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Address:-Ashok Yakkaldevi 258/34, Raviwar Peth, Solapur - 413 005 Maharashtra, India Cell: 9595 359 435, Ph No: 02172372010 Email: ayisrj@yahoo.in Website: www.ror.isrj.net

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ORIGINAL ARTICLE





"SIGNIFICANCE AND IMPLICATION OF VALUE CHAIN TOWARDS EFFECTIVE WASTE MANAGEMENT AND COMMUNITY DEVELOPMENT"

Amar Nath, Kumar Shalender and Nripendra Singh

Research Scholar, Jaypee Business School (JIIT). Research Scholar, Jaypee Business School (JIIT). Associate Professor, Jaypee Business School (JIIT).

Abstract:

This research paper aims to highlight the key role of one of the components of value chain; service in community development through effective management of waste. Also this study provides a conceptual model leading to effective management of waste through the use of 3R approach (Reduce, Reuse and Recycle) along with contributing to community development. For this purpose study draws on extensive literature review along with various case studies. Secondary data, generated through the in-depth interviews, is also used to conclude the study. Study found that with the innovative use of 3R approach an organization can effectively meet its both obligations related to profit and society. This not only helps in projecting the positive image of the organization in the minds of its target customers but also helps it in contributing towards the overall development of community.

KEYWORDS:

Significance and implication, waste management and community development.

I.INTRODUCTION

Value chain represents one of the crucial concepts in business management especially from strategic point of view. It consists of primary as well as support activities which ultimately combine to create a value for the customers. Service, along with other four, represents one of the primary activities of a firm. It can play a decisive role in overall satisfaction of the consumer and hence must be handled with utmost care. Precaution has also need to be taken on the waste generation front which is increasingly becoming a severe problem for the world. Hospitality industry is one of the major contributors of the waste with as much as 45% of all municipal solid waste coming from this sector only (Bacot.et.al, 2002). No wonder it has been in the eye of storm for some time and facing heat from various environmental stakeholders. What makes this picture further gloomy is the fact that the industry is growing at the rate of 17% in India (karvy realty, 2010). Therefore this negative impact arising from the waste is expected to further worsen the balanceof ecosystem. In the wake of all these situations there is an urgent need to adopt innovative and environmental friendly practices in hospitality industry. Although increased environmental activism along with more stringent regulations has given impetus to all these innovations, economic benefits in terms of sustainability and loyal customers are acting as the main motivating forces behind the adoption of these innovative services in industry. By reducing the various hazards of inefficient waste management like direct land filling (without segregation), emission of various green house gases (Methane, carbon dioxide, sulphur dioxide etc.) an organization can help in overall development of

Title: ""SIGNIFICANCE AND IMPLICATION OF VALUE CHAIN TOWARDS EFFECTIVE WASTE MANAGEMENT AND COMMUNITY DEVELOPMENT"", Source: Review of Research [2249-894X] Amar Nath, Kumar Shalender and Nripendra Singh yr:2014 | vol:3 | iss:9

community through its contribution towards ecosystem balance. Reduction in land filling areas positively affects the fertility of soil and water by minimizing the quantity of leachate, reduction in green house gases helps to maintain the optimum temperature which ultimately culminates to a more sustainable environment not only for present but also for future generations to come. Further waste can be used in generation of electricity (waste-to-energy plant) and biogas (bio-digester) for cooking purposes thereby replacing the costly LPG. These benefits directly affect the economic status of nearby community areas leading to their overall development. Therefore community development through effective waste management by innovative use of 3R (Reduce, Reuse and Recycle) approach not only benefits the organization in terms of monetary value but also helps the company to put a more positive image in minds of customers which is sure to increase its brand loyalty. This paper will focus on issues of waste management which help in community development through various green practices like recycling and composting. For this extensive literature review has been done on the various aspects i.e. services, hospitality industry, community development, value chain and green approaches.

LITERATURE REVIEW

Waste generation is a key concern for our society. Most of the research was done on environmental issues and their impact on human health, which indicate the current level of waste generation and disposal. Most of the researches point towards the degradation of environment because of open dumping that is done in many parts of the world. One of the bad effects of this open waste disposal is formation of leachate that contaminates the ground water making it unsuitable for drinking purposes. One such research done by Vasanthi P.et al., (2007) on the impact of solid waste on ground water in Chennai describes the element of leachate that damage land as well as ground water. Along with this emission from openly dumped waste poses many hazards for human health. Thailand, one of the developing nations in the world, is facing this difficulty in terms of increasing waste generation with time (Chiemchaisri, C. et al., 2007). Therefore all these worsening situations demand some immediate legal as well as stringent initiatives that will help to minimize the ill effects of this ever increasing problem.

3R (reduce, reuse, and recycle) approach is one such preventive measure that is aimed to reduce the problem of waste generation by eliminating the source of waste itself (Memon, M.A., 2010). Reduce, first step of 3R approach, emphasize the optimize usage of available resources. This can be done by having more accurate predictions, better use of operation activity at each level with effective integration of information technology aimed to prevent waste at the source. Reuse; second step of 3R approach not only useful in minimizing the waste but can also effectively contributes to the community development aspect. Clothes, crockery, soaps and shampoos etc can be reused in order to limit the overall waste generation from hospitality industry. While clothes can be reused as ironing mat, used soaps and shampoos can find their way in making new toiletries. Recycling, though last phase in 3R approach, is significantly important from the waste management point of view. Recycling of the waste generated from hospitality industry can effectively bring down the overall quantity of waste. Some of the methods include recycling of tissues and fabrics into bags, making platters from broken glasses, brochures made up of recycled papers, garbage and laundry bags consisting of recycled plastics and clothes.

In India recycling has been a source of untapped potential as there lays a big gap that needs to be bridged through various measures. The improvements can be done in various ways like increasing the accountability, enhancing the effectiveness, improving the work environment as well as finding more scientific methods to approach the waste management process which in turn is sure to affect the community in positive way. Efforts of Pune Municipal Corporation in this regard is worth mentioning. Corporation has decided to send hotel waste and wet garbage to the farmers residing within 10 km of city area. This garbage will be used for composting process and will be supplied free to the farmers; thus helping them to bring in some economic benefits (hospitalitybiz India, 2009). Similarly in Maharashtra, Biogas plant made by ARTI uses waste food as input to generate the output in form of biogas. This biogas generated is much cheaper than the LPG as its operational cost is Rs. 2 per day. In contrast, Rs. 30 per day is operation cost incurred on the LPG which makes this biogas much cheaper and economical than LPG and Kerosene (arti-india). Similarly operational Biogas plants in Kerala, also credited with Ashden award in 2007, contributed a lot in the overall development of the community. Biogas generated from plants replaces around 50% use of LPG which results in reduction of 3,700 tons/year of carbon dioxide. Further this biogas helps in generating electricity and its effluent can be used as fertilizer (ashden, 2009).

VALUE CHAIN

In the field of strategic management, the term "value chain" represents a series of activities within

the firm that provide value to the firm's customers in the form of either a product orservice(Walsh, P.R., 2011). Concept of value chain was given by Michael Porter in 1986 in which he describes the primary as well as support activities of a firm. While logistics (inbound and outbound), operations, marketing and sales, services represent primary activities of a firm; infrastructure, human resource, technology development and procurement are classified as support activities as shown in Fig. 1.

Support activities Organization **Human Resources** Technology Purchasing Marketing Service Inbound Operations Outbound activities Logistics Logistics and Sales Materials Manufacturing Order Product Customer service handling Assembly processing Pricing Repair Primary Delivery Shipping Promotion Place

Figure 1: Porter's Value Chain (1986)

Source: www.insemble.com

Our research though focuses on the service aspect which is one of the primary activities according to the value chain. More specifically we talk about the services used in hospitality industry.

RESEARCH METHODOLOGY

Both qualitative and quantitative techniques are used to develop the conceptual framework for effective waste management along with the participation of community development. Case studies are used to discuss the issue in detail and alternative measures are driven to build value chain for which help environment and community. A conceptual model has been framed which ultimately helps to bring down the hazards emanating from the excess of waste.

CASE STUDY: ANALYSIS AND DISCUSSION

Case 1:Nagpur: This case represents the efforts aimed at waste minimization in one of the cities in India with the method ofdoor-to-door garbage collectionsystem (seas Columbia, 2005). Nagpur, located in central India, has taken initiative inimplementing MSW Rules 2000 by introducing 100% door-to-door garbage collection system. This consists of collection of municipal solid wastes not only from houses but also fromhotels, restaurants, office complexes and commercial areas resulting in significantly reduction in hazards environmental hazards.

Case 2: Bangalore- one of the famous hotel in Bangalore i.e. ITC was recently awarded the LEED India Platinum Rating for its new hotel in Bangalore, India with an holistic approach to sustainability deploying green practices in all areas including air conditioning, thermal engineering, energy efficient lighting, water, as well as creating 'green guest experience'. Use of eco-responsible toiletries and cleaning materials, allergen free mattress and pillow protections, and eco-friendly amenities, for example, bathrobes are made of organic cotton and recycled stationery (hotel world Asia, 2010).

Case 3: Mumbai: One of the hotels in Mumbai i.e. Rodas Starting its operation in 2001, the hotel has mastered every aspect related to the environment sustainability. Recycling process is approached from multi-pronged ways. On one hand this approach tries to reduce the waste at source by providing the laundry in jute baskets rather than harmful plastics another provision allows the recycling of discarded fabric or linen with the help of housekeeping department. Broken glass is reused by adapting to various shapes of platters. Another measure include use of eco friendly pen and pencils made up of cardboard which is free of

chlorine, potted plants, handcrafted slippers and use of 25% of recycled papers. Even the tissue boxes and jars are made from environment friendly wood (Rodas hotel).

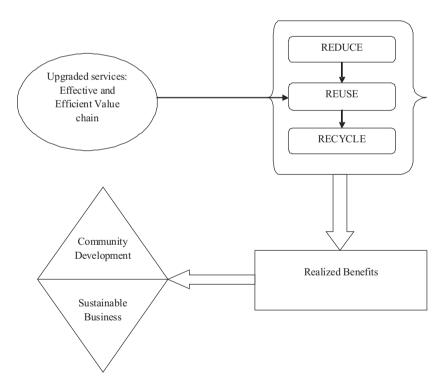
Case 4: Bangalore: Taj hotel in Banglore has pioneered the concept of water recycling and saves the 15-20 kl on daily basis. This recycled water is then used for watering plants in gardens and site cooling towers. Figures revealed that hotel is able to achieve recycling or reusing efficiency to as much as 98 percent. Energy consumption from the renewable resources has gone from 7% to 30.4%. In case of water recycling efficiency of 25% has been achieved while in case of air conditioning 20% improvement has been made (earth check).

Case 5: Mumbai: One of the 5-star ecotel hotel Orchid has focused on environmental strategies, along with other environmental like recycling as integral part of its routing operations. Garbage bags used by the hotels are made from the recycled plastic and milk pouches. Provision of separate recycle bin has been followed in the each room of the hotel. Waste Paper is recycled to make the brochure while by use of efficient lightning saving of around Rs 33, 28,435 per year have been achieved. Operational practices include use of hangers made from sawdust, laundry bags made up of reusable cloths instead of plastic bags and use of recyclable baskets (orchid hotel).

CONCLUSION

There is an urgent requirement ochange traditional ways of delivering services in hospitality industry. One can argue against the radical change that need to be implemented in order to accommodate these innovative practices of 3R approach but then benefits realized in terms of enhanced image and loyalty is huge in contrast to the overall cost incurred by organization. In fact for the process of waste minimization there is no need of expensive machinery or heavy investment but constant endeavor targeted at regular up gradation of current services being used in hospitality industry.

Figure 2: Conceptual model of Value Chain and Community Development.



Source: Pictorial representation of concepts by Authors.

The efficiency of the waste management program can be increased by giving attention to whole mechanism from the very basic level of operation i.e. at the source itself. What really is required to start focusing on the minute details which otherwise feel mundane in nature. Another crucial factor that can lift the overall success level of this program is commitment from the staff which is absolutely necessary to get the desirable success from this exercise.

Benefits arising from the success of waste management practices not only brings in additional revenue for the organization but also enhanced the intangible aspects like loyalty and brand image of company. Further the contribution of organization to community development efforts will strengthen its credentials of being ethical and responsible organization. Waste minimization will directly reduce the hazards of environment pollution and helps to bring back the balance of our ecosystem.

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