**T.C.**

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**MASTER'S THESIS**

# FROM MECHANICAL TO ENTREPRENUERIAL ORGANIZATION: EFFECT OF ORGANIZATION DESIGN ON INNOVATION AT THE INDIVIDUAL LEVEL

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**TEZ SAVUNMA SINAVI**, İÜ Lisansüstü Eğitim-Öğretim Yönetmeliği'nin **36. Maddesi** uyarınca yapılmış, sorulan sorulara alınan cevaplar sonunda adayın tezinin **KABULÜNE** OYBİRLİĞİ / OYÇOKLUĞUYLA karar verilmiştir.

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# ABSTRACT

**From Mechanical to Entrepreneurial Organization: Effect of Organization Design on innovation at the individual level**

**Yahya Zakaria Hassan GAMAL**

Organization Design is a challenging issue that face organizations in fast changing environment. In this research we studied mechanical and bureaucratic organization design models, which emerged and developed in a stable context began at industrial ages and lasted for a long period and influenced the modern organization design in the 21st century. To understand how modern organization design models evolved, we studied and analyzed Galbraith Star Model as example. We found that although he tried to avoid deficiencies of industrial age organization design, he couldn't overcome challenges in the bureaucratic organization design models due to his strong belief in the hierarchal organization. In this research we studied the impact of organization design on innovation at individual level. Research found that the mechanical organization design in complex context hinders innovation and adaptability. In this research we proposed an entrepreneurial organization design model that reinforce innovation and adaptability in complex and fast changing contests. The proposed model was used as analytical tool in a qualitative research case study of Al Sharq Youth which is an organization that supports youth activism and innovation. Al Sharq Youth is designed in networked and decentralized way. Data was collected in the research from open-ended unstructured interviews and organizational documents that explains the organization design, policies and procedures. Research found that the is facing challenges in implementing full decentralization due to the inability to dispense the tendency to top-down control. Research found that the organization design process is still top-down and centralized at the Head quarter and is not participative or inclusive. Research found that the leaders who are supposed to implement the decentralized network model of organization design either aren't believing that decentralized network is a practical model of organizing, or not aware of the trad-offs that must be taken to organize real decentralized network.

**Keywords:** Organization Design, Innovation, adaptability, Complexity, Bureaucracy.

# ÖZ

**From Mechanical to Entrepreneurial Organization: Effect of Organization Design on innovation at the individual level**

**Yahya Zakaria Hassan GAMAL**

Organizasyon Tasarımı, hızla değişen ortamlarda organizasyonların karşılaştığı zorlu bir sorundur. Bu araştırmada, endüstriyel çağda başlayan, uzun bir süre devam eden ve 21. yüzyılda modern organizasyon tasarımını etkileyen istikrarlı bir bağlamda ortaya çıkan ve gelişen mekanik ve bürokratik organizasyon tasarım modellerini inceledik. Modern organizasyon tasarım modellerinin nasıl geliştiğini anlamak için örnek olarak Galbraith Star Modelini analiz ettik. Endüstriyel yaş organizasyonu tasarımındaki eksikliklerden kaçınmasına rağmen, hiyerarşik organizasyona olan güçlü inancı nedeniyle bürokratik organizasyon tasarım modellerinde karşılaşılan zorlukların üstesinden gelemediğini tespit ettik. Bu araştırmada, organizasyon tasarımının inovasyon üzerindeki etkisini bireysel düzeyde araştırdık. Araştırma, karmaşık ortamlarda mekanik organizasyon tasarımının inovasyon ve uyarlanabilirliği engellediğini buldu. Bu araştırmada karmaşık ve hızlı değişen ortamlarda inovasyon ve uyarlanabilirliği güçlendiren girişimci bir organizasyon tasarım modeli önerdik. Önerilen model, gençlik aktivizmi ve inovasyonu destekleyen bir organizasyon olan Al Sharq Youth'un nitel araştırma vaka çalışmasında analitik bir araç olarak kullanılmıştır. Al Sharq Youth, ağ bağlantılı ve ademi merkeziyetçi bir şekilde tasarlanmıştır. Araştırmada açık uçlu, yapılandırılmamış görüşmelerden ve organizasyon tasarımını, politikalarını ve prosedürlerini açıklayan belgelerden veriler toplanmıştır. Araştırma, organizasyonun yukarıdan-aşağıya kontrol eğilimini dağıtma konusundaki yetersizliği nedeniyle tam ademi merkeziyetçiliği uygulamada zorluklarla karşı karşıya olduğunu buldu. Araştırma, organizasyon tasarım sürecinin hâlâ yukarıdan-aşağıya ve merkeziyetçi olduğunu, katılımcı veya kapsayıcı olmadığını buldu. Araştırma, ademi merkeziyetçi bir ağ tasarımı modelini uygulaması gereken liderlerin, ademi merkeziyetçi bir ağın pratik bir örgütlenme modeli olduğuna veya gerçek bir ademi merkeziyetçi bir ağın örgütlenmesi için yapılması gerekenlerin farkında olmadıklarına inandıklarını buldu.

**Anahtar Kelimeler:** Organizasyon Tasarımı, İnovasyon, Uyarlanabilirlik, Karmaşıklık, Bürokrasi

# FOREWORD

In the name of Allah, the Entirely Merciful, the Especially Merciful. All praise is only to Allah, Lord of the worlds.

*"It is always impossible, until it is done!"*

I do not find words to describe the extent of the support I received from my supervisor of the thesis Prof. DR. Halim KAZAN. For me he was not only a research advisor, but he embodied the true meaning of a sincere teacher and caring father who supports his students with the best of cooperation, sincerity and humility. Without his support I wouldn't be able to finish my master's degree. Allah Razi Olusn Hocam.

I dedicate this thesis to my father Zakaria "The Kind Man", who were very ill, and I couldn't be beside him. And then he died, and I couldn't say goodbye to him, and I couldn't be able to attend his funeral in Egypt. I dedicate it to my mother and sister who offered be priceless unconditional love and sacrifices throughout my life.

And I dedicate my thesis to my spiritual father Ayman Abdel Rahim, the brother and teacher who taught me the deep meaning of Islam and being a Muslim by example. Ayman Abdel Rahim didn't give me pieces of information, but he offered me a world view and paradigm that shaped my ideas, dreams and my life.

In the process of completing this thesis I received a lot of dedicated support, motivation and sincere advices from many of my dear friends, brothers and sisters, therefore I would like to thank them for their kind bolster, Dr.Hussien El Kazaz , Dr.Heba Rauf Ezzat, Dr.Mohamed Affan, Dr.Mehmet Bayratan, Ahmed Nashar, Abdullah Alhaddad, Mustafa AlNemr, Mohamed Hegazy, Hassan Emam, Hiatham Ibrahim, Mohamed Amasha, Ahmed Shaheen and Şeyda Karaoğlu.

Finally, I would like to dedicate this thesis to my soulmate and the companion of my life journey, who was the friend and the supporter in difficult moments, who tolerated my mistakes, and supported me in many hardships in the journey of my life with love and compassion. My beloved wife Hadeer, thank you for being beside me.

Yahya Zakaria Hassan GAMAL

İSTANBUL, 2019

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# INTRODUCTION

In 2007 the Finnish mobile brand Nokia was dominating the mobile global market to the extent that 50% of smart phones sales were going only to Nokia. In the same year another new competitor was entering the market of smartphones, Steve Jobs was introducing the first Apple iPhone. Within 6 years Nokia lost 90% of its market value and sold to Microsoft at 2011. On other hand in August 2018 Apple make historical record to be the first public traded company in the US to reach valuation of 1 Trillion dollar. Apple's market valuation makes its value bigger than the GDP of each of 183 out of the 199 countries for which the World Bank has GDP data. Apple's market valuation is bigger than GDP of Turkey, The Netherlands, Saudi Arabia, and Sweden. The secret behind the phenomena of Apple can be summarized in two words adaptability and innovation.

This research is trying to study how to design organizations that support innovation. In 21st century innovation is not nice to have feature, it is a must, it is said that "innovate or evaporate". But innovation is not easy mission, a lot of organizations want to support innovation, but they didn't realize that they have a problem in their organizational design. To understand the effect of organization design on innovation we went back to history to track the evolution of organization design models from the industrial revolution. It was found that the organizational principals which were the reason for the efficient organization in the 20th century and was the reason for the huge economic development during industrial revolution, the same principals are now hindering innovation in the 21st century organizations and cause the death of some of traditional market leaders like Nokia and Kodak.

The context had changed a lot from the simple and stable context of industrial revolution age, to the complex and turbulent context of knowledge economy age. The rate of change and development in technology is exponential. There is a sever need to design organizations that can be developed as fast as technology develops, and to be adaptable to change. In this research we are proposing entrepreneurial organization design model as alternative to the mechanical and bureaucratic organization design model that was developed 150 years ago. The organizational design model proposed in this research is challenging the dominating hierarchical command and control model and proposing network-based organization design that support individuals to innovate and contribute to the progress of their organizations.

In the first chapter of this thesis we are trying to understand the evolution of Organization Design models in the organizational theory after the industrial revolution and the effect of main theorists with engineering background on the Organization Design theories and models. And in the second chapter we are trying to analyze the modern main Organization Design model used in the 20$^{th}$ and 21$^{st}$ century and study the enhancements and developments that happened to the mechanical organizational design models, and we will study the influence of industrial revolution "mechanical" organizational theories on modern organizational design models, then we will make a generic framework that represent the mechanical and bureaucratic organization in modern world. In the third chapter we will study the difference between industrial revolution simple and stable context that can be predicted and controlled, and the 21$^{st}$ century complex, turbulent and uncertain context. In the fourth chapter we will develop the entrepreneurial organization design model based on our understanding of the challenges of the mechanical organization design theories and based on our understanding of the complex context of modern world. At the fifth and last chapter we will conduct a case study research as qualitative research method, and we will use the entrepreneurial organization design model as analytical tool for Al Sharq Youth organization which is considered an international decentralized organization that support youth innovation.

# CHAPTER ONE

# EVOLUTION OF ORGANIZATION DESIGN

## 1.1.    What does Organization Design mean?

The word *"Organization"* in Greek language means "Tool". In modern organizational theory, Organization is an invisible purposeful social tool. A social institution is the interaction between group of individuals who organize themselves and work together intentionally in structured way to achieve a common set of goals and aims. The word "*Design"*, as defined in oxford dictionary, means "to do or plan something with a specific purpose in mind".

Many theorists and consultants define **Organization Design** as a graphical representation of the organization which known as "Organization Structure".  An organization structure describes how patterns of an organization is structured and illustrates power relations as well as communication channels inside the organization. Organization structure has a lot of forms such as functional, projectized, or matrix. Although organization structure is one of the most important elements of any organization, but it is not the only one element that shape organization design, organization design is more than organization structure.

We can define Organization design as the science concerned with the act of deliberate planning and organizing the way that people working in an organization and describes how people should organize, communicate, coordinate and work together to achieve organizational goals or a common purpose. Therefore, Organization Design is the deliberate process of organizing and aligning all elements of an organization to achieve organizational goals. These elements can be Soft like culture or hard like structure (Stanford, 2007).

To achieve that, modern organization designers utilizes theories from other fields like sociology, psychology, organizational theory, complexity theory and system theory. Organization Design by its nature is an integrative science that integrate knowledge from different sciences and perspectives to tackle organizational challenges. Organization Design is all about answering this question: what is the best way to organize? (Galbraith, 2014)

Organization design include, but not limited to, organization elements such as strategy, process, values, structure, organization culture, organizational behavior, performance matrix, rewards, people, etc. There are many models' ad frameworks that clarifies Organization Design. We will analyze some of these frameworks in the coming chapters. The following illustration's example explains some elements of organization design (Stanford, 2007).
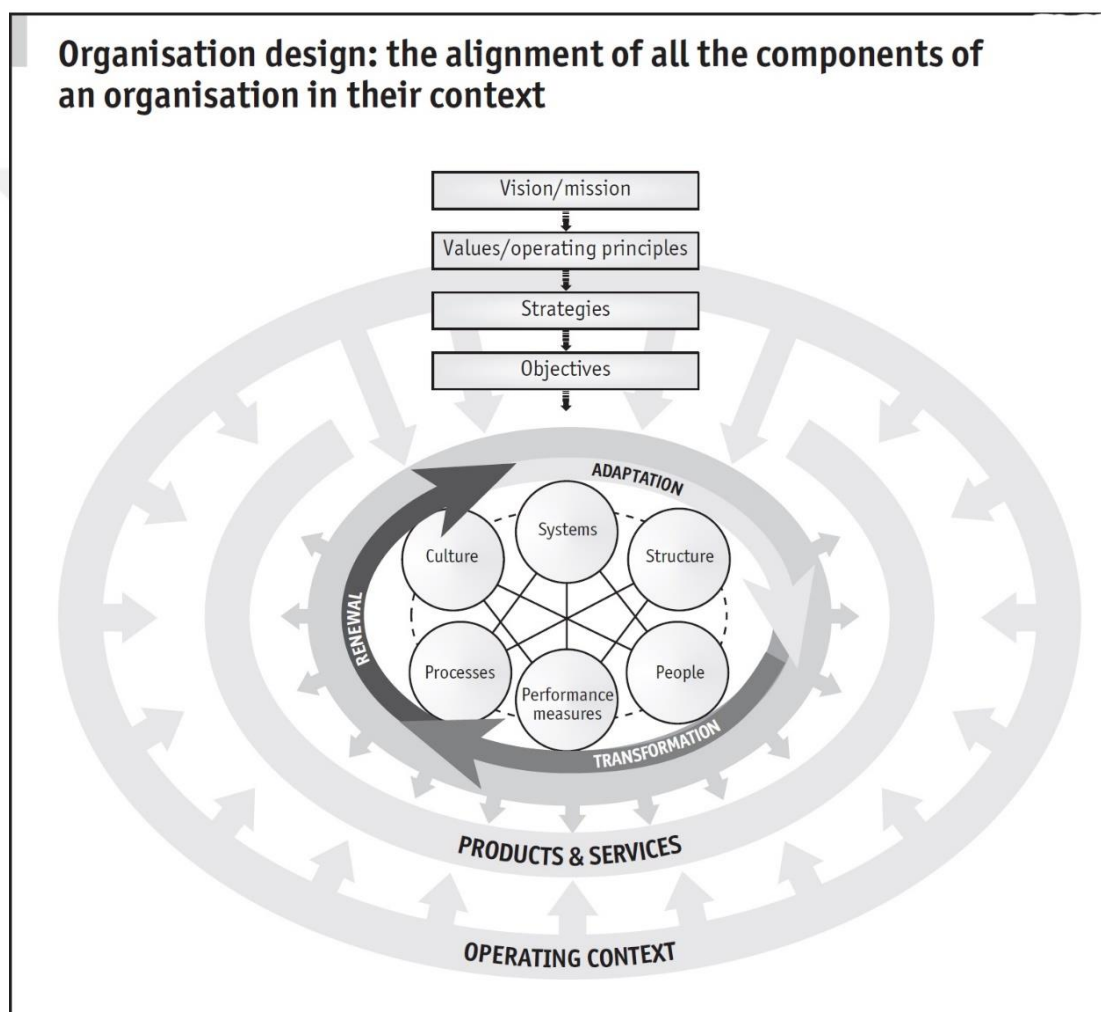


**Figure 1.1:** Organization Design Elements Example

**Source:** Stanford, Naomi. Guide to organization design: Creating high-performing and adaptable enterprises. Vol. 10. John Wiley & Sons, 2007.

As demonstrated in (Figure 1.1), organizations are not isolated from its own environment and the context which operates in. On the other hand, organization is highly affected by the external environment. For organizational design, the context of

an external environment context is a factor that has the most influence on the design of an organization. Assessing and understanding the operating context is regarded as the first step to make organization design. Failing to understand the nature of the operating context leads to wrong organization design that cannot adapt, perform or survive in the context.

To make successful organization design we should consider three things:

- Understand the operating context and environment of the organization.
- Analyze the organization in holistic way.
- Make organization design fit for the future, not the present.

The most important step in designing an organization and to make organization design effective, is to understand and analyze the operating context and environment that the organization will be operating in. My goal in this thesis is to make an organization design that fits into the future. In order to achieve that, I had to study the past to understand the context in which organization designs were developed and why they are struggling in the present.

## 1.2. Pre-industrial revolution Organizational Model.

Before the industrial revolution people were working at home factories or workshops. The work depended mainly on the individual skills of a craft man who should accomplish everything during the whole process (Smith, 1776). The worker was responsible for everything; how he/she will organize the work, where he/she will bring row materials, how he/she will make the whole production process itself, where he/she will sell his product, and for how much. Work depended on the "Skillful Artist/Worker" who have all the knowledge and the talent to make the job from the beginning to the end. (Morgan, 1998)

This way of working and organizing was dominant style of work and life in the 17th century until the industrial revolution in Britain changed everything. After the industrial revolution in the 18th and 19th century and due to technological development that made mass production and economies of scale possible, it was very hard for people who are self-employed to compete with huge production lines and factories which produce cheap products, hence so many population shifted their way

of making money from working from home, at personal workshop, or in agriculture to work in mass factories.

The following table illustrate this phenomenon of the transformation from self-employed skilled worker to a factory man "blue collar" and the emergence of new type of jobs "Manager".

| Year | % Wage and Salaried Employees (1) | % Self-Employed (2) | % Salaried Managers and Administrators | Total Labor Force |
|------|------|------|------|------|
| 1780 | 20.0 | 80.0 | — | 100.0 |
| 1800 | 17.4 | 82.6 | — | 100.0 |
| 1860 | 48.0 | 52.0 | — | 100.0 |
| 1880 | 59.8 | 39.1 | 1.1 | 100.0 |
| 1890 | 60.7 | 38.1 | 1.2 | 100.0 |
| 1900 | 63.3 | 35.4 | 1.3 | 100.0 |
| 1910 | 69.2 | 29.0 | 1.8 | 100.0 |
| 1920 | 72.6 | 24.8 | 2.6 | 100.0 |
| 1930 | 74.8 | 22.3 | 2.9 | 100.0 |
| 1940 | 75.6 | 21.4 | 3.0 | 100.0 |
| 1950 | 79.1 | 16.5 | 4.4 | 100.0 |
| 1960 | 81.1 | 13.6 | 5.3 | 100.0 |
| 1970 | 83.5 | 10.4 | 6.1 | 100.0 |
| 1980 | 81.4 | 10.8 | 8.6 | 100.0 |

**Figure 1.2:** Employees vs. Managers vs. Self-employed % in the US

**Source:** Gareth, Morgan. "Images of organization." London: Stage (1986).

## 1.3. Mechanical and Bureaucratic Organization Design

After the industrial revolution the formal managerial thinking evolved with the work of many thinkers, engineers, factory owners, and sociologists to manage mass number of people working on the factory floor. Ideas which were initially proposed and preached by the Scottish economist and the father of capitalism Adam Smith, like division of labor, were implemented widely (Smith, 1776).

In the 19th and 20th century the bureaucratic organization model emerged. it became the main form of organizing work in the factories and even armies in the battlefield. The main ideas behind the bureaucratic organization was developed by thought leaders: Frederick Taylor (1856 – 1915), Henri Fayol (1841 – 1925) and Max Weber (1864 – 1920).

### 1.3.1. Frederick Taylor (1856 – 1915)

Fredrick Taylor is known as the father and founder of scientific management referring to his well-known book scientific management. Taylor was an American mechanical engineer. He dealt with the concept of organization not as human institution but as a machine. When an engineer designs a machine, his primary focus will be on how to make this machine operates in the most efficient way by making machine parts working together smoothly.

Taylor observed that if factory workers operate their own way while utilizing their talent, there would not be a unified way of doing or accomplishing the work, hence, waste of time, energy and money. And by observing workers and identify the fastest time to finish a specific task, Taylor managed to estimate the optimum time for the whole production cycle, remove slack and predict the production rates and speed. Moreover, to control the factory's floor, Taylor analyzed the work of skillful workers and broke it down to more simpler and easier steps and tasks that don't need special talent or skills in a way that any worker in the factory can do any job with simple training and orientation. As a result, workers became interchangeable just like any mechanical part of any machine. Using this scientific methodology, Taylor was able to predict and control the whole production process (McChrystal, 2015).

The methods developed by Taylor made an extreme development at efficiency and resulting in relatively higher wages for workers, cost reduction, mass production and, hence, huge increase in profits. Afterwards, factory and business owners adapted Taylorism for its priceless economic value (see table 1.1).

Taylorism not only increased the productivity, but also increased the control over workers and over the organization as a whole. Not only business owners adopted Taylor management principals of separating planning and implementation, but a lot of military leaders used Taylor's ideas to increase the efficiency of their troops in the battlefields. (Knouse & Carson, 1993)

The most modern version of Taylorism is "McDonaldization" which describes the way that the multinational fast food corporation operates its huge business making standardized operations that is multiplied in every franchised store. People who accept McJobs go through very disciplined training process to perform the simplified boring task repeatedly. Taylorization of restaurant resulted the concept of "Fast Food"

and "McDonaldization". The dark side is that the same assumption of Taylor on workers is still there in 21st century and that is manifested in the type of caliber McDonald recruits: high school students, colleague students, pastime workers, low educated adults. Such manifestation facilitates the dehumanization of workers at the bottom of hierarchy (Morgan, 1998).

| Efficiency & Productivity factor | Before Taylorism | After Taylorism |
|---|---|---|
| Car assembly record time (Edmonson, 2012). | In 1908 was 748 minutes | In 1913 cut to 93 minutes |
| The cost of overhauling boilers dropped (McChrystal, 2015). | From 62 $ | To 11 $ |
| Machining a tire | done in one fifth of the previous time after adopting Taylorism. | |
| Making a cannon projectile | From 600 minutes | To 90 minutes |
| Work force in a company | From 2000 worker | To 1200 worker |
| Henry ford's Model T engine turnover rate | Increased and reached 380 % annually after adopting Taylorism. | |

**Table 1.1**: Economic Effect of Taylorism

**Taylor contribution to organizational theory:**

- Taylor separated mental thinking of the work from manual doing of work. People who do the work just doing what they were asked to do as mechanical power and it is other people job to think about how to organize the work (Taylor, 1911).
- Work men cannot self-manage or self-organize themselves in any work. So Taylor transferred the authority of organizing the work from workers to managers to reduce improvisation to a minimum level and replace it with scientifically designed and estimated repeatable tasks.
- The notion of predict and control.
- Workers should be trained to perform the specific simple tasks that they are supposed to perform (Taylor, 1903).

- The emergence of white collars workforce like clock watcher, supervisors, managers, consultants.
- There is only one way to make any work in the most efficient and fastest way and the role of the manager is to find it and teach to the work man.
- Taylor was the pioneer to use Empirical and data driven "scientific" process for organization and work design (Hamel, 2007).
- Manager should be a technical expert who know the nature of the job much more than the worker and subordinates (Brunsson, 2008).

**Critics to Taylorism**

A lot of organizational theorist consider Taylor is the enemy of workman because he was dealt with human workers like machine parts, although Taylorism bring massive efficiency to organizations, but it sacrifices a lot of social values and human qualities like creativity (Mintzberg, 1989).

Prof. Amy Edmondson from Harvard university criticized Taylor ideas because of the fear that generated inside the organization and dominate the work environment. Taylor aimed in his scientific management to be able to predict and control everything in the organization, to do that he subjected workers to close supervision which increased the fear in the workspace, fear to lose incentives and intolerance to risk taking or any mistakes (Edmondson, 2012).

To increase control and predictability, Taylor gave managers the power to use fear to increase workers productivity, as efficiency and productivity is the ultimate goal to be achieved for organization. Prof. Amy Edmondson proposes the concept of psychological safety in here most recent book named by Fearless organization as alternative methodology to lead and direct people in organization, to give people the safe space to learn, experiment and innovate (Edmondson, 2018).

Another major critic to Taylor was about his vision and taken-for-granted assumptions on workers. He describes workers in his fundamental book Scientific Management as (mechanical ability, phlegmatic, idiots, mentally sluggish, stupid, etc.) (Taylor, 1914).

MIT and Harvard lecturer professor Douglas McGregor criticized this assumption of Taylor about human nature of factory workers in his Theory X and

Theory Y argument (McGregor, 1960). McGregor argues that the for-granted-assumptions about employees that they always need to be controlled and directed by authority because they are motivated only by money, fear and security, these assumptions of Theory X shouldn't be generalized. In other hand Theory Y suggest that human nature is motivated by ambitions, and people can self-control themselves and don't need upper authority, people seek and accept responsibility, have creative capacity and can take right decisions. McGregor argues that managers can get better results out of employees if they make employees felt trusted, respected and recognized and vice versa. (McGregor, 1960)

According to Gary HameL the professor at London Business School that any consultant/manager who focus on watching and monitoring process, then analyses and describe it then improve it is considered one of the follower of Taylorism (Hamel, 2000), and this consultant/manager is deeply dependent on best practices that already existed and there is no innovation in that is because Taylorism does not believe in the creative capacity of workers that drive innovation. Taylorism and incrementalism is the way leaders lead organization for more than 100 years in environments that can be described as stable with minor competition and that is not the case in the 21st century turbulent environment.

### 1.3.2. Henri Fayol (1841 – 1925)

Henri was born in Istanbul to a French father who was serving his obligatory military duty in Turkey. He was trained and educated as mine engineer and during his career he worked as manager who managed hundreds of workers. He realized that to manage this number of people, a new set of skills is needed other than engineering. Throughout his career was observing the factors that affect work results.

**Fayol contribution to organizational theory:**

- Every worker has managerial role that at sometimes is big and sometimes is small.
- Distinguish between managerial ability and technical ability.
- Workers who are skillful in managerial skills can be at the top of the hierarchy.
- Good manager with little technical skills is better that bad manager with excellent technical skills. Hence organization is more affected by leader's managerial abilities more than technical abilities.

- Managerial functionals: Planning and Forecasting, Organizing, Staffing, Directing, Controlling. (Fayol, 1916)
- Principals of management: Division of work, Authority, Discipline, Unity of command, Unity of direction, Subordination of Individual Interest, Remuneration, Centralization and decentralization, Scalar chain, Order, Equity, Stability of tenure of personnel, Initiative, Esprit de Corps.
- At the higher level of the organization administrative knowledge and experience is more important than technical experience (Raghavulu, 1991)
- Fayol's Gang plank: this principal facilitates direct communication in the in case of emergency between two workers without reporting to direct managers.
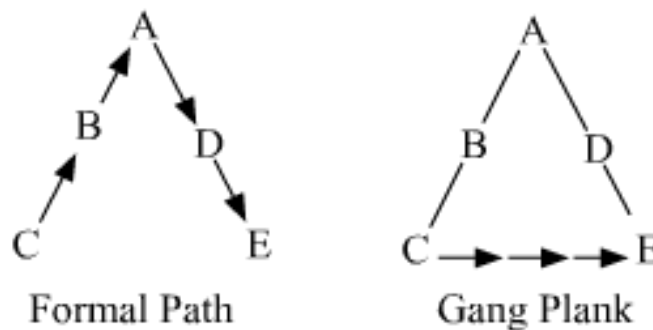


**Figure 1.3:** Fayol's Gang Plan

**Sources:** Fayol, Henri, and John Adair Coubrough. "Industrial and general administration." (1930).

Although Henri Fayol admired Taylor work and described him as visionary, but Fayol had a bit different perspective to see the organization. Taylor built his theory from the factory floor basic and minor element the worker and the task from bottom-up view, But Fayol approached the study of management from administrative upper top-down holistic view due to his experience of fifty years of managing mines.

Moreover, Fayol showed respect to worker men in his theories and believed that workers can be motivated with other things more than money. He gave a space for marginal initiative for workers to take, unlike Taylor, which gave no room for workers to take any kind of initiative because for workers it is prevented for them to think because they are stupid and gave the job of thinking and initiative taking exclusively to managers (Dumez, 2018).

Fayol ideas about management was written in his book in French (Administration industrielle et Générale) in 1916 and his managerial ideas was known for Fayolism and it dominated the managerial thinking in France (Wren, 1994).

**Critics to Fayolism**

Fayol ideas faced relatively less academic criticism compared to Taylor and a lot of his ideas is not aggressively questioned. Some organizational theorists and specially Peter Drucker, the management guru, criticized the Functionalism that Fayol implicitly and explicitly used in organization design, Fayol view of organization design was based on his experience in mining, but not all organization can be designed functionally as mines factories, in and complex or more dynamic environment functional design of organization will not be helpful (Drucker, 1974).

Another critic to Fayol is about two concepts of management, the first one is concept of "Unity of command" and the second is "Scaler chain", these two concepts make solid and military-like hierarchy in the organization design. Solid hierarchy transform organization into *silos*. Silos in organization means that every department is working individually and don't share information about the work and not welling to collaborate with other departments from the same organization (Stanford, 2007). Silo mentality make internal communication and sense of unity decreases, and that may leads to internal competition within the same organization and very low degree of collaboration (Albers, 1965) and it turns to be very hard for top management to manage the coordination between all employees at the bottom of the hierarchy.

Fayol as well as Taylor have a very mechanistic view of organization may be because both are engineers they believe there is only one ideal and optimum way of designing and managing organizations, engineers think that if they could make the right design and plan, they can fully control the machine with problem free operating mood (Prasad, 1991), the idea of designing an organization just like a machine and expecting it to act like machine while ignoring that an organization is a social entity consists of humans who have fairly different psychological orientations and emotions is very dangerous because it leads to an expectation of absolute predictability of humans actions and reactions and that it is not true specially in complex system like human organization.

### 1.3.3.  Max Weber (1864 – 1920)

Max weber the German sociologist who introduced the organizational theory and theorized the most dominating organizational model that dominating public and private organization from 19th century till now. Max weber educational background ranged from Law to economics and political economy, then his research focused on sociology (Warner, 1997).

**Weber contribution to organizational theory:**

- Max Weber introduced the rational-legal organizational model to organizational theory and that was named for *Bureaucracy*, and the main goal of bureaucracy is to achieve efficiency and solve the challenge of managing power and authority in legitimate and rational-legal way that doesn't leads to any abuse of power and authority that are given to people in irrational way like charisma (Weber, 1947).
- Weber's Bureaucracy principals:
  - Bureaucratic organization has clear organizational hierarchy that defines authorities and power.
  - Managers have the authority and the right to control and direct lower rank employees' behavior. Employees must obey the authorities that is already defined by clear rules.
  - Specialization and division of roles and labor in the organization, and boundaries between positions, authorities and roles are clearly defined.
  - Organization is operated and govern by clear, formal and fixed rules and procedures.
  - Organizational rules and authorities is impersonal.
  - For every position in the hierarchy there is well defined career path and well-defined rules for promotions.
  - All communications and recording are formally recorded.
  - Formal positions in the hierarchy is filled based on merit, not any political consideration, personal are recruited and selected based on skills not elected, bureaucrats are technical experts not politicians.
  - Separation between formal position in the hierarchy and personal.

Bureaucratic organization brought clarity of roles, rules and responsibilities. Bureaucracy not only empowered merit over nepotism, but also increased the

efficiency of implementing complex work. Impersonality increased the objectivity and professionalism in workspace and public organization.

**Critics to Weber's bureaucracy**

To manage any organization in bureaucratic way to achieve organizational goals a clear set of rules and procedures are defined and implemented, rules are respected from everybody. one of the drawbacks of this methodology is that after a period people forget why this rule was made? What was the purpose behind making these rules? And obeying rule become a kind of religion in the organization, rules are not questioned or challenged, rules become the ends and organization loses its purpose.

Because of the rigid rules of the bureaucratic organization, rigid hierarchy, tempting to predict and control the future and inflexibility, all that features of organization design lead to resisting the change and consider it as existential threat to self-continuity. Communication is always top-down and one way. And people on the frontline do not have the right to take big decision or giving feedback to solve problems and when problem occur employees have to wait until top management make its slow intervention.

Another pitfall of bureaucracy is that due to strict division of labor and specialization and the rigid hierarchy and rules, all that makes horizontal and vertical communication very weak. Weak vertical communication limits decision making speed and weak horizontal communication limits coordination and collaboration at bureaucratic organizations. And that slows the speed of the organization in achieving organizational goals and as well that affect the sense of organizational unity towards achieving organizational goals.

Over respecting the rules, managers' right of controlling their subordinates, with no power for employees to take and decisions they are only allowed to follow their managers specially at the bottom of the hierarchy. High efficiency limits employees from taking initiatives and bring new ideas and innovation to workspace which demotivate employees, kills organizational creative capacities and leads to decreasing in organizational loyalty and increasing of employee's frustration.

Final disadvantage of Weber's bureaucracy is that the concentration and domination of power and authority in the hand of few number of people at the top of the hierarchy who have the right to make regulation and control mass number of organization members.

## 1.4. Main characteristics of mechanical organizational design of industrial revolution Era.

From the review of the legacy and the literature of the founders of the science of management Taylor, Fayol and Weber. We can notice that two of them had engineering background (Taylor and Fayol) and Weber had Law educational background, these mechanical and structural educational background affected the theories that that were introduced by these scholars. Engineering and low sciences both are structed in mechanical and rational way, hence organization designer from this backgrounds has the implicit assumption that if he/she put the mechanical parts together in the only one right way the whole machine will work in best efficiency, however organizations are social institutions consists of humans who interact and communicate with each other in complex way.

Organization design elements is interconnected and affected by each other in very complex way, for example, organizational structure affect communication and information sharing, leadership style affect organization structure, and both organizational structure and leadership style influence the organizational culture. The temptation of segregating the organizational design elements is considered an implicit mechanical view of organization that try to make decomposition of an organization to its basic elements to be able to put it together and make an effective organization design that can predict and control the organization performance and efficiency.

We can summarize the main features of organization design from classical and mechanical school of thought of management that was theorized in the 19th century after the industrial revolution as the following:

| Mechanical Organization design elements | Effect on organizational dynamics in action |
|---|---|
| **Organizational structure**<br><br>(Hierarchal functional structure) | Military like hierarchy with Concentration of power at the top of the pyramid |
| | Decomposition of work to its basic elements that doesn't need special talent or skills and can be trained (division of labor) |
| | Fear between layers of the hierarchy. |
| | Slow decision making and information flow. |
| | Silos mentality between functional departments and internal competition and decreased sense of unity. |
| | Separation of thinking about the work at the top from doing the work at the bottom. |
| | Workers can't self-manage or self-organize themselves while doing the work, it is the job of the manager to think about the best efficient way of organizing and doing the work. |
| | Organization is rational system (not social or human system). Organization is a machine that can be designed and engineered in only one efficient way. |
| | Boundaries between positions, authorities and roles are clearly defined. |
| | |
| **Information sharing and feedback**<br><br>(Secrecy and Closed) | Information flow from top of hierarchy down to workers. valuable insights at the frontline of the organization is ignored. |
| | No feedback sharing and hence losing opportunities of learning and development due to fear to share mistakes in unsafe environment. |
| | Communications between workers are formally recorded and documented. |
| | Vertical communication between layers of management is slow and horizontal communication between departments and employees is very limited. |

| | |
|---|---|
| **Leadership Style**<br><br>(Authoritarian and centralized) | Centralization of decision making and concentration of authority and power with the few on the top of the Pyramid. |
| | Unempowered workforce in decision making. |
| | Distinguish between managerial ability and technical ability, and managerial abilities is much more recognized and respected, and can be promoted to the top of the pyramid in a leadership position. |
| | Managers only has the power to make the rules and procedures and workers must obey it. |
| | Manager has the right and the power to direct and control employee's behavior with full control of subordinates. |
| | |
| **Strategy**<br><br>(Resisting change and maintain status quo) | Determined from strategic plans that have implicit assumption that the context is stable and can be predicted and controlled. |
| | Change is not preferred, so resisting change and impose fixed strategies is the norm. |
| | Efficiency and productivity are the goal and the main performance measure. |
| | Managers role is to decrease improvising to minimum and decompose the work into predefined, predicted and controlled pieces of work that is distributed to works. |
| | The is only one best efficient way of doing the work (Best Practice) and it is the job of the manager to find it, and train employees to it in the same way. |
| | Strategy of the organization is determined from the top of the organization without any participation from workers. |
| | |
| **Organizational Culture**<br><br>(Fear) | Management by fear of supervision and material compensation. |
| | Risk taking, Failure or mistake are punished. |
| | No collaboration between Silos. |
| | Employees are mechanical parts cannot be trusted to think, innovate or take decisions. |
| | Employees motivated only by financial motivations. |
| | Organization is governed by clearly defined formal, unquestioned and fixed bureaucratic rules and procedures. |

**Table 1.2**: Mechanical Organization Design

# CHAPTER TWO

# MODERN ORGANIZATION DESIGN MODELS EXPLORATION

## 2.1.    Evolution of Modern Organization Design Models.

The rate of technology development accelerated in very high rate in the 20th century. The competition became more sever as the globalization became a global phenomenon. The 20th century witness the born of multinational corporation which some of them are much richer than some countries. Due to these reasons among others a great attention was paid to science of "Management". As featured in Bennett Amanda book *The Death of the Organization Man* (Bennett, 1990) MBA (Master of Business Administration) degrees spread in universities and MBA holders were internationally recognized, MBA was considered as the passport for any employee wants promotion or finding a new job. Even doctors joined the MBA movement to be able to manage healthcare organizations (Lazarus, 2010).

Managerial and organizational science development coped with the technological development that took place in 20th century after world war two. Leaders coming from military to business bring a lot of scientific methods that used in the war with them in business space, some of military leaders became management consultants (Cummings, 2008). Management consultancy became a career and prestigious profession. Business schools and consulting companies made a lot of research and theories to solve corporates' organizational challenges while growing internationally and facing global competition.

Due to organizational challenges Organizational Development emerged to support organizations grow, expand and compete. Traditionally Organization Design is considered the end required goal of any Organizational Development process, this was the condition in stable environments, but when coping with changes became daily duty Organization Design became a continuous process and not final state or destination as well (Galbraith, 2008). That's why Organization Design is one of the hot issues for every growing corporate and business organization so business schools and business consultancies developed a lot of theories, approaches, frameworks and models of Organization Design.

Organization Design model is a framework that illustrates the main ingredients and subsystems that should be taken into consideration while designing any organization. Organization Design model is like a templet and a tool that helps in understanding, analyzing, developing and designing organizations and explaining the relationships between organization design elements and subsystems and how they are interconnected and how they are interact together (Stanford, 2007). As well Organization Design model provides common language for communication of when talking about organization development and organization design, without organization design model it will be hard to think and develop organization in comprehensive way.

Organization Design model is not equivalence to organizational structure, however organizational structure is one of the main elements of any organization design model, and organization design model is a conceptual framework describes all organization's elements and how all of them fits, interact and interconnect together in a systematic view. Organization Design models is normally developed by organizational theory scholars, business schools or consulting companies. Organization Design model reflects the perspectives of its owner, so there is no absolute right or wrong to any model or perspective but there are always limitations that need to be observed (Cummings, 2008).

Organization Design models is reflecting a lot of things, firstly Organization Design model is manifesting the paradigm and world view of its producer (Organization Designer) and may indicates the implicit ideology behind the theory, secondly Organization design model is affected by the specific context that it was developed in it, and it is highly affected by the set of challenges that the Organization designer is trying to understand and solve.

An organization designer with behavioral science background will see the solution of organizational problems in enhancing the relationships between employees. Another organization designer coming from military background from world war two will propose a mathematical model that was used in the war. A third organizational designer working in quantitative research-based consultancy will recommend a technology in data collection and analysis to support organization design. A fourth organization designer from classical strategy consultancy firm will propose a wide re-structuring programs to solve organization design problems.

No one of the four consultants provided the wrong solution of the absolute right solution but all of them partial solution from everyone personal perspective (Leavitt, 1965).
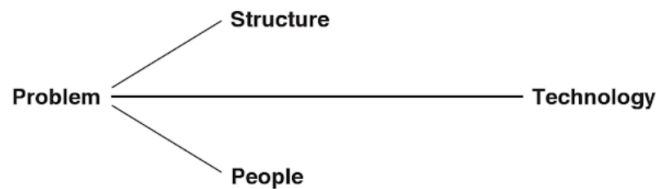


**Figure 2.1:** Perspectives of organizational design problems

**Source:** Cummings, Thomas G. *Handbook of organization development.* Sage, 2008.

After Leavitt work at *Handbook of organizations* book, a lot of scholars and organization designers begin to deal with Organization Design in more integrative and comprehensive way, by inviting multiple perspectives when designing organizations (Galbraith, 2008). Harold Leavitt proposed a multi perspectives model to tackle organizational problems and challenges, that model became the foundation for a lot of organization design models.
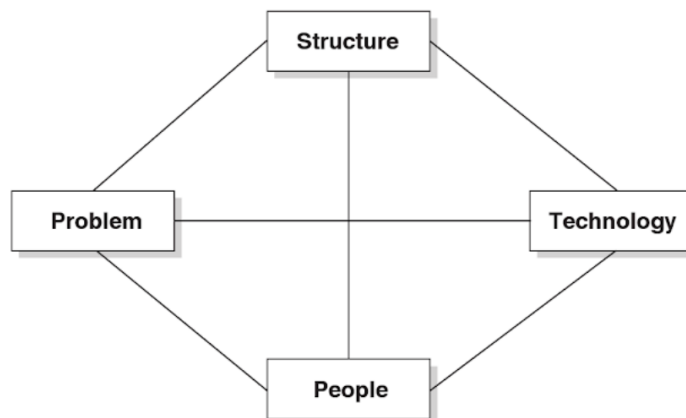


**Figure 2.2:** Harold Leavitt Model

**Source:** Cummings, Thomas G. *Handbook of organization development.* Sage, 2008.

From that time on, many theories and models have emerged that attempt to analyze the basic components of organizations and provide guidance on how to design the successful organization from its point of view. Theories of Organization Design are similar in many basic organizational elements and differ in some details,

because all the theories explain the same phenomenon, it is the phenomenon of organization. It is natural to find a lot of similarities in the models and theories in many of their elements and interpretations and analyzes. Examples of Organization Design models that emerged at the 20th century:

- Burns and Stalker - Mechanistic vs. Organic organization (1960s)
- Weisbord Six Box Model (1970s)
- Nadler and Tushman Congruence Model (1980s)
- McKinsey 7-S Model (1982)
- Ralph Kilmann's Five Track Model (1989)
- Burke-Litwin Model (1992)
- Fractal Web Elizabeth McMillan (1996)

Majority of these models and theories arose in a similar context of the 20th century characterized by relative stability. So, it would not be useful to review all organization design theories and models, but it may be more useful that to choose one Organization Design model that fits to research purpose and analyze it in depth.

In this chapter we will explore and focus on Galbraith's Star model as example of modern organizational design models for many reasons. The aim of exploring Galbraith's Star model for organization design is to make us able to deeply understand modern organization design thinking (Stanford, 2007).

I chose Galbraith's Star model to analyze and study in details because it is one of the earliest models was theorized as organization design model (Galbraith, 1977). Galbraith's Star model was theorized in 1960s and was used for about 50 years and this model is unique in that it has been subjected to a process of continuous testing and updating, which lasted for decades and finally the last documented version of the model was in Galbraith's last book *Designing Organizations* that was published in 2014 the same year of Jay Galbraith death (Galbraith, 2012). As well Galbraith's Star model can be considered as the main theory and framework that was developed specially for Organization Design purpose, not other aims.

Another reasons to choose Galbraith model is that he studied the lateral organization (Galbraith, 2014) and innovative organization (Galbraith, 1982), and both are in the core interest of the research conducted in this thesis. And finally, Galbraith's

Star model contains the main organizational elements of any other organization design model (Marsh, 2009).

One of the biggest advantages of Galbraith Star Model is that model is reflecting in the holistic view of organization and Organization Design which is for Galbraith more that organization structure. For many years, there was a firm belief that the Organization Design was only a process of redrawing the organizational chart/structure in a new way with the changing positions of boxes/jobs, this wrong and inadequate view of organization design was and remains one of the reasons for the repeated failure of restructuring programs in companies (Stanford, 2007).

## 2.2.    Galbraith's Star Model as Organizational Design Model Example

Dr. Jay Galbraith was professor at MIT School of management and University of Pennsylvania. Galbraith is considered the father of organization design and he is the inventor Star Model for organization design which was adopted by worldwide by hundreds of organizations over the years since 1960s till now. Galbraith utilized Leavitt model to build his organization design star model (Galbraith, 2008). Galbraith's Star Model mapped key organizational elements and interaction between them in comprehensive way (Galbraith, 2012).



**Figure 2.3:** Galbraith's Star Model

**Source**: Galbraith, Jay R. *Designing organizations: Strategy, structure, and process at the business unit and enterprise levels*. John Wiley & Sons, 2014.

Galbraith explained at his book Designing Organization book why he chose these specific factors to be the components of his Organization Design model. Galbraith see that these specific components can be controlled by the leadership team, and they can be manipulated. Second reason is that these factors can shape required attitudes and behaviors from people in the organization (Galbraith, 2012). When leadership team want some behaviors to be prevailing in the organization, they make measures and rewards policy to motivate people adapt these specific behaviors required by leadership team (Galbraith, 2014). And that's explaining why culture is not from the main factors of Galbraith's Star Model because he believed that organizational culture cannot be controlled by leadership team, but it can be influenced by the other factors.

### 2.2.1. Strategy

Due to scare resources organization cannot seize every business opportunity appears, so organization needs to decide where to go? And where not to go? How to go? How to win? (Chandler, 1962). And after determining the strategy the other four factors is being designed in alignments with the strategy to achieve it. Strategy is made to make leaders able to kill good ideas, because they have already a strategy (Galbraith, 2014).

### 2.2.2. Structure

Structure for Galbraith is a way to allocate authority and power in hierarchal structure. Galbraith see the division of labor is a must for any organization that want to survive for long time and hence hierarchy is a must as well. The need for hierarchy Appear because organizations doesn't have the ability to process information and take decisions that make large numbers of people and reach consensus (Galbraith, 2014).

Galbraith believe that large numbers of people cannot make decisions and coordinate to implement it (Galbraith, 2012). The existence of hierarchical structure is the only way to escalate to resolve conflicts between people about the direction of the organization. Talented and strong calibers who have minds of their own cannot reach consensus without hierarchy in uncertain situations, they need to be forced to take specific direction from higher ranked directors (Chandler, 1962). Galbraith in Designing Organizations book proposed the traditional organizational structures that

is widely used and adapted in the mainstream organization design models. Organizational structure types explained as the following (Keller, 2011).

**Functional structure**

Any organization at the beginning of its lifecycle is structured in functional way, as well as the society itself is structured in functional way. Every department is taking care of specific specialty of the organization, for example Human resources or finance (Galbraith, 2014). Functional manager typically is an expert in the specialty of the department, and often he/she is responsible for the communication with other departments.
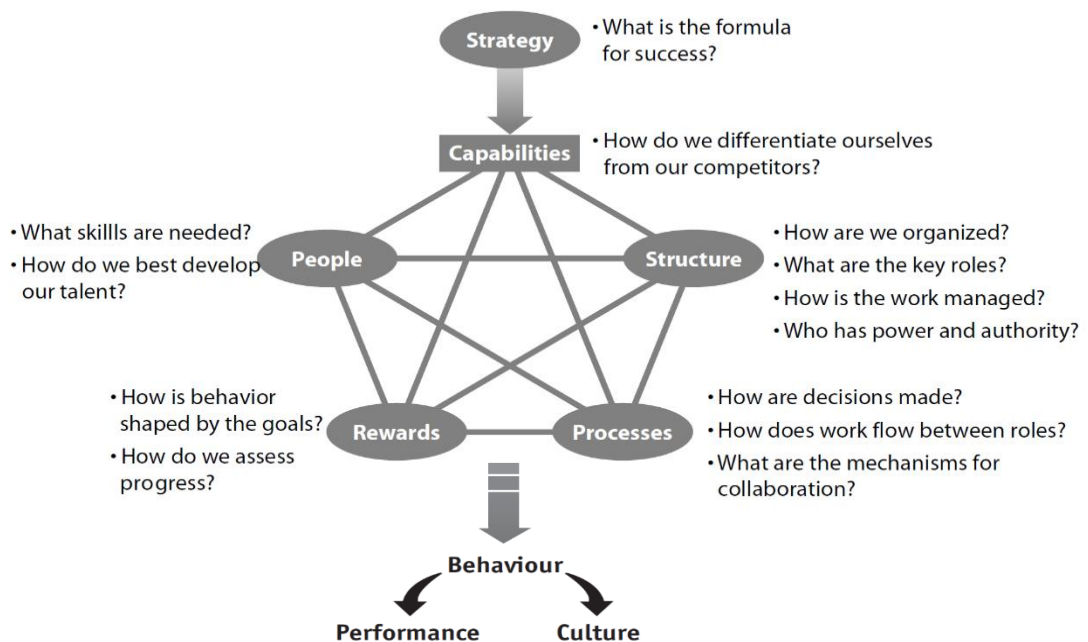


**Figure 2.4:** Functional Structure

**Source**: Galbraith, Jay R. *Designing organizations: Strategy, structure, and process at the business unit and enterprise levels.* John Wiley & Sons, 2014.

Functional structure works best for small company or autonomous business unit. But as the organization grow and functional departments become huge some negatives phenomena occur. Firstly, the organization is broken into isolated Silos and "Silos mentality" is prevailing. Every function sees the business from its perspective and defend its interest against other departments. Collaboration and since of unity decreases (Galbraith, 2014). Lateral coordination might be a solution for collaboration challenges between functional departments.

**Product structure**

Because it is hard to deal with variety of product lines operations in functional hierarchal structure, we can now make the organization around the product itself or

profit center and every product or profit center become a business unit that has its special and internal functional structure. Product centric structure works well when developing and launching new products that need to have a multidisciplinary team work on the same product with complete focus (Galbraith, 2014). Product structure by nature facilitates the entrepreneurial spirit around the independent product or independent profit center.



**Figure 2.5:** Product Structure

**Source**: Galbraith, Jay R. *Designing organizations: Strategy, structure, and process at the business unit and enterprise levels*. John Wiley & Sons, 2014.

The main disadvantage of product centric structure is that the sense of autonomy increases, and sense of organizational unity may decrease. As organizational resources are scarce and limited, and every product team doing their best to make their product successful, that may lead to competition on resources between products division, resources includes financial resources as well as human resources.

**Customer centric structure**

Is more in services business to satisfy specific customer segments with specific offering and services, this way of organizing is typically happening while the organization is growing and expanding to serve other customer segments. And every customer segment unit is acting as functional organization (Galbraith, 2014). IBM, Apple and Dell are worldwide examples of successful companies who have customer centric organizational structure.

**Figure 2.6:** Customer Centric Structure
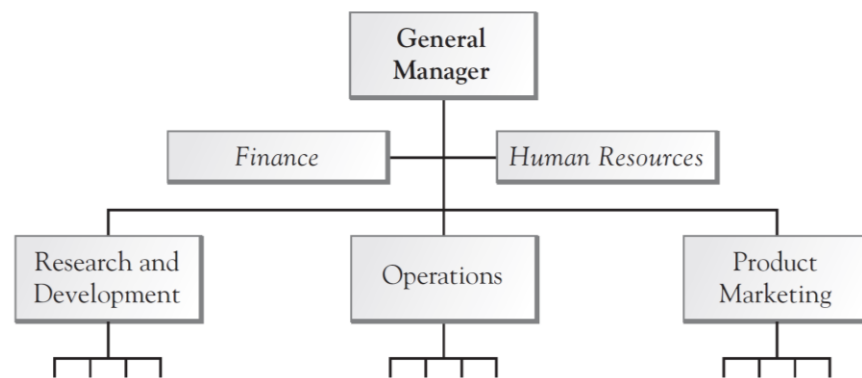
**Source**: Galbraith, Jay R. *Designing organizations: Strategy, structure, and process at the business unit and enterprise levels*. John Wiley & Sons, 2014.

Main disadvantages of customer centric structure are that departmental goals become the focus of each department not the organizational goals. As well customer segments may overlap between departments who have difficulty in coordination as each department focus on his own goals and customers (Galbraith, 2014). Another disadvantage of customer centric structure the duplication of functional work that happens in each department.

**Distribution channels centric structure**

Another way of organizing is around distribution channels which describes one of the most critical parts of any business model. Distribution channels identifies how customers want to get the products or services delivered to them. Every way of selling, distributing and delivering the value proposition is considered distribution channel, and a specific unit in the organization structure is built-up around each distribution channel method. Within each distribution channel unit in the structure, the unit operates in functional structured way.

**Geographical structure**

Another way of organizing is around geographical existence, that range from area management in same city to country wide and regional operations structures. And again, the geographical unit is structured functionally.
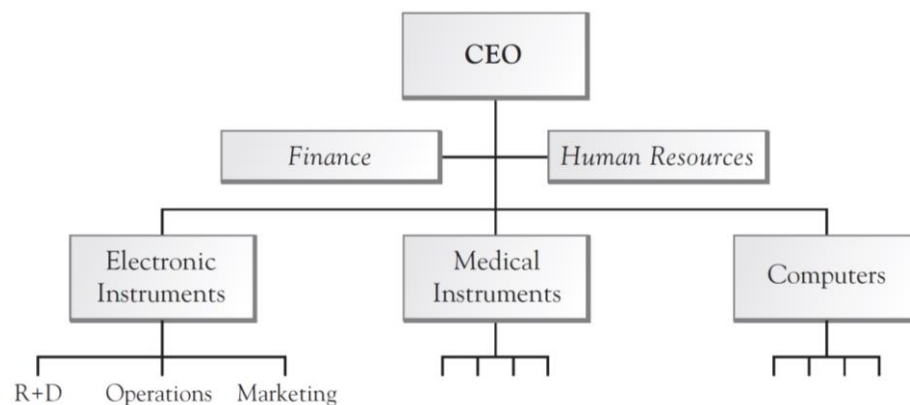


**Figure 2.7:** Geographical Structure

**Source**: Galbraith, Jay R. *Designing organizations: Strategy, structure, and process at the business unit and enterprise levels.* John Wiley & Sons, 2014.

Geographical structure is best working when localized decision making is needed to meet local market needs (Galbraith, 2014). However, companies with international brands face challenges to keep control over the localization initiatives that may lead to deviation of the original offering, and that might end with tensions between headquarters and local divisions.

**Matrix structure**

Matrix structure was the structuring fashion for late 20th century and till now. Matrix structure is about the organization is structured functionally and in the same time is operation by multifunction projects or profit centers that satisfy specific customer's needs. Normally organizations with matrix organizational structure is have

project-based operations often engineering projects (Galbraith, 2014). Employee at Matrix structure organization has two managers, the functional manager and the project manager and that leads to a lot of organizational politics. Matrix organizational structure bring functional specialties together to achieve specific project and that support innovation (Galbraith, 1971).



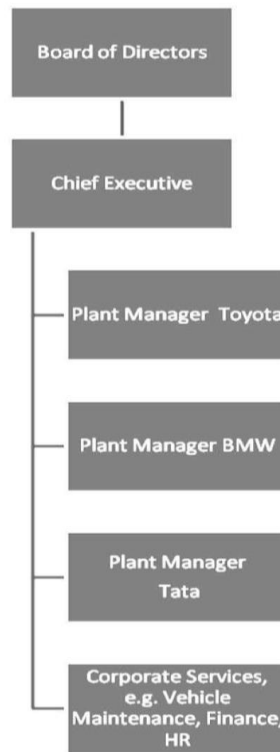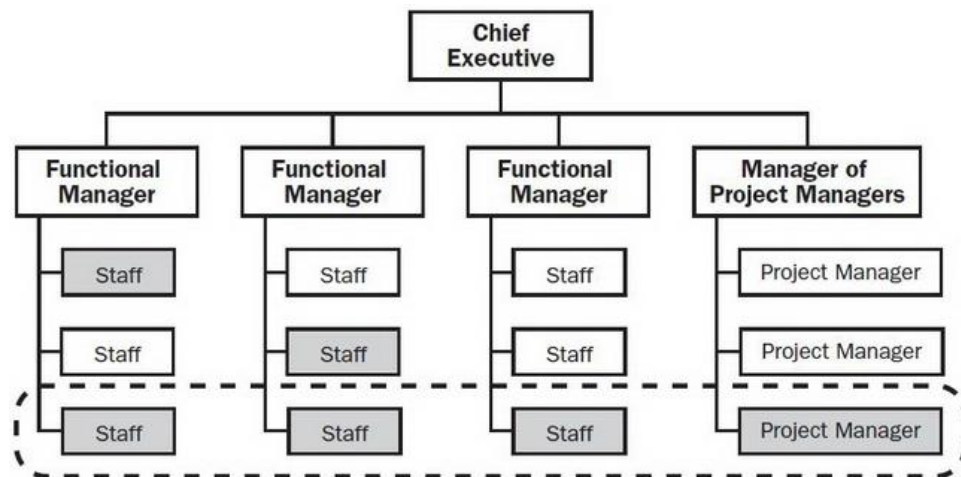**Figure 2.8:** Matrix Structure

**Source**: Galbraith, Jay R. *Designing organizations: Strategy, structure, and process at the business unit and enterprise levels.* John Wiley & Sons, 2014.

It is common in matrix organizational structure to find internal competition and politics between bureaucratic functional departments and customer centric project managers, that make employees confused with the reporting relationships and decision-making authorities (Galbraith, 2014). In other hand employees at matrix organizational structure enhance cross-functional communication and learn new skills that can be transferred back to functional departments after project is finished.

**Hybrid structures**

In normal organizational life organizations may multiple types of organizational structure at the same time what is called Hybrid structure. In hybrid structures organization contain two or more types of organizational structure under the same organization. For example, organization manage some functions centrally and functionally like finance and rest of the organization is organized around product or channel or customer segment (Galbraith, 2014).
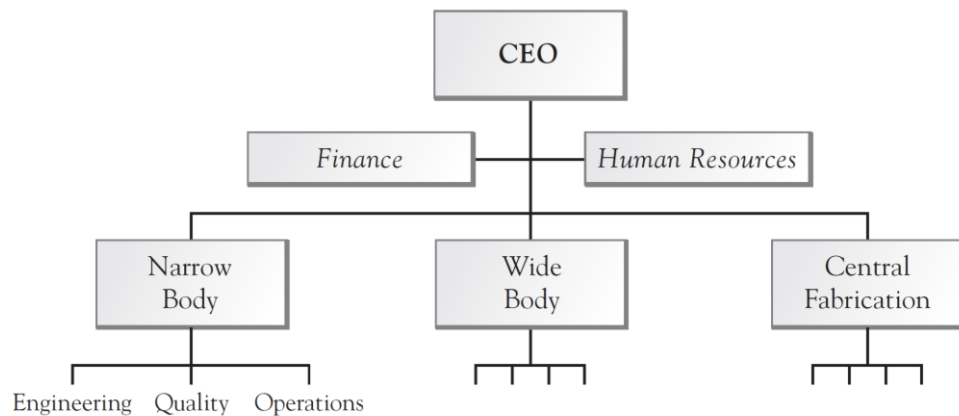
**Figure 2.8:** Hybrid Structure

**Source**: Galbraith, Jay R. *Designing organizations: Strategy, structure, and process at the business unit and enterprise levels.* John Wiley & Sons, 2014.

Designing the shape of the hierarchal structure depends on multiple factors. First one is span of control which means how much people a single manager can manage and control. There is a global trend to make organization much flatter and decrease the number of managerial levels and wider the span of control. Traditional span of control was recommended to range from five to nine employees managed by single manager to be able to direct and control them (Galbraith, 2014). The trend of flat organization (Wide span of control + less managerial levels) suggest the span of control to increase and maybe reach to 127 employees managed by one manager and the conditions enable wider span control are:

- Wide span of control works when intensive communication is not needed between employees and manager for that type of work.
- Wide span of control works When performance can be easily monitored and controlled.
- Wide span of control works when leadership style shifts from command and control to coaching leadership.
- Wide span of control works when organization adopt self-management style of working, big teams can self-organize without the direction and supervision of manger and that need a whole special organization design.

Second factor is the number of managerial levels from bottom of the hierarchy to the top. Shape of the hierarchal structure as well depends on the number of the people in the organization (Galbraith, 2014).

Third one is division of labor. Describes the degree of specialization of organization employees, and the percentage of specialists to generalists needed to operate the organization in proper way that can achieve the strategy. Specialization degree is very critical organizational design strategic decision.

### 2.2.3. Process

**Informal process:** Social and informal bottom-up interaction between employees that is voluntary undertaken by colleagues to perform their work. Informal processes lead to information sharing and self-organizing. some companies invest in digital social network to enhance informal self-organizing and build internal communities of interest (Galbraith, 2014).

**Business process:** It is the workflows and processes that are designed to facilitate the replicable daily operations, like cash collection process, business development process, etc. Some of these processes facilitate cross-functional interdependence and collaboration. Business process become complicated as business grows and now, they can be automated in software like ERPs.

**Management process:** It is the processes that associated with management and allocation of the organizational scare resources due to organizational priorities to execute the organization strategy. Organizational scare resources range from money to human talents which have ROS (Return on Skills) and need to be invested wisely (Galbraith, 2014).

### 2.2.4. Reward system

Organizations and leaders use reward systems to motivate people to work to achieve organizational goals. There are three rewards systems; firstly, compensation and merit increase and bonus and the purpose of the variable compensation is motivating specific behaviors. Secondly, promotion to higher level in the hierarchy. Thirdly, recognition systems like publicly celebrating desired behaviors. Fourthly, job challenge and this one unlike the other rewards systems is internal motivator not external.

For Galbraith some company uses unmaterialistic purpose beyond economic to motivate employees and attract talents specially in industries like healthcare and education. Another job challenge reward type is that the job itself to be fulfilling and challenging for the employee who want to be perceived as expert.

### 2.2.5. People

This factor is the one related with all Human Resources practices and processes starting from recruiting the right people, and putting a lot of effort in selection of the best of them who has the fitting mind-sets with company culture, development of skills set of hired staff, rotation assignments processes of letting staff do their work in other departments to see how business works from different perspective and finally promotions processes.

### 2.3.    Galbraith Lateral Organization

One of the best points in Galbraith thinking of organization design is the Lateral informal organization. *Lateral Organization* is considered part of the process and decisions part of the Star Model, and it means the process of horizontal collaboration and cross-functional workflow and coordination between departments or functions or divisions to achieve organizational mission in complex environment.
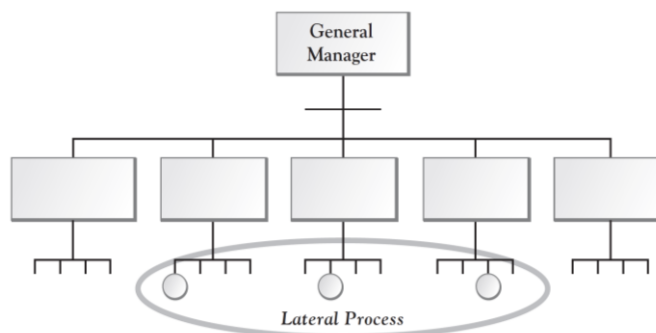


**Figure 2.9:** Lateral Organization

**Source**: Galbraith, Jay R. *Designing organizations: Strategy, structure, and process at the business unit and enterprise levels*. John Wiley & Sons, 2014.

Lateral processes is important to build organizational network that can face unpredicted issues in complex and changing environments. Normally, in functional organization general manager is responsible for cross functional coordination, and general managers take all decisions in functional organization. However lateral

processes decentralize some decision-making authority to people who are at the front line with customers and facilitates cross-functional coordination and collaboration. Hence Lateral process make organization more responsive and adaptable to external environment (Galbraith, 2014).

Lateral processes of collaboration a cross the organization can take a lot of forms. Galbraith propose five ways of collaboration by lateral processes ranked from the easiest to implement and cheapest in terms of employee's time and effort to the more costly and difficult to implement process.
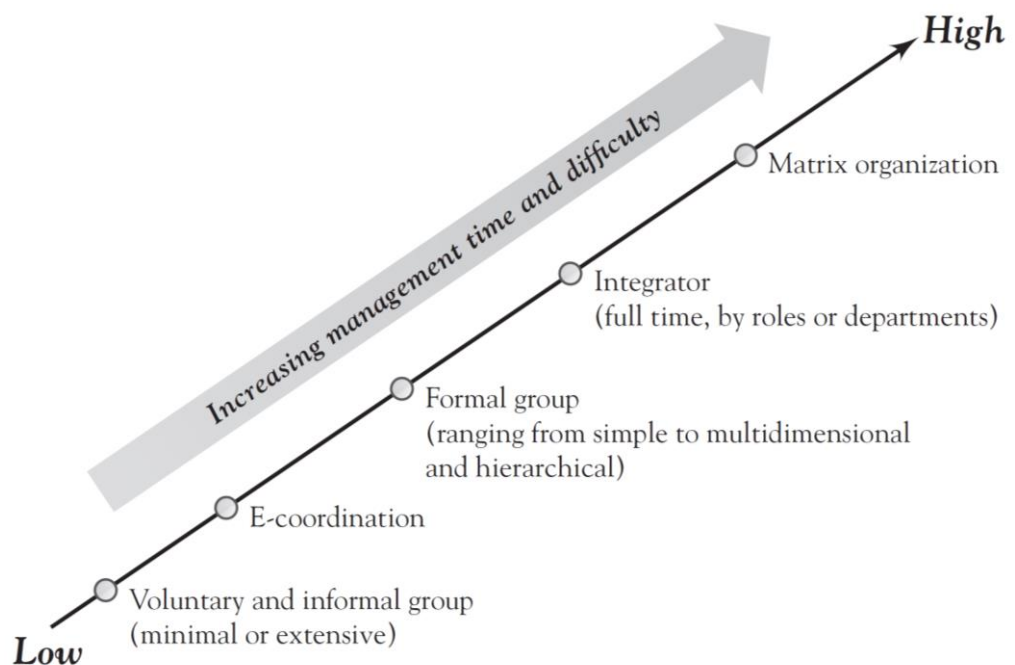


**Figure 2.10:** Lateral Processes types

**Source**: Galbraith, Jay R. *Designing organizations: Strategy, structure, and process at the business unit and enterprise levels*. John Wiley & Sons, 2014.

The first type of lateral process is the voluntary informal processes. This emerge from social and informal interaction between employees without formal direction from the management. It is natural process and considered the easiest to be implemented and the cheapest in terms of employee's time and energy. Voluntary informal process can be enhancing by multiple strategies; first one is the Interdepartmental rotation which means leaders and employees rotate their department for a specific period or mission to see the organization from different

perspective. The second strategy is Interdepartmental events like cross-functional training, hangouts, retreats and workshops. The third strategy is Co-location which means simply to make people work from same workspace without physical barriers that is block cross-functional communication, interior design may have interesting role in fostering communication in the workspace (Galbraith, 2014).. The last strategy is designing performance measurement system that rewards cross-functional collaboration.

The second type of lateral collaboration processes is E-coordination which can be achieved by a lot of electron social network technologies that is tailored to enhance collaboration and communication at workspace (Galbraith, 2014). Examples of E-coordination platforms is Slack, Yammer owned by Microsoft and Workspace owned by Facebook. The attitude shift in communication from one-to-one like email to many-to-many in social networks affected workspace communication strategies. There is a valuable knowledge that is wasted and doesn't transfer in the one-to-one commination strategies (Harden, 2012).

Some organizations impose social technologies to be used by employees like implementing ERP systems. Social networks technologies is bottom-up voluntary communication tools that cannot be imposed by administration. Social technology may need to be part of change program to succeed, it has to be user-friendly, fun, developed upon users' feedback in agile way, and finally social technology needs to be built on the ground before being built on the cloud with the support of the leadership. Social technology facilitates self-management among employees and may provide the opportunity for social network analysis.

The third type of lateral collaboration processes is the formal groups which can be manifested in Taskforces or multidisciplinary teams who collaborate cross-functionally to achieve an organizational common mission. Formal group members are formally assigned to the team, that's why formal groups are more expensive than informal voluntary groups. Another source of cost of formal group is the team building effort that may cost time and money, as usually team members from silos functional mentality to a multifunctional collaborative effort.Successful formal groups have clear mission and task with full control of its elements and outputs, clear organizational resources, decision making authority over the mission and great competence in conflicts resolution skills (Galbraith, 2014). For formal groups who

have expertise in self-organizing and self-management team may don't have to have a formal leader.

The fourth type of lateral processes is integrators which means the assigned leaders to direct and coordinate the efforts of formal groups. Integrators act as general managers of the formal groups.

The fifth type of lateral processes is Matrix Organization which is considered the most complex and the hardest to implement methodology of lateral coordination. Normally Matrix organization challenge is the dual boss dilemma and conflict of loyalty.

## 2.4.    Designing Galbraith's Innovative Organization

Galbraith see innovation as destructive process to bureaucratic organization, and bureaucratic organization see innovation as threat, so he proposed that to separate the innovation from operations and make two organizations. First one is designed to manage operations, decrease uncertainty and risk and the other organization is designed specifically to manage innovation, risks and uncertainty. Both organizations need a leadership that can manage both wings simultaneously (Galbraith, 1982).
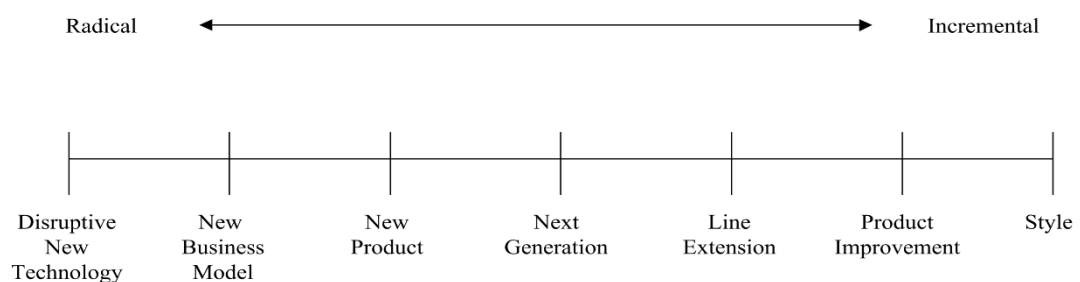


**Figure:** Types of innovation

**Source:** Galbraith, Jay R. "Designing the innovating organization." Organizational dynamics 10, no. 3 (1982): 5-25.

Galbraith as well as other management scholars see innovation ranges from the incremental innovation which is considered a type of improvement of the statuesque, and the other extreme type of innovation which is radical innovation which can lead to the disruption of a complete industry by introducing new technology make the competition irrelevant (Christensen, 2015).

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**Implementing Galbraith's Star Model for innovative organization design**

**Structuring** innovative organization depends on two main factors, the innovating roles that is concluded as who is the corporate entrepreneur and innovator who will initiate the idea? Who is idea sponsor who has the authority and power to support the entrepreneur? And finally, who is in the leadership of the organization who is able to manage operation organization and innovative organization simultaneously.

To let innovation happens Galbraith propose four types of separation between innovation organization and operating organization. First type is the physical separation which means moving the innovation team physically to work away from the operations workplace. Second type of separation is the structural one by isolating the innovators from the operational structure. The third way of separation is separation of fund by getting fund from separate financial resource doesn't affect operations fund. And the fourth and final way of separation is separation from control systems. Innovation is made by experimentation, trial and errors in contrast control system function is to minimize any risks or variation in operations, the more operation is sensitive to variation and the more radical innovation is undertaken, the greater need to hide and separate from the control systems. These four strategies can be implemented together or individually (Galbraith, 1982).

Separation of innovation and operation make it harder for innovation adoption in the operation, but not making the separation expose innovation to too early attack that might kill radical innovation before its birth. Galbraith claim that it is leadership role to manage this dilemma and support innovation to be separated and adopted back in the operations (Galbraith, 1982).

**Processes** that support innovation; secure funding for potential projects from internal or external sponsors, searching for ideas from outside the organization which is so-called "open innovation" (Chesbrough, 2006).

**Rewards** is very critical for innovation organization for both idea champions and ideas sponsors. Rewards is not only money but also recognition of innovation act between peers. Operating organization will resist again the rewarding process of innovation, so the support of leadership is critically needed.

**People** pillar is critical for innovative organization because innovation is done by people who have the potential to take risks and try new things. Organization must empower the recruiting the right people who have the potential to innovate and support innovation.

## 2.5. Analysis of Galbraith Star Model for Organization Design

Galbraith made a holistic Organization Design model that is not depending only on organizational structure (Galbraith, 2012), although the abstract framework is comprehensive and including most of organizational components, however the content of the framework and the meaning of each component and Galbraith preferences of the content needs analysis and critics.

| Organization Design factor of Galbraith's Star model. | Analysis and critics |
|---|---|
| 1- Strategy | Structure follows strategy and strategy is fixed plan done at the top of the pyramid without participation from employees who are in direct contact with customers and had a lot of valuable date to be taken into consideration while planning for the strategy.<br><br>If strategizing process is not inclusive enough that will be a risk for the organization to lose valuable inputs or depend on minds of the few and missing collective intelligence. |
| | Strategy is defined with strategic plans not experimentation and that is based on implicit assumption about the environment that it is stable and can be predicted and controlled, which is not the case at complex environments. |
| | The model focused on the internal organizational components and ignored the effect of external context and environment on organization design. |

| 2- Structure | For Galbraith hierarchal structure is not questioned or debated; it is taken for granted organizational orthodoxy. Galbraith claims that big numbers of people cannot communicate and take decisions together, so a few of them should have the authority and power and be at the top of the hierarchy to take decisions and determine the direction. |
| --- | --- |
| | Evolution Darwinian world view for hierarchal organization from simple functional structure to more complex way of hierarchy as growing, expanding to other markets or diversifying their business or operations. |
| | Galbraith offered the example of open-source software development that the crowd has to obey centralized hierarchical authority and con not be organized without hierarchy. However, Blockchain is emerging technology that enable crowds to take decisions and build consent. |
| | Cross-functional coordination is on of the major challenges of functional organization structure specially in big organizations. Galbraith tried to offer some strategies to solve this challenge by the idea of lateral organization. But still the functional hierarchy will continue to suffer from cross-functional coordination as structural disadvantage. |
| | At his paper titled with (the future of Organization Design) Galbraith said he is following (Chandler, 1962) "Structure follows strategy." The implication of that is structure is adaptable only to strategy, not to external environment or context changes. |
| | In his paper at 1982 about designing the innovative organization Galbraith admit that "innovation is not hierarchal process", so he decided to split the organization into two parts, operations part and innovation part. Galbraith made that separation because he can not imagine that there is organization without hierarchy. Hierarchy for Galbraith is fate and inevitable end. |

| | | |
|---|---|---|
| **3- Process** | Highlighting informal process which is the social and voluntary interaction is positive point for Galbraith Star Model, because the work is facilitated and collaborated at the level of informal processes. | |
| | Lateral processes not only need to empower people at the front line with all data that supports the decision making, but also training and mentoring and knowledge transfer and experience sharing to maximize the organizational learning. | |
| | Galbraith see that the cost of lateral process is the time that will be wasted in conflict resolution between functional representative. And that is the price of functional structures because the loyalty of the employee will be always remains to the functional department not to the organizational collective mission. | |
| | Galbraith consider the lateral processes as support to general manager in functional organization. Lateral organization importance is that it is support cross-functional communication and decreases silos mentality and support innovation. | |
| **4- Rewards** | Organization Design school of thought called Strategic Organization Design and it is top-down process is done by the top of the pyramid and people do not participate in the organization design process, they are informed and manipulated using reward policy as motivating tool for people to adapt change. Using rewards as motivation/manipulating tool is widely used in modern managerial practices, but for 21st century workers looking forward for fulfilling and meaningful jobs, not only good salary. | |
| **5- People** | Galbraith has the same predetermined assumption of people towards change as they will resist change. | |

**Table 2.1:** Analysis of Galbraith Star Model

In a paper titled with "The Future of Organization Design" published by Organization Design journal and written by Jay Galbraith in 2012. Galbraith said that the future of organization design will be the same as the past of organization design (Galbraith, 1982). It seemed that Galbraith concluded his views about organization design in this statement. Galbraith introduced very comprehensive model about organization design that is beyond the structure, but still his paradigm and world view belong to the mechanical and hierarchal organizational design paradigm of the 19th and 20th century. The aim of his organization design model is obtain efficiency and preserve stability of operations.

Although Galbraith proposed the idea of Lateral Organization to enhance cross-functional coordination as recognition of the need to collaborate and innovate in multidisciplinary work, he still believe in the viability of functional structure and concrete division of labor, with low democratic a top-down organization design approach, just like 19th century organization designers Taylor, Fayol and Weber.

A major critic to Galbraith is that although he understands the sever disadvantages of the hierarchal functional structure specially the disadvantage of hindering cross-functional coordination and innovation, but he couldn't think outside the pyramid. He tried to invent solutions to treat bad effects by making research about designing the lateral organization that support cross-functional cooperation and designing the innovative organization that doesn't follow the hierarchy of operational organization, but all this solution is not radical enough to solve the hierarchy problems.

In other word we can conclude that Galbraith introduced Star model of organization design as a holistic and simple to understand framework. Star Model itself is excellent tool to analyze or design organizations, however the main concern is not about the model itself, but it is about Galbraith view of organization as hierarchical functional pyramid. The strategy of the organization is predetermined at the top of the hierarchy, structure follows strategy (but should remain hierarchal), if the organization needs innovation it should be separated from the main body of hierarchal structure. The process and rewords and people pillar of star model is tools to manipulate people interaction and behavior to achieve organizational strategy, so the Galbraith has the implicit assumption about human behavior that the main motivator for employees is money, this assumption history is going back to Taylor as well.

Hierarchal and Mechanical view of organizations aims for efficiency and stability of operations. Galbraith ideas of organization design survived in 20th century that can be described as relatively certain and stable environment. In 21st century turbulence and uncertainty and disruptive innovation is the norm. Innovation in 21st organization is not nice to have feature; it is survival safe mechanism. Small startups operated from garage can disrupt a historical market leader and let it out of the market.

The challenge of organization design transferred from how to design organization with steady state and stable operation to how operationalize innovation, continuous change and adaptability. And this is exactly what inspired the research conducted in this thesis which is how might we build organization that is innovative by design? How might we design organizations belong to the future not to the 19th and 20th century mechanical and hierarchical organization? How might we design organization that is not only make jobs but fulfilling lives for its members.

In the third chapter we will explore the change in the context from stable and simple environment to complicated context to complex context. From understanding the features context, we can get inspiration about what is the critical factors to be considered when forming a new organizational design model that is compatible with the specific context of 21st century.

# CHAPTER THREE

# CHANGING CONTEXT FROM SIMPLE TO COMPLEX

## 3.1.    The Cynefin Framework and analysis of organizational contexts

In the first chapter we explored the origins and the emergence of organization from the industrial revolution time at the 19th century. And in the second chapter we discussed the emergence of organization design and the effect of mechanical organizational ideas from the 19th century on the modern organizational design models in the 20th century. In the second chapter we studied and analyzed Galbraith Star Model as example of modern organization design models and conclusion was that organization design in 20th century is strongly influenced by the mechanical view of organization that was theorized in 19th century by the engineers Taylor and Fayol, and the lawyer and sociologist Weber.

In this chapter we will study and analyze the context and environment of operations and it's matching with the organizational design. We will use The Cynefin Framework as analytical tool. The Cynefin Framework was theorized by David John Snowden who has studied philosophy and financial management as his educational background. Snowden propose a different perspective of organization as he see organization as human system that cannot be engineered, in contrast with the perspective of the engineers of 19th century (Taylor and Fayol) who deals with organization as machine (Gareth, 1986) that is designed in mechanical way.

David Snowden challenges the taken-for-granted assumptions in traditional organizational theory like the mechanical and Newtonian design of the organization. Snowden challenges the ability of an organizational designer to predict and control the future of the organization even if the organizational design was successfully engineered (Snowden, 2007). To do that, Snowden view organizations from complexity theory perspective. He utilizes principals, techniques and tools from complexity theory. The Cynefin Framework is adopted and used by hundreds of organizations and executives around the world in a lot of different industries. The Cynefin Framework is not only useful for civil organizations but also it is worldwide used by military organizations specially the United States Defense.

The main benefit of The Cynefin Framework for our research is that it helps us to map and clearly define the context of the organizational operation and hence define the proper organizational design that fits with this specific context. Contexts are Complex, Complicated, Simple, and chaotic, as illustrated below:

**Complex**

What's it like?

• Flux and unpredictability
• Emergent instructive patterns
• Many competing ideas

Emergent Practice

What to do?

• Probe, Sense, Respond

**Complicated**

What's it like?

• Cause-and-effect relationships discoverable but not immediately apparent to everyone
• More than 1 right answer possible

Good Practice

What to do?

• Sense, Analyze, Respond

What's it like?

• High turbulence
• No clear cause-and effect relationships, so no point in looking for right answer
• Many decisions to make and no time to think

Rapid Response

What to do?

• Act, Sense and Respond

**Chaotic**

What's it like?

• Clear cause-and-effect relationships evident to everyone
• Right answer exists

Best Practice

What to do?

• Sense, Categorize, Respond

**Simple**

**Figure 3.1:** The Cynefin Framework

**Source:** Snowden, David J., and Mary E. Boone. "A leader's framework for decision making." *Harvard business review* 85, no. 11 (2007): 68.

Analysis of organizational context and external environment context is fatal for leaders and organizations because each context needs a special type of thinking and leading, tools of decision making, work methodology, and finally a special organization design. There is no one size that fits all organizational design solutions for every context. Each context needs a special organization design that make

organization performing and exceling in each context with its special conditions, so organizations and leaders need to be trained to differentiate and navigate between different organizational context (Snowden, 2007)

Before exploring the organizational contexts, it is important to clarify that there are no clear boundaries between contexts. Organizational context is identified by the predominant and dominant, not by an absolute. That happens because contexts change and because the boundaries between contexts may dissolve. Contexts are often mixed, and one organization may operate in more than one context, but often there is a context that is the dominant of the organization's work.

### 3.1.1. Simple Context: (Best Practice)

The simple context is a stable context characterized by simple and obvious cause and effect relationships that are very easy to be understood and predicted from anyone. Problem solving in simple contexts does not require much effort because all factors affecting the problem are clearly known and all solutions are also clear, there always only one right solution for every (Snowden, 2007).

In simple context organizations and leaders are accustomed to resorting to well-known, pre-determined solutions, and are not prepared for any sudden change or disruption. Stability is the norm in simple environments and any change in the environment makes organizations fall into chaos. This is what always happens through disruptive technological innovation in 21$^{st}$ century, Disruptive innovation destroyed market leaders and whole industries (Christensen, 2015). So, organizations and leaders need to be alerted for any change might happen in the environment. Solutions for challenges in simple context can be brought easily from engineering and reengineering of the process or the problem, then it can be calculated accurately and implemented. If the problem appears again the solution can be replicated from past best-practices solutions with high efficiency (Snowden, 2007). Excessive communication between organization members in not needed as problems and solutions are self-explanatory.

This simple context was exactly the context of the emergence of the industrial revolution in the 19$^{th}$ century, where problems in the factory floor needed simple analysis and categorization, searching for best practices and replication of the operation. Taylor, Fayol and Weber breakthrough ideas work here very well.

### 3.1.2. Complicated context: (Good Practice)

The complicated context is characterized by existing of multiple solutions for the same problem, it is not only one right answer like in simple context. Experts determine the good answer from multiple choices after making deep analysis and investigation of all options and using their expertise in the process. An example of complicated process is designing new car model, there is a lot of ways and options to design a car, but experts determine the most effective design that save oil and allow for faster speed (Snowden, 2007).

The disadvantages of complicated context are that it is dominated by expert, and experts don't allow other non-experts to contribute in the process of finding the optimum solution of the problem and that leads to missing fresh perspectives and innovations. Leaders should hold the safe space for fresh perspectives from non-experts and don't allow the ego of experts to the kill out of the box innovations, that will make organization miss a lot of opportunities (Snowden, 2007). Another disadvantage of the rule of experts is the over analysis nature of their thinking and working mode, over analysis waste a lot of time and opportunities.

To let experts, get fresh ideas and innovate, leaders might make experts work in other department or other organization to see the world from different perspectives and motivate experts' minds to think differently. The implication of the dilemma of the rule of experts appeared in the organizational context when Taylor separated the thinking from the doing at the factory floor. Taylor made the expert "white colors/managers" think and design how can the best be done. Worker was perceived as stupid mechanical power that is not allowed to think and contribute to the design of the work. Bureaucratic division of labor as well contributed to the domination of experts over non-experts.

Organization designers of the 19th and 20th century from mechanical and Newtonian mindset they dealt with organization design as designing complicated machine (Gareth, 1986). If machine parts are combined in the most proper way by expert organization designer (manager) the machine will work well (Snowden, 2007). Machines can be engineered, predicted and controlled as well as organizations in modern organization design theories. Change in complicated environment is exceptional, steady state of operations is the norm. So, machines and mechanical

organizations are designed to be static and to operate at the most efficient way, they are not designed to face and adapt continuous change.

### 3.1.3. Chaotic context: (Rapid Response)

Complete turbulence is the main characteristic of chaotic context. Firstly, Solutions cannot be identified or experimented, but rapid action that aims to create order, minimize losses and increase benefits is the main course of action that can be taken in chaotic context. Secondly, leaders should do their best to transform chaotic context into complex context to be able to make experiments and observe emergent patterns that allow seizing opportunities and avoid risks.

Leadership and communication styles in chaotic context required to be directive and top-down to generate stability as fast as possible, as waiting for feedbacks from the bottom of the hierarchy is not useful. And it is challenging for leaders to shift leadership styles from top-down to bottom-up after the context transform from chaotic into complex, central authority and the human desire to control often dominate the leaders thinking after chaotic situations ends.

One of the reasons for the regression to the centralized patterns of leadership is that the leader who has managed brilliantly to survive a catastrophic and chaotic challenge conceals an internal mythical image of the heroic and championship, which makes it is very difficult to re-share the power with people or adopt decentralized or participatory leadership styles. When the leaders become heroes, the ultras and fans turn around, and the leadership in this case is extremely difficult. Getting accurate information that describes the situation is very difficult, because both fans and financiers prevent access to accurate and correct information to the leadership. Whether in good faith or in bad faith the end is the same, the end is a lack of information that leads to making wrong decisions and ultimately failing.

Unfortunately, the dominant organizational theories is based on the simple and complicated contexts which were lived in the 19th and 20th century, hence majority of leaders getting from business schools which curriculums is biased towards simple and complicated context theories, tools and methodologies. Organizations leaders must deal with this uncertainty, and now much more executives and leaders recognized the need to do something different, to transform their way of managing organizations.

To survive in this uncertain and complex environment business leader, entrepreneurs and all types of organizations need to embrace a new managerial mindset that is consistent with the new challenges we face and the new uncertain context we are living in.

### 3.1.4. Complex context: (Emergent Practice)

In complex environment continuous change is the norm, even the governing rules are always changing. Factors and elements that affect the environment and the context are unknown, the network relations and connections between environment factors are hard to be mapped and tracked. The effect of the change of environmental factors is not known as well. The complexity of context increases as the number of the factors that may affect the context increase, and the complexity also increase when the connection between factors that affect the context increase. So, in an age defined by extraordinary connectivity through the internet and easy transportation complex environment become the norm (Snowden, 2007). Complex context in contrast to the simple and complicated contexts can not be predicted and cannot be controlled.

Working and organizing in complex environments and context cannot be done through long term strategic plans, as strategic planning need two things; stability in the environment and deep knowledge about the industry. In the 21$^{st}$ stability is very rare almost everything changes in very high rate, and almost all industries is disrupted by emerging of new technologies and the movement of digitalizing everything. Long term strategic planning is very effective tool in simple and complicated stable environments.

Growing in complex environment doesn't need strategic planning but it needs fast, cost-effective, safe to try experiments and trials and errors. Experimentation result in learning a pattern as a result of experiment interaction with changing and evolving reality. The right solution cannot be designed, planned or predetermined. The right solution at complex environment emerges throughout experimentation, not fabricated. Methodologies that was introduced in Agile Project Management, Lean Startup and Design Thinking is very effective tools to use in navigating and working in complex environment (Ries, 2011). In experimentation there is a must to be biased to learning not efficiency. Failure is inevitable part of the process of getting learning through experimentation.

Organizations in complex environments and contexts should be as fast as small startups in taking decisions and adapting to new changes Eric Ries called that the startup way (Ries, 2017). If organizations are not fast enough to understand the signals and adapt to the new context, a small startup team working from a garage will receive the signals of the change in the market earlier and will adapt to changes faster, and a small startup team may disrupt a whole industry and make traditional market leaders irrelevant (Ismail, 2014).

Startup is in continuous process of searching for new business model that fits with the external environment and market (Osterwalder, 2011). Startup teams is not developing solutions and working in closed and isolated labs, they are always testing their solutions with real customers and learn from customers' feedback and adapt to it very fast (Blank, 2011). In complex environment and context there is no room for best practices or for the single right solution, Solutions are identified from the validated learning result from experiments (Ries, 2011).
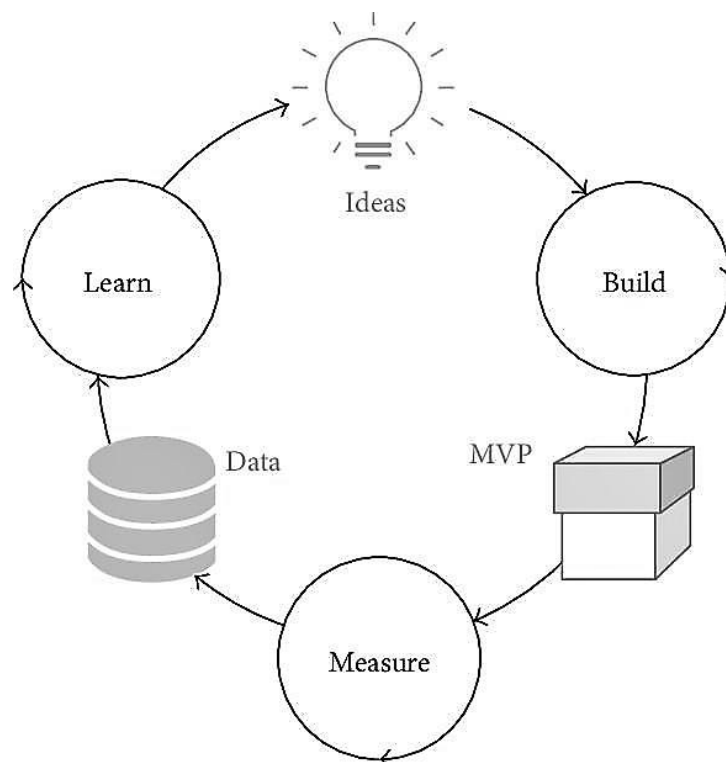


**Figure 3.2:** Lean Startup Process

**Resource:** Ries, Eric. *The lean startup: How today's entrepreneurs use continuous innovation to create radically successful businesses.* Crown Books, 2011.

Complicated context with clear cause and effect relationships between system's elements can be deeply analyzed and engineered and designed and reengineered, in contrast to complex context that has no clear cause and effect relationships between the elements of the system, so it cannot be analyzed rationally and engineered in mechanical way and cannot be controlled.



Complicated                                        Complex
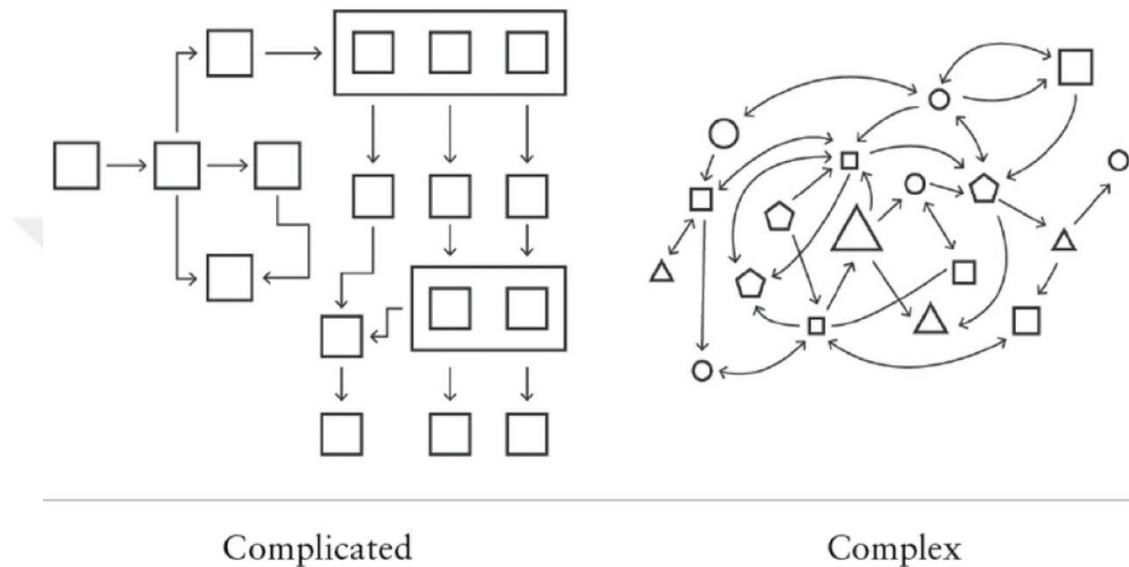
**Figure 3.3:** Complicated versus Complex

**Source:** McChrystal, General Stanley, Tantum Collins, David Silverman, and Chris Fussell. *Team of teams: New rules of engagement for a complex world*. Penguin, 2015.

Solution in complex context are emerge from the utilization of existing scarce resources and existing conditions, not from designing the perfect conditions with all necessary resources available for action (Sarasvathy, 2009). Organization designer and organization leader in complex environment should act and behave like an entrepreneur.

Entrepreneurs are not working in perfect conditions, in contrast they are lacking a lot of information and resources, they begin with what in hand and do experiment until they find the magical recipe of success, that is called *Effectuation* process limitation of resources and information is a motive for finding creative solutions.
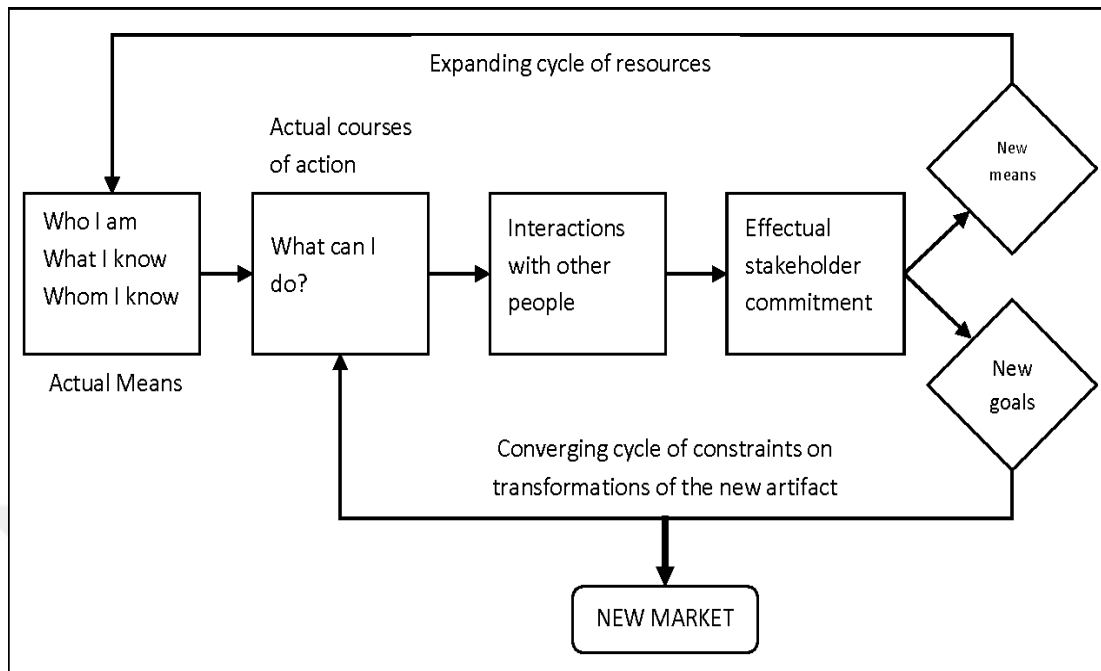
**Figure 3.4:** Effectuation Process

**Source:** Sarasvathy, Saras D. *Effectuation: Elements of entrepreneurial expertise.* Edward Elgar Publishing, 2009

Taylorism, Faylosim and Weber bureaucracy cannot help in complex environment, Imposing solutions, command and control styles of management and strategic forecasting business plans cannot help as well. To survive in complex environment a new mindset and tools should be used by organizations and leaders, an entrepreneurial mind-set, and experimentation managerial tools should be adopted. Without experimentation (Safe enough to try experiments) it is almost impossible to survive in complex environment and a core element of experimentation processes is failure. Leaders should tolerate failure as by product of experimentation, and Taylor's efficiency is the enemy of experimentation. Leaders should hold safe space for experimentation, failure and learning (Edmondson, 2012).

Control over organization and people will handicap experimentation and innovation, and the less experimentation the less sensing of changes happens in the environment. Control will not lead except to strategic failure, irrelevance and disruption. Leaders should support the emergence of patterns and solutions not impose nor control the organization.

Interactive communication is critical to succeed and survive in complex environments. Leadership should make the stage for horizontal and vertical communication channels. In contrast to Fayol's Gang plank and Galbraith Lateral organization where horizontal communication is exceptional, in complex environment organization wide communication is the norm that allow organization members to share information and insights that helps in the emergence and identification of the solutions of organizational challenges.

## 3.2. Organizational context shift from 20th century simple context to 21st century complex context.

The 21st century is coming with a lot of challenges in economic and business world. The emerging new technologies and high level of connectivity opened the doors for huge opportunities as well as disruption for a lot of industries. In knowledge economy (Smith, 2002), it is familiar to read and hear a lot about the term Disruptive innovation, which theorized and preached by Harvard business school professor Clayton M. Christensen in his book The Innovator's Dilemma (Christensen,1997).

Disruptive innovation means that: making a product or service much more accessible for a big and new whole customers population despite being historically only accessible for small segment of wealthy or skilled customers, that disrupt existing big market players and often this disruption is conducted by new comers to the market! just before two decades disruption innovation was very exceptional event, now it is the norm, disruption innovation now threatening most industries and most of the big players with a long history of success (Christensen, 2018).

So, innovation in 21st century is neither luxury nor fancy word used for PR and marketing, but being innovative, responsive and adaptive with rapid change in a complex environment is the basic skill to survive in turbulence and uncertain world. In the following section in this chapter we will explore some manifestation of the nature of complexity at the 21st century context and environment. Complexity and uncertainty are not only coming with a lot of organizational challenges, but also with opportunities of growth and thriving.

### 3.2.1. Public Discourse & Awareness about disruptive innovation

The interest in disruptive innovation is not limited to practitioners or businessmen, but also between commentators, business authors and thinkers, academics and researchers who seek to understand this confusing phenomenon that disrupt all kinds of businesses. This trend in public discourse is an indicator of the importance and the sever impact of disruption innovation. This is reflected in the following curve, which shows the size of the public interest in the topic of disruptive innovation and disruptive technology by growing number of articles about the topic.
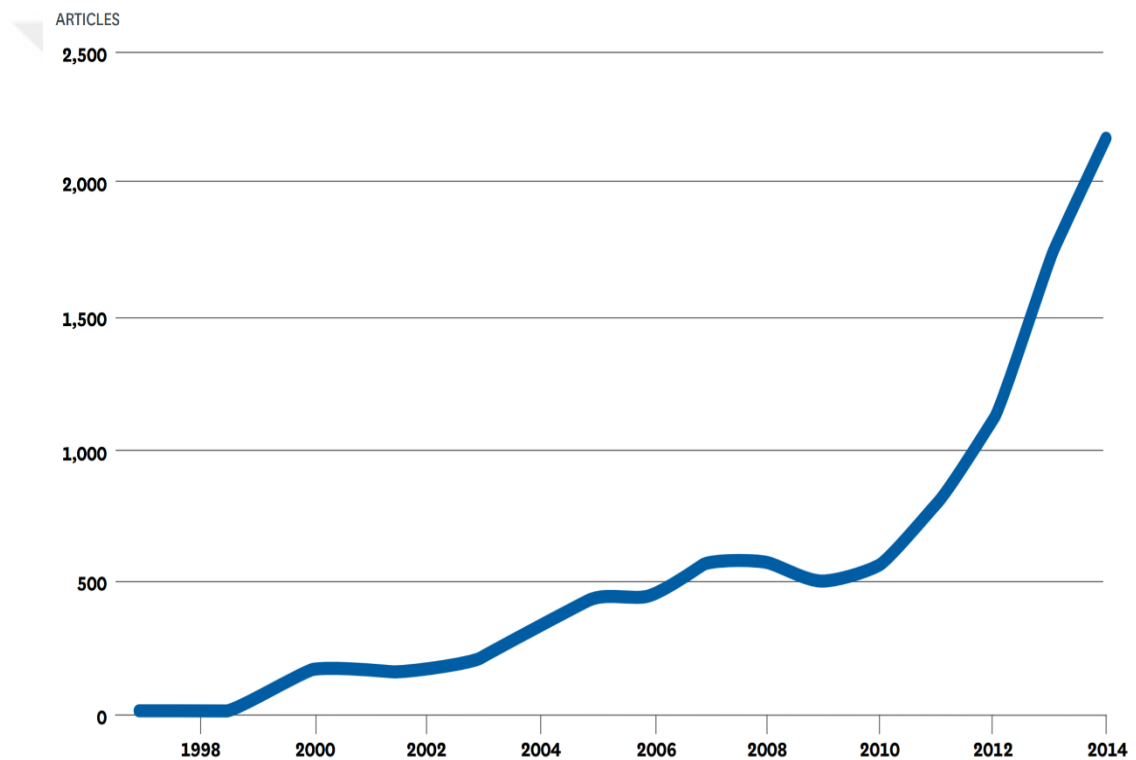


**Figure 3.5:** Number of Articles about Disruptive innovation

**Source:** Christensen, Clayton M., Michael E. Raynor, and Rory McDonald. "What is disruptive innovation." *Harvard Business Review* 93, no. 12 (2015): 44-53.

### 3.2.2. Mortality rate of fortune 500 companies.

Innovation is good thing to those who use it, and very dangerous for those who ignore, it is as said "innovate or evaporate!". As reported in AEI by Professor Mark J. Perry who is a professor of economics and finance at the University of Michigan's Flint campus, that increasing rate of mortality for established business from top fortune 500 companies in USA is continuing. Prof Mark compared the list of fortune 500 big companies list between years 1955 and 2017, he found that it is about 88% of companies listed in fortune 500 in the year 1955 disappeared in 2017, only 60 companies out of 500 remained in both lists and survived from 1955 to 2017, almost nine companies out of ten had either closed, bankrupted , merged, acquired or simply gone. Only 12% of fortune 500 survived to last on the list through the last 60 years due to dynamism and the uncertainty (Perry, 2017).

### 3.2.3. Creative Destruction and S&P 500 lifespans shrinkage.

The Standard & Poor's 500 Index (S&P 500) is a Stock market index selecting the most widely followed and watched 500 stocks in the American stock market, and considered a stock performance benchmark for investors, because S&P 500 supposed to make representation of US stock market. The index selection of the 500 stocks is prepared by economists and analysts working at Standard & Poor company which is a financial services firm (Kenton, 2019). A research had been done by Innosight, a strategy consulting firm, about corporate longevity forecast of S&P 500 companies due to creative destruction and disruptive innovation. The research shows that the average lifespan of S&P 500 in the year 1964 was 33 years, and this lifespan dramatically decreased into 22 years in 2017, and S&P 500 lifespan is expected to drop to 12 years in 2027 (Innosight, 2018). Let us Imagine a world where the life span of best companies in the US is only 12 years, such uncertain and turbulence world cannot be faced by traditional mindset or outdated managerial practices.

### 3.2.4. Shrinking time to reach 1-Billion-dollar market capital valuation

Although there are a lot of disruption and turbulance in knowledge and innovation economy but as well there are much more opportunies emerge for organization who build their capacities and capabilities to be adaptable and sieze opportunities before other competitors in the market.
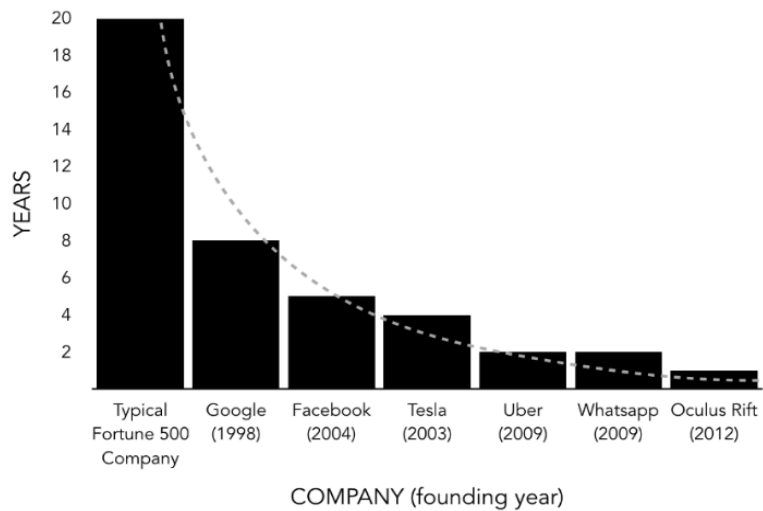
**Figure 3.6**: Time needed to reach 1 billion dollar in Valuation

At the time that some big established companies from fortune 500 evaporate and disappear, a lot of startups crashing time to reach 1 billion dollar market valuation, it was taking about 20 years for a company in the past to reach 1 billion dollar market valuation, now it may took about 2 years to reach that goal (Ismail, 2014). And now we are living in a world where an innovative idea can be transformed into startup valuated with 1 billion dollars within only 390 days (Morris, 2017).

### 3.2.5. Moor's low of Exponential Technological Progress

Gordon Moore is an American engineer, researcher, entrepreneur and the co-founder of Intel Corporation the leading technology firm. In 1965 Gordon Moore wrote his observation and prediction about the future of semiconductor industry and published a paper in Electronics Magazine. Moore observed that the number of transistors placed on an integrated circuit is increasing by twice every year, which means doubling the capacity of semiconductor and electronics devices every year, which is considered an exponential growth of semiconductors industry and hence all electronics products. This phenomenon is recognized after words as Moor's Low (Moor, 1965).
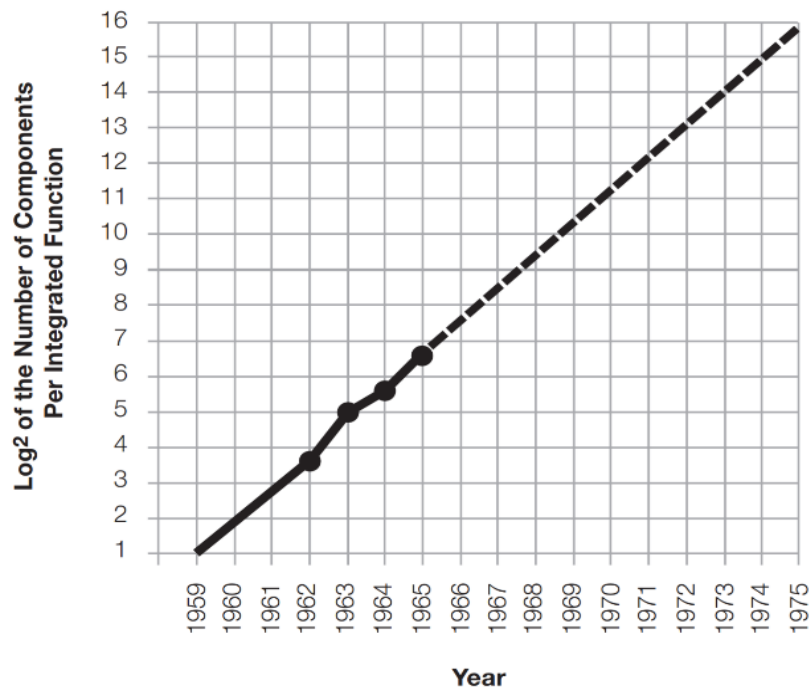
**Figure 3.7:** Moor's Law prediction at 1965

**Source:** Moore, Gordon E. "Cramming more components onto integrated circuits." (1965)

In 1975 Gordon Moore revisited his observation and changed it to be two years instead of one year to double the capacity of semiconductor component. Through the years Moor's low proved to be almost right for more than 50 years. See the tracking of the applicability of Moore's low from 1971 to 2017 in (Figure 3. ). Moore's low predictions now is used widely to indicates the technological exponential progress in almost most of technological fields.

Not only Gordon Moore who predicted exponential technological progress but also Gerry Butters who predicted that the amount of data that can be transferred from one side of optical fiber tube to another is doubled every nine month, this prediction in known with Butter's low, which will lead to faster data transmission with low cost. Butter's low implications is huge and not limited to media and communication industry (Crosbie, 2015). Moore's low and Butter's low is just examples of technological revolution and a new whole economic model based on knowledge and innovation.
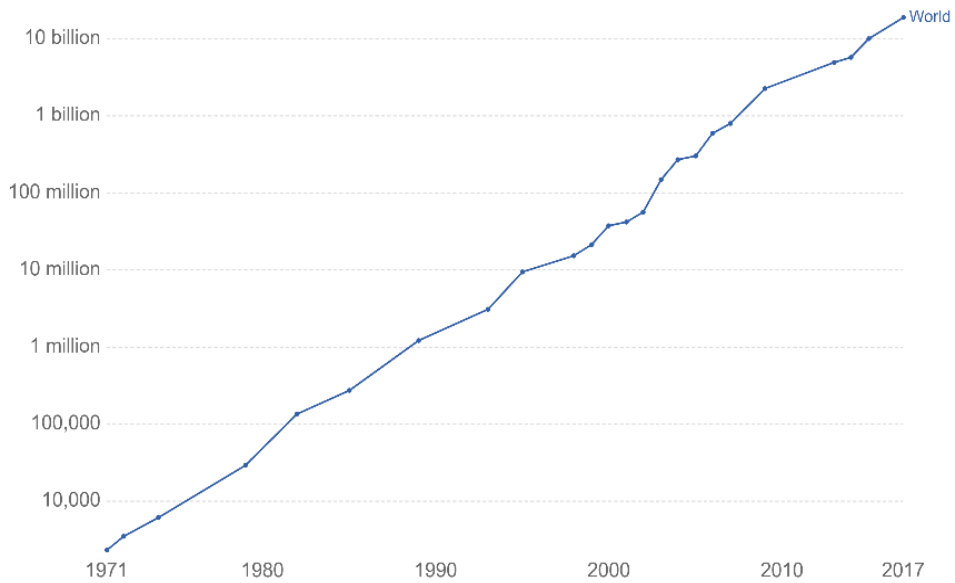
**Figure 3.8:** Moor's law actual applicability from 1970 to 2017

**Source:** Roser, Max. "Moore's Law - exponential increase of the number of transistors on integrated circuits" (Online) https://ourworldindata.org/technological-progress , 28 April 2017.
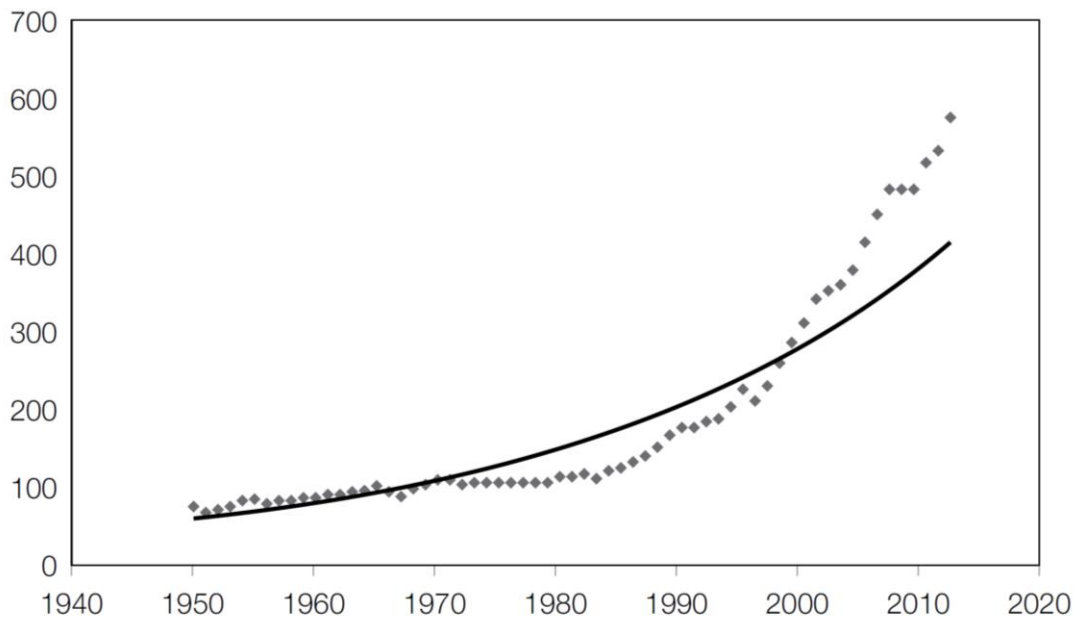


**Figure 3.9**: Exponential Growth in Total Patents Application annually (Thousands)

**Source:** Kotter, John P. *Accelerate: Building strategic agility for a faster-moving world*. Harvard Business Review Press, 2014.
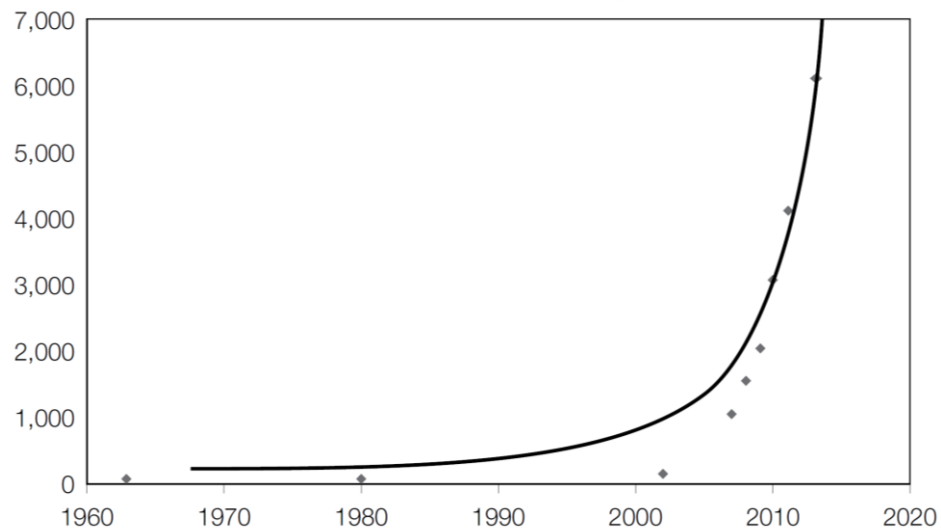
**Figure 3.10:** Exponential Growth in Hard Drive Storage in GB

Examples of exponential cost reduction of technologies that opens massive opportunities for future business (Ismail, 2014):

| Technology | Cost was: | Cost Decreased to: |
|---|---|---|
| *Industrial robots* | $500,000 (2008) | $22,000 (2013) |
| *Drones* | $100,000 (2007) | $700 (2013) |
| *Human DNA profiling* | $10 million (2007) | $1,000 (2014) |
| *3D printing* | $40,000 (2007) | $100 (2014) |
| *Solar Energy* | $30 per kWh (1984) | $0.16 per kWh (2014) |
| *Medicine (full body scan)* | $10,000 (2000) | $500 (2014) |

**Table 3.1:** Exponential technologies cost reduction

Some of these numbers back to 2014 five years ago, which means in 2019 the year of writing this research the costs decreased much lower. What Moore and Butter observed became the main feature for the future of business and information technology and knowledge economy as explained by Salim Ismail in his book Exponential Organization.

The following graph is almost describing the world we are living in. the graph was illustrated by Salim Ismail to clarify the relation between linear growth, disruption and exponential growth. Those who think, operate and innovate in linear way will be disrupted by the other exponential innovation that will leave the historic heroes of the past stay in the past like Kodak and Nokia. Linear rate of change was only possible in simple and complicated contexts, where relationship of any system can be easily mapped, organized and predicted because relationships and connections in the environment can be defined by rational cause and effect relationships. Organization in modern world after the industrial revolution was designed to live within simple and complicated contexts. In complex contexts the exponential curve is the perfect representation of not only for the growth rate of technology, but also for the rate and speed of change due to complexity. That's why a new managerial model is needed to adapt with the speed of change in complex environment and to cope with exponential technological progress and disruption.
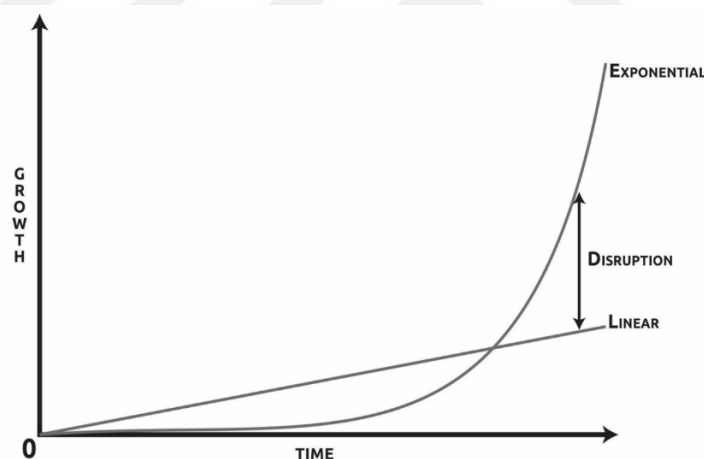


**Figure 3.11:** Linear Growth Vs. Exponential Growth

**Source:** Ismail, Salim. *Exponential Organizations: Why new organizations are ten times better, faster, and cheaper than yours (and what to do about it).* Diversion Books, 2014.

Exponential technological progress has a lot of organizational and social implication. For example, growing of computational power, increase of electronics capabilities and decreasing the cost of the technology in the same time, will make a lot of technological products affordable for people which affect the quality of life for people. From environmental perspective decreasing the power consumed to run electronic devises dramatically which will save the environment.

### 3.2.6. Technology adoption rate

It is not only the technology that develops exponentially, but also technology adoption rate and technology commercialization by mass markets and customers is developing exponentially. The real fruit of any creative technology is commercialization and finding ways to transform the technical technology into desirable, feasible and affordable product or service, and that the essence of disruptive innovation. Thanks to high connectivity that made technology adoption rate and the spreading of innovative products and services faster than any time in history. Simple and complicated contexts can be characterized with stable and long lifecycles of technologies and products, however in complex environment products lifecycles are shorter more than ever due to continuous development of new technologies.

**Telephone vs. Tablet**

Adapting the Telephone with 80% of American households took about 100 years since it's invention at 1876. On other hand it took only 5 years for Tablet to reach 50% adoption rate! One reason for that difference in adoption rate is that the infrastructure needed for each product, for Telephone it took time to spread the network of landlines all over America, but regarding the Tablet and all knowledge economy products need much less infrastructure to operate, almost maybe internet connection which is almost reaching everywhere (Desjardins, 2018).

The second reason is the nature of consumer who can adopt rabidly new technologies and can connect with each other and share experiences and impressions, now a consumer in South Africa can buy a product from Korea after reading American's reviews and comments on the product features and performance, this is the knowledge economy age!
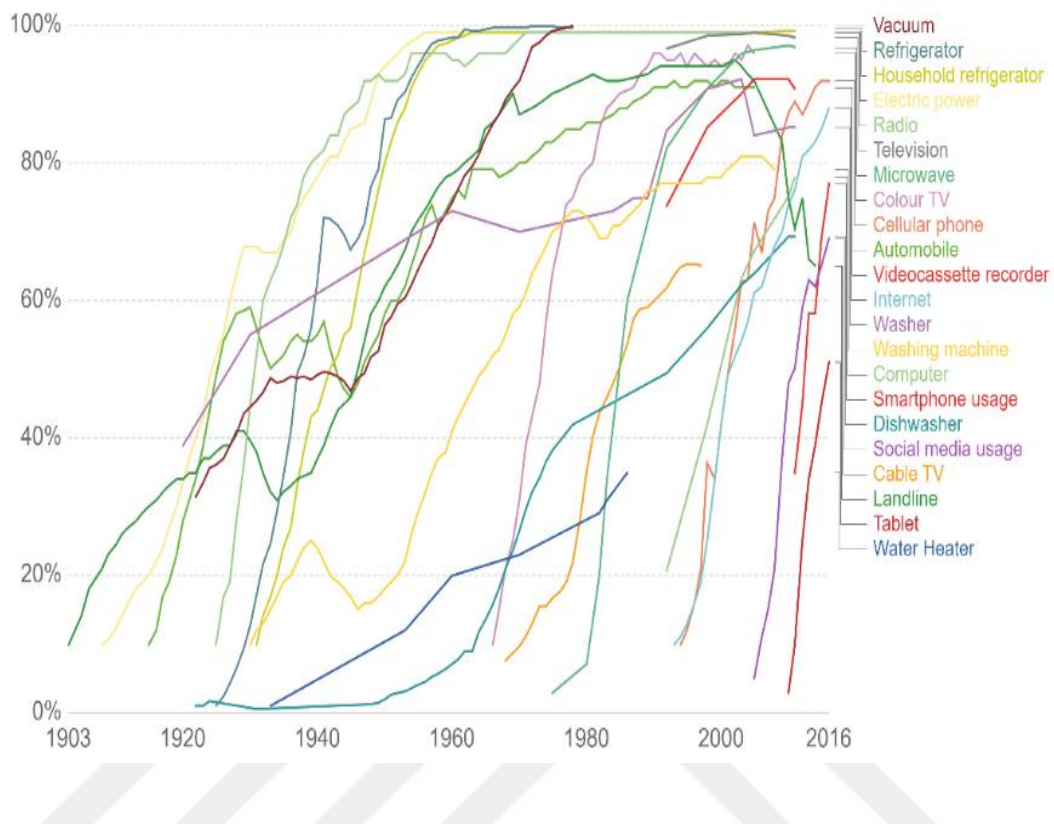
**Figure 3.12:** Speed of technology adoption rate

**Source:** Ritchie, Hannah. "Technology Adoption" (Online)
https://ourworldindata.org/grapher/technology-adoption-by-households, 2019.

Another manifestation of disruptive innovation and exponential adoption rate of new technologies and exponential growth is the comparison between Fixed landline Telephone subscribers' number vs. Mobile phone subscribers, it's obvious the disruption made by mobile to the traditional telecommunication industry.

The following graph illustrates both typical disruption innovation phenomena and high adoption rate for technology (Ritchie, 2019). A recent example of disruption caused by new technology is the bankruptcy of Kodak the giant and the leader of the photography industry for decades, Kodak in 2012 declared bankruptcy due to the disruptive innovation of digital photography technology (Ismail,2014).
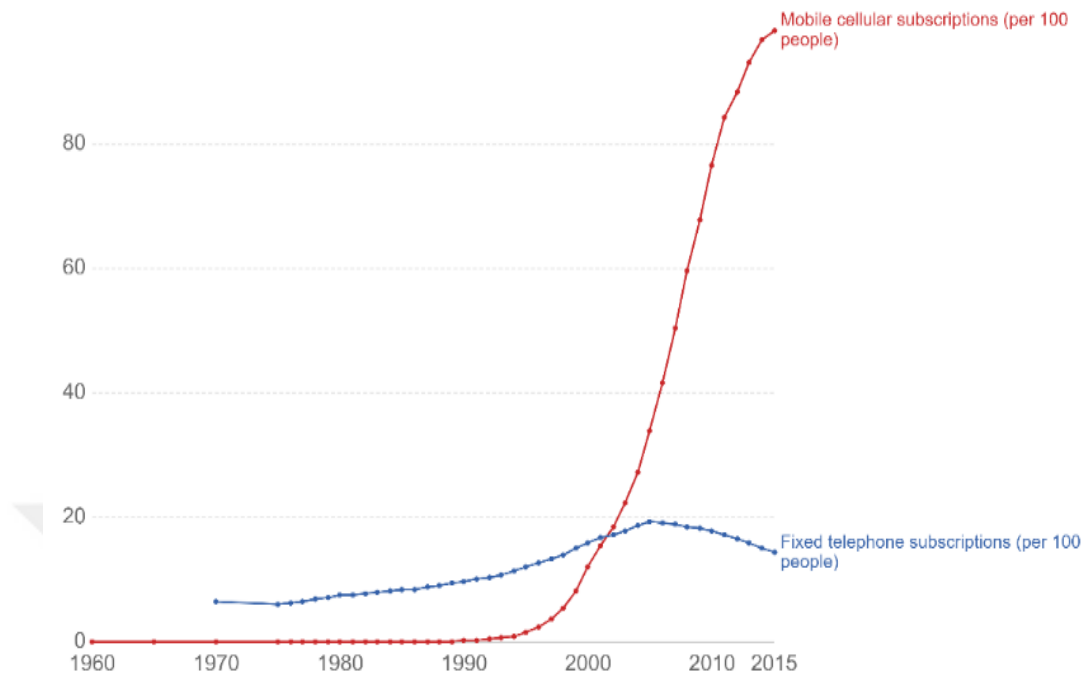
**Figure 3.13:** Mobile Vs. Land Lines

**Source:** Ritchie, Hannah. "Technology Adoption" (Online)
https://ourworldindata.org/grapher/technology-adoption-by-households, 2019.

### 3.2.7. Complex Connected World

if there is one word that can describe the age that we are living in, it will be connectivity and communication. This connectivity allows huge amount of data, information and knowledge that couldn't be possible before. As well this connectivity made a revolution in business models and innovation that took the advantages of that connectivity.

**Mobiles**

Now we are living in a world that the amount of mobile subscriptions is more than the amount of the whole world population living on Earth since 2015. And it is estimated that in 2023 the numbers will exponentially increase to reach 9.1 billion mobile subscriptions and 8.5 billion mobile broadband subscriptions (Heuveldop, 2017).

Thanks to mobile phones world connectivity between people and nations increased, and mobiles now is considered the primary tool to manage selling, buying and banking transactions besides social networking and exposure to media. In a survey in 2014 it results that 15% annual increase of people in surveyed countries prefer to get news update from mobiles and 17% decrease for getting news from desktop computers (BBC, 2014)

**Internet**

Electricity was a discovery that turns to bee basic need for societies in 20th century, Internet in now considered the electricity of 21st century. Internet become the main platform that connects people and nations and affect every aspect of life, from education to politics and business.

From 2018 Almost, half of population of the planet Earth had internet connection with means more than 4 billion humans can access the internet. In 2017 only, quarter billion got internet access for the first time with considered an exponential growth in only one year (Kemp, 2018). And everyday more people join the global community of internet using. Which will democratize knowledge and will open doors for new markets, exceptional innovations and opportunities. Hereunder graph representing the percentage of population who use and adopt internet technology of some middle east countries; Israel, UAE and Turkey the place of our study.
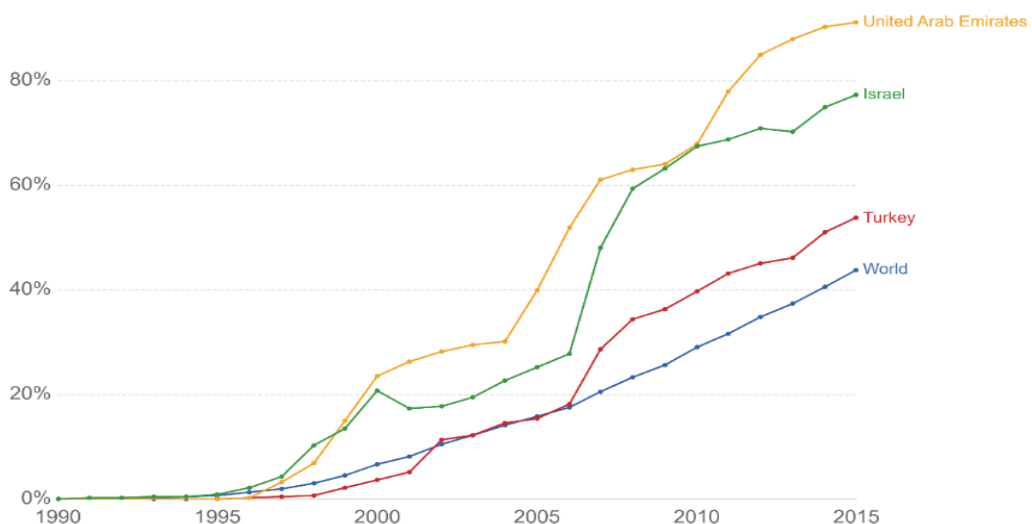


**Figure 3.14:** Percentage of population using the Internet

**Source:** Ritchie, Hannah. "Technology Adoption" (Online)

https://ourworldindata.org/technology-adoption, 2018.

### 3.3. Challenges of mechanical Organization Design model in 21st century complex environment.

The phenomena of exponential progress and adoption rate of technology is known for multiples definitions in literature like industry 4.0 or fourth industrial revolution. The 1st industrial revolution happened in the 18th centuries with discovering steam engine power and the beginning of industrial society and leaving agriculture gradually and the emergence of factory worker. Then comes the 2nd industrial revolution at 19th century known for mass production systems and emerging of a lot of technologies like electricity and internal combustion engines , now we can differentiate between two kind of workers the blue collars who work physically with their body in factory floor and the white collars who works at offices in managerial roles and positions. The 3rd industrial revolution is about the digital revolution at 20th century, the biggest achievement of this era is the internet and ITC information technology communication, this connected world began in 1980s and still ongoing.

The 4th industrial revolution at 21st century accumulates on the breakthrough of digital revolution and extended its effect from human body to global societies and make the connection between cyber-physical systems. The 4th industrial revolution known for a lot of emerging technologies like AI Artificial intelligence technology, IoT internet of things, Blockchain technology, 3D Printing, autonomous cars etc. the concept of 4th industrial revolution became popular because of WEF World Economic Forum and professor Klaus Schwab who coined the concept in his books and articles (Schwab, 2017)

We can notice that each industrial revolution was based on economic model, emerging technologies and operated by managerial model differ in each stage. Managerial models emerge and evolve exactly like technologies. The science of management was born in 20th exactly in 1911 in the book titled by The Principles of scientific management by Frederick Taylor (Taylor, 1911). This book was and still considered one of the most important books of the 20th century and for the first time in history the concepts of efficiency, division of labor and specialization was featured in this book and thanks to Taylor without him the mass production and industrial revolution wouldn't be possible in 20th century. But these great inventions worked well in the simple and complicated contexts, and now the context changed, and the same managerial inventions (aka bureaucracy) that supported economic growth at the 1st

industrial revolution now has become the greatest obstacle to development, growth and survival in a changing and complex world.

As Gary Hamel London Business School professor always says that the ideology of traditional management is "Controlism". Although organizational and managerial science seems to be pragmatic without ideological biased but, the traditional managerial thinking is biased towards control, control over operations, control over strategy, control over execution, control over the environment and control over the future. Control might be possible in the simple or complicated contexts, but in complex environments control over everything seems to be impossible (Hamel, 2014). The tendency to control was and still is the ideology that dominates managerial and organizational thinking, and this is reflected in all the managerial tools that were produced throughout the 20th century from Taylor's Scientific Management to Galbraith's Star Model.
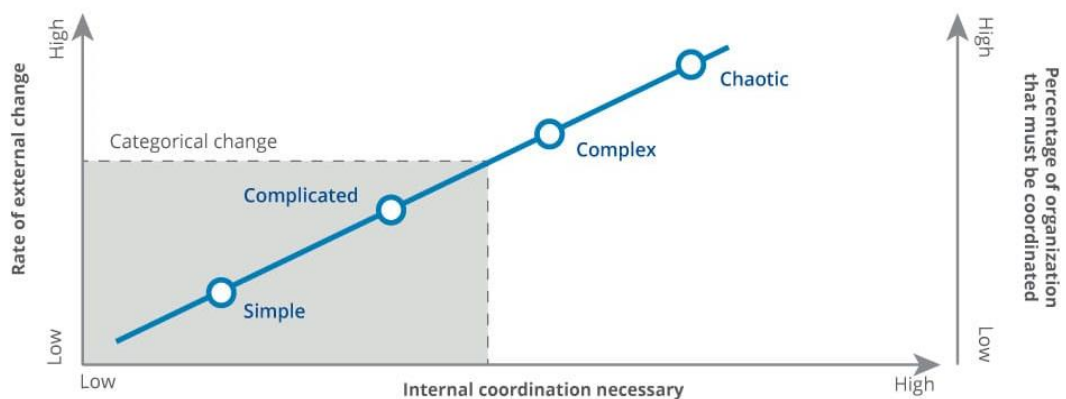


**Figure 3.15:** External Change vs. Needed Internal Coordination

**Source:** Mariani, Joe. "Leading to chaos: A conversation with General Stanley McChrystal" (Online) https://www2.deloitte.com/insights/us/en/deloitte-review/issue-19/general-stanley-mcchrystal-interview-innovation-in-leadership.html, 25 July 2016.

1983 on the number of supervisors, managers and administrators doubled in the United States. Harvard Business Review made a survey and the results was shocking 66% of who responded to the survey said that organizations is turns into bureaucratic more than ever. Today the average number of managerial layers reached to 8 managerial layers between employees at the frontline and top management with marginal growth in productivity (Hamel and Zanini, 2018).

Unfortunately, even a lot of startups and organizations who begins with innovative ideas and adaptive entrepreneurial organization design is transforming themselves into bureaucratic and mechanical organizations. That's typically happens in the growing and scaling-up phase of the organization. After the initial successes think that they have made the recipe of success that will last forever and now it is the team to but an organization that preserve that success, they forgot that new innovations kill old innovation and they have to keep innovating to be able to survive. Leaders tempt to control the organization using traditional hierarchical pyramid organization design, to reinforce efficiency and predictability. By doing that the organization is transformed into a mechanical entity that has little capacity to innovate or adapt to the changing environment (Kotter, 2014). By transforming from network to hierarchy organization losses its core competitive advantage, adaptability and innovation.
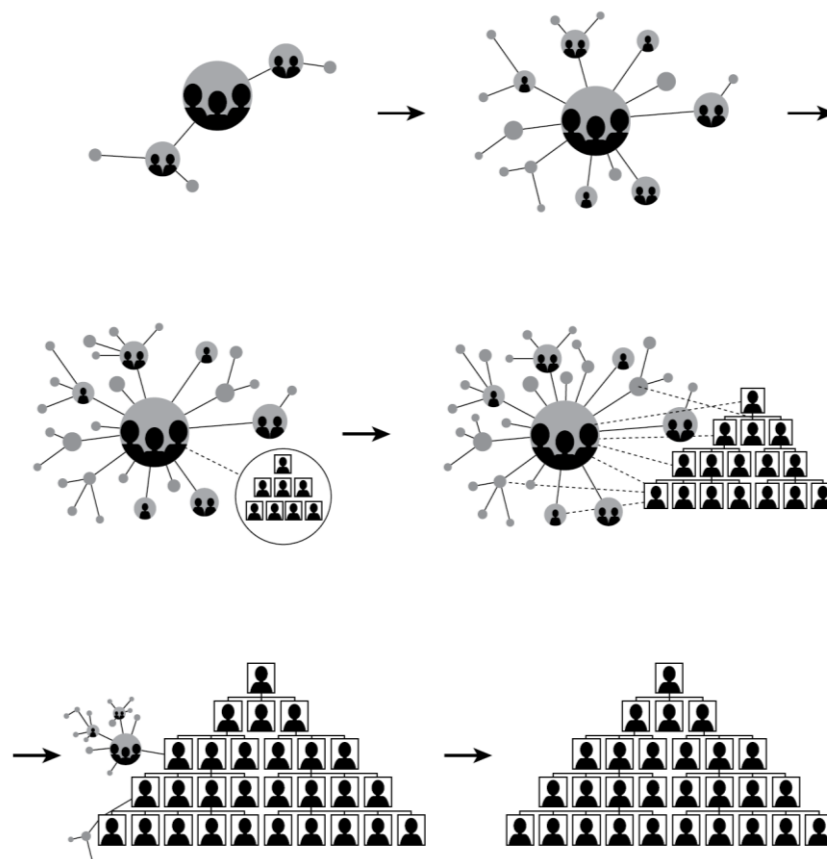


**Figure 3.16:** Typical lifecycle of an Organization from Network to Hierarchy

**Source:** Kotter, John P. *Accelerate: Building strategic agility for a faster-moving world.* Harvard Business Review Press, 2014.

Why it is hard to beat bureaucracy and mechanical organization design? Firstly, bureaucracy is strong because it is known and almost familiar everywhere on earth, it is the managerial operating system for about 150 years. The second reason for the establishment of the bureaucracy is that it is in the interest of managers in all bureaucratic institutions that the situation remains as it is (Hamel and Zanini, 2016). If the bureaucracy is destroyed, many managers will find themselves without authority, without work and without the privileges that bureaucracy gives to the class of managers specially the ones at the top of the hierarchy. The third reason is that there is no single model that can be referred to as a transformational model into non-bureaucratic organization. Even organizations that have been liberated from bureaucracy have done so after years of working in this transformation, each devising and innovated their own non-bureaucratic model (Hamel and Zanini, 2016). The fourth reason for the establishment of the bureaucracy is that it performs the required control function efficiently. The removal of middle management classes without the readiness and special training of staff on the nature of the tasks entrusted to them during and after this transformation, the organization will turn into chaos, and this pretext is what the supporters of the bureaucracy chanting as an eternal and irreplaceable administrative solution.

Bureaucratic and mechanical organization designed as well is biased to the past experiences and against the possibilities and opportunities of the future, biased to repeat best practices of the past and against trying new things. Money and resources are invested in the activities that was successful in the past not in the business that might be successful in the future. Leaders of the past at the top of the hierarchy determines the strategy of the organization, the potential leaders of the future have no contribution in determining organization future (Hamel, 2014).

The bias of the past and the tendency to control both undermine the organization's ability to innovate and adapt to the violent changes of the future, bias to the past and control hinder the exploration of the future by taking the risk of experimenting with new things. Due to bias to the past and controlism, bureaucratic and mechanical organization design is killing innovation at individual level, team level and hence organizational level. In complex context innovation is not nice to have organizational feature, but it is survival safeguard (Edmondson, 2013). Organizations who are not able to innovate and be adaptable to environmental fluctuations well end

up irrelevant, and that is applied to for profit organizations and not for profit organizations.

Bureaucratic and mechanical organization design come with very high cost in complex context. Cost includes but not limited to; high human resources cost due to high numbers of managers and supervisors through the organizational hierarchy. Too much wasted time in solving internal issues resulted from poor communication and slow decision making, and internal politics resulted from competition on wining power and authority. Another source of cost is missed opportunities cost that resulted from disempowering of employees' initiatives, risk averse culture and centralized decision-making processes (Hamel, 2017).

A lot of things changed since the mechanical organization design and bureaucracy was invented. Taylor designed organizations that employ unlettered and unskilled workers who has mechanical power, now people hired in organization not for their physical ability, but for mental talents and skills. In the past organization size was considered a competitive advantage that reinforce mass production, now everything is almost automated and small teams are much faster to seize market opportunities. In the past the competitive advantage was the ability to execute at large scale, in the 21$^{st}$ century the core competitive advantage is to adapt at scale.

We now in 21$^{st}$ century need a new managerial breakthrough respond to the new challenges we face and compatible with the exponential growth of technologies, 4th industrial revolution and knowledge economy. To deal with hypercharge rate Organization Design needs to change. A lot of organizations, societies and businesses are suffering from the high level of uncertainty, ambiguity and complexity, and trying to face these new challenges and live in this context with managerial mindsets and tools from the past, from more than 100 years ago. Unfortunately, the managerial mindset and tools that were successful in industrial age 20$^{th}$ century will not be effective in solving knowledge age 21$^{st}$ century challenges. Bringing tools from the past to face future challenges is part of the problem.

# CHAPTER FOUR

# ENTREPRENEURIAL ORGANIZATION DESIGN FOR 21st CENTURY

## 4.1. Beating Bureaucracy

Taking into consideration the establishment of bureaucracy and mechanical organization design that we mentioned in chapter three, mechanical and bureaucratic organization design cannot be changed by imposing new top-down organization-wide transformation programs implemented by outsider consultants. John Kotter a Harvard University professor in his research says that 70% of large-scale transformation and change programs fails (Kotter, 1996). Transforming into non-bureaucratic and entrepreneurial organization design is an emergent, experimental, collaborative and participative process. Building entrepreneurial design is entrepreneurial iterative and human centered design process by nature (Hamel and Zanini, 2016).

The bureaucracy can only be defeated in the same way it dominated, bureaucracy took years of experimentation and emergence until it proved its feasibility and viability in practice (Hamel, 2008). Organizational transformation in complex context is not rational and mechanical process that could be engineered. The transition to a non-bureaucratic organization should not be done through authoritarian instruments and means. Authority, power and leadership of non-bureaucratic Organizations is determined by the ability to attract faithful followers and is not determined by rights granted in advance by a position in the hierarchy. In contrast to Taylor methodology of separating Doing from Thinking, in 21st century people who perform the work they are the ones who decides how the work will be organized, not top management or external experts.

Transformation journey cannot be done without the support of the top leadership of the organization and the support of the owners of the organization (Laloux, 2014). The transformation process can begin with people, for example; employees hack managerial process that hinder innovation and adaptability by performing a small, cheap and fast "safe to try" experiments and measure the impact of each experiment, utilize what worked and retry other ways of things that didn't work.

That can be applied to all managerial process in an any organization, from selection and hiring to decision making (Hamel and Zanini, 2016).

## 4.2. Entrepreneurial Organization Design Model for Complex environment

### 4.2.1. Organizational Architecture

Organizational architecture describes how the organization is organized and managed, how power is distributed and how decisions are made, all from very high-level view.

**Decentralized Network of multidisciplinary teams.**

Organizing in complex environment can be a competitive advantage as well as obstacle to development, adaptation and growth. The functional hierarchical structure that was not questioned structure of modern organization design models cannot be as adaptable, agile and fast as required for operating in complex environment. Structuring for organization that embrace innovation is not the traditional pyramid, but it is a network of multi-disciplinary and autonomous teams. A network that share information and resources in collaborate way. The main organizational unite is the team not the functional department. Every team is assigned to specific mission and has all the capabilities and resources to accomplish this mission, resources including human resources, financial resources, information and expertise. Every team is operating autonomously which means the itself is responsible for its decision and not waiting for upper decision to direct its movement.
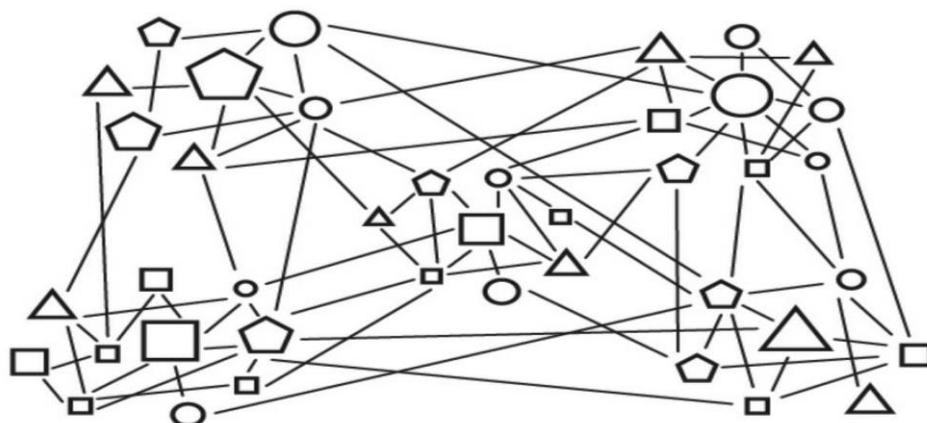


**Figure 4.1:** Networked Multidisciplinary autonomous Teams

**Source:** McChrystal, General Stanley, Tantum Collins, David Silverman, and Chris Fussell. *Team of teams: New rules of engagement for a complex world.* Penguin, 2015.

Teams is the most capable change agent in complex environment and in innovative organizations. This network of multidisciplinary autonomous teams can beat any traditional functional hierarchy because it is faster in decisions that is taken by people who has the most updated information about the context, no need to process information in bottom-up way and waiting for top-down decision from the leadership of the pyramid. Every team is capable can achieve the mission assigned to it. Every team is free to explore new trends and decode signs of future change and act upon it.

Supporters of functional hierarchy clams that hierarchy always produce efficiency and discipline, but the core competency needed for 21st complex operation is adaptability. However even the most organizations that rely on accuracy, efficiency, commitment, soldiering and hierarchical order have adopted a network approach in structuring. That is military institutions because they understand the importance of the ability to adapt and speed in the battlefields. An example of this is what the US military operations officer General Stanly mentioned in his book Team of Teams, that the US military could not confront Al-Qaeda despite the superiority of the US military in the quality of training and technological development. Only US army was able to excel when it reorganized itself in a networked form capable of countering the speed of the al-Qaeda network (McChrystal, 2015).
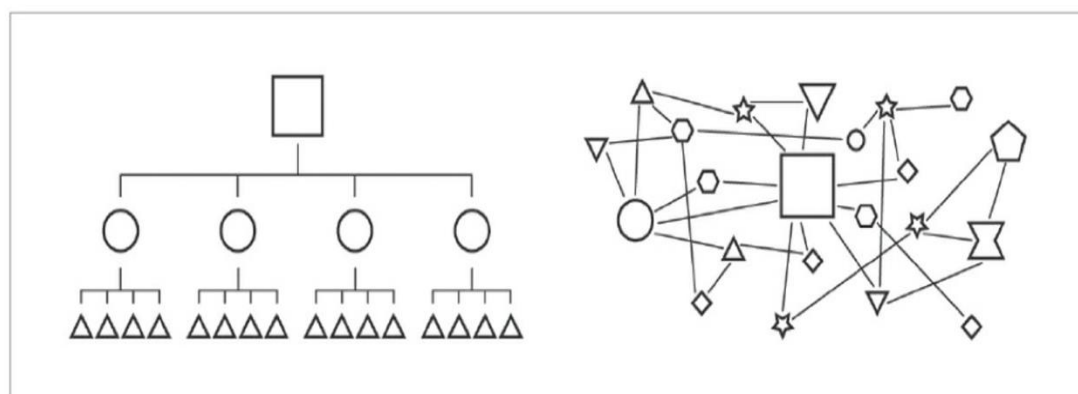


What we were designed for   What we were facing

**Figure 4.2:** Pyramid Hierarchy Cannot Beat a Network

**Source:** McChrystal, General Stanley, Tantum Collins, David Silverman, and Chris Fussell. *Team of teams: New rules of engagement for a complex world.* Penguin, 2015.

Organization that is structured in network architecture can be considered anti-fragile organization, that's can benefit from shocks and unplanned events, adapt, and seize opportunities. In contrast hierarchal organizations can be considered fragile organization that is collapse when failing unplanned events (Taleb, 2012). Antifragility is as well named for the trending name "Resilience". Antifragile and resilient organizational networks are not risking averse, but they are risk and uncertainty friendly.

**Self-management.**

Self-management is the second feature of the architecture of the organization design of the entrepreneurial organization that operates in complex environment. Self-management facilitate the emergence of natural leaders and give everyone in the organization the opportunity to lead. Self-management facilities the emergence of informal bottom-up natural hierarchies of influence, not top-down hierarchies of positions, where power is gain from filling a specific box in the pyramid shape hierarchical structure (Laloux, 2014). In contrast in self-management power goes to those who support peers and adding value to the organization, they are more influencers than others and maybe get more money as well as compensation for their effort. Those who are pushing the organization forward are at the top of the informal hierarchy by influence not by politics and position (Laloux, 2014).

Self-management has a lot of Advantages, firstly, Self-management decreases the human resources costs, because there will not be huge number of managers and supervisors. Because in self-management every employee has full responsibility over his work, he has to develop his skills to meet his commitments in front of his colleagues and that accumulate experience for the organization and develop organizational calibers.

Decision making in self-management is faster, because people at the frontline who have all relevant information related to decision domain can take immediate decisions (Laloux, 2014). Self-management secure high level of flexibility and proactivity within organization as employees have the power to take initiatives. In self-management there is no hierarchy ladder for promotion and there is no centralized power that attract employees to compete about it, the exact contrast happens low level of internal competition and politics exist is self-management (Hamel, 2011).

### 4.2.2. Shared consciousness

Shared consciousness describes the extend that members of the organization and the network of teams are empowered with all information and knowledge that support them to move forward in the right direction and take the right decisions without waiting for top-down directing. Although the organization is designed as decentralized network, shared consciousness keeps the organization teams unified and move together to achieve organizational purpose (McChrystal, 2015).

**Organizational Purpose**

Organizational Purpose simply is the reason of existence of specific organization, what specific aim that the organization serve and established for. Purpose is one of the most important elements of any organization designed to be a network not hierarchical pyramid. The importance of purpose is not only that it gives organization members sense of meaningful work because may be there is an argument that not every work can be purpose driven (Sinek, 2017). However, the main function of organizational purpose is that it works like guiding star for the network, it unifies decentralized teams towards same direction, and it help leaders to take hard decisions (Laloux, 2014).

Tactical targets and goals is a moving target in complex environment and always changing. So, a network of teams with strategic understanding of the context and deep understanding of the team mission and organizational purpose can take the right strategic and tactical decisions (McChrystal, 2015).

Another benefit of organizational purpose is that organizations with meaningful purpose seems to be more attractor to talents who want to belong to organization with higher mission and cause especially millennial generation, as well organization with purpose attract clients and customers who are welling to deal with a brand with a purpose (Ismail, 2014).

**Meetings**

Meetings is considered one of the main means of exchanging information, knowledge and wisdom within any organization. There is a lot of types of meetings for example brainstorming meeting, planning meetings, follow up meetings and feedback meetings to name just a few. However, the type of the meeting it needs to be inclusive.

When designing entrepreneurial organization to fit with complex environment we need to think how meetings are structured? Is meeting is facilitated by facilitator? Is the facilitator is holding the space for everyone to speak? How feedback is delivered? Is everybody of the team is able to give and receive feedback? Is there any type of dominance to anyone and is anyone any able to speak freely without fear? Is there a specific periodic meeting to talk and think about how the team organized and working together (Retrospective meeting)?

New online social technologies for mass communication (many to many) and sharing information like (Workplace, Slack, Notion, Yammar, Online forums etc.) can support information sharing, knowledge transfer between large groups of teams, brainstorming and idea generation and building special groups of similar interests who can learn and build new ideas together (McChrystal, 2015).

**Default to be open and transparent**

Mostly every organization has tons of documents about how the work is organized. Information include but not limited to descriptions of rules and authorities, appraisal methodology, reward matrix, targets and bonuses, salaries and promotions policies, board decisions. Although the existence of these information, normally it is not shared and accessed to everyone. It is only accessible to few of people who are privileged with this knowledge and unfair power. Lacking transparency about working rules and policies increase internal politics and conflicts.

In 21$^{st}$ organization all governing rules about work can be declared, shared and be accessible to everyone easily any time on the web. After sharing the governing rules openly everyone is invited to provide feedback and propose developments and recommendations about how the work is organize and managed based on his actual experience of what worked and what didn't work with him (McChrystal, 2015.

Confidentiality and lack of transparency are a major risk in the case of network organizations, because lack of transparency means that all information necessary for decision making is not clear for decision taker at the edge of the organization. Since the leadership is decentralized, the decision to be issued without enough information will be either wrong or inaccurate. Secrecy costs the organization a lot of resources. Unfortunately, in many Organizations, workers hide their mistakes and hide some information out of fear.

Transparency is not only useful for sharing information for those who need it, but it is also useful to held individuals responsible in fort of their teammates. When publishing openly the progress and the results of the work, and sharing the commitments of teammates towards each other openly, that's form a kind of peer pressure to keep organization members do their best and maintain the quality of their work. Peer evaluation and review can be another tool of building accountability in the entrepreneurial organization more than supervision of a single manager or boss, everybody in the organization is held responsible to the whole organization.

### 4.2.3. Leadership style & role

Some practitioners who support decentralized ways of working propose that now is the time of leaderless organization, however the contrast is may be the right answer, in 21st century the need for true leaders increased. However, roles of leaders at decentralized networked organization differs from roles of functional and hierarchical organization. In functional hierarchical organization the main role of leader is to determine the vision of the organization, predict and control the environment, organize how the work will be done and manage the coordination between silos of the departments and hold people accountable.

In entrepreneurial organization design the roles of the leaders are different and may be harder. Most of the managerial roles like recruitment, tasks distribution, follow up and supervising work etc. returns to the team to do it. One of the main roles that returns to employees is the task of thinking and organizing, this job was taken from worker by Taylor because he was thinking that workers are stupid and are not able to organize their work, however in the 21$^{st}$ century workers are highly skilled educated calipers who can perform and make experiments about this task autonomously.

So, if all managerial roles will be done internally by teams what is the roles of leadership then? The first role of leaders in networked, decentralized and creative enterprises is to hold the space, protect and maintain the new pattern of organization of work. Transforming and working with a flexible network pattern is not easy, and the organization while being on a journey to become a networked and decentralized organization will face many challenges, failures and mistakes. These failures may be the result of some experiments about new ways of working, people forget that the purpose of these experiments was learning about what will work from them. But

because most of the world's organizational worker is coming from hierarchical cognitive background, With the first failure that workers experience in the new organizing style, there will be voices that urge a return to the hierarchical model, because it is more efficient and able to control. Here comes the role of leaders to remember all organization members about the reality of the challenge of the 21st century, which is: rapid adaptation to changes in the working environment rather than efficiency.

The second role of leader is to transform his role from being a chess master to be gardener, chess master is micromanaging every aspect of the organization and he is held responsible for every single detail about the organization. Gardener leader is offering a vision, not imposing it while crafting and building the new culture that will support the decentralized network organization. Words of leader here is very important, it's vital to repeat frequently the purpose of the transformation, the purpose of the organization and the reality of the challenges of 21$^{st}$ century complex context. The gardener role of leader include building and maintaining the platform and the ecosystem that support new ways of working and support organization in fulfilling its purpose.

The third role of leader is to be role model of 21$^{st}$ century leader not only by his words, but his deeds as well. Thinking openly and loudly with people, not adopting authoritarian style of leadership, accepting and listening for feedback, talking about your failures and wrong decision and share lessons learned and being human-like leader not super-hero leader all that actions are very important in building the new culture.

The fourth role of leader is to act like an investor and sponsor for new ideas and initiatives by employees, he may literally invest in corporate entrepreneurs and innovators. Leader should sponsor entrepreneurial activities and protect it and invite innovators and entrepreneur to solve organization problems and challenges. As well leader of the organization is acting like the public face who represent the organization.

The leadership style that can be consistent with world view of decentralized network and entrepreneurial organization design is the servant leadership, who depend on building human to human relationships with organization members and build the platform of collaboration and innovation. Leadership in self-management

organization is distributed to the edges of organization and exercised by all organization members who want to shape organization future, leadership in entrepreneurial organization is not exercised in centralized way at the top of hierarchal pyramid (Edmondson, 2012). Leaders in entrepreneurial organization are more coaches and facilitators than micro-managers.

### 4.2.4.  Strategy

Human beings like to be "in control" of everything, especially in control of the future that's why humans invented "planning" to make future events happens without any surprises. However, controlling future events could be applicable in stable simple and complicated contexts that have linear rate of change, but in complex context with exponential rate of change, predictability and control turns to be impossible. No one can now claim the ability to predict the future, nor even the most powerful consulting firms like McKinsey can predict the future in this complex and rapidly changing reality (Ismail, 2014). Organizations who want to be successful in the future must proactively explore possible options by experimentation more that determine future destination by planning (Hamel, 2007). Experimentation is a practical and proactive tool to deal with future uncertainty, as experimentation build a platform that allow the organization to sense and respond to changes in fastest way without wasting resources, time and money in strategic planning.

Strategy in complex environment cannot be determined by detailed strategic long-term plans. Strategic planning works only in stable and predictable environments. Complex environment is constantly changing, that leads to make strategic planning cannot work in this specific context of continuous change. So, strategy setting at complex environment is not one-time event that is documented in a file, and strategy is not fixed. Strategy in complex environment is evolving and adapting to changes in the environment. As well in a networked decentralized organization there is no one single leader who can design and enforce implementing strategy with a top-down approach.

Strategy at decentralized network is built and changed in participative way, teams and people at the edge of the organization must have a slack of time and energy to be contributing to the evolving strategy by decisions, initiatives and action that they are taking that is consistent with organizational purpose. Initiatives taken by

teams are well informed by the context of operations from all edges of organization. As external complex environment cannot be predicted nor controlled, then experimentation is the solution to determine future possibilities and directions.

In 21$^{st}$ organization corporate entrepreneurs and innovators they are the ones who determine organization future, entrepreneurs and innovators are the organization sensors of future changes, and by their initiatives and experiments they make the organization adaptable to the future. Lacking internal processes that support entrepreneurship inside the organization will lead to losing intrapreneurs and that is a big risk, as research shows that lost entrepreneurs are the competitors of the future, but they are competitors with full knowledge of weaknesses of their past organization. Organization designer and leader should make clear processes that support innovation and entrepreneurship to mitigate that existential risk. Leaders and organization designers have to deal with entrepreneurship and experimentation as practical change management tool instead of top-down change management programs which are separate from reality and are liable to fail and waste the resources of the organization.

Innovation and Entrepreneurship as strategy can be supported with a lot of tools, including but not limited to make ideas generations Hackathons and competition, entrepreneurship and innovation training for organization members and incubating funding of new ideas. Another way to encourage entrepreneurship is to make organization members part of the decision-making process of selecting successful ideas, the more the decision-making process is integrative (with no veto top-down decisions) the more culture of innovation and entrepreneurship spread inside the organization.

Innovation skills in not a gift, it is a skill needs investment in training and education. Organization members should be trained to be innovators by challenging for granted assumptions about the industry and the business that they are working in. Employees should be trained to monitor emerging trends in the market and think how to utilize it before competitors. Employees needs to be trained on how to understand customer needs and how to be business anthropologists who keep an eye on customers behaviors as humans and make insights about it to be an inspiration for future innovation.

There must be methods for assessing and rewarding staff performance that helps to motivate behaviors that lead to innovation, for example; reward new ideas openly, share the decision-making authority to experiment with new products, allow staff to risk part of the organization's resources such as small funding or part of staff time to be invested in the experimentation and test some new ideas. The organization might make a partnership with innovative employees in new companies that are created specifically to implement their employee's innovative ideas (Tennant and Hamel, 2015).

| Evaluation Factor | Performance Indicator |
|---|---|
| **Innovation Inputs** | Amount of organizational Investment in terms of funding and staff time valuated in monetary terms monthly. |
| | Total Internal ideas generated by staff monthly. |
| | Total external ideas collected from (customers, suppliers, etc.) monthly |
| **Innovation Throughputs** | Number of screened ideas went to pipeline |
| | Amount of time ideas takes from concept to prototype |
| | Number of tested ideas and number of experiments |
| | Number of funded ideas |
| | Initial valuation of ideas I the pipeline |
| **Innovation Outputs** | Number of ideas go to market annually |
| | Money generated from new products or services |
| | Return on investment on innovation |
| **Leadership Support** | Amount of top leadership time invested to support innovation |
| | Number of leaders who support innovation |

| | Number of leaders, managers and executives who are formally assigned to innovation projects |
|---|---|
| | Number of leaders whose compensation is based on innovation related targets. |
| **People Competence** | Number and percentage of staff trained on innovation |
| | Number and percentage of qualified innovators |
| | Number and percentage of people hired based on innovation competence |
| **Organizational Climate** | Number of processes that facilitate innovation |
| | Number of processes that hinder innovation |
| | Effort made to increase innovation supportive processes and removing innovation hindering processes |
| **Innovation Efficiency** | Change over time in innovation ratio outputs to inputs. |

**Table 4.1:** Dashboard measuring innovation performance

**Source:** Hamel, Gary, and Nancy Tennant. "The 5 requirements of a truly innovative company." *Harvard Business Review* 27 (2015).

### 4.2.5. Organizational Culture

Organizational culture is one of the most important elements of entrepreneurial organization design. As culture is the soft side of the organization that reflects all other hard elements like structure or even workspace layout design. Organizational culture has mutual effect on all other organizational design elements. For example, if an organization is separating the offices of top executives from other employees that hinder communication and indicated solid hierarchal view of organization, in contrast open workspace enhance eye contact and support information sharing and knowledge transfer.

However, culture is one the most complex issues to be managed in any organization because the organizational culture is the result of the interaction of all elements of the organization, started from the way of the leaders of the organization talk and their words and symbols, through the manner of monitoring the performance of staff and the design of incentives, success stories and failures in circulated in the organization, and unwritten rules followed by everyone. All these elements and more collectively form any organization culture.

Management by fear is the norm of modern organizations and fear is a product of hierarchical pyramid structure. Fear in organizations reinforce control, and control increase efficiency that's why managers normally design systems of rewards and punishments that increase quality and efficiency by fear. Fear in organizational context can be appear in a lot of shapes, for example fear of losing promotions and financial gains, and the fear of being publicly perceived as loser if your idea failed. So, psychological safety appears in leaders and peers' interactions and communication and workplace policies and procedures.

For organizations that looking forward to support innovation and entrepreneurship, psychological safety is very important for them to enhance organizational learning and innovating. Psychological safety doesn't mean only that it is safe to speak up and make your voice heard, but also it safe to ask questions about things you don't know, safe to share information, safe to ask for help, safe to try new things and make experiments that might fail and it is safe to share failure's lessons learned and declare mistakes. Without feeling safe while innovating, no innovation will occur, because no one will dare to think about new idea if he is sure that he will be punished if the idea failed.

Psychological safety doesn't mean it is safe to waste organizational resources without charge, but psychological safety is about offer safe place for innovation and experimentation in highly accountable working environment. If the accountability is in low level in the organization the psychological safety transforms into carelessness and apathy. And if the accountability is very high but without psychological safety the workspace will be like prison managed by fear, and organization member will not contribute to any innovation building activity due to high risk of failure. Psychological safety works well in accountable working environment, at this stage organization member are willing to try new things and run experiment and learn.
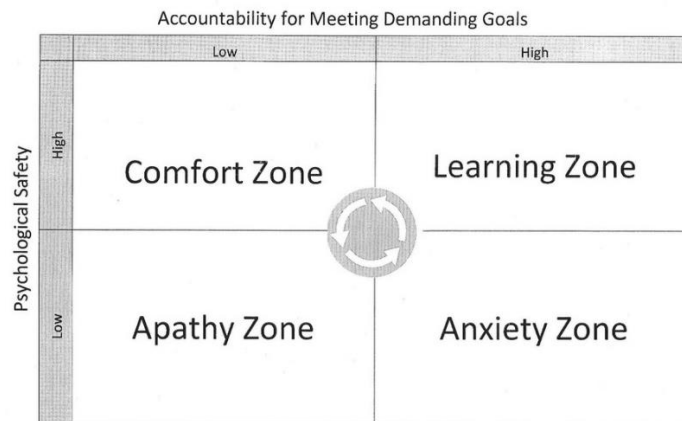
**Figure 4.3:** Psychological safety and Accountability

Failure is indispensable part of innovation and learning processes; organizations and leaders should differentiate between failure that result from carelessness that deserve blame and failures result from experimentation of new idea that deserve praise and celebration. Organizations who encourage exploration and experimentation and make it safe to fail in the process of learning and innovating, these organizations will navigate complex environment and seize future opportunities of growth. Leaders and organization designers can build organizations to be failure free organizations with highest possible efficiency and control that preserve the status que, but this choice come with high price of losing the ability to adapt to rapid changes in complex environment that cannot be predicted or controlled.
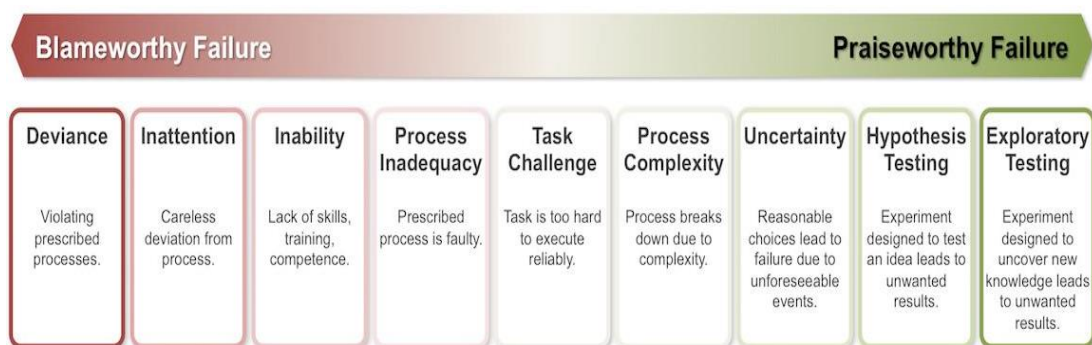


**Figure 4.4**: Types of Failures

# CHAPTER FIVE

# RESEARCH METHODOLOGY

## 5.1.    Purpose of The Research

This research utilizes case study qualitative research method to achieve the purpose of the research, which is investigating and understanding the effect of mechanical organizational design models on individual innovation at complex context and propose an alternative organizational design model that supports innovation at the individual level.

## 5.2.    Research Question

In order to achieve the purpose of the research we should answer the following central research question: What is the effect of the hierarchical and mechanical organization design in a complex context on individual level innovation?

## 5.3.    Importance and Justification

This topic is important because it deals with hot issue that faces almost every organization living in 21st century complex, turbulence and uncertain environment. Innovation in 21st is not optional for any organization aim to survive and grow (Hamel, 2007). There is no organization on earth declare explicitly that it is not supporting employee's innovation, but the reality is that it is killing innovation without knowing that Organization Design is the reason. The majority of nowadays organizations is using organizational design models invented from more than 150 years ago (McChrystal, 2015), from the time of industrial revolution, this mechanical organization design model cannot cope with the exponential rate of technological development or face complex environment that is defined by globalization, innovation and sever competition (Edmonson, 2012).

There is a lot of research about new generations work orientation, there is a global trend saying that the generation that born and raised in the internet era, social networks, the booming of startup movement and entrepreneurship (Blank, 2013), these generation looking for different type of work environment, they are searching for organization that support their innovation and giving them the space to do so, but

unfortunately most of our organization are designed in mechanical way to fit with factory worker living in the 19th century (Ismail, 2014).

So, there is a critical need to develop a new organizational design model that make organization much more adaptable, responsive and agile, an organizational model that unleash individual innovation in a fulfilling work environment.

## 5.4. Research Methodology: Why to Use Case Study Method.

*"Empirical research advances only when it is accompanied by logical thinking, and not when it is treated as a mechanistic endeavor"* - Richard Yin, 1984.

The Research methodology that is proposed to be used in this thesis is (Single-Case Study) as an expletory holistic research method, the methodologies that will be conducted in implementing the research will following the qualitative research methods in the analysis of organizational design literature and organization design models and framing and developing the new theory of the entrepreneurial organization design model.

As noted by (Stake, 2000) case study method is highly effective in building and theorizing new theory or framework, and that is exactly the aim of my research question, thesis aim and objectives which is building a new model of Organization Design that supports innovation at individual level. Crafting theory by using case study as a research technique is supported by Robert Yin (Yin, 2013) and a lot of scholars, and In recent years the case study method grabbed the attention of management researchers to be used as a method to create, innovate and test organizational theories, frameworks and models (Gibbert, Ruigrok, & Wicki, 2008).

The classical school of management and research is leading the mainstream of research by Newtonian mechanical mind-set, that could work effectively in testing existing hypothesis, but for generating new theory or developing hypothesis case study method is much better and effective. The reason of most of the critics of the method of Single Case Study is due to generalization difficulty, but (Hamel, 1993) argues that generalization ability is determined by the strength and the depth of the description in a specific context. Theory in social science emerges from deep reviewing of literature that is related to the topic of the research, and then the theory should be validated and tested through the investigation of specific social problem,

but before the validation of the theory, the theory should be created firstly. That's why case study method is the most effective research methodology for this thesis.

## 5.5. Theoretical and Conceptual framework

To develop the theoretical and conceptual framework of the research I conducted deep analysis of the literature written about the organizational theory from the time of the industrial revolution by the thinkers like Taylor at the 19th century. Then I studied the impact the mechanical thinking of organizational theory on modern organizational theory. After that I began reviewing the evolution of the concepts of organization design at modern world at 20th century and coupled with understanding the difference of between the two contexts in the industrial age and innovation age using Cynefin Framework. And finally, I developed that initial theoretical framework that will be examined and applied on the selected case study object Al Sharq youth organization.
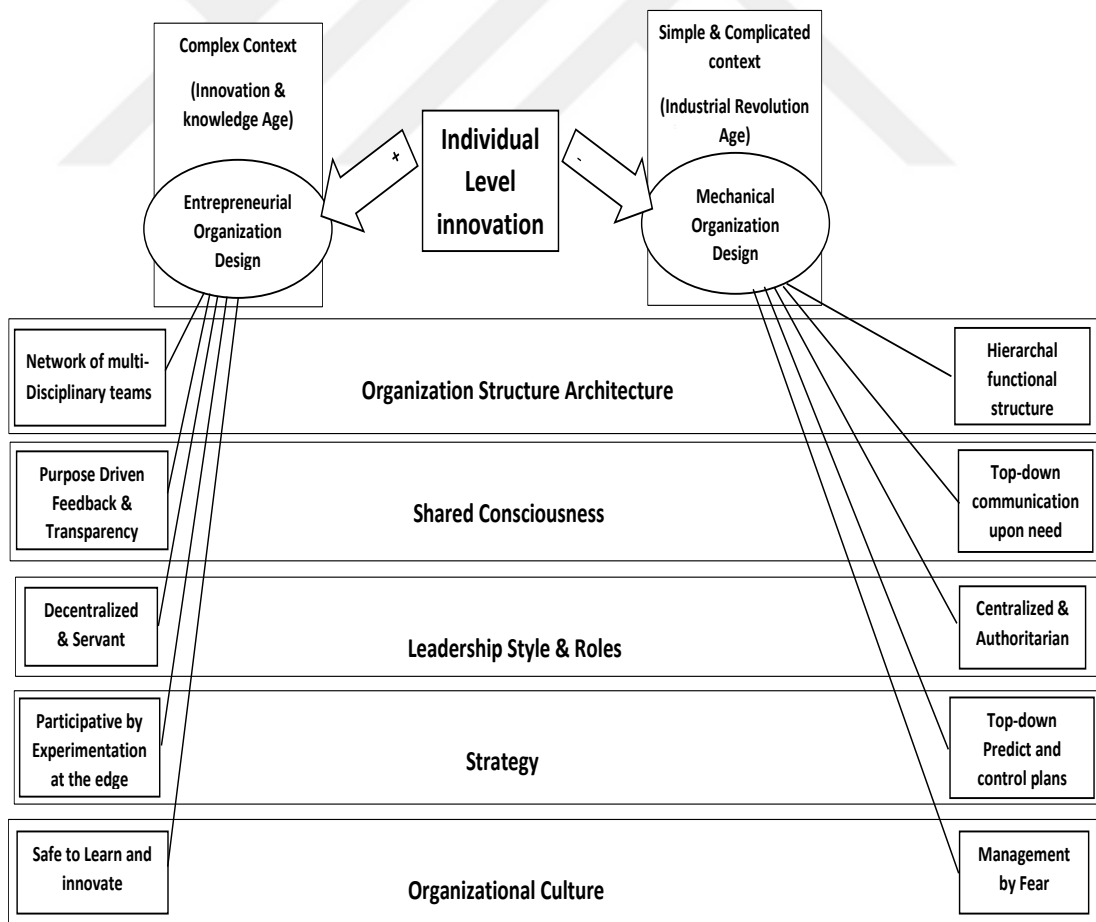


**Figure 5.3:** Theoretical Framework

## 5.6.    Object of the Case Study research: AL-Sharq Youth Organization

## 5.6.1.  Background about AL-Sharq Youth Organization

Al Sharq Youth is an international NGO run established in London and Istanbul after the Arab Spring in 2012. Al Sharq Youth was initiated by network of passionate and active youth in various fields who are interested in public affairs. The network is rapidly expanding to build a new generation that is well-connected, professionally skilled, and inspired by universal values and a global understanding. Al Sharq Youth connect their network members around the world through the digital network which is dedicated and secure space for international collaboration.

Al Sharq Youth Vision is: To inspire a renewed consciousness that is borne by a generation that can build a politically stable and economically prosperous future for the Region, enriched by the adoption of universal values and spirited communication." Al Sharq Youth is trying to achieve this vision through its network of international Hubs around the world. A Hub is a group of local networks led by respective catalysts based in more than 20 cities across the globe.



**Figure 5.1:** Al Sharq Youth International Hubs Network

**Source:** "Sharq Youth Forum" (Online)  https://youth.sharqforum.org/, 2019.

The organization is focusing its efforts on youth because, unlike in previous generations, young people in this age can acquire knowledge and adapt to changes more rapidly, due to empowerment made possible through new mediums of communication and technology. We believe young people can offer creative solutions for resolving the crises we live through today and for accomplishing the desired future.

### 5.6.2. Why to choose Al Sharq Youth as Case Study object?

I choose Al Sharq Youth Organization to be the object of thesis case study for a lot of reasons. First reason is that Al Sharq Youth is may be one of the very few organizations around the world that is consciously and deliberately embrace a network and decentralized organization design model. Second reason is that Al Sharq Youth is supporting innovation and technology-based entrepreneurship at individual and organizational levels in their Hubs to produce useful solutions for local communities' challenges. The third reason is that the organization is operating in complex, uncertain and fast changing environment, and this is exactly the type of environment that we want to study an organization that is operating within an complex environment. The fourth reason to choose Al Sharq Youth is the international taste of its international team, international volunteers, multinational culture and geographic locations which will give the case study international generalizability of results.
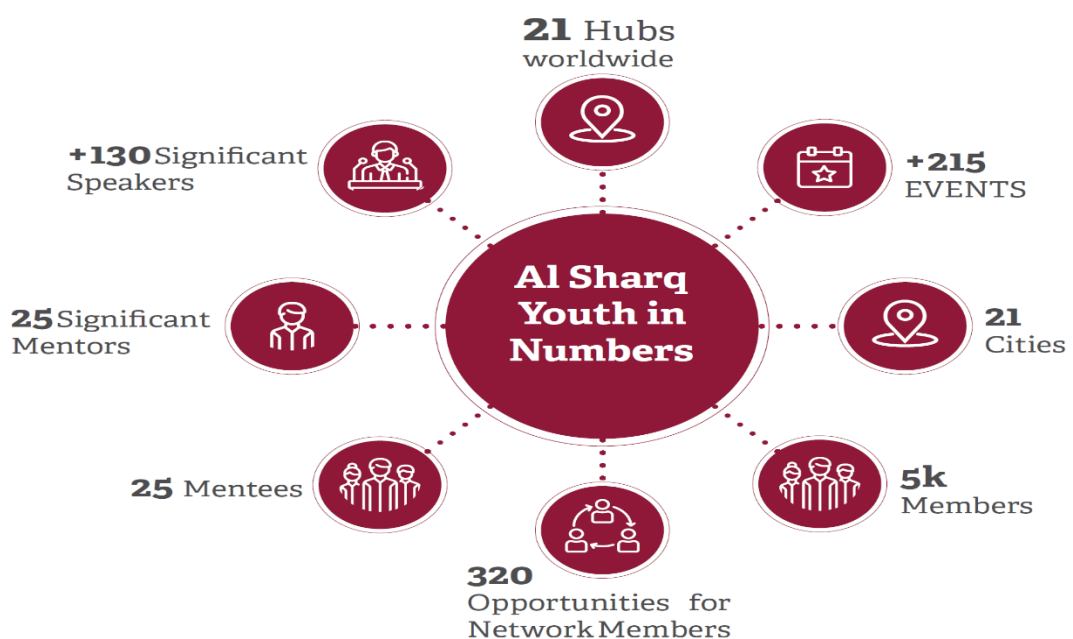


**Figure 5.2:** Al Sharq Youth in Numbers.

**Source:** "Sharq Youth Forum" (Online) https://youth.sharqforum.org/, 2019.

### 5.6.3. Sources of Data Collection in the Case Study

In the case study, it is important to integrate data sources, as a means of ensuring comprehensive results that will increase the reliably and reflect the reality of the case as precisely as possible. The diversity of data sources in the case study provides researchers with the ability to build understanding depth study of the studied situation and enable them to create an integrated story.

- **Internal Organizational Documents analysis.**

For organization design research it is important to analyze the organizational documents. That's because organizational documents are archiving the way that an organization operates and explains how the organization is structured. A lot of rich and interesting data could be found in the documents for example how the organization formally reward or punish specific behaviors that is affected by organization design. Organizational document gave me a lot of historical data that helped very much in the analysis of the case. The organizational documents that was analyzed in this research includes:

- Network Organization Charter.
- Hub management guidelines.
- Organization Structure.
- Corporate profile.
- Regional events guidelines.
- Organization Values document.
- Organization Development proposal.
- Organization's Website.

- **Interviews of Organization Members.**

interviews must be conducted carefully to ensure a reliable case study. Therefore, the targeted sampling should be carefully selected, as well as the quality of the sample and the quality of the participants to be interviewed. It is important that the researcher identifies early who are the best interviewees and who are considered the gatekeeper for knowledge and information within the organization. The sample that was interviewed in this research include management members, employees and volunteers as I tried to make the sample representative as possible.

In this research I used open-ended unstructured interviews as a tool to collect data and insights about the research object. There were two criteria on which I chose the interviewees. The first criterion is to be one of the organization members who is affected directly with the organization design of the organization. The second criterion is to have diversity in the background and nationality. Interviewees insisted on the confidentiality of the conversation, so interviewees identities will not be declared.

Interviews included the following segments:

- Hubs Coordinators.
- Volunteers.
- Employees from core team.

## 5.7. Al Sharq Youth Organization Design
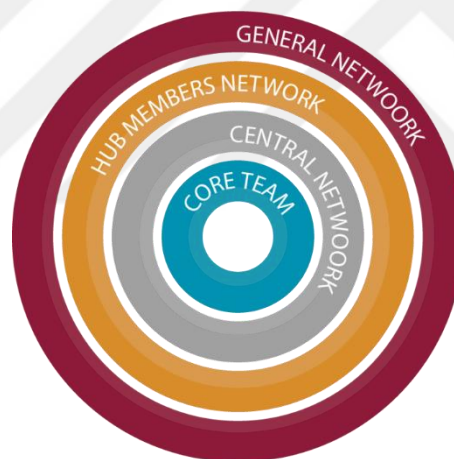


| Levels of the network | | |
|---|---|---|
| Level | Description | Main components |
| Core Team | The main executive members of Al Sharq Youth at the international level | Coordinators of the main units in the five task forces |
| Central Network | The team of executive members of Al Sharq Youth at the international and local level, in addition to the previous members of the core team | • Core team<br>• Hubs Coordination teams<br>• Alumni network |
| Hub members network | Hub members across the globe who interact and attend the activities of the hubs regularly | All the hub members excluding the core team |
| General Network | Any individual who is interested in joining the network and fits the membership criteria yet cannot commit to be a hub member | General |

**Figure 5.4:** Al Sharq Levels of Network.

**Source:** "Sharq Youth Forum" (Online) https://youth.sharqforum.org/, 2019.

### 5.7.1.  Hubs Network:

Hubs are the main body of Al Sharq Youth, it is a local network led by respective catalysts based in 23 countries across the globe. The most active and influencing young and professionals in every community are selected from these local networks in different countries to participate and lead the international based events. The 5 circles of Al Sharq "Horizon, Ignite, Innovation, Mosaic and Spotlight" are reflected in every hub to ensure the highest level of participation in every community which form our matrix organization. Hubs are not obliged to have the 5 circles, each hub can choose one or more of the circles to adopt its scope according to the Hub member's interests, creating a theme for the hub and hold its activities and events reflecting it. Hubs is a way of organizing locally around geography.

**Hub Goals are:**

- Build the Presence of Al Sharq Youth in the city / country established in.
- To build and sustain a network of high caliber and achieving young leaders who can join our programs and initiatives.
- Build projects or participate in creating them for a beneficial tangible outcome.

**Hub's Core Team roles:**

Each hub has a core team that coordinate and organize its projects, activities, tasks with the lead of the hub coordinator. Hub Core Team are advised to be:

- Hub Coordinator
- PR & Media Coordinator
- Mentorship Coordinator
- Opportunities Coordinator
- Circle Coordinator

It's advised that the tasks be distributed and assigned by the Hub coordinator for easier workflow and the Hub Co. is responsible to follow up with them. The Hub Coordinator can assign a deputy for him/her in case he isn't available to follow up the tasks and have the responsibility of reporting both financial or progress reports.

### 5.7.2. Circles:

Al Sharq Youth Circles is considered the second way of organizing. Circles is considered domains of work and activities and specialties (Aka functions) "Themes" consists of five circles as follow:

**<u>Al Sharq Horizon</u>**

Al Sharq horizons are the thought leadership circle of Al Sharq Youth Forum, including young academics and influencers in politics, economics and the social sciences. Horizons aim to challenge existing ideas and theories, while creating new ones.

**<u>Al Sharq Ignite</u>**

Al Sharq Ignite is a network of young businessmen and entrepreneurs. This circle provides opportunities for these young people to develop and incubate their ideas and business projects.

**<u>Al Sharq innovation</u>**

a network of young scientist's technologists, it aims at providing opportunities for young innovators to develop their capacity in technological and scientific projects.

**<u>Al Sharq Spotlight</u>**

Al Sharq Spotlight is the talent discovery mechanism of Al Sharq Youth Forum in the fields of Media and Journalism. Spotlight puts exemplary initiatives and talents center stage by providing a platform and promoting the work of young people.

**<u>Al Sharq Mosaic</u>**

It is a network of talented artist and figures which aims to promote the common pursuit of peace and prosperity through the diversity of the arts.

### 5.7.3. Mechanisms for Implementing and Guiding Work:

**<u>Work execution mechanisms:</u>**

- Matrix structure: is the administrative structure between the core team and the hub coordinating team, and communication and coordination is performed as follows:

- Vertical communication: where the main circles coordinators in the core team motivate the coordinators of initiatives in the hubs.
- Horizontal communication: where the Hubs Coordinator coordinates the main hub coordinators in the hub and support projects.

**Guidance policies:**

- The Alumni Network Coordinator will link those responsible for initiatives and the graduates so that sufficient guidance and expertise is transferred to complete the initiative.
- The guidance process is not mandatory, but only to guide and benefit from the expertise available in the network.

### 5.7.4. Meetings & Communications in Al Sahrq Youth Organization:

- Each hub's core team should meet at least once a month.
- It's advised to set a fixed day for meetings.
- All meeting minuets must be written and shared with the hub core team.
- Meetings can be Offline "face to face" or online according to member's availability and agreement.
- In case of unavailability to join the meeting, the member should inform the hub coordinator before the meeting date.
- Each hub should create 1 secret group on our social platform "Workplace" for only the core team of the hub for internal organization. The second group closed/public for all hub members to communicate. Both general Coordinator and Community Coordinator should be added to these groups.
- Hubs are not allowed to have separate Facebook pages without direct permission from the HQ.

### 5.7.5. Handover and Rotation:

**Rotation:**

- The network insists on the rotation of responsibilities across its members to ensure its initiatives and programs are always evolving and thriving.
- Hub Coordinators are to be elected by the core team based on their proposed projects to make the position competitive and nailed.

- Calling for projects and elections will be 3 months before the annual conference.
- Projects should be clear, reflecting the values of AL Sharq contains its SWOT analysis, and how it will be implemented for the best outcome.

**Rotation & Handover time:**

- Process starts three months before the annual conference in January.
- Hub Coordinators to be rotated the same time as the General Coordinator and handover to be during the Annual Conference for official announcement.

**Duration:**

- Regional Coordinator: 2-3 Years
- Hub Coordinator: 2-3 Years
- Hub Core Team: 1 – 2 Years

**How rotation happens:**

- **Regional Coordinator**: In Consultancy with the hub's coordinators in the region according to his ability, being available in time, and his offered plan of projects, etc.
- **Hub Coordinator**: 3 names suggested by the previous hub coordination, then the core team chooses one based on the vision, then there will be a handover period till the annual conference, the announcement is to happen during the conference.
- **Hub Core Team:** Hub coordinator in coordination with the community coordinator and based on the CVs of the candidates.

### 5.7.6. Hub Plan

- Each hub coordinator and his team should work together on devolving their plan for the hub's activities and projects.
- The hub plan should have an outline for the year by choosing a theme or scope that the hub's activities would adopt. The theme can underly one circle or a mix of circle's scope according to the interests of the hub members.
- The outline shouldn't change, but the activities and projects itself is changeable according to availability of applying it.
- Each hub should localize the vision of Al Sharq and reflect it in their hub plan.

### 5.7.7. The Mechanisms of Decision-Making and Adjusting Policies:

**Decision-making mechanisms:**

- The decision shall be taken by direct vote by a majority.
- In the case of equality of votes, the vote of the General Coordinator shall be weighted.
- A vote shall be considered valid only if at least half of the members are present.

**Policy Adjustment Mechanisms:**

- The core team is authorized to amend the public policies.
- A report shall be submitted to the core team on the reasons for changing a policy in the rules of procedure and then presented to the core team.
- The amendment of public policies shall be adopted by a vote of more than two thirds of the members.
- The core team shall be informed of the policy amendment session through the Membership Coordinator at least one week in advance.
- A committee shall be formed with the beginning of the work of each new rotation of the core team to discuss and develop this Charter. The Coordinator of Memberships shall form this Committee and shall provide the next teams with the commandments and proposals.

### 5.7.8. Al Sharq Members:

**Recruiting:**

The membership process opens twice a year, the members is requested to fill the membership form and choose the hub they want to be part of, the hub coordinator will revise the form and approve or decline the request. Once approved the members will be directed to the hub and workplace. In other words, the members will be activated online through the workplace or offline by joining the hubs and its activities.

**Conditions of Membership:**

- The age of the member should be between 18 – 35 years old.

- They should be an active member in their society who participates in youth activities and initiatives interested in public affairs.
- The member should adhere the values of the forum in their general behavior and their community activity within the framework of the forum initiatives.

**Types of Membership:**

- A member of the general network.
- A member of the hubs network.
- A member of the central network.
- A member of the core team.

**Member Benefits:**

- Providing a youth environment for communicating, exchanging of experiences and networking with active interested youth from various fields and backgrounds.
- Participating in the activities and events of Al Sharq Youth Forum and benefiting from them.
- The network provides members with sources of knowledge and opens new horizons for the future.
- Contributing in the process of social change.

**The Responsibilities of the Member:**

- Supporting the forum in reaching the vision and goals we believe in.
- Thinking of and taking the initiative of events and projects that correspond with the goals and vision of network.
- Supporting the Forum with new ideas of clarity, flexibility and the ability to activate.
- Positive interaction with the activities and events of Al Sharq Youth Forum.
- The moral commitment to the values of the forum and respectively dealing with its members.

### 5.7.9. Evaluation Process and Factors:

A monthly evaluation will take place after the monthly meeting of hub coordinators and along the month. The aim of the evaluation is encouraging hubs and increasing the competency level between them for the best results.

- **Commitment and Communication: (2 Points)**

    **Attendance of Hub Coordinators Monthly Meetings. (1 Point)**

    Hub Coordinators must attend the monthly meeting of hub coordinators, in case of unavailability, the community coordinator must be informed at least 6 hours before the meeting. In case, of informing, half the point will be counted.

    **Response and Communication. (1 Point)**

    Responding to emails, messages, calls, and requests from main office and communication with it and other hubs.

- **Reporting: (2 Points)**

    **Financial Report. (1 Point)**

    Keeping financial records and submitting monthly financial reports updated.

    **Events' Report. (1 Point)**

    Submitting needed proposal of the report before the event, and the report after the event is accomplished with full elements as mentioned in the planning and reporting section.

- **Functions: (2 Points)**
- **Hub Monthly Meeting. (1 Point)**

    Each hub should have at least one monthly meeting with hub core team.

- **Monthly Activity. (1 Point)**

    Each hub should have at least one meeting or activity with the hub members only or public events.

- **Projects. (2 Points)**

    As having projects is becoming focusing on having projects or planning for having one, each hub should have a project, be part of one or propose one for the upcoming phase.

- **Partnerships. (1 Point)**

  Each hub should work on having a partnership with one or more national organization that would help in organizing events and implementing projects.

- **Members: (1 Point)**
  - **Gender Balance ratio. (0.5 point)**

  The ratio of the Males to Females should be balanced in the hub.

  - **Active members ratio. (0.5 point)**

  The ratio of active members to the total number of members should be balanced and not less than 50% of the total number.

- **Bonus:**

  In order to compensate the missing points or to improve it, 2 Bonus points can be given according to developing a new innovative idea or initiative for overcoming a current issue, finding an international partnership, finding a big sponsor for an event or project and having a sponsorship signed with them or any innovative idea for Al Sharq and the community that can be implemented.

**5.7.10. What Al Sharq Offers:**

- Al Sharq is committed to provide all the support required to legalize the hubs and kick off their activities.
- Al Sharq forum provide the hubs the name and the brand to be used to achieve the strategic goals and the vision.
- Al Sharq is committed to provide and develop an online platform where all the members interact virtually.
- Al Sharq is also committed to provide the required marketing, promotions and related support.
- Al Sharq is committed to provide access to the other networks, public figures, and international organization for the benefits of the hub.
- Al Sharq is also committed to provide the required training and orientation for hub core team.

## 5.8. Data Analysis and Findings

After finishing deep open-ended unstructured interviews with participants from all layers of the Al Sharq Youth Organization (Employees, ex-employees, Hub coordinators, Hub members and volunteers), I began the process of analyzing another source of data which is Al Sharq Youth organizational documents like (internal policies, procedures, and organizational charter). I will use the entrepreneurial organization design model that I developed in the previous chapter and illustrated in the theoretical framework as an analytical tool for the data collected from both interviews and from Al Sharq Youth organizational documents.

In the data analysis I used a "Pattern-Matching" logic of analysis. The theoretical framework illustrates a spectrum of organization design orientation from mechanical organization design model defined by bureaucracy to entrepreneurial organization design model defined by adaptability and innovation, So I will make the pattern-matching between the predictions of the theoretical framework and my findings and insights I got from the interviews and organizational documents to map the position of Al Sharq Youth in the organization design model spectrum between mechanical to entrepreneurial.

Al Sharq Youth organization was chosen as case study object because its organizational design is expected to be belonging to the entrepreneurial organization design orientation, and that's because it is structured in a decentralized network shape, but the analysis will clarify a lot of interesting tensions in the application of the network model.

### 5.8.1. Organizational Structure Architecture

Although Al Sharq Youth is announced to be a "Decentralized Network", but in reality it is structured with hierarchical mindset. The hierarchy appear in the layers of geographical structuring between local Hubs and regional Hub, as well the hierarchy of networks (general network, Hubs Network, central team network and core team network). However, hierarchy is not always having negative implications, but the object of the study hierarchy had a very negative implication on the network which is top-down decisions. The centralization of decision making slows the operations and hinder initiative taking and entrepreneurial spirit inside the organization.

The center of the network is Istanbul core team which supports the international Hubs spread around the world. One of the interviewed Hubs coordinator explained the relation with other Hubs as the following: *"We have a great cooperation with the core team of the network, with external sponsors, but we lack the connections with other hubs."* As framed by a Hub coordinator the interconnection between hubs is weak and that hinders the realization of Al Sharq Youth purpose about supporting knowledge and experience transfer between Hubs. For this case of having central support point and very weak connections between Hubs that leads to centralized reality of the network.

Hubs are managed autonomously in decentralized way, each Hub has it is own agenda and plan its activities due to local conditions and priorities. Main headquarter in Istanbul is supposed to support the Hubs spread in more than 20 cities around the world. Although Hubs is managed in decentralized style, however the financial support is managed centrally from Istanbul office.

A positive point at Al Sharq Youth is the "Rotation" concept, which means people who are in leadership positions as coordinators cannot stay more than two years, that rotation brings new energy to the organization and fresh perspectives. However, the negative point in rotation is that organization design is almost changing at every rotation, every general coordinator begins structuring the organization from scratch with new rules, which means there is no accumulation of experiences. There is alumni network that was designed to contain all previous coordinators, but it is still not active or efficient.

A negative point is that the process of organization design itself is implemented by only the general coordinator, it is not participative process, in contrast organization design is done in top-down style. Al Sharq Youth organization members and employees don't believe that they supposed to have any organization design role, hence they have no contribution to the process. Designing the organization by only the general coordinator increases the tendency to centeralization.

At the last version of organization structure the general coordinator adopted the Matrix Structure as a way of structuring the organization. Matrix organization structure when illustrated (despite all the disadvantages of matrix structure) it gives a feeling that everything under control and collaboration is guaranteed. And this is one of main conclusion I got from interviews. Although Al Sharq Youth leadership believe in the

decentralized network as way of organizing, they are not willing to give up tendency of control. To organize a decentralized network a trade-off should be made regarding control. Tendency to control make the application of the decentralized network "Partial and non-radical application" as one of the interviewees described.

Final finding regarding the organizational architecture is that through analyzing and comparing the documents of Al Sharq Youth and interviews content, there is a significant gap between what is written in the papers and what is implemented in the ground. Specially in the organization charter. This gap between organization documents and real behaviors questioning the seriousness of the adoption of the decentralized network organization design.

### 5.8.2. Shared consciousness

The first element of the shared consciousness is organizational purpose. Organizational purpose at Alsharq Youth organization is provide a networking platform between leaders of civil activism to share knowledge and accumulate experiences. This purpose seems to be clear to most organization members, however it is not satisfying to some organization members who aspire to have much more ideological purpose. However, some active members of the organization complain of those who join the organization for networking, and consider it exploiting the resources and relations of the organization for the benefit of its own projects, and here it seems an interesting phenomenon that they forgot that the purpose of the organization is networking for the benefit and interest of the people, It seems that the purpose of the organization needs to be formulated and explained to the employees of the institution in a simpler and clearer way, because a deep understanding of the purpose of the institution will enable them to take the right decisions in the future.

The second element of the shared consciousness is meetings. Meetings processes at Al Sharq Youth has very detailed explanation in the organizational documents, specially meetings of the local Hubs. However, the details about meetings is administrative more than about how meetings are structured or facilitated to be integrative to all meeting attendees. Meetings is a social technology if it didn't be used in proper way will drain a lot of energy and waste a lot of time. However, some of the interviewed participants indicated that the communication with organization teams is done in positive way and giving feedback is adopted in good manner.

Another interesting finding is that although Al Sharq Youth is subscribing to Workplace application which is developed by Facebook for business usage. Workplace is considered a world class social technology that facilitates communication and networking among colleagues at organization. Surprisingly, leaders and coordinators are not adopting Workplace technology and they are not using it. And the reason of this phenomena is that the need of social technology of communication did not come from people, it was imposed from the top, the same experience can be found at the companies that impose usage of ERP or any IT systems on employees, same reaction always happens from employees, ignorance! It takes human-centered experimental approach to implement such technologies, not hierarchical top-down developed solution.

The third element of the shared consciousness is transparency. Some organization members complained about lack of transparency which appears in unjustified surprising decisions that is made without consulting the team.

### 5.8.3. Leadership Style and Roles

Leadership is very interesting element of organization design of Al Sharq Youth. The president of the organization is Wadah Khanfar who is considered a famous public figure in the middle east. He was the president of Al Jazeera Media Network that is considered one of the most influential media network in the middle east between 2003 and 2011. Fast Company classified him as the most creative person in business (2011), and he was featured as "the most powerful and influential people in the world" according to Forbes Magazine (2009). He founded in 2015 Huffington Post Arabic version of the international media outlet. And he founded Al Sharq organization at 2012. Wadah is known for his achievement of the fast growing of AlJazeera.

Wadah as the leader of Al Sharq Youth, he is the one who coined the "Network" narrative in the organization. He believes in the decentralized networked way of organizing as the best to empower people to innovate. He him self is not adopting the micro-management style of leadership in contrast he is known for the tendency to decentralize, delegate and empower others, this is the way he led the growth of Al Jazeera and the same is happening now in Al Sharq Youth. Although Waddah is believing in the decentralized network when hiring other leaders who are responsible for the implementation of the work, they might not believe in the practicality of the network style organization. And because Waddah delegating implementation roles to

non-believers of "the decentralized network", the network stays in the internal narrative and external marketing more than reality.

Fredrick Laloux says that to implement self-management organization it needs the support of two types of people, the owners and top management. In the experience of Al Sharq a third element is needed which is recruiting believers in the new networked operating system. Middle leaders who are not believing in decentralization and network as way of organizing will never innovate new organizational solutions that facilitates the networking, self-management and decentralization.

### 5.8.4. Strategy

There are two types of strategies at Al Sharq Youth, the grand strategy which determines the general direction of the whole organization and this is determined centrally. The other type of strategy is the local strategy, and this is determined by Hubs themselves. Experimentation is not featured at Al Sharq Youth as strategy determination tool.

Al Sharq Youth at microlevel made a lot of success, that appears obviously in the numbers of the annual report that explains the activities of the year. These micro-level successes is a result mainly from the excellence of marketing, fundraising, recruitment of calibers using the strong brand of Al Sharq Youth, and most importantly Wadah Khanfar's international public relations network that he built and accumulated over the years in his previous work at Al Jazeera. However, the micro-level successes giving a feeling in the organization that there is no problem in the organization design deserve special attention. Another strategy challenge that is facing Al Sharq Youth is the tendency to expand in opening new Hubs and seeking more international spread without existence of mature organization design that help the network to be sustainable, this tendency was described by on of the interviewed Hubs coordinators "quantity over quality".

Al Sharq Youth is extraordinary successful in recruitment calibers worldwide, the organization is using branding and international elites, public figures and celebrities to attract the best calibers and members. As well with the experience of Wadah in public relations Al Sharq became able to build international network of supporting partnerships that increased the strength of the brand of Al Sharq Youth, hence recruitment capacity of volunteers and members.

Another strategy challenge is that it is not clear that Al Sharq is an elite organization, or it is a grassroot organization. There are trad-offs when choosing both scenarios, however being a network is grassroot strategy. Another question that is not clear yet in the strategy of Al Sharq is that whether Al Sharq targeting elite activists or targeting potential leaders who need development. All these questions seem not to be on the top of the agenda because the organization is focusing now on the branding and expansion of Hubs worldwide.

### 5.8.5. Organizational Culture

Communication is very important elements to monitor to understand organizational culture. And for decentralized network communication is very critical to the success of the network. Here a quote from one of the interviewed international Hubs coordinators about communication with core team in Istanbul: *"What I really like about Al Sharq Youth is the lack of bureaucracy. I am literally one or two e-mails away from solving an issue or inquiring about some projects. The central team of the network functions well."* This quote indicates the spirit and culture of fast communication and collaboration between the heart of the network in Istanbul and the arms of the network the international Hubs. However, some interviewed Hub coordinators indicated that the distance between Istanbul and other international Hubs hinders collaboration.

Organization culture in Al Sharq has a lot of contradictions. For example, it is safe to give feedback to a colleague, however if the feedback to the general coordinator it will be neglected. The general narrative inside Al Sharq Youth is about decentralized networked organization, however there is no trials of radical tools or methods to implement this vision because of the skeptics about the practicality of the network organization, which nobody can declare the opposition of this approach explicitly.

Some volunteers are skeptical and disloyal to the organization. They feel that the organization is exploiting their efforts in periods where volunteers are needed. After the event or conference, the organization disappears from their lives, does not participate in decision-making and does not participate in strategies. Some volunteers then declined to share their ideas.

Another challenge of organizational culture is that although Al Sharq Youth vision to adopt diversify in Hubs, however there is a strong feeling between organization's

members that Al Sharq Youth is "Arabic club" who is formed to tackle Arab world issues only. This conclusion is illustrated by one of the interviewed Hubs coordinators. Non-Arab Hub coordinators complained that even if the meeting containing non-Arab attendees, the used language in the meeting is Arabic which make them disengaged. Another Hub coordinator clarifies the Arabatization of Al Sharq Youth as the following:

*"Al Sharq Youth will need to work more on bringing non-Arab members and opening non-Arab hubs. This is especially important for the western hubs. I know it is much easier to open a hub, gather 20 Arab friends, but that is not the point. The point is to gather others, too."*

Although there is a kind of onboarding orientation sessions to new Hubs that introduces Al Sharq Youth organization and its activities and values, there is no any organizational awareness about how the network works. There is no culture manuals or training on new ways of work in a decentralized network. The conclusion is that organizational development is not on the top priorities of Al Sharq Network, because the network is already growing and achieving a lot of success on the micro-level, however the network is facing sever organizational challenges on the macro-level.

### 5.8.6. Implications on innovation

When analyzing the impact of Al Sharq Youth organization design on innovation we must differentiate between international Hubs and Istanbul core team. Hubs are autonomous entities they can determine their own agenda and manage it with their own way; hence Hubs members have very high potential ability to innovate as long as they have the ability to provide resources to support their idea. But when you need a kind of special support from the heart of the network at Istanbul there is "Mess" as described with Hub coordinator, as there is no decision making process for selecting ideas and give it support, it depends on one's personal relations and connections inside Istanbul office. Hubs members generally praising the lack of bureaucracy and the flexibility that allows them to innovate and help their ideas come to reality.

Regarding Istanbul core team we can observe the same phenomena of flexibility. However, "Organizational Innovation" is not supported. What i mean with organizational innovation is the innovation in the managerial and organizational processes. Radical ideas about applying the decentralized network organization is not supported and neglected. Maybe because the dominant organizational mind-set is still adopting the hierarchical and mechanical organizational design world view. Not

supporting organizational innovation initiatives resulted in a passive attitude of those who were proactive initiative takers.

### 5.8.7. Limitations of the research

The research limitations regarding the research object of the case study is that the selected organization is a non-for-profit organization not business for profit organization. And Al Sharq Youth has full time paid employees who are considered the core team of the network besides thousands of volunteers who volunteer to work in the Hubs. Implications of studying Non-profit organization cannot be generalized to all kinds of organizations especially business organization, however the organizational dynamics is the same at any organization. So, it is recommended to make to study the same phenomena with business (for profit) organizations, to increase the reliability of the findings and conclusions

Another limitation is about case study qualitative research methodology. For many scholars qualitative research is lacking reliability, for example the generalization issue, as case study research is about specific contextual case with specific conditions that cannot be generalized. However, case study is the best research methodology to build new theories and hypothesis. To solve this problem, it is advised to make similar research but with quantitative research methodology to increase generalizability.

# CONCLUTION

Organization design in complex context is consider one of the major challenges in modern organizations at knowledge economy era. In this research we tried to answer a central research question about the effect of Organization Design in a complex context on individual level innovation. To be able to answer that research question a single case study qualitative research methodology was adopted. The qualitative research study was chosen for that research because now there is no comprehensive theory about organization design that supports innovation. And case study qualitative research methods are best working in building theories and creating hypothesis.

To understand the roots of organization design we went back the history of organizational theory from the industrial revolution age. The work of the founders of management and organizational thought leaders were deeply analyzed, specially the work of Fredric Taylor, Henri Fayol and Max Weber. In my opinion the backgrounds of the three scholars affected their world view and hence their scientific contribution. Taylor and Fayol were mechanical engineers and Weber studied law till doctorate degree, both engineering and law sciences are established based on analytical thinking and decomposing systems, reengineering, predict and control behaviors. This worldview affected the three scholars when they developed their organizational approaches. With the machinery revolution at Industrial age organizational scholar viewed organizations as machines, they thought that if organization was designed like machine it will be running in more efficient way.

In order to trace the effect of industrial revolution scholar in modern and post-modern organizational thinking, the work of Jay Galbraith the father of organization design was deeply analyzed. Jay Galbraith in his last book that was published recently in 2014 have matured all his ideas about organization design, and although that he became aware that the industrial revolution organizational principals hinders innovation and collaboration (like functional organization structure) he didn't propose a new radical organizational model due to his strong believes in the hierarchal organizational model. It was found that organizational theorists living in the 21$^{st}$ century still are not able to liberate their thinking from the industrial revolution managerial principals.

The machine organization worked well in the stable environment of 19th and 20th century, thanks to mechanical organization design that was the reason behind the economic development of many western countries. But the stable context transformed into turbulent context. The rate of the change and technological development changed from linear change rate to exponential change rate. The ability to predict and control organizations or contexts decreased dramatically. The speed of technological development is more than speed of organizational adaptation and adoption.

In this research we used The Cynefin framework that was developed by David Snowden to analyze the change and the differences between organizational contexts. According to Cynefin framework the industrial age is belonging to simple and complicated contexts. Working in simple context can be done through following past best practices without any innovation and there is always only one right way to do the work. Working in complicated context can be done through consultation of experts, there is always multiple right answers to and challenge, experts can analyze the challenge and propose multiple right approaches to achieve it. Work and solutions for organizational challenges can be engineered, predicted and controlled in both simple and complicated context, however the contrast is happening with complex context. In complex context solutions can not be planned because the context is ever changing, solution can not be imposed but it needs experimentation. 21st century is belonging to complex context that exponential rate of change is the norm.

The nature of work itself changed, in industrial age the ideal worker (blue collars) was the one who doesn't think and "Stupid" as Taylor described, the main skill needed from worker is the mechanical and physical power, and the mental part of working is left to managers (white collars) who have a mental ability to think and design work. In knowledge economy era the definition of ideal worker changed. The ideal worker in 21st century is innovative caliber who can collaborate with colleagues in a team to solve organizational challenges.

Although the technology and people developed very fast from 20th century to 21st century, but the organizational design model is still not changed. The same organizational principals (division of work, hierarchy, command and control, etc.) that ruled the industrial revolution 150 years ago still dominant the organizational design models in knowledge age of 21st century. The tendency of control that dominated the

industrial revolution age should be changed to be tendency to innovation. The organization design models that was developed to sustain control should be changed to new organizational design models that support innovation, because organizations that are not investing in innovation will be disrupted sooner or later by adaptable competitors or by small innovate startup team.

In this research a new organizational design model was proposed as a solution to the organizational challenge of adapting to fast changing complex environment. the model was named for "Entrepreneurial Organization Design Model". The reason of choosing "Entrepreneurial" to describe the model is that the main skill that organizations need to be trained about now is entrepreneurship that based on innovation. Big organization to survive in the future should be working like small startup. Big organizations have to be more agile, rely less on top-down strategic plans and focus more on bottom-up experimentation, adopt decentralized network of multidisciplinary teams as organizational architecture instead of hierarchical pyramid, to be open and transparent instead of secrecy, adopt psychological safe culture that support experimentation and learning from failures instead of fear based environment that focus only on efficiency. Organizations of the future need to have shared consciousness that is shaped by clear organizational purpose and the openness of sharing information organization wide. Leaders of future organizations are not adopting authoritarian and dictatorial leadership styles, in contrast leaders of the future are willing to giving power to people to determine organization future and try new things. Leaders of the future are servant leaders who protect entrepreneurs and innovators and hold the space for them to thrive.

In this research the entrepreneurial organization design model was utilized as analytical tool for the case study object Al Sharq Youth Organization. Al Sharq Youth is designed to be a network of activists and innovators who aim to develop their societies and share experiences with others. Al Sharq network consists of more than 20 Hubs worldwide and Hubs are considered the main organizational unit of the network. Al Sharq Youth was very interesting case study because it highlights the challenges that face the decentralized network organization design.

Findings of the case study research can be concluded as the following, leadership of a decentralized network should be aware of the trad-offs that must be made to implement this organization design. Most important trade-off is the tendency

to control versus real decentralization, leaders should know that decentralized networks cannot be controlled, however it might be dynamically governed. Second main finding I that when aiming to launch a decentralized network organization, the middle leaders who leads the execution should be hired with a core selection criterion which is believing in the network as practical organizational design. When middle leaders are not believing in the network, they just use the terminology of the network in organizational conversation but, they adopt and implement hierarchical systems. Third finding is that organizations feels the need to transform when it feels real organizational pain or failure or have a leadership vision that support the transformation effort, organization that is growing by achieving micro-level success will not feel the need to transform the way that they were designed. Another finding is that the rotation of leadership is positive process that need to be coupled with accumulation of knowledge and experience. Another lesson learned from the case study is that organization design efforts shouldn't be top-down planning activity, it must be bottom-up participative experimentation process, people support organizational initiatives that they crafted. And it is important for a decentralized network organization to have shared consciousness which will make the organization able to move the whole network in the same direction towards achieving the organizational purpose. To build shared consciousness information sharing should be managed effectively by running well structured and inclusive meetings and transparency.

The implications of this study for future research is that researchers may begin to study how to make mental transformation for managers who were working in hierarchical context for years and want to adopt the new organizational design model, self-management may not be suitable to everyone specially for those who lived their entire lives in hierarchical organizations, researchers needs to sort out if it is possible to make this mind shift, and how to make it. As well it takes too much time for new employees to be fully functioning with self-management system. and researchers have to define the leadership traits of leaders of adaptive organization at the 21$^{st}$ century. As well it is important for researchers to study decision making processes that needed for fast moving and changing context. As well it is extremely important to produce a model for participative organization design activities, a model that explains how to motivate and invite people to contribute to the organization design process. Another proposed future research is the "accountability challenge" in decentralized

network organization, accountability is still a challenge in self-management as well, although in self-management accountability is implemented through peer review and peer pressure without managers, but still researcher have to find more practical way to increase accountability without using top-down controlling mechanisms. Final future research proposal is that the entrepreneurial organization design model has to be studied in quantitative research method to increase the reliability of the study findings and increase generalizability.

Practical implication is that as we saw in the case study, change cannot be achieved through only potential vision, to realize adaptable and innovative decentralized network organization it needs investment in building the capacities of people who will implement the new operating system. People should be trained about how to give feedback and communication in nonviolent way, people should be trained how to facilitates productive meetings, people should be trained about the art of prototyping and experimentation. Without investment in changing people's world view it will be still very challenging to transform an organization into entrepreneurial one.

# BIBLIOGRAPHY

| | |
|---|---|
| Albers, Henry Herman. | : Principles of organization and management. J. Wiley, 1965, p43. |
| Anthony, Scott D., S. Patrick Viguerie, Evan I. Schwartz, and John Van Landeghem. | : "2018 Corporate Longevity Forecast: Creative Destruction is Accelerating." *Innosight. https://www. innosight. com/insight/creative destruction* (2018). |
| BBC | : "break news to the world" (Online) http://www.bbc.com/future/sponsored/story/20140617-break-news-to-the-world , 2017. |
| Bennett, Amanda. | : *The Death of the Organization Man*. William Morrow & Company, Inc., 105 Madison AVe., New York, NY 10016, 1990. |
| Blank, Steve, and Bob Dorf. | : *The startup owner's manual: The step-by-step guide for building a great company*. BookBaby, 2012. |
| Blank, Steve. | : "Why the lean start-up changes everything." Harvard business review 91, no. 5 (2013): 63-72. |
| Brunsson, Karin Holmblad. | : "Some effects of Fayolism." International Studies of Management & Organization 38, no. 1 (2008): 30-47. |
| Chandler, Alfred D. | : "Strategy and structure: chapters in the history of American industrial enterprises." USA: Massachusetts Institute of Technology (1962). |
| Chesbrough, Henry. | : "Open innovation: a new paradigm for understanding industrial innovation." Open innovation: Researching a new paradigm 400 (2006): 0-19. |
| Christensen, Clayton M. | : *The innovator's dilemma: when new technologies cause great firms to fail*. Harvard Business Review Press, 2013. |

| | |
|---|---|
| Christensen, Clayton M., Michael E. Raynor, and Rory McDonald. | : "What is disruptive innovation." Harvard Business Review 93, no. 12 (2015): 44-53. |
| Christensen, Clayton M., Rory McDonald, Elizabeth J. Altman, and Jonathan E. Palmer. | : "Disruptive Innovation: An Intellectual History and Directions for Future Research." *Journal of Management Studies* 55, no. 7 (2018): 1043-1078. |
| Crosbie, Vin. | : "BUTTER'S LAW ACTING ON MEDIA" (Online) http://www.digitaldeliverance.com/2015/01/14/butters-law-acting-on-media/ , 18 March 2018. |
| Cummings, Thomas G. | : *Handbook of organization development*. Sage, 2008. |
| Desjardins, Jeff. | : "The Rising Speed of Technological Adoption" (Online) http://www.visualcapitalist.com/rising-speed-technological-adoption/ , 14 February 2018. |
| Drucker, Peter. | : "Management: Tasks, Responsibilities and Priorities." (1974). |
| Dumez, Hervé. | : "Henri Fayol. Performativity of his ideas and oblivion of their creator." (2018). |
| Edmondson, Amy C. | : "Strategies for learning from failure." *Harvard business review* 89, no. 4 (2011): 48-55. |
| Edmondson, Amy C. | : "The competitive imperative of learning." *Harvard business review* 86, no. 7-8 (2008): 60-7. |
| Edmondson, Amy C. | : *Teaming to innovate*. John Wiley & Sons, 2013. |
| Edmondson, Amy C. | : Teaming: How organizations learn, innovate, and compete in the knowledge economy. John Wiley & Sons, 2012. |

| Edmondson, Amy C. | : The Fearless Organization: Creating Psychological Safety in the Workplace for Learning, Innovation, and Growth. Wiley, 2018. |
|---|---|
| Fayol, Henri, and John Adair Coubrough. | : "Industrial and general administration." (1930). |
| Galbraith, Jay R. | : "Designing the innovating organization." Organizational dynamics 10, no. 3 (1982): 5-25. |
| Galbraith, Jay R. | : "Matrix organization designs How to combine functional and project forms." Business horizons 14, no. 1 (1971): 29-40. |
| Galbraith, Jay R. | : "The future of organization design." Journal of Organization Design 1, no. 1 (2012). |
| Galbraith, Jay R. | : *Designing organizations: Strategy, structure, and process at the business unit and enterprise levels*. John Wiley & Sons, 2014. |
| Galbraith, Jay R. | : Organization design. Addison Wesley Publishing Company, 1977. |
| Gareth, Morgan. | : "Images of organization." London: Stage (1986). |
| Gibbert, Michael, Winfried Ruigrok, and Barbara Wicki. | : "What passes as a rigorous case study?." Strategic management journal 29, no. 13 (2008): 1465-1474. |
| Hamel, G. | : "Leading the revolution." Boston: Harvard Business School, (2000). |
| Hamel, G., and M. Zanini. | : "Top-Down Solutions like Holacracy won't fix bureaucracy." *Harvard Business Review* (2016). |
| Hamel, Gary, and Michele Zanini. | : "The end of bureaucracy." *Harvard Buisness Review* (2018): 3-11. |

| Hamel, Gary, and Nancy Tennant. | : "The 5 requirements of a truly innovative company." *Harvard Business Review* 27 (2015). |
|---|---|
| Hamel, Gary. | : "Bureaucracy must die." *Harvard Business Review* 4 (2014). |
| Hamel, Gary. | : "First, let's fire all the managers." *Harvard Business Review* 89, no. 12 (2011): 48-60. |
| Hamel, Gary. | : "What matters now." Strategic Direction 28, no. 9 (2012). |
| Hamel, Gary. | : "Assessment: Do You Know How Bureaucratic Your Organization Is?" (online) https://hbr.org/2017/05/assessment-do-you-know-how-bureaucratic-your-organization-is, 16 May 2017. |
| Hamel, Gary. and Breen, Bill. | : "The Future of Management" Harvard Business School Press, 2007. |
| Harden, Gina. | : "Knowledge sharing in the workplace: A social networking site assessment." In *2012 45th Hawaii International Conference on System Sciences*, pp. 3888-3897. IEEE, 2012. |
| Heuveldop, Niklas. | : "Ericsson mobility report." *Ericsson, Stockholm* (2017). https://digitalreport.wearesocial.com/, 2018. |
| Keller, Scott, and Colin Price. | : *Beyond performance: How great organizations build ultimate competitive advantage.* John Wiley & Sons, 2011. |
| Kemp, Simon. | : "GLOBAL DIGITAL REPORT 2018" (Online). |
| Kenton, Will. | : "S&P 500 Index – Standard & Poor's 500 Index Definition" (Online) https://www.investopedia.com/terms/s/sp500.asp 17 April 2019. |

| | |
|---|---|
| Knouse, Stephen B., and Kerry D. Carson. | : "W. Edwards Deming and Frederick Winslow Taylor: A comparison of two leaders who shaped the world's view of management." International Journal of Public Administration 16, no. 10 (1993): 1621-1658. |
| Kotter, John P. | : "Leading change. Boston, MA: Harvard Business School Press. Kouzes, JM, & Posner, BZ (2002)." *The leadership challenge." San Francisco, CA* (1996). |
| Kotter, John P. | : *Accelerate: Building strategic agility for a faster-moving world.* Harvard Business Review Press, 2014. |
| Laloux, Frederic. | : *Reinventing organizations: A guide to creating organizations inspired by the next stage in human consciousness.* Nelson Parker, 2014. |
| Lazarus, Arthur. MD, M. B. A. | : "Physicians with MBA degrees: change agents for healthcare improvement." *The Journal of medical practice management: MPM* 26, no. 3 (2010): 188. |
| Leavitt, Harold. | : "Handbook of organizations." *Rand Mc Nally,* (1965): 1144-1170. |
| MacGregor, Douglas. | : The human side of enterprise. Vol. 21, no. 166-171. McGraw-Hill: New York, 1960. |
| Mariani, Joe. | : "Leading to chaos: A conversation with General Stanley McChrystal" (Online) https://www2.deloitte.com/insights/us/en/deloitte-review/issue-19/general-stanley-mcchrystal-interview-innovation-in-leadership.html, 25 July 2016. |
| Marsh, Craig, Paul Sparrow, Martin Hird, S. Balain, and A. Hesketh. | : Integrated Organization Design: The new strategic priority for HR directors. Centre for Performance-led HR, Lancaster University Management School, 2009. |

| | |
|---|---|
| McChrystal, General Stanley, Tantum Collins, David Silverman, and Chris Fussell. | : Team of teams: New rules of engagement for a complex world. Penguin, 2015. |
| McGregor, Douglas. | : "Theory X and theory Y." Organization theory 358 (1960): 374. |
| Mintzberg, Henry. | : Mintzberg on management: Inside our strange world of organizations. Simon and Schuster, 1989. |
| Moore, Gordon E. | : "Cramming more components onto integrated circuits." (1965): 114-117. |
| Morris, Chris. | : "10 start-ups that reached $1 billion in record time" (Online) https://www.cnbc.com/2017/05/23/10-start-ups-that-reached-1-billion-in-record-time.html, 30 May 2017. |
| Osterwalder, Alexander, and Yves Pigneur. | : *Business model generation: a handbook for visionaries, game changers, and challengers*. John Wiley & Sons, 2010. |
| Perry, Mark J. | : "Fortune 500 firms 1955 v. 2017" (Online) http://www.aei.org/publication/fortune-500-firms-1955-v-2017-only-12-remain-thanks-to-the-creative-destruction-that-fuels-economic-prosperity/, 1 May 2019. |
| Peters, Thomas J., Robert H. Waterman, and Ian Jones. | : "In search of excellence: Lessons from America's best-run companies." (1982). |
| Prasad, D. Ravindra, V. Sivalinga Prasad, and P. Satyanarāyaṇa, eds. | : Administrative thinkers. Sterling Publishers Pvt. Ltd, 1991. |
| Ravanfar, Mohammad Mehdi. | : "Analyzing Organizational Structure based on 7s model of McKinsey." Global Journal of Management And Business Research (2015). |

| Ries, Eric. | : *The lean startup: How today's entrepreneurs use continuous innovation to create radically successful businesses.* Crown Books, 2011. |
|---|---|
| Ries, Eric. | : *The startup way: how modern companies use entrepreneurial management to transform culture and drive long-term growth.* Currency, 2017. |
| Ritchie, Hannah. | : "Technology Adoption" (Online) https://ourworldindata.org/grapher/technology-adoption-by-households-in-the-united-states, 2019. |
| Ritchie, Hannah. | : "Technology Adoption" (Online) https://ourworldindata.org/technology-adoption, 2018. |
| Roser, Max. | : "Moore's Law - exponential increase of the number of transistors on integrated circuits" (Online) https://ourworldindata.org/technological-progress , 28 April 2017. |
| Sarasvathy, Saras D. | : *Effectuation: Elements of entrepreneurial expertise.* Edward Elgar Publishing, 2009. |
| Schwab, Klaus. | : *The fourth industrial revolution.* Currency, 2017. |
| Sharq Youth. | : "Sharq Youth Forum" (Online) https://youth.sharqforum.org/, 2019. |
| Sinek, Simon, David Mead, and Peter Docker. | : *Find your why: A practical guide for discovering purpose for you and your team.* Penguin, 2017. |
| Smith, Adam. | : "The Wealth of Nations. Modern Library." New York 423 (1937). |
| Smith, K. H. | : "What is the Knowledge Economy?" Knowledge intensity and distributed knowledge bases." (2002). |
| Snowden, David J., and Mary E. Boone. | : "A leader's framework for decision making." *Harvard business review* 85, no. 11 (2007): 68. |

| Stake, R. | : The case study method in social inquiry. In Norman K. Denzin & Yvonne S. Lincoln. The American tradition in qualitative research. Vol II. Thousand Oaks, California: Sage Publications, (2000). |
|---|---|
| Stanford, Naomi. | : Guide to organization design: Creating high-performing and adaptable enterprises. Vol. 10. John Wiley & Sons, 2007. |
| Taleb, Nassim Nicholas. | : *Antifragile: Things that gain from disorder*. Vol. 3. Random House Incorporated, 2012. |
| Taylor, Frederick Winslow. | : "The principles of scientific management New York." *NY: Harper & Brothers* (1911). |
| Taylor, Frederick Winslow. | : Scientific management. Routledge, 2004. |
| Taylor, Frederick Winslow. | : Shop management. Рипол Классик, 1914. |
| Warner, Malcolm. | : "Management Theory: From Taylorism to Japanization." Human Systems Management 16, no. 4 (1997): 311. |
| Weber, Max, Alexander Morell Henderson, and Talcott Parsons. | : "The theory of social and economic organization, 1st Amer." (1947). |
| Wren, Daniel A., and Arthur G. Bedeian. | : "The evolution of management thought." (1994). |
| Yin, Robert K. | : "Validity and generalization in future case study evaluations." Evaluation 19, no. 3 (2013): 321-332. |