BIG DATA ANALYZED MARKETING STRATEGIES FOR SRI LANKAN SMALL AND MEDIUM ENTERPRISES

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Abstract- With the expansion of globalization, national economic development has become more important since it is a decisive development dimension of a country. In there, Small and Medium-sized Enterprises (SME) plays an important role in job creation, entrepreneurship and income generation of developing countries. The main objective of this study is to determine the marketing challenges faced by Sri Lankan SMEs and the influence of big data analysis to overcome those challenges. Among all the challenges, implementing the business-oriented marketing systems is the most difficult challenge faced by SME. Thus the necessity of data analysis arises where it can rely on better marketing results through the better understanding of the potential customers’ current needs and wants. Furthermore, based on the analyzed data an ideal customer profile can be developed corresponding to the relevant business field, which reveals the buying behavior pattern, buying criteria and buying motivation of the targeted customers. Using big data analyzing strategies SMEs can access publicly available census data for marketing insights. Based on data analysis SMEs can synthesize their fragmented customer data sources across their e-commerce platforms, point-of-sale systems, social accounts and mobile applications with advanced consumer management technologies. Moreover, they can get the overall idea about the competitors and their offers which they use in order to captivate the customers. SMEs can also alter their workflows and response patterns based on the data they are receiving, and analysis of the overall marketing output and match sales representatives to ideal customers. Since Sri Lankan SME’s are having the lack of knowledge in marketing and difficulties in payout on marketing as well as recruiting experts, mentioned big data analyzed marketing strategies will lead to improving the SMEs business with ease.

Keywords- Sri Lankan SME, Big data analyzed marketing strategies, Business-oriented marketing systems

I. INTRODUCTION

Sustainable economic development of a society always depends on the composition of individual’s wealth where it will lead more investment in small enterprises[1]. Thus, the emergence of entrepreneurs will grow upward which is universally promoted as an important mechanism to generate economic growth of a developing country. There, Small and Medium Enterprises(SME) plays a major role in nation development[2].

As like all other developing countries, SMEs are the backbone of Sri Lankan economy. It provides 45% of the total employment, accounts more than 75% of the total number of enterprises, and contribute to 52% of the Gross Domestic Production (GDP). All the three micro, small and medium enterprises fall under the SME category. World wise various definitions are used to define SMEs according to the level of development of that particular country and also it can be revisited once in 3 years and amended where needed based on the business and economic development in the country. Annual turnover and number of employees are the yardsticks used to define SMEs in Sri Lankan context but some other countries may also include total investments. Based on Sri Lankan national policy framework, the enterprise which has the annual turnover less than LKR Mn 750 and number of employee are less than 300 have been categorized under the name of SME.

When we compared the SMEs business models with large enterprises there are several challenges has to be faced by SMEs due to their amount of investment and business environment. They usually have some common challenges such as limited resources, lack of finance, time, marketing knowledge, specialist expertise and limited impact in the marketplace. In addition, SME marketing is haphazard and informal because they follow their own way of making decisions in marketing as owners or managers[5]. Marketing and Innovation are the major factors which help small enterprises to develop their business [4]. Therefore the main purpose of this study is to identify the marketing challenges faced by Sri Lankan SMEs and to analyze how those challenges can be addressed using current trends in Information and Communication Technologies (ICT) through the existing literature.

While drawing comparison of existing publications of journals and organizations related to ICT’s big data analysis has a high level of influence in business as well as customer - oriented marketing. In order to achieve objectives of this study, first Sri Lankan SMEs’ structure is discussed. Next, challenges faced by the SME in marketing and adaptation of ICT in marketing are elaborated. Then, it is needed to give a brief idea on big data which further leads to big data analysis concepts where it produce more impact on marketing based on some uniquely identified case studies. Finally we have made a conclusion based on
the overall study which will head towards to a new innovative research domain.

II. IMPORTANCE OF MARKETING FOR SME

SMEs are defined in multiple ways by various countries using peculiarly identified criteria such as number of employee, amount of capital investment, amount of annual turnover and nature of the business. Even within a country, different institutions and many other different regions has variety of definitions for the SMEs [6].

In Sri Lanka also, various definitions has been made to illustrate the SMEs. The Industrial Development Board has defined that a small industry as an establishment whose capital investment in plant and machinery does not exceed LKR 4 million (US$ 42,000) and the total number of regular employees does not exceed 50 persons. It is clear that they have used the size of capital investment and the number of employees as the criteria to define the small industries [3].

While considering manufacturing and service sectors, annual turnover and the number of employees, are the main two dimensions used to define SMEs in Sri Lankan National Policy Framework. Further, it has classified micro, small and medium enterprises: those who has the annual turnover in between LKR Mn 251-750 and with 51-300 number of employees are categorized as medium; those who has the annual turnover in between LKR Mn. 16-250 and with 11-50 number of employees are grouped as small and for those whose annual turnover is less than LKR Mn. 15 and with less than 10 number of employees comes under the micro [3].

Even though, there is no clear definitions to SME’s they have made a huge influence to the economy as well as to the society in many ways. Considering the role of SMEs in economic development and job creation of a nation, central bank of Sri Lanka has emphasized that their involvement can be taken under three parameters which are engine of growth in developing country, backward and forward linkage provider to the large scale firm as well as to higher Foreign Direct Investments (FDI), and most importantly poverty reduction [10].

III. CHALLENGES FACED BY SMES WITH RESPECT TO MARKETING

Existing literatures elaborates that the complex reality of SME’s marketing environment, is influenced by a number of critical parameters such as markets, customers, trends and competitors who indirectly helps SMEs to develop a distinctive marketing style due to heavy market competition. Further SME marketing is restricted by the skills and attitudes, perception of function, personnel, resource limitations and including finance [28]. Many enterprises are often relies on the applications of classical marketing models especially for SMEs marketing theory development has been somewhat limited [20].

When compared to large enterprises it is well documented in the existing literature that SMEs are having their own unique characteristic that differentiates them from conventional marketing [7]. Based on the inherent size, stage of development, as well as the behaviors of owner or manager theses unique characteristics, was determined and they may often leads to some limitations in their business environment. In most of SME owner or managers tend to be generalists rather than specialists. Irrespective of expert knowledge on market situation just to respond for current circumference and opportunities haphazard decisions are made by SMEs especially regarding marketing [8]. Thus, SME marketing is likely to be spontaneous, haphazard, loose, unstructured, informal, built upon, reactive and conforming to industry norms [5].

There are several types of networks build around SME’s such as business network, industry and marketing network, social network and mainly personal contact network [14][15][16][17][18]. Marketing through networking is a common strategy used by SMEs and it is based on people oriented activities and done through personal contact networks. Sometimes they will form networks with customer as well as competitors in order to make their business productive [5]. Some SMEs follows integrated marketing communications also [21].

Entrepreneurs and SME owner or manager has to be very careful while making marketing decisions. Always they should remember that the decisions made by them have to suits the small growing enterprise since it does not have the operational environment or resources of a large enterprise [11]. Moreover SMEs marketing is highly depends on how SME owner or manager make decisions, deliver their offerings in the marketplace even with the constraints of limited resources, enterprise, impact and size [12].

Customers usually engage with enterprises through email, social media, mobile devices, web, entertainment consoles, voice response, print advertising and mass media advertising. In Order to obtain the real picture of effectiveness of campaign and marketing objective, customer behavior trends, rate of response as well as customer pursuing behavior marketers need to track the channels which connect them with the customer. Through this they can get a deep and broad perspective of customer expectations behavior and satisfaction.
Information regarding the products and services in those media will give an image about that company in market place and customer’s mind. So the conflicting information from different sources can create issues for company’s image. Therefore, creating a systematic integration and coordination among these communication channel is now become a fundamental challenge for marketers[23].

According to the recent research among 400 senior marketing executive more than 70 percent recognize that there is a need for major digital transformation. Therefore it shows that marketing has entered a mandatory transition period. This is a time to migrate from the traditional large demographically oriented approaches toward more granular, data-driven, highly targeted campaigns becomes a matter of survival, not a matter of choice[24].

Marketing expert Patrick Zuluagaemphasizes that developing a business oriented marketing is the most crucial challenge faced by SMEs.Where the main factor influencing this was inability to implement the required ICT infrastructure support[9].In practice SMEs are more attracted towards innovative product development. Innovative marketing is wider than the product innovation [19].

IV. IMPACT OF NEW TECHNOLOGY ADOPTION IN MARKETING

In this digital era hence customers are widely using mobile apps, social media and all other ICT related tools, enterprises also need to improve their way of engaging with customers in order to grow brand loyalty, generate leads and build revenue[35]. SME’s innovative marketing can be focused on different terms such as opportunity, newness, novel, creative unusual solutions for the issues they faced and their needs. Indeed development of new service and product as well as new processes for performing the existing functionality also can be included [25].Therefore adaptation of new technologies has transformed customer behavior and opened up new opportunities for marketers. An array of digital tools is available for marketers to harness their marketing purpose. These tools will produce data which often tantalizingly footprint of targeted customers [26].

According to Audrey Gilmore, for SMEs, E-Technologies are more beneficial to expand their enterprise and advertise their product or service for a wide range of customer with low cost. Also they can break the Language barriers as well as decrease the cost of materials printing such as catalogs and glossy brochures[27].They can use mobile computing, digital content in social media or other publicly available resources for their marketing. Therefore entrepreneurs can enhance their credibility by building a professional image through E-Technology adoption[12]. This adoption will raise the prospect of much accurate marketing measurement[26].

In this shrinking geographical distance due to virtual access to borderless nations via the internet, many SMEs are actively participating in the internet to take maximum advantage of this recently emerged business dimension. In Sri Lankan context SMEs were a notable feature which was also common in many other developing countries. Enterprises are now supposed to adopt optimal structures of ICT because of the heavy competition [29]. Even though ICT and E-commerce has full advantages in marketing SMEs in developing countries hesitate to adopt due to the lack the necessary capacity or awareness [31].

V. BIG DATA CONCEPTS FOR MARKETING

Gartner’s has explained that the big data as “high-volume, high-velocity and/or high-variety information assets that demand innovative and cost-effective forms of information processing for enhanced decision making, insight and process optimization where data that is now being captured and generated in multiple formats and from of disparate sources[32]. Each and every second new data is created across the globe through the extensive use of internet by social networks, other forums and applications. Data could be manipulated from all type of sources such as mobile and GPS devices, sensors, social networking, websites, legacy data sources and so on. Furthermore, user activity generates data about customer needs, preferences as well the quality of their experiences [33]. Therefore digital data is now everywhere freely available. Since the volume of the data is huge and complex just the big data by itself does not drive business value [34]. Traditional database management tools are not enough to handle vast data. Enterprises face new challenges with the search, store, capture, and analysis these kind of data[35]. In Order to overcome this challenge it is essential to use advanced data analytics to analyze the virtually unlimited data [34].

There are several categories defined under the big data analysis namely prescriptive, predictive, diagnostic and descriptive. Among them, the results of predictive analysis allow organizations to gain competitive advantage over their competitors, because it provides the ability to discover patterns and trends in marketing which can use to identify how the customer’s behavior will change in the future [35].

5.1 BENEFITS OF BIG DATA IN MARKETING

After big data captures the spotlight of marketing environment the way of doing business is undergoing huge changes with respect to discovering insights and interact with one another. It offers many practical business opportunities to enterprises including the
better way of delivery, the optimization of operations, more effective decision making, the mitigation and management of financial and other risks, as well as the development of new business models which will increase the productivity and innovation [35].

In order to obtain the full benefits of big data, enterprises need a cohesion set of solutions to capture, process, analyze the data and identify new insights to make decisions and scaling the related data [35]. The enterprise which explore big data will pay attention to data flow as well as rely on data scientist and product, process developers. Further they transfer analytics from IT function into core business [36]. Big data analytics helps to discover new facts about the highly volatile nature of the market and gives the power to change business tactics for survival and growth. Furthermore, it gives a brief idea about the marketing challenges such as customer behaviour changes, competition and currents trends in market [37].

This big data analysis will produce more accurate business insights, a strong customer base detail, recognition of sales and market opportunities, current market trends and sentiments, automated time decision making process, report on churn rate and other customer behaviors, detection of fraud and risks, understanding of changes in business plan and forecasting along with better targeted social influencer marketing [38].

Once SME transfer their marketing practices from traditional method to E-Technology adopted marketing method they can combine publicly available data through big data analysis for their marketing. By means of deep multi-channel analysis of virtually unlimited amounts of data and attributes, real-time personalized precise web and email offers can be awarded to the customer [34]. This will help the enterprise to attract new customer in the market. Further according to the marketing experts’ perspective, they can place a retargeting pixel on their website backend and implement a retargeting campaign. Enterprises can use big data to match sales reps with the ideal customers, promote their enterprise with SEO and PPC Campaigns, and find the gap between what consumers’ desire and what competitors offer to the customer.

It is clearly mentioned in a recent survey that the top-performing organizations use big data analytics five times more than lower performers. In that survey, half of the respondents has clarified that the top priority of their organization was the improving information and analysis of it and further it is mentioned that they were under a pressure in adopting advanced information analysis techniques [39]. In order to enrich this approach as an example the white paper issued by the Intel company emphasizes a list of benefits they gained as a global company with the absorption of big data analysis for their marketing strategies [40].

CONCLUSIONS

Based on the study several challenges faced by the SMEs are identified and the foremost challenge they face is marketing. To address this challenge our study focused on E-Technology adoption in current trends. In that scenario based on the literature, nearly all corporate marketing leaders today believe that the use of data analysis will drive the enterprises towards successful marketing decisions. Since the results obtained from big data analysis is more reliable, it is worthy to use in marketing decisions as well. Thus this study is emphasized that in order to gain best marketing outcome, Sri Lankan SMEs also can rely on big data analyzed marketing strategies for productive business.

FUTURE DIRECTION

Using big data tools and software, it enables an organization to process extremely large volumes of data that a business has collected to determine which data is relevant and can be analyzed to drive better marketing decisions in the future. Based on the identified difficulties faced by Sri Lankan SME through the careful review, it is recommended to develop a framework for SME’s in order to reduce the complexity of the marketing.

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