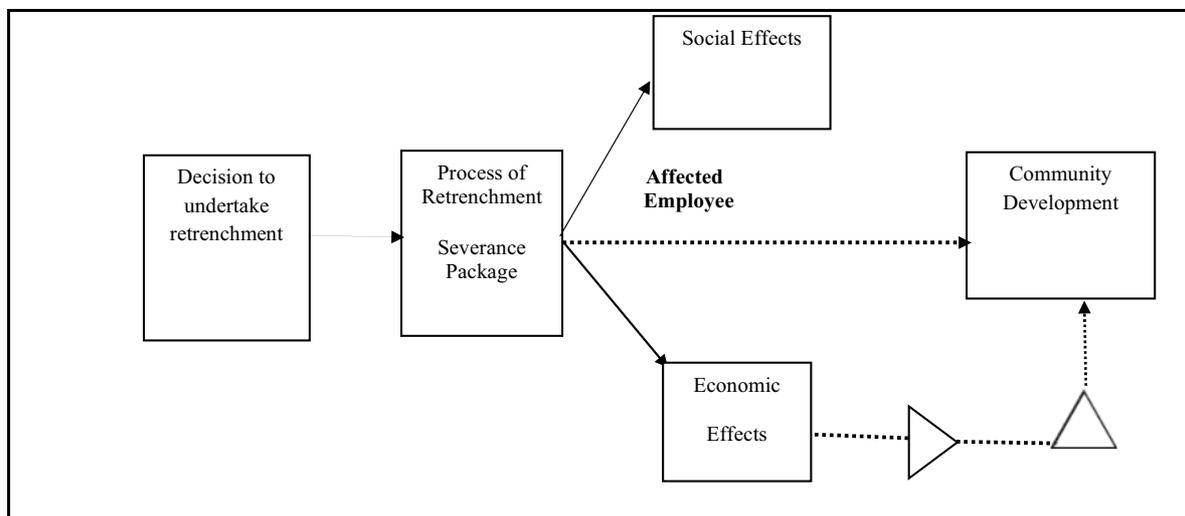
- The elements are connected, and therefore interact dynamically with the exchange of information. These interactions are rich, non-linear, and have a limited range because there is no overarching framework that controls the flow of information.
- The systems are open systems with feedback loops, both enhancing, stimulating (positive) or detracting, and inhibiting (negative) each other.
- The systems operate under conditions far from equilibrium, which means there is continual change and response to the constant flow of energy into the system.
- The systems are embedded in their histories, and no single element or agent can know, comprehend, or predict actions and effects that are operating within the system.

- The systems are sensitive depending on the initial conditions; therefore, changes in the input are not correlated with the outcome.

In this paper, the CAS theory is used as an approach to create awareness that organisations are linked to the societies they operate from; hence, their activities have a consequential effect on those societies. The organizational ecosystem makes it important for firms to take a second look at retrenchment, especially during difficult economic times, as its repercussion may affect the immediate society or community and the country at large. The effect ripples through the economic life of the affected employees, causing a series of interconnected situations. Within the context of CAS, retrenchment is a complicated system that has both positive and negative feedback loops. It involves economic hardship and an estranged way of life for the victimised employee on one hand and improved, effective performance and production of the organisation, on the other hand.

2.4.2 Conceptual framework

Figure I: The conceptual framework of the study



In this study, we conceptualise that the decision to retrench is directly linked to the process of retrenchment. In this process, severance packages are provided to ease the economic effects on the affected staff. We also conceptualise that the retrenchment process determines the effects on the affected individual. In particular, the economic effects on the affected individual, such as income which is directly related to the spending levels after retrenchment, can affect the community’s development, as there is a decline in revenue generation and a slowdown in developmental activities due to the inability of the affected employee to contribute to tax payments toward the community. As Chandra (2014) indicates, retrenchment affects the economic ability of retrenched employees and their relatives through financing the education of dependents. It also affects their living conditions, increases indebtedness and leads to dependence on others, as well as depletes asset holdings of these employees.

3. Methodology

3.1 Study setting

To accomplish the established research aims, this study focuses on a single case of a multinational mining company that operates in a small town in Ghana, West Africa. The Roley mine (a pseudonym) is a Ghanaian gold mining subsidiary of a giant multinational company. The company entered the Ghanaian market in 2004 and has undergone significant restructuring programmes since that period.

In 2006, one thousand one hundred and fifty-four workers were retrenched. Between 2013 and 2014, Roley, the Ghanaian subsidiary, implemented a \$220 million retrenchment programme that slashed the company's workforce by more than 500. The company retained a skeletal workforce for maintenance and security purposes and temporarily ceased operations for at least two years.

3.2 Research approach and design

This study uses a single-case study design and adopts a mixed-method approach. The effects of downsizing on the affected employees were quantitatively analysed due to the fact that the key variables are easily measured quantitatively, while the effects on community development were qualitatively analysed because researchers wanted to go deeper into the underlying reasons for the consequence of downsizing, which is better explained in a story. Hence, this study is exploratory and descriptive. Based on the topic under study, the HR department of Roley mines as well as the residents of the community who were employees of this mine but were affected by the downsizing activity were the respondents. Adopting the snowball sampling technique due to the difficulty in getting to the scattered affected employees with the help of a twelve-member team that was trained for data collection, researchers were able to access three hundred and fifty-three (353) former employees of Roley Mines (a pseudonym) who were affected by the downsizing activity and were all residing in the same locality, as the case organisation to participate in the quantitative part of the study. Here, Cronbach's alpha and exploratory factor analysis were used to measure the reliability and the variables of the economic effects, because there was no hypothesis in the study.

In the qualitative part, purposive sampling was employed to gather qualitative data from the ex-HR department staff of Roley mines, who were members of the implementers of the retrenchment programme to provide an in-depth understanding of the retrenchment process. To determine the revenue situation after the retrenchment, the zonal heads of revenue collection divisions of all five municipalities were also interviewed. The researchers conducted the in-person interviews. Permission was sought from the respondents, and the interviews were audio-recorded and handwritten, where necessary. The recordings were transcribed by the researchers, and responses were analysed using content analysis to identify the major themes and sub-themes for coding. Each code was compared with the data to check for reliability and validity. All necessary research protocols and ethics were adhered to.

4. Study findings

This section is a presentation of the analysis of the qualitative and quantitative data for the study. In line with the objectives of this study, the data presented in this section are classed into three themes. These themes cover the downsizing process at Roley Mines, the economic effects of retrenchment on the affected victims, and the effects of the downsizing on the community development.

4.1 Retrenchment process at Roley Mines and its effects on the victims and the community

This part of the study was qualitatively conducted, as those who were directly related to the study were the zonal heads and chief revenue officers within the community and two ex-HRM department staff who were participants in the retrenchment process. The researchers sought to determine how the process and effects of the retrenchment exercise affected internal revenue generation within the community, and whether any significant changes in developmental work occurred because of the retrenchment exercise.

The ex-staff of Roley Mines were able to provide information on the processes used. Generally, the zonal officers indicated concerns about unemployment, a negative change in the local business climate, a significant fall in donations and philanthropy, and the deterioration of the

economic climate in the town since Roley Mines retrenched the employees. The results are grouped under various themes and are presented in Table 2.

Table 1 Themes, subthemes and quotes for the qualitative part of the study		
Main Theme	Subtheme	Evidence quotes
Retrenchment Process	Mode of Communication	‘The first thing the company did was to have a meeting with the HR department and plan for the exercise. This was put on a Gantt chart with periods attached to it. All the necessary stakeholders including the labour union were informed and a Memorandum of Understanding (MoU) was signed. Letters were then prepared and dispatched to the affected employees within the various departments. (Ex-Staffing Manager, Roley Mines).
	Selection Criteria	‘Every worker of Roley mines, including senior management, was affected. However, the whole process was done in batches of three, and depends on the persons’ department, and how essential the service is. Employees whose services were deemed essential, such as those pumping water from the underground, were the last batch to exit the company’ (Ex- Management Training Officer, HR department).
Retrenchment effects	Economic Effects	<p>‘The retrenchment exercise has made the economic activity of the municipality come to a standstill. The payment of property rates is not showing any positive sign as it has dropped. Hence the inability of the assembly to generate the required targeted revenue for developmental activities in the municipality’ (Chief Revenue Officer).</p> <p>‘At most every 2 years, Roley Mines recruits new applicants into their company, but after the retrenchment exercise, no recruitment exercise has ever taken place. This has widened the unemployment net in the municipality. National service personnel who were placed there were also enjoying other benefits, such as Roley’s scholarships, to further their education abroad. Some were more privileged to gain employment there right after their service. Most of these employees were natives of the community and that was benefiting us’ (Zonal Officer 4).</p> <p>‘Before the retrenchment exercise, business was booming, but after most of their workers were declared redundant, the situation was reversed’ (Zonal Officer 3).</p>

	Community development	'The issue of massive unemployment cannot be downplayed as residents of the community were over-dependent on the mining activities for employment. A lot of the workers were natives of the community who have all been affected by the retrenchment. At first, our major occupation was farming, but the mines have taken our farmlands, making the unemployment situation in the community unbearable' (Zonal Officer 5).
		'For the past 4 years, since the retrenchment exercise took place, more of the retrenched staff are still jobless and cannot fend for themselves, not to mention their families. The retrenched workers residing in the community cannot pay their bills and rent consistently. Indeed, the retrenchment exercise has intensified the unemployment' (Zonal Officer 1)

4.2 Retrenchment effects

4.2.1 The economic effects of downsizing on victims

To test for economic effects, nine items were used and subjected to principal component analysis (PCA), and the refined results are shown in Table 2.

Table 2 EFA for economic effects			
Measures	Pattern Matrix	Structure Matrix	Communalities
	Component	Component	
		.853	
		.752	
		.841	
		.749	
		.836	
		.823	
	.942	.829	
	.784	.781	
Reduced income level	.763	.754	
Non-provision of quality healthcare for the family	.677	.611	
	.651		
Reduced spending level		.899	
Reduced savings	.894	.751	
No support for extended family			
Unable to foot bills properly	.812	.866	
Unable to access to loans and credit facilities	.828	.723	
Non-provision of quality education for my wards		.848	
		.744	
Reduction in the demands of goods and services	.724	.787	.657

Extraction Method: Principal Component Analysis.
 Rotation Method: Oblimin with Kaiser Normalization.
 Rotation converged in 6 iterations.

The score on Bartlett's Test of Sphericity ($\chi^2 = 1402.248$; $df=36$) was 1% ($p < .000$), while that of the Kaiser-Meyer Olkin measure of sample adequacy was 0.848, which exceeds the minimum value of 0.6, which supports the factorability of the data. Two components were extracted with eigenvalues exceeding 1, with the first and the second components explaining 50.96% and 13.51% of the variances, respectively (64.47% total explained variances). The remaining items loaded significantly on their respective components. This implies that victims experienced a reduction in income and spending levels, low credit rating, and standard of living, and could not pay their bills, let alone support their extended family, which has a huge economic impact on them.

4.2.2. Scale reliability test

To examine the internal reliability of the set of items used in the questionnaire, it was essential for researchers to perform a scale reliability test. Table 3 depicts the results of the scale reliability test using SPSS, and the Cronbach's alpha values are also shown.

Table 3 Cronbach's alpha for economic effects

	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Squared multiple correlation	Cronbach's alpha if item deleted
1. Reduced income level	19.25	56.122	.539	.341	.877
2. Non-provision of quality healthcare for the family	18.60	49.068	.781	.649	.858
3. Reduced spending level	18.91	57.563	.463	.444	.882
4. Reduced savings	18.98	56.654	.484	.454	.880
5. No support for extended family	18.75	51.586	.674	.479	.867
6. Unable to foot bills	18.45	52.069	.670	.525	.868
7. Unable to access loans and credit facilities	18.88	50.657	.755	.605	.861
8. Non-provision of quality education for my wards	18.35	48.525	.723	.600	.864
9. Reduction in the demands for goods and services	19.08	56.133	.590	.367	.875
10. Unemployed	18.61	53.470	.482	.306	.884

George and Mallery (2012) provided some rules of thumb for Cronbach's alpha coefficients: $\alpha > 0.9$, $\alpha > 0.8$, $\alpha > 0.7$, $\alpha > 0.6$, $\alpha > 0.5$, and $\alpha < 0.5$, corresponding to excellent, good, acceptable, questionable, poor, and unacceptable, respectively. An alpha of 0.8 is a reasonable goal.

The last column of Table 3 shows an alpha above the acceptable alpha value of 0.8 (George & Mallery, 2012). The least alpha value from the table is 0.858, corresponding to health care for the family, while the highest alpha value of 0.884 corresponds to unemployment. By implication, obtaining an acceptable scale reliability test implies that for each of the constructs measured, their matching items were reliable, consistent, and had acceptable validity (cf. Din 2011).

5. Discussion

5.1 The process of retrenchment

Although the results of the study provide support for the application of the complex adaptive systems theory, it is important to discuss the number of components and the interaction within the ecosystems and also portray the effects of the retrenchment exercise within the theory.

From the results, it was noted that communication was conducted across the various subunits and also to stakeholders, including the HR manager, the Chief Labour Officer, Labour and Employment Ministry, and the Labour Union. This is a clear indication of the interconnectedness and interdependence among stakeholders. Further, within the process of retrenchment, the movement toward the exit was characterised by careful turns. Here again, the need to curb the effects of the retrenchment exercise even at the three stages, considering the nature of the services provided within the mine.

This is a clear indication of the elements/subunits that interact dynamically with much information but are also sensitive to the initial condition (Chan 2001). Within the process was the need for negotiations which led to the agreement of the affected staff. This was the feedback stage of the open systems nature of the ecosystems that enhanced and stimulated the process to avoid any negative repercussions from the retrenchment exercise. Hence, the absence of a criterion for selecting employees is affected, but rather the choice of essential services.

5.2 Effects of retrenchment

Effects of retrenchment were measured from the economic and community development point of view. These are explained in the subsections below.

5.2.1 Economic effects of retrenchment

Similarly, the results of the effects of the exercise were measured with nine items: income level, provision of healthcare, spending level, support for the extended family, payment of bills, gaining access to loans and other credit facilities, provision of quality education for their wards, demand for goods and services, and unemployment for each employee in different stages and situations. This makes the prediction of the outcome of the retrenchment exercise difficult. Hence the recognition of the far-from-equilibrium characteristic of CAS theory.

5.2.2 Effects of retrenchment on community development

Finally, the exercise apart from its effect on the affected, led to deterioration of the community which was termed by a respondent 'as dead community'. Here, issues related to difficulty in generating revenue for developmental activities, closing down of businesses in operation due to low patronage, upsurge of unemployment due to the closing down of these businesses, and the fact that one is retrenched, not to mention the break in philanthropic acts of social responsibility from individual residents within the community who provided street bulbs and road construction aids.

Retrenchment hardly affected the community, especially when the livelihood of the very people who used to be farming was taken away from them through the concession of their lands and replaced with business activities emanating from the mining activities. One can tell the

effects of the actions of the members within an ecosystem and how important it is for each member to be conscious of the effects of their actions due to the unified nature of the ecosystem (Holden 2005).

5.2.3 Retrenchment Impact

The findings presented in the previous sub-sections have highlighted that employee retrenchment has far-reaching effects on all-stakeholders. It is therefore imperative that a robust and rigorous retrenchment awareness programs are designed by the government to extensively address the short and long-term repercussions of lay-offs. In line with this, relevant stakeholders must be permitted to make meaningful contributions to these retrenchment programs. It is also important to note that there is a close-knit interconnectedness between organisational effectiveness and profitability, employee dignity and socio-economic development such that retrenchment programs should always factor that in their design (Classen & Dunn 2012; Chandra, 2014). This also calls for researchers to look beyond the impact of downsizing on organisational effectiveness and focus on the implications of retrenchment on the wider society and humanity at large.

6. Conclusions and recommendations

This study has produced unique results regarding the use of the environmental influences of organisations through the lens of the complex adaptive systems theory to portray retrenchment effects on community development. Additionally, the study reveals the dangers of a firm's decision to retrench and caution institutions to consider alternatives to retrenchment to prevent such occurrences in the community within which these firms operate. The study therefore makes some practical recommendations to management, the retrenched staff, and the labour union indicated below:

- Management of Mining Companies

Each mining company has a myriad reasons for embarking on retrenchment; it might be to downsize to cut down costs in the event of unfavourable circumstances such as high electricity tariffs, increased taxes, and high operational costs. Though this might sound reasonable and good for the organisation, the imprudent execution of retrenchment can paint a bad image of the organisation and also affect the morale of the survivors. Notwithstanding, retrenching less efficient workers could signal a strong warning to the non-affected staff to improve their performance and build upon themselves. A corporate strategy based on objectivity, counselling, and training prior to retrenchment and proper communication of the rationale behind should be adopted by mining companies in order to obviate the instance of committed and hardworking survivors working with apprehension. Retrenchment is inevitable in organisations because of circumstances beyond the control of management. When the top management of mining companies contemplates it, it is expected that they will engage in a negotiation process and establish a consensus with the representatives of the labour unions for the benefit and mutual understanding of all parties involved.

- Government of Ghana/Labour Unions

The government of Ghana must ensure that organisations respect and abide by the regulations enshrined in the labour laws of this jurisdiction. The government must ensure that all organisations aiming to retrench follow the laid down procedure enshrined in the Labour Act of 2003. The labour commission is also mandated to ensure that the said organisation engages in a negotiation process with the labour unions representing the workers. The labour union must respect the rights of workers and ensure the adequacy and fairness of the severance packages given to the affected staff. The government must also protect the rights of workers, where it deems the decision by an organisation to retrench as gratuitous. A final decision to retrench can only be made when there is no further possible choice for retrenchment.

- Retrenched staff

Retrenchment news that aims to restructure sounds good to that organisation but burdens the affected with uncertainty, depression, and a sense of anxiety. When competent staff become retrenched, they develop a sense of disappointment and resentment toward the survivors and the top management of the organisation. However, retrenchees can effectively handle this phenomenon by bettering themselves and adopting better coping strategies. They must build upon their human and social capital and learn other employable skills to improve their CV. In addition, they should effectively manage their finances, build their portfolios, and make prudent use of their given retrenchment pay.

The findings of this study have significant implications for organisations and stakeholders. Researchers have already established that retrenchment does not guarantee improved performance (Yu & Park 2006; Wayhan & Werner 2000) and could worsen the affairs of the implementing organisation. In Roley's case, the firm had to shut down completely within a year of implementing the employee downsizing program. When it resumed operations about three years later, it had to invest valuable resources in re-employment.

The literature on employee downsizing points out that the actual cost of layoffs is greater than empirically estimated (Datta *et al.* 2010). The impact of retrenchment on the community was established in this study. This suggests that there is a social cost to downsizing and that organisations in their yearning to make profit should consider the effects on the ecosystem. Influential organizational stakeholders, such as community leaders, should task businesses to carry out retrenchment programs more responsibly. In Roley's case, where the implementing firm was the major employer in the town, the firm could have directed some funds from the downsizing programme into developmental projects that will provide alternative forms of sustainable employment for the community. For instance, the firm could have assisted the town to set up an industrial and vocational hub where skilled artisans among the retrenchees could work and continue to contribute to the economic well-being of themselves, their families, and the community.

Shareholders need to reorient their outlook beyond the intended benefits of downsizing. Employee downsizing is not a 'silver bullet' that can salvage a struggling business. It would be prudent to engage experts in critically diagnosing the organizational situation before implementing a rather harsh employee downsizing activity. Downsizing should be the last resort. Some researchers have advocated more efficient use of employee downsizing than 'demand declining' (Datta & Basuil 2015; Gandofi 2008; Datta *et al.* 2010; Geoffery Love & Nohria 2005).

Lastly, the government should implement policies that obligate firms to prove beyond any reasonable doubt that retrenchment is essential. This suggestion is particularly relevant for developing countries such as Ghana and other emerging economies with high unemployment rates coupled with relaxed regulatory frameworks and institutional lapses that can be exploited by firms to the detriment of the greater communal good (Kamoche *et al.* 2012). Again, these environments do not have certain social services such as support for the unemployed, which makes it difficult to survive when affected by retrenchment.

An obvious limitation of the study was the difficulty in accessing employees who had been retrenched. This challenge was effectively managed through the use of snowball sampling to reach a large number of affected employees. The researchers were informed about other retrenched staff with similar backgrounds by those contacted to get to those who were inaccessible. This is the most effective way for researchers to overcome this limitation.

While this study focused on the leavers (retrenched staff) and the community, future research could delve deeper into the effects on the survivors and the organisation as well. Furthermore, a longitudinal study to examine the long-term effects can be conducted. Finally, because of growing concerns about environmental deterioration, businesses are under intense pressure to measure their impact on the environment and to account for the energy and resources they use from the environment. A study to confirm the results of the effects of

retrenchment on the community in the current study is highly recommended, especially with the opening of mines.

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