

***Business process Reengineering and Total Quality Management  
Better Together- Case study: The Toyota production system-***

**اعادة هندسة الاعمال وادارة الجودة الشاملة معا أفضل دراسة حالة: نظام تويوتا الانتاجي**

**Boukhadra Meriem**, Researches and Economics Studies Laboratory Souk Ahras  
University- Algeria, [boukhadrameriem41@gmail.com](mailto:boukhadrameriem41@gmail.com)

**Dr Boufas Cherif**, Researches and Economics Studies Laboratory Souk Ahras  
University- Algeria, [achraf1boufas@yahoo.fr](mailto:achraf1boufas@yahoo.fr)

Received:22/11/2019;Accepted for reviewing:26/01/2020;Accepted for publishing:30/06/2020

**Abstract** The study aimed to examine the impact of both BPR and TQM in achieving a remarkable result in critical measures of performance such as cost, quality, time and customer satisfaction, in order to carry out the study we used the descriptive and analytical approach In addition to the case study approach with reference to the model of the Toyota company the study found out that the application of both BPR and in Toyota through the Toyota production system, which combined change and improvement, which was able to make Toyota one of the most successful companies globally and the best in performance

**Keywords:** Business Process Reengineering; Total Quality Management; Toyota production System

**JEL classification code: M10, M19**

**ملخص:** هدفت الدراسة الى التعرف على تأثير كل من اعادة هندسة الأعمال وادارة الجودة الشاملة في تحقيق نتائج حاسمة في مقاييس الاداء الحاسمة مثل : التكلفة، الجودة، الوقت ورضاء العملاء ، ومن اجل القيام بالدراسة تم استخدام المنهج الوصفي والتحليلي بالاضافة الى منهج دراسة الحالة بالاشارة الى نموذج شركة تويوتا، توصلت الدراسة الى ان هناك تطبيق لكل من اعادة هندسة الاعمال وادارة الجودة الشاملة في شركة تويوتا من خلال نظام تويوتا الانتاجي والذي يجمع بين التغيير والتحسين، مما جعلها واحدة من أنجح الشركات عالميا وافضلها أداء.

**الكلمات المفتاحية:** اعادة هندسة الأعمال؛ ادارة الجودة الشاملة؛ نظام تويوتا الانتاجي.

**تصنيف JEL:** M10, M19.

**Boukhadra meriem**, Email: [boukhadrameriem41@gmail.com](mailto:boukhadrameriem41@gmail.com).

## 1. Introduction :

There is no doubt that change has become a necessity for all companies around the world especially in the twenty-second century and the massive use of information technology, besides this the competitive pressure, have forced most companies to increase their focus on using the world's best improvement techniques also the customer has become more sophisticated. so the companies attempted to use new tools and methods like Total Quality Management and Business Process Reengineering to catch up with the changes in the environment and to adapt to the new circumstances in order to improve their performance and to satisfy the customer.

### 1.2 Research Problematic:

Total Quality Management and Reengineering have become a hot topic for academics and research, because of their crucial role in achieving competitive advantage, but some companies rely only on Total Quality management others think that Reengineering is the solution to fit with changes in the world of business and to achieve a competitive advantage. this study came to answer to the following question:

“Does the combination between the two approaches (TQM and BPR) is enough to reach a remarkable result in performance in Toyota?”

**1.3 Research objectives:** The current study aimed at testing BPR and TQM and their impact on enhancing performance in Toyota. Therefore, the researcher formulates the hypothesis of the study as follows:

**H0:** There is no impact on Business reengineering and Total Quality Management on Toyota's production system.

**H1:** There is a positive impact on Business reengineering and Total Quality Management on Toyota's production system

**1.4 Previous studies:** This section investigates the state of art from the literature, by presenting a number of previous studies that dealt with the subject of the research:

-Satrina Harvey & Bruce Millett(1999),” **OD, TQM and BPR: A comparative approach**”, Australian Journal of Management & Organisational Behaviour, The purpose of this article is to compare three approaches to the management of organisational change: Organisational Development (OD), Total Quality Management (TQM) and Business Process Re-engineering (BPR). The article concludes that although the approaches all aim to increase organisational efficiencies, they are quite different both conceptually and in the way, they are practised. This article does not attempt to argue that one of the approaches is better than the others — rather, its perspective is a contingent one. It argues that each of the approaches is suitable for different situations and that each approach can lead to increases in organisational efficiencies. However, the three approaches should be used as they were intended. They should not be utilised as off-the-shelf packages.

-Y.F.jarrar & E. M. aspinwall (1999). “**Integrating total quality management and business process re-engineering: is it enough?**”, Total quality management Journal, the article has presented an argument for integrating BPR and TQM. The individual strengths and weaknesses of each have been shown to complement each other. From the evidence presented, it was concluded that the way forward for organizational development is an

integrated model, one that builds on the best practices of BPR and TQM and adds strategic planning and a stronger focus on people.

-A Williams, J Davidson & al(2003),”**Total quality management versus business process re-engineering: A question of degree**”, The Journal of Engineering Manufacture,The paper presents a comparative analysis of continuous improvement (CI) versus BPR approaches to operational change. Change implies risk, and SMEs naturally require a means for establishing levels of uncertainty and net return. It also evaluates the level of a single ‘natural process’, as a means of costing BPR implementation. The paper concludes with the definition of ROI curves, which are intended to inform SMEs in the selection of appropriate improvement strategies.

## **2. Literature review:**

### **2.1 Business Process Reengineering:**

BPR is not an unknown word to the business world. It has been more than two decades since it was introduced for the first time as a tool for change in the American business sector. Hammer (1990) was the first person who introduced BPR and is considered as a father of BPR. Business process reengineering is a tool used for bringing radical change in the business process, it’s the new way of doing business. (Shah& Habib, 2013,p2), according to Hammer & Champy, Reengineering is the fundamental rethinking and radical redesign of business process to achieve dramatic improvements in critical, contemporary measures of performance such as cost, quality, service, and speed. (Hammer & Champy, 2001,p35) , Davenport and Short suggest a more modest approach to BPR. They consider reengineering as a combination of the radical change approach and the discipline of continuous process improvement. According to there business process

reengineering or "business process redesign" is the analysis and design of workflows and processes within and between organizations. (Tsalgatiidou, 2010,p4), In other word Reengineering means: a total transformation of a business, an unconstrained reshaping of all business processes, technologies, and management systems, as well as organizational structure and values, to achieve quantum leaps in performance throughout the business (Obiageli& al, 2015,p17)

There are four factors that should be considered in the description of reengineering. These are "fundamental, radical", "dramatic" and "process": (Özge Akbabaa, 2016,p321.322)

- Fundamental:** The style of doing business should be questioned for reengineering. It is necessary to achieve the answers to the question of "Works are done but why are they done?". It is necessary to ask "what" and "why" and to start all over again ignoring the answers received.

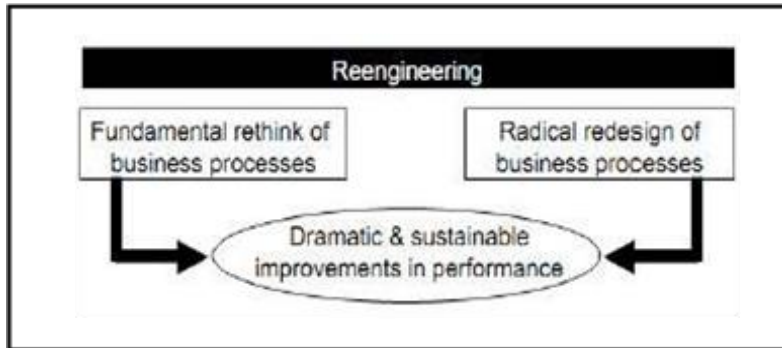
- Radical:** It is derived from the Latin word "radix". Radix means root. Radical means redesigning everything all over again by pushing all existing aside.

- Dramatic:** A success rate that is increasingly continuing from within the process is never aimed by reengineering. Rapid leaps are aimed at performance. It is a situation which should not be attempted by a company that is in need of 10% improvement regarding the issues of productivity, quality, cost, and service but which should be attempted by a company that is in a more desperate situation or that hits the top in more success and has no anxiety.

- Process:** Although it is the most important point of the description, it is the point that mainly forces companies. Since company managers fail to be process-oriented while getting stuck

in the mission, work, employee, and structure phenomena. However, the most important point in reengineering is to be process-oriented.

**Fig. 1. Hammer and Champy (1993) business process reengineering model**



*Source: Arip Budiono & Romy Loice. 2012.p35.*

## 2.2 Total Quality Management meaning and significance:

TQM has emerged as one of the most integrative mechanisms or organization development and improvement. It represents a complete way of managing an organization with a focus on quality and customer. The unrelenting increase in the intensity of commercial competition worldwide demands that organizations must continuously strive to improve the efficiency of their operations. Quality, therefore, has become a corporate strategy for doing business. It is no longer an option, it is a positive requirement (Reddy, 2009,p13), It may be defined as a continuously evolving management system consisting of values, methodologies, and tools, the aim of which is to increase external and internal customer satisfaction with a reduced amount of resources (Andersson, 2006,p284)

Among many other benefits. TQM results in: (Reddy, 2009,p15)

- Committed customers
- Increased productivity
- Reduced costs

- Better profits
- Improved company image
- Employee motivation
- Team spirit and increased participation
- Improvements in attitudes and value system
- Dedicated management
- Positive organizational culture.

**2.3 Similarities between BPR and TQM:** business process reengineering and Total Quality management have much in common we may describe it in the following point: (Tumwijekye, 2011,p2)

-Both concepts are **focused on the customer**. The primary goal of Reengineering like for TQM is to satisfy the customer in terms of quality services/products provided at a speed determined by the customer.

-**Teamwork**; in both approaches, teamwork, worker participation, and empowerment are central. Emphasis is put on empowering and involving all employees in quality decisions at all levels and making sure that everything is done in teams.

-All approaches share the aspect **of cross-functionality**. Achieving quality is not the responsibility of one single department within an organization but rather a responsibility of all functions.

-**Process analysis and measurement**; the focus is on the individual processes to make sure that each process is improved to produce quality.

-**Supplier involvement**; both approaches acknowledge the need to involve suppliers in the process of process and quality improvement.

**2.4 Differences between BPR and TQM:** The following table shows the main differences between business reengineering and total quality management.

**Table (01): Process Improvement (TQM) vs Process Innovation  
(BPR)**

<i>Characteristic</i>	<i>Total Quality Management (TQM)</i>	<i>Business process Reengineering (BPR)</i>
<i>Level of Change</i>	Incremental.	Radical.
<i>Starting Point</i>	Ongoing process.	Start from zero with no biasness.
<i>Frequency of Change</i>	One time/Continuous	One time.
<i>Time Required</i>	Short.	Long.
<i>Participation</i>	Bottom – up.	Top – down.
<i>Typical Scope</i>	Narrow, within functions.	Broad, cross – functional.
<i>Risk</i>	Moderate	High.
<i>Primary Enabler</i>	Statistical tools.	Information system.
<i>Type of Culture</i>	Cultural	Cultural/Structural.
<i>Underlying Philosophy</i>	Maintain harmony	Disrupt the status quo.
<i>Pace of Change</i>	Slow.	Rapid.

*Source: Sanjay Kr. Dubey .2013,p22*

#### **2.4 Strengths and weaknesses of business reengineering and total quality management:**

Both business process reengineering - as an approach of radical change- and Total Quality Management- as an approach of continuous improvement- have strengths and weaknesses are shown in the table below:



**Table (02): Major strengths and weaknesses of TQM and BPR approach**

	<i>Strengths</i>	<i>Weaknesses</i>
<b>BPR</b>	<ul style="list-style-type: none"> <li>-Dramatic improvements (innovation)</li> <li>-Relatively short time frame (quick results)</li> <li>- Exploits IT capability</li> <li>- Cross-functional nature ensures 'whole process optimization'</li> <li>- Measurable progress and results</li> </ul>	<ul style="list-style-type: none"> <li>- Top-down approach which degenerates to command and control</li> <li>- Massive layoffs (usually)</li> <li>- Revolutionary nature of change can be very stressful and financially exhaustive.</li> <li>- Narrow scope focusing on business processes. Usually resulted in neglecting or undermining the people dimensions, e.g. reward, measurement, management, individual beliefs and organizational culture.</li> <li>- Operational process focus leads to reduced customer focus.</li> <li>-Focus on 'time and cost' savings leads to short/medium-term benefits and lack of strategic impact.</li> </ul>
<b>TQM</b>	<ul style="list-style-type: none"> <li>- Bottom-up participative approach.</li> <li>- Broad scope covers all organizational aspects</li> <li>-Results in stable culture of continuous improvement.</li> <li>-Evolutionary nature</li> <li>-makes change easy to capability implement and reduces resistance</li> </ul>	<ul style="list-style-type: none"> <li>-Lack of strategic impact</li> <li>- Long time frame.</li> <li>- May lead to sub optimization improvement.</li> <li>- Lack of innovativeness and radical change.</li> <li>- Difficult to measure progress.</li> <li>-Continuous incremental improvement mentality inhibits learning</li> <li>- Lack of IT focus or utilization.</li> </ul>

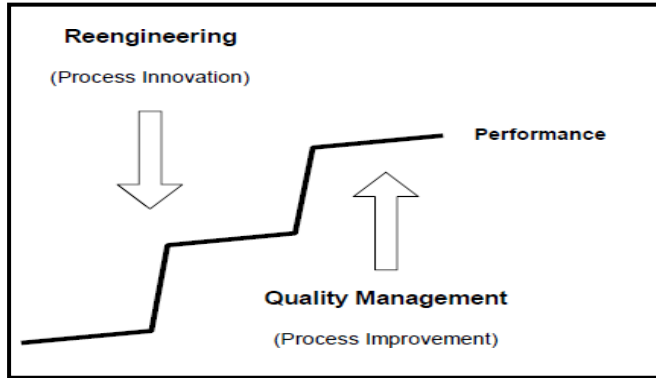
*Source: Y. F. Jarrar & E. M. Aspinwall .1999. p586.*

**2.5 Distinctions Between Reengineering & Quality Management:**

Reengineering and Quality Management are linked in two deceptively similar ways by two authorities on Reengineering: Michael Hammer and Thomas Davenport. Both rely on a "stair-step model" to

depict the relationship they see between Reengineering and that aspect of Quality Management generally known as continuous improvement. (Nickols, 1993,p4)

**Fig.02: The "Stair Step" Model**



*Source: Nickols, f. 1993. P4*

## **2.6 The integration between a process innovation and process improvement:**

It is possible to integrate TQM and BPR (Fig 2), but it is necessary to ensure their mutual "separation". It is also necessary to differentiate what reengineering teams are and to separately set TQM teams. Each of these two strategic approaches has its advantages and disadvantages and they are fairly well supplementary under certain conditions. It must always be clear what we want to achieve with change. If gradual improvement is sufficient, it is appropriate to use TQM – moderate changes. If greater annual changes in business results are needed, radical reengineering changes must be implemented. Change is selected according to business needs. However, it is possible to start with TQM, continue with reengineering, then a certain time with TQM, etc. TQM can be used on the implementation of moderate changes after radical change through reengineering. TQM is a system that drives improvement is very analogous to a Kaizen approach. The elements and characteristics are considered supportive of each other, and the two

philosophies mandate, and the two philosophies mandate a similar organizational mindset. Consequently on the road of a company to TQM, a Kaizen approach and any of its tools under its umbrella in practice are a compatible valuable tool to TQM. The TQM tools are tools for the systematic improvement in the small steps. Allender (1994) concluded that nothing in the TQM philosophy dictates that continuous improvements must proceed in small steps and that improvements are welcomed in either small steps or gigantic leaps. Thus, the breakthroughs envisioned by BPR are indeed consistent with TQM. De Bruyn and Gelders (1997) think that TQM is an enabler of reengineering. According to Harrington (1995) and Kelada (1994) are these two approaches complementary and that reengineering has to have TQM aims at the forefront in order for it to be successful .it can often serve as the building block for subsequent reengineering efforts. (Martonova, 2013,p6)

### **3.Study Methodology :**

The objective of this paper is to examine the integration between two approaches business reengineering and total quality management and their impact on the performance of a manufacturing industry like Toyota. Therefore, the current study uses the descriptive and analytically methodology, and the case study methodology by addressing the experience of Toyota.

### **4. Case Study in Toyota:**

#### **4.1 Company Overview:**

Toyota is one of the leading Japanese automobile vehicle manufacturers around the world. Established on August 27, 1937, the company offers vehicle manufacturing as well as financing in other industries. The company sells its vehicles to a number of 190 countries, and the primary markets are in Japan, North America, Europe, as well as in Asia. Toyota's automotive division includes the design, manufacture, assembly, and sales of passenger vehicles and promotes

the integration of the automotive industry and technology. Toyota also manufactures automotive parts, components, as well as accessories for its vehicles. In the current market, and sells three kinds of cars: hybrid vehicles, conventional engine vehicles, as well as full cell vehicles. The product line of the company includes subcompact as well as compact cars, mini-vehicles, mid-size luxury vehicles, sports and specialty cars, recreational and sports utility vehicles, pickup trucks, as well as buses. (Jimenez, 2017,p4)

#### **4.2 Why Toyota wanted to reengineer its business processes?**

Toyota automobiles are termed as inefficient and cheap motors. To change the notion, the Toyota administration decided to re-engineer its business processes. Toyota used to send its representatives and employees to the US to learn about automobile manufacturing from Ford. But in reality, Toyota did not have space, resources, and many other factors as Ford have in the US and therefore not practical to implement the same process as in Ford. (Jallepalli, 2014)

#### **4.3 How did the idea come up?**

Toyota received their inspiration for the system, not from the American automotive industry (at that time the world's largest by far), but from visiting a supermarket. Taiichi Ohno visited the supermarket on his trip to the US and found it interesting to find all the goods in one place and the rack is filled once the product is bought or emptied from the rack. He thought this could be a very useful idea to implement the just in time technique. (Jallepalli, 2014)

#### **4. How is BPR implemented?**

- Minimum Inventory Sub-assemblies are produced on-demand or order from customers.
- Minimum setup cost.
- Machines are set up in U-shaped with minimum space occupied and a single person attending multiple machines.

-Have all your suppliers near-by and resources deliver to work point or workstation.

-Use the PULL method in manufacturing, contrary to the PUSH method used in Ford. (Jallepalli, 2014)

**Advantages:**

With minimum or no inventory, inventory storage expenses are reduced or removed.

-Lesser the setup time and cost, lesser the lot size.

-Less space occupied.

-A transportation cost is reduced with all your suppliers nearby and takes less time in transportation.

-PULL method, refers to making sub-assemble parts on need, instead of manufacturing them much before ordering. Thus decreasing WIP inventory.

-Any worker at a work station can stop the assembly lines if they find defects. (Jallepalli, 2014)

**Dis-advantages: (Jallepalli, 2014)**

-With minimum inventory, Toyota is very much dependent on suppliers, if they fail to deliver, then there is a loss.

-Need more accuracy, since there is no additional inventory

-Employees may require to work on multiple machines, there might be a chance of a mistake.

-Have to find suppliers near to work station and suppliers deliver at a workstation, therefore need trustworthy suppliers.

-With the PULL strategy, we need to adjust to the demand hack.

**4.5 Innovation at Toyota:**

When it comes to being innovative and making fundamental changes in the organization, Toyota has shown that size does not matter and even a giant can reinvent itself, In July 2000, Toyota launched the Construction of Cost Competitiveness in the 21st Century program, also known as CCC21. That initiative focused on cutting the purchasing costs of 170 major components. Katsuaki Watanabe, Toyota's president, and CEO spearheaded this effort because he was then a

purchasing specialist. This program brought together engineers from Toyota and the parts suppliers, eliminating unnecessary costs with methods such as standardizing parts across the entire Toyota range or reducing the number of components required to make a part. For example, reducing the parts in a horn from 28 to 22 led to a 40 percent savings in cost. In another example, Toyota helped to improve suppliers' economies of scale by approving 3 inside hand grips, down from 35. At the end of five years, the program led to a total savings of US\$9 billion. Never satisfied with its success, Toyota started the Value Innovation (VI) program in 2005 to follow up on the CCC21 program, which goes beyond lean manufacturing to lean product development practices. The VI program refocused Toyota on the production and design processes, continuing its quest for waste elimination and cost reduction. Toyota expects the VI program to show its main benefits by 2010, raising the operating profit margin from 9.3 percent to 10 percent. What happens when that goal is achieved as well? Toyota already is thinking of plans to use the benefits of the VI program to invest in technologies, researching new vehicle structures that will reduce weight and lower fuel consumption. (Iyer, 2009,p96)

*Fig.03 . Toyota cost cutting*

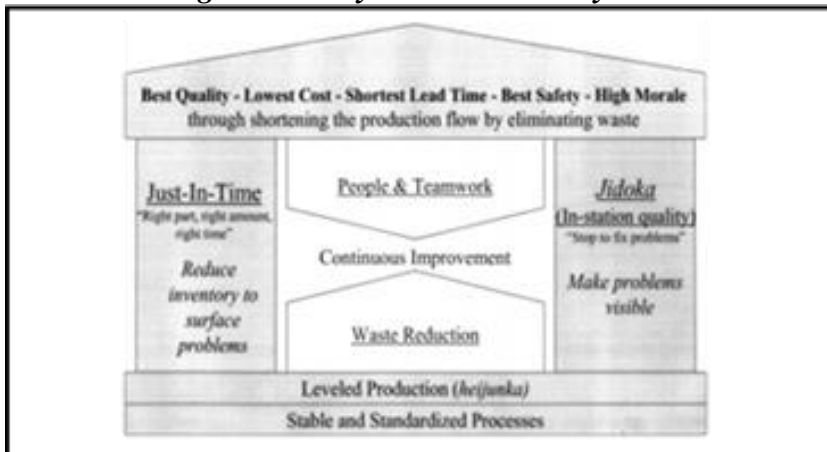


Source: Iyer, 2009,p97

**Outcome of BPR for Toyota :** From an image of non-productive and low quality automobile company to One of the best automobile with best processes and most number of automobiles manufactured in an year. Toyota displaced GM and became the world's largest automobile maker Toyota Production System is implemented at many other manufacturing companies and a concept of Lean Operations is created with reference to TPS to implement similar process in other field. (Jallepalli, 2014)

**4.6 TQM in Toyota:** The company established The Toyota Way, a set of business principles, in 2001. It is based on kaizen — continuous improvement — and strives to eliminate waste and overproduction, as well as to create a bureaucratic system where any employee can suggest a change where they see fit. There is a high value on human participation. There is constant encouragement for further innovation, consensus and ideas for improvement. The Toyota Way also focuses on long-term improvements rather than short-term. The two main pillars of the Toyota Way are ‘Customer First’ and ‘Respect for people’. (Business Initiative Directions Blog, 2013)

*Fig.04 The Toyota Production System House*



*Source: Jeffrey K. Liker & James M. Morgan.2006 .p7.*

**Challenges:**

The primary problem in using the techniques mentioned above is how to implement TQM in the systemic problems which Toyota experiences. For instance, job training entails costs, while the time duration of the training can promote unproductivity in some areas of operation. Furthermore, the TPS has various expected outcomes that may not become the consequence of the effect of implementing TQM. Another important element to take note is how workers have been influenced by the American practice of waiting until the machine breaks down before calling in maintenance. These are the challenges in utilizing techniques that help integrate a more fluid and smooth transition of productivity through TQM. (Jimenez, 2017,p6)

**Success:**

It is identified that Toyota was able to become the highest quality producer of cars in the world and has dominated the 1980 import market. Toyota presently experiences success in the field of manufacturing basically because of the result of integrating TQM in its management of human resources and operations the use of TPS made it possible for the company to achieve the expected outcomes and the creation of kaizen, or continuous improvement. It enabled all Toyota employees to have a responsibility to follow closely the standardized guidelines which reflect the mission, vision, goals, and culture which the company strives to maintain in both employee relations and process development. TPS and kaizen proved to create a healthy relationship with the clients, which have become more satisfied with the service they received from the company through the year. . (Jimenez, 2017,p7)

**The results of the application of BPR and TQM on Toyota production system :** (McGraw-Hill, 2004)

-46% reduction in **lead-time** to produce the product (from 12 to 6.5 hours)



- 83% reduction in **work-in-process inventory** (from 9 to 1.5 hours)
- 91% **reduction in finished-goods inventory** (from 30,500 to 2,890 units)
- 50% reduction in **overtime** (from 10 hours to 5 hours/person-week)
- 83% improvement in **productivity** (from 2.4 to 4.5 pieces/labor hour).

## **5. Conclusion :**

This paper discusses two important approaches in business environment Business reengineering and total quality management and their impact on the Toyota production system, Business Reengineering focuses on radical, dramatic improvements in a short period of time. by using information technology as an enable while Quality Management, consists of kaizen or continuous improvement, is concerned with gradual, incremental improvement over long periods of time. Each of these two strategic approaches( BPR & TQM) focus on customer satisfaction and teamwork and each of them has its advantages and disadvantages, There is an integral relationship between re-engineering and total quality management. Quality management is one of the most important pillars of re-engineering and they both seek to improve performance and achieve competitive advantages The Toyota production system is a framework of concepts and methods based on the principles of Business reengineering and quality management in order to provide the best quality, the lowest cost and the shortest in lead time by focusing on the elimination of waste, applying the TPS made Toyota one the most successful companies around the world.

## 6. References:

### Books :

- Iyer, A. V. (2009). *Toyota supply chain management*,(edtion1.). Mc  
craw hill. new york

-McGraw-Hill, J. K. (2004). *The Toyota Way: 14 Management  
Principles from the World's Greatest Manufacturer* .CWL publishing  
entreprises. united state.

Hammer . M. Champy.J (2001). *Reengineering the corporation- A  
manifesto for business revolution* (edition v 1). united states.: Harper  
Collins Publishers.

### PhD Thesis

-Reddy, J. (2009). *Total Quality Management in indian organization* .  
Phd thesis. srikrishnadevaya university .india.

-SanjayKr.Dubey(2013).*Reengineering and Strategy Evolution to  
Manage Change in a Government OrganizationA Study of Defence  
Organization*. Doctoral thesis of Philosophy in Management. Amity  
University.India

### Journal article:

Andersson, &. al. (2006). *Similarities and differences between TQM,  
six sigma and lean*. The TQM magazine, Vol. 18(3), 284.

-Arip Budiono &Romy Loice (2012), *Business Process Reengineering  
in Motorcycle Workshop X for Business Sustainability*, Procedia  
Economics and Finance journal,volume 4.

-Jeffrey K. Liker & James M. Morgan(2006). ***The Toyota Way in Services: The Case of Lean Product Development***. Academy of Management Perspectives.united state.

Obiageli.L.O& al (2015). ***Bussiness Process Reengineering and organizational performace of selected automobile firms in southeast of nageria***. european journal of business economics and accountancy, Vol. 3 .(5), 17

-Martonova, I. (2013). ***The integration of TQM and BPR***. Quality innovation prosperity magazine. vol2 (2).

-Y.F.jarrar & E. M. aspinwall (1999). ***Integrating total quality management and business process re-engineering: is it enough?***. Total quality management Journal, vol. 10, no 4&5.united kingdom.

-Satrina Harvey & Bruce Millett(1999),” ***OD, TQM and BPR: A comparative approach***”, Australian Journal of Management, 2(3).

-A Williams, J Davidson & al(2003),”***Total quality management versus business process re-engineering: A question of degree***”, The Journal of Engineering Manufacture, Volume: 217 issue: 1.

### **Seminar article :**

Habib , M. N &Shah.A. (2013). ***Business Process Reengineering: Literature Review of Approaches and Applications***. proceedings of 3rd Asia-Pacific Business Research Conference,, (p. 2). Kuala Lumpur, Malaysia.

Özge Akbabaa, E. A. (2016). ***the Effects Of Reengineering, Organizational Climate And Psychological Capital On The Firm Performance***,12th International Strategic Management Conference., (pp. 321-322). antalya, turkey.

**Internet websites :**

Tsalgatidou, A. (2010). *methodologies of business process modelling and reengineering*. [fr.scribd.com](http://fr.scribd.com). Consulted on: 10 /15/ 2019.

-Tumwujukye, L. (2011). *Business\_Process\_Reengineering*.  
[https://www.academia.edu/5940366/Business\\_Process\\_Reengineering](https://www.academia.edu/5940366/Business_Process_Reengineering)  
consulted on: 15.10.2019

- Nickols, f. (1993). *The “Fit” Between Reengineering and Quality Management* :<https://www.nickols.us/fit.pdf>,consulted on: 15.10.2019

-Jimenez, J. T. (2017). *Application of TQM and process Improvement in Toyota and Xerox*.  
<https://www.researchgate.net/publication/318642328>. consulted on:  
20.10.2019

-Jallepalli, A (2014). *business-process-reengineering*.  
<https://prezi.com/m87mrdeyiopp>. consulted on: 20.10.2019

-Business Initiative Directions Blog( 2013). *toyota-motors-the- king-of-total-quality-management* .<http://blog.bid-org.com>,consulted on:  
22.10.2019.