The impact of leadership in organizational dynamics and change management in the mining sector: A case study of Bindura Nickel Mine, Zimbabwe

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Zimbabwe is a nation blessed with a diversity of minerals and metals that have necessitated the establishment of a large number of mining companies. However, the mining industry has constantly experienced new developments in terms of new technologies, changing employee demographics, global economic competition and economic shocks related to the instability of both domestic and global financial markets. In this scenario the most effective and beneficial maneuver for the mining sector is to create innovative ways in conducting business. The ability to quickly and adequately adapt to these environmental challenges has become a crucial factor for the success of their mining business. The mining sector need to accept, adopt and implement changes in their business model according to changing trends, technologies, customer preferences and future concerns. Thus, change in the mining sector is very important for sustainable and long term success and survival of the mining business.

Key words: Mining, Leadership, Organizational dynamics, Change management.

INTRODUCTION

The country, Zimbabwe is endowed with vast amounts of precious minerals that include platinum, gold, diamonds, asbestos, nickel, coal and chrome, iron and other diverse kinds of minerals (Geological Survey, 1990; Chamber of Mines of Zimbabwe, 2017 and Kambale, 2019). According to Chamber of Mines of Zimbabwe (2017), the mining industry contributed 13.62% of mineral revenue to the government and government related institutions in 2017. Sibanda (2020) revealed that the mining sector accounts for between 12 percent and 16 percent of the Gross Domestic Products (GDP), and generates over 60 percent of Zimbabwe’s export earnings (Reserve Bank of Zimbabwe, Minerals Marketing of Zimbabwe, Chamber of Mines of Zimbabwe, 2017 and Sibanda, 2020). Thus mineral resources have potential to contribute tremendously to sustainable economic growth and development which can lead to massive poverty reduction and create a number of jobs through the forward and backward linkages across the productive sectors of the economy.

Ironically, the mining industry has constantly experienced new developments in terms of new technologies, changing employee demographics, global economic competition and economic shocks related to
the instability of both domestic and global financial markets (Mahonye and Mandishara, 2015). It is against this background that leaders in mines will have to craft a delicately balanced policy environment and ensures effective implementation of leadership and change management strategies that fosters investment, domestic and especially foreign, while ensuring that ‘mineral rents’ are not only captured but invested efficiently. However, change management leaders often lack the appropriate scope, plan, measures, commitment, innovations and management approaches necessary for steering effective organizational change. This has often resulted in the dreary failure of the desired change management initiatives in the mining sector. There are possibilities for the mining industry to lose its repute and market share if the leadership of the mining companies fail to prepare their companies according to the rapidly changing circumstances and situations.

The researcher established the gaps that exist between literature and the impact of leadership in organizational dynamics and change management particularly the fact that literature has little concerning the relationship between leadership, organisational dynamics and change management in mining per se. In particular, the relationship between and the impact of leadership on organisational dynamics and change management as well as the factors causing leaders in the mining sector to fail to stir their mines to prosperity have not been determined. This therefore, justifies the need for further study in this particular area. Therefore, the primary objective of this study is to assess the impact leadership and organizational dynamics and change management, showing the ways in which leaders in mines affect the process of change using the case study of Bindura Nickel Mine (Pvt) Ltd in Zimbabwe. The specific objectives of the study were to determine the impact of leadership on organisational dynamics, to determine the impact of leadership in change management, to determine the relationship between leadership, organisational dynamics and change management and to find out why some leaders in the mining sector with high qualifications fail to stir their mines to prosperity.

**Hypothesis**

H₀: Leadership and organizational dynamics are not significant in change management.

H₁: Leadership and organizational dynamics are significant in change management.

**METHODOLOGY**

The researcher employed the Realist philosophical paradigm which embraces both quantitative and qualitative research paradigms. For the purpose of this research, the target population included including executive management members, senior management, middle management, professional workers, general workers pool gang and contractors at the Bindura Nickel Corporation Company. A case study research design was chosen to narrow down a broad research field into a researchable one. A statistically representative sample size was selected from the study population and the researcher employed a blended approach of both random and non-random sampling techniques that include stratified random sampling and simple random sampling. McDaniel and Gates (1993) defined a sample as a sub set of a population which can fairly imitate the characteristics of the population which it is taken. Dougherty (2011) further explains that, a large number of items, individuals, or locations of a statistical population may, within specified limits of statistical probability, be represented by a small group of a parent population. Saunders and Townsend (2016), agreed with Miles and Huberman (1994), on the need for the determination of an appropriate sample size that is able to generate enough and accurate data for the study. He stressed the need for a sample size that is representative of population and that provides good and reliable results. It was critical for the researcher in this regard, to have a large sample size, in order to capture critical data regarding the phenomena under study. Best and Kahn (2013), concurs with Mugenda and Mugenda (2013), that ten percent to thirty percent (10% to 30%) of the population can be picked from a large population. The sample size of this research study was therefore determined by calculating 10% of the employee population hence a sample size of 78 was selected.

Questionnaires and interviews were then used to collect field data. The questionnaires and interviews were operationalized in terms of the impact of leadership on organisational dynamics; the impact of leadership in change management; the relationship between leadership, organisational dynamics and change management as well as investigating the reasons why some leaders in the mining sector fail to stir their mines to prosperity, through confirmation of conclusions. The questionnaires used in this study consists of both structured and semi structured questions. Open ended question allow respondents to compose their own responses rather than choosing between a number of given answers. Open ended questions gave the respondents the opportunity to fully express their ideas without limitation as compared to the closed questions. The closed questions enabled the respondents to keep fixed and remain focused on the subject under study. More so, the questionnaire gave the respondents an opportunity to express their views without the influence of the researcher. Questionnaires were administered through e-mails and face to face. Interviews with key informants who hold the leadership positions in the company particularly, the executive management, senior management and middle management were conducted.

Purposive sampling was used, targeting of key informants, in this case executive management, senior management and middle management. Also known as judgmental, selective or subjective sampling, purposive sampling relies on the judgment of the researcher when it comes to selecting the units (such as people, cases/organizations, events, pieces of data) that are to be studied (Creswell and Creswell 2005). Tom et al. (2011) contend that respondents/ participants are selected on the basis of the research objectives and according to the drive of the study hence applicants who could not meet the profile were rejected (Creswell and Creswell 2005).

In this research study, the main goal of purposive sampling was to focus on particular characteristics of leaders and the entire lower level employees at BNC Pvt Ltd, which best enabled the researcher to answer your research questions. Purposive sampling was more efficient because the researcher chose relevant, knowledgeable and observant expert informants who are all employees at BNC Pvt Ltd. Thus, purposive sampling was applicable in determining relevant, reliable and credible informants needed to correctly to answer the particular research objectives. The sample that was investigated was relatively small and the administration of research
instruments was comparatively easy especially when compared with other sampling techniques. Purposive sampling was advantageous in that it is less rigorous, convenient and feasible particularly given the limited time and resources constraints the researcher faced. At the same time, the responses obtained provided in-depth data as provided by main informants who in point of fact work for the particular company.

Throughout the research process, fundamental ethical principles were applied. The researcher obtained from relevant authorities Bindura Nickel Corporation Limited and sought for written consent from participants before gathering data. The researcher also observed the company rules and regulations and informed all participants on the purpose, benefits and possible risks of their involvement in the research study in order to ensure voluntary participation. The respondents’ privacy was highly respected while their responses were treated confidentially. The researcher also avoided falsification of data in order to maintain the integrity and objectivity of the research study.

RESULTS AND DISCUSSION

Data analysis is the process of inspecting, cleaning, transforming and modelling data with the goal of highlighting useful information, suggesting conclusions and supporting decision making (Musingafi and Hlatywayo, 2013). The data collected from questionnaire and interviews were coded, quantified and captured onto the SPSS spread sheet. The data set was then cleaned to check for errors before being exported to the statistical package for social science (SPSS), for analysis. All quantitative data was analysed using descriptive analysis and statistics. The study has applied correlational analysis, t-testing and hypothesis testing to make inferences on the impact of leadership in organizational dynamics and change management at BNC. On the other hand, qualitative data was analysed inductively, using themes and sub themes and the data findings were triangulated. Following data analysis, data was then presented in form of tables and figures as recommended by Leady and Ormrod (2015). By definition a table is usually an arrangement of words, numbers, signs or combinations of them into a two dimensional matrix for the purpose of exhibiting certain information in compact and comprehensive form while a figure is any kind of graphic illustration such as a graph, pie chart, photograph, drawing, sketch, or other devise to convey an idea in a non-verbal fashion (Tom et al., 2011). Tables and figures are appropriate in this case because they are clear and easy to understand. Data interpretation was based on inductive and deductive analysis techniques and the discussion of findings was linked to the empirical evidence.

Demographic Characteristics of the Respondents

A t-test was conducted to determine the association between gender, age and level of education and organizational dynamics. The paired sample tests and sample correlations are shown in Tables 1 and 2.

Respondents’ occupation, experience and income

The section below presents the participants’ occupation, experience and income. This was done to determine the association between employees’ job, experience, and their remuneration in order to determine whether their employment status had effects on organizational dynamics. The responses obtained are presented in Table 1.

Responses obtained showed that 10% (n=05), of the employees in middle management; 12% (n=06), were junior managers (including supervisors, foremen or superintendents); 32% (n=16), were professionally qualified and experienced specialists; and 40% (n=20), were skilled technical and/or academically qualified workers while 12% (n=06) were semi-skilled workers. Of these, 20% were employed for not more than 1 year; 28% had spent 2 years; 18% had 3 years; while 16% had worked for 4 years. Only 8% (that is, n=4), had more than 5 years’ experience of working at the company. Four percent (04%), of the respondents further revealed that they earned an income which is below USD$ 200, followed by 08% who earned between USD$300-400 whereas 28% indicated that they earned between USD500-600. The study also showed that 72% (that is, n=36), earned between USD$500-1000 and only 16% of the respondents earned a salary which is above USD$1000. Commenting on employee remuneration, one respondent (R16), stated that,

“The salary is reasonable considering that we are paid in United States Dollars. The majority of employees in some industries are earning salaries in RTGS dollars and to make matters worse, their salaries are far below the poverty datum line.

The findings showed that the majority of respondents were fairly paid. This tends to suggest that employee’s employment status and remuneration satisfied and motivated workers and hence there is low employee turnover at the company. These findings are in sync with Burke (2002), Schoeman and Blaauw (2016) and Linz and Semykina (2012), who pointed out that high wages result in low employee turnover.

Impact of leadership on organizational dynamics

From the data obtained, results indicate that employees’ relationship with BNC company was to a larger extend, good (n=63%). Only 37% indicated that the relationship was bad. One employee (R35) expressed that the good taste between the employer and the employee stemmed from:
Table 1. Participants’ occupation, experience and remuneration.

<table>
<thead>
<tr>
<th>Characteristic variable</th>
<th>Rating variable</th>
<th>No. of respondents</th>
<th>% respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation</td>
<td>Top management</td>
<td>00</td>
<td>00</td>
</tr>
<tr>
<td></td>
<td>Senior management</td>
<td>00</td>
<td>00</td>
</tr>
<tr>
<td></td>
<td>Middle management</td>
<td>05</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Junior management</td>
<td>06</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Professional workers</td>
<td>16</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Skilled technical workers</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Semi-skilled</td>
<td>06</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Length of service in years</td>
<td>1 year and below</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>2 years</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>3 years</td>
<td>09</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Employee remuneration in usd</td>
<td>USD$ 200 &amp; Below</td>
<td>02</td>
<td>04</td>
</tr>
<tr>
<td></td>
<td>USD$300-400</td>
<td>04</td>
<td>08</td>
</tr>
<tr>
<td></td>
<td>USD$500-600</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>USD$700-800</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>USD$900-1000</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Above USD$1000</td>
<td>08</td>
<td>16</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Primary Data, 2021.

Table 2. Relationship between leadership and organisational dynamics and change management.

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Leadership</th>
<th>Organisational dynamics and change management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson correlation</td>
<td>1</td>
<td>0.596**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>

Role of leadership on organisational dynamics

Research findings obtained from the respondents with regard to their perception on the role of leadership on
organizational dynamics reveal that majority of respondents agree that the role of leadership on organizational dynamics relates to moving the organization towards a common goal (30%); placing a value on employees (60%); maintaining employee motivation (58%); attempting to reduce the overall employee turnover (44%); monitoring employee job satisfaction (46%); aligning teams with the goals of the organization (44%), promoting a strong collaboration amongst team members (56%); managing and reviewing employee diversity as a result of the change (68%), and helping the organization to improve its overall profitability (44%) respectively. Also, commenting on the role of leadership on organisational dynamics, key informant “Y” expressed, “BNC leadership respects the interests of employees and maintains its status of being an employer of choice in the country. The leadership actively endeavours to create opportunities to improve the work environment which user friendly to employees” growth and to contribute to the well-being of employees. In this regard, the company leadership has maintained employee recognition schemes, performance bonuses as well as ensuring commitment to training programs in order to improve employee performance and satisfaction.”

On the other hand, key informant “X” echoed, “Good employee relations have continued to be an area of significance for the company leadership and this has been realized by open communication policies as well as improved consultation with employees. Employee participation has been prioritised through employee suggestion boxes where individuals have been rewarded for coming up with noble towards effective cost cutting initiatives. Works council meetings are being held religiously once every month and other communication forums such as liaison meetings are being maintained. Worker leadership was also trained in order to enhance its effectiveness in engagements with management. Essentially, this has helped in upholding the relationship that exists between employees and management and has enabled the company to resolve issues amicably.”

Impact of leadership on organisational dynamics

In terms of the impact of leadership on organisational dynamics, data obtained revealed that leadership explicitly rewarded employees’ performance (70%); improved employee satisfaction (66%); increased retention of key talent for the organisation (66%). By the same token, Haveman et al. (2014); Stolzenberg, (2018); Granovetter (2017) carried out a study on the effects of organizational dynamics on careers and found out that leaders positively impact on organisational dynamics. However, 70% of the respondents showed that leadership has failed to significantly reduce the total number of employee dismissals; 50% showed that leadership had failed to improve workers’ participation in change initiatives, 66% showed that leadership had failed to reduced employee turnover ratio; and has increased the number of new employee hires.

Impact of leadership in change management

The main thrust of this research was to examine the impact of leadership in organizational dynamics and change management. As such, understanding the impact of leadership in change management is key to finding solutions in addressing the organisational problems that stem from leadership strategies employed at BNC. The research findings were presented are: leaders improved employee knowledge, skills and abilities (58%; n=29); improved employee commitment to the organisation (58%; n=29); improved business performance against the planned budget (60%; n=30); reduced employee grievances (60%; n=30); reduced employee disciplinary action (60%; n=30); improved customer satisfaction (58%; n=29); reduced employee absenteeism (56%); improved organisational stability and alignment (58%; n=29). There was however, an insignificant impact on cost reduction on the planned budget (20%; n=10); the management of the supply of goods and services, and creativity and innovation by employees. This means that leadership had a significant positive impact of on change management at BNC. In addition to the above factors, one key respondent interviewed (informant “X”), commented that, “As leadership, we have managed to maintain growth and expansion opportunities in the mining sector. We have also improved utilisation of organisational resources, and organisational agility to adapt to organisational changes within the environment. As a consequence of the changes that were introduced by the new leadership at BNC, our 2020 nickel production was 6 620 tonnes and our sold nickel concentrate profit after tax was US$13.5 million, up from 131% in 2019 and this signifies the positive impact of leadership.”

These findings are consistent with a number of studies by researchers such as Aarons et al. (2015); Zinyama et al. (2015); Valkangas and Okumura (1997); Gesell (2010) and Belias and Koustelios (2014), who established that Leaders are particularly critical to organizational effectiveness and can impact the capacity to foster change and innovation. Gruban (2013), Abbas and Asghar (2010), in particular argued that leadership competences are strongly connected with the successful organizational change.
Table 3. McNemar’s hypothesis test.

<table>
<thead>
<tr>
<th>Hypothesis test summary</th>
<th>Test</th>
<th>Sig.</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>The distributions of different values across on the impact of leadership in change</td>
<td>Related – Samples</td>
<td>0.000</td>
<td>Reject the null</td>
</tr>
<tr>
<td>management are equally likely</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asymptomatic significances are displayed. The significance level is 0.005.</td>
<td>McNemar Test</td>
<td></td>
<td>hypothesis</td>
</tr>
</tbody>
</table>


Relationship between leadership, organisational dynamics and change management

The study sought to determine whether leadership had effect on organisational dynamics and change management at Bindura Nickel Corporation Limited. This was tested using Pearson Product Moment Correlation Coefficient at 95% confidence level and findings were presented in Table 2. The findings reveal a statistically significant positive relationship between leadership and organisational dynamics and change management ($r=0.596$; $P<0.05$). This means that an improvement in leadership style and management strategies results in improved organisational change management. These results are similar to the findings by Northouse (2004); Antonakis et al. (2013), McIaggen et al. (2013); Mokgolo et al. (2012) who revealed that the effectiveness of the leader determines the eventual success of the organisation and thus, inferring that there is a significant positive relationship between leadership and change management.

Hypothesis test on the impact on organizational dynamics and change management

A McNemar’s hypothesis test was carried out to determine the impact on organizational dynamics and change management and the results are presented in Table 3. Table 3 shows that the test is not statistically significant at the .000 level of significance in the sense that $p>0.005$ and hence the hypothesis test rejected the null hypothesis which states that leadership has no significant impact on organizational dynamics and change management. This therefore, infers that there is sufficient evidence to accept the hypothesis that leadership has a significant positive impact on organizational dynamics and change management.

Factors hindering leaders to stir their organisations to prosperity in the mining industry

The research findings showed that the greatest challenge in many respects, is the lack of financial resources ($70\%$; $n=35$). Another challenge that was raised by respondents was lack of infrastructure (systems and facilities) allocated to a change initiative ($66\%; n=33$); followed by employee resistance to change process ($80\%; n=40$). From the research findings, the researcher noted that although the company has managed to successfully resolve a number of employee concerns through the regular channels, there still remained a number of disputes that arise from the Trojan Mine’s care and maintenance era which are pending. This is particularly the case with a number of mining companies in Zimbabwe. The Zimbabwe Chamber of Mines of Zimbabwe (2017); Kambale (2019); the Ministry of Mines and Mining Development (2016), notes that mineral resources have potential to contribute tremendously to sustainable economic growth and development which can lead to massive poverty reduction and create a number of jobs through the forward and backward linkages across the productive sectors of the economy.

However, research findings are also consistent with the Chamber of Mines of Zimbabwe (2017); the Reserve Bank of Zimbabwe, the Minerals Marketing of Zimbabwe (2017); and Sibanda (2020), which indicates that the mining sector is affected by a plethora of challenges that include lack of financial resources and technological equipment resources and inconsistent policies. By the same token, Nadler et al. (2001), and Belias and Koustelios (2014), employees resist changes and especially they resist most to radical changes. On the contrary, Pondy and Huff (1985) argued that any change process often has problems because it is improperly framed by top management. This therefore tends to suggest that ineffective leadership strategies themselves affect the leaders in stirring their organisations.

Conclusion

Leaders have a significant positive impact on organisational dynamics and they can significantly reduce employee dismissals, employee turnover ratio and the number of new employee hires. Leaders are particularly critical to organizational effectiveness and can impact the capacity to foster change and innovation. In particular leadership was found to be strongly connected with
SUCCESSFUL ORGANIZATIONAL CHANGE. IT IS THEREFORE INDISPUTABLE TO CONCLUDE THAT LEADERS HAVE A SIGNIFICANT POSITIVE IMPACT ON CHANGE MANAGEMENT. RESEARCH FINDINGS SHOWED THAT THERE WAS A SIGNIFICANT POSITIVE ASSOCIATION BETWEEN LEADERSHIP AND ORGANIZATIONAL DYNAMICS AND CHANGE MANAGEMENT. THEREFORE, IT CAN BE CONCLUDED THAT THERE IS A RELATIONSHIP BETWEEN LEADERSHIP AND ORGANIZATIONAL DYNAMICS AND CHANGE MANAGEMENT. WITH REGARD TO MEASURES TO FACTORS HINDERING LEADERS TO STIR BNC TO PROSPERITY, IT WAS CONCLUDED THAT LACK OF FINANCIAL RESOURCES, LACK OF INFRASTRUCTURE (SYSTEMS AND FACILITIES) ALLOCATED TO A CHANGE INITIATIVE AND EMPLOYEE RESISTANCE TO CHANGE PROCESS WERE THE MAJOR FACTORS IMPEDING LEADERS TO STIR BNC TO PROSPERITY. THIS TENDS TO POINT TO THE FACT THAT THE STRATEGIES EMPLOYED BY BNC LEADERSHIP TO DEAL WITH THE ORGANIZATIONAL DYNAMICS AND CHANGE MANAGEMENT CHALLENGES AT BNC ARE NOT ENTIRELY EFFECTIVE BECAUSE OF THE FACTORS OUTLINED.

RECOMMENDATIONS

It is essential for leaders to reduce employee turnover and balance between employee performance and improving employee morale and engagement. Leaders should identify the needs of employees such as effective monetary rewards and employee participation in decision-making and satisfy these needs. Organisational leaders should be able to organize, plan, control, budget, recruit employees and solve labour related problems. Leadership should ensure the establishment of directions by visioning the future and developing strategies; communicating change, aligning, motivating and inspiring the employees and crafting strategies to interconnect employees working under them in order to enhance employee’s confidence and awareness so they can enhance their performance, and also make them able to understand their personal outgrowth and development. Organisational leadership should create an environment where change can take place; identifying and shaping the issues that lead to innovation, defining the organization as an environment, facilitating discussions, and encouraging more participation in innovative activities. There is need for organisational leadership to ensure the participation of all employees in the decision making process; create coalitions to support change, and provide finance and other incentives for participation in the change process.

LIMITATIONS

As the corona virus pandemic (Covid 19) is ongoing, the timeline of carrying out this research was a limitation on its own, as the study produced results at a later date. This means the results only reflected the truth up to the period under consideration and as such cannot be applied to a period after the conclusion of the study.

AREA FOR FURTHER RESEARCH

Further investigations should be done on the impact of leadership in influencing organizational dynamics and change management in the face of the Covid 19 pandemic.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

REFERENCES


