Recycling of waste as a determinant of financial performance of SMALL AND MEDIUM ENTERPRISES in Eldoret Town, Kenya

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Owing to strong influence on economic and social issues, environmental impact attributed by SMEs activities is significant, not only for their magnitude but also in diversity. However SMEs are often unaware of their environmental impact and lack the resources to implement environmental initiatives and since their environmental footprints are small and localized they easily go unnoticed. Nevertheless the cumulative environmental impacts of countless SMEs constitute major environmental challenges to both regulators and stakeholders, (Kapolon, 2010). Environmental issues is now considered strategic and there has been debate all over the world concerning environmental issues (Waste recycling). Many SMEs are reluctant to adopt waste recycling strategies until they find financial benefit for themselves. The specific objective was to determine the extent to which recycling of wastes determined SMEs financial performance in Eldoret town, Kenya. The study area was Eldoret town, Kenya and the research design adopted was explanatory research design because it compares two variables, the dependent variable being financial performance and independent variable is waste recycling strategy. The research used stratified and simple random sampling and Hotels, restaurants, bars and supermarkets were the study units. There are more than 8175 SMEs in Eldoret town and the researcher used stratified sampling and targeted 80 respondents in supermarkets and 197 respondents in hotels/restaurant/bars. Data collection instruments used was five point likert scale questionnaire and structured interview. Data analysis used was descriptive statistics, explanatory factor analysis, Pearson Moment correlation and regression model analysis. Data was presented using tables, figures and in prose form. The study showed that there is a relationship between waste recycling strategies adopted by SMEs on their financial performance and it found that most SME’s in Eldoret have an understanding of waste management. From simple regression test the study findings; r=0.209 and r²=0.440, which shows that 44% of the growth of financial performance can be explained by the adoption of waste recycling. The study recommends that an awareness programme should be organized in schools, offices, through multimedia houses to educate the masses on the need to recycle waste and thus save on their costs and as a way to generate income. The study further recommends that SMEs require greater access to financial services and investment capital.

Key words: Recycling of wastes, financial performance.

INTRODUCTION

According to Leenders (1993) concern has grown markedly about a firm’s responsibility to protect the environment and has resulted in passage of various environmental laws and regulations. This has resulted in many suppliers and purchasers making a lot of changes in products and services and methods of doing business. The strategic question for the organization is to how to achieve sustainable growth where future quality of work life is not sacrificed for short term economic gain. Lacronix (2005) asserts that many organizations worldwide are making an effort to purchase products and services that are less harmful to local and global environments. Both public and private sector organizations are implementing purchasing practices that
include environmental and social considerations. These activities are part of a broader movement towards more sustainable forms of production and consumption.

According to Burt et al., (2004) economic growth and environmental management are two conflicting goals. Environmental care and economic growth are mutually exclusive goals. The environmental management approach adopted by large scale industries and SMEs differ considerably. Most of the large scale industries are well organized and structured and are sometimes backed up by international reputable mother companies.

Kapolon (2010) comments that SMEs have unique characteristics which inhibit the implementation of environmental management systems and some are reluctant to adopt waste recycling strategy until they find financial benefits for themselves, thus this study assessed the extent to which waste management strategy is a determinant of financial performance of SMEs.

**Problem statement**

Kapolon (2010) notes that it is acknowledged the world over that, SMEs are one of the leading groups in economic activities and they pose enormous social and environmental challenges. SMEs play a vital role in economic development but they also contribute significantly towards overall industrial pollution. A number of factors hinder SMEs from planning and implementing pollution control actions. These factors include lack of access to technology, lack of space, non availability of trained personnel and unwillingness of management to invest in environmental protection.

Waste recycling strategy adoption by many organizations saves a country problems, but many organizations such as small and medium enterprises do not embrace these strategies unless they find benefit for themselves and their customers (Kapolon (2010)). The cost of putting up an environmental management systems and implementing cleaner production in most cases is wider than for larger firms, even when there is a demonstrated financial return, SMEs may lack the resources and expertise to exploit such opportunities. Thus this study assessed waste recycling strategies as determinants of financial performance of SMEs in Eldoret town.

**Justification of the study**

This study will benefit various entities by contributing to existing knowledge on waste recycling. Main beneficiaries include researchers by finding area of further research, the Government by implementing waste recycling policy, manufacturing organizations in order to put in place proper disposal and waste management.

**Financial performance measurement**

Financial measurement system should provide one with a set of tools and metrics to understand your financial situation. This information can be used for making better business decisions in a number of areas including: Business Profitability, Pricing, Cost Accounting, Capital Purchasing, Strategic Planning and Incentive Compensation. Financial performance indicators in the form of ratios cover a number of concepts and are grouped as: Profitability, Liquidity, Utilizations, Financial structure and Investment – shareholder ratios. Avoid hanging paragraphs – merge with others. For the purpose of this study measurement for financial performance of SMEs will be Return on Revenue (ROR) and Return on Assets (ROA).

**Conceptual frame**

The conceptual framework depicts both dependent and independent variables. The independent variables operationalize the waste recycling strategies which include Recycling, non pollutants use, waste management and use of energy saving products. The dependent variable on the other hand is depicted as SMEs financial performance measured in terms of revenues and expenses (return on assets and return on revenues) as a result of SMEs adoption of waste recycling strategies.

**METHODOLOGY**

This study adopts the Pearson Moment Correlation and Simple linear regression model to test relationships between variables that is waste recycling strategy as independent variable and financial performance of SMEs as dependent variable. The Simple regression equation was as follows;

\[ Y = b_0 + b_1 X_1 + \epsilon \]

Where:

- \( Y \) = Dependent variable (Organization financial performance)
- \( X_1 \) = Independent variable
- \( X_1 \) = Recycling of wastes
- \( \epsilon \) = Error term
The study utilized both primary and secondary data. Primary data collection tools included questionnaires and structured interviews. The questionnaires and the structured interviews were administered at the management level as they were best suited to understand waste management procedures and its implications to the financial status of the enterprise. The questionnaires were administered to all the top management and purchasing managers concerned with waste recycling activities.

FINDINGS

Financial performance of SME's

The respondents were asked to agree or disagree to given statements as they relate to their financial performance. As shown in the table 3.1 Majority 265(97.5%) agreed that their enterprise has the ability to meet financial obligations, 272(100.0%) of the respondents agree that there is availability of funds to purchase inputs and inventory items in the enterprise. Further 251(92.3%) of the respondents agreed that the enterprise is able to repay all debts without any difficulties. The majority of the respondents 258(94.9%) agreed that the enterprise is able to operate after a major financial adversity. The respondents 258(94.8%) agreed that the enterprise is able to pay all expenses and 265(97.4%) agreed that the enterprise is able to repay all indebtedness. Most of the respondents agreed with all the statements as depicted in table 1.

Relationship between waste recycling and financial performance

The study sought to find out if recycling of waste affects the financial performance and the majority 175(64.3%) indicated no while 97(35.7%) indicated yes. This implies that most enterprises are not affected by recycling of waste as they do not practice recycling.

Recycling of waste as a determinant of financial performance of SME's

The study sought to know if the enterprises take empty packages from customers and the majority 258(94.9%) with 237(87.1%) indicating that they return empty packages to the party responsible in the recycling process, another 265(97.5%) agree that they collect waste material from cycling bins. When asked if the waste materials are delivered to the entity responsible for recycling 258(94.8%) agreed while 220(80.9%) indicated that they agree there is always processing of recyclables to create secondary raw materials. When asked if the secondary materials are used to manufacture new materials the majority 213(78.3%) agreed, 192(70.6%) agree that the new materials are returned to the market place and 213(78.3%) agree that the system that can handle the growth in volume of waste is implemented. This implies that the respondents agree that recycling of waste is a determinant of financial performance of SME's (table 2).

Regression analysis effects of waste recycling on financial performance on SME's

A regression test was conducted to establish the effects of waste recycling on financial performance of SME's. The researcher of the study first identified the variable that explains the waste recycling. After the variables were identified and arranged scores were awarded to each variable and their totals calculated so as to find the maximum value that one respondent could score. The maximum value was then divided equally into portions that is if maximum value is 80; 1-20=poor, 21-40=fair, 41-60=good and 61-80= very good. After which they were
Table 2: Recycling of Waste as a Determinant of financial Performance of SMEs

<table>
<thead>
<tr>
<th></th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
<th>NR</th>
<th>Mean</th>
<th>Stdv</th>
</tr>
</thead>
<tbody>
<tr>
<td>We take empty packages from customers</td>
<td>14</td>
<td></td>
<td>258</td>
<td></td>
<td></td>
<td></td>
<td>3.87</td>
<td>0.565</td>
</tr>
<tr>
<td></td>
<td>(%)</td>
<td></td>
<td>(94.9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We return empty packages to the party</td>
<td>7</td>
<td></td>
<td>258</td>
<td></td>
<td>7</td>
<td></td>
<td>3.94</td>
<td>0.335</td>
</tr>
<tr>
<td>responsible in the recycling process.</td>
<td>(%)</td>
<td></td>
<td>(87.1)</td>
<td></td>
<td>(10.3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We collect waste material from cycling bins</td>
<td>7</td>
<td></td>
<td>194</td>
<td></td>
<td>64</td>
<td></td>
<td>4.13</td>
<td>0.652</td>
</tr>
<tr>
<td>The waste materials are delivered to the entity</td>
<td>14</td>
<td></td>
<td>(94.9)</td>
<td></td>
<td>(2.6)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>responsible for recycling.</td>
<td>(%)</td>
<td></td>
<td>(71.5)</td>
<td></td>
<td>(23.5)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There is always processing of recyclables to</td>
<td>52</td>
<td></td>
<td>119</td>
<td></td>
<td>161</td>
<td></td>
<td>3.99</td>
<td>0.068</td>
</tr>
<tr>
<td>create secondary raw materials.</td>
<td>(%)</td>
<td></td>
<td>(45.8)</td>
<td></td>
<td>(37.1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The secondary materials are used to</td>
<td>14</td>
<td></td>
<td>143</td>
<td></td>
<td>70</td>
<td></td>
<td>3.66</td>
<td>1.357</td>
</tr>
<tr>
<td>manufacture new materials.</td>
<td>(%)</td>
<td></td>
<td>(52.6)</td>
<td></td>
<td>(25.7)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The new materials are returned to the market</td>
<td>7</td>
<td></td>
<td>138</td>
<td></td>
<td>56</td>
<td></td>
<td>3.65</td>
<td>1.342</td>
</tr>
<tr>
<td>place.</td>
<td>(%)</td>
<td></td>
<td>(52.6)</td>
<td></td>
<td>(25.7)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The system that can handle the growth in volume</td>
<td>70</td>
<td></td>
<td>145</td>
<td></td>
<td>70</td>
<td></td>
<td>3.82</td>
<td>1.048</td>
</tr>
<tr>
<td>of waste is implemented.</td>
<td>(%)</td>
<td></td>
<td>(52.6)</td>
<td></td>
<td>(25.7)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SD: Strongly Disagree, D: Disagree, N: Neutral, A: Agree, SA: Strongly Agree, NR: None response

Source: Survey Data (2011)

Table 3: Regression analysis effects of waste management on financial performance on SMEs

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.209</td>
<td>.440</td>
<td>.019</td>
<td>.219</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Financial performance

Source: Survey Data (2011)

ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Deg.</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4,274</td>
<td>2</td>
<td>2,139</td>
<td>13.850</td>
<td>.001*</td>
</tr>
<tr>
<td></td>
<td>11,726</td>
<td>270</td>
<td>309</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>16,000</td>
<td>272</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Recycling wastes,

b. Dependent Variable: Financial performance

Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>5.082</td>
<td>.304</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Recycle wastes</td>
<td>5.54</td>
<td>.144</td>
<td>5.17</td>
</tr>
</tbody>
</table>

Predictor: (Constant), Recycling wastes,
Dependent Variable: Financial performance

From the results of data analysis $x_1$: Recycling wastes, it is therefore concluded that the waste recycling influences financial performance. The recycling of wastes contribute to $R=0.209$ and $R^2=44.0\%$, this implies that $44.0\%$ of the change in organization financial performance is explained by it. These results are significant as explained by the F-ratio of 13.850 at a p-value = .001.

According to Hair et al., (2006) if the coefficient of the independent variables are really not all zero then the F-ratio should be significantly greater 1.00 which in this case $F$-ratio =13.850 with a $p$-value <.001 hence waste recycling has significant effect on organization financial performance at $\alpha<0.05$. Hence the null hypothesis was rejected and the alternative adopted and the end simple regression equation $Y=b_0 + b_1x_1 + \epsilon$ can be summarized as: $Y= 5.082 + 0.534x_1 + 0.304$ (table 3).

Conclusions of the study

It can be concluded that despite all the knowledge about waste management it is still expensive to recycle waste within Eldoret and Kenya in general. This is because...
waste recycling plants and companies are few if not scarce within the environs of Eldoret. Recycling as one of waste recycling strategies shows it affects financial performance of SMEs. According to simple regression analysis its contribution is 44%. Despite many SMEs not having a lot to recycle those benefitting is just a small number.

REFERENCES
World Bank Discussion Papers.
Markley MJ, Lenita Davis (2007). Exploring future competitive advantage through sustainable supply chains, Department of Management and Marketing, Culverhouse College of Commerce and Business Administration, The University of Alabama, Tuscaloosa, Alabama, USA.