Proceedings of the Australasian Conference on Business and Social Sciences 2015, Sydney
(in partnership with The Journal of Developing Areas)
ISBN 978-0-9925622-1-2

FACTORS ESSENTIAL FOR LONGEVITY AMONG DOW JONES INDEX ORGANISATIONS: QCA ANALYSIS

Malik Muhammad Sheheryar Khan*
University of South Australia, Australia

ABSTRACT

Organisational longevity paves the way towards phenomenal changes and creates linkages with strategy depending on the organisation. The primary aim of this research study is to identify the vital factors of organisational longevity and to determine the priorities attributed to those factors by companies in their formal documentation. The research has developed a model based on previous established models like e Mckinsey 7S Model, Weisbord's Six Box Model, The Nadler-Tushman Congruence Model, Jay Galbraith's Star Model, Burke-Litwin Model of Organisational Performance and Change and Four Theoretical Frameworks of Bolman and Deal (on Leadership). Based on this model, factors have been identified; resources, organisational culture, organisational systems, innovative capability and strategy. Factors responsible for longevity have been tested among two groups of companies, the longevity group and the fallen out group, who are and were listed respectively on the Dow Jones Index, by applying Qualitative Comparative Analysis (QCA). QCA analysis uses truth tables to represent and analyse causal complexities and assess the differences in the existing data. The QCA analysis shows that the main drivers of longevity are "resources" and "innovation". This means that companies tend to sustain for long periods if its organisational resources are effectively managed and at the same time, an environment of innovative capabilities is created within the organisation. Further, the underlying conditions which support these main drivers are a combination of "strategy" and "culture".

JEL Classifications: M10, M14

Keywords: Longevity, Organisation, Dow Jones Index, QCA, Framework

***Corresponding Author's Email Address**: malik_sherry@yahoo.com

INTRODUCTION

Robbins (2012) defined longevity as "organisations survive even after their founding members leave." A suitable aspect of organisational longevity is creative destruction in today's competitive landscape which was explicated by Munro (2005).Creative destruction is the way wherein organisations revolt against the corporate protocols and discontinue the poorly performing business units, fostering innovation across the organisation and come up with unique offerings. Mayfield et al. (2000) empirically established the link between strategic type and longevity. It was found that companies with a defender strategy exhibited better longevity while on the contrary companies with prospector strategy have lesser longevity. The paper has focused on 10 out of 30 Dow Jones listed companies in order to understand the strategies adopted by these companies to ensure organisational longevity. The research has developed model integrating five factors which are practiced in the longevity group companies as well as fallen out group companies. These factors are resources, organisational culture, organisational systems, innovative capability and strategy.

The companies in the longevity group consist of P&G, Du Pont, IBM, GE and American Express. These companies were in the Dow Jones on Jan 1, 1986 and are still present in the Dow Jones as of today. The Fallen Out Group companies consist of Alcoa, AT&T, Goodyear, Altria and Kodak which was present in the Index on Jan 1, 1986 but subsequently fell out of the index. This study collects examples of companies in the Dow Jones Industrial Average Index, who have managed to remain financially viable and stand the test of time. The use of formal company statements (annual reports, Chairman's report, and so forth) as a source of data has been widely used in qualitative research. The data collected from 10 US organisations from their annual reports across 28 years (1986-2014) was analysed using Nvivo Software, which is a powerful way to do sophisticated data coding and helps in development of theories and models. The PDFs of annual reports were transferred to Nvivo Software in the early stages of the study and further holistic approach was adopted to analyse the data across both the data sets i.e. longevity group and fallen out group. Qualitative comparative analysis (QCA) methodology was used in order to report the results of these conditions and further analyse commonalities and variances between the longevity group and the fallen out group. The main idea has been to identify the degree of frequency that each key factor had in order to identify the set of factors which are essential for an organisation's longevity.

AIM AND OBJECTIVES

The aim of this study determines the role of factors towards organisational longevity among companies listed on the Dow Jones Index. Objectives are described below:

- To study importance of organisational longevity.

- To study relevance of five factors which are responsible for longevity among longevity group and fallen out group companies
- To analyse organisational longevity with Qualitative Comparative Analysis (QCA).

LITERATURE REVIEW

Introduction to Organisational Longevity

Timothy Frye defines organisational longevity as "*the length of survival of a self-governing organisation without a market crash that ends trading"* (Frye, 2000, p. 43). Sanchez gives a theoretical framework which suggests that longevity is dependent on that organisation which possesses dynamic, systematic, cognitive and holistic characteristics. He asserts that longevity of an organisation is determined by its dynamic response to changes that includes both the external environments and the internal factors of the organisation itself (Sanchez, 2008). According to, Volgy et al. organisational longevity can be guaranteed depending on two factors: structural and cultural changes. Structural changes are dependent on formal and informal rules, complex legalisation and operating procedures, that is likely to enhance the longevity of any organisation, if it is filled with cultural understanding. Cultural understanding with appropriate structural arrangements and changes can bring about organisational longevity and development (Volgy et al. 2009).

According to Jay Barney, firm resources makes organisations achieve durability, by emphasizing on four main competitive advantages: "*value, rareness, imitability, and substitutability*" (Jay Barney, 1991, p. 99). Durability and longevity achieved through this is required for many reasons, both for the organisations as well as for stakeholders, consumers, etc. In organisations, longevity is required for maximization of profit for present and future survival in the competitive market. Longevity might be required to satisfy the social and consumer needs, but it is the continuous generation of profit that makes the organisation to run and sustain their business.

Longevity also empowers organisations to carry on business activities into the future in pursuance of its desired goals (Palazzo & Basu 2008). Longevity allows organisation to pursue goals that are possible and within the purview of the organisation's planning. In simple words, longevity embodies visionary goals for the organisation (Dyllick & Hockerts 2002; Paine 2003), and in case any errors are detected, organisations have a chance of detecting and correcting any deviations from desired goals (Hargreaves 2007).

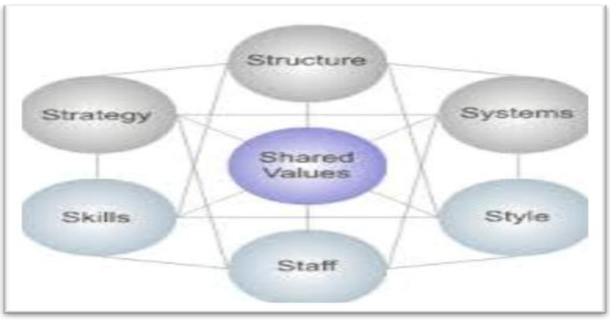
Factors Responsible for Organisational Longevity

Many models have been designed by various analysts and scholars to explain the longevity and sustainability of organisations or companies. The key factors of the models and the application of these factors by various global organisation and companies, for critical evaluation have been researched in this section.

Mckinsey 7S Model

This 7S Model is a value-based management model that is used to ensure that all organisational parts live in harmony (Russell Arthur Smith 2011). Mckinsey has selected 7s because the competitive strength that one can take from it is ostensibly important. According to Waterman, Peters and Phillips, the productiveness and subsequently longevity is involved in the entire interrelationship between structure, strategy, systems, style, skills, staff, and super-ordinate goals (Waterman et al. 1980). The reason for putting these variables together is because of the fact that they can influence any organisation towards change, and can guide organisation towards development.

Figure 1: The Mckinsey 7S model

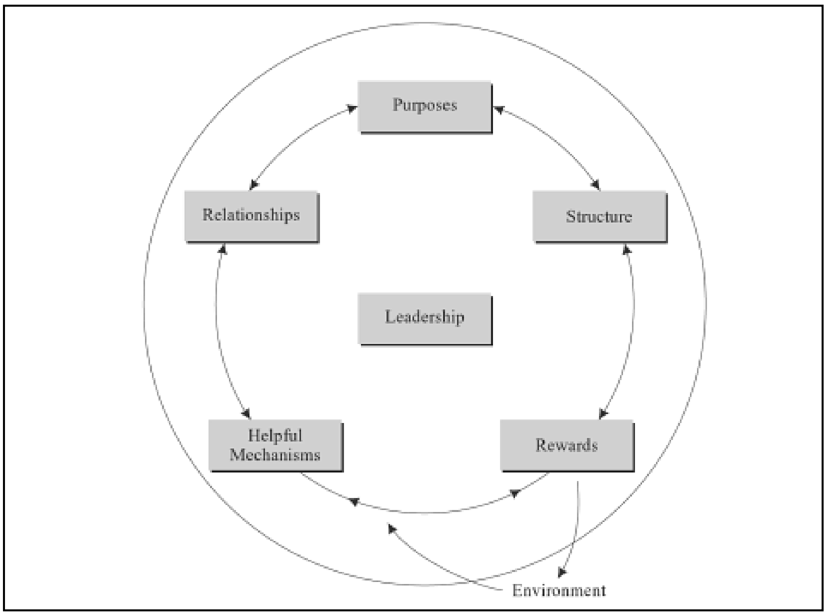


Source: (Waterman et al., 1980, p. 18)

Weisbord's Six Box Model

Marvin Weisbord in 1976 came up with a diagnostic model that seeks to capture all the important and essential features of organisational performance determinants (Palmer 2005). He describes this model as a combination of the data, theories and research that organisation uses in their business work, which has been developed by him as a tool and a working method (Palmer 2005). It focuses on the organisation as a whole and advocates viewing an organisation from both formal and informal perspectives (Sharma 2012). Factors of this six box model are purposes, structure, rewards, helpful mechanism, relationships and leadership.

Figure 2: Weisbord's Six Box Model



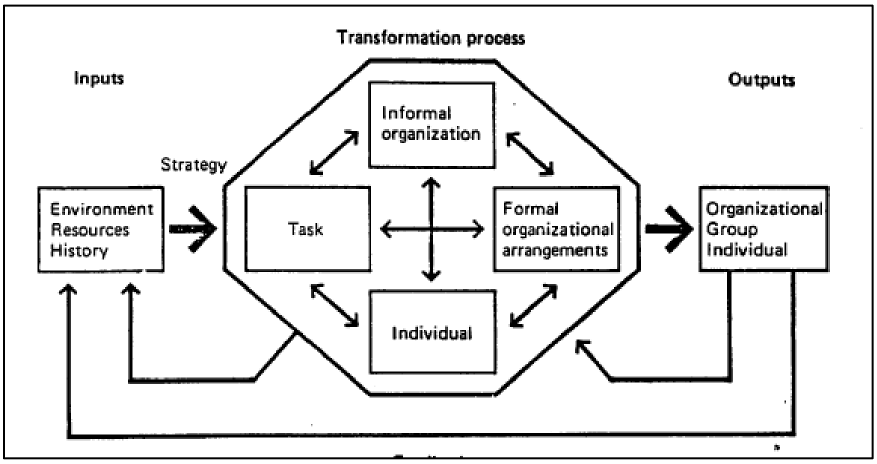
Sources: Weisbord M. 2014; Rothwell 2013

Each factor defined within the model plays an important role. Firstly, purpose focuses on examining goal fit, goal clarity and goal agreement of organisations. Organisations' purposes are results of psychological negotiation between what organisation members want to do in terms of values, beliefs, and competencies, and what they have to do in terms of environmental demands and survival needs. Secondly, Structure looks into how the goal of the organisational mission gets aligned with the internal structure of the organisation. The third factor, Relationship focuses on examining required interdependence quality among three different folds in the organisation: the relationship between individuals in the organisation; the relationship between different departmental sections, units and groups and relationship among each departmental section units and groups; and most importantly, the relationship between the employee and his job. Fourthly, rewards focuses on examining organisations' reward systems and their strengths and weaknesses, and employees' feelings about them. The fifth factor, helpful mechanisms focus in examining whether mechanisms in organisations are useful and adequate. These include policies, procedures, tools, formal and informal meetings, informal devices, creative adaptations, budget systems, and planning and control systems. Lastly, Leadership focuses on examining what systems top leaders use, in order to manage organisations and how they use them to keep all other boxes in the model in balance (Rothwell 2013). The model however is insufficient in explaining how organisation’s today can maintain longevity.

The Nadler-Tushman Congruence Model

The Nadler-Tushman Congruence Model was formulated in 1977 by David A. Nadler, Michael L. Tushman and Nina G. Hatvany. This model shows as to how organisational components and variables are related to each other. The components of the organisation consist of task, individuals, formal organisational elements and informal organisation. Task refers to all the inherent work which is supposed to be carried out by the organisation; Individuals refers to the employees of the organisation, and identifying the roles played by these employees in building the organisation; formal organisational elements refers to all the processes, procedures, methods and structures of the organisation that makes the employees to perform tasks in the organisation; and informal organisation refers to the unstated values and procedures that influenced the organisation, where individuals are conditioned to work with it, besides the formal elements. The organisation’s which can maintain these variables can experience longevity (Nadler et al., 1980).

Figure 3: The Nadler-Tushman Congruence Model Components for organisational Analysis

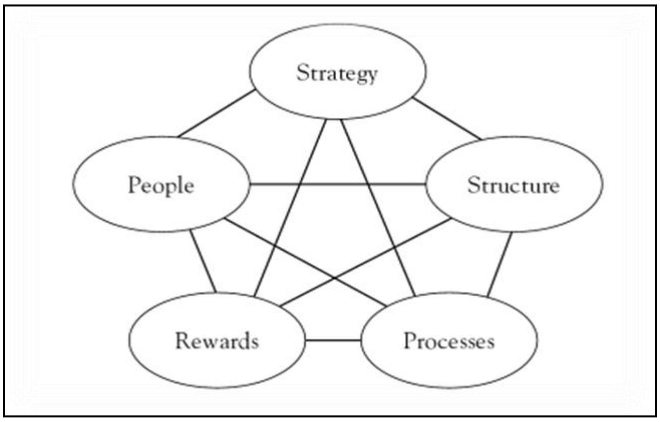


Source: Nadler et al. 1980

Jay Galbraith's Star Model

The Star Model was one of the first models made for organisational analysis in 1973 by Jay Galbraith (Galbraith 2008). It is one of the most widely used and accepted model by organisations while analyzing how the organisation functions The star model framework helps in designing choices for organisation, of which the designed policies are controllable by the management of the organisation, thus influencing the behavior of the employees. The management team of the organisation worked on the policy frameworks to become skilled in handling such frameworks, in order to make and shape the behavior and work ethics of the employees. The policies of the star model falls under five categories. These include: strategy, people, structure, rewards, and processes. The evolving nature of the star model allows a company to adapt to changes in the environment and remain viable and long lived (Benghozi et al. 2013).

Figure 4: Galbraith Star Model

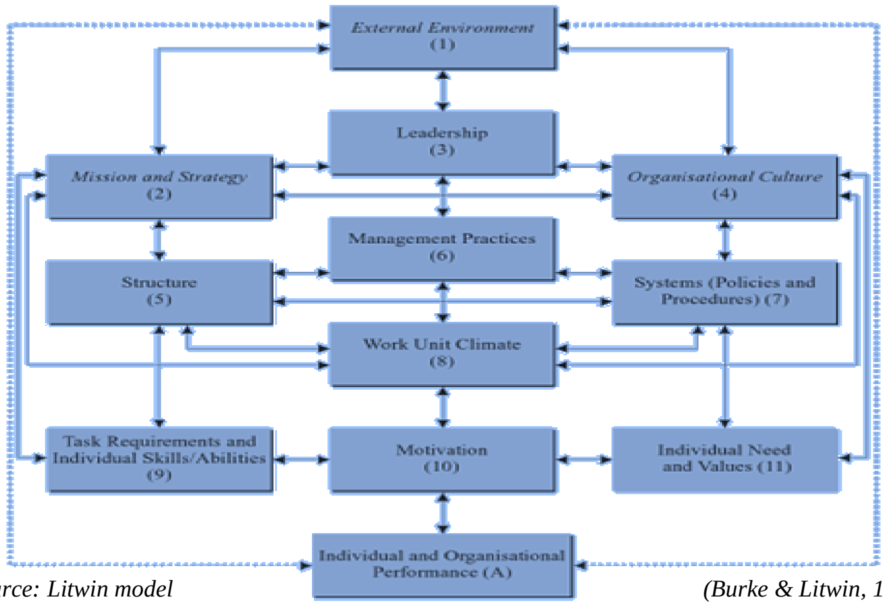


Source: The Star Model™

Burke-Litwin Model of Organisational Performance and Change (1992)

Burke and Litwin proposed a model, to deal with the multidimensional changes and complexities that modern organisation face (Burke & Litwin 1992). This model with its multi-approaches not only diagnoses the issues faced by organisastion, but also assess the performance of the organisation to give effective approach for organisational growth (Burke & Litwin 1992). The Burke-Litwin Model (Burke & Litwin 1992) adopted an open system approach to study the growth and development in organisation. This model is compounded with input, output and others (Sharma 2012). The input consists of the external dimension that influenced the organisations, the output consists of the internal organisational structure and people involved, and others consist of those components which are the primary throughout dimensions (Sharma 2012). The input and the output is linked with the feedback loop links, by making the outputs to affect the external environment, and in return forces the external environment to affect the output or the performance of the organisation (Sharma 2012). For instance, change in external environment such as governmental policies or market conditions can affect the internal working of the organisations, or many powerful companies' internal structural working can affect the external environment as well. Thus it remains necessary that an ideal climate or environment is maintained in each organisation, so that all other units or department do not not get affected, as it might prove fatal for organisational longevity (Martins & Coetzee 2009)

Figure 5: Burke-Litwin Model of Organisational Performance and Change



Source: Litwin model *(Burke & Litwin, 1992)*

Four Theoretical Frameworks of Bolman and Deal (on Leadership)

Four Theoretical Frameworks or approaches to organisational theory highlighting on leadership skills was developed by Bolman and Deal. These frameworks which are meant to support organisational survival and growth include; structural theory, human resource approach, political approach, and symbolic approach (Shuler 2009; Bolman & Deal 2008).Structural Approach gives emphasis on leaderships' roles and responsibilities in organisation (Shuler 2009).The Human Resource framework of leadership engaged itself in providing what human resource really looks like in its comprehensive setting. Political approach refers to power of the leaders, who needs to know the limitation of the power, while allocating resources among individuals, interest groups, etc. Symbolic framework approach stresses on leaders reducing ambiguity in social situations, and showing clear path to the organisations and people involved. All frameworks are reinforcing the need for clarity to ensure organisational survival.

MODEL PROPOSED BY THE RESEARCHER

Organisations are like living organisms, and if organisations identify the traits that allow their survival, then longevity can be ensured. Identification of such traits requires strategic approach which plays the substantial link between strategic characteristics and longevity. A model has been developed for organisational longevity integrating five factors including resources, organisational culture, organisational systems, innovative capability and strategy. Factors of this model are explained below.

Resources

Resources comprise of human resources as well as material resources such as finances. Human resources are an important part of the allocation process because they offer the required intellectual, planning, co-ordination and problem-solving skills in managing projects strategically. Employees also form an integral part of the human resources in an organisation. Involving employees in the organisation as valuable stakeholders is one of the best ways of managing human resources. Empowering them gives them autonomy and intrinsically motivates them to contribute to the growth and sustainability of the organisation. In hiring of employees, management should make decisions based on the need to enhance sustainability in the company. Therefore, there is need to consider employees committed to ensuring the longevity of an organisation (Lengnick-Hall et al. 2010).

Resources are critical for any business. Strategies are successful only if they are based on the present availability of resources both in terms of employees and other factors of production. Businesses cease to exist without resources and hence resources are highly crucial and imperative for sustenance of business. Resources form the foundation of the business and managing multiple resources is an essential aspect and by anyway a management fad. In fact, all management fads are intended to utilize the materialistic resources as well as the manpower in the most efficient manner to accomplish the predetermined results. Many researchers have studied the need of resource management from multiple angles.

Organisational Culture

Organisational culture refers to values, assumptions and expectations that define an organisation, as it is visible from many angles. Three cultural levels are proposed including the first level, second and the third level (Schein 2004). The first level comprises of visible elements such as facilities and dress code while the second level involves strategies, objectives, and philosophies and values a company has. The third level comprises feelings, attitudes and assumptions among organisational staff.

Organisational culture plays two critical roles which can be categorized into functions and influences exerted on the various business processes of the establishment. Functions of the organisational culture are in-house assimilation and harmonization. In-house assimilation means socializing of the new entrants of the organisation, defining the precincts for the company and nurturing sense of belongingness, individuality and organisational commitment towards the employer. The harmonization function is regarded as developing a competitive superiority, developing a protocol of generally acceptable behaviour and social system constancy which gels the organisation together. Organisational culture with time evolves a mutual system of interpretations which is used as the basis for organisational communication and shared empathy and reciprocation norms. If the culture is not able to deliver expectancies in regards to the above mentioned functions, the culture may hamper the overall efficiency and productivity of the organisation. Organisations need to change and adapt with time, organisational culture supports the cogent managerial tools through an implicit way of influencing the employee behaviour. Culture exemplifies the indicative character of the firm through symbolism, feelings, communication protocols, employee attitude and behaviour, physical setup and value system etc.

Organisational Systems

Organisational systems essentially refer to all the units of an organisation that define it, including production or manufacturing systems, quality management systems and communications among others. The establishment of a comprehensive assembly of systems is because it is easier to relay information and monitor smooth undertaking of events. For instance, process systems will determine whether the output defines company excellence which in the long run determines the viability and lifespan of an organisation. The process system involves definition and ensuring the set terms of inputs, outputs, feedback mechanisms and measurement systems are in check within an organisation (Potocki & Brocato 1995). Quality systems on the other hand ensure that continuous improvement is constantly undertaken and that companies strive to sell and provide quality products and services.

Innovative Capability

A company's innovative capability is responsible for new creations and better ways to survive the economic climate that is constantly changing. The dynamism witnessed among long lived companies is a clear indication that in order to achieve longevity, flexibility, creativeness and innovativeness are paramount to achieving survival in harsh economic market (Mishra et al. n.d.). Innovation could take form of new products or services as well as new methods and techniques of producing products. It is very important for organisations to engage in open minded possibilities, be flexible and willing to diversify or perfect their niche in order to survive the tides of different economic climates.

Strategy

Business strategy is an integral part of maintaining an organisation at a certain advantage above other. This can be through creation of core competencies, marketing strategies and growth strategies. Because strategies are set in alignment with organisational objectives, sustained good performance and excellence, is usually the intended outcome. Strategies are the action plans through which an organisation can stand out in the competition only if it is able to develop a unique proposition and is also able to endure it for a long time. This unique proposition can only be developed through well-structured strategic decisions which deliver superior and unmatched value for the consumers or come up with low cost deliverables or both. Identify and develop competitive advantage and organisational longevity. Moreover, while entering a new market in a foreign market; multinational enterprises must device an internationalization strategy in alignment with the environment within the new country. There are different kinds of strategy that companies use to achieve many other objectives. Ultimately, it is essential that companies keep on strategizing, assessing progress and re-strategizing in order to maintain a competitive advantage and sustain a core competence. This sets a company apart from the rest leading to organisational excellence which is an essential pre-requisite to business longevity (Reed et al. 2009).

DOW JONES AS A MEASURE TO ORGANISATIONAL LONGEVITY

Charles H. Dow developed the Dow Jones Industrial Average (DJIA) method in 1869 (Jones 2000). Dow was one of the founders and editors of The Wall Street Journal. During its budding stage, the Dow Jones Industrial Average comprised of 12 companies, whose trades were recognized in New York Stock Exchange (Jones 2000), but now it comprises of 30 companies. The companies in Dow Jones Industrial Average™ are considered after studying the company and taking a comprehensive view of its economic condition, external environment and cultural criteria that make the organisation to survive in the competitive world (Jones 2013). It takes the company's performance in the market, branding and longevity in the long run, into consideration. The organisations or companies that reach these benchmarks are considered inside the Dow Jones Industrial Average™ (Jones 2013). This benchmark allows organisations to pursue policies and methodology that will allow investors to trust them, in terms of organisational longevity, resources, profit, loss, etc. (Jones 2013).

Dow Jones is the most quoted market index on Wall Street. The reason for Dow Jones Indices to be so popular is because of Wall Street being mentioned in the newspaper every day (S & P Dow Jones Indices, 2015). Thus, from the time Dow Jones was established, it became the most cited and quoted index in the stock market.

The companies in the Dow Jones Industrial Average are known as blue-chip companies, not only because of the ability to generate money or holding the world stock, but they gained their name owing to stability and longevity (Editors of Don't Sweat Press 2004). Only companies which show excellent reputation based on brand or longevity, demonstrates continuous and steady growth, and with many investors are included in the Dow Jones lists (Dumortier 2014). At present, the Dow Jones is maintained by a committee that consists of three representatives of S&P Dow Jones Indices, and two representatives of *The Wall Street Journal* (Dumortier 2014). This committee is responsible for deciding which company to add or take out from within the companies listed in the Dow Jones Industrial Average list.

Linking Organisational Longevity with Dow Jones index

Companies in the Dow Jones Industrial Average™ showed consistent success in the market index, crossing more than 10000 market index points from 1990s onward (Dow Jones Indexes 2000). Though the number bears no special significance, it helps in highlighting the performance of the companies, and the index was perceived as a marker of economic improvement, and the excitement that the economy had been steadily increasing was felt through the world. The Dow Index shows a decline in the United States economy in by 2001 and 2002, after the terrorist attack of the World Trade Centre in 2001, but rise again hitting 10,000 Market Index by 2003 (Dow Jones Indexes 2000). By 2006, the Dow Jones Industrial Average™ unleashed quite a momentum in world economy, and repeatedly beat record after record in the market index with an unprecedented record of 12011.73 (Dow Jones Indexes 2000). The Dow Jones Industrial Average™ however started to melt down again from 2008 onward, due to the global economic downturn. Markets started to tumble by 2008, and the Dow Jones Industrial Average™ went from 11893.69 in its market index in March to 10365.45 in September, and to 9069.12 in October (Dow Jones Indexes 2000).

Since the economic recession did not end even by the start of 2009, and with no government bailout efforts in sight, the Dow companies started to take their own serious initiatives themselves, and from as low as 7000 in March, 2009 (lowest since 1997), the Dow Jones Industrial Average™ showed an increase of 10015.86 in October, 2009 (Dow Jones Indexes 2000). The end of the year saw the Dow Jones Industrial Average™ closing their market index deal by 10428.05 (Dow Jones Indexes 2000). The Dow Jones Industrial Average™ again started to steadily rise by 2010. The year 2014 shows disappointment in The Dow Jones Industrial Average™ stock performance. On 12th Friday, December, 2014, stocks plunged deeply as oil crisis deepened in the market, making Wall Street to undergo one of its worst week (Hjelmgaard 2014). The Dow Jones Industrial Average™ shows a serious fall of 315.51 points (1.8% to 17,280.83) on Friday alone, coming to a close fall of 678 points in a week, its worst performance since September, 2011 (Hjelmgaard 2014). As of 16th December, 2014, stock market continues to fall owing to the oil issues, making the Dow Jones Industrial Average™ to fall by 99.99 points (Onyanga-Omara 2014).

RESEARCH METHODOLOGY

Data Collection Procedure

A QCA analysis was conducted in order to analyse commonalities and variances between the longevity group and the fallen out group. QCA data was obtained from a content analysis which was conducted by obtaining annual reports of 10 case companies from the period 1986 to 2013 (28 years). The companies were divided into two groups; Longevity Companies and Fallen Out Companies. The Longevity group consists of companies like P&G which were in the Dow Jones on Jan 1, 1986 and are still present in the Dow Jones as of 31 Dec 2013. The Fallen Out Group consists of companies like Alcoa which were present in the Index on Jan 1, 1986 but eventually fell out of the index subsequently. From each report, only Chairman's report, Letter to Stockholders and Operating reports have been extracted. Qualitative analysis using Nvivo was conducted to extract 5 factors and 18 descriptors from the annual reports. These factors and descriptors were all identified through a literature review. These reports are then analysed for word frequencies in Nvivo. Word frequencies for all the 18 descriptors of the five factors were obtained. The descriptors for each factor became child nodes within each node. Nvivo then summarized the total amount of times the word is used in the report. Further, it checked usage of word in the relevant and desired context. The final frequencies are then duly noted and used in the QCA analysis. The quantitative method i.e. QCA has not been used in previously conducted researched which have been focused on organisational longevity. QCA is a pioneering work of research, which enables quantification of results and addresses qualitative data configuring logic between similarities and limited diversity conditions.

DATA ANALYSIS

QCA analysis uses truth tables to represent and analyse causal complexities and assess the differences in the existing data. This method was chosen for the current study since the study aims at identification of the factors of organisational longevity, and at the same time, finding out which factors need to be prioritized or paired by an enterprise as part of their strategic extent to sustain their existence and performance. Here, all factors which were greater than the mean of the ten companies data was considered to be of high importance and vice versa.

Table 1 below shows the summary of the QCA truth table identifying the factors required to make an organisation long lived. Table 1 shows the causal combinations representing the word frequency data extracted from the annual reports. Since QCA is an analytic technique that uses Boolean algebra to implement principles of comparison using only original qualitative data, the results as shown in Table 2 are computer generated algorithms developed by the QCA software as based on multiple comparisons of key factors emerging from qualitative data (i.e. chairman's report and operating results). The outcome variable in both tables is either one or zero. One denotes the presence of longevity and zero denotes the absence of longevity. The factors which are marked as high have a numerical value greater than the mean of the combined word frequencies for all then ten companies and vice versa.

Table 1: Crisp analysis QCA: Using mean

Crisp Analysis QCA - Using Mean						
Company	**Culture**	**Systems**	**Resources**	**Strategy**	**Innovation**	**Longevity**
P&G	Low	Low	Low	High	High	1
IBM	High	High	High	High	High	1
GE	High	High	High	High	High	1
Du Pont	High	High	High	High	High	1
Amex	High	Low	Low	Low	Low	1
Goodyear	Low	Low	Low	Low	Low	0
AT&T	Low	Low	Low	Low	Low	0
Altria	Low	Low	Low	Low	Low	0
Alcoa	High	High	Low	High	Low	0
Kodak	Low	High	Low	Low	Low	0

Analysis of this truth table produces the following Boolean algorithms/conditions:
(Culture*Systems*Resources*Strategy) + (Culture*Systems*Resources*Innovation) + (Culture*Resources*Strategy*Innovation) + (Culture*~systems*~resources*~strategy*~innovation) + (~culture*~systems*~resources*Strategy*Innovation) → Longevity (1)

Here, '*' indicates multiplication, '+' indicates addition of alternate combinations of logical conditions, '~' indicates absence of the factor and '→' indicates the outcome.

Table 2 Crisp analysis QCA: Truth table using mean

Crisp Analysis QCA - Truth Table Using Mean						
Company	**Culture**	**Systems**	**Resources**	**Strategy**	**Innovation**	**Longevity**
P&G	0	0	0	1	1	1
IBM	1	1	1	1	1	1
GE	1	1	1	1	1	1
Du Pont	1	1	1	1	1	1
Amex	1	0	0	0	0	1
Goodyear	0	0	0	0	0	0
AT&T	0	0	0	0	0	0
Altria	0	0	0	0	0	0
Alcoa	1	1	0	1	0	0
Kodak	0	1	0	0	0	0

Out of 32 logically possible combinations of causal conditions in the truth table (Table 1 & 2), only 6 combinations were extrapolated from the data which would explain the presence or absence of longevity. Three combinations were based on the finding that at least four factors out of five should have the outcome of 1 (be higher than mean) and that two of these four factors must be resources and culture.

The QCA software calculated only one simplified assumption of the above generated algorithms:

Resources + Innovation + (Culture*~Strategy) + (~Culture*Strategy) → Longevity (2)

This solution establishes the endpoint of the complexity. The equation (2) marks the required prime implicants that explain the presence of longevity. It has been arrived at through the process of Boolean Minimization (Scholesser, Rihoux, Ragin and De Meur, 2009).

The QCA software also gave a simplified assumption which explains the absence of longevity which is:

~resources*~innovation → ~longevity (3)

This equation marks the required prime implicants that explain the absence of longevity.

The QCA analysis shows that the main drivers of longevity are "*resources*" and "*innovation*" according to equation (3). This means that companies tend to sustain for long periods if its organisational resources are effectively managed and at the same time, an environment of innovative capabilities is created within the organisation. Further, the underlying conditions which support these main drivers are a combination of "*strategy*" and "*culture*". This means that one of the two factors, strategy and culture, may be present as a support for the main drivers. When there is prevalence of cultural environment, emphasis on strategy is not necessary and vice versa. Lastly, the absence of longevity in an organisation is explained when either the resources are not effectively managed, or "*Innovative capabilities*" are not duly enhanced as per the need.

It may be noted that the QCA results complement the content analysis findings to a degree which stated that both longevity companies and fallen out companies equally prioritised the factor of strategy, systems and innovation. However, longevity companies prioritised the factors of "*organisational culture*" and "*organisational resources*" to a much greater degree than fallen out companies.

CONCLUSION

Based on the factors which were identified within the literature review, the researcher conducted Nvivo analysis among the 5 longevity group companies and 5 fallen out group companies based on their presence/ absence from the Dow Jones Index. The results of the longevity group reveal that the companies in this group gave immense importance to efficient strategic management and resource management which has contributed towards the stability of the organisations while the others have succumbed to the economic pressure posed during the global financial crises which created a harsh business environment for them. Another important factor i.e. the innovative capability within the organisations can also be attributed to the overall success of the organisation. Although, organisations within both the groups have presented their acumen towards innovation, it was only observed as a continuous process within the longevity organisations. Further the organisational system within each organisation towards the maintenance of quality and productivity of products and services can be attributed as an important factor contributing towards overall longevity.

ISBN 978-0-9925622-1-2

Thus, it may be said that companies in order to maintain a stable position within the organisation need to keep on strategizing, assess the overall progress of their strategic decisions made in the past, and also re-strategize based on the conclusions drawn through analysis in order to stay competitive in the market.

ENDNOTES

Acknowledgement

*****I would like to thank my supervisors Dr Howard Harris and Dr Saras Sastrowardoyo for inspiring me, guiding me and providing me with the motivation to write and get my work published. I would also like to thank Dr. Carmen Joham-Reaiche for helping me understand the QCA research method and how to use the fsQCA software.

REFERENCES

Bolman, L.G. & Deal, T.E., 2008. *Reframing Organisations: Artistry, Choice and Leadership* 4th ed., John Wiley & Sons.

Benghozi, P.-J., Krob, D. & Rowe, F., "Digital Enterprise Design and Management 2013", *Proceedings of the First International Conference on Digital Enterprise Design and Management* DED&M 2013, Springer Science & Business Media.

Burke, W. & Litwin, G.H., "A Causal Model of Organisational Performance and Change", *Journal of Management*, 1992, Vol. 18(3).

Dow Jones Indexes, 2000. The Dow Jones Industrial Average.

Dumortier, A., Dow: Investing Essentials, 2014

Dyllick, T. & Hockerts, K., "Beyond the business case for corporate sustainability", *Business Strategy and the Environment*, 2002, Vol. 11(2), pp.130–141.

Editors of Don't Sweat Press, "*The Don't Sweat Guide to Your Finances: Planning, Saving, and Spending Stress-Free"*, Hachette Books, 2004

Frye, T., "*Brokers and Bureaucrats: Building Market Institutions in Russia"* , University of Michigan Press, 2000

Galbraith, J.R., "*Designing Matrix Organisations that Actually Work: How IBM, Proctor & Gamble and Others Design for Success"* , John Wiley & Sons, 2008

Hargreaves, A., "Sustainable Leadership and Development in Education: creating the future, conserving the past", *European Journal of Education*, 2007, Vol. 42(2), pp.223–233.

Hjelmgaard, K., "Dow caps off brutal week with 315-point drop", *USA Today*, 2014

Jay Barney, "Firm Resources and Sustained Competitive Advantage", 1991

Jones, D., 2013. *Dow Jones Global Indices Methodology*, Available at: https://www.djindexes.com/mdsidx/downloads/meth_info/Dow_Jones_Canada_Select_Growth_and_Value_Indexes_Methodology.pdf [Accessed February 2, 2015].

Lengnick-Hall, Cynthia A., Pepe Lee Chang, and Amanda J. Lengnick-Hall, "Indigenous knowledge as a strategic resource: An ethical and societal challenge." , 2010.

Martins, N. & Coetzee, M., "Applying the Burke-Litwin model as a diagnostic framework for assessing organisational effectiveness", *SA Journal of Human Resource Management*, 2009, Vol. 7(1), pp.144–156.

Mayfield, M., Mayfield, J. & Stephens, D., "The relationship of generic strategy typing and organisational longevity", *Competitiveness Review: An International Business Journal*, 2000, Vol.17(1/2), pp.94–108.

Mishra, Kirti, Cristina Neesham, and Ken Coghill. "Responses to Climate Change: An Integrative Model of Organisational Processes using a Complex Evolving Systems (CESs) perspective.", 2013.

Montuori, L.A., "Organisational longevity - Integrating systems thinking, learning and conceptual complexity", *Journal of Organisational Change Management*, 2000, Vol. 13(1), pp.61–73.

Munro, A., "Practical Succession Management: How to Future-proof Your Organisation",2005, Burlington: Gower Publishing, Ltd.

Nadler, D.A., Tushman, M.L. & Hatvany, N.G., "A Model for Diagnosing Organisational Behaviour: Applying a Congruence Perspective", *Organisational Dynamics*, 1980, Vol. 9(2), pp.35–51.

Onyanga-Omara, J., Stock sell-off continues as oil sinks below $56, *USA Today*.2014

Palazzo, G.& K.Basu., "Corporate Social Responsibility : A Process Model Of Sensemaking", *Academy of Management Review*,2008, Vol. 33(1), pp.122–136.

ISBN 978-0-9925622-1-2

Paine, L.S., "Is Ethics Good Business ?", *Challenge*, 2003, March-April(2), pp.6–21.
Palmer, "*Managing Org. Change"*, McGraw-Hill Education (India) Pvt Limited, 2005.
Potocki, Kenneth A., and Richard C. Brocato, "A system of management for organizational improvement." *Johns hopkins apl technical digest*, 1995, Vol 16.4: 403.
Robbins et all, "Managing Organisations and People MGMT1001", Sydney: Pearson Australia, 2012
Reed, Mark S., et al., "Who's in and why? A typology of stakeholder analysis methods for natural resource management." *Journal of environmental management*, 2009, Vol. 90.5: 1933-1949.
Berg-Scholesser, D. Rihoux, B. Ragin, C. and G. de Meur, "*Qualitative Comparative Analysis (QCA) as an approach*", Sage, 2009.
Rothwell, W.J., "*Performance Consulting: Applying Performance Improvement in Human Resource Development"*, Wiley, 2013.
Russell Arthur Smith, J.S. ed., " *Strategic Hospitality Leadership: The Asian Initiative"*, John Wiley & Sons, 2011.
Sanchez, Ron, ed., "*Research in competence-based management"*, Emerald Group Publishing, 2008, Vol. 4.
Sharma, "*Change Management & Organisational Transformation"*, Tata McGraw-Hill Education, 2012.
Shuler, J., "*Organisational Theory: Just the Facts"*, Lulu.com, 2009.
Volgy, T.J. et al., "*Mapping the New World Order"*, John Wiley & Sons, 2009.
Waterman, R.H., Peters, T.J. & Phillips, J.R., "*Structure is Not Organisation"*, M. Wiener, 1980.