MINISTRY OF HIGH EDUCATION AND SCIENTIFIC RESEARCH

-

HIGHER NATIONAL SCHOOL OF MANAGEMENT

ENSM. P.U. KOLEA

A Dissertation Submitted In Partial Fulfilment Of The Requirement

For The Award Of Master Degree In Organizational Management

The Quest for Business Process Reengineering Opportunities As A Mean To Sustain or Acquire Competitive Advantage

Case: DANONE DJURDJURA ALGERIA

Submitted by: Ryma BENHIMI **Supervised by: Pr. Abdelmalik MEZHOUDA**

Academic Year: 2019 / 2020

ABSTRACT

Holding an utmost end goal of a case for action triggering, this study was geared towards the revelation of Danone Djurdjuras' business processes manifesting the need for a reengineering initiative so as to eventually improve the company's competitive advantage. For such, a fixed convergent mixed method research design was carried implying ergo the parallel quantitative/ qualitative data collection and analysis of side-by-side themes (business process reengineering key success factors, reengineering opportunities - via dysfunction/ importance criterion - and competitive advantage). Considering the ambitious corrival rather than critical state along with the company's transcending quality and innovation, in contrast with other competitive dimensions such as cost/ delivery and flexibility, managers refuted the current radical change necessity. However, survey results checked divergently with great frequency majority of dysfunctional symptoms approving additionally the need for grand scale process alteration. With some insinuations to review a certain set of processes, any further potential reengineering initiative would have continuous improvement and change management along with its variants as convergently favorable key success factors, unlike discipline unfamiliarity and rejection of the information technology inductive thinking.

Key Words: competitive advantage, business process reengineering, process dysfunction.

Résumé

Ayant comme ultime aspiration d'inaugurer un appel à l'action, cette recherche était vouée vers la révélation des processus de Danone Djurdjura manifestant la nécessité d'une initiative de réingénierie afin d'améliorer à terme son avantage concurrentiel. Pour ce faire, la méthode mixte, plus précisément la triangulation caractérisée par la collecte et l'analyse synchronisée de données couvrant des thèmes parallèles (facteurs clés de succès de réingénierie, opportunités de réingénierie - qu'il s'agisse de dysfonctionnement ou d'importance des processus - et les dimensions de compétitivités) a été adoptée. Compte tenu de la situation ambitieuse plutôt que critique ainsi que la transcendance en terme de qualité et d'innovation, contrairement à d'autres dimensions concurrentielles telles que le coût/ la livraison et flexibilité, les dirigeants ont réfuté la nécessité actuelle d'un changement radical. Cependant, les résultats de l'enquête ont vérifié de manière divergente et prépondérante la grande majorité des symptômes de dysfonctionnement et ont approuvé la nécessité d'une modification à grande échelle des processus. Avec des insinuations a revoir certains processus, toute initiative potentielle de

réingénierie aurait l'amélioration continue et la conduite du changement comme facteurs clés de succès favorablement convergents, inversement avec la méconnaissance de la discipline et le rejet de la pensée inductive sur les technologies de l'information.

Mots Clés: avantage concurrentiel, réingénierie des processus, dysfonctionnement des processus.

ملخص

مع طموح نهائي لتدشين دعوة للعمل، سعت هذه الدراسة إلى الكشف عن أساليب تسيير العمل لشركة Danone Djurdjuraالمستدعية إلى مبادرة إعادة الهندسة من أجل تحسين ميزتها التنافسية. تحقيقا لهذه الغاية، تم تنفيذ تصميم بحثي يتميز بالتجميع والتحليل المتوازيين للبيانات الكمية و النوعية مغطيتا موضوعات المتوازية (عوامل النجاح الرئيسية لإعادة هندسة، فرص إعادة الهندسة - سواء كان الأمر يتعلق بخلل وضيفي أو أهمية العمليات - والأبعاد التنافسية). نظرًا للوضع الطموح و التفوق من حيث الجودة والابتكار، على عكس الأبعاد التنافسية الأخرى مثل التكلفة / التسليم والمرونة، دحض القادة الضرورة الحالية للتغيير الجذري لأساليب تسير العمل. مع ذلك، تباينت واختلفت نتائج الاستفسار وتحققت بشكل كبير غالبية أعراض الخلل الوظيفي الموافقة بالمثل إلى الحاجة الملحة للتغيير مع اقتراحات لمراجعة مجموعة معينة من العمليات. أي مبادرة إعادة هندسة محتملة سيكون لها التحسين مستمر وإدارة التغيير كعوامل نجاح رئيسية، على عكس عدم معرفة المبادرة ورفض التفكير الاستقرائي حول تكنولوجيا المعلومات.

الكلمات المفتاحية: الميزة التنافسية ، إعادة هندسة أساليب تسير العمل ، الخلل الوظيفي.

ACKNOWLEDGEMENTS

First and foremost, praise it to Allah the Almighty for all the blessings, trails and strength.

Along the lengthy quest, a pillar, a role model, a life-time inspiration was found: Pr.Abdelmalik MEZHOUDA. Far more than a supervisor, his relentless guidance, support, belief, reassurance, drive and patience undoubtedly made this work came to being. No amount of credit, appreciations and indebtedness would ever ample his assistance.

Considering the technical background and the alteration to the managerial filed, high regards must be expressed to all collogues and teachers who helped expand the knowledge boundaries and challenged the reasoning process and to some whose lessons went beyond their lectures. Special acknowledgements to Dr. Ali BELAIDI whom introductory methodological courses will forever be beared in any further academic research.

Commendations to Mr. Hamid OUHROUCHE and all Danoners for their near or far practical contribution.

To the unconditional love, prayers, caring and sacrifices of family members and friends made during the toughest times, bless you.

CONTENTS

LIST OF TABLES

.

LIST OF FIGURES

LIST OF ABBREVIATIONS

BPR: Business Process Reengineering.

B2B: Business-to-Business.

B2C: Business-to-consumer.

CA: Competitive Advantage.

DDA: Danone Djurdjura Algeria.

ERP: Enterprise Resource Planning.

HSE: Health, safety and environment.

IS: Information System.

IT: Information Technology.

KPI: Key Performance Indicator.

MM: Mixed Method.

PDCA: Plan-Do-Check-Act.

QMS: Quality Management System.

R&I: Research and Innovation.

SAP: Systems Applications and Products in Data Processing.

TQM: Total Quality Management.

CHAPTER I: INTRODUCTION

1. Background

"*The greatest danger in times of turbulence is not the turbulence; it is to act with yesterday's logic*" (Peter F. Drucker).

Whoever is reading this, you have been assuredly assigned as king in the sense that whether you are a customer or consumer, you are the pivotal point of myriads of businesses. But this wasn't the norm years back, hence how come the power balance presently lopsided to your advantage and how come companies adjusted their doctrine along the way?

In hindsight, the era of the world war witnessed a "push philosophy" where the producers held the grip on power considering customers' desperate commitment to pay for almost anything as long as it satisfied their rudimentary needs. Companies, consequently, were confronted to the crucialness to fulfill an overwhelming generic demand without increasing their production capacity in the expense of plant financing or decreasing/ maintaining it with the sacrifice of market share. With another global crisis, the 1929-1939 economic depression, the rather called "introverted companies" came to the realization that their main objective is to sell and that production was only a mean to do so, ergo adjusting from the production optic to the selling/ distribution one.

Presented with a wider variety and aware of their prominence, customers' outgrowing demand became distinctly sophisticated: to acquire the desired product with the desired quantity and quality at the desired time and place under a desired cost. Therefore, the value creation to their regards that once seemed inherently simple became enigmatic. Vigorously fighting for greater market share, for that is the new fate of companies. Undertaking the challenge, several companies were eager to win not only their sector markets but simultaneously the one of others rises the reddest flag of competition. Under this dilemma, each aims at gaining a specific competitive advantage to upfront this intense rivalry.

" *The Crisis That Will Not Go Away*", the largest chapter within Hammer & Champy's book "*Reengineering the Corporation: a Manifesto for Business Revolution "* (2002), advanced an additional puzzle piece propelling therefore the three Cs notion (Customers, Competition and Change) as the main unavoidable organizational drivers. Operating currently in a dynamic/ VUCA world (Volatile, Uncertain, Complex, Ambiguous), the major concern that emanates, not to mention the thirst to not only adapt to cope but adapt to triumph, even if some companies succeed to outvie, the notion of "winning" became so temporary in the face

of constant change which turned to be the norm (globalization, technological advancement...etc). No company nowadays ever leans back restful enjoying the smooth profit making. Thus, remaining internally flexible, innovative, and highly responsive to outer alteration and evolution for sustaining one's competitive advantage is the new survival challenge.

"*The problem is that we are doing business in the twenty-first century with companies designed during the nineteenth century to work well in the twentieth, we need something entirely different."* (Hammer & Champy, 2002, p. 33). Throughout the years, in the strive to thrive, multitude of managerial practices took light. Undeniably, their contribution shaped the current operating system of most corporate but regardless of the evolution, many companies (especially those with profound history) still hold some of these assumptions by inertia (Teplov et al., 2016) or worse, endeavor to automate or continuously improve rather than breaking loose and challenging them. As such, these efforts would no longer be enough to pull through the global marketplace (Macdonald, 1995 quoted by Magutu et al., 2010).

The inception of business process reengineering (BPR) philosophy was hailed to be "*the only mean of salvation for organizations trapped in outmoded and outdated business process and general working ways*" (Valentine and Knights, 1995 quoted by Ozsoy & Vayvay, 2012, p.92). It has, as its concept, came to dramatically alter the old traditional rules as its invites to not only view a company through horizontal "process lenses" that transcends the vertical department barriers, but to initiate a root reexamination and ‘ground-up’ redesign of core business processes so as to remain relevant in this customer orientated, highly competitive and erratic environment.

This potent process improvement paradigm though indeed implies a great deal of courage and boldness to leap for a complete new functioning (instead of consistent amelioration), if applied properly, it promises multidimensional quantum advantages. In fact, according to Attaran & Wood (1999) who cited the work of Verespej (1995), out of 180 US and 100 European companies, three-quarters undertook reengineering efforts in which 80% achieved or even exceeded the targeted objectives covering higher productivity, greater cost efficiency, better goods or services delivery, reduced business cycles, and overall improved profits (p.1).

2. Problematic and Research Questions

In face of the aforementioned 3Cs, companies' state of affairs differ. While each relentlessly seeks to acquire greater gains and corner the market, they choose to rely on different optimization techniques in which, among others, Business Process Reengineering (BPR). Pioneers, Hammer and Champy (2002), posited that companies undertaking reengineering efforts may fall in one of these three situations: ones in dire straits with aggressive external rivalry compelling therefore an outstanding change within their outdated or even departmental flanged processes (crisis/ desperation/ do or die 60%), ones that can predict a threatening competitive advantage loss if proceeding with current practices (foresight/ anticipation/ cautious 30%) or ones being at their prime yet have eager and vigorous managers that aim at amplifying their lead over corrivals (ambitious 10%) (Hammer 1990 quoted by Grove & Kettinger, 1998).

Although BPR is welcomed and got high enthusiasm by myriads of managers considering its proven multiplicative breakthroughs rather than the conventional slow fractional ones, it lays a high risk of failure if not fully respected, ergo its boldness. With this, adopting the approach while being in desperate plight battling to rejuvenate the business, " *its chances of success are significantly lower than in any of the previous stages.*" (N. Malačič & I. Malačič, 2016).

Hence throughout this work, endeavors are made to investigate the possible deployment of business process reengineering methodology in a proactive manner for maintaining/ gaining sustainable competitive advantage within a subsidiary of a multinational food-products corporation. In this regard, the present research will attempt to address the following question:

If any, what business process(es) to reengineer so as Danone Djurdjura Company sustains or acquires competitive advantage?

In order to pursue the above problematic, it's imperative to formulate and tackle the following sub-questions:

- Does the case under investigation dispose of a favorable layout to welcome or sustain a potential reengineering initiative?
- Which business process(es) manifest(s) reengineering dysfunctional symptoms?

- ➢ What are the most important business processes to the regard of company's' vision and customers?
- ➢ What are the current competitive advantages and disadvantages of the company?
- ➢ To what extent would the perspectives of top management agree or disagree with the operational ones on previous inquires?

3. Research field

From treating Spanish children's' intestinal infection to a French prominent multinational food products corporation (N°1 worldwide for fresh dairy products, plant-based foods and beverages; N° 1 in Europe for medical nutrition; N° 2 worldwide for early life nutrition; N° 3 worldwide for packaged waters/ 2017 statistics), Danone (nickname for Daniel, son of company's' early founder: Isaac Carasso) remained, along a century of existence, committed to its roots considering its current mission "*Binging Health Through Food To As Many People As Possible*".

With a global presence covering 5 continents, a product availability in more than 120 countries and 190 production sites in over 55 countries (2019 statistics), all its 100,000 culturally diversified employees (Danoners) are bound with 04 core values labeled "HOPE":

- ➢ H for Humanism: sharing responsibility and respect for others.
- ➢ O for Openness: curiosity, agility and dialogue.
- ➢ P for Proximity: accessibility, authenticity, empathy.
- ➢ E for Enthusiasm: boldness, passion, appetite.

As the corporate invites its employee (regardless of status) to act as a leader, a set attitudes, known as "CODES" were ought to be embodied in each and every so as to practically bring and demonstrate its value.

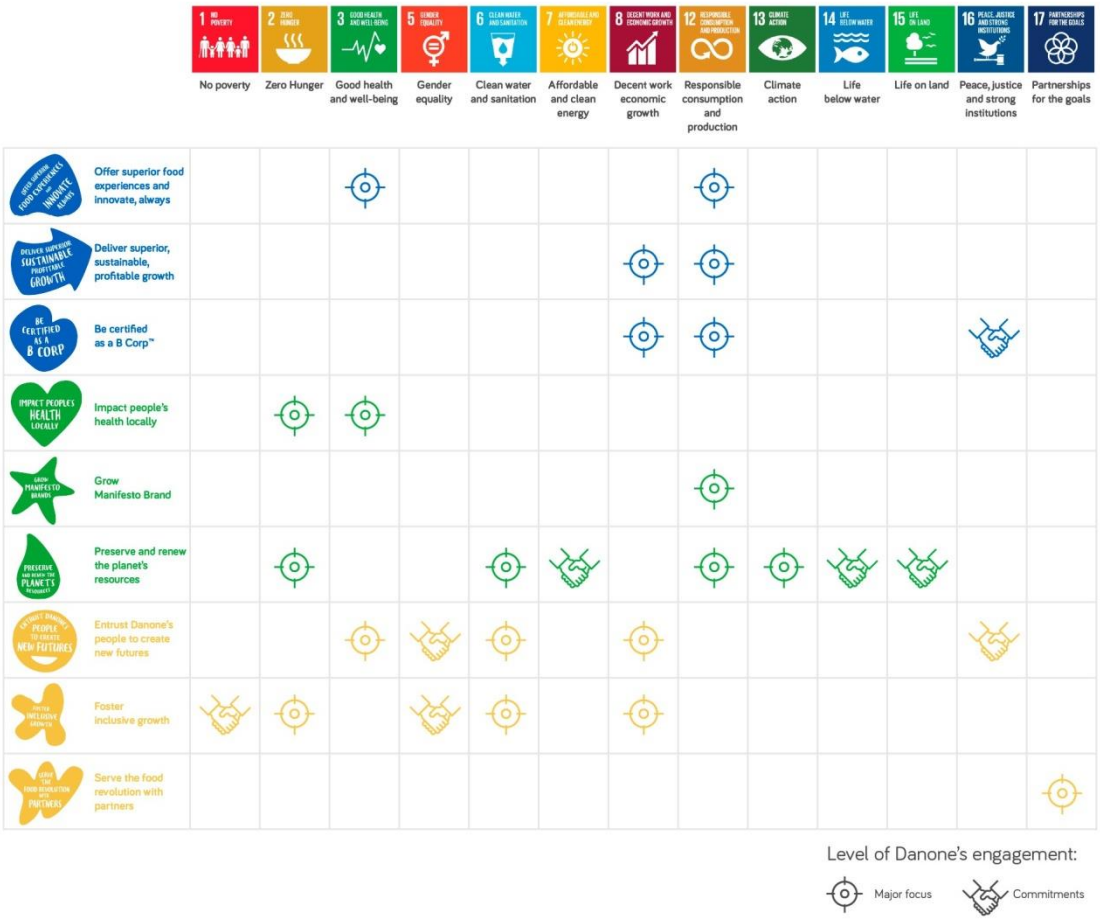
- ➢ C for Committed: to create a meaningful future by challenging the status quo.
- ➢ O for Open: to share, learn and connect (inside and out).
- ➢ D for Doers: to be driven to deliver sustainable results.
- ➢ E for Empowered: to be involved, delegated, trusted and encouraged to bring constructive feedbacks.
- ➢ S for Self-aware: to be aware of one's strengths and areas of improvements.

Figure N°1: Danones' Values & leadership Model.

Source: Danone Sustainability Brochure (2015).

Unified with an ideology of : "*One person, One voice, One action*", Danoners are geared towards one vision that is: " *One Planet , One Health"*. As food-related challenges are increasingly complex, Danone pledged to become socially responsible. Matter of fact, 9 of United Nations' 2030 Sustainable Development Goals are embedded within the company's' business, brand and trust models.

Figure N°2: Danones' 2030 Objectives in Alignment with United Nations Agenda

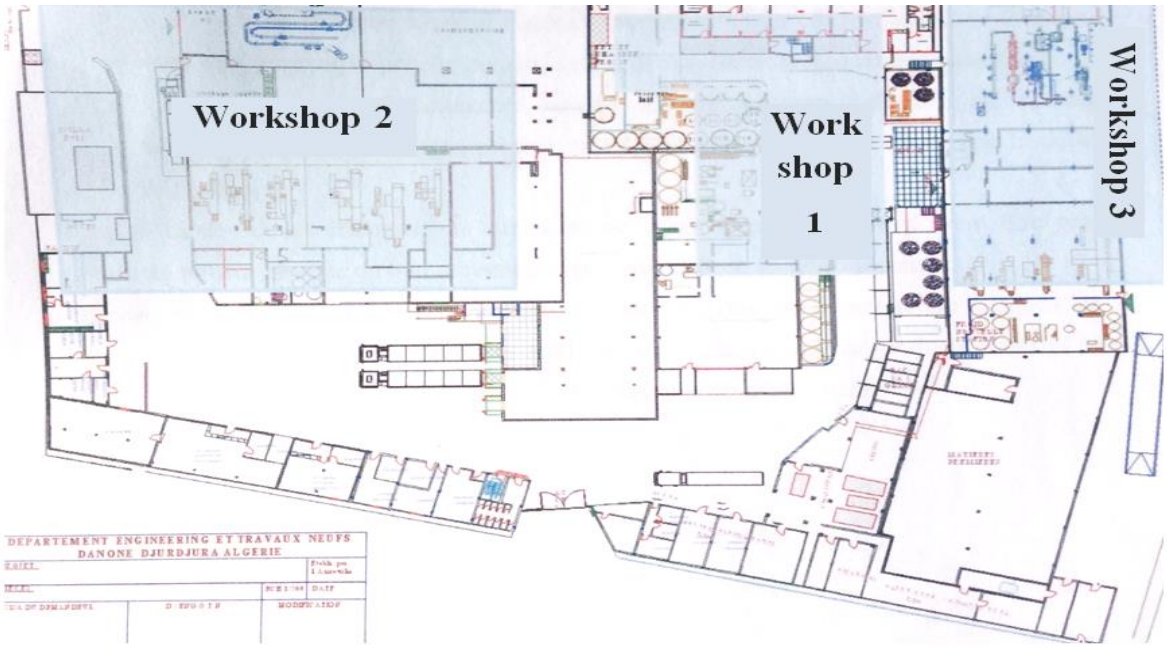


Source: Danones' Official Website.

October 2001 marked the 51% partnership agreement between Danone and Djudjura which was at the time leader of the Algerian market for fresh dairy products, a merger that gave rise to the currently known “Danone Djurdjura Algeria SPA”. Almost a year later, following the manufacturer's overall renovations and new tool implementation, Danone brand was launched. By July 2006, the joint stock shifted to 95% for Danone with 5% for BATOUCHE family, founders of Djurdjura dairy. Eager for expansion, DDA acquired in 2015 “Trefle”, another company active in the field of dairy products, cheese and fruit juices located in Blida. DDA's current main mission is the manufacture and marketing of fresh dairy products (in which currently is in co- leader position) as well as the import and distribution of products related to specialized nutrition through its ELN (Early Life Nutrition) division (in which it's in a leading position in Algeria).

For the time being, DDA has its head office based in the Algerian Business Center of Mohammadia, Algiers and its original and only manufacturer in the industrial zone of Taharacht, Akbou[1] (the activity of second factory, the one located in Blida, came to end just a few months back hence comes the dilemma of having to produce both products in a single plant). As the present research field is restricted to the prementionned manufacturer, it's essential to further elaborate its operational structure. With the head office covering the great majority of processes especially the managerial ones, at the factory level it is held responsible for mostly the industrial and supply part with little representatives of some other departments for coordination purposes.

Figure N°3: DDAs' Manufacture Sitemap



Source: Company's Internal Document.

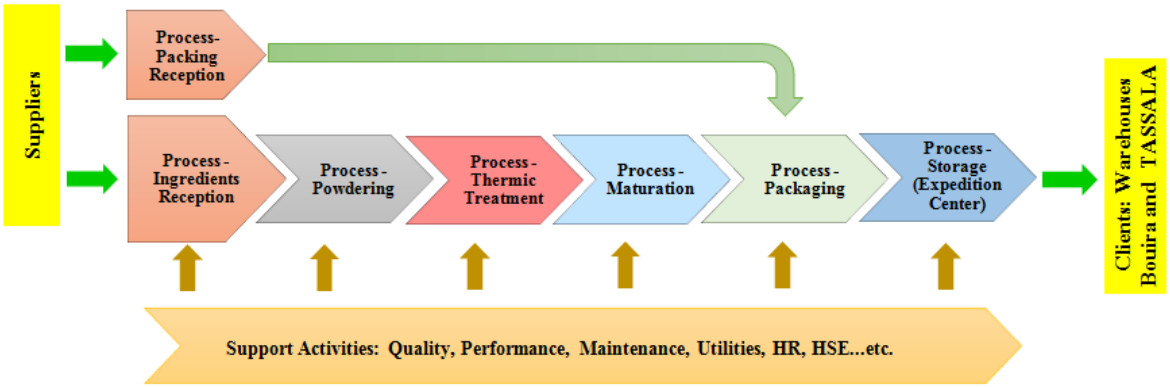
The above figure illustrates the overall layout of the factory as it is composed mainly of 03 workshops:

- Workshop 1: labeled "process "concerns the product or the "white mass" preparation., This last covers the reception of raw material (milk and other ingredients) along with their initial quality inspection which are two common activities and then depending on product type, each follows a specific process with specific conditioning.

[1]Bejaia's true economic hotspot with 50 agri-food production units (in expansion) including prominent economic actors such as Somman, Ramdy, Candia, Ifri, ..etc.

- Workshop 2 and 3: these are packaging units including 12 different lines (with overall capacity of 275,660 bottles or pots/hour) specialized in the conditioning of a wide variety of products (Danette, Activia, Danano, Dan'up, Danino...etc). Once done, products are stored within expedition center to be finally supplied to 2 distribution warehouses.

Figure N°4: Manufacture Main Process Map



Source: Adapted From Company's Internal Document.

Besides WISE (a Danone inaugurated worldwide program aiming to reduce hazardous accidents while fortifying among all its variant sites a safety culture; hence its acronym: "Working In A Safe Environment"), DDA is currently on the venture to upgrade its ISO 22000 certification[2] to its latest version (2018).

4. Research Methodology

As no realistic research process is linear and as any researcher shall remain vigilant for the inner and outer environment of its inspected field, this work came to term after extensive back and forth reflection and adaptation. Initially, the venture was to tackle the potential BPR implementation to transit toward a responsible production system within Danone Djurdjura. However, after a month of in-depth literature review and field exploration, an alteration was perceived convenient. i.e. From a theoretical perspective, responsible production shall respect economical, environmental and social dimensions which can be quite challenging to combine as is and endeavoring to achieve so via a reengineering initiative would be just too complex to

[2] A Food Safety Management System which includes effective internal communication, employing process-based Plan-Do-Check-Act principles ..etc.

tackle; form an empirical perspective, not only the company is already well engaged in environmental protection as it has elaborated several optimizations and tracking to minimize its impacts, (its plastic and water recycling, waste valorization along with other upcoming projects) but it was confronted to a pivotal decision that requires shedding urgent light towards its potential economical state rather than the environmental and social one (referring to the second production plant closure).

With a pragmatic worldview, the current research question is addressed through the use of a fixed convergent mixed method design implying therefore the side-by-side simultaneous yet separate quantitative and qualitative data collection and analysis followed with an overall merging and interpretation of findings. The sampling criteria that distinguished those participating in the quantitative study (survey results followed a univariate analysis) with those in the qualitative one (semi-structured answers followed a framework/ matrix analysis) was theoretical: typology of business processes. The intent of using such design was to compare and corroborate data generated from both studies so as to gain greater insight and understanding of the inquiry.

5. Research Interests

Throughout the intensive data acquisition along the academic years, now comes the opportunity to put at test the transition wit of DIKW pyramid (Data, Information, Knowledge, Wisdom). Candid, this work was driven by career and managerial combined with theoretical purposes:

- Career-wise: "*Outsiders have the intuitive ability to continually view problems in fresh ways and to identify ineffective practices and traditions*" (John P. Kotter). Aspiring for a consulting profession, it's crucial to develop a certain potential to deliver new insights and recommendations so as to propel and push a business to its outermost success. It's essential hence to not only understand and master strategic concepts (such as competitive advantage) but also means to acquire it. Daring to tackle BPR (despite its complexity and failure ratio) aligns as well with the vision as the very essence of the approach is challenging current assumptions through discontinuous thinking.
- Managerial and theoretical: no company would ever be indifferent in achieving rapid breakthroughs and no company would ever be indifferent to suggestions to improving

its competitive advantage. As such, highlighting competitive advantage dimensions and business tools that might induce or improve them was quite compelling to investigate. Considering BPR prominence and its proven advantages, it was founded important to not only pinpoint its main success factors but also put at test the reengineering symptoms that would help reveal potential improvement areas.

6. Thesis Outline

In order to clarify the potential fulfillment of studied research questions, this dissertation is divided so as to cover three main parts. The first concerns an overall literature review along with a detailed conceptual framework aiming to lay a solid understanding of previous works in relevance with the topic. Based on these, the second part reveals meticulously the chosen methodological approach in the diagnosis of this case study. Last but not least, following a presentation and discussion of results for further improvement suggestions, a conclusion is set forth to summarize the overall endeavors.

CHAPTER II: LITERATUR REVIEW AND CONCEPTUAL FRAMEWORK

Throughout this chapter, the called upon concepts within the investigated research inquiry are put in spotlight. Initially, a literature review of previous works liking primarily business process reengineering (besides other relevant managerial practices) with competitive advantage are presented. Then for each of these concepts respectively, the most crucial information required to understand and answer the problematic are advanced.

1. Literature Review

When steadiness implies regression in the face of an everlasting change, businesses are confronted to a critical decision: either improve or dissolve. As the answer is quite evident: not to survive but rather thrive, myriads of masterminds were driven to develop approaches aiming, in one way or another, for more versatile corporations. With this, several performance improvement tools emerged: from the ones working with existing processes such as quality management methodologies and process improvement techniques to the ones that abandon them in the favor of radical new ones. (Magutu et al., 2010)

By nature, humans are compelled to compare themselves to the ones they regard rather performant and then endeavor to project their "*best practices*" to rise up or even surpass them. The world of organizations and business is of no difference as it is run by these last. Benchmarking, that's what Robert Camp (1989) labeled and further define it as the "*the search for industry best practices that lead to superior performanc*e" (p. 813). A logistic engineer and pioneer, he inaugurated Xerox's benchmarking program after the companys' dire straits situation (loss of 69% market share in 10 years including a profit loss of $ 860 million in just 4 years). Through the design and implementation of a 10 step model created after the identification of potential improvement gaps against Japanese competitors who dominated the market at the time; Xerox, by 1991, appraised its customer satisfaction to 91% with a 40% improvement in product reliability and a deficiency decrease of 78%. Enthusiastic, other companies aspired to adopt such practice and had been proven that four years later, 30 companies generated $76 million profit in their very first year of benchmarking implementation (Dragolea & Cotîrlea, 2009).

In contrast to what meets the eyes, benchmarking isn't a once in a lifetime magic potion that would grant long lasting profit. Referring to the American productivity center (a

contribution of a 100 US companies) defined benchmarking as: "*a process of continually measuring and comparing an organizations' business process against business process leaders anywhere in the world to gain information which will help the organization take action to improve its performance*" (APQC, 1993 quoted by Simpson et al., 1999, p. 718). Hence, benchmarking is a consistent action registering under continuous improvement paradigm, precisely: TQM (Simpson et al., 1999). As this last is geared towards superior quality to meet or exceed customers' expectations (whether internal or external) through ongoing refinement (Miller, 1996), its contribution in enhancing the company's position was manifested among several firms; in fact Venkataiah & Sagi (2013) cited Oaklands' (1993) TQM definition as " *an approach to improving the competitiveness, effectiveness and flexibility of a whole organization*" (p. 51). For simple illustrative matters two works had been chosen: the one of Ganapavarapu & Prathigadapa (2015) and Korankye (2013). The former conducted a study on 60 national and international organizations, 30 companies that were QMS certified had higher competitive advantage than the other uncertified half. The latter further proved such matter among 30 manufacturing companies and 30 enrolled in services, who gained an increase in market share and were able to sustain their competitive advantage via the implementation of TQM. However he emphasized that it shall be taken as a wholesome approach and the fact of its individual tool implementation will do more harm than good.

Remaining in the continuous improvement of the existent process ideology, lean management (which aims at revealing and eliminating any form of waste) had also evinced its effectiveness. Through the current state value stream mapping elaborated on an Indian CNC manufacturing unit by Verma & Sharma (2017), 04 sources of waste had been spotted (defects, waiting time, improper inventory, material handling). With the proposition to combine 02 processes, place supermarkets between processes, change ideology from build/ stock to make/ order, use of pacemaker and Kanban system, the production lead time declined from 5 days to 2 days 7h and while the process cycle efficiency has gone from 0.388% to 0.476%, hence higher performance. Referring also to the work of Jones (2013), based on financial data extracted from the Wharton Research Data Services in a time frame extending from 1990 to 2010, indicated a direct correlation between return on asset and lean implementation and according to this lasts' level, 45% of companies gained competitive advantage while 60% were able to maintain it for over 10 years.

Marking a departure from enhancing actual processes, business process reengineering gave rise to the notion of "starting from scratch". Although reengineering was previously adopted by myriads of companies and consulting firms, it was not fully labeled at their time. The concept was only propelled to the business vernacular when Michael Hammer, a former Professor of Computer Science at the Massachusetts Institute of Technology (MIT), published a Harvard Business Review article in 1990 entitled "*Re-engineering work: Don't automate, obliterate".* After argumenting the new era of businesses, he invited companies to break loose from their old assumption of specialized, departmental processes and fundamentally reconsider and redesign news ones that are cross-functional, customer-driven and IT- enabled, as for it to be the only mean to achieve remarkable performance breakthroughs. He additionally highlighted the useless deployment of high technology on outdated processes which shall be obliterated and removed rather than simply automated.

"*You cannot do reengineering without an environment of continuous improvement or TQM*" **(**Stewart, 1993 quoted by Chen, 2001, p. 79). With BPR (as a top-down approach) emphasizing on unfastening from existing processes in favor of reinvigorated ones, it may sound initially paradoxical compared to the ideologies of continuous improvement (bottom-up). Nonetheless, they both: recognize the importance of processes, are customer oriented, eager for productivity and call upon benchmarking/ performance measurement/ change management tools (Bhaskar & Singh, 2014). While Chen (2001) advanced "Participative BPR" as a combination of these two methodologies, Paim et al. (2008) quoted by Nadarajah (2013) argues that the endeavors to fuse both BPR and TQM is what gave rise to BPM (Business Process Management) confirming further their complementarily rather than incompatibility.

Intrigued, abundant scholars ventured to tackle the topic. As reported by Motwani et al. (1998) who endeavored to showcase a glimpse of the plentiful contribution to the reengineering concept and further propose a practical framework, an initial research at that time revealed over 800 articles tackling the subject. 22 years from that, in a highly volatile environment, assuredly the approach gained greater momentum. Bhaskar and Singh (2014), pinpointed the great alteration of BPR labeling though referring to a variant level of process change, for instance: Process innovation (Davenport & Short, 1990), Core process redesign (Kaplan & Murdoch, 1991), Breakpoint business process redesign (Johanssen et al., 1993),

Business process transformation (Burke & Peppard, 1993), Organizational reengineering (Lowenthal, 1994), Business scope redefinition (Venkatraman, 1994). However within this work the conception of Hammer (1990) is retained.

Several are the research evidences that pinpointed the rewarding outcomes of reengineering initiatives (Cafasso, 1993, Grover & Malhotra, 1995 quoted by Ikon et al., 2018; Ahmed et al., 2007, Abdolvand et al., 2008, Khong & Richardson, 2003 quoted by Immaculate, 2015). These benefits cover customer satisfaction, cost, quality, speed, delivery, flexibility and innovation implying therefore higher productivity, profitability and ultimately competitive advantage (Goll & Cordovano, 1993, Adeyemi & Mukaila, 2008 quoted by Ikon et al., 2018; Immaculate, 2015). Taking for instance Company X in West Java Indonesia, specialized in motorcycle spare part selling and maintenance services, which conducted BPR after the emergence of competitive threatening environmental change. Following a diagnosis of its initial processes, an identification of customers needs and performance gap (conduction of focus group among ten loyal customers and former ones), new vision and process objectives formulation, the sales and inventory control processes were to be reengineered. Retaining the initial one for illustration specifically B2B segment, once the customer's receipt order is acquired (2 minutes), the goods are ought to be stored at the warehouse (15-25 minutes), then the prices get checked and sales note is to be manually written with the aid of a calculator that often requires rechecking (7-25 minutes), the goods get packed (5-7 minutes) and finally delivered. As the company deals with 2 segments B2C and B2B which follow the same process, the sales' clerk cannot usually focus on whom to serve first especially with flooding quantities of B2B requests aggravating further the dilemma. After the IT enablers identification, the process was redesigned by including a system that allowed booking orders. Although company X invested annually 30 million in BPR deployment, it had granted annual savings up to 70 million as customer service time halfened to 15 minutes. (Budiono & Loice, 2012).

On account of BRP misconception with automatization, reconfiguration, downsizing, restructuring (as will be further explained) and the non respect of its major axes, many companies fall short to achieve those promised performance breakthroughs. Hence, the upcoming contributions aim to illustrate some of BPRs' key success factors.

Riyanto et al. (2018), based on an extensive literature review and use of IDEF0 (Integration Definition Language 0) method, foregrounded the indissociable link between organizational commitment, change and IT variables to both the reengineering practice and competitive advantage achievement. It was further concluded that the non consideration of these key drivers will lead to a doomed failure, hence highlighting and emphasizing the crucialness of such practices for any BPR initiatives. Incomplete, Eze et al. (2019) investigation on 381 staff members of 3 Nigerian insurance firms, which were confronted to reengineer their core business process in the hope to come to grips with market competitiveness, additionally pinpointed the importance of new processes development and implementation while indeed confirming the favorable performance impact of new technology integration along the initiative.

Reinforcing further these elucidations, Magutu et al. (2010) endeavored to assess whether BPR implementation improved competitiveness within Wrigley Company (due to Wm Wrigley Jr. holdings' decision in deploying an ERP along with supply chain concepts) and determine the key factors and reasons that may have led to its success or failure. According to the respondents, an improvement in quality along with different competitive advantage dimensions (cost management, customer service and productivity) was agreed upon and was further justified by the effective process redesign, use of project and change management techniques, suitable IT infrastructure, top hierarchical level engagement/ leadership and well-founded reengineering business case.

Simasiku & Ngoma (2018) who sought to look over BPR manufacturing users in Zambia, evinced that 65% among the 60 validated responses, confessed to adopt the approach in which 55% gained competitive advantage through cost reduction, improved customer relation and quality of service or product. They further highlighted that the success of these last could be attributed to the readiness of corporate to undergo such projects due to: managers engagement and support (65%) and the availability of skilled labor (71.6%) along with extra training (50%). The contribution of this work was in the advancement that the setting up of a reengineering team to ensure the smooth running of the project (58.3%), testing of the new redesigned processing (based on benchmarking) to be later on implement in case of success (56.6%) and well communication and awareness of employees of the transition (68.3%) were indeed of great importance. Immaculate (2017) in examining the adoption impact of BRP

practices on the overall performance of Pharmacy and Poisons Board in Kenya had also fortified some of these factors (staff training, technology and organizational structure change), however continuous improved was perceived to have rather a low effect contrasting therefore what had already been advanced.

These studies among countless across sectors' trials, have assuredly highlighted BPRs' performance impact on relatively unfamiliar companies, ergo it's imperative to showcase some big giants' cases that have come to adopt the approach. Starting from Ford's Industry in the 80's. In that era, its accounts payable department in Northern America retained more than 500 employees and with an inspiration to rationalize and automate the system, the number could be lowered to 5 times less. Fords' eagerness to regulate his company's difficulties decided to put under the radar in what could be considered a " secondary " process, the one of accounts payable. His initial objective was to reduce the number to 400 employees, but after" benchmarking" with Mazda (though aware of their significant differences) he was shocked that this last only retained 5 people to do the job. He realized through this the extent of opportunity thus decided to radically reengineering the current process. If the company was up to purchase an item, the account payable is confronted to match 14 items concerning the purchase order, the reception document and the invoice from the vendor. Ultimately, while he recommended his vendors not to send no further any invoice, he deployed a "one-line database" in which the initiator of the purchase order enters the specification and once the good is received, the receptionist only checks if the order was initiated or not, hence accepting the item or returning it back (the matching and the payment check printing is done automatically). The root of Fords' reengineering was a conceptual shift from " we pay when we receive the invoice" to " we pay when we receive the good" and through this new reconfiguration the employees reduction reached 75% instead of 20% (a release of 375 employees) (Hammer, 1990).

Mutual Benefit Life assurance company was proceeding with its core process like any other competitor. An application would have to go through 5 departments mobilizing 19 people for 30 meticulous steps. Optimally, this application could be processed within a time frame of 24 hours but in concrete it takes 5 to 25 days. With such tremendous time waste due to departmental information transactions, the company decided to undergo a reengineering of

its process through the creation of a new position called a “case manager”. The job description of this last stated that they have full autonomous responsibility for the application from the reception to the issuance of the policy with assistance of shared data bases and expert systems, eliminating consequently the clerks’ position who had to do repeatedly one single task. With this approach MBL eliminated 100 field office posts and doubled the capacity of application with processing time to nearly four hours and average turnaround of two to five days allowing it to gain competitive advantage over companies within the same field (Hammer, 1990). IBM credit issuance process also used underwent an almost identical approach by making a deal structure supervise the credit process from beginning to end instead of running through 5 interdepartmental steps allowing a cycle time reduction of 90% and increase of handle 100 times the number of credit applications prior to the application of BPR (Hammer & Champy, 2002). Another insurance and financial services company, Liberty Mutual, gained more than $50 million benefit just a year after reengineering its customer contract issuance process which had to initially undergo 15 to 20 interdepartmental hand-offs each entering and reentering data in his/her own distinct computer systems. This process had an average cycle time of 62 days though its usual contract preparation took only 3 days. The reengineering efforts yielded eventually to more than halfen the process duration and doubled the number of quotes explaining hence the made profit (Hammer & Stanton, 1995 quoted by Attaran & Wood, 1999).

Last but not least, Kodak which reengineered its product development process back in 1987 due to Fujis' newly introduced 35mm single-use camera[3] against the companys' lack of present competitive offer and worse, a traditional product design process (partially sequential and partially parallel[4]) that would take around 70 weeks to produce one (a delay that gives the rival a significant edge). To foreshorten its time to market, Kodak called upon a common data base in which each engineer work is timely collected, combined and consulted (hence the new process name "concurrent engineering). With this, the duration to move the new competitive offer to production almost halfned to 38 weeks and reduced production cost by 25% (due to

[3] Type of camera that comes initially loaded with film and once used, its returned back to manufacture for deconstruction and reuse.

[4] Sequential meaning that employees working on a specific task have to wait until the previous one is achieved (which induces time waste) and parallel meaning that all parts of product design would be carried simultaneously and integrated by the every end (causing as well time waste due to made uncommunicated improvements yielding to the non eventual fitting of subsystems).

the involvement of manufacturing engineering in which expertise helped in finding inexpensive alternatives) (Hammer & Champy, 2002). Similarly, the two year Hallmarks' product development process involving more than 20 hand-offs underwent a reengineering initiative. With an objective of duration halving through cross-functional team establishment, a computerized database to collaborate the work of different employees relevant to the process was used along with the implementation of computer-based point-of-sale terminals for its 1,700 major retailers (to track the selling rates of the developed products). Through it, the company was able to reduce its design time by 200% and introduce each year more than 23,000 new card lines (Wellins & Murphy, 1995 quotes by Attaran & Wood, 1999).

2. Conceptual Framework

2.1. Business Process Reengineering

2.1.1. Concepts

- **Business Process**

Myriads of perceptions, interpretations and definitions had been published concerning business processes, among these only few are retained. A business process can be defined as "*a structured, measured set of activities designed to produce a specified output for a particular customer or market. It implies a strong emphasis on how work is done within an organization*." (Davenport, 1993 quoted by Bogdănoiu, n.d, p. 2). Zemguliene (2018) citing Bekgaard (2009) further highlighted that these process activities include the "*movement, manipulation, consumption of materials and information, coordination, control and evaluation of work tasks performed by the actors*" (p. 228). Concurred, Hammer & Champy (2002) pioneers of the reengineering concept, additionally pinpointed the importance of value adding "*business process is a collection of activities that takes one or more kinds of input and creates an output that is of value to the customer*" (p. 38). Although the conventional external end customers remain the ultimate target, they can also be internal ones, the ones of the succeeding process and these are the retained elucidations.

From these, a business process might be characterized by 03 main elements: inputs (different types of materials and information - the one of customers in both types-), outputs (goods, services or any anticipated result of certain value) and processing (turning the initial variable

to the second). As the latter forms the major and foremost the greatest concern of companies for its time and money consumption, reengineering engages in tackling this element for optimization objectives (Bogdănoiu, n.d.).

Broadly classified, business processes might fall into one of 3 types (Worthington, 2009; von Rosing et al., 2015; Al-Shammari et al., 2007, quoted by Okesola, 2016):

- Primary/ Essential/ Operational processes: as their title indicates, these set of interrelated activities form the core business through their direct contribution in responding to customers' needs and value creation to their regard. Such processes include: procurement, product/service development, manufacturing, marketing, sales and after-sales.
- Secondary/ Support processes: the scope of value adding changes from external customers to internal ones in a sense where these processes support and assist the primary ones in delivering what is expected. For instance accounting, HR, and IT are not relevant procedures to the regard of customers but without their contribution, essential processes have no valid infrastructure or resources that would allow them to function accordingly.
- Management processes: These corporate governing operations (although no direct value is delivered through them) are engaged in directing, planning (strategic/ tactical/ operational planning), budgeting, controlling and coordinating, oversight, and monitoring of main or supporting processes.

❖ Business Process Reengineering

The change of business era along with the enhancement of information technology gave rise to the reengineering discipline. Davenport (1993) defined BPR as "*the analysis and design of workflows and processes within and between organizations.*" (quoted by Bhaskar & Singh, 2014, p. 25). Talwar (1993) viewed it as the "*rethinking, restructuring and streamlining the business structures, processes, and methods of working, management systems and external relationships through which to create and deliver value*" (quoted by Bhaskar & Singh, 2014, p. 26). Similarly Manganelli & Klein (1994) quoted by Laguna & Marklund (2013) defined reengineering as "*the rapid and radical redesign and change of strategic, value-added business processes- and the systems, policies, and organizational structures that*

supports them- to optimize the work flows and productivity in an organization" (p. 54). Slightly closer to the latter, Hammer and Champy (2002) present it as "*The fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service, and speed*." (p. 35) This definition consists of 04 key words:

- ➢ Fundamental: refers to business people questioning the reasons for their actions and their need to unlock the implicit assumptions embedded in them. At this point, it is clear that the main objective is understanding the current processes as it is undoubtedly crucial to pave the path of improvement, however initially they shall not be meticulously analyzed for the possible obstruction of creative thinking. Hence the main emphasis shall be on "What Should Be" rather than " What Is".
- ➢ Radical: as the word means "root" in Latin, redesigning shall be taken to the origin of things, to reinvent from a " clean state" new ways of working.
- ➢ Dramatic for the leaping multiplicative outcomes it generates.
- ➢ Processes: reengineering focus on processes rather than tasks, jobs or people.

Overall, BPR as a performance improvement technique geared towards customer satisfaction and quantum leap acquisition, calls upon discontinuous thinking to wipe out non value adding activities and then redesign the processes with the support of IT tools. Nonetheless the concept is often, yet shall not be, confused with:

- ➔ Automation: "*doing wrong things right*". With information technology representing a main enabler for any BPR initiative, it's quite easy to fall in the trap of automatization where solutions are adopted to make existing processes more efficient. Reengineering differs in sense of radical change of processes and the use of technology within the redesign.
- ➔ Reorganization/ Restructuring/ downsizing: " *doing less with less rather than doing more with less*". While reengineering does indeed induce a flatter organization through decision making at lower levels and staff release (in which IT is often the blaming causes) but these as indicated are just potential outcomes in sense that the primary aim of the initiative is not changing persay the hierarchical structure of an organization but rather its underlying business processes.

- ➔ TQM: " *Do it better VS do it different*". Despite the numerous similarities (already advanced), reengineering as a top down approach seeks discontinuous thinking and obliteration of existing processes to achieve performance breakthrough while TQM aims to enhance existing processes through ongoing incremental improvements (Hammer & Champy, 2002).

2.1.2. Models and Steps

While the aim and general concept remain common, BPR implementation turned out to be case customized. Although Hammer and Champys' (2002) model was intuitively regarded as a reference (so as for this work), several authors along with companies choose to tailor the project based on their organizational conditions. The following table provides a glimpse of some reengineering models and steps.

Note: to best meet the objectives of this research, a slight swapping of steps' succession of the retained model was judged necessary (in other words the new initial step is the identification and selection of processes to be reengineered, then communication of case for action and vision statement (to acquire top management engagement)).

Table N°1: Different BPR Models and Steps.

Authors	Steps				
	Initiation	Diagnosis	Conception	Deployment	Evaluation
Guha, Kettinger & Teng, 1993 quoted by Akoka et al., (n.d).	* Identify BPR opportunities (key process, value added chain, key success factors), identify technologies, align BPR with strategic objectives and obtain superior engagement. * Imagine the new processes. * Organize the re-engineering team * Identify performance drivers/or goals (Time, cost, errors)	* Map processes (identify added value and resources) * Identify pathologies (redundancy, inefficient politics, non-value added activity)	(Process and IS Redesign) * Explore alternatives (Check available IT for new design) * Redesign the new process and HR architecture (Change management, role definition and tasks, plan training.) * Prototype and select IT platform	Install IT and reorganize activities and staff	*Manage the new process and evaluate them according to performance factors.
Prasanta, 1997 quoted by Akoka et al., (n.d).	* Study the business environment (Social, economical, political…) *Analyze conditions of organization (study external factors: economy, industrial rate, internal factors: culture, structure, processes, technology and identify the sub-criteria that affect performance ex: regulations, change management, customer orientation, information sharing. Then define the objectives and establish the priorities)	* Identify key processes, review improvements, plan re-engineering process, find solution	Redesign, deployment and evaluation		
Davenport,1993 quoted by Akoka et al., (n.d).	* Identify processes (overall diagnosis no recommended tool, analyze resources for BPR and focalize on core processes) *Identify changes (analyze probable changes, evaluate costs, identify RH contribution after a shallow solution conception) *Develop vision (benchmarking, client orientation, quantified objectives)	Continue initial diagnosis and understand existent process (description , measurement in contrast with previous objectives, value/ problems/ solutions identification)	Prototype new process	Advice on change management, implementation of new organizational structures.	

Motwani, Kumar, JJiang & Youssef, 1998	Understanding (BPR definition and methodology, commitment of top management) → Initiating (Vision creation, process selection of BPR, definition of clear and measurable objectives, forming a reengineering project team) → Programming (document evaluation of current processes, uncover bottlenecks, establish baselines & benchmarking) → Transforming (conduct pilot study, estimate the scope of organizational change, estimate resource requirement need) → Implementation (employee education, leadership, structured alignment, redeployment of IT, modified reward system) → Evaluating (evaluate success, make modifications, monitor progress)
Venkataiah & Sagi, 2013	Prepare for Reengineering (Is BPR necessary) → Map and Analyze As-Is Process → Design To-Be Process (benchmarking with other peer even if not in same industry) → Implement Reengineered Process → Improve Process Continuously (monitor the progress of action and the results)
Budiono & Loice, 2012	Analysis of current processes → Determine customer needs and performance gap → Develop business vision and process objectives → Identify the processes that needs to be redesigned → Understand and measure the existing processes Identify IT levers and modify process → Design and Build a Prototype Process → Measure and assess process performance
Laguna & Marklund, 2011	Case for action and vision statement → Process identification and selection → Obtaining management commitment → Evaluation of design enablers → Acquiring process understanding → Creative process design → Process modeling and simulation → Implementation of the new process design
Hammer and Champy, 2002	Introduction to BPR (prepare and communicate the case for action and vision statement) → Identification of business processes (doing a high-level process map) → Selection of processes to be reengineered (according to dysfunction, importance and feasibility) → Understanding of the selected business processes → Redesign the selected business processes → Implementation of the redesigned business processes (project planning)

Source: Developed by Researcher.

2.1.3. What to Reengineer?

"*A problem well stated is a problem half-solved*" (Charles Kettering). As perhaps the most critical yet difficult step in a BPR initiative is the identification of pivotal business processes to reengineer, Hammer and Champy (2002) advanced 03 criterion to assist the selection:

➢ Dysfunction (broken processes):

Table N°2: Reengineering Symptoms and Diseases

Symptom	Disease	Explanation
Extensive information exchange, data redundancy, and rekeying	Arbitrary fragmentation of a natural process	Having to frequently telephone, send numerous memos or emails to colleagues from different organizational departments for information transfer; having the same information consistently traveling back and forth; having to rekey data taken from one computer into another; manifest not only a terminal disease but an inappropriate and arbitrary processes fragmentation. Endeavoring to give people more means for communication; linking the terminals so that information can travel electronically from one system to another or just rekeying faster; would only treat the symptom, not the disease. Hence reengineering attempts to solve such by gluing back activities of the same process through a cross-functional integration.
Inventory, buffers, and other assets	System slack to cope with uncertainty	Without meticulous prediction of customer demand (whether internal or external), companies tend to squirrel (sometimes too much) extra physical assets/ caches of work/ information/ extra workers ...etc to face the uncertainty operating hence in a JIC mode (just in case inventory). In such a case, endeavoring to create better inventory management tools would only treat the symptom. Instead the company shall work on eliminating uncertainty by porper suppliers - customers structuring and planning.

High ratio of checking and control to value adding work	Fragmentation	It's obviously unavoidable that a company shall dispose of a set of actions for verification and checking such as internal controls, audits, reporting..etc. To the regards of the customers, these are non value adding activities (they do not directly contribute to the value of the product or the service) yet they are crucial for the company itself. However, when such actions form too great a portion of all the work the organization performs, it implies a certain dysfunction. The root cause of it is the incompetence and mistrust that can come from fragmentation. The objective in reengineering is not to make checking and control more efficient, but to eliminate its root causes.
Rework and iteration	Inadequate feedback along chains	When issues and errors are identified in a posterior step than its initial execution, correcting and redoing the work becomes inevitable. A consequence for having a deficient feedback system in a long work process. Reengineering would allow not to get the rework done more efficiently, but to eliminate it entirely.
Complexity, exceptions, and special cases	Accretion onto a simple base	With every contingency, processes that were once simple grow complex due to consistent modifications, additional rules and special cases. Reengineering attempts to restore the original, clean process even if it implies creating another for the other situations.

Source: Adapted from Hammer & Champy (2002).

Besides these, two other emphasizing and complementary process dysfunctional symptoms are retained:

➔ Extensive manual work: When a great portion of work is done manually within a process, high risks of replication and human errors are led which could be costly and time consuming, hence their identification and optimization may have a major positive impact on overall performance (Smith, 2016; Smith 2018; Mitchell, 2014).

➔ Bottlenecks: for illustration, imagine a bottle full of any type of liquid, while trying to pour its content, the speed of the flow will be depending on the size of the neck or bore of the bottle. Projecting it into business, a bottleneck refers "*a component in a complex system whose performance significantly limits the performance of the*

system as a whole" (Goldratt, 1984 quoted by Baldwin, 2015). In other words, it's a step though functioning at maximum capacity cannot process as fast its inputs ergo delaying or momentarily stopping the flow of operations. Hence eliminating or increasing the capacity of the bottleneck step will often increase the overall capacity of the process (HBS Toolkit - Basic Operations Self-Instructional Workbook, n.d.).

➢ Importance (processes with greatest impact on the company's customers): With a backward reflection, a company may determine what process to reengineer according to the feedback of their customers .i.e. Track their highlighted issues (for instance product cost/ features or time- delivery) to the responsible processes (product design or order processing). Consideration shall be given also to processes that may have a significant effect on the company's strategic direction. These would ultimately help create a priority list of those processes that most require reengineering efforts.

➢ Feasibility (current processes that are most susceptible to succeed the redesign): depending on some factors such as: process scope (the broader, the rewarding, the riskier), cost or investment and the strength of the reengineering team including commitment of process owners. This selection criteria had not been retained as it can only be determined after potentially convincing top management to engage in a feasibility study as a consequence of this research outcome.

2.1.4. Reengineered Process and Cooperation Characteristics

Following the troublesome/ problematic business process(es) identification yet preceding the embarkation of clean state remodeling, it's pivotal to understand and visualize the prospective state of a reengineered process. Through observations and participations in myriads of BPR projects among various typologies of industries and processes, Hammer & Champy (2002) spotted some these recurrently exhibited redesign commonalities and characteristics:

➢ Job integration: recalling MBL case manager and IBM deal structure which exemplify the reverse assembly line paradigm as several and distinct tasks were unified inducing therefore a single responsibility/ contact point. [5]

[5] This challenges the rooted work fragmentation and specialization, also known as "division of labor" propelled by Adam Smith in his 1776 "The Wealth of Nations" book.

- Decision descends to lower hierarchical levels: in addition to the previous horizontal compression, a vertical one is also engendered as decision making becomes an integral part of the work or process itself rather than being a separate held on task of the hierarchy command[6].
- Natural and logical process step flow: against the slow artificial linearity and sequentially of activities introduced for control purposes, redefined processes allow the achievement of simultaneous logically organized work.
- The end of "having any colored car so long as it's black": at odds with standardized complex mass production systems, dynamic business environment requires multiple yet simplified process versions (case specific) so as to provide and deliver tuned products while preserving the same economies of scale.
- Work is performed where it makes the most sense: instead of having work arranged around specialists scattered along different departments, it's relocated and redistributed across organizational boundaries (giving the illustration of purchasing process which had to spend 100$ just to fulfill a 3$ internal pencil request, it was reengineered so as each operating unit disposes of a monthly 500$ credit card to issue its own orders from a list of already approved suppliers and negotiated prices[7]).
- Reduction of reconciliations (referring to data incompatibility): through the elimination of external process contact points (recall Fords' account payable process which disposed of 3 contact points (vendors through the purchase order, receiving dock through receiving paperwork and account payable through invoice) and was reengineered to eliminate the invoice part so as to reduce the high risk of information irregularity and ratio check and control).
- Centralization- decentralization combined advantages: through information technology business units have the ability of autonomous operation while organization achieves economic of scales which centralization provides.

As "*for every action there is a reaction*" (Albert Einstein), BPR deployment triggers several organizational changes that go beyond the redesign of the selected process(es):

[6] This challenges the tacit assumption about employees not having time nor the in-depth required knowledge, hence the stacking of superior managerial levels.
[7] The tracking of all transactions was deliver by the bank proving the credit cards.

- Organization becomes aligned with the end-to-end process rather than being focused on departments: via the transition from departmental functioning to process teams, work that was once performed by functionally separated employees becomes rearranged and grouped among process teams responsible for the entire process.
- Job description expands to become multidimensional: team members come to have broader knowledge of all steps included within their process and are probable to execute several. They become collectively responsible for the process result rather than individually on their tasks.
- Role of managers switches from supervisors to coaches and employees get more empowered rather than controlled: as traditional managers are responsible for supervising, checking, controlling, tracking the work as it moves from task performants, with reengineering eliminating almost all these aspects, their role became about leading, facilitating, coaching, mentoring so as to empower and develop employees in value creation. With wider expertise and higher ability for decision making, employees become autonomous in how the work is going to be done, ergo rather than following the rules, that make their own under certainly organizational obligations (deadlines, productivity objectives, quality standards ..etc). Even the hiring criteria of the company goes beyond expertise to analyze candidates' character (whether they are self starting, disciplined, degree of motivation for customer satisfaction, decision making ...etc).
- Performance measurement changes from activities to results: efficient tasks do not sometimes imply overall process performance, hence performance measurement gets done according to final value creation and the compensation of its doers is set accordingly.
- Promotion based on ability rather than performance: incarnated in the reasoning system of most companies, if a technician is highly efficient in his work, then he is presumed to be a good responsible for other technicians of his field which happens to not always be the case. Therefore, advancement shall be regarded as a change rather than a reward.

- Value system alters from protective to productive: no matter how outstanding the redesign of the new process is, if the values of employees are somehow about pleasing the boss, underestimating the work they do and the fact of getting paid for only showing up, BPR will never witness dawn. Thus, constant learning, team spirit, believing they are not just a cog in the wheel and that they get paid for the value they create to the customers, these are the new fostered BPR values.
- Organization structure goes from hierarchical to flattened arrangement: from supervisors managing 1-7 employees (hierarchy) to coaches orienting up to 30.

2.1.5. Benefits and Critical Success Factors

"We must have the boldness to imagine taking 78 days out of an 80-day turnaround time, cutting 75% of overhead, and eliminating 80% of errors. These are not unrealistic goals. If managers have the vision, reengineering will provide a way" (Hammer, 1990, p. 16). Throughout all the prestated endeavors and according to several authors (Raymond et al., 1998; Teplov et al., 2016; Immaculate, 2017; Srinivasan, 2011) who based their work in return on other scholars contribution, BPR deployment induces not only a better understanding of corporate strategy for the initiative alignment but also:

- Time reduction through the improvement of organizational coordination and communication (less hierarchy, enrichment of tasks, fast decision making, bureaucracy minimization) inducing ultimately an improvement in delivery speed/ reliability and product development swiftness.
- Higher flexibility hence market coverage (change volume/ variety/ nature of product, enlarged client base hence an increase in market coverage).
- Improved process quality and the one of goods by ensuring that the end product does not have any defects and therefore reduce wastage, and meets customer expectations.
- Administrative and production cost saving through operational optimization (elimination of redundant/ duplicate activities and personnel costs).

Statistically, these potential objectives could be translated to a 70 percent decrease in cycle time, 40 percent increases in customer satisfaction/quality/ revenue, 40 percent decreases in costs, and 25 percent growth in market share (Champy, 1995 quotes by Venkataiah & Sagi, 2013).

Though appealing, 50-70% of BPR efforts fail to see the dawn of promised results (Hammer & Champy, 2002; Jamali, 2011). Hence before getting on the wrong foot and heading off the pass, meticulous consideration of critical success factors is pivotal as BPR does not guarantee these advantages unless these CSF are properly applied (Habib, 2013).

While admitting the non exhaustively of scholars nor factors already foregrounded within the literature review, it is however important to pinpoint that the former retained authors have based their work on extensive literature hence their credibility and for the latter the most crucial and recurrent factors were stated. Evidently, in those diverse works, CSFs were investigated posterior BPR implementation, thus recalling the research question under investigation, some of these factors cannot be assessed: compelling business case, top management engagement (to the exception of having sufficient and adequate knowledge about BPR) and effective process redesign .i.e. The primary objective of this research is to identify opportunities, find a rational reason to justify the necessity hence developing a business case. Once this last had been communicated to top management, these would investigate the potential achievement of the project as already hinted (this might for instance include risk evaluation, appropriate resource allocation, ability to create a reengineering team which combines multi-skilled experts from various functions within the organization or external to it ..etc). Following these, the chosen team endeavors to prototype the new processes, test/ simulate, plan and finally deploy the implementation (Magutu et al., 2010; Riyanto et al., 2018; Mugo & Kariuki, 2018; Jamali et al., 2011; Ikon et al., 2018; Habib, 2013; Simasiku & Ngoma, 2018; Eze et al., 2019). Nonetheless, other factors can indeed give a partial glimpse of whether favorable circumstances are present for a BPR initiative. The ones taken into account are :

➢ Continuous Improvement: in addition to what had been already hinted within literature review for the requirement of an environment of continuous improvement generally and TQM specially, Nadarajah (2013) cited the works of Altinkemer et al. (1998) and Burdett (1994) which basically highlighted that companies that have undergone a BPR project had indeed witnessed positive breakthrough in performance within the initial year but had had hard time sustaining it, hence the

need to call upon TQM. Also Macintosh and Francis (1997) quoted by Chen (2001) argued that companies that had introduced TQM prior to taking on board BPR, faced less resistance to change (upcoming CSF). With this being said, it is therefore important to identify whether the company that potentially attempts to deploy reengineering efforts have such ongoing refinement practices incarnated, or else it would be of extreme difficulty not only to reengineer but also make learn TQM and continuous improvement practices consecutively.

➢ Information Technology: through process integration and information coupling, IT induces higher productivity by speeding up processes and reducing errors. Regarded as a main enabler for any BPR effort, it is important to be aware initially of the available: IT infrastructure (hardware, software) and IT skills and knowledge (Magutu et al., 2010; Riyanto et al., 2018; Eze et al., 2019; Immaculate, 2017; Mugo & Kariuki, 2018; Jamali et al., 2011; Habib, 2013; Attaran, 2004; Venkataiah & Sagi, 2013...etc). However the trickiest yet most important aspect of IT in reengineering effort is having inductive thinking i.e. unlike the usual deductive thinking incarnated within the belief system of myriads managers (endeavor to identify a problem then find an appropriate technological solution for it), inductive thinking invites for the opposite. It's having the readiness and ability to acknowledge a powerful technology (without getting trapped in conventional way of doing things) and then seek potential problem resolution through its adoption, "*problems the company probably doesn't even know that it has*." (Hammer & Champy, 2002, p. 88).

➢ Change management and other variants: "*It is axiomatic that people are the greatest asset to any enterprise. Too often, however, this is merely empty rhetoric*" (Srinivasan, 2011, p. 47). Considering the large-scale groundbreaking nature of reengineering projects along with all the side effects of BPR initiative, an escalating endangerment and resistance to change would automatically get manifested. As a "dark side" or as "a major barrier", it is mandatory therefore to consider the human aspect. For this factor, an investigation might be carried to reveal whether the case

under research follows a good change management strategy along its projects including: effective communication (top-bottom, bottom-top, horizontal-vertical), training and education, participative structure with proper reward system, adequate working environment (featured by collaboration, cooperation, teamwork, friendly interactions, confidence, trust, recognition and empowerment[8]) to favor an innovative organizational culture where stress and resistance to change is reduced allowing ergo a free flow emergence of employees' creative ideas which shall be exploited to enable the achievement of expected results (Magutu et al., 2010; Riyanto et al., 2018; Mugo & Kariuki, 2018; Immaculate, 2017; Jamali et al., 2011; Ikon et al., 2018; Habib, 2013; Al-Mashari & Zairi, 1999) ...etc.

2.2. Competitive Advantage

2.2.1. Competitiveness

Threatening yet uplifting, vicious yet virtuous, least it could be said to elucidate competition. Stuck in a relentless battling arena, businesses are encountered with a double edged sword considering the opportunities and hindrances competition lays - i.e. the potential improvement and/or expansion of the market pie VS its enormous required efforts. Misconfused, this last is not narrowly restricted to the rivalry among companies though it undoubtedly represents the most powerful factor (depending on the number/size/capabilities of peers, similarities in proposed products/services...etc) (Fred & Forest, 2017). Expanding from simple opponents and peers, in his very first Harvard Business Review article: "*How Competitive Forces Shape Strategy"*, Porter (1979) advanced 04 other competitive forces: the bargaining power of customers /suppliers, potential entrance of new rivals and development of substitute products/ services. The collective strength of these forces shapes the economic structure roots of any industry and determines hence its attractiveness.

Under this dome, competitiveness refers to firms' aptitude to consistently play off, pay off and prosper, precisely, it's their extent of cost-cutting, threat neutralization and opportunities exploitation (Sigalas 2013 quoted by Sachitra, 2016). In this regard of companies being in the mid of an open dynamic system, Buckley et al. (1988) defined

[8] Organizational climate where subordinates and employees are able to set goals and monitor their own performance as well as identify, decide and solve problems that affect their work.

the notion as *"ability to produce and sell products and services of superior quality and lower costs than its domestic and international competitors.*" (quoted by Siudek & Zawojska 2014, p. 93). Furthermore, Drwiłło (2002) stated that: *"competitiveness of a firm means adapting its products to the market and competition requirements, particularly in terms of product range, quality, price as well as optimal sales channels and methods of promotion*" (quoted by Siudek & Zawojska 2014, p. 93).

2.2.2. Competitive Advantage and its Dimensions

The hunt for a precise competitive advantage definition came to an amalgamation of different perceptions though revolving mostly around value creation. A company is said to possess CA whenever it has a strategic edge over its rivals which originates from an ability to defend against competitive forces while generating greater value for its customers, inducing therefore superior profits than the average ones within the same market (Thompson & Strickland 2002 quoted by Wanjiku, 2012, Besanko et al., 2000 quoted by Hakkak & Ghodsi, 2015). Put differently, this positional market supremacy results in the creation of higher economic value: "*difference between the perceived benefits gained from the customer's purchase of a firm's products/ services with their full economic cost) than the one of competitors*" (Barney, 2007 quoted by Wilfred et al., 2014, p. 176). Though easy said than done considering the ambiguity of the former and the complexity to translate them into strategic and or operational objectives, myriads of scholars were able to pinpoint the following set of broad competitive dimensions in which the perceived value proposition stems and in which companies may rival over regardless of the industry (Porter, 1985; Gruchman, 2009; Magutu et al., 2010; Al Qudah, 2012; Vinayan et al., 2012; Nadarajah, 2013; Eloísa et al., 2015; Lasalewo et al., 2016; Sachitra, 2016; Taques et al., 2020):

- Price/Cost: refers to the ability to reduce and or produce at low cost implying therefore competitive (low) prices offer.
- Quality: covering product quality for the ability to meet design specifications set according to customers' requirements (conformance and reliability) and process quality for the ability to produce and offer defect-free products. Some of the prementioned authors had even additionally considered the environmental

aspects through the ability to minimize impact of production activity on the environment. Note: considering the nature of the research field, other quality indicators such as product durability and performance were not retained.

- Delivery: covering delivery speed that is to deliver the requested products on time (or faster), delivery reliability that is delivering the product in the right amount and quality (in accordance to promises made to customers) also development speed that is develop and introduce new products faster than competitors or lower than the industry average.
- Flexibility: refers to the ease of production changes in volume, time and nature. The former is referred to as scale flexibility, the latter as scope flexibility (covering the ability to manufacture a wide range of products with same installations and to make product design adjustments and customization in function of customers' requirements). With the product being the outputs, the processes that deliver them are out to be flexible in a sense that they have to be able to be efficiently converted, adapted, or even developed so as to meet the requirements and market needs.
- Innovation: refers to the ability of an organization to mobilize its expertise and knowledge to be proactive by exploring new opportunities rather than being flanged to the exploitation of current strengths. This could also mean the creation/ introduction/ implementation of new products, services, technologies, processes, technologies or even markets.

In the endeavors to ascertain the very source of CA, practitioners diverge by large to two ideologies. Some argue that by doing something different or doing something differently than rivals is what conveys advantages (activities a firm does especially well compared to activities done by rival), while others proclaim that the acquisition of unique things is what delivers that edge (resource a firm possesses that rival firms desire). The former vision refers to the Activity-based view and the latter to Resource-based view.

- Activity Based View (ABV): Porter long has emphasized the crucialness of developing adequate strategies by seeking means to improve customers willingness to pay and/or reduce the cost induced by the firm's individual value chain activities all to acquire competitive advantage. To his regards, activities are

the bridge that link the gap between a given conceived strategy and its implementation, in other words, activities are the operationalization of strategy. Accordingly, any firm is perceived as a collection of interrelated activities from which value streams, hence his contribution of value chain. He argued that CA lays in what firms "Do and How They Do It" rather than what firms "Own" as the performance of activities would eventually call upon the appropriate resources. "*Competitive advantage results from the ability to perform required activities at a collectively lower cost than your rivals, or the ability to perform activities in unique ways that create buyer value and allow your firm to command a premium price*" (Porter 1985, Porter 1991 quoted by Ngowi & Rwelamila 1999, p. 31) .

- Resource Based View (RBV): According to the different authors of this ideology (Penrose 1959, Wernerfelt 1984, Barney 1991 ..etc), a firm is viewed as a "bundle" of different resources and capabilities which shall be well and continuously exploited/developed. These assets (physical: plant, equipment, location, technology, raw materials, machines; human: employees, training, experience, intelligence, knowledge, skills, abilities; and organizational: structure, planning processes, information systems, trademarks, copyrights, databases) form the source of competitive advantage, precisely the intangible ones. Unlike tangible resources which could be easily acquired or imitated, the intangible one such as culture, knowledge, brand equity, reputation, and intellectual property represent the very root of a sustained CA. Hence, for any asset to be considered a strategic one it shall be: valuable, rare, hard to imitate and not easily substitutable (Fred & Forest, 2017).

Highlighting Porters' and ABV practitioners' conviction evoked a certain reflection, the one of process optimization approaches abundant evolution. Persuaded, many organizations ventured to improve their activities, whichever the degree of their scope, in order to deliver higher value to their customer hence acquiring greater CA. Despite registering mainly in this perspective the presumed "disagreement" between these two approaches is presumed to come down to one small detail: Porter and ABV users not considering firms' activities as resources unlike the statements of RBV initiators.

2.2.3. Sustainability Dilemma

Being first is easy, remaining so is dicey. With fewer steps behind, firms' with leading market positions are being jeopardized by craving rivals' imitation. The acquisition of competitive advantage is no longer viewed as a static notion but rather a dynamic one that required incessant efforts (Vinayan et al., 2012). These efforts shall be translated into continuous anticipation and adaptation between external changes and internal resources in addition to effective formulation/ implementation/ evaluation of strategies (Fred & Forest, 2017).

Unlike Porter (1985), who first propelled the sustainable competitive advantage concept by his proposition of the three strategies types a firms can adopt (low-cost differentiation, focus) so as to achieve it, Barney (1991) advanced that the notion exceeds the simple time frame aspect to duplicative matters : " *a firm is said to have a sustained competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors and when these other firms are unable to duplicate the benefits of this strategy* " (p. 102).

3. Conclusion

Following the elucidation of most potent information regarding business process reengineering and competitive advantage, a certain relatedness could be grasped (going beyond what had been already set forth within literature review):

- *"Companies that solely focus on competition will die. Those that focus on value creation will thrive"* (Edward de Bono). Destroying or acquiring rivals' firms shouldn't be corporate' ultimate objective neither for their own sake (having a market monopoly lessens the eagerness for improvement) nor the one of customers (restricted choice of products and services). Their unique and eventual aim shall be centered around maximum value delivery to the regards of their customers. As previously emphasized, the very essence of reengineering efforts is customer orientation (mostly the end buyers), ergo through the respect of its dimensions and steps, BPR allows the achievement of cost, quality, service and speed benefits which are actually the levers of CA.

- Concerning CA sources' debate, BPR registers overall in both. With the ideology of ABV and Porters' value chain contribution seeking optimization at the business system level, rather than functional /departments/business units (Porter 1985 quoted by Sheehan & Foss 2009), BPR endeavors to improve the "*fit*" among activities (processes) in cross sectional manner while obliterating non value adding ones. Beside, Immaculate (2017) argued that BPR has its roots in RBV theory as through its deployment, BRR enhances organizational resources by equipping it with effective processes, flatter structures and systems without forgetting employees empowerment and the resulting cultural change.
- In his article "*What is strategy?*", Porter (1996) emphasizes that while all firms are forced to continually strive to improve the performance and productivity of their activities (through the use of outsourcing, benchmarking, TQM, reengineering ...etc), this operational effectiveness on its own does not generate strategic distinctiveness, hence a disability to sustain competitive advantage. Since BPR gives the opportunity to fundamentally rethink processes and radically change them, why not do so in a way to differentiate from competitors? In other words, instead of redesigning with the soul thinking of improvement, the new traded-off/ harmonized proposed processes shall be either different than the ones of rivals or if they are common process, then at least that shall be conducted differently, for that is the only mean to have a strategic positioning hence a sustainable competitive advantage. With this, BPRs' application scope will expand from an operational improvement tool to a strategic one. "*You can't look at the competition and say you're going to do it better. You have to look at the competition and say you're going to do it differently*."(Steve Jobs). (doing it "better" refers to operational effectiveness while doing it "differently" refers to strategic positioning).

With this being laid, a practical investigation approach shall be developed so as to mobilize them.

CHAPTER III: METHODOLOGICAL FRAMEWORK

In light of the provided theoretical clarifications, it is essential herein to develop an investigation strategy that would ultimately best answer the aforementioned inquiries. Aiming so, this chapter tackles the background philosophical stance that has guided the sampling, data instrument development and analysis (research design) without certainly overlooking ethical considerations.

1. Philosophical Assumptions

Whether made explicit or not, any given scientific research is undeniably grounded on a set of guiding philosophical assumptions on the perceived nature of reality and knowledge acquisition embedded within the belief and value system of its researcher. Despite literatures' different labeling of these last: paradigm/ worldview/ epistemological stance/ mental model/ or broadly conceived research methodologies (Kuhn, 1962; Morgan, 2007; Greene , 2007 quotes by Hall, 2014; Neuman, 2009 quoted by Creswell & Plano Clark, 2018), they all refer to a certain reasoning or problem resolution process founded on a set of convictions and outlooks shared by a community of specialists in a particular discipline (Khun, 1962; Schwandt, 2001 quoted by Chilisa & Kawulich, 2015). It had been agreed that each worldview or paradigm can be deconstructed to 04 dimensions: ontology (nature of reality), epistemology (way of knowing/ relationship between researcher and subjects), axiology (role of researchers values) and methodology (investigation process) (Creswell & Plano Clark, 2018; Teddlie & Tashakkori, 2009 quoted by Hall, 2014).

By far, the most recurrent paradigms used in social science research are the variants of positivism and/ or constructivism. Predominantly, the former which holds an objective singular view of reality, is often associated with quantitative approaches. As its name insinuates, quantitative research implies the collection, analysis and interpretation of numerical data to deductively test causality among variables, hypothesis and ultimately theories for generalization purposes (top-down). The latter (constructivism) which holds a subjective multiple perception of reality is often associated with qualitative approaches. These last, form the interpretations of narratives generated by the selected study participants (their perhaps divergent perspectives are due to cultural, historical and context differentiation), inductively explore, socially construct meaning, develop hypothesis and eventually spawn

theories (bottom-up) (Teddlie & Tashakkori, 2009; Creswell & Plano Clark, 2018; Chilisa & Kawulich, 2015).

With the rising complexity of certain research problems, there has been an incipient urge to call upon answers that go beyond the uniqueness of simple numbers in a quantitative sense or words in the qualitative one (Creswell & Plano Clark, 2018). Over 70 years of evolution, an "integrated/ combined/ hybrid" research approach or rather a "third methodological movement" has emerged (Steckler, McLeroy, Goodman, Bird, & McCormick, 1992; Ragin, Nagel, & White, 2004; Teddlie & Tashakkori, 2003 /2009 quoted by Creswell & Plano Clark, 2018). The rationale behind such initiative, besides empowering strengths while eliminating weaknesses in the combination of both methods, was to deliver a deeper complete understanding for inquiries under investigation. Unlike multimethods which yield to homogenous data regardless of the different used tools (Teddlie & Tashakkori, 2009 quoted by Hall, 2014), mixed methods induce heterogeneous ones through the separate collection and analyses of both quantitative (closed-ended and numerical) and qualitative (open-ended and textual) data followed with an overall integration (mixing) and interpretation of the findings (Edmonds & Kennedy, 2017; Creswell & Plano Clark, 2018; Tashakkori & Creswell, 2007b, p. 4 cited in version 2009).

"*Qualitative and quantitative approaches should not be viewed as rigid, distinct categories, polar opposites, or dichotomies. Instead, they represent different ends on a continuum.*" (Newman & Benz, 1998 quoted by Creswell, 2014, p. 3). The inception of mixed methods raised great concerns and heated debates to legitimize the combination of the so regarded incompatible philosophical assumptions underpinning both quantitative and qualitative practices. In fact Ostlund et al. (2011) cited Onwuegbuzie and Leech (2005) claim that pioneers of mixed methods research often accuse purists (those who reject mixing) of obstructing scientific prosperity. Following this "paradigm war" (1970s - mid 1990s), 03 main and distinct assumptions took light to validate mixed method research use :a-paradigmatic stance, multiple paradigm approach and the single paradigm one. The first of these sweeps aside the controversy by completely dissociating methodology and epistemology, implying therefore a possible use of quantitative and qualitative methods under any research paradigm. The second refutes the incompatibility claims and often view the paradigm differences to be rather "shallow and not real" ergo asserting the feasible paradigmatic integration under one

research project (Tashakkori & Teddlie, 2003; Cresswell & Plano Clark, 2007 quoted by Hall, 2014; Mksani Acheampong, 2012; Saunders et al., 2009 ; Weber, 2004 quoted by Maarouf, 2019).

Beyond the critics of the two previous suggestions (scholars' conviction that no research is paradigmatically free and the lack of clear philosophical mixing of the multiple stance), the third assumption claims that both quantitative and qualitative methods can be fused under a single paradigm.

There had been myriads of philosophical suggestions for this last: transformative, dialectical pluralism, critical realism (Fetters and Molina -Azorin, 2017b; Ghiara, 2019; Shannon Baker, 2016; Barnes, 2019 quoted by Maarouf, 2019) but perhaps the most common, agreed upon and advocated philosophical support for the mixed research approach is pragmatism (Biddle & Schafft, 2015; Dieronitou, 2014; Hathcoat & Meixner, 2017; Yvonne Feilzer, 2010 quotes by Maarouf, 2019, Johnson & Onwuegbuzie, 2004; Maxcy, 2003; Morgan, 2007 quotes by Hall 2014;c, Biesta & Burbules, 2003; Bryman, 2006b; Howe, 1988; quoted by Teddlie & Tashakkori, 2009).

"*Pragmatism rejects binary (either-or) choices suggested in traditional dualisms (e.g. rationalism vs. empiricism, realism vs. antirealism, free will vs. determinism, appearance vs. reality, facts vs. values, subjectivism vs. objectivism … It endeavors to find a middle ground between philosophical dogmatism and skepticism and to find workable solutions to long-standing philosophical problems*" (Teddlie & Tashakkori, 2009, p. 70). Centered around problem resolution, pragmatism lays emphasis on "what works" to respond to variant typologies of research questions (within one study). It promotes the use of all available methods that best suit inquiries under investigation (primary importance is given to research questions and their results not the methods themselves nor the worldviews underpinning them) (Patton, 1990, Rossman & Wilson, 1985 quoted by Creswell & Plano Clark, 2018). According to these last authors (Creswell & Plano Clark, 2018), the dimension of this worldview are:

- Ontology (intersubjective): pragmatism views reality as both singular and multiple (researcher attempts to test hypotheses and deliver multiple perspectives).
- Epistemology (practicality): Pragmatism views knowledge as being both constructed and based on the reality of the world one experiences and lives in (researcher collects data by "what work" to address questions).

- Axiology: both biased and unbiased perspectives.
- Methodology: use of both quantitative and qualitative methods following the upcoming design.

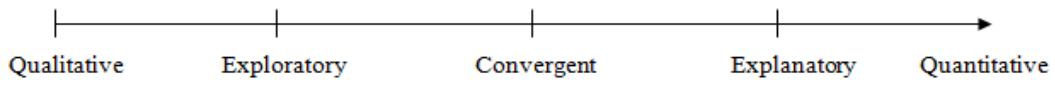
2. Research Design

"*Planning without action is futile, action without planning is fatal.*" (Cornelius Fichtner). Before attempting to resolve any quest, it is crucial to set a certain guide-way, framework or research design that would inform the type, source, procedure of data collection and analysis. As already hinted, MM research is the adopted approach within this study, precisely a fixed convergent MM research design.

➢ Fixed: the call upon MM designs might arise from unexpected encountered difficulties in a sense that a researcher may judge a necessity for collecting another heterogeneous data set to better understand and answer the research questions under investigation. Hence, the use of the approach in such a case is "emergent". However, in this research, the design was predetermined at the very start (fixed) and is executed accordingly (Creswell & Plano Clark, 2018).

➢ Convergent: depending on philosophical assumptions and typology of questioning, the researcher positions its investigation approach within a continuum as previously indicted. Certainly, a research can almost be purely qualitative or quantitative but when it comes to combining or mixing both, the coordinate shifts according to the: intent, timing and priority given to these methods. Bases on such criteria's Creswell & Plano Clark (2018) identified 03 core MM research designs: the exploratory, explanatory and convergent designs.

Figure N°5: Methodological Continuum



Source: Developed by Researcher.

- Exploratory Design (QUAL → quan = explore and generalize findings): following the collection and analysis of qualitative data, the researcher develops a quantitative instrument based on the "explored" perspectives of the previous participants. This design is mostly used when there is no clear theory or framework for the investigated problematic, hence unknown variables and nonexistent measurement instruments (necessity to develop one). Projecting back to the previous illustration, the exploratory design is mostly inclined towards the qualitative side due to the priority given for this last. Since there is abundant work on both reengineering and competitive advantage that guided both qualitative and quantitative data collection and analysis, this design is not retained as a valid one.
- Explanatory Design (QUAN → qual = explain quantitative results): within this design, a researcher initiates the investigation with quantitative data collection and analysis and then endeavors to explain in-depth the generated results by conducting a qualitative inspection. In contrast to the previous, this design is shifted towards the quantitative side due to its priority (refer to sampling criteria subtitle for the clarification concerning this design inconvenience).
- Convergent Design (QUAN + QUAL = converge results): unlike the two previous sequential designs, convergent MM design is a parallel single phased investigation. The collection and analysis of quantitative and qualitative data are done simultaneously with, in many cases, equivalent status or priority (laying in the middle of the continuum). Since this is the so found appropriate design for this study, further details are required.
    - ❑ Intent: "*There are several ways in which one data source may be inadequate. One type of evidence may not tell the complete story, or the researcher may lack confidence in the ability of one type of evidence to address the problem. The results from the quantitative and qualitative data may be contradictory, which would not be discovered by collecting only one type of data. Further, the type of evidence gathered from one level in an organization might differ from evidence examined from other levels. These are all situations in which using only one approach to address the research problem would be deficient*" (p. 44). Considering the complexity of the reengineering opportunities revealing

attempt, the unfamiliarity with the research field and the non accessibility n-or the doability of several processes observation[9], relying only on qualitative investigation was expected to be insufficient. Hence, the conduction of a quantitative investigation was perceived necessary in order to compare/ corroborate/ combine/ the separate quantitative statistical results with qualitative findings for validation purposes and eventually a more complete understanding of the research problem.

- ❏ Timing: Concurrent / synchronous data collection.
- ❏ Priority: Identical weight given to both methods (QUAN / QUAL).

Note: Recalling the philosophical assumptions, Creswell & Plano Clark (2018) argued that pragmatism would be the best fit for convergent mixed method design as the qualitative and quantitative investigations are carried simultaneously.

2.1. Sampling Criteria

Undertaking a MM research approach implies a certain ambiguity for the appropriate sampling strategy: shall the sample size be equivalent? Shall the qualitative candidates be identical to the ones of quantitative investigation? Or shall they be included as a subset (vice versa)? Considering the previously selected design and according to Onwuegbuzie and Collins (2007), four options were laid: picking identical samples (same individuals in both methods), parallel samples (distinct individuals within the same population), nested samples (individuals in one sample are a subset of the other) and multilevel samples (different individuals from different populations). Since there is an aspiration to harness diverse perspectives (within one research field) that would be eventually synthesized, the second option was maintained. The intriguing question that arises is: under what criteria would the sampling distinction be made?

Harking back to the previous chapter, it had been pinpointed that business processes might be classified into 03 main categories: managerial, operational and support processes. Ergo, for quantitative sampling, overall employees within operational and support processes (in this priority order) are targeted as they are the ones who perform the actual work. For the

[9] Hammer & Champy (2002) evoked an example of a company with a terribly flawed order fulfillment process and "limping" sales .The company's customers were content with the service only because the sales people had to delivers the goods themselves on the determinant of their job. With such illustration, they highlighted how the dysfunction of one process might be manifested in another, in other words reengineering symptoms do not always reside where to disease is. Hence the necessity to observe almost the overall processes.

qualitative investigation, the focus was directed towards employees within the managerial processes, in other words the target was on the highest hierarchical positions such as heads of different departmental and senior managers.

Concerning the size, some authors argue to call upon equal magnitude samples especially if the researcher intends to transform the qualitative data to quantitative ones (Creswell & Plano Clark, 2018). However, such an option would jeopardize and/ or somehow limit the rigor of one (if not both) methods. Therefore, within this study, the guiding principles of both methods are respected i.e. the qualitative sample was chosen to be much smaller than the quantitative sample in order to maintain the rigorous, in-depth exploration of the former and the rigorous, high-power examination of the latter.

Table N°3: Apportionment of DDA employees according to working place

Employees	Number	Rate
Manufacture	445	48.37%
Headquarters	105	11.41%
Tessela Warehouse	222	24.13%
Regional	148	16.09%
Total	920	100%

Source: Companys' Internal Document.

Table N°4: Apportionment of DDA employees according to Hierarchical level

Hierarchical level		Number	Rate
Manufacture	Managers	85	15.45%
	Non managers	360	65.45%
Headquarters	Managers	66	12%
	Non managers	39	7.1%
Total		550	100%

Source: Companys' Internal Document.

Although the overall population was targeted in both analyses (all departmental responsibles/ senior managers and all other employees taking part of the mentioned processes), only 105 validated responses were retained for the quantitative investigation (107 collected - 1 duplicated - 1 already interviewed) along with 12 managers participating in the qualitative one.

Note: for the quantitative sample, statistically, is admissible as with a 95% confidence level and acceptable margin of error goes from 4-9% implying therefore a sample size varying from 240-92 participants.

Table N°5: Interviewed Managers

Number	Position	Seniority	Interview Duration
01	Manufacture Director	24 years	33 minutes
02	DAMAWAY Responsible	19 years	48 minutes
03	R&I Responsible (Product)	19 years	56 minutes
04	Maintenance Responsible	16 years	30 minutes
05	Service Delivery Manager Maghreb and West Africa (IT Responsible)	12 years	44 minutes
06	Business Solution Manager/ IS Maghreb and West Africa Responsible	12 years	38 minutes
07	Supply Planning Responsible	5 years	1H03 minutes
08	Brand Manager	5 years	1H26 minutes
09	Internal Control Responsible	4 years	1H10 minutes
10	Downstream Quality & Consumer Relation Responsible	3.5 years	1H06 minutes
11	Packaging Unit Manager	3 years	43 minutes
12	Performance Responsible	2 years	21 minutes

Source: Developed by Researcher.

2.2. Quantitative and Qualitative Data Collection Instruments

Perhaps the most vital part in undertaking an investigation is the gathering of data that would ultimately answer the risen research questions. Bearing in mind the chosen research design, complexity of data integration and overall analysis, the used investigation instruments (though independent and distinct) were designed in a way to tackle the same themes[10] (BPR key success factors, reengineering opportunities, competitive advantage): " *We find that merging the two databases works best if the researcher designs the study by asking parallel questions in both the qualitative and the quantitative data collection efforts*" (Creswell & Plano Clark, 2018, p. 275). Such initiative had been referred to as the "side-by-side approach"[11] (John W. Creswell J. David Creswell, 2018)

[10] For instance, to best identify the right process(es) to reengineer, the survey included a full section on the first selection criteria mentioned within conceptual framework that is dysfunctional symptoms while the interview still investigated broadly this last but additionally covered the second criteria that is process importance.
[11] Also advanced as a strategy to minimize validation threats (Creswell & Plano Clark, 2018)

- ➢ Quantitative instrument: as one of its most common tools, a survey had been used with one dominant rating scale: 5-point Likert scale (refer to Annex B). Considering the indisposable email addresses of some employees within research field and the aspiration to cover the maximum number of targeted population, the survey administration took two forms: an online one (a Google Form version was created and published in the companies' internal outlook group) and a printed one that have been distributed and collected after 4 weeks interval.
- ➢ Qualitative instruments:
  - Semi-Structured interviews: unlike structured interviews (almost taking the form of a survey with rigid standardized closed ended questions) and unstructured ones (barely guided, conversation like interrogation), the use of semi-structured interviews give the researcher a moderate flexibility in the asked questions (probe, reorder, omit ..etc) while certainly relying on a guide. This last covers open ended/ broad scope questions of predefined topics and themes (refer to Annex C).
  - Observation: as a "*systematic description of the events, behaviors, and artifacts of a social setting*" (Marshall & Rossman, 1989 quoted by Kawulich, 2015, p.1) was used over a time frame extending from early February to mid-March. Considering that such span represented the field exploration, no predetermined observation grid was followed (recalling in addition the research question alteration).

❖ Pilot testing: with the intent of clarity assessment for the used instruments, both the interview guide and survey had been tested. The former was conducted with the packaging unit manager and the latter was tested on 03 employees (operators). Once the interview came to an end and the surveys had been filled, questions were asked to identify any ambiguity, confusion, multiple meanings, one response impact on the other, appropriate length ...etc. The feedback was mainly positive hence no major modifications were made.

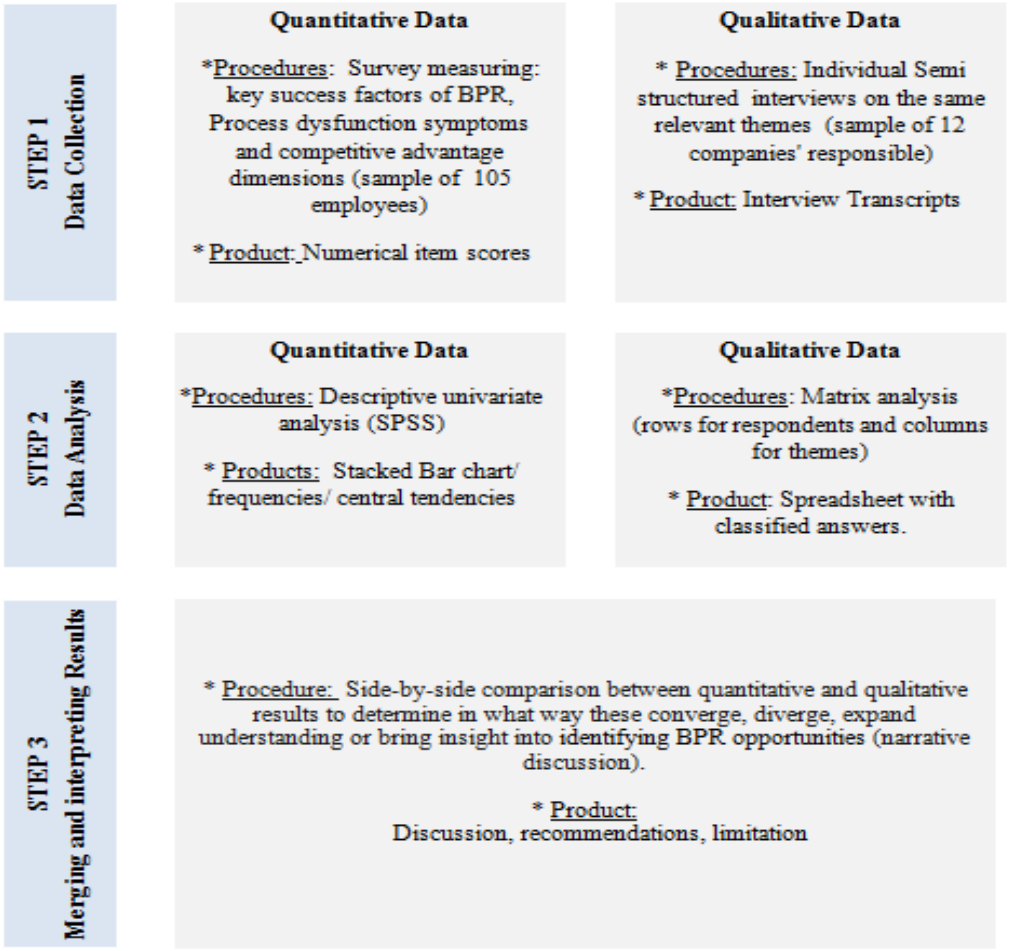
Note: the selection of these test subjects was not random, as they represent the lowest level in each sample i.e. if a packaging manager can understand and manage to respond on competitive advantage inquiry so can a senior manager and if an operator can clearly understand survey items so can an R&I employee.

2.3. Quantitative and Qualitative Data Analysis

- Quantitative Data: Capitalizing technological advancement, the analysis of surveys' results was carried using Statistical Package for the Social Sciences (IBM SPSS version 25). Before proceeding with the examination, it is crucial to ensure that the database is error-free. Therefore, following the codification of variables, the physically collected responses had to be intensely reviewed before being fused with the automatically generated excel spreadsheet (Google Form participations). The correction of the database covered typing errors (depending on the predefined range of modalities) and missing values (replaced by an out of range number "99"). Eventually, a univariate analysis is conducted but since most of the generated data are ordinal (preponderance of Likert items), computing the mean or any related measure such as the variance or standard deviation would be quite meaningless, ergo only the frequencies and some central tendencies measures were used.
- Qualitative Data: similarly before engaging in data analysis, the audio recording of each and every interview had been manually transcribed (allowing initial familiarization) into a 45 pages document (the reduced number was due to the clean transcription which implies the elimination of personal/ research project presentation, detailed/ irrelevant identification of participant, interjection/ filler/ repetitive words and eventual regards). With this rather overwhelming set of data and being inspired primarily by the works of Miles & Huberman (1994) and Ritchie & Lewis (2003), it was found to be most practical to use a framework or a matrix analysis which is "*most commonly used for the thematic analysis of semi-structured interview transcripts*" (Pope et al. 2000 quotes by Gale et al., 2013). As any 2 by 2 matrix generated by the crossing of a set of rows and columns, this case uses its former to represent the encrypted interviewees and its latter to represent themes which were already foregrounded within the conceptual framework (nonetheless, consideration were taken for potential emergence of any other significant themes hence the additional columns). For each cell, direct transcript quotes/ notes and or summaries were written. With this, while each full row reveals the respondent's answer across the themes, each full column exhibits cross-respondent answers within one theme, thus the ease of visualization and comparison.

Note: as the created spreadsheet was quite meticulous and voluminous to append, only the major themes of a small random interview were exhibited in Annex D.

Figure N°6: Convergent Mixed Method Research Design Diagram



Source: Adapted from Creswell & Plano Clark (2018)

3. Ethical Considerations

In social science, human involvement is almost inevitable even more if the study is thoroughly centered around them. Ensuring their trust and well being is pivotal for the appropriate and relevant investigation conduct. Bryman & Bell (2011) and Greener (2008) advanced some ethical principles to consider. Beside the most evident ones such as the respect

of dignity/ privacy of participants and researchers' communication of honest intentions, the following are few other ideals:

- ➢ The researcher shall present his title along with the study objectives.
- ➢ Full voluntary consent shall be given by the participant prior the investigation.
- ➢ Participants shall be protected from any form of harm physical / emotional/ career wise.
- ➢ Participants shall be reassured of confidentiality and anonymity.

With these into account, while endeavoring to get interview appointments, a consent form had been attached to each sent mail (refer to Annex E). Even if one eventually agreed to participate, before initiating the interview, a briefing is made to ensure that the participant had indeed read and understood each and every information on the form otherwise re-explain and start recording. For the survey, only a statement on confidentiality and anonymity had been written. However, because a printed version of the survey had to be distributed for employers that do not dispose of email addresses and because no access was granted to the research field, the distribution process was mainly under the responsibility of the tutor. To guarantee maximum confidentiality and anonymity, a thought was developed to use a form of a ballot box for participants to submit their anonymous responses, unfortunately such initiative had not been elaborated.

4. Encountered Problems and Limitations

- Considering the francophonic culture of the country generally and the one of the research field specifically, the interview guide and survey had been developed in French as a measure of respect and also as a measure of doability for maximum participation. With that, there had been an increasing endeavor in translation and wording prior and posterior the data collection.
- Considering international and national pandemic circumstances (COVID-19), physical interviews were not possible to be conducted hence audio calls were made via Cisco Webex (a videoconference platform the company uses). With this, there was not only an inability to know the context in which the investigated person was (which restricts the free liberal expression leading to a significant impact on the potential responses) but also a great deal of information transmitted from body languages were uncollected.

- Considering the length limitation of survey and time restrictions of interviewers, there had been an impotence to meticulously tackle all details of each theme. For instance, just investigating the competitive advantage of the company or the reengineering symptoms could alone cover full surveys without mentioning some critical success factors which are full concepts by themselves (culture, change management, continuous improvement ...etc).

5. Conclusion

Holding a pragmatic worldview advocating the used of appropriately judged methods to best respond risen research questions, a mixed method, precisely a fixed convergent mixed method design was adopted. This last involved the synchronous quantitative and qualitative data collection (targeting both operational employees and highest hierarchical managers) along with their respective analysis (univariate and framework/ matrix analysis). The rational behind such approach was to acquire greater insights by comparing and corroborating these two organizational level perceptions on: BPR key success factors (continuous improvement, information technology, change management), reengineering opportunities (dysfunctional symptoms, process importance to regards of customers) and competitive dimensions (cost, quality, delivery, flexibility, innovation). With the deployment of each research instrument, now comes to revelation of acquired results.

CHAPTER IV: RESULTS PRESENTATION AND DISCUSSION

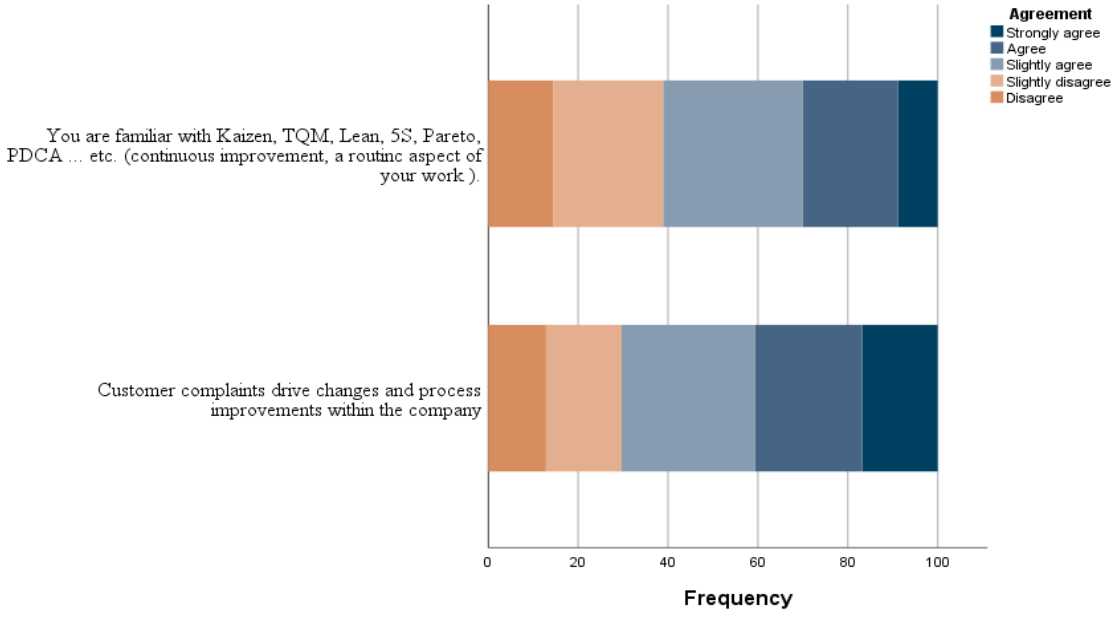
With the adopted research design being identified and deployed, this chapter consists of the acquired result elucidation presented according to the 03 already stated axes. Each axe will cover sequentially the quantitative then the qualitative findings followed with an overall mixing and interpretation. It is worth noting at this point any further statistical details concerning the upcoming graphs might be consulted in annex F.

1. Results Presentation

1.1. Axe 01: Business Process Reengineering Critical Success Factors

1.1.1. Quantitative Results

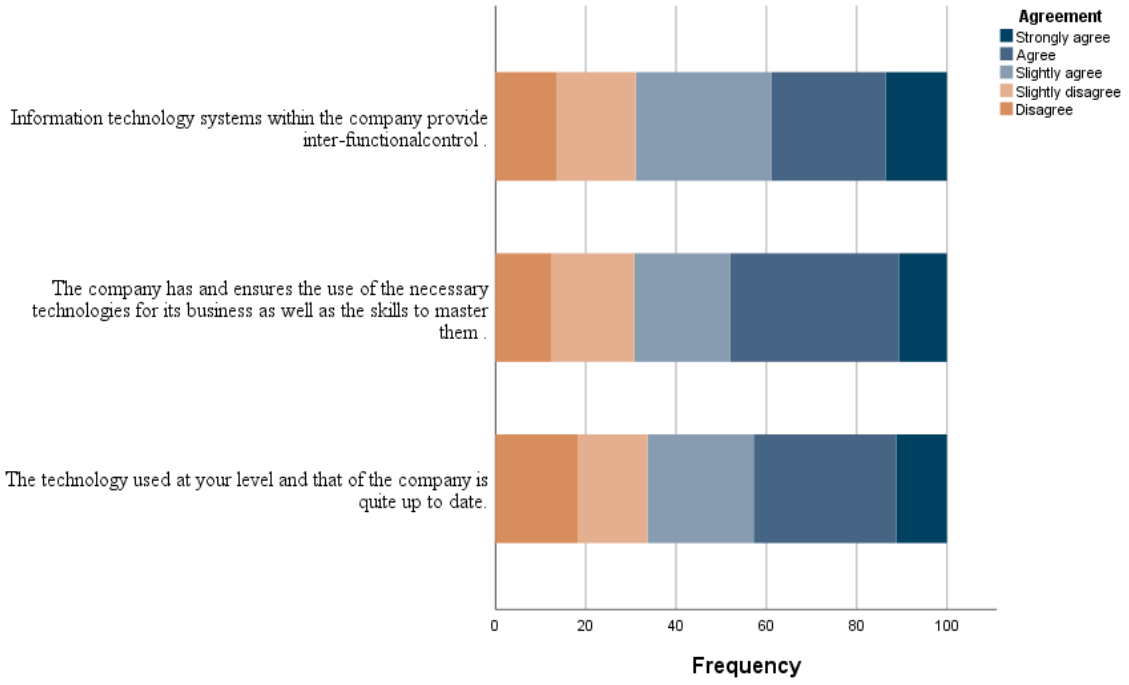
Figure N°7: Responses Reflecting Continuous Improvement



Source: Primary Data

For the ease, productive and sustainable deployment of any reengineering effort, a continuous improvement ideology must be already incarnated. The case under investigation manifests supportive features as the above stacked bar chart illustrates a 61.1% agreement on acquaintance and quotidian use of Kaizen, TQM and lean practices including for instance 5S along with some problem identification/ resolution methods such as Pareto and PDCA. These ongoing refinements which imply process improvements and overall changes are driven from customers' feedback (70.3% affirmation), confirming therefore the previous result.

Figure N°8: Responses Reflecting Information Technology

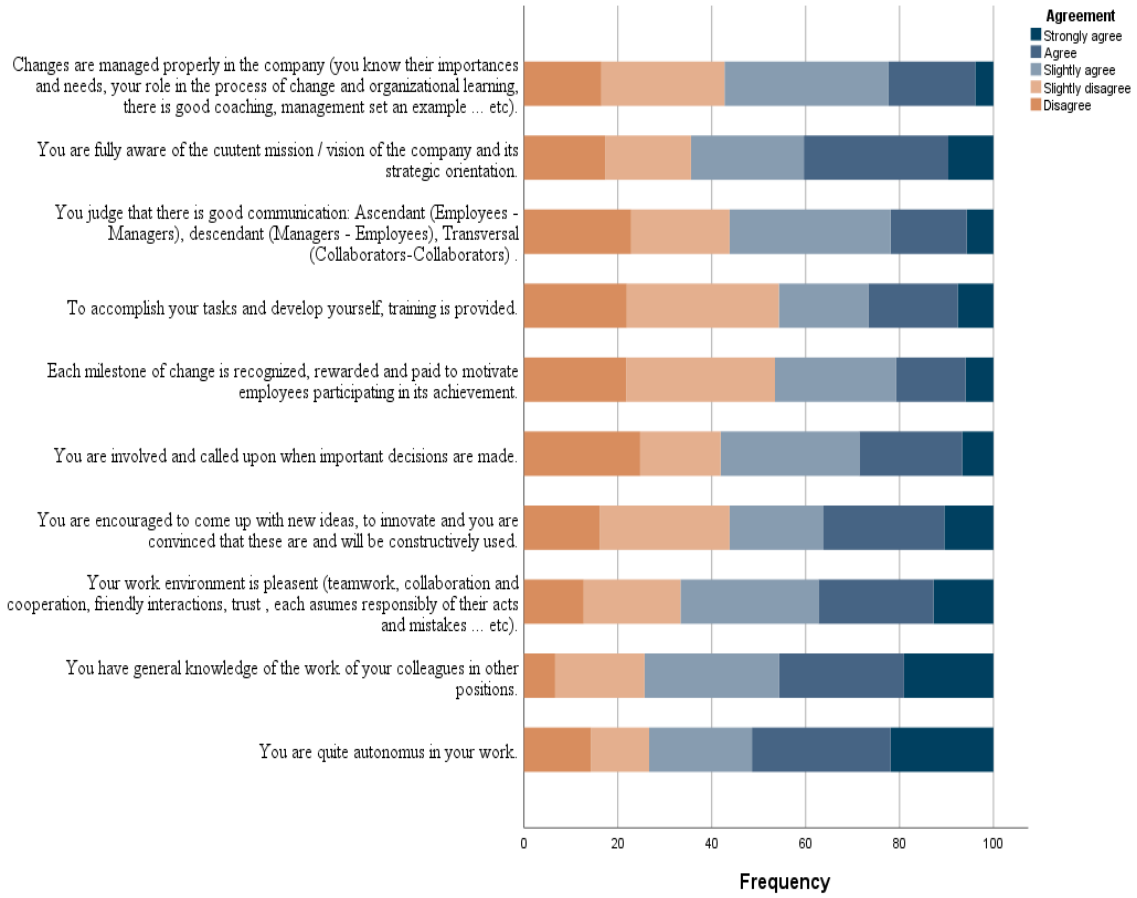


-

Source: Primary Data

Understanding the current technological advancement state is crucial to identify reengineering opportunities in a way that would make it an enabler or a key success factor. The supplied illustration evinces, with 68.9% corroboration, a technological information system layout that ensures an inter-functional control. With the same mode (4: standing for agreement) it also indicates an overall approval on the company's constant urge to either deploy adequate technologies with appropriate skills (69.3%) and/or update the existing ones (66.3%).

Figure N°9: Responses Reflecting Change Management and other variants



Source: Primary Data

Regardless of the extent, falling short to consider the human capital while undergoing corporate transformations would doom the initiative or at best form a major hindrance. Thus, internally, employees with their pivotal role are ought to be well informed, trained, rewarded, involved and provided with an adequate working environment to ensure further prosperity. For the current field of inquiry, an overall judgment of 57.3% was done on convenient change management including awareness of their importance/ needs, role in the process of change/ organizational learning and leadership by example. This could be further affirmed with a most frequent value of 4 and a rate of 64.4% regarding staff consciousness of the company's current vision, mission and overall strategic orientation along with a favorable estimation of the variant levels of communication (56.2%) but infirmed with a mode of 2 indicating slight disagreement concerning provided trainings (45.7% discord). Sharing the same central tendency, the

highest rate of disapproval (46.5%) was on recognition, rewards and remuneration for the workforce's achieved breakthroughs. With 82.8% of respondents having more than 05 years experience within the company, only 58.1% confirmed their involvement/ contribution in important decision making while 56.2% acknowledge the supportive and use of their ingenious propositions. Ensuring an adequate working environment is also crucial to enable the free flowing of initiatives and innovative ideas. Indeed there had been a 66.6% affirmation on the currently pleasant working environment characterized by teamwork, collaboration, cooperation, friendly interactions, trust and accountability. For reengineering initiatives in particular, having autonomous employees with border or multidimensional knowledge of their colleagues' work would significantly help in the creation of process teams (instead of departmental divided ones). Fortunately, such an aspect had been verified with a rate of 73.3.% and 74.3% respectively.

1.1.2. Qualitative Findings:

- Besides the consistent benchmarking with other international business units[12][13], the case under investigation disposes of a set of guiding standards and tools for ongoing refinement labeled "DAMAWAY" standing for Danone Manufacturing Way as illustrated below. This performance management system monitors a number of KPIs regarding safety, quality, cost, delivery, motivation and nature (SQCDMN). A noteworthy pillar that had been indeed observed is a routinc measure called SIM (Short Interval Meeting) or "AIC: Animation Interval Court". According to the J-1 performance indicators, every morning a team regrouping: operators, production/ performance/ quality/ maintenance/ HSE managers conduct brief meetings on different units (whether process or packaging lines) to celebrate and encourage positive achievements while identifying potential enhancement opportunities. Issues are spotted using different procedures such as Ishikawa, 5 whys' and Pareto then an

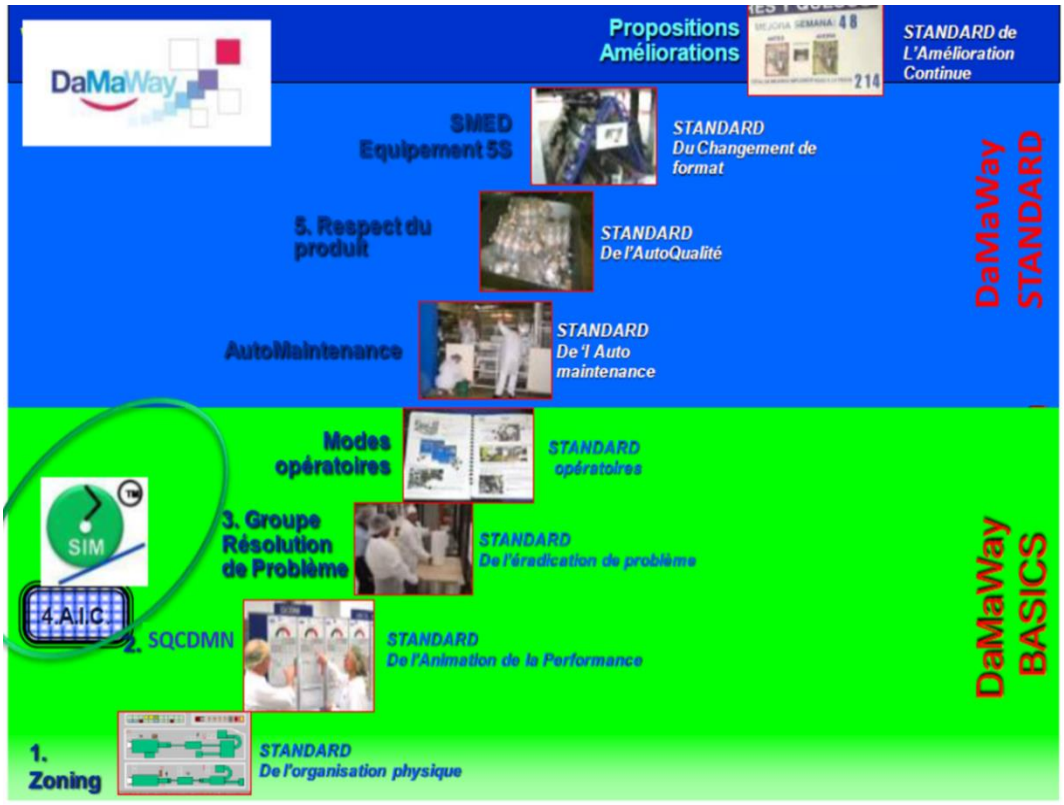
[12] Via inter-factory visits and Workplace (an enterprise connectivity platform), different subsidiaries of the holding company come to share their best practices and technologically advanced tools for inspiration. An example that can be given is: PLS (Production line tracking system) or SLP in French (Suivi Ligne de Production) which is a system where production operators report by the hour outputs and/ or difficulties. Initially benchmarked from a French factory, the system had been further developed, adapted and deployed in Algeria (first implementation in Africa followed by Tunisian and Moroccan factories).

[13] Priority of benchmarking starts among internal subsidiaries, if no appropriate solution was found the practice will be geared outwards.

action plan is developed accordingly. This last is written on a board (visible to all operators) including the problem, the person who is held responsible for solving it, the deadline and most importantly the tracking using PDCA cycle (the circle is drawn on the table and for instance if the task had been executed the DO portion would be checked). Their questioning of "how can we prevent this from happening again?" shall also be mentioned as it represents the Deming cycle wedge for relapse threats. Another affirmation of this "preventive" philosophy had been pinpointed by the adoption of TPM (Total Productive Maintenance). Registering as well under continuous improvement, TPM (founded on 5S which already is a DAMAWAY standard) aims at eradicating or minimizing breakdowns, defects, downtime ...etc.

Overall, all interviewees argued that continuous improvement became an incarnated philosophy in the elaboration of day to day tasks, they even referred to it as an embedded cultural aspect.

Figure N°10: Danone Manufacturing Way



Source: Companys' Internal Document

➢ Beyond productivity and efficiency, the adoption of new technologies was perceived to be now, more than ever, strategic rather than operational. It's no longer recognized as facilitators, but a vital part in everyone's daily work.

On the venture for full digitalization for the past 5 years, the case under investigation currently disposes of SAP ERP which is an integrated system that covers and involves different facets of the business. By unifying various functions, the aim was to make the information flows more visible to all users depending on their specific needs and to simplify collaboration and communication. Besides numerous updates including the security ones which are made 4 times a year on average, business migration plans are being elaborated so as to upgrade the currently operating 6th version SAP to one of its latest SAP HANA by the first or 2nd quarter 2021[14] and to integrate further AI practices (Chatbot for instance). Though the openness was agreed upon, divergent appreciations on technological alignment were expressed. Some argued that the overall state of being is quite upgraded (perhaps compared to local companies), others pinpointed the gap in contrast to international units even some complained about the difficulty to acquire cross functional information (limited SAP access), hence the necessity to call and mail frequently.

As non of the participants had an idea of what reengineering meant, a broad explanation had been provided with great emphasis on the inductive IT reasoning. Overall Managers, specifically IT and IS ones, made a clear disagreement to such ideology. Despite the current abundant and diverse technological solutions on the market, the choice was perceived to be strictly dependent on business needs. Unless this last reveals itself, unless there is a problematic or a certain failure, the quest for the appropriate solution begins (starting from other subsidiaries to other external companies whether in the same industry or not). Once found, an analysis of the solution along with its impact and potential outcomes is made over a time frame of a month.

➢ Proceeding with culture, aside from the intense sense of belonging and the incarnated philosophy of quality/ food safety “ the company's DNA” (which will be

[14] Depending on the business need, such updates most often if not always, are the decision of the holding company.

later on tackled), there had been an emphasis on the multinational facet. Some advanced that each country have a certain corporate culture and when internationalized, regardless of the endeavors of the subsidiary to change or modernize things, it always remains impregnated in the culture in which it was born. French indoctrinated companies had been perceived to be overly cautious, prudent and unadventurous in the sense of not taking high risks and dreading rapid changes. On this account and in addition to human nature (trapped in a comfort zone), resistance to change get manifested by many, hence the necessity for great endeavors to be made so as to manage the roller coaster.

As any change or development is approached as a project, a method or rather a project management training labeled “GOOSE” is delivered to managers and non managers. This includes: feasibility and risk analysis along with objectives targeting, team constitution (make participate the right people for better insights/ propositions and also set change ambassadors), change communication along its different stages, training delivery and creation of an appropriate environment to reach these objectives. Regarding communication which had been indeed identified as key lever, the initiator of change regroups different employees from different departments and delivers a mock session where the problematic and a detailed description of proposed solution is laid. This allows not only to check the respect of the company's requirements via each service but also to brainstorm and try the best to bring out from the employees themselves perhaps a more suitable solution. To make other employees aware of the potential modifications (those not directly involved nor impacted by the change), an A3 card (which is included in DAMAWAY standards) is used to explain the project context, description, team working on it and the state of advancement. Overall communication, compared to other international business units as a main reference, was perceived to be “improvable.”

Although some pinpointed the regression of delivered training compared to past years, others argued that it was another taken care of aspect as managers and employees each in their field receive training sessions (the recent tendency is the online ones as they are presumed to be more efficient) to familiarize with any change which are afterwards followed to check whether the project was well understood and

whether these people manage to carry their new day to day work and perceive along the way their potential added value.

Creating an appropriate environment is crucial to reduce stress and resistance while allowing a free flowing mode of thinking as already mentioned. The current workplace was perceived to be very pleasant and motivating in a sense that everyone is encouraged to participate by giving ideas and by exposing one's abilities and potential. The working environment had also been characterized by teamwork, cross functional collaboration, diversity's high respect and humanism (the workers' social aspects are respected).

An illustration of what had been observed might be presented so as to further support the previous findings. During the field exploration, a project idea development was witnessed: once the conditioning machines' cleaning program comes to an end, the distilled water that used to pass through all pipelines ceases to let the entrance of yogurt products. An issue had been revealed, the time accuracy of water and product follow turned to have some drawback, which led to a momentary pouring of a defective products. One member of the performance team had the idea of installing a conductivity meter that would detect the right moment to start the conditioning. Reaching out to a maintenance guru within the company, they measured the different conductivities (the one of distilled water, the mixture and pure product) and concluded the potential benefits of the proposed solution. The idea/ project was presented to the board for further investigation. This simple observation not only highlights the collaboration, teamwork and innovative culture Danoners own but also emphasizes the continuous improvement ideology incarnated within them.

Figure N°11: A Sample of Citations Regarding BPRs' Critical Success Factors

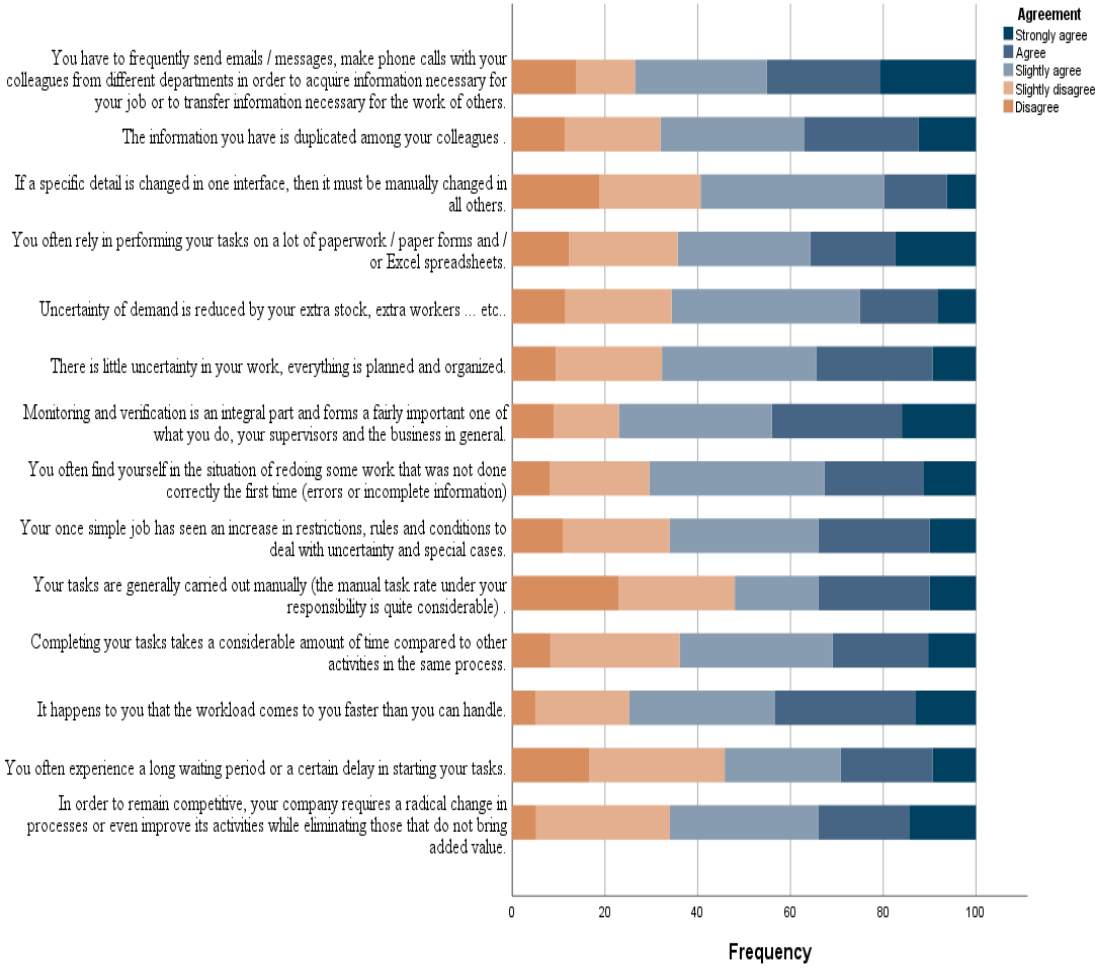
"Like any company operating with its unique management system such as SMS (Sanofi Manufacturing System) for instance, Danone disposes of DAMAWAY which is mainly inspired from TPS (Total Production System) practices constituting of different continuous improvement concepts and methods. One of its goals that we are currently working on is the hunting of all forms of waste, mudas, mûris and muras on all processes, it is our daily life, every day, every work, every action that we do registers in this..."
"Ah for us technology has a vital role… I would say we're in phase with technological movement as every time there's something new, there's a business intelligence, a new information system, all the things that can simplify work and life through automatization, Danone remains very open to it" "Comparing to locals, true we may claim that we are a little advanced in terms of technology but comparing to other international units we are far behind despite being in the process of improving" "So if you tell me that we take a solution and we adapt to it or change a whole process to follow it, then I would have to disagree. It doesn't always work, it may work for some people and companies but not for others".
" ... it still remains quite difficult to introduce any change due to others' resistance, it's common, but us as managers, we have to really try to bring out the necessity of change from employees themselves in order to minimize their resistance, so we have to make participate, properly communicate or explain and orient solutions' discussion in a way that these last comes from them ... It's necessary to involve people and be receptive to their propositions, you never know maybe they hold an idea which could have far better impact with diminished risks than what is already planned..." "Among the first things that I had been told with my arrival to the company is: " one can long be outstandingly competent and talented, but with no right attitude or behavior that goes along with it, no advancement is guaranteed"... So eventually I understood that this was the culture of Danone and the workplace I'll be operating in … And until now, it had been a pleasant experience especially with everyone's bound, feels more like a family than anything else and I recently integrated the company so imagine the feeling of people with more than 20 years in it!"

Source: Primary Data

1.2. Axe 02: Potential Process to Reengineer

1.2.1. Quantitative Results

Figure N°12: Responses Reflecting Process Dysfunctions



Source: Primary Data

Here presented is a tendency glance of overall processes dysfunctions. According to respondents from procurement-to-shipment (manufacturing/ production) process: national milk collection and milk collection development managers, raw material manager, production operators (41), shipping center operators (5) and production flow manager; all symptoms were affirmed with considerable frequencies. Following are the scored frequency ordered in an ascending order: excessive manual work (54.3%, mode: 1), data redundancy (average of 59.1%), little uncertainty in work (61%), extra inventory/ buffers and other asset (63.4%), complexity/ exceptions/ special cases (64.5%), data rekeying (65.2%, mode: 5), extensive communication exchange for

information acquisition or transfer (65.9%), bottlenecks (average of 66.3%), rework and iteration (67.5%,), high ratio of checking and control (75.5%, mode/ median: 4). In conformity, 65.2% of repliers judged a necessity of radical change of processes in order for the company to remain competitive.

Despite the aspirations and high endeavors to proceed the analysis with this transversal and cross functional manner, 02 inconveniences prevented so:

- ➔ Relying on the "occupied post" question as a mean to achieve appropriate tracking of process dysfunction was not as fruitful as expected. After 03 weeks of survey publication and distribution, only 45 answers were collected with a great majority of respondents being of the previous process. Aiming to diversify and collect further answers, an investigation on the lack of contribution was carried. Eventually, a decision was made to optionalize the question (under request of some employees) which led to 41 empty answers and 14 remaining ones (05 already included in previous process) (those that did trust the promised confidentiality) were either unclear or too scattered to link as a process. Even with, the sample size was neither large nor diverse enough compared to the objectives.
- ➔ In addition to this very last, only one employee within Algiers' headquarters responded to the online survey, which hence limits the analysis to the company's second level (manufacture).

In account of these drawbacks, following is the departmental classification of the remaining 55 (41+14) replies as for at least to provide a glimpse. Each cell represents the frequency of responses of the department on a particular dysfunction symptom statement (refer to survey in Appendix B). In contrast to all other departments which manifested considerably high frequencies for the majority of answers hence the approval for the necessity of radical change in activities so as for the company to remain competitive, supply had its only highest scores on statement 24 which regards complexity/ exceptions, and special cases (57.2%)[15].

[15] This might be potentially due to the rather recent TEC DAN deployment (a system used by warehousemen to register raw material transactions).

Table N°6: Responses Reflecting Process Dysfunctions Classified According to Department

	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Industry (39.2%)	80%	70%	70%	75%	70%	80%	85%	75%	75%	63.2%	65%	73.7%	57.9%	84.2%
Supply (13.7%)	42.9%	28.6%	28.6%	0%	14.3%	42.9%	14.3%	42.9%	57.2%	42.9%	14.3%	28.6%	42.9%	28.6%
Quality (17.6%)	88.8%	88.9%	55.5%	66.6%	66.6%	66.6%	66.6%	66.6%	55.5%	33.3%	44.4%	77.7%	55.5%	55.5%
Finance (9.8%)	100%	100%	60%	80%	100%	80%	100%	80%	80%	80%	60%	80%	40%	80%
R&I (5.9%)	100%	100%	0%	100%	66.6%	100%	100%	100%	66.7%	0%	66.6%	100%	100%	66.6%
Control (7.8%)	100%	100%	75%	50%	75%	75%	100%	75%	50%	25%	75%	100%	75%	75%
IS/IT (5.9%)	100%	100%	33.3%	100%	100%	100%	100%	100%	100%	66.6%	100%	100%	33.3%	66.6%

Source: Primary Data

1.2.2. Qualitative Findings:

As the quantitative analysis didn't bring much to light, hopes were on the qualitative one to not only reveal in-depth distressed processes but to highlight the most important ones to the regards of the company's clients and customers.

➢ In alignment to what had been already stated (DAMAWAY system), overall processes were viewed to be rather optimized and heading towards a favorable position (This years' (until July) productivity KPI had almost doubled comparing to last year). As a result, majority of interviewees had a hard time to clearly pinpoint a broken process not to mention its sources of defects. Probing further, some troublesome distinct activities were recognized yet most had its curative project on the way:

➔ Plastic crates: as packing goes along, the products get manually stacked in crafts and transported to cold storage rooms. Before being supplied to

production, these crafts which got retrieved from clients undergo extensive washing[16] as some get returned in rather unhygienic conditions. The issue that arises is when the planned production demand does not match the repossessed crafts (as some got lost or broken by clients), hence unexpected alteration of the plan (reduction) must be made to cover only the recollected crafts.

Currently, the company is planning to entirely obliterate this cleaning process by transiting to the use of cardboard boxes instead of plastic ones. This would not only allow it to cover a wider range of consumers (not having to make craft returning contracts) and liberate an important space within the factory but also to respect its sustainability engagement by the minimization of plastic and water consumption.

➔ Maintenance and spare parts: while this process was perceived to be 80% deficient for the lack of inputs and outputs tracking along with broken pieces analysis and valorization, benchmarks with other business units were made and a project for integrating the right procedures is forthcoming.

➔ Commercialization: due to the inability to find company's product in some regions or cities and the fact of stable demand (regardless of the current product quality and capacity to meet a large one), high focus is given by top management and actions are presently being done in the field (non disclosed).

➔ Despite existing procedures, purchases are made in a firefighting mode as there is a lack of anticipation, hence in the face of urgency a lot of exceptions are made leading to corner cutting.

Eventually, there was a strong emphasis on the necessity to properly apply the existing procedures and to adapt processes which could be done by undertaking slight improvements measures rather than radical ones.

- According to respondents, the core/critical processes that contribute directly to satisfying their clients/customers' needs and eventually to meeting the company's vision are: customer service, production, quality, logistics (inbound/ outbound) and maintenance.

[16] With its meticulous considerations for HSE aspects, the company disposed of craft cleaner close to workshop 2 (recalling the displayed company's sitemap).

Receiving on average 30 calls per month, clients and/or customers' feedback come to mainly cover acclamations, complaints and or information requests. Initially, the company's central focus was on best answering requirements and complaints. Though claimed to be very limited (despite the above target KPI for 2019 and the octupled rate from January- July 2020) and mostly taken care of[17], some cover pot deformation due to multiple product handling during supply, some cover taste (despite this being a personal preference, the company carries studies to identify the preponderance of such requirement and whether it aligns with its mission (or instance delivering an overly sweet product just to please its clients and consumer would contradict its values). Other concern different product features such as consistency, pot swelling or contamination[18].

Considering the numerous quality inspection points and hygiene/ safety policies (recalling ISO 22000 certification) within manufacture, most of these drawbacks were mainly tracked to the cold chain and selling points i.e. indeed, the most important thing is the quality in which the consumers buy the product form the selling points. Back in 2018, 56% (that is more than half) of selling points were not cold chain compliant. Hence, a process was developed (labeled store check) which consists of taking a sample of 32 store out of 45000 to verify the respect of temperature levels, hygienic conditions, products expiration dates, packaging state, right positioning and to analyze products' quality in comparison to when it left the factory. To further foster good practices, training/ awareness campaigns and bonus systems[19] for about 1070 sales points on a national scale were made so as to encourage the respect of the company's quality requirements.[20]

This year, to be more consumer centric, the company decided to dive deeper within their customers' enlightenment inquiries as it came to its realization that this last

[17] Though clients/ customers ' requirements are only expanding, the company was presumed to be quite attentive to these last as for every complaints, the product pot in question gets retrieved to proceed with further investigation within manufacture and provide compensations if needed.

[18] Taking for instance the time interval between 2013-2014. This era witnessed a significant decreases in customers complains regarding price, contamination, texture and filling in contrast with product availability, design, taste, foreign bodies and pot swelling.

[19] Bonus systems are quite common among different other rivals, but these last were presumed to be mainly restricted to turnover. Unlike these last, Danone in its trade marketing program labeled "CHRIKI" established another pillar based on quality conformity which is regarded to be unique to the company.

[20] Despite being a good initiative, it was deemed to have no significant difference in terms of market superiority as myriads of products are put under the same conditions.

covered 70% of all feedback calls. Beside the regular questioning such as sugar ratio and suitability for elderly/ infantile consumption, gluten presence was one of the frequent inquiries. Such input was communicated from customer service to the marketing department (which was not supposed to be fragments in the first place, creating therefore this back and forth information exchange) in order to explore any opportunity to include for instance the information on the packaging, overall this was perceived as an "improvement area".

Figure N°13: A Sample of Citations Regarding Process Dysfunctions and Importance.

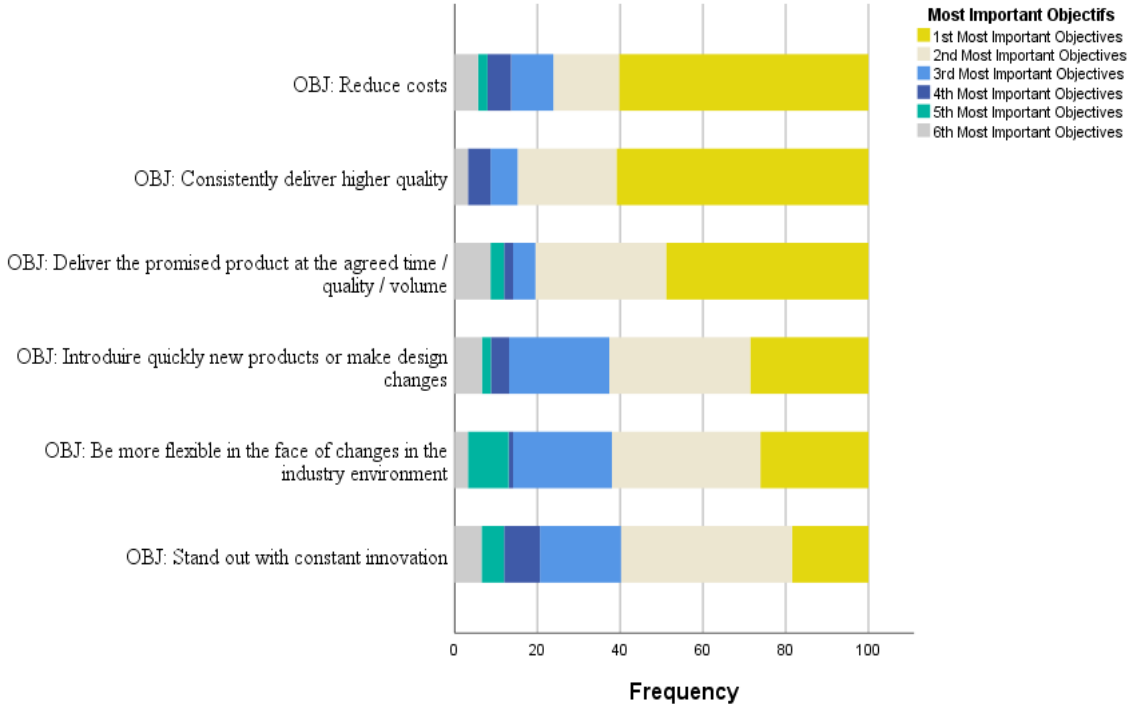
"You know working in the industrial means that we are confronted frequently with hazards that us and any company has to face, currently I have no process in mind that maybe broken or dysfunctional as you say… certainly again no process is 100% efficient nor perfect and remains so along decades, they all can lead at some point to these hazards, as I said we constantly try to improve things but if they still don't work despite the efforts then we have to break the paradigm ....though we can always do better but yes I would say that 80% of currents processes are optimized (the other 20% are due to the unavoidable human impact) "
"There is the quality of production including the use of premium raw materials so as to guarantee for our customers a good product available in large quantities, that is also to say, we must satisfy the distributors as the consumer must find the product all the time on store shelves...so I would say that all that is production, quality and supply is heart of our business." "...Certainly the customer is more and more demanding it's normal with all the means that he has today ... but to be honest I think that Danone can be more demanding than its customers especially in terms of quality, we set the bar really high but if something escapes us and we manage to have a complaints or a recommendations we remain attentive because after all it's thanks to the consumer that we are here ...". "For complaints, I would say that they are limited. For requirements, well they are quite simple to summarize: they want a cheap, constantly available premium product so for example if a product eventually costs 40 dinars, they would want it at 20 dinars and after all that is the work of marketing, to convince people that these 40da are worth it"

Source: Primary Data

1.3. Axe 03: Competitive Advantage

1.3.1. Quantitative Results:

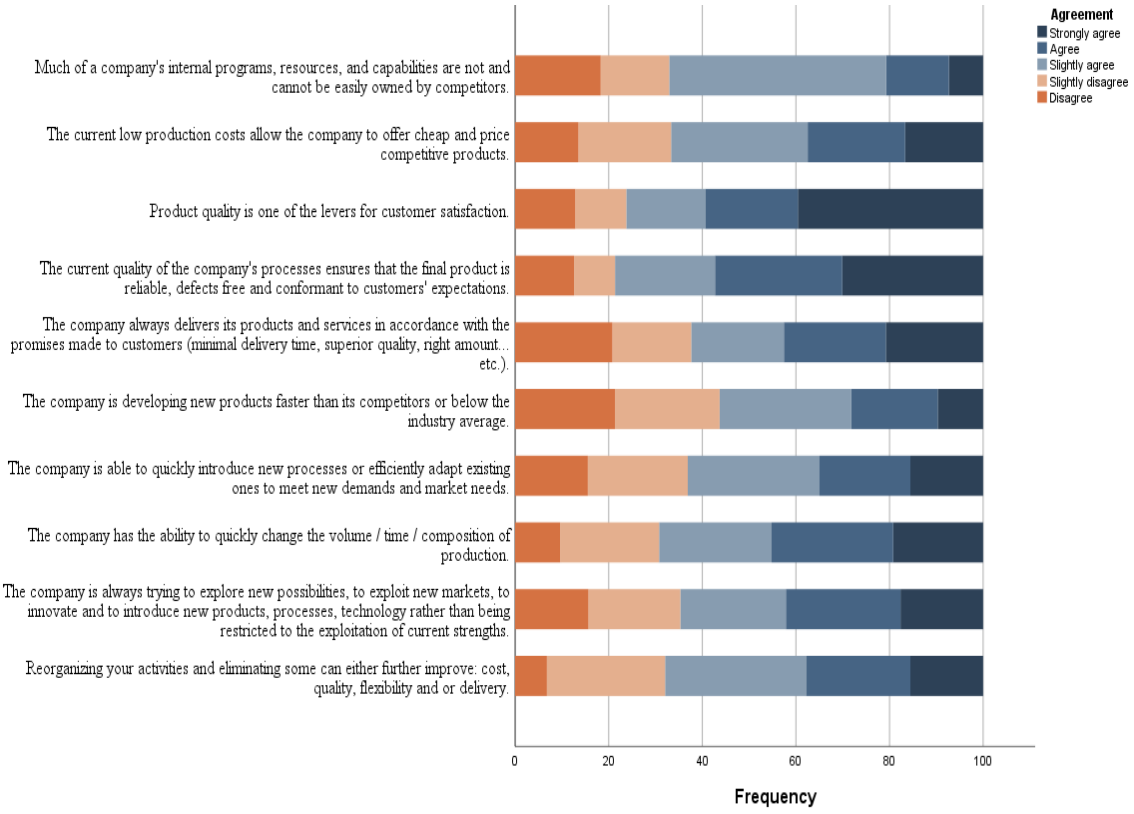
Figure N°14: Classification of the Most Important Objectives



Source: Primary Data

Simultaneously excelling every competitive dimension remains with no doubt a challenging if not an out of reach aspiration to any company. Opting to outvie on one or two characteristics or build up accordingly seems to be a more realistic choice. The proceeding graph indicates respondents' judgment on the company's competitive priorities. Sharing the same mode (1) The achievement of constant superior quality, cost reduction alongside convenient product delivery (promised time/ quality/ volume) are the three most important objectives the company under investigation lays emphasis on (60.9%, 60.2%, 48.9% respectively). Following these, in face of external change, standing out by constant innovation, being flexible and endeavoring to introduce new products or make design changes are the second top priority (41.3%, 35.9%, 34.1% correspondingly/ same mode: 2).

Figure N°15: Response Reflecting Competitive Dimensions



Source: Primary Data

In accordance with the previous results (most important objectives) and insinuation of the company's competitive advantage (67% agreement on the acquisition of non duplicable internal programmers, resources and capacities), an overall favorable estimation of its dimensions can be acknowledged. Starting form quality as it has the highest central tendencies (mode: 5 and median: 4)[21]. This last had been identified as a primary concern and as one of the customer satisfaction levers (76.2%), hence enough efforts are made to ensure that the current processes deliver as defect free and conform as possible (78.7%). Disposing of a capacity to change time/volume/ composition of products (mode 4) and a flexibility to introduce/ modify current processes to meet market requirements had also been affirmed (69.2%, 63.1% accordingly). Current production costs are perceived rather low allowing therefore the company to offer cheap and price competitive products (66.7% approval). Concerning delivery, there had been

[21] Meaning that the most frequent evaluation was a "strong agreement" and the value that split in half all the responses is 4 which implies an agreement as well.

an accordance on the company's ability to deliver indeed products according to customers' requirements (62.4%, mode: 4) however introducing new products faster than competitors or lower than the industry seemed more challenging (56.3%). In addition, the company is adjudged to be innovative and eager for new possibilities (64.6%, mode: 4). Despite all these positive feedback, the proposition of activity reengineering to improve either if not all these dimensions was asserted by 67.9% .

Concerning the reported recommendations for improving company's competitive dimensions, there were emphasis on:

- Expanding products portfolio and opting for a differentiation strategy (stressing on innovation).
- Reviewing current sales, commercial and distribution policies (especially this last).
- Reducing fixed costs by renegotiating rental contracts (warehouses, trucks and vehicles...etc.).
- Improving encouragement policies and communication (including manager/ non manager proximity, directing toward a common/ global objective instead of departmental objectives, even the headquarter transfer to manufacture level).
- Necessity to fasten decision making process.
- Necessity for further local sourcing.
- Necessity for further resource allocation and trainings.

1.3.2. Qualitative Findings:

➢ The current industrial environment was deemed to be rather volatile, uncertain and complex: volatile and uncertain in the sense of having to consistently firefight and manage unstable demand impacting therefore the whole procurement to supply process (considering for instance, in addition to the variations of trading rates, the required -quite lengthy- time to acquire raw material especially that much of these last are imported taking hence at least 2 to 3 months to be finally shipped). This makes it quite difficult and challenging to ensure product availability on one hand and avoid sales slumps and losses of finished ones on the other. Complex, as it

depends on several parameters, case in point with present global pandemic, impacting the economic situation with restriction on goods flow/ national transportation and most importantly the populations' purchasing power (with delivered products typology into bargain)[22].

- Since Danones' arrival on national market, it had been considered to be a prestigious phrontistery, thus being consistently on radar. Though in its landing, the instructions were not to be concerned nor compared to current competitors, the opponent party was eager to learn and imitate. Consequently, respondents claimed that the company's creation and existence had indeed evolved the dairy production activity on national level, ergo evolving its own rivals, ergo the current marketplace aggressiveness characterized with a significant product panel diversity yet disloyal rivalry.

  Surpassed by 2012, in face of a strong competitor which took lead (Soummam), the company fell to second rank owning a market share of more than 26%[23]. Regardless, the company was not adjudged to be in a critical situation but rather in an ambitious one with an affirmation of the company's capacity to cope and the current consistent multiplicative endeavors to follow the market and develop an entire strategy so as to regain leadership (all subsidiaries of holding company have the objective of being leaders in each established country). It's important to note that despite the obvious maximum profit goal, there had been a strong emphasis on first the inward focus (strategy based on mission and self-challenging rather than external competition) and second on selling rates as a non indicator of market leadership.

- Against one major rival, which has far greater agility in decision making[24], enormous expansion potential (including factory vastness), more production capacity/ variety (ease of size batches change) and advantageous gap given to its distributors[25]; the company under investigation also manifested its levers. Besides belonging to an international group of more than 100 years experience with a

[22] Not rudimentary with rather short expiration date.

[23] The remaining 10-15% are battled over by other rivals such as Ramdy, Hodna ..etc.

[24] Unlike a multinational that has several opinion leaders, procedures and validations; owning a company and being the main decision point significantly eases and fastens the call making.

[25] As distributors, to a certain extent, were perceived to be market rulers; the rival gives a consequent profit margin for them so as to select his product.

prominent brand image, meticulous considerations for hygiene/ food safety/environment, active customer listening, constant innovation, distributors loyalty, one indisputable competitive advantage that can neither be benchmarked nor duplicated was identified that is quality and product reliability (explaining the slightly below target finished product losses KPI form 2019-July 2020). From product development phase (healthy nutritious recipes), raw material selection criterion, manufacturing (diligent analysis) to selling points, quality gets checked and monitored every step of the way[26]. In addition there is a whole program labeled "Icare" which is an internal cultural quality program aiming to inspire quality mindset embodiment in Danoners' everyday work, "the living quality". [27]

- In what comes competitive dimensions:
  - A quality-cost trade-off was made clear. As already stated quality inspection on the plant level starts with raw material analysis i.e. If the supplied milk was identified to contain antibiotics, then the quality requirements obligates its disposal counting it hence as a loss, explaining therefore the slightly above target total loses including milk and plastic KPIs (2019- July/2020) (other rivals were presumed to use such substance regardless). Furthermore, if a manufactured product happens to not be perfectly conform to customers requirement it has to be also disposed, these all have a significant impacts on rising company's costs. But overall, controllable costs KPI is slightly under target which could be explained but all the initiatives the company is undertaking. A mending solution which could be stated for illustrative matters, in addition to all the industrial efforts form process optimization, projects are underway to alter products recipes by using local raw material while certainly maintaining premium quality[28] (reducing importation costs and stock-out risks) (refer also to the upcoming bullet point).

[26] Besides the store check program already mentioned, the company recently made an investment within its distributors warehouse for the round the clock automatic temperature tracking and monitoring so as to emphasize further the company's quality belief as a mean of superiority.

[27] The program/ award competition is structured around four drivers: fostering employee ownership, encouraging and promoting employee involvement and interaction in a continuous improvement approach, ensuring that Danone's Food Safety and Quality messages are sincere and consistent, promoting a visible commitment among leadership

[28] This might be also considered as a form of innovation.

* Revolving all mainly around decision making, time to market and flexibility were perceived to be rather unfavorable. As already pinpointed, operating within a multinational implies having several procedures and validation levels in contrast to having one decision point, hence the launch of a new product was judged to be significantly low comparing to rivals[29] and what comes to flexibility it was rather a technical setback for machines adaptation to minimum capacity production and to formats of products (explained somehow by the increase of change over and technical downtime KPI in comparison to set target). Regardless, there had been an agreement in the current ability to satisfy on time the type and volume of products required by clients especially with the potential factory expansion and current optimizations.
* As already hinted, the company was perceived to be rather in an ambitious state for its strong belief that a company that does not remain dynamic or innovative is doomed to fade. Ergo, innovation was indeed perceived not only as a mean to upfront intense rivalry but as a survival asset. There was an overall agreement on the consistent effort of demarcation by product innovation but then in light of the previous point (lack of flexibility) having variant products propositions with no mean of producing them might be useless.

➢ Besides the company's generic/ made public mission : "*Bringing health through food to as many people as possible*", two aims were brought to light: transiting towards the use of local raw material by raising awareness and training some of the national suppliers to rise up to the company's requirements and reducing product prices so as to expand the clients database (an adopted strategy since 2004). Any other strategic orientations were concealed under the obligation of business confidentiality.

➢ Besides issues concerning inflation, import customs clearance delays/ restrictions, clients' readiness for full charge declaration/ full taxes payment and overall disloyal rivalry, the closure of Blida's' manufacture made the highlight of preoccupations. With divergent outlooks: some attribute the reason of its closure to its human rather than technical factors (lack of belonging sense unlike the current one), some

[29] With a digital distribution KPI monitoring the rate of product presence on points of sales, delivery was perceived to be good

perceived reasons of optimizations (non profitability), other referred to it as a rather an investment made in the wrong time (2016 crisis impacting the dairy sector), yet majority agrees that endeavors are made to subcontract and repatriate as much of Blidas' equipment as possible enhancing further the capacity of current factory. With this, factory much creativity is needed to optimize the process (recall workshop 1) and the rather tight space of current.

- In addition to demand fluctuation (implying therefore a hesitation in further investment) and what is perceived to be rather a "disloyal" competition (for instance lack of transparency in day to day transactions), the company takes no risk in cutting corners hence jeopardizing the brand image and overall reputation of the group. Thus it could be said that the main setback the company is its own mission, values, standards, principles, and high requirements (even more meticulous than the ones of clients and customers).

Figure N°16: A Sample of Citations Regarding Competitive Advantage

"the Algerian market is very volatile and unstable. One month we can make sales of 1000 tons and then have way less in another so there this irregularity which impacts a whole lot … but we undergo things, we try to understand what is happening in the market but in the absence of exact market statistics, things get harder" "Our neighbors are indeed our rivals and they are quite strong, but you know Danone is not really based on competition, it has a strategy, a mission to bring health to many through the consumption of its nutritive products, Danone sets goals to achieve and annually challenges them ... True, the goal is always about improving the business but competition is not really the right word I would say ...though the Algerian budget is somehow restricted so there is this tendency to purchase the cheapest, but that at the expense of quality? each has a strategy!" " We are in an environment where things change constantly, how things are today won't necessarily hold valid for tomorrow, so we have to have this openness to learn, to adapt, to consistently improve things even if they seem good for the time being"
" Strictly speaking, Danone = Quality and Health, that's our real strength, that's the very essence of our business! With our robust quality system, we really tolerate no defect, no product can pass to customer level without detailed inspection of quality/ conformity and I think that's what makes customers consistently pick our products ….In fact, despite all the fake news (referring to the use of expired raw material in Blidas' manufacture), we called our distributors and selling points just to deny and prove these claims wrong. Surprisingly, we didn't even have to as they didn't even

believe that Danone would be that neglectful...” “Unfortunately there is a lot of innovation within Danone, we are really active in this sense, but we have seen them, personally I have seen them, duplicated by our competitors”
“Well, the 2030 vision and objectives are quite confidential but its safe to say that our main mission is delivering at the right time variant healthy, high quality product while preserving the integrity, safety and well-being of its employees in every sense of the word”
"... Our quality requirements are the ones that prevent us from being competitive in terms of price ... a product that is not of high quality we have to discard it, there is a real business impact for sure but we just can't afford to sell a non -compliant product, the health of the consumer is always our priority " "At Danone you have to know that there is a whole team working on industrial optimization, even at the level of the R&I department, there are products on the market that we try to optimize with new ingredients in order to keep the same quality ... optimization at Danone is always present...Every year the ingredients costs are rising, we always try to maintain the price, since increasing the price is the last lever in a company as it pleases literally no one". “If we compare to previous years, we are on the right path whether on factory indicators, point of sales indicators or the ones of consumer service we are on an improvement trend.” "we really have the ambition to do a lot of things ... if I could show you what we plan for this year, what we would like to do for the following ones, it's very ambitious: new type of formats, new recipes, new types of products completely innovative in Algeria, there's a lot of ambition ...in terms of innovation I think we're pretty good but then it's useless to have so many product propositions that cannot be distributed, to have a billion references without being flexible enough to produce them is useless...” "Introducing new products, in my opinion, if we are faster than the competitors, personally I don't think so because, you know our main competitor is a family-owned- company so the decision is usually made by one person, the boss. On the other hand at a multinational like Danone, there are several levels of responsibility, validation, there is a whole procedure to launch a product, there are also quality requirements on which we cannot argue about, we cannot buy an ingredient that does not meet international standards and specifically from Danone ... All the procedures that are put in place of course are there to secure the launch but unfortunately the constraint is that we are not faster than the competitor because simply he burns several steps along the way...."

" this is our goal, I mean to try to be flexible enough so as to satisfy all customers needs… our work, it's a flow driven by the customer, we already think customer-wise, I think all multinationals resonate the same, it's the customer who pulls the whole chain…" "The state that we live with production, especially in the factory, is flexibility being very difficult to attain. We have very little flexibility though we are trying recently to optimize certain recipes, which is a good thing, but we don't remain very flexible, so changes can't be made overnight…"
"In fact we as much as Danone we don't mind running ourselves over in terms of quality compliance and requirements, it's our only setback, if we follow the move and we allow ourselves to do what others are doing, we'll flood the market, we'll drown others …. but we have such strict requirements by the group, we would rather restrict ourselves for the sake of our values than take risks and impacting the brand reputation of the dairys' global leader" " .. but then it comes back to the Algerian culture, with all due respect, we have this mentality of jumping over opportunities even if they are not legit ..clearly if a distributor is given the chance not to pay as much taxes through the non declaration of full charges, sure they will take it! this is something that goes against us as such acts are prohibited..."

Source: Primary Data

2. Interpretation And Discussion

With the heterogeneous results presented (quantitative results generated from the perceptions of operational and support process employees and qualitative ones generated from departments heads/ senior managers), it's essential herein to endeavors acquiring greater insight via their merging.

Concerning the layout in which the company is, there was indeed some partial favorable corroboration and convergence on some aspects in contrast to some others that had risen conflicting appraisals. In what comes to continuous improvement, it is rather safe to assure not only the incarnation of ideologies and practices aiming to consistently enhance the existent hence sustain any potential reengineering endeavor, the customer orientation which is ones of BPRs' central axes, but also the prescient thinking[30] which

[30] Taking another illustration, the company under inquiry disposes of a referential for preventive risk evaluation labeled "DANGO". This set of potential risks covering all aspects of the business was developed by the holding company and which each subsidiary has to track and monitor. To note that there is a certain interval to additionally add any identified hindrance considering the diversity of countries and contexts.

turn to align with the nature of research inquiry (proactive probable deployment of BPR).

Despite the multinational culture facet being perceived as a potential change hindrance, deployed efforts to manage the roller coaster were indeed approved for both responses (to the exception of delivered trainings and appropriate recognition/ reward system for change milestone). These exertion include participative management (involvement and encouragement to feedback and suggestions (taking SIMs for instance)), pleasant/ motivating working environment (emphasis on teamwork, friendly interaction and strong sense of belonging) so as to urge these last and overall communication (specifically change communication through mock sessions, ambassadors, A3 cards... etc). Another favorable aspect is the multidimensional knowledge of employees and their autonomy which would particularly and most certainly ease the potential cross-functional teams creation (BPR requirement).

To what had been reported, besides the agreement on the given technological importance hence the ongoing efforts to provide necessary technological tools and skills, survey results and interview findings pinpointed a divergence regarding technological alignment (comparing to other business units) and issues regarding interfunctional control as despite the availability of a SAP ERP which was supposed to integrate information, there was still complaints about the access limitation and information acquisition, thus creating extensive communication, thus the insinuation for the process teams transition necessity. "*A company that looks for problems first and then seeks technology solutions for them cannot reengineer*" (Hammer & Champy, 2002, p. 87), as a major setback, such inductive reasoning was not manifested by top managers (the ones that are supposed to push the imitative (BPR as a top-down approach)) .

Concerning reengineering opportunities, high divergence was noted. Taking for instance the procurement-to-shipment process which manifested an overall agreement (of at least 50%) on each reengineering/ dysfunctional symptom even so with the departmental responses to the exception of supply), interviews in opposition revealed that such process among other are well optimized (to the exception of purchase practices) emphasizing further the company's eminence and its DAMAWAY standards deployment for the chase of efficiency. Even if there was any "undisclosed"

shortcomings, either adaptation or continuous improvement was presumed to be sufficient to get back on track in contrast to survey responses on necessity for radical changes as a mean for the company to remain competitive.

Alternatively, identifying customers complaints and requirements so as to track them back to their responsible processes, had unfortunately not evinced much as regardless of the scorecards' octupled rate[31], claims for their well management had been advanced (recalling the illustration of store check process).

Supposedly, if majority of core business processes are optimized (or on the way to be considering the undertaken projects) and if all customers feedback had been taken to account, how come the company still dwells in 2nd position?

In face of a VUC market (Volatile, Uncertain, Complex) and aggressive yet disloyal rivalry, the company relies mostly on one main differentiating advantage that is the vigorousness to insure nutritive premium products (besides the aforementioned competitive sources). This last was regarded as the utmost company's priority and had indeed the highest confirmation for both data sets considering the strong "non-benchmarkable" internal requirements and policies embodied within its DNA and a whole culture directed towards such a cause. As a double edged sword, these high standards were recognized as one of the two aspects that restrains the company from dominating the market. Despite the interview posited quality/ cost trade-off (opposed to quantitative estimations), high endeavors are being made (a 16 years strategy on implementation) so as to reduce them.

Though the company was adjudged to be flexible in terms of time/ volume/ product composition (even with the pinpointed KPIs) and to deliver these according to requirements, the second restraining aspects (easiness and fastness of decision making due to the multinational nature of the company) prevents competing on dimensions like time to market and flexibility to acquire or change certain assets. Due to this latter, being highly innovative with no concretizing means (especially in matters of product variety) was presumed to be unavailing.

[31] Though the year 2019 also witnessed a 5/3 increase than of the preceding one, the current above target octupled customer complaints' rate would most undeniably had been impacted by international and national pandemic circumstances.

CONCLUSION

The very essence of this research was to not only investigate whether Danone Djurdjura manifests any favorable practices that would untimely help deploy or sustain a potential reengineering initiative but also reveal business process(es) evincing symptoms that would call upon such practice so as to eventually and potentially improve the company's competitive advantage or support its current one.

To acquire breadth and depth insights, a fixed convergent mixed method design was used targeting two distinct organizational levels: interviewed top managers who endeavor to defend their current doctrine/ managerial choices and surveyed operational subordinates who hold a rather critical eye toward these last, yielding therefore to both accordance and controversy.

Considering its belonging to 100 years potent holding company which constantly fortifies its subsidiaries with distinguishable mindset and habits, the case under investigation was perceived to outive in quality and innovation as competitive dimensions in contrast with some controversial hindrances insinuation to rival over costs, delivery and flexibility. The venture to sustain or enhance these lasts lead to a certain bewilderment as in the attempt to reveal any reengineering opportunity, conflicting results were exhibited: quantitative results (whether procurement-to-shipment core business process or departmental responses) checking myriads of dysfunctional symptoms and need for radical changes in processes while qualitative ones promoting the well optimized processes (company occupying 2nd largest market share and a superior outlook comparing to other local challengers hence a lack of urgency for such grand effort). Nonetheless in alignment to a prominent interviewee stating: "*We must always anticipate the near and far future...We must always think that if another company with a great capital, capacity and which master both our advantages and the one of our rivals decides to invest and rival in the Algerian market, it will undoubtedly dominate and lead the market*", the long term success was deemed jeopardized. For such, and for the favorable affirmation of continuous improvement and change management/ other variants, a definite necessity to review in-depth the already pinpointed process along with the hints on decision-making, sales (prospect-to-order), purchase and distribution but still this would be quite challenging as the lack of BPR

knowledge along with the refuted inductive reasoning (as an axial information technology aspect) were identified, being hence a serious hurdle.

Candid once more and regardless of the endeavors, drawbacks of this research are plenty though out of reach. Plainly, in addition to what had been already stated within methodological chapter and time restriction to pursue further clarifications on results' divergence, confidentiality directly impacted the output of the study as not only the strategic orientations were indisputably concealed thus an incapacity to prospectively align a potential BPR project but also the non disclosure of internal benchmarks among other subsidiaries driving hence the alternative investigation of IT thinking among managers rather than embracing it. Furthermore, not enough responses were recorded (especially the non contribution of headquarter employees) not to mention the inability to track functions to processes (as a consequence of removing occupied post inquiry). Last but not least, it is worth mentioning that any reengineering project, as complex as it is, requires a full team responsible for process diagnose/ redesign and implementation, a reengineering czar, leader, process owner and steering committee.

REFERENCES

AKOKA, Jacky, CHOKRON, Michel & COMYN-WATTIAU, Isabelle (n.d.). Une démarche d'aide au choix d'une méthode de reconfiguration de processus. Retrieved from: http://www.sietmanagement.fr/wp-content/uploads/2016/04/BPR-Akoka.pdf

AL-MASHARI, Majed & ZAIRI, Mohamed (1999). BPR implementation process: an analysis of key success and failure factors. Business Process Management Journal, Vol. 5, Iss. 1, pages. 87-112.

AL-QUDAH, Kamel A.M.(2012). The impact of total quality management on competitive advantage of pharmaceutical manufacturing companies in Jordan. Perspectives of innovations, Economics and Business, Vol.12, Iss.3, 17 pages.

ATTARAN, Mohsen (2004). *Exploring the relationship between information technology and business process reengineering*. Information & Management, Vol. 41, Iss. 5, pages 529-684.

ATTARAN, Mohsen & WOOD, Glenn G. (1999). *How to succeed at reengineering*. Management Decision, London, Vol. 37, Iss. 10, pages 752-757, DOI: http://dx.doi.org/10.1108/00251749910302845,

ÁVILA, Rafael (2015). *The Different Kinds of Business Processes.* Retrieved from: https://blog.luz.vc/en/o-que-e/os-diferentes-tipos-de-processos-de-negocio/

A walk through Danone's History (2016). Retrieved from: https://medium.com/@Danone/a-walk-through-the-danones-history-a031acdb7335

BALDWIN, Carliss Y (2015). Bottlenecks, Modules and Dynamic Architectural Capabilities: working paper, third draft. Harvard Business School, 52 pages. Retrieved from: https://www.hbs.edu/faculty/Publication%20Files/15-028_ec57f2ea-890d-4243-b9f3-60784359bab9.pdf

BARNEY, Jay (1991). *Firm resources and sustained competitive advantage*. Journal of Management, Vol. 17, Iss. 1, pages 99-120. Retrieved from: https://josephmahoney.web.illinois.edu/BA545_Fall%202019/Barney%20(1991).pdf

BHASKAR, Hari Lal & SINGH, R.P. (2014). *Business process reengineering: A recent review*. Global Journal of Business Management, Vol. 8, Iss. 2, pages 24-51.

BALDWIN, Carliss Y. (2015). *Bottlenecks, Modules and Dynamic Architectural Capabilities*. Working Paper, Harvard Business School, 52 pages.

BOGDĂNOIU, Cristiana (n.d.). Business process reengineering method versus kaizen method. Faculty of Financial Accounting Management Craiova, *Spiru Haret* University, Romania.

BRYMAN, Alan & Bell, EMMA (2011). Business research methods. Third edition. Published in the United States. Oxford University Press Inc, 806 pages.

BUDIONO, Arip & LOICE, Romy (2012). *Business process reengineering in motorcycle workshop X for business sustainability*. International Conference on Small and Medium Enterprises Development with a Theme "innovation and sustainability in SME development" (ICSMED 2012), Elsevier Ltd, SciVerse Science Direct, Procedia Economics and Finance 4, pages 33 – 43, DOI: 10.1016/S2212-5671(12)00318-8

CHEN, Yih-Chang (2001). *Empirical Modeling for Participative Business Process Reengineering.* A thesis submitted in fulfillment of the requirements for the award of Doctor in Philosophy, Department of Computer Science The University of Warwick, 308 pages. Retrieved from: http://wrap.warwick.ac.uk/4204/1/WRAP_THESIS_Chen_2001.pdf

CHILISA, Bagele & KAWULICH, Barbara (2012). *Selecting a research approach: Paradigm, methodology and methods*. 21 pages. Retrieved from: https://www.researchgate.net/publication/257944787

CRESWELL, John. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches.* Forth Edition. Printed in the United States of America, SAGE Publications, Inc, 285 pages.

CRESWELL, John. W., CRESWELL, J. David (2018). *Research design qualitative, quantitative, and mixed methods approaches*. Fifth Edition. Printed in the United States of America, SAGE Publications, Inc, pages 301-303.

CRESWELL, John W. & PLANO CLARK, Vicki L. (2018). *Designing and Conducting Mixed Methods Research*. Third Edition. Printed in the United States of America, SAGE Publications, Inc, 760 pages.

CUCLESCHIN, Andrei (2019). *Interview Transcription: 3 Types of Transcription Explained*. Retrieved from: https://www.amberscript.com/en/blog/3-types-of-transcription-explained.

DRAGOLEA, Larisa & COTIRLEA, Denisa (2009). *Benchmarking - a valid strategy for the long term?* Annales Universitatis Apulensis Series Oeconomica, Vol. 11, Iss. 2, 14 pages.

DUDOVSKIY, John (n.d.). *Ethical Considerations*. Business Research Methodology. Retrieved from: https://research-methodology.net/research-methodology/ethical-considerations/

EDMONDS, W. Alex, & KENNEDY, Thomas D. (2017). *An applied guide to research designs: Quantitative, qualitative, and mixed methods*. Second Edition, Printed in the United States of America, SAGE Publications, Inc, 387 pages.

ELOÍSA, Díaz-Garrido, PEÑA, Martín, LUZ, María, LÓPEZ, Sánchez, MARÍA ,José (2015). *Operations Practices and Competitive Priorities: Impact of the Operations Strategy on Performance*. Research Journal of Recent Sciences, Vol. 4, ISS. 11, pages 103-114. Retrieved from: http://www.isca.in/rjrs/archive/v4/i11/15.ISCA-RJRS-2014-1125.pdf

EZE, Benneth Uchenna, ADELEKAN, Saidi Adedeji & NWABA, Emmanuel Kanayo (2019). *Business process reengineering and the performance of insurance firms in Nigeria*. Emerging Markets Journal, Vol. 9, Iss. 1, pages 44-48, DOI: 10.5195/emaj.2019.163, http://emaj.pitt.edu

FITZGERALD, Brian & MURPHY, Ciaran (1996). *Business process reengineering: The creation and implementation of a methodology*. Canadian Journal Information Systems and Operational Research (INFOR), 19 pages.

FRED, R. David & FOREST, R. David (2017). *Strategic management concepts and cases*. Pearson Education, Inc, 701 pages.

GALE, Nicola K., HEATH, Gemma, CAMERON, Elaine, RASHID, Sabina & REDWOOD, Sabi (2013). *Using the framework method for the analysis of qualitative data in multi-*

disciplinary health research. BMC Medical Research Methodology, Vol.13, Iss. 117, 8 pages.

GANAPAVARAPU, Leela Krishna & PRATHIGADAPA, Sireesha (2015*). Study on total quality management for competitive advantage in international business*. Arabian Journal of Business and Management Review, Vol. 5, Iss. 3, 4 pages, DOI:10.4172/2223-5833.1000124

GREENER, Sue (2008). *Business research methods*. Ventus Publishing Aps, 110 pages.

GRUCHMAN, Grzegorz B.(2009). *The process-based view of a company: principles and applications*. BPTrends, 12 pages.

GROVER, Varun & KETTINGER, William J. (1998). Business Process Change: Concepts, Methods And Technologies. Center for Information Management and Technology Research: College of Business Administration, University of South Carolina. Idea Group Publishing.

HABIB, Muhammad Nauman (2013). *Understanding critical success and failure factors of business process reengineering*. International Review of Management and Business Research, Vol. 2, Iss.1, 11 pages.

HAKKAK, Mohammad & GHODSI, Masoud (2015). *Development of a sustainable competitive advantage model based on balanced scorecard.* International Journal of Asian Social Science, Vol. 5, Iss. 5, pages 298-308

HALL, Ralph (2014). *Mixed methods: In search of a paradigm*. Chapter in Undertaking Research in a Challenging and Changing World, 11 pages, https://www.researchgate.net/publication/259045135

HAMMER, Michel (1990*). Reengineering Work: Don't Automate, Obliterate*. Harvard Business Review. Retrieved from: https://hbr.org/1990/07/reengineering-work-dont-automate-obliterate

HAMMER, Michel & CHAMPY, James (2002). *Reengineering the corporation: A Manifesto for business revolution*, HarperCollins Publishers, Inc, 271 pages.

HBS Toolkit - Basic Operations Self-Instructional Workbook (n.d.). Retrieved from: https://hbswk.hbs.edu/archive/hbs-toolkit-basic-operations-self-instructional-workbook

IKON, Michael. A., ONWUCHEKWA, Faith. C., & NWOYE Christina. O. (2018). *Business process reengineering (BPR) and competitive advantage in a recessed economy: A study of selected brewing firms in Anambra state, Nigeria*. International Journal of Management Technology, Published by European Centre for Research Training and Development UK, Vol. 5, Iss. 2, pages 1-15.

IMMACULATE, Naibei Chepkemoi (2017). *Business process reengineering practices and performance of pharmacy and poisons board in Kenya*. A research project submitted in partial fulfillment of the requirement for the award of master degree of business administration of Kenyatta University, 92 pages.

JAMALI, Gholamreza, ABBASZADEH, Mohammad Ali, EBRAHIMI, Mehran & MALEKI, Tahereh (2011). *Business process reengineering implementation: Developing a causal model of critical success factors*. International Journal of e-Education, e-Business, e-Management and e-Learning, Vol. 1, Iss. 5, pages 354-359.

JONES, Louis G (2013). *The sustainability of lean manufacturing as a competitive advantage*. A thesis submitted in fulfillment of the requirements for the award of master degree in science, faculty of Technology Brigham Young University, 71 pages https://scholarsarchive.byu.edu/etd/3732

KAWULICH, Barbara B. (2015). *Collecting data through observation*. Retrieved from: **https://www.researchgate.net/publication/257944783_Collecting_data_through_observation**

KORANKYE, A. Addae (2013). *Total quality management (TQM): A source of competitive advantage. a comparative study of manufacturing and service firms in Ghana.* International Journal of Asian Social Science, Vol. 3, Iss. 6, pages 1293-1305. Journal homepage: http://www.aessweb.com/journal-detail.php?id=5007

LAGUNA, Manuel & MARKLUND, Johan (2013). *Business process modeling, simulation and design.* Second Edition, CRC Press Taylor & Francis Group, 668 pages.

LASALEWO, Trifandi, MASRUROH, Nur Aini, SUBAGYO, HARTONO, Budi , AGUNG YUNIARTO, Hari (2016). *The effect of competitive advantage and human advantage on*

industrial competitive strategy (Case study: SMIs in Gorontalo Province). Journal of Indonesian Economy and Business, Vol. 31, Iss. 3, pages 307 – 324.

LIH, Jeffrey & CHANG, Jen (2000). *Exploring the links between business process reengineering and small and medium-sized enterprises*. A dissertation submitted in fulfillment of the requirements for the award of the degree of Doctor in Philosophy, faculty of Social Studies at the Warwick Business School, University of Warwick

MAAROUF, Heba (2019). *Pragmatism as a Supportive Paradigm for the Mixed Research Approach: Conceptualizing the Ontological, Epistemological, and Axiological Stances of Pragmatism*. International Business Research, Published by Canadian Center of Science and Education, Vol. 12, Iss. 9, DOI:10.5539/ ibr.v12n9p1, http s://doi.org/10.5539/ibr.v12n9p1

MAGUTU, Peterson Obara, NYAMWANGE, Stephen Onserio & KAPTOGE, Godwin Kiplimo (2010). *Business process reengineering for competitive advantage: Key factors that may lead to the success or failure of the BPR implementation (The Wrigley Company)*, African Journal of Business & Management (AJBUMA), Vol. 1, pages 135-150. http://www.aibuma.org/journal/index.htm

MALAČIČ, Nina & MALAČIČ, Iztok (2016). *Key factors for successful financial and business restructuring with a general corporate restructuring model and Slovenian companies case studies*. Institute for Economic Research, Ljubljana, Occasional Paper No. 9, 58 pages.

MILAN, R., MILAN, B. , MARKO, C., JOVANOVIC, V., DALIBOR, B., BOJIC, Z., AVRAMOVIC, N. (2014). *Implementation of Business Process Reengineering in Human Resource Management*. Inzinerine Ekonomika-Engineering Economics, Vol. 25, Iss. 2, pages 211–222.

MILES, Matthew, B. & HUBERMAN, A. Michael (1994). *An expanded sourcebook: qualitative data analysis*. Second Edition. Printed in the United States of America, SAGE Publications, Inc, 352 pages.

MILLER & JOHNSON, William (1996). *A working definition for total quality management (TQM) researchers*. Journal of Quality Management, Vol. 1, Iss. 2, 6 pages.

MITCHELL, Emma (2014). *6 Indicators Your Business Processes are Inefficient.* Eclipse. Retrieved from: https://www.eclgrp.com/blog/6-indicators-your-business-processes-are-inefficient

MOMANYI, Evanson. K.N (2012). *Business process reengineering for performance improvement: a case study of Kenya petroleum refineries limited*. A research project submitted in partial fulfillment of the requirements for the award of master degree in business administration, school of business, Nairobi University., 85 pages.

MOONEY, ANN (2007). Core competence, distinctive competence, *and competitive advantage: What is the difference?* Journal of Education for Business, Heldref Publications, pages 110-115.

MOTWANI, Jaideep, KUMAR, Ashok, JIANG, James & YOUSSEF, Mohamed (1998). *Business process reengineering: A theoretical framework and an integrated model*. International Journal of Operations & Production Management, Vol. 18, pages 964-977.

MUGO, Rebecca Mukami & KARIUKI, Paul (2018). *Influence of business process reengineering on sustainable competitive advantage: A case study of UAP old mutual*. Journal of International Business, Innovation and Strategic Management, Vol. 1, Iss. 7, pages 163 - 178.

NADARAJAH, Devika A/P (2013). *Fostering sustainable competitive advantage through business process management.* Thesis Submitted In Fulfillment Of The Requirements For The Degree Of Doctor Of Philosophy, Faculty Of Business And Accountancy University Of Malaya Kuala Lumpur, 297 pages.

NGOWI, Alfred. B. & RWELAMILA, Pantaleo. D. (1999). *What is a competitive advantage in the construction industry?* Cost Engineering, Research Library, Vol. 41, Iss. 2, pages 30-36.

OKESOLA, Opeyemi Omololu (2016). *Business Process Reengineering As A Tool To Gain Competitive Advantage*. Dissertation Submitted In Partial Fulfilment Of The Requirements For The Degree Of Master Of Business Administration At Assam Don Bosco University, 134 pages.

ONWUEGBUZIE, A. J., & COLLINS, K. M. (2007). *A Typology of Mixed Methods Sampling Designs in Social Science Research*. The Qualitative Report, Vol. 12, Iss. 2, pages 281-316. Retrieved from: https://nsuworks.nova.edu/tqr/vol12/iss2/9

O¨STLUND, Ulrika, KIDD, Lisa, WENGSTRO¨M, Yvonne & ROWA-DEWAR, Neneh (2011). *Combining qualitative and quantitative research within mixed method research designs: A methodological review*. Elsevier Ltd., International Journal of Nursing Studies, Vol. 48, pages 369–383, journal homepage: www.elsevier.com/ijns

Overview of activities, risks factors: Danone registration document (2017). Retrieved from: http://ddr2017.danone.com/pdf/overview-of-activities-risk-factors.pdf

OZSOY, Beliz & VAYVAY, Ozalp (2012). *Business Process Reengineering: Strategic Tool for Managing Organizational Change an Application in a Multinational Company*. International Journal of Business and Management, Vol. 7, Iss. 2, pages 89-112. Retrieved from: http://dx.doi.org/10.5539/ijbm.v7n2p89

PEARSON, Sonia (n.d). Types of business processes explained: A full guide on business processes. Retrieved from: https://tallyfy.com/types-of-business-processes/

PENROSE, Edith (1959). *The Theory of the Growth of the Firm*. Forth Edition. Oxford University Press Inc., New York, 301 pages.

PORTER, Michael. E. (1979). *How Competitive Forces Shape Strategy*. Harvard Business Review. Retrieved from: https://hbr.org/1979/03/how-competitive-forces-shape-strategy

PORTER, Michael E. (1985). *Competitive advantage creating and sustaining superior performance*. New York: Free Press, 557 pages.

PORTER, Michael E. (1996). *What is strategy?* Harvard Business Review. Retrieved from: http://www.rcmewhu.com/upload/file/20150528/20150528184258_9036.pdf

RAYMOND, Louis, BERGERON, François & RIVARD, Suzanne (1998). *Determinants of business process reengineering success in small and large enterprises: An empirical study in the Canadian context*. Journal of Small Business Management, Research Library, Vol. 36, Iss. 1, pages 72-85.

RITCHIE, Jane & LEWIS, Jane (2003). *Qualitative research practice: a guide for social science students and researchers*. Printed in Great Britain, The Cromwell Press Ltd, Trowbridge, Wiltshire, SAGE Publications Inc, 349 pages.

RIYANTO, Agus, PRIMIANA, Ina , AZIS ,Yunizar &, AZIS Yudi (2018). *Reengineering support for competitive advantage through organizational basis, information and communication technology: a literature review*. Problems and Perspectives in Management, Vol.16, Iss.3, pages 464-476. DOI:10.21511/ppm.16(3).2018.37

SACHITRA, Vilani (2016). Review of Competitive Advantage Measurements: Reference on Agribusiness Sector. J*ournal of Scientific Research & Reports, Vol.12, Iss, 6, 11 pages.*

SHEEHAN, Norman T. & FOSS, Nicolai J. (2009). *Exploring the roots of Porter's activity-based view*. Journal of Strategy and Management, Vol. 2, Iss. 3, pages 240-260.

SIMASIKU, Peter Lubosi & NGOMA, Jacob (2018). *Business process reengineering (BPR): Is Zambia's manufacturing industries aware of the benefits that this strategy brings?* International Journal of Scientific & Engineering Research, Vol. 9, Iss. 2, pages 1072- 1081.

SIMPSON, Mike, KONDOULI, Dimitra & WAI, Pui Hung (1999). *From benchmarking to business process re-engineering: A case study.* Total Quality Management, Research Library, Vol. 10, pages 717- 724.

SIUDEK, Tomasz & ZAWOJSKA, Aldona (2014). *Competitiveness in the economic concepts, theories and empirical research.* Acta Scientiarum Polonorum Oeconomia, Vol. 13, Iss. 1, pages 91-108.

SMITH, Yaakov (2016). *4 Tips to Identify and Fix Basic Business Inefficiencies*. Small Biz Club: Learn, Network, Belong. Retrieved from: https://smallbizclub.com/run-and-grow/operations/4-tips-identify-fix-basic-business-inefficiencies/

SMITH, Big (2018). 7 Signs Broken Workflows Are Getting in Your Way. My Venture Pad. Retrieved from: https://myventurepad.com/7-signs-broken-workflows-are-getting-in-your-way/

SRINIVASAN, R. (2011). *Business Process Reengineering.* Published by the Tata McGraw Hill Education Private Limited, pages 218.

TAQUES, Fernando Henrique, LOPEZ, Manuel G., BASSOC, Leonardo F., AREAL, Nelson (2020). *Indicators used to measure service innovation and manufacturing innovation*. Journal of Innovation & Knowledge, 17 pages. Retrieved from: https://www.researchgate.net/publication/338521322_Indicators_used_to_measure_service_innovation_and_manufacturing_innovation

TEDDLIE, Charles & TASHAKKORI, Abbas (2009). *Foundations of Mixed Methods Research Integrating Quantitative and Qualitative Approaches in the Social and Behavioral Sciences*. Printed in the United States of America, SAGE Publications, Inc, 339 pages.

TEPLOV, V.I., TARASOVA, E.E., MATUZENKO, E.V., ALYABIEVA, M.V & BELENOV. O.N. (2016). *Commercial activity business processes reengineering: Theoretical, methodological and practical aspects*. Journal of Advanced Research in Law and Economics, Vol. 6, Iss. 3, pages 649 – 661, DOI: 10.14505/jarle.v7.3(17).22. Retrieved from: http://www.asers.eu/journals/jarle/jarle-issues.

The Danone company sustainable development overview: 2015 strategic initiatives. Retrieved from: http://www.dannon.com/wp content/uploads/2014/02/2015_Dannon_Sustainability_Brochure.pdf

VENKATAIAH. C.H., SAGI, Srilalitha (2013). *Business process re-engineering in manufacturing and service industries-some perspectives*. ZENITH International Journal of Multidisciplinary Research, Vol.3, Iss. 1.

VERMA, Neha & SHARMA, Vinay (2017). *Sustainable competitive advantage by implementing lean manufacturing: A Case study for Indian SME*. Elsevier Ltd, Science Direct Materials Today: Proceedings 4, pages 9210–9217.

VINAYAN, Gowrie, JAYASHREE, Sreenivasan & MARTHANDAN, Govindan (2012). *Critical Success Factors of Sustainable Competitive Advantage: A Study in Malaysian Manufacturing Industries.* International Journal of Business and Management, Vol. 7, Iss. 22, 17 pages. Published by Canadian Center of Science and Education. Retrieved from:: http://dx.doi.org/10.5539/ijbm.v7n22p29

WANJIKU, Wambugu Annah (2012). *Factors influencing competitive advantage of firms in the micro finance industry in Kenya*. A Research Project Submitted To The School Of Business In Partial Fulfillment Of The Requirements For The Award Of The Master Degree Of Business Administration in The University Of Nairobi, 51 pages.

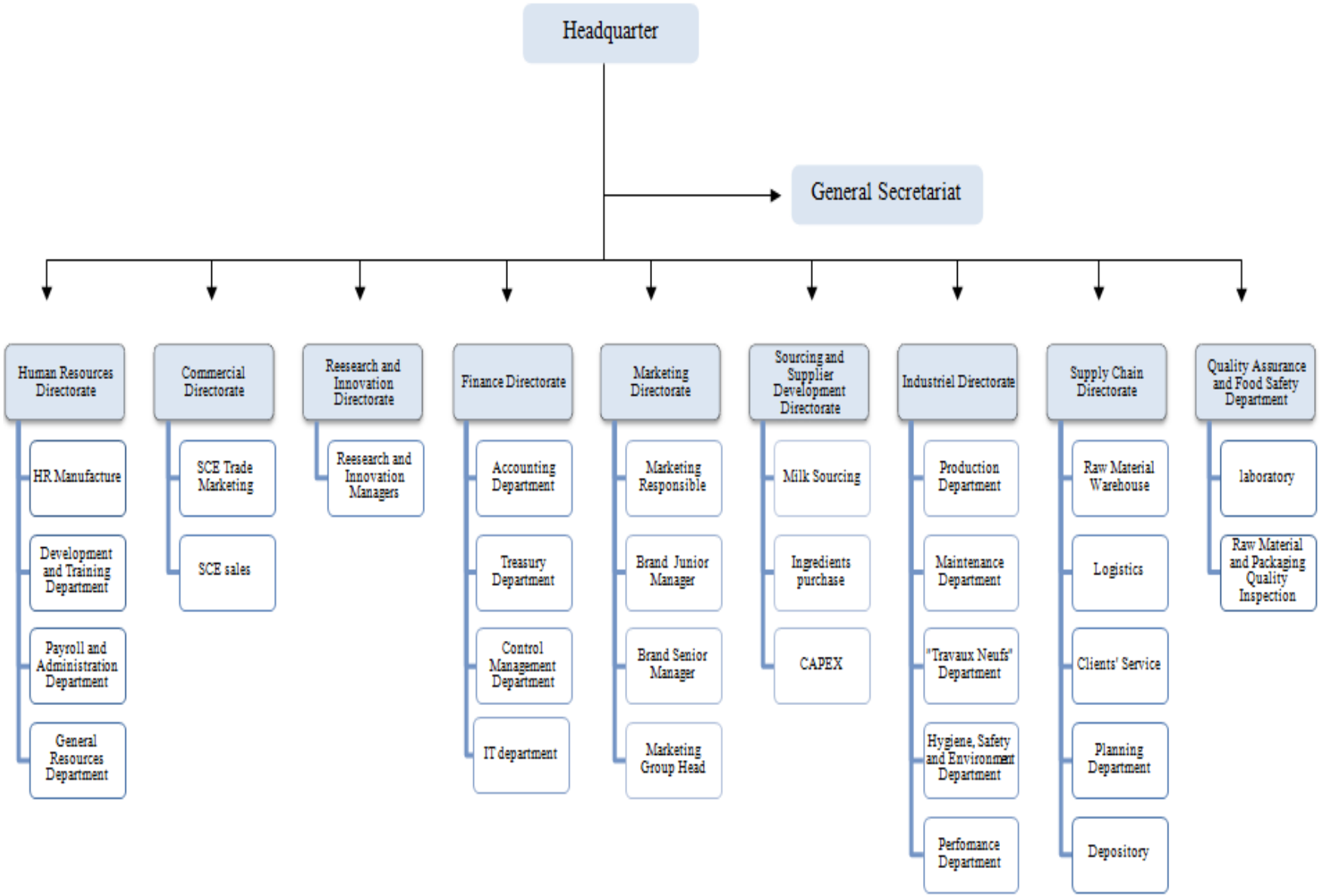
WERNERFELT, Birger (1984). *A Resource-Based View of the Firm*. Strategic Management Journal, Vol. 5, Iss. 2, pages 171-180. Retrieved from: http://web.mit.edu/bwerner/www/papers/AResource-BasedViewoftheFirm.pdf

WILFRED, Marangu, BERNARD, Oyagi , GEORGE, Gongera Enock (2014). *An analysis of concentric diversification strategy on Organization competitiveness: Case of sugar firms in Kenya.* European Journal of Business and Management, Vol. 6, Iss. 19, pages 175-180.

WORTHINGTON, Tom (2009). *Green Technology Strategies: using computers and telecommunications to reduce carbon emissions*. Tomw Communications, PO Box 13, Belconnen ACT 2617, Australia.

ZEMGULIENE, Jolanta & VALUKONIS, Mantas (2018). *Structured literature review on business process performance analysis and evaluation.* The International Journal Entrepreneurship And Sustainability Issues, Vol. 6, Iss. 1, pages 226-252. Retrieved from: https://doi.org/10.9770/jesi.2018.6.1(15).

APPENDIX A- DANONE DJURDJURA ORGANIGRAM


Headquarter
General Secretariat
Human Resources Directorate
HR Manufacture
Development and Training Department
Payroll and Administration Department
General Resources Department
Commercial Directorate
SCE Trade Marketing
SCE sales
Reesearch and Innovation Directorate
Reesearch and Innovation Managers
Finance Directorate
Accounting Department
Treasury Department
Control Management Department
IT department
Marketing Directorate
Marketing Responsible
Brand Junior Manager
Brand Senior Manager
Marketing Group Head
Sourcing and Supplier Development Directorate
Milk Sourcing
Ingredients purchase
CAPEX
Industriel Directorate
Production Department
Maintenance Department
"Travaux Neufs" Department
Hygiene, Safety and Environment Department
Performance Department
Supply Chain Directorate
Raw Material Warehouse
Logistics
Clients' Service
Planning Department
Depository
Quality Assurance and Food Safety Department
laboratory
Raw Material and Packaging Quality Inspection

ANNEXE B- SURVEY

Questionnaire

Chères Danoners,

Dans le cadre d'élaboration d'un mémoire de fin d'études, pour l'obtention d'un Master en Management-option: Management des organisations au niveau de l'École Nationale Supérieure de Management Koléa, nous avons choisi d'aborder le thème de: «Le Reengineering Des Processus Comme Levier D'avantage Concurrentiel : Cas De Danone Djurdjura Algérie».

Votre contribution constitue un apport important dans l'amélioration de la qualité de ce dernier, en effet, nous vous prions de bien vouloir consacrer quelques minutes de votre précieux temps pour compléter cette enquête. Vos réponses resteront *confidentielles et anonymes* et ne seront utilisées qu'à des fins de ladite recherche.

Information du répondant:

A. Années d'expériences au sein de Danone :

☐ moins de 05 ans ☐ de 05 à 10 ans ☐ de 11 à 15 ans ☐ plus de 15 ans

B. Votre département : _____ Post occupé : _____

C. Quel est votre degré d'accord concernant les énoncés suivants?

* Indications: **1**= Pas d'accord, **2**= Plutôt pas d'accord, **3**= Plutôt d'accord, **4**= D'accord, **5**= Tout à fait d'accord.

Énoncés	1	2	3	4	5
Facteurs Clés de Succès Du Business Process Reengineering					
1. Vous êtes familier avec le Kaizen, TQM, Lean, 5S, PDCA, Pareto...etc. (l'amélioration continue, un quotidien de votre travail).					
2. Les réclamations des clients suscitent des changements et des améliorations des processus au sein de l'entreprise.					
3. Les systèmes de technologie de l'information au sein de l'entreprise fournissent un contrôle inter-fonctionnel.					
4. L'entreprise dispose et veille à l'utilisation des technologies nécessaires pour ses métiers ainsi que les compétences pour les maîtriser.					
5. La technologie utilisée à votre niveau et celle de l'entreprise est assez à jour.					
6. Vous êtes en parfaite connaissance de la mission/ vision actuelle de l'entreprise et son orientation stratégique.					
7. Vous jugez qu'il y'a bonne communication: * Ascendante (Collaborateurs - Managers) * Descendante (Managers - Collaborateurs) * Transversal (Collaborateurs-Collaborateurs)					

8. Pour accomplir vos tâches et vous développer, des formations sont délivrées.					
9. Votre environnement de travail est agréable (travail d'équipe, collaboration et la coopération, interactions amicales, confiance, chacun assume la responsabilité de ses actes et fautes …etc.).					
10. Vous avez une connaissance générale du travail de vos collègues dans d'autres postes.					
11. Vous êtes assez autonomes dans votre travail.					
12. Vous êtes impliqué et sollicité lors de prise de décisions importantes.					
13. Vous êtes encouragé à proposer de nouvelles idées, à innover et vous êtes convaincue que ces dernières sont et seront constructivement utilisées.					
14. Chaque jalon de changement est reconnu, récompensé et rémunéré pour motiver les employés participant à ça réalisation.					
15. Les changements sont gérés convenablement a l'entreprise (vous savez leurs importances et nécessités, votre rôle dans le processus de changement et l'apprentissage organisationnel, il y'a un bon accompagnement, la direction donne l'exemple…etc.).					
Symptômes du Business Process Reengineering					
16. Vous devez fréquemment envoyer des emails/ messages, faire des appels téléphoniques avec vos collègues de différents départements afin d'acquérir des informations nécessaires pour votre travail ou de transférer des informations nécessaires pour le travail des autres.					
17. Les informations que vous disposez sont dupliquée chez vos collègues.					
18. Si un détail spécifique est modifié dans une interface, alors il doit être modifié manuellement dans toutes les autres.					
19. Vous vous fiez souvent dans l'exécution de vos tâches sur beaucoup de paperasse /formulaires papier et /ou aux tableurs Excel.					
20. L'incertitude de la demande est diminuée par votre extra stock, extra travailleurs…etc.					
21. Il y'a peu d'incertitude dans votre travail voire tout est planifier et organiser.					
22. Le control et la vérification est une partie intégrante et forme une portion assez importante de ce que vous faites ainsi que vos superviseurs et l'entreprise en général.					
23. Vous vous retrouvez souvent dans la situation de refaire un certain travail qui n'a pas été fait correctement la première fois (erreurs ou informations incomplètes).					
24. Votre travaille qui était une fois simple a connu une augmentation de restrictions, règles et conditions pour faire face à l'incertitude et les cas particuliers.					
25. La réalisation de vos tâches se fait généralement d'une manière manuelle (le taux de tache manuel sous votre responsabilité est assez					

considérable).					
26. La réalisation de vos tâches prend un temps considérable par rapport aux autres activités du même processus.					
27. Ça vous arrive que la charges de travail vous vient plus rapidement que vous pouvez traiter.					
28. Vous subissez souvent un long délai d'attente ou bien un certain retard pour débuter vos tâches.					
29. Afin de rester compétitif, votre entreprise nécessite un changement radical des processus voir d'améliorer ses activités toutes en éliminant celles non porteuses de valeurs ajoutées.					
Avantage Concurrentiel					
30. Une grande partie des programmes, ressources et des capacités internes de l'entreprise ne sont pas et ne peuvent pas être facilement possédées par les concurrents.					
31. Les faibles coûts de production actuels permettent à l'entreprise d'offrir des produits à prix bas et compétitif.					
32. La qualité des produits est un des leviers de satisfaction de vos clients.					
33. La qualité des processus actuelle de l'entreprise garantit que le produit final ne présente aucun défaut/erreur, est fiable et conforme aux attentes des clients.					
34. L'entreprise livre toujours ses produits et services conformément aux promesses faites aux clients (temps de livraison minime, qualité supérieur, quantités appropriées…etc.).					
35. L'entreprise développe de nouveaux produits plus rapidement que ses concurrents ou inférieur à la moyenne de l'industrie.					
36. L'entreprise est apte à introduire rapidement de nouveaux processus ou d'adapter efficacement les processus existants pour répondre aux nouvelles exigences et besoins du marché.					
37. L'entreprise dispose de la capacité de modifier rapidement le volume/ temps/ composition de production.					
38. L'entreprise essaye toujours d'explorer de nouvelles possibilités, d'exploiter de nouveaux marchés, d'innover et d'introduire de nouveaux produits processus, technologie plutôt que d'être bridée à l'exploitation des forces actuelles.					
39. La réorganisation de vos activités et l'élimination de certaines peut améliorer encore davantage soit : le coût, la qualité, la flexibilité et/ou la livraison.					
40. Veuillez classer ces objectives selon leurs l'importance accordé par l'entreprise (#1 pour l'objectif le plus important, #2 pour le prochain plus important et ainsi de suite. Vous pouvez classer plusieurs objectifs au même degré s'ils sont d'égale importance). Réduire les coûts _____ Délivrer constamment une qualité supérieur _____ Délivrer les produit promis au temps/ qualité/ volume convenue _____ Introduire rapidement de nouveaux produits ou à apporter des changements de conception _____					

Êtres plus flexible face aux changements de l'environnement de l'industrie _____
Se démarquer avec la constante innovation _____

D. Avez-vous des recommandations pour améliorer le service/ la qualité, réduire les coûts, êtres plus flexible et éventuellement à accroître l'avantage concurrentiel de l'entreprise?

_____
_____

ANNEXE C- INTERVIEW GUIDE

Thématiques	Questions	Objectifs
Introduction	1.1. Pourriez-vous vous présenter? (Ancienneté/ autres postes acquis au niveau de Danone) 1.2. Quels est votre fonction actuelle? En quoi consiste-elle?	Présentation de la finalité de la recherche et familiarisation avec interviewé
Avantage Concurrentiel	2.1. Comment décrivez-vous l'environnement de votre industrie? (sa complexité en termes d'intensité de rivalité, d'incertitude, dynamisme, d'innovation, d'exigences clients … etc.) 2.2. Est ce que l'organisation de l'entreprise et ses processus permettent de faire face à cet environnement et de bien satisfaire les exigences des clients? 2.3. Quels sont les avantages concurrentiels de DDA? et comment les protège-t-elle?// qu'est ce qui permet cette dernière d'être compétitive//Qu'est-ce que vous possédez ou vous faite que vos concurrents peuvent pas dupliquer ? vice versa. 2.4. Selon vous, l'entreprise est-elle capable de : * Fournir à temps le type et le volume de produits requis par les clients ? * Introduire de nouveaux produits sur le marché plus rapidement que les concurrents ou bien moins que la moyenne de l'industrie? * Créer et fournir des produits personnalisés et « les plus à jour »? * Offrir des produits de qualité supérieure? * Réduire ses coûts et vendre ces produits avec un prix inférieur a ceux des concurrents?	Identification du business context ainsi que l'avantage concurrentiel de l'entreprise
	2.5. Est ce que l'entreprise a une vision claire de son marché? Quel est cette vision? (en termes de compétition, produits, attentes et exigences clients, servir de nouveaux marchés…etc.) ? 2.6. Y'a-t-il des problèmes ou préoccupations d'affaires auxquels l'entreprise est confrontée? 2.7. Selon vous, qu'est ce qui empêche Danone de dominer le marché ?	Identification des problèmes/ préoccupations/ obstacles de l'entreprise ainsi que sa vision et objectifs afin d'aligner les efforts probables du BPR

Identifications des Processus	3.1. Y'a-t-il un système approprié pour la gestion des processus opérationnels? 3.2. À votre avis, quels processus manifestent plus de dysfonctionnements ou que vous jugez défaillants? 3.3. A quel point vous jugez les processus/ ou du moins les activités sous votre supervision sont optimisé? Est-t'il nécessaire de les revoir? * Si oui: Est-il nécessaire de refondre radicalement ces processus ou une simple amélioration peut les rendre plus efficaces pour atteindre les résultats souhaités? 3.4. Selon vous, quels sont vos processus clés/ critiques contribuant directement a la satisfaction des exigence de vos clients/ consommateurs et éventuellement a répondre à la vision de l'entreprise? 3.5. Selon vous, qu'est ce qui est le plus important a l'égard de vos consommateurs? En quoi comporte leur exigences et réclamations?	Découvrir les core processus ainsi que ceux en dysfonctionnent pour identifier le besoin probable du BPR
Facteurs Clés De Succès Du BPR	4.1. Pourriez-vous décrire comment la conduite du changement est effectuée au sein de l'entreprise? 4.2. Comment jugez-vous la communication et la formation au sein de l'entreprise et/ou de votre division? 4.3. Comment décririez-vous la culture et votre l'environnement de travail au sein de votre entreprise? 4.4. Quelle est rôle de la technologie d'information dans votre travail et celui de vos subordonnées? 4.5. Pourriez-vous décrire l'infrastructure informatique de l'entreprise / l'usine, son rôle et sa relation avec les fournisseurs/distributeurs/clients? ***(Responsable IT)*** 4.6. Y'a-t-il des mises à jour sur vos système IT? Comment approchez-vous cette initiative (***Responsable IT)*** 4.7. Comment les nouvelles technologies peuvent-elles vous permettre de faire ou bien d'accomplir de nouvelles choses que vous n'arrivez pas à faire actuellement? S'il y avait de nouveaux logiciels à intégrer, y aurait-il un moyen? ***(Responsable IT)*** 4.8. Amélioration continue au sein de Danone, ça vous dit quelque chose? 4.9. Avez-vous une connaissance ou une idée générale de ce que pourrait signifier «Business Process Reengineering»? Ses exigences, avantages, résultats?	Vérifier la disponibilité des variables favorisante la probable implémentation du BPR
Conclusion	5.1. Y a-t-il quelque chose que vous aimeriez ajouter? ou bien avons-nous oublié quelque chose que vous jugez important pour notre question de recherche?	S'ouvrir sur d'autres informations et conclure l'interview

APPENDIX D- GLIMPSE OF USED MATRIX ANALYSIS

	Facteurs Clés de Succès Du BPR			Opportunités BPR		Avantage Concurrentiel (A.C)				Autres
	Amélioration Continue	Conduite de Changement et Autres	Technologie D'information	Processus en Dysfonctionnement	Processus Jugés Important	Enivrement de L'industrie	A.C. de L'entreprise	Dimensions A. C	Obstacles et préoccupations	
Participant X	C: "*... Danone est basé sur le DAMAWAY qui est, je pourrais dire, une philosophie d'amélioration continue ....le DAMAWAY c'est un outil, c'est des standards, c'est des basique, c'est des méthodologies.. il y a plusieurs méthodes dans le métier, l'un des pilés qu'ont implémente ici à Akbou c'est les AIC s qui sont le quatrième pilier de DAMAWA, à travers on essaie de travaille sur l'amélioration des processus existants d'usine..."* N: insinuation sur l'effet spaghetti que l'entreprise essaie d'optimiser	R: *Sensation forte de respect mutuel, d'humanisme et d'appartenance malgré la courte expérience (un environnement de travail estimé agréable). * la communication et la formation ont été identifier comme leviers importants et pris en charge surtout sans le cadre d'un projet ou transformation (exemple des sessions de mock) * La résistance au changement est un aspect commun que tout entreprise doit faire face (pas uniquement DDA) * Culture d'amélioration continue, de qualité et sécurité. N: Le référentiel de comparaison de Danone se fait par rapport aux autres CBU, non pas avec les entreprises locales	C: "*C'est claire qu'une entreprise telle que Danone et DDA spécifiquement ne peut possiblement pas achever tout ce qu'elle a pu faire sans l'aide de la technologie.. apports le côté machine, je dirais que c'est une partie indispensable de notre travail surtout l'aspect communication et partage d'information*" R: Vu les benchmarks partagés entre CBU, la technologue n'est pas vraiment jugée à jour. N: aucune connaissance sur le reengineering	C: "*a mon égard, le processus emballage est le plus défaillant et hors maitrise aujourd'hui c'est les caisses en plastique c'est-à-dire le faite d'avoir un blocage dans le retour de caisse ca impact la production tu planifie de faire un tonnage bien défini suite aux non-caisses on fait la réduction donc on va plus satisfait la demande .. pour moi c'est un processus ou des fois on perd la maitrise mais comme même on la direction ne reste pas les bras croisés du coup on travaille a le corriger a travers l'adoption des caisses carton...*" N: autres processus jugé optimisés, pas de nécessité pour une refonte radicale.	C: "*le processus le plus critique à mon avis c'est l'écoute client, on a l'écoute client on sait bien ce que le client veut, exigences clients réellement tu lui donnes un produit à ces attentes il y a des attentes explicites et implicites, explicites en matière de goût texturent de faveur, par contre aux attentes implicites c'est hygiène sécurité produite et l'aspect nutritif ...*" R: Réclamations jugés limites et exigences couvrantes le rapport prix-qualité.	C: "*....environnement très complexe vue la concurrence actuelle nous somme dans une position vraiment très très critique due à la concurrence , on était comme étant les leaders dans le domaine donc actuellement nous sommes en l2eme position (après Soummam) d'où la nécessité de multiplier les efforts afin de reprendre la place initiale et de maintenir nos part de marché*"	R: * appartenance a un groupe de plus de 100 ans d'existence, l'image de marque, recettes saines utilisant des matières premières de haute qualité, hygiène /sécurité des produits et respect de l'environnement sont les avantages jugés de l'entreprise. * Ressources ou activités non duplicables : C:" c'est en matière de moralité nous lorsqu'on fait une concurrence loyale par contre il y a d'autres qui font une concurrence un peu agressive c'est-à-dire par rapport à nous on ne peut pas par exemple dupliquer un produit du concurrent en matière de recette ou emballage, chose que les autres permettent de faire "	R: * L'entreprise est jugez capable de fournir a temps le type et volume de produit requit par le clients/ consommateurs surtout avec l'extension de l'usine (Transfer machine de Blida ainsi que les optimisations et investissements au cours. * Lenteur d'introduire de nouveaux produits sur le marché due au degré approfondi d'étude du produit et le taux de validation. * la personnalisation des produits dépend de la mission et valeurs de l'entreprise (exemple de la demande de sucrer d'avantage les produits qui met en péril les valeurs et la mission de l'entreprise: assurer la santé par la consommation des produits Danone) * Pour le couts, pas grandes informations appart une croyance que l'entreprise est entrain de développer des projets pour les minimiser	R: * le réglement, les standards et principes restrictifs de l'entreprise qui prohibe certains actes qu'autre entreprise permet de faire (exemple de factorisation totale impliquant une obligation de payement des taxes). * la préoccupation actuelle est la lenteur de développer des fouineurs locaux (risque de rupture en cas de restriction d'importation)	/

* Note: "C" indiquant une citation, "R" pour résumer et "N" pour note.

ANNEXE E- CONSENT FORM

Formulaire de Consentement

Titre Projet de Recherche: The Quest for Business Process Reengineering Opportunities As A Mean To Sustain Or Acquire Competitive Advantage (La quête pour les opportunités de réingénierie des processus comme moyen de maintenir ou d'acquérir un avantage concurrentiel: Cas De Danone Djurdjura Algérie).
Nom de chercheuse: Ryma BENHIMI.
Nom d'établissement : Ecole Nationale Supérieure de Management (ENSM).

Le présent formulaire de consentement éclairé comporte principalement une fiche de renseignements ayant but de partager le maximum d'informations relatives a notre étude (description, objectifs, procédures.etc.) ainsi qu'une clause pour formaliser votre engagement a participer dans notre recherche.

Fiche de Renseignements

1.1. Introduction:

Dans le cadre d'élaboration d'un mémoire de fin d'étude pour l'obtention d'un Master en Management-option : Management des organisations au niveau de l'École Nationale Supérieure de Management Koléa, moi Ryma BENHIMI a choisi d'aborder le thème de: «The Quest for Business Process Reengineering Opportunities As A Mean To Sustain Or Acquire Competitive Advantage». Jugez pivotal et indispensable, on a l'honneur de vous demander de bien vouloir nous accordez votre consentement pour faire partie de cette recherche. Les informations qui suivent couvrent les modalités de ce projet. En cas d'ambiguïté de ces derniers veillez a nous contacter (via les coordonnées a la fin de ce document), vous pouvez également communiquer avec notre tuteur Mr. OUHROUCHE Hamid.

1.2. Description et But de Recherche:

Il est indéniable que la création de valeur à l'égard des consommateurs qui semblait autrefois être intrinsèquement simple est devenue embrouillante. Au défi, chaque entreprise s'efforce à obtenir un avantage concurrentiel spécifique pour faire face à l'intense rivalité. La préoccupation majeure qui émane, même si certains réussissent, la notion de « gagner » est devenue si temporaire face à un changement constant qui s'est avéré être la norme. L'idéologie de l'amélioration continue a certainement été adopté par plusieurs, mais il vient un temps ou une reconsidération fondamentalement des activités doit être faite afin d'acquérir cet avantage; chose qui est la principale préoccupation de cette recherche.
Autrement dit, via cette étude, nous visons à identifier les opportunités de réingénierie des processus afin d'améliorer potentiellement l'avantage concurrentiel de l'entreprise.

1.3. Sélection des Participants:

Comme notre étude comporte deux niveaux d'analyse voire: stratégique et opérationnelle, le choix des participants pour les entretiens était celui de la vision stratégique de l'entreprise.
Considérant votre position hiérarchique, nous sommes convaincues que vous pouvez

nous aider en partageant votre perspective des processus de l'entreprise et éventuellement la position de cette dernière. Alias, en participant (si vous acceptez), il vous sera demandé de répondre à des questions portent sur l'environnement de l'industrie et l'entreprise face à ce dernier ainsi que l'état de ses processus.

1.4. Procédure et Type D'intervention:
Votre participation à ce projet sera requise pour une entrevue d'environ 1 heure. Cette entrevue dépendra de votre disponibilité et l'endroit qui vous convient le plus. L'optimale serait le face-à-face mais considérant les circonstances auxquelles nous sommes confrontées (Covid-19), on envisage probablement une communication en ligne (peu importe la plateforme de votre choix) ou bien un appel téléphonique.

1.5. Participation volontaire:
Votre participation à cette recherche est entièrement volontaire (ça reste votre choix) mais soyez convaincue que votre collaboration et éventuel perspectif sont primordiaux pour la réalisation de notre recherche. Ne pas participer implique une étude plus ou moins reprochable, voire notre valeur ajoutée à l'entreprise serait moins probable. Nos énormes appréciations d'avance pour le temps et l'attention que vous pourriez nous consacrer.

1.6. Anonymat et Confidentialité:
Tous les renseignements tirés de l'étude (transcription et autres informations enregistrées) demeureront confidentiels et anonymes et cela a travers un traitement informatique non nominatif, voire une codification des données identificatoires dont l'accès est strictement limité a la chercheuse. Autrement dit, tous nos efforts seront déployés afin d'assurer que tout contenu d'entrevue ou toute citation directe de l'entrevue, qui est accessible par le biais d'une publication universitaire ou d'autres médias universitaires sera anonymisé de sorte que vous ne puissiez pas être identifié à moins que la permission n'ait été accordée de le faire. Une fois l'analyse terminée et le rapport déposé les enregistrements seront détruits.

1.7. Partage Des Résultats:
Rien de ce que vous nous dites ne sera partagé avec un tiers et rien ne vous sera attribué de nom. Les données obtenues à partir de votre participation aux entrevues, ne seront utilisées qu'aux fins de ladite recherche. Éventuellement, une copie du rapport final sera envoyée à votre organisation, à la bibliothèque de notre école (ENSM) et à toute personne ayant participé à la recherche qui en a demandé une copie.

1.8. Risques et Avantages:
Nous ne prévoyons aucun risque associé à votre participation, néanmoins si vous constatez un certain mal à l'aise durant l'entrevue, veillez a le communiquer afin d'assurer votre bien-être et d'assurer une collecte de données précise, adéquate et fidèle (cela peut impliquer une cesse temporaire d'enregistrement audio). Il n'y aura aucun avantage direct (voire rémunération monétaire ou autres) pour votre participation mais elle aura à tout le moins contribué à l'avancement des connaissances scientifiques et une probable valeur ajoutée pour l'entreprise a travers ce modeste travail.

Clause

En accordant votre participation a cette recherche, vous affirmez votre lecture attentive et compréhension de la présente fiche de renseignement.

Information Contact:
Email: benhimiryma3627@gmail.com
Telephone: +213674544950.

APPENDIX F- DETAILED STATISTICAL FINDINGS

Table N°1: Statistics Regarding Continuous Improvement.

	You are familiar with PDCA, Pareto, Lean, TQM, Kaizen, 5S ... etc. (continuous improvement, a routinc aspect of your work).	Customer complaints drive changes and process improvements within the company
Median	3,00	3,00
Mode	3	3
Disagree	14,4%	12,9%
Slightly disagree	24,4%	16,8%
Slightly agree	31,1%	29,7%
Agree	21,1%	23,8%
Strongly agree	8,9%	16,8%

Source: Primary Data

Table N°2: Statistics Regarding Information Technology.

	Information technology systems within the company provide inter-functional control .	The company has and ensures the use of the necessary technologies for its business as well as the skills to master them .	The technology used at your level and that of the company is quite up to date.
Median	3,00	3,00	3,00
Mode	3	4	4
Disagree	13,6%	12,5%	18,4%
Slightly disagree	17,5%	18,3%	15,3%
Slightly agree	30,1%	21,2%	23,5%
Agree	25,2%	37,5%	31,6%
Strongly agree	13,6%	10,6%	11,2%

Source: Primary Data

Table N°3: Statistics Regarding Change Management and Other Variants.

	Changes are managed properly in the company (you know their importance and needs, your role in the process of change and organizational learning, there is good coaching, management set an example ... etc.) .	You are fully aware of the mission / vision of the company and its strategic orientation .	You judge that there is good communication: * Ascendant (Employees - Managers) * Descendant (Managers - Employees) * Transversal (Collaborators-Collaborators) .	To accomplish your tasks and develop yourself, training is provided .	Each milestone of change is recognized, rewarded and paid to motivate employees participating in its achievement .
Median	3,00	3,00	3,00	2,00	2,00
Mode	3	4	3	2	2
Disagree	16,5%	17,3%	22,9%	21,9%	21,8%
Slightly disagree	26,2%	18,3%	21,0%	32,4%	31,7%
Slightly agree	35,0%	24,0%	34,3%	19,0%	25,7%
Agree	18,4%	30,8%	16,2%	19,0%	14,9%
Strongly agree	3,9%	9,6%	5,7%	7,6%	5,9%

	You are involved and called upon when important decisions are made	You are encouraged to come up with new ideas, to innovate and you are convinced that these are and will be constructively used .	Your work environment is pleasant (teamwork, collaboration and cooperation, friendly interactions, trust ,each assumes responsibly of their acts and mistakes ... etc.).	You have general knowledge of the work of your colleagues in other positions.	You are quite autonomous in your work
Median	3,00	3,00	3,00	3,00	4,00
Mode	3	2	3	3	4
Disagree	24,8%	16,2%	12,7%	6,7%	14,3%
Slightly disagree	17,1%	27,6%	20,6%	19,0%	12,4%
Slightly agree	29,5%	20,0%	29,4%	28,6%	21,9%
Agree	21,9%	25,7%	24,5%	26,7%	29,5%
Strongly agree	6,7%	10,5%	12,7%	19,0%	21,9%

Source: Primary Data

Table N°4: Statistics Regarding Procurement-to-Shipment Process Dysfunctions.

	You have to frequently send emails / messages, make phone calls with your colleagues from different departments in order to acquire information necessary for your job or to transfer information necessary for the work of others.	The information you have is duplicated among your colleagues .	If a specific detail is changed in one interface, then it must be manually changed in all others.	You often rely in performing your tasks on a lot of paperwork / paper forms and / or Excel spreadsheets.
Median	3,00	3,00	3,00	3,00
Mode	4	2	3	5
Disagree	23,4%	19,0%	24,4%	23,3%
Slightly disagree	10,6%	23,8%	14,6%	11,6%
Slightly agree	17,0%	21,4%	36,6%	16,3%
Agree	25,5%	14,3%	12,2%	23,3%
Strongly agree	23,4%	21,4%	12,2%	25,6%

	Uncertainty of demand is reduced by your extra stock, extra workers ... etc..	There is little uncertainty in your work, everything is planned and organized.	Monitoring and verification is an integral part and forms a fairly important one of what you do, your supervisors and the business in general.	You often find yourself in the situation of redoing some work that was not done correctly the first time (errors or incomplete information)	Your once simple job has seen an increase in restrictions, rules and conditions to deal with uncertainty and special cases.
Median	3,00	3,00	4,00	3,00	3,00
Mode	3	2	4	3	3
Disagree	19,5%	9,8%	8,9%	16,3%	17,8%
Slightly disagree	17,1%	29,3%	15,6%	16,3%	17,8%
Slightly agree	26,8%	19,5%	22,2%	32,6%	26,7%
Agree	19,5%	24,4%	33,3%	14,0%	17,8%
Strongly agree	17,1%	17,1%	20,0%	20,9%	20,0%

	Your tasks are generally carried out manually (the manual task rate under your responsibility is quite considerable) .	Completing your tasks takes a considerable amount of time compared to other activities in the same process.	It happens to you that the workload comes to you faster than you can handle.	You often experience a long waiting period or a certain delay in starting your tasks.	In order to remain competitive, your company requires a radical change in processes or even improve its activities while eliminating those that do not bring added value.
Median	3,00	3,00	3,00	3,00	3,00
Mode	1	3	3	1[a]	2
Disagree	34,8%	14,3%	8,9%	23,8%	4,7%
Slightly disagree	10,9%	11,9%	17,8%	23,8%	30,2%
Slightly agree	13,0%	31,0%	28,9%	16,7%	25,6%
Agree	26,1%	26,2%	24,4%	16,7%	14,0%
Strongly agree	15,2%	16,7%	20,0%	19,0%	25,6%

Source: Primary Data

Table N°5: Statistics Regarding Most Important Objectives.

	OBJ: Reduce costs	OBJ: Consistently deliver higher quality	OBJ: Deliver the promised product at the agreed time / quality / volume	OBJ: Introduce quickly new products or make design changes	OBJ: Be more flexible in the face of changes in the industry environment	OBJ: Stand out with constant innovation
Median	1,00	1,00	2,00	2,00	2,00	2,00
Mode	1	1	1	2	2	2
1st Most Important Objectives	60,2%	60,9%	48,9%	28,6%	26,1%	18,5%
2nd Most Important Objectives	15,9%	23,9%	31,5%	34,1%	35,9%	41,3%
3rd Most Important Objectives	10,2%	6,5%	5,4%	24,2%	23,9%	19,6%
4th Most Important Objectives	5,7%	5,4%	2,2%	4,4%	1,1%	8,7%
5th Most Important Objectives	2,3%	0,0%	3,3%	2,2%	9,8%	5,4%
6th Most Important Objectives	5,7%	3,3%	8,7%	6,6%	3,3%	6,5%

Source: Primary Data

Table N°6: Statistics Regarding Competitive Dimensions.

	Much of a company's internal programs, resources, and capabilities are not and cannot be easily owned by competitors.	The current low production costs allow the company to offer cheap and price competitive products.	Product quality is one of the levers for customer satisfaction.	The current quality of the company's processes ensures that the final product reliable, defects free and conformant to customers' expectations.	The company always delivers its products and services in accordance with the promises made to customers (minimal delivery time, superior quality, right amount...etc.).
Median	3,00	3,00	4,00	4,00	3,00
Mode	3	3	5	5	4
Disagree	18,3%	13,5%	12,9%	12,6%	20,8%
Slightly disagree	14,6%	19,8%	10,9%	8,7%	16,8%
Slightly agree	46,3%	29,2%	16,8%	21,4%	19,8%
Agree	13,4%	20,8%	19,8%	27,2%	21,8%
Strongly agree	7,3%	16,7%	39,6%	30,1%	20,8%

	The company is developing new products faster than its competitors or below the industry average.	The company is able to quickly introduce new processes or efficiently adapt existing ones to meet new demands and market needs.	The company has the ability to quickly change the volume / time / composition of production.	The company is always trying to explore new possibilities, to exploit new markets, to innovate and to introduce new products, processes, technology rather than being restricted to the exploitation of current strengths.	Reorganizing your activities and eliminating some can either further improve: cost, quality, flexibility and or delivery.
Median	3,00	3,00	3,00	3,00	3,00
Mode	3	3	4	4	3
Disagree	21,4%	15,5%	9,6%	15,7%	6,8%
Slightly disagree	22,3%	21,4%	21,2%	19,6%	25,2%
Slightly agree	28,2%	28,2%	24,0%	22,5%	30,1%
Agree	18,4%	19,4%	26,0%	24,5%	22,3%
Strongly agree	9,7%	15,5%	19,2%	17,6%	15,5%

Source: Primary Data

APPENDIX G- GLIMPSE OF READING GRID

Glimpse of the Followed Reading Grid (Examples of Some Reference Within Literature Review)					
Date	Authors	Title	Source	Methodology	Problematic/ Objectives/ Results/ Summary
1990	Michael Hammer	Reengineering Work: Don't Automate, Obliterate	Harvard Business Review	/	Within this article, which witnessed the birth of the reengineering concept, Hammer illustrated the era of which businesses are confronted, laying afterwards the business process reengineering solution. With the emergence of technological solutions, myriads of companies automate their processes which happen to be made in a complete different environment, however, as he argumented, such initiative turn to have more drawbacks than advantages and further emphasized that the appropriate solution is not automating but obliterating and removing outdated processes. By this, he meant breaking away from old assumptions, rethinking and redesigning processes in a cross functional manner and then use IT as enablers to achieve dramatic improvement (rejecting the specialization of labor and organizational boundaries). Presenting reengineering principles along with 2 case studies (Ford, MBL), he invites companies to embrace the approach as for it to be for some "the only hope" .
1998	Jaideep Motwani, Ashok Kumar, James Jiang & Mohamed Youssef	Business process reengineering A theoretical framework and an integrated model	International Journal of Operations & Production Management, Vol. 18 No. 9/10	Document Analysis	The article presented an overall BPR literature review based on 133 articles filtered from 800 initial one. The authors have divided the findings into 04 main streams (definition and overview articles on BPR, normative studies done by practitioner, development of conceptual models for assessing and implementing BPR, assessment and successful implementation of current practices of BPR by manufacturing) in which accordingly developed a practical framework covering six phases including: understanding, initiating, planning, programming, transforming, implementing, and evaluating.

1999	Attaran, Mohsen; Wood, Glenn	How To Succeed At Reengineering	Management Decision; London, Vol. 37, Iss. 10	/	The article presents BPR corporate success stories (Hallmark, IBM Credit Corporation, Ford Motor Company, Liberty Mutual, Wal-Mart) along with its usual main obstacles (misunderstanding of the concept, misapplication of the term, lack of proper strategy, change management) and lesson learnt which in our regards are simple reminder of the essence of the approach.
2013	Venkataiah Ch. & Srilalitha Sagi	Business Process Re-Engineering In Manufacturing And Service Industries-Some Perspectives	ZENITH International Journal of Multidisciplinary Research. Vol.3, Iss. 1	/	The paper presents a general BPR literature overview covering its definition, need, tools, techniques, link with TQM, challenges, risks, consolidated methodology along with a brief example in the healthcare industry.
2010	Peterson Obara Magutu, Stephen Onserio & Godwin Kiplimo Kaptoge	Business Process Reengineering For Competitive Advantage: Key Factors That May Lead To the Success or Failure of the BPR Implementation (The Wrigley Company)	African Journal of Business & Management (AJBUMA), Vol. 1	Online Questionnaire to 30 randomly sampled employees (by conclusion it was stated that the approach was qualitative by nature however no proof was perceived).	**Problematic:** Wrigley Company (East Africa) Limited, a subsidiary of the Wm Wrigley Jr was confronted to reengineer its business by adopting ERP and supply chain concept due to a decision from the latter. **Objectives:** Assess whether BPR implementation improved competitiveness within Wrigley Company and determine the key factors and reasons that may have led to its success or failure. **Results:** According to the respondents, an improvement in quality along with different competitive advantage dimensions (cost management, customer service and productivity) was agreed upon which was justified through the well-founded business case, effective process redesign, use of project, change management techniques, suitable IT infrastructure and top hierarchical level engagement/ leadership.

2018	Agus Riyanto, Ina Primiana, Yunizar & Yudi Azis	Reengineering support for competitive advantage through organizational basis, information and communication technology: a literature review	Problems and Perspectives in Management	Qualitative founded on the literature review of some journals and reports	**Problematic:** Much of BPR initiatives come to almost never witness the dawn of success due mainly to issues within the implementation phase, IT infrastructure, human errors and/ or their combination. **Objectives:** Establish the link between BPR variables and the one of competitive advantage, organizational commitment, organizational change management and IT using IDEF0 method. **Results:** Organizational commitment, change and IT were each projected to BPR and competitive advantage independently. Through scholars' research, the interrelated tight relationship between BPR and competitive advantage was diagnosed and further highlighted and emphasized their use for any BPR initiatives.
2009	Larisa Dragolea & Denisa Cotîrlea	Benchmarking - A Valid Strategy For The Long Term?	Annales Universitatis Apulensis Series Oeconomica	Case Study	**Objective:** Check whether benchmarking would be a valid strategic tool in acquiring long term benefits for the current companies. **Results:** After the theoretical presentation of the benchmarking concept: evolution, definition, types, steps, goals, benefits and problems, the authors presented XEROX case study which was among the first users of benchmarking. After the identification of high deficiency compared to Japanese competitors (statistics), XEROX developed and implemented a 10 step model categorized in 5 phases inducing fascinating results (reference to multitude statistics within the document). The initial research question was further verified, benchmarking is indeed a valid strategy if associated with continuous improvement.

2015	Leela Krishna Ganapavarapu & Sireesha Prathigadapa	Study on Total Quality Management for Competitive Advantage in International Business	Arabian Journal of Business and Management Review. Vol. 5. Iss. 3	Quantitative (sample of 60 national and international organizations in which half are ISO certified)	**Objectives**: Examine link between TQM factors with competitive advantage. **Results:** The analysis between the QMS certified and uncertified organizations in terms of customer focus responsiveness, leadership, reliability, ease of use system, team-building, security, competence, and product portfolio (TQM dimension in relation to competitive advantage) had proven that the initial ones had better competitive advantage than the later and further invites business to adopt such doctrine in the face of globalized economy.