Enterprise development in the waste management sector: a review

SC Thaba, T Chingono and C Mbohwa
FEBE, Department of Quality and Operations Management
University of Johannesburg
South Africa
scthaba@uj.ac.za, ttchingono@uj.ac.za, cmbohwa@uj.ac.za

Abstract

The waste management sector was dominantly private sector owned. For some this made business sense as selected materials could be recycled while the rest of waste materials estimated to 10.2 million tons was deposited in the landfills. What is done by the private sector is not enough as most of the waste is deposited into the landfills due to non-efficient and effective collecting of waste especially in the household areas. Solid waste management is a standout amongst the most critical issues for nearby municipal, much money and effort is spent by local authorities for collecting and disposing waste. This study suggest that one parastatal agency is not sufficient for the development of effective and efficient waste management hierarchy. Through a thorough online literature survey the researchers established that, through incorporating and supporting SMMEs within the waste management sector and developing and sustaining them with upwards and downwards integration waste can be managed sustainably and this could even lead to a Zero waste system.

Keywords
Enterprise development, Waste Management, review

1. Introduction

According to Karani and Jewasıkiewitz (2007) previously the waste management sector was dominantly private sector owned which made business sense because the recycling of paper, glass, tinplate and aluminium while the rest of waste materials estimated to 10.2 million tons was deposited in the landfills. There is a need for sustainable enterprise and supplier development through the encouragement of innovation and creativity in the waste management sector. Currently in the City of Johannesburg metropolitan area the most of the waste is collected by Pikitup Johannesburg (SOC) Ltd. Pikitup (2016) states that, it is officially an integrated waste management service provider to the CoJ and is mandated to provide integrated waste management services to Johannesburg's private, and business residents. Still even what is done by the private sector is not enough as most of the waste is deposited into the landfills due to non-efficient and effective collecting of waste especially in the household areas. According to Ngadiman et al (2016) solid waste management is a standout amongst the most critical issues for nearby municipal, much money and effort is spent by local authorities for collecting and disposing waste.
## Elements or drivers of waste management

<table>
<thead>
<tr>
<th>Elements</th>
<th>Authors</th>
<th>Sub-elements</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainability</td>
<td>Zu, (2013)</td>
<td>Sustainable enterprise</td>
<td>Sustainable Enterprise Development</td>
</tr>
</tbody>
</table>

© IEOM Society International
<table>
<thead>
<tr>
<th>Category</th>
<th>Author(s)</th>
<th>Title</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSR</td>
<td>Zu, (2013).</td>
<td>Sustainable Enterprise Development</td>
<td></td>
</tr>
<tr>
<td>Drivers of enterprise development</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to Kobersy et, al (2015), capacity building concern the empowerment development with no limitation within a community, by encouraging long term investment in competitive areas, resources redistribution, good and services improvements, management system and structure improvements, which will results in demand of company’s products and service.

**Entrepreneurship**

Fortunato and Alter (2015) states that Entrepreneurship has received attention in research due to impacts that entrepreneurs are making in the communities and economy, they are considered as catalyst of change and engine of economic growth through creativity and innovation. Lyons, (2015) mentions that leveraging the power of entrepreneurship can solve community’s economic, social and environmental challenges.
**Community/ economic builders**

According to Fortunato and Alter (2015) certainly growing attention is been given to the entrepreneurs by the community developers because of number of citation for the role the entrepreneurs are playing in terms of job creation, economic development and developments of their business within this competitive century.

**Continuous learning**

According to Kutzhanova, et al (2009) a competent entrepreneur shall be willing to learn and a selective and purposeful manner, according to ensuring continuous and in-depth learning. Fogel (2001) states that managing a business and entrepreneur’s ability is interrelated to 

Research shows that the need for training programs is greater in countries where external assistance and preferences for small business are limited. In Sweden, both business-related experience and business education were highly correlated with the entrepreneur's ability to start and manage a business (Davidsson 1991). Training and educational services are particularly important in emerging market economies because entrepreneurs lack basic business skills (Fogel 1994). Swanson and Webster (1992) found that 30 percent of the Czech entrepreneurs surveyed requested training in the areas of preparing business plans, decision-making, negotiating, pricing, market penetration, handling of cash-flow, organization, and managing the business.

**Economic growth**

According to Koberse et al (2015), the economic growth of businesses depends on the way enterprises adapt to the changing needs of the competitive environments and how as a company offers its products.

**Culture**

According to Fogel, (2001), entrepreneurship is likely to nurture in an environment where people values, encourages and supports the start-up businesses, while ensuring availability of opportunities, and entrepreneurs have adequate skills and knowledge in starting and managing business.

**Stakeholders/ entrepreneurship ecosystem**

According to Lyons, (2015) enterprise development is possible through the collaboration of community stakeholders which is willing to create innovative solutions to the community problems through using its assets, this include government, educational institutions, civil societies and entrepreneurship programmes such as incubators and private sector.

**Business incubation**

Vanderstraeten, et al (2016) mentions that business incubation is an organisation that offers administration facilities, office space, network opportunities for start-ups businesses, logistic facilities and business advices. Fogel (2001) states that networking in one important non-
financial tool that offers four essential assistance namely motivation and support, role lead by example and expert opinion and counselling

Conclusions and Recommendations

This study suggest that one parastatal agency is not sufficient for the development of effective and efficient waste management hierarchy. According to Karani and Jewasikiewitz (2007) organisations such as Development bank of Southern Africa (DBSA) is identifying two key investment areas namely capturing the methane emissions from the landfills and financing moveable and physical assets for sustainable development? The landfills can also be used for the manufacturing of the biogas to be used in replacement of the fossil fuel. Through the support of many SMMEs within the waste management sector, in developing and sustaining them with upwards and downwards integration. The SMMEs can grow in very a competitive business because there is a potential business development within the waste management sector. According to Karani and Jewasikiewitz (2007) the municipality can award contracts to individuals or contractors so that the part of waste management services is done by the private sector other than everything being done by a parastatal. These have to mean business opportunity starting from the first level of the waste management hierarchy and not only at the waste are in the dustbin or landfills. The enterprise and supplier development code could as is being forwarded through the Broad Based Economic Empowerment initiative, which just started with the new government of South Africa. But it have a vast of literature in supply chain supporting emerging Small Business enterprises (SME), mainly being utilised by industrial cluster and focal companies (figure.2). According to Boari (2001) industrial cluster are meant to promote innovation through continuous integration and information flows to provide encourage resource commitment and investment in public and private sector in spatial proximity of suppliers and customers which brings competitive advantage due to shorter feedback loops when the company the complexity of the interdependencies with customers, suppliers and other companies

References


8. Cognizant, (2011), Reverse Supply Chain: Completing the Supply Chain Loop, Cognizant, Available via:


© IEOM Society International


© IEOM Society International


Sebonkile C Thaba is a Lecturer with the University of Johannesburg in the Department of Transport and Supply chain Management. He has conducted research in logistics, supply chain management, life cycle assessment and sustainability

Tatenda Chingono is a PhD student with the University of Johannesburg in the Faculty of Engineering and the Built environment. He has conducted research in logistics, supply chain management, life cycle assessment and sustainability.
Charles Mbohwa is a Professor of Sustainability Engineering and currently Vice Dean Postgraduate Studies, Research and Innovation with the University of Johannesburg, SA. He is a keen researcher with interest in logistics, supply chain management, life cycle assessment and sustainability, operations management, project management and engineering/manufacturing systems management. He is a professional member of Zimbabwe Institution of Engineers (ZIE) and a fellow of American Society of Mechanical Engineers (ASME).