Analytical Maximization of Employees’ Value: A Winning Strategy for Organizational Goal Attainment

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Abstract
In order to meet set goals, organizations need the efforts of employees, who in turn have values that the organization need to maximize. This empirical study attempted to examine if the use of analytical methods in maximizing employees’ value has any effect on the organizational goal attainment of manufacturing firms. It examined two dimensions of employees’ values (exchange and social values) and three levels of analytics (descriptive, predictive and prescriptive analytics). The study is a cross sectional one that adopted the use of a questionnaire to 5 top managers of 48 manufacturing firms. The data were analyzed with the use of percentages, mean and standard deviation. The result showed that the use of analytics in maximizing employees’ values has a positive impact on organizational goal attainment. It recommended that business leaders need to understand the different values employees expect from the organization in order to effectively maximize their values. Finally, it recommended that organizations should learn to adopt the higher levels of analytics such as the predictive and prescriptive analytics in maximizing employees’ values in order to effectively achieve their goal attainment objectives.

Keywords: Analytics; Employee Value; Value maximization; Goal attainment.

1. Introduction
Organizations have different value propositions, objectives and goals they seek to achieve. These goals are achieved through the coalition of efforts between the organization and a network of other parties otherwise known as stakeholders (Jensen, 2000). These stakeholders, according to Jensen (2000), are a network of persons within the organizations (employees) and outside the organization (customer, suppliers, host communities, government, and other interest groups). Within this network, the employees, being internal stakeholders, happen to be strategically positioned to have a direct impact on the attainment of organizational goals.

The business performance of an organization to a great degree depends on its ability to maximize the values of its stakeholders, and this tells on how well the organization formulates and successfully apply the right strategic orientation (Al-Dmour, Obeidat, Masa‘deh, and Almajali, 2015). Implementing the right strategic orientation on the organization’s business activities has become an essential assignment for Chief Executives and policymakers of organizations.

Subsequently, how organizations are able to maximize the values of their employees happens to be one of the key focus activities of strategic management geared towards goal attainment. This is because, the employees are said to play the most vital role in the successful implementation of corporate strategy (Du Plessis, 2009), and these employees also play important role in all strategic decisions (Gabčanová, 2011). Employees work for organizations with the hope of getting something in return; these things they seek to get in return represent their value. This expectation brings about trust which emanates from their perceived security that the organization, in its bid to achieve its goals, also takes into consideration their interest.

It is therefore required that, for organizations to attain their profit making and other goals, it must build trust in the employees by creating values for them. Advocates of stakeholders’ value argue that the success of an organization should be measured by its satisfaction of all its stakeholders- in this instance, the employees (Jesen, 2000). Similarly, Post, Preston, and Sachs (2002) established that the aim of the organization is to create diverse values for diverse stakeholders. They further advised that an organization cannot survive if it is not focused on how to uphold the values of all of its constituents (stakeholders). If this is the case, the maximization
of the stakeholders’ value should then be seen as an end as well as a means to goal attainment in the organization. This paper thus examines what organizations perceive as the values of employees and also, how organizations can create and maximize these values. Most importantly, the paper is set to interpret the impact that maximizing employees value through the use of analytics can have on the goal attainment bottom line.

2. Literature

2.1 Employees’ Value Maximization

To understand the concept of employees’ value, it is first important to define the word ‘value’ and secondly, examine and review its dimensions. According to Porter and Kramer (2011), value is seen as a benefit in relation to cost. BasuMallick (2018) concludes that employee value is that thing that drives an employee to succeed in an organization. This means that an employee’s value serves as the motivating factor for productivity. Successful organizations have demonstrated paradigm shifts from the norm that customers should be put first, to a new paradigm that employees should be put first (Reynold, 2017). These set of organizations according to Reynold (2017), now make the management of their employee’s value a top priority based on the assumption that a satisfied employee translates to a happy customer. This, therefore, implies that the employees are the source of an organization’s success, and it will be beneficial to organizations to understand what values employees hold dear (Buzzelli, 1991).

Mitchell, Agle and Wood (1997) in analyzing who and what matters to CEOs through the stakeholder’s salience theory, was able to establish that every stakeholder has its own distinct value referred to as ‘claims’. What they meant by ‘claims’ are the expectations every stakeholder such as the employee has of the organization. These claims or values are what matters to the employees and they form the drivers to organizational trust, employee motivation and positive bottom line (Ferrell 2004). Schneper and Guillen (2004) assert that employees values differ from employee to employee, which means that there is a wide range of values ascribed to employees. According to Collier (2018), employee values are; fair salaries, the opportunity for personal development, work-life balance, recognition and sense of purpose, positive organizational culture and health related benefits. Similarly, Matic (2018) stated that employees’ values include; fair salary, other benefits outside salary, career development and stability, positive work environment, great organizational culture. Again BauMallick (2018) suggested self-service learning & development, flexible workforce management and the adoption of communication & engagement software by organizations as what today employees’ value.

The above scholars helped to bring out the various forms in which employees’ values are seen in organizations today. Bowman and Ambrosini (2000) in an attempt to explain value creation from the foregoing were able to categorize employees’ value into two broad types which are; Social Value and Exchange Value.

1. The Social Value: This refers to the utility derived from the organization’s ability to improve the self-concept or the emotional affiliation the employee has about the organization. Fischer (2014) states that employees’ social values refer to the non-monetary benefits derived from an employment agreement; the sense of safety and self-worth that workers feel from their job. This category of value encompasses recognition and work-life balance policies. According to Fischer (2014), calculating the social value of employees may look a bit difficult in practice majorly because it cannot be monetized. From the review, it is clear that the ‘use value’ makes up part of the social value dimension of employees’ value. Perhaps a more contemporary and conclusive way to interpret the social values of employees is through the concept of the psychological contract, which is defined by Schein (1965) as the implicit or unwritten expectation and understanding that exist between employees and management.

2. Exchange Value. Exchange value, is either seen as the monetary benefit tied to a task, good, service, or product at a certain point in time when the exchange occurs, or the amount the organization pays to the employee for the use value of an important task, job, product, or service (Lepak, Smith and Taylor, 2007). There is an economic condition that however facilitates the creation of this category of value which is that the monetary amount must exceed the employees’ costs of creating the value. This cost could be time, effort, money, happiness or sanity. The exchange value could also be referred to as the economic value.
In addition, creating value for employees involves a deep understanding of business realities, what key stakeholders such as employees define as value, and the allocation of resources such that value is created for the organization and its stakeholders (Ulrich and Brockbank, 2005). While organizations may know their business realities, they often find it hard to know what their employees’ values are. Understanding employees’ value is thus a stepping stone to creating value for employees. It is also not enough for organizations to understand and create values for their employees, but very pertinent that they understand how critical it is for them to maximize these employees’ values.

While trying to maximize employees’ value, the organization must fully consider the different needs and concerns of individual goals as a singular employee as well as group expectations running in a matrix form. Organizations need to ensure they maximally satisfy each group of stakeholders without neglecting one for another and also have an objective equilibrium point of satisfying the various needs and concerns of their stakeholders. This is because employees are the organization’s most vital partners who play a significant role in the smooth operations of the organization (Bowman and Ambrosini, 2000).

Subsequently, Harrison and Wicks (2013) observed that firms that treat their employees with utmost regards and motivate them financially and non-financially can prevent employees’ behaviour that may be detrimental to the firm’s performance. Such behaviours often manifest in forms of strikes, absenteeism, low productivity and lack of commitment. If the effect of neglecting employees’ expectation can be this critical to organizations, then it becomes pertinent for organizations to seek ways to maximize their employees’ value expectations.

2.2 Organizational Goal Attainment

Enough said about employees’ value and its maximization, it is equally important to discuss its associated relationship with the goal attainment objectives of organizations. According to Biech (2009), goal attainment is a state of achieving set objectives. These set objectives according to him, are classified into three broad categories; 1. Expense reduction objectives (reducing cost associated with errors, reducing dependency on costly processes, and increasing employee efficiency. 2. Revenue generation (objectives geared towards expanding the business such as increasing customer base, customer loyalty, and profit margin), and 3. Regulation compliance (objectives geared towards adherence to stipulated policies, avoidance of cost associated with non-adherence and other social responsibility activities).

An organization is considered to have done well if it attains its set goals. This is in line with the goal-attainment approach view of D'souza and D'souza (2017) which holds that how well an organization performs should be determined by its goal attainment state with regards to its quality outcomes, profit margin, and market share. The simple way to interpret this state for organizations is by associating the effect of maximizing employees’ values with organizational goal attainment. This requires not just mere data presentation in terms of scorecard values but the use of analytical methods and tools such that historical data is used to ascertain trends that will help to predict future occurrences and outcome, thus helping the organization to adopt the most effective ways to maximize its employees’ value.

2.3 The Analytical Maximization of Employees’ Value

Critical issues such as employees’ value maximization are not decided by guesswork from managers, but by careful consideration and deliberations of key individuals within the managerial team who engage in a systematic and participative method in decision making. To enhance the objective of maximizing the employees’ value, this paper proposes the need for an analytical orientation to maximizing employees’ value. In this context, the analytical orientation refers to the ability of the organization to systematically evaluate information to facilitate decisions regarding the management of employees’ value (Miller and Friesen, 1984). According to Morgan and Strong (2003), an organization that utilizes this tool would find useful management information and control systems. It helps the organization’s capacity to build knowledge, store information that will enable the organization to learn, and subsequently boost its goal attainment objective (Talke, 2007). Subsequently, Weinzimmer, Robin and Michel (2012) observed that this critical analysis assists organizations to assemble information related to environmental changes, identify and initiate innovation processes that affect their success.

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Still on elucidating the importance of analytics to organizations, Bagshaw and Okwakpam (2017) are of the opinion that analytics form the basis for which organizations is able to reduce non-productive paid time, thus enhancing the organizational bottom line. According to them, it helps to reveal hidden information firms do not see and aids in positioning the firm to make performance improvement decisions that will lead to workforce efficiency and organizational performance.

2.4 Analytical Levels

According to Talke (2007), analytically gathering information from employees and appropriately interpreting the gathered information are critical to employees’ value maximization as well as attaining organizational goals. This indicates that a firm that is analytically oriented is more likely to improve the relationship with its employees. Analytics is said to be a method of identifying patterns of connections that link metrics or data (Bagshaw and Okwakpam, 2017). The use of analytical method in employee management comes in different levels such as; descriptive level (This is the use of simple metrics to measure current or historic state of things), predictive level (This is the level at which more than one descriptive data are related to one another to determine trend and future occurrence), and prescriptive level (this is the level at which identified trend is used to proffer solution or avoid reoccurrence) (Ejo-Orusa and Okwakpam, 2018; Harris et al., 2010; Ulrich, 2013; Levenson, 2005, Schmarzo and Smeyers, 2014).

Each of the analytics levels requires and represents different activities. At the descriptive analytical level, the managers use metrics to present business data such as attrition count, scorecard values, error level, skill level, training cost per head, headcount (Ejo-Orusa and Okwakpam, 2018). At this level of analytics, all that is required to be done is to name and group data to represent the present or past state of things. At the predictive analytical level, the managers relate more than one descriptive data or metrics to ascertain root causes and project future occurrences (for example, relating error level with the skill level to ascertain if it is lack of skill that is responsible for high error level). At the prescriptive level, which is a more advanced stage of analytics, the managers relate predictive analytical results with historical data to arrive at a projected occurrence and subsequently provide a possible solution (Ejo-Orusa and Okwakpam, 2018).

Despite the ascribed usefulness of analytics in business management, the fact still remains that its usage has not gained much attention as most managers seem to be lost on how to go about it (Ejo-Orusa and Okwakpam, 2018). According to Levenson (2005), knowing about analytics in employee management is not enough, what matters is the knowledge of the applicability of each level of analytics and the appropriateness of the metrics to be used. Likewise, having established that the use of the analytical method to effectively maximize employees’ value is a necessity for organizations to attain their goals in the globalised world, the fact still remains that not all organizations to adopt the tool.

Based on the foregoing, the need for managers to understand the expected values of their employees and how to efficiently maximize these values through the application of analytical methodology becomes essential.

3. The Research Hypotheses

The following research hypotheses stated in a null form were tested to verify the existence of any significant relationship between the use of the analytical method in employees’ value maximization and organizational goal attainment.

\( H_01 \): The use of the descriptive analytical method in maximizing employees’ value does not have a significant impact on organizational goal attainment for manufacturing firms.

\( H_02 \): The use of the predictive analytical method in maximizing employees’ value does not have a significant impact on organizational goal attainment for manufacturing firms.

\( H_03 \): The use of the prescriptive analytical method in maximizing employees’ value does not have a significant impact on organizational goal attainment for manufacturing firms.

4. Methodology
The population of the study is 48 manufacturing organizations registered with the Manufacturers Association of Nigeria (MAN) in the Rivers State. Since the population is relatively small, the study adopted the population size as the sample size. The cross-sectional survey research method was adopted with a structured questionnaire on dimensions of employee values (exchange and social values) and levels of analytics (descriptive, predictive and prescriptive analytics). Also, the degree of goal attainment in the organizations made up part of the items of the questionnaire. Through the use of purposive sampling, copies of the questionnaire were sent to five (5) top management staff in strategic departments and units of each of the manufacturing firms bringing the total number of respondents’ to 240. It is the responses from these 240 respondents that were analyzed for the study.

5. Data Analysis and Interpretation

The data collected were analyzed using percentages, mean scores and standard deviation, and these were used to determine the relationship amongst the study variables and equally test the stated hypotheses. In the questionnaire, four research items were used to depict employee value maximization and four items depicted levels of analytics while three items depicted the degree of goal attainment. Also, goal attainment level of the firms was compared with the level of analytics they adopted. All these are presented in Tables 1, 2, 3 and 4 respectively.

Table 1: Items of Employee Value Maximization

<table>
<thead>
<tr>
<th>Questionnaire Items</th>
<th>N</th>
<th>Sum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. We place emphasis on greater employee satisfaction in our firm through good pay.</td>
<td>240</td>
<td>760</td>
<td>3.92</td>
<td>.630</td>
</tr>
<tr>
<td>2. The health and development of our employees is one of our major concerns.</td>
<td>240</td>
<td>700</td>
<td>3.43</td>
<td>.775</td>
</tr>
<tr>
<td>3. We often provide assistance to our employee with their families in order to raise their standard of living.</td>
<td>240</td>
<td>800</td>
<td>3.73</td>
<td>1.138</td>
</tr>
<tr>
<td>4. Employee safety is of eminent priority in our firm.</td>
<td>240</td>
<td>728</td>
<td>3.57</td>
<td>1.074</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>240</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Field survey data 2017.

To examine the degree at which the exchange and social values (dimensions of employees’ value) were considered in the organizations under study, four items as stated in the questionnaire were used. Table 1 represents the aggregated sum from the respondents indicating the mean score and standard deviation where the first item represents the exchange value of employees while the other items represent the social values of a typical employee. Majority of the respondents with a mean score of 3.92 agreed that their firms pay more attention to employees’ pay package than other expectations of the employees as it shows that employees’ satisfaction through good pay, is of major concern to organizations. This is attributed to the assumption that the first level of every employee’s value is ‘pay’. Also, a reasonable number of respondents were of the opinion that their firms pay attention to employees standard of living providing assistance to employees’ families, this is reflected in the mean score (3.73) while on the other hand, the organizations’ concern for employees health and development has a lesser mean score (3.43). These components are seen as a vital factor for an integrated approach in achieving set targets of stakeholders’ value maximization in the operations of the firms.
Table 2: The Use of Analytics in Organizations

<table>
<thead>
<tr>
<th>Use of Analytics for Employees’ Value Maximization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaire Items</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>1. We usually carry out entrance interview to ascertain pay expectations of a worker</td>
</tr>
<tr>
<td>2. We take a quarterly inventory of our employees’ complains as related to their expectations.</td>
</tr>
<tr>
<td>3. We compare employees expected with reality and use such data for future analysis</td>
</tr>
<tr>
<td>4. We use the expected-reality data to ascertain frequency, cause and way forward</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
</tr>
</tbody>
</table>

Source: Field survey data 2017.

To examine the levels of descriptive, predictive and prescriptive analytics (dimensions of analytics) used by the organization in maximizing employees’ social and exchange values, four items as stated in the questionnaire were used. The first item represents the descriptive analytical level, the second and third items represent the predictive analytical levels and the last item represents the prescriptive analytical levels. Table 2 represents the aggregated sum from the respondents indicating the mean score and standard deviation. With the first item scoring a mean score of 3.92, it shows that most organizations utilize the descriptive analytical method in maximizing employees’ values. With the second and third item (representing predictive analytics) having mean scores of 3.00 and 2.92, it shows that the organizations do not use predictive analytics as much as they make use of the descriptive analytics. Finally, the fourth item scored a mean score of 1.37 showing that the use of prescriptive analytics amongst the organizations studied was very minimal.

Table 3: Goal Attainment in Organizations

<table>
<thead>
<tr>
<th>Items on Organizational Goal Attainment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaire Items</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>1. We have only met below 80% of our objectives For three years consecutively</td>
</tr>
<tr>
<td>2. We have met about 80% of our objectives For three years consecutively</td>
</tr>
<tr>
<td>3. We have always met above 80% of our objectives For three years consecutively</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
</tr>
</tbody>
</table>

Source: Field survey data 2017.

Three items were used to determine the degree at which the organizations had attained their set goals and objectives. The first item represented poor goal attainment; the second item represented an average goal attainment while the third item represented an excellent goal attainment. From the result shown in Table 3, a high number of organizations were unable to reach their set goals with the first item having a mean score of 4.00. Likewise, a reasonable number of organizations were barely able to achieve their set goals as shown by
the mean score of 3.92 for item 2. Only a small number of organizations were able to excellently attain their set goals, this is indicated by the low mean score of 2.40 recorded for item 3.

Table 4: Firms Performance, Value maximized and Adopted level of Analytics

<table>
<thead>
<tr>
<th>No of Firm</th>
<th>Goal Attainment %</th>
<th>Values Maximized</th>
<th>Level of Analytics</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>Below 80%</td>
<td>Employee Satisfaction by good pay package</td>
<td>Descriptive</td>
</tr>
<tr>
<td>12</td>
<td>80%</td>
<td>Good pay package and increased standard of living</td>
<td>Descriptive and predictive</td>
</tr>
<tr>
<td>3</td>
<td>Above 80%</td>
<td>Safety, health and increased standard of living</td>
<td>Descriptive, predictive and prescriptive</td>
</tr>
</tbody>
</table>

Source: Field survey data 2017.

Another analysis carried out was to compare the goal attainment level of the firms with the level of analytics adopted while also revealing the core values maximized. As shown in Table 4, out of the 48 firms surveyed, 33 did not meet 80% of their set goals, 12 met 80% of their set goals and only 3 exceeded 80% of their set goals. Further analysis showed that the 33 firms that did not meet 80% of their goals only adopted the use of descriptive analytics in maximizing their employees’ values. The value they, however, emphasized on maximizing employees’ was good pay (exchange value). The 12 firms that met 80% of their set goals adopted the use of both descriptive and predictive analytics in maximizing their employees’ value. They, however, emphasized on maximizing good pay (exchange value) and increased standard of living (social value). Finally, the 3 firms that exceeded 80% of their set goals adopted the use of descriptive, predictive and prescriptive analytics in maximizing their employee’s values, and the values they emphasized on were safety, health and increased standard of living (social values).

6. Discussion

The result of the study shows that indeed manufacturing organizations recognize that their employees have values and expectations which spur them to perform and keep them in the organization. This assertion is affirmed from the high mean score of items on employee value maximization. Another significant point to note in the employee value maximization objective of the organizations is that most manufacturing firms focus more on maximizing the exchange value of employees while they pay less attention to the social value of the employees. This assertion is affirmed from the high mean score of item 1 (which represented the exchange value) on the employee value maximization table (Table 1), and the lower mean scores of items 2, 3 and 4 (which represented the social values).

Again the study revealed that most manufacturing firms adopted a descriptive analytical method in maximizing their employees’ value. This is shown by the high score recorded for item 1 (which represents the descriptive level of analytics) in Table 2. On the other hand, manufacturing organizations do not pay much attention to the use of predictive and prescriptive analytics in their employee value maximization process. This claim is confirmed by the lower mean score recorded for items 2 and 3 (which represent the predictive analytics). Furthermore, manufacturing firms seem not to make use of prescriptive analytics in their employee value maximization as shown from the very low mean score of item 4 (which represented prescriptive analytics).

The result in Table 3 shows that a large number of manufacturing firms were not been able to score above average in their goal attainment. This is shown in the high mean score of item 1 (which indicated poor goal attainment). On the other hand, few of the organizations have achieved above average success rate in their goal attainment as shown in the low mean score recorded for item 3.

Further analysis of the result as in Table 4 revealed that the organizations that scored low on goal attainment, scored high on the use of descriptive analytics and low on the use of both predictive and prescriptive analytics in their employees’ value maximization process. Likewise, organizations that scored high on goal attainment, scored high on the use of predictive and prescriptive analytics in their employee value maximization process.

The conclusion of the result is that when organizations adopt the use of all levels of analytics in maximizing their employees’ value, they tend to record a high successful outcome in their goal attainment. From the results
of the study, it is convenient to reject the two study hypotheses, thus the paper states that the use of analytical methods in maximizing employees’ exchange value has a significant impact on organizational goal attainment for manufacturing firms, and the use of analytical methods in maximizing employees’ social value has a significant impact on organizational goal attainment for manufacturing firms.

7. Conclusion

Organizations can’t independently achieve their goals only by relying on their own; they need the participation of employees, hence the need to maximize the values and expectations of these employees which includes remunerations of salary and other non-monetary benefits. Perhaps one of the reasons for the high employee turnover experienced by manufacturing firms could be related to the neglect of these values.

This paper has been able to ascertain that the use of analytics in employee value maximization positively affects goal attainment objectives of organizations. It achieved this purpose by examining the concept of employee value maximization through its two dimensions which are; exchange and social values. It established that exchange values are those values tied to the monetary benefits the employee expects from the job while the social values are those non-monetary and emotional affiliations an employee seeks to get from the job. Maximizing these values for the employees requires that organizations understand the topical employees’ values that exist within the larger employees’ group in the organization. This is necessary because not every employee is on the same level of value and expectation, hence to effectively maximize all employees’ values and be able to attain organizational goals.

Furthermore, the concept of analytics as a tool for maximizing employees’ value was also examined and it was established that three basic levels of analytics exist. These levels of analytics which are; descriptive, predictive and prescriptive analytics are interconnected to each other such that data derived from one level is useful for the other levels progressively. It also found out, most manufacturing firms relied mainly on the first level of analytics – the descriptive analytics; however, with the use of analytics in maximizing employees’ values, organizations are able to understand trends and predict future occurrences from historical data, and finally be able to prescribe possible solutions.

Finally, the study revealed that the general use of analytics to maximize employees’ value is a winning strategy for attaining organizational goals, but it, however, showed that most firms adopt the descriptive analytics strategy while neglecting the use of predictive and prescriptive analytics which seem to be more effective.

This study calls for further study to ascertain the reasons for the minimal usage of the predictive and prescriptive analytics by organizations.

8. Recommendations

From the results of the study and reviewed literature, the paper recommends that:

1. Employees should be seen as internal constituent stakeholders, and as such should have expectations that need to be managed. Thus, business leaders need to be knowledgeable about the various expectations and values of employees or what matters most to their employees.

2. Manufacturing firms need not stop at the use of descriptive analytics in maximizing employees’ values but move up to adopting the use of predictive and prescriptive analytics in order for them to effectively attain their goals.

3. Managers require knowledge training and retraining on what metrics and data are required for value maximization.

References


