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Will Implementing Android Operating System into BlackBerry Limited's Products Provide Them with the Much Needed Support to Improve Their Financial Situation?

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Abstract:

BlackBerry Limited is a company in the smartphone industry. The company has been struggling financially due to the tough competitions from current market leaders. The company, which had their own Operating System, implemented android OS into their newest and subsequent new phone.

The aim of this study is to understand the situation that BlackBerry is facing and the opportunity to implement Android OS to improve their financial situation. The report can be useful for companies that are facing similar problems or considering taking similar actions.

This study involved secondary data. The information is credible and accurate such as reliable educational or government websites.

STEEPLE analysis explored the external environment that may affect BlackBerry Limited in the market. The analysis shows that BlackBerry has many potential buyers and external advantage which can be utilized to the maximum with the use of Android OS. Perception map is used to determine various position of BlackBerry in many aspects compared to other companies in the industry, which shows the lacking of the product. Michael Porter's analysis is done to analyze the stakeholders, which shows the high-risk high-reward situation in which BlackBerry is in. SWOT analysis is done to understand the advantages and disadvantages that BlackBerry has in term of its internal and external environment. Financial analysis is done to acquire the picture of BlackBerry's financial situation.

In conclusion, based on analysis regarding the current business environment, implementing Android Operating System into BlackBerry Limited's products will cover many of the products flaws.

Keywords: Smartphones, Android Operating System, BlackBerry, Financial Situation

1. Introduction

BlackBerry Limited is a company that strives in the smartphone industry, established researches and manufactures of its own products. The business' operations are separated into four lines: Hardware, Services, Software, and Others.¹The company has exceeded customers' expectations in many fields, which is topped by its unique, user-friendly smartphone product with physical QWERTY keyboard that excels in communication means.²The smartphones were able to compete with the current market leaders Android and Apple phones' wide and diverse application software with the facility that allows the user to type much more accurately than touchscreen phones. The company also avoids using other companies' Operating System (OS) for its smartphones, such as Android OS which is one of the market leaders in the industry. However, BlackBerry suffers a horrible revenue drop even after deemed to be one of the most potentially successful companies in the industry. BlackBerry has experienced a huge drop in their average revenue gain during the 2015 Fiscal Year in the hardware sales business line, which is around 62.2% compared to the previous year.³The lack of funding may affect the company's strategies opportunities as a whole, limiting their move with respect to the amount of cash that the company has. At the end of the year 2015, a new product, BlackBerry Priv is going to be developed and sold to the public.⁴The phone does not differ much from the previous ones, except that it will combine its own OS with Android's OS, which is a taboo in the company since the first BlackBerry smartphone came out to the industry. The move is publicly seen as a desperate last resort that BlackBerry Limited has done to sustain the company even just by a little bit. However, it is debatable whether this decision will help BlackBerry to acquire back their market power in the industry and improve their financial situation. In this case, STEEPLE, five forces, and SWOT analysis are used to obtain the description of the Blackberry's external environment, and perceptual map is used to determine consumers' perception. Financial analysis is also done to provide outline of BlackBerry's situation in terms of finance. The research question of the study is "In view of the current business environment, how has Blackberry benefited from the implementation of Android Operating System in its line of smartphones?"

2. Methodology

The background information, revenue analysis, and company history can be found on the MarketLine company profile. Other data collected such as the price changes in the oil is collected from governmental websites which is reliable. Government websites are specifically chosen to give higher credibility towards the argument inside the analysis as the information is government approved and mostly true. The content of it will also be protected from external edits and changes.

Educational websites are also chosen for credible use of business tools by professionals. Collecting data with such ways ensures a correct and accurate utilizing of several different and unique business tool that are used in the analysis.

No primary data is involved in this study. Information is collected from credible sources that have the authority and credibility to update the information.

3. Research Findings

BlackBerry needs to understand the external factors that the world may bring that may affect the success of the new BlackBerry Priv. The following STEEPLE analysis will determine the external environment that the company struggles in. The analysis provides options that can be crafted into an appropriate strategic decision.

3.1. Steeple Analysis

3.1.1. Social - Society's Smartphone Lifestyle

It is very obvious that people cannot live without a smartphone at this period of time.⁵ Smartphones have become inseparable to anyone.⁶ Smartphone market has been growing ever since, and demands are expected to grow at a steady pace. Smartphone global shipments number for 2014 is around 1.250 million units, which grows from 1.008 million units in 2013.⁷ The information is not the most recent one, but still relevant to the study. This lifestyle is definitely a good development that BlackBerry co. can strategize upon. Increasing demand means increasing potential revenue, which may brought BlackBerry into the top of their game. Many strategies may be implemented to make use of the opportunities, such as investing more in advertising. If the launching of the phone is a success, the profit obtained from the sales may solve their dropping revenue problem as more customers will be attracted to buy the product due to better customer base and brand loyalty towards both BlackBerry and Android. However, attention on competitors must be increased. Some competitors are also trying to climb back up in the market ladder, such as Nokia. Knowing the development in the environment, similar strategies and innovation may be used, and can lead to strict and fierce niche market competition. It is also worth noted that BlackBerry co. may suffer huge losses if the situation of low demand but high supply of the product occurs.

3.1.2. Technological - Technology Development Related to BlackBerry's Product

Communication technology keeps on developing despite its short product life cycle. Moreover, new innovations that may prove to be a boon to many wireless technologies have been developed and will be implemented in a short time. An example is the Wireless in the Car which will be implemented in Chevrolet Impala in 2016. The feature will provide 4G wireless internet connection around the car, giving the passenger of the car to experience fast internet connection wherever they go.⁸ The car is targeted to middle to upper class young customers, and thus the feature is one of the luxurious only few can afford. This opens new opportunities for BlackBerry. BlackBerry phones have always been the favourites for busy businessman that prioritizes ease of use of their phones, mostly for communication, rather than the feature of the phones themselves.⁹ Many new features that may attract these young upper class customers may be implemented by BlackBerry on their products. The new features should make use of the fast internet, such as read-a-loud GPS system or online reminder. This new selling points would increase BlackBerry's customer base. Due to the improved customer base, the company will be able to improve their financial situation. It may also be possible to form a partnership between the two companies.

3.1.3. Economic - Oil price

The global crude oil price is showing a steady rate of increase during the final stretch of 2015 into 2016.¹⁰ The increasing price in resources may result in global increase in any marketable object in the world due to the increase of the price of raw materials needed to create products. Analysis on the development of global prices will show the steady jump in prices in the market. This is beneficial towards BlackBerry as the company may follow the market price set during the period of time, lifting up the potential revenue of their new product by default.

3.1.4. Ethics

Any pressure groups inquires that creating new features and possibilities inside a smartphone will affect today's youth and make them addicted to the object of what is supposed to be their means of communications. By using Android OS, BlackBerry's image in a whole will be changed into a more favourable position, as Android OS is on a good standing in the eyes of pressure groups due to several CSR that Android has done.

3.1.5. Politics - Political Interference

It is on many countries' government's attention that smartphones security and monitoring features needs to be observed.¹¹ The government may want to interfere with the development of the Operating System market share, as Android OS has been dominating the market for the Fiscal Year 2015, with a market share of 82.8%.¹²

3.1.6. Environmental

When iPhone came out in 2007, the market had preferred touch screen phones instead of keyboards. Users of smartphones wanted “mobile ecosystems” that provide various unique applications and softwares.¹³ The OS would need frequent updates to improve its capabilities on fixing potential bugs, and improve its performance in general. It’s crucial that the OS is running optimally and make use of new technologies and development. As mobile OS that are easy to use and get, such as Android, is getting more popular, the industry is open to many more new contenders, which brought down the “cost of ownership”.¹⁴ The lowered cost threatens phones with “proprietary OS” as they need to increase their product’s cost, which will lower the competition in the industry due to the high “development and maintenance” cost for the OS.¹⁵

3.2. Perceptual Map

Consumer perceptions can be presented in a Perceptual Map, which is a picture of the perception and preferences of customers regarding a product or a brand.¹⁶ The map determines the position of BlackBerry and many of its competitor in many aspects such as price, perceived quality, etc. Looking at the current development of BlackBerry, it is more hardware oriented, but the decision of taking in android OS into its phone may change it to software oriented. Other competitors that are taken into consideration are Samsung, Nokia, and MicroMax and other Chinese competitors. Using the perceptual map, the change that BlackBerry may bring from the implementing Android OS into the phone will be clarified.

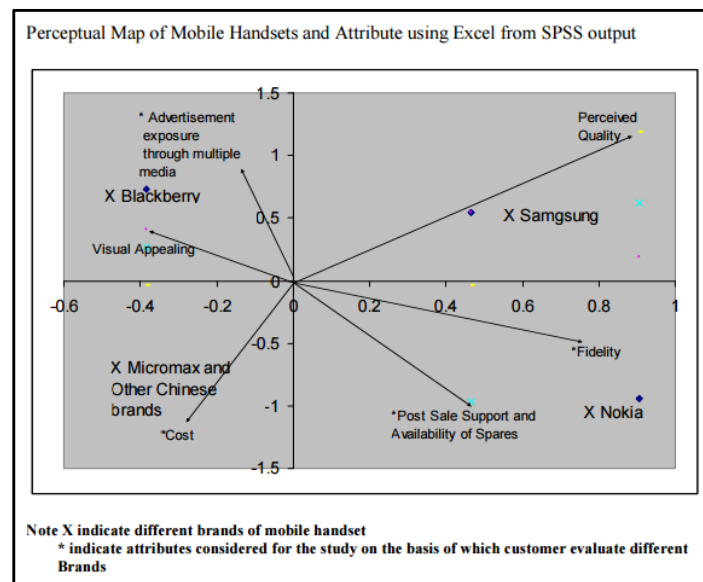


Figure 1: Perceptual map for different aspects of different products in the smartphone market¹⁷

According to the perceptual map, four brands of mobile handsets are Nokia, Samsung, Micromax and other Chinese brands and BlackBerry are possessing unique position. BlackBerry is perceived better on the attribute of advertisement exposure through multiple media and visual appealing smart appearance of its mobile handsets. It is perceived to be costlier in comparison to other leading brands. Holistic branding strategies should be more focused towards innovative feature and compatibility with wide variety of software platforms and future applications resulting in creating positive social change in the society.¹⁸ The results of LoMonaco’s research about smartphone purchasing habit showed that less expensive products and innovations are available in the market due to more companies joining the industry.¹⁹ As the era of normal phone is getting replaced by the popularity of smartphones, the prices of smartphones all around the world goes down. BlackBerry also does not have a relatively good image as shown in the perceptual map. BlackBerry’s phones are known to be very strong compared to others. However, this conclusion is only extracted from the data in which taken when BlackBerry is perceived as one of the favourite smartphones. How BlackBerry’s phone is perceived as strong is quite vexing, as even with people still remember this particular feature of the phone, they still switch to another OS and phones. “Technology buffs” market would be more suitable for BlackBerry, and as such they would tend to change their preferences regarding OS due to extra features on the phone.²⁰ By implementing Android OS into their phones, BlackBerry’s image of having few applications and softwares in their phone will change into the better due to Android OS’ wide apps portfolio. This image will not jeopardize BlackBerry’s strong phone an security image.

3.3. Michael Porter’s Five Forces Analysis

To analyze the potential involvement and effect of stakeholders towards the company in an industry, “Michael Porter’s Five Forces Analysis” is used. It is potential to use to understand strategic implications for individual firms within an industry.²¹ As BlackBerry is trying to implement an innovative means to increase their revenue and profit, the analysis is important to understand the role of each stakeholder on the success of the launch of the product.

3.3.1. Bargaining Power of Buyers

BlackBerry desperately needs customers due to the lack of revenue from the sales of their phones.²² Moreover, BlackBerry's customers may switch to other phone from the competitors quite easily as more mainstream phones with better quality can be easily bought all around the world. As such, customer has moderate to high bargaining power over BlackBerry, and with variety of choices for consumers, so the demand is elastic and the price sensitivity is high.²³ Customers will prefer the competitors' products if the switching cost is affordable.²⁴

3.3.2. Bargaining Power of Suppliers

In their connection with the supplier, BlackBerry has a bargaining power that is lower than that of their supplier. This situation is present because companies such as Apple and Samsung have purchases in a much higher scale to bigger suppliers. As such they have higher bargaining power compared to BlackBerry.²⁵ As such, BlackBerry has high dependence on their supplier because they need to spend switching cost if they wanted to switch to another supplier.²⁶

3.3.3. Threat of Substitute Products or Services

BlackBerry uses a QWERTY physical keyboard for the physique of their smartphones. Smartphone can be substituted by Tablets, considering that both products have similarities in terms of "interface, functionality, and apps".²⁷ Concerning this, the substitution of the product that are present are touch screen smartphones and tablet phones, and standard phones. Touch screen smartphones are very common in the market and easily found anywhere in the world and as such having a different body for a phone has benefits and drawbacks. The advantage is that a unique and innovative shape for a phone may pique some customers' interests. Even though it is already known well as a communication-based phone by many people, the new phone combined with an OS created by the market leader will ease up the cost of advertising as many Android customers may already know of the existence of the new phone. However, the disadvantage is that many customers may not be used to the different way of communicating and operating the phone, and as such may seek help often to the customer service. The service provided during this time may show the quality of work of the company and may affect the image of BlackBerry on the customers.

3.3.4. Threat of New Entrants

In 2010, Xiaomi Inc. has entered the smartphone industry with its relatively cheap smartphone with decent quality. The newcomer has now become the third largest smartphone producer in the world. Another newcomer from India, MicroMax, which just started entering the industry and developing smartphones in 2010, is also developing physical QWERTY phone which costs much cheaper than BlackBerry as it is, with almost the similar quality. Micromax is now the 10th largest smartphone company as of Q3 2014.²⁸ BlackBerry's move to implement Android OS is suitable to strengthen their competitiveness as BlackBerry's strong point of the new product is the quality and facility that the product provides. The QWERTY smartphone market may be dominated by Micromax for lower to middle class, and BlackBerry for middle to upper class.

3.3.5. Intensity of Competitive Rivalry

It is known that competition is very tight in smartphone industry. In the industry, standard phone features such as camera, touch screen quality, phone security, or even software bundle, can be easily imitated and even upgraded into a better one to provide competitive edge.²⁹ The competition level is relatively high with Apple and Samsung controlled more than 50% of the market. In addition, there are other strong competitors who can take control of market shares.³⁰ There are also changes in the industry with the introduction of smartphone applications which are offered by huge competitors such as iPhone and Android smartphones. The number of applications that are offered is much higher than that of BlackBerry's, which poses a great threat and problem on BlackBerry.³¹ According to Dr Klingebiel, BlackBerry does not have enough strength and capacity to compete with big companies such as Apple and Samsung, despite the new product line that BlackBerry had tried to introduce with the launch of Q10 and Z10, and used OS10.³² In the end, in 2016, BlackBerry had used Android OS, leaving its own OS BB10 behind.³³

3.4. SWOT Analysis

3.4.1. Strengths

BlackBerry has a competitive advantage due to its "cloud technology" advancement that they had been utilizing for more than ten years to support their "real time data" and "market-leading security and backend integration".³⁴ BlackBerry also excels in product design, engineering, research and development that provide opportunities for BlackBerry to innovate on their products. Data shows that on 2015, BlackBerry spent \$711 million on Research and Development.³⁵ Moreover, BlackBerry has a geographical reach that are widespread, such as to US, UK, Canada, Europe, Middle East, Africa, and Asia Pacific, which allow them to enjoy cost reduction through economies of scale and personal connections with customers.³⁶

3.4.2. Weaknesses

BlackBerry's financial report's data shows a decline in their net revenue and net profit margin.³⁷ Even in the last few years the net profit margin has reached negative values. Their net profit margin from 2012, which is 6.3%, falls to (9.12%) in 2015 BlackBerry's financial condition which is far from decent may cause loss of trust from investors.³⁸

3.4.3. Opportunities

BlackBerry products sales is hoped to be increased in the next several years with the growth potential of smartphones and tablet markets. Furthermore, the market for “Enterprise Mobility Management/EMM” is hoped to develop even more to provide beneficial opportunities for BlackBerry, with its strong presence in the EMM market.³⁹

3.4.4. Threats

With the inclination towards the “Bring Your Own Device” policy that which several companies used as a way to save money, BlackBerry enterprise subscriber may dropped.⁴⁰ BlackBerry is also in an industry with a high competition level compared to Apple and Samsung which has iOS ecosystem and Android OS ecosystem, which will bring down BlackBerry’s market share. More threats shows due to the rapid evolution of technologies in the telecommunication industry, and a product life cycle that tends to be short.⁴¹ In addition, “average selling prices” from mobile device and smartphone have a tendency to drop in which ultimately will pull own BlackBerry’s profitability.⁴²

3.5. Financial Analysis

BlackBerry’s revenue from 2007 USD3.037Mil keeps increase until it reaches USD19.907Mil in 2011. In 2012 started to decrease to USD18.435Mil, and continued to decline to USD2.160 in February 2016.⁴³ By using Financial Ratio analysis, it is possible to obtain descriptions on a company’s development regarding its financial performance on a certain period of time.⁴⁴ The results showed improvement in profitability which is indicated with an increase in net profit margin from 20.8% in 2007 to 17.13% in 2011, but then decline to 6.31% in 2012. Net profit margin was negative in 2013 and became worse in 2014, from -5.83% to -86.2 In 2015 net profit margin still was negative but decreases to -9.12%.⁴⁵ It was relevant to BlackBerry’s strategy. Starting 2014, BlackBerry started to use Android OS in their “QNX-based OS”.⁴⁶ In 2015, BlackBerry Priv with its QWERTY keyboard started to use Android 5.1.1 Lollipop.⁴⁷ Finally, BlackBerry has announced that it will be abandoning its BB10 operating system in favour of Android, for 2016.⁴⁸ In February 2016 BlackBerry’s net profit margin stay still negative at -9.63%, but not become worse than several years before.⁴⁹

4. Conclusion

From the STEEPLE analysis, the decision of creating the new product may be a good idea, due to the amount of opportunities that the external environment may provide to the company. However the risk of each opportunity also needs to be considered due to the fact that BlackBerry may not be able to bear much loss at the current situation that BlackBerry limited are in.

From the Perceptual map, BlackBerry’s image needs to be altered to attract customers from the modern society. The new phone will keep the original design of the QWERTY physical keyboard and the top security provided by BlackBerry Enterprise System, combined with the transparency of use and fidelity facilitated by Android Operating System. Through these means, customers view on the product will slowly alter into an easy to use, quality phone with higher price compared to other phones. Changing the image of the company into a more luxurious brand rather than a simple niche market competitor who’s desperate for revenue will ensure BlackBerry’s continuity inside smartphone industry in the long run.

From the Michael Porter’s Five Forces analysis, it is shown that taking Android OS into their phone will prove to be extremely beneficial towards the company. In addition to be the market leader and a widely known smartphone and operating system provider, Android OS becomes the basis of the new smartphone by creating a completely new quality phone that are contrasted with the economical phones that many has seen to date. Android OS provided a leeway to aid BlackBerry to sell its products through niche markets. Moreover, prioritizing customer’s needs such as customizable applications is done through implementing Android OS.

From SWOT analysis, with the current below average financial condition and pressure from tight competition, BlackBerry still have some advantage through their forte in research and development, geographical reach, and steady growth potential of smartphones and tablet markets.

From financial analysis, it is also shown that taking Android OS into their phone prove to be beneficial towards the company. The net profit margin is still negative in February 2016 but not become worse than several years before. Data to February 2016 shows that implementing Android Operating System into BlackBerry products provide them with the much needed support to improve their financial situation.

Based on analysis of the current business environment as a whole, the implementation of Android OS in its line of smartphones brought positive benefits for BlackBerry which will also be represented by their relatively stable financial situation.

However, it is apparent that BlackBerry need to keep looking for differentiation aspect that can be offered to consumers, so that the implementation of Android Operating System on BlackBerry products can have a positive impact on long-term financial situation.

In addition, by taking customers loyalty and innovation into account, BlackBerry may have a steady place in the smartphone industry by creating the first high class and easy to use phone. If developed further, the image of BlackBerry may flourish and create a premium brand.

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6. References

- i. Betters, Elyse. (2015, November 6). BlackBerry Priv Official: Release Date, Price, Specs and Everything You Need to Know. Website : <http://www.pocket-lint.com/news/134978-blackberry-priv-official-release-date-price-specs-and-everything-you-need-to-know>
- ii. Blackberry Limited. (2015). Annual Report for the fiscal year ended February 28, 2015. Website: <http://ca.blackberry.com/company/investors/documents.html>
- iii. BlackBerry Ltd, BBRY, Retrieved July 29, 2016, from Morningstar, Inc., website: <http://financials.morningstar.com/ratios/r.html?t=BBRY>
- iv. Brandon, J. (2014, April 21). 5 New Wireless Technologies for Today's Businesses. Retrieved December 20, 2015, from CIO: <http://www.cio.com/article/2376959/mobile/5-new-wireless-technologies-for-today-s-businesses.html>
- v. Dave Teh. (2013). Strategic Analysis – BlackBerry. E Transformation Consultant
- vi. Dobbs, Michael E. (2014). Guidelines for applying Porter's five forces framework: a set of industry analysis templates. Emerald Group Publishing Limited
- vii. Edwards, Luke (2016, February 1). BlackBerry Appears To Be Going Android Only, Say Goodbye To BB10. Website: <http://www.pocket-lint.com/news/136383-blackberry-appears-to-be-going-android-only-say-goodbye-to-bb10>
- viii. Ehrenberg, Alexandra L., Jukes, Suzanna Claire, White, Katherine M., & Walsh, Shari P. (2008) Personality and Self-Esteem as Predictors of Young People's Technology Use. *CyberPsychology and Behavior*, 11(6), pp. 739- 741.
- ix. Grush, Andrew. (2014, January 29). It's Now Possible To Run Android 4.2.2 On The BlackBerry Z10, Sort Of. Website: <http://www.androidauthority.com/blackberry-z10-android-340468/>
- x. Kotler, Philip., Keller, K.L. (2012). *Marketing Management*, 14th edition, Prentice Hall
- xi. Kumar, A.; Woods, C.; Budolig, G.; Segars, L.; Nathoo, Q. (2013). BlackBerry, Research In Motion – Case Synopsis
- xii. LoMonaco, Alexa. (2014). Smartphone Purchasing Habits Among The University of New Hampshire Students. Honors Theses, University of New Hampshire MacKinnon, A.; Leshner, H.; Burrows, M. (2008). Strategic Report For Research In Motion, Harkness Consulting
- xiii. Marketline. (2015). BlackBerry Limited COMPANY PROFILE [Company Profile]. Available from National Library Board Online database
- xiv. Munir, Akhtar; Saddozai, A.K.; Khattak, B.; Hashim, S. (2011). Porter Five Forces Analysis of Pakistan Mobiles Communication Limited (Mobilink): A Critical Approach. *Interdisciplinary Journal Of Contemporary Research In Business*, Vol. 3: 5, 704-712
- xv. Secure Communication and Collaboration. (n.d.). Retrieved July 25, 2016, from BlackBerry UK official web site: <http://uk.blackberry.com/enterprise/solutions/secure-communication-collaboration.html>
- xvi. Short-Term Energy Outlook. (2016, March 8). Retrieved March 12, 2016, from U.S. Energy Information Administration: <http://www.eia.gov/forecasts/steo/report/prices.cfm>
- xvii. Smartphone OS Market Share, 2015 Q2. (2015, August). Retrieved December 18, 2015, from IDC: <http://www.idc.com/prodserv/smartphone-os-market-share.jsp>
- xviii. Nazarian, Robert. (2016, April 11). Everything You Need To Know About The Blackberry Priv Android Phone. Web site: <http://www.digitaltrends.com/mobile/blackberry-android-phone-news/>
- xix. Nigam, Ashutosh. (2012). Attribute Based Perceptual Mapping Using Discriminant Analysis Regarding Selected Brands of Mobile Handsets: An Empirical Investigation in Haryana. *International Journal of Computer Science & Management Studies*, Vol.12: 3, 188-202
- xx. Poznanski, Julie; Sadownik, B.; Gannitsos, I. (2013). Financial Ratio Analysis - A Guide To Useful Ratios For Understanding Your Social Enterprise's Financial Performance, part of the Demonstrating Value Initiative at Vancity Community Foundation
- xxi. Richards, Hayden. (2013). Dr Ronald Klingebiel: BlackBerry Needs A Game-Changing New Strategy. Website: <http://www.intelligenthq.com/technology/dr-ronald-klingebiel-blackberry-needs-a-game-changing-new-strategy/>
- xxii. Shah, N. (4, August). Market Monitor Q2 2014: Micromax Becomes The Leading Mobile Phone Brand in India. Retrieved April 11, 2016, from Counterpoint -- Technology Market Research: <http://www.counterpointresearch.com/2q2014marketmonitorindia>
- xxiii. Youssef, Moustafa Haj . (2013). Strategic Tensions Within The Smartphones Industry: The Case of BlackBerry. *VISTAS: Education, Economy and Community*, 3: 125-141
- xxiv. United States Securities and Exchange Commission, BlackBerry Limited, for the fiscal year ended February 29, 2016, Retrieved July 25, 2016, website: <http://ca.blackberry.com/company/investors/documents.html>