

# CONSTRUCTING AN INNOVATION ADOPTION CONCEPTUAL LENS/PRELIMINARY FRAME WORK FOR FURTHER TESTING IN UPSTREAM OIL AND GAS

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## ABSTRACT

*Conceptual Lens helps to focus our study along certain directions for answering the research questions. A Conceptual Lens made from the existing literature helps the researcher to frame relevant questions to be asked to the respondents. In this paper, the researcher describes a method for constructing conceptual lens and employs the same method for constructing an innovation adoption conceptual lens for further testing in upstream oil and gas. The Conceptual lens can be treated as the starting point for qualitative data analysis.*

**Keywords:** Conceptual Lens, Preliminary Frame Work, Qualitative Analysis, Coding, Variables, Upstream Oil and Gas.

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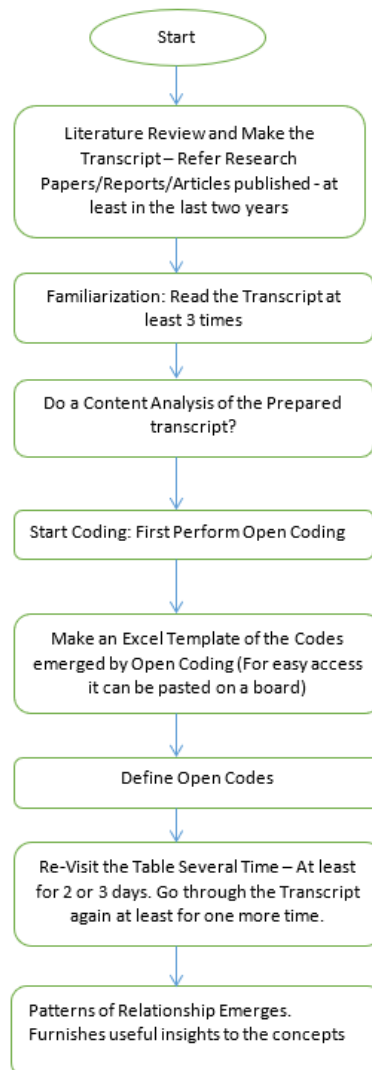
## 1. INTRODUCTION

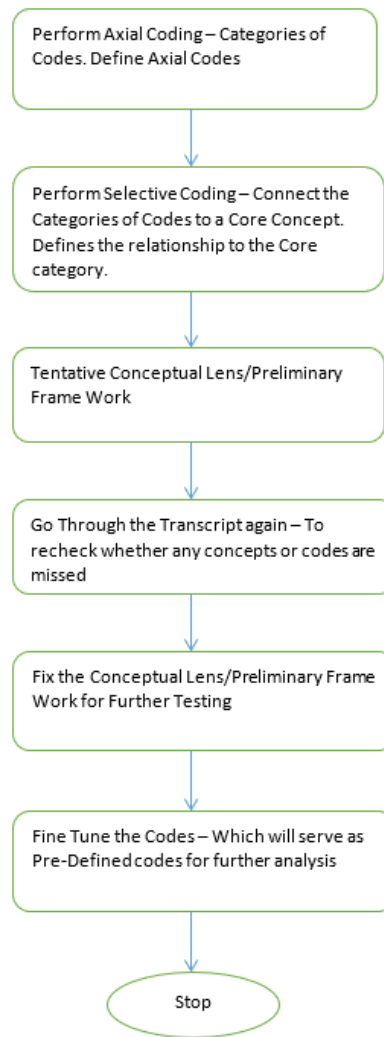
Conceptual Lens helps to focus our study along certain directions for answering the research questions. A Conceptual Lens made from the existing literature helps the researcher to frame relevant questions to be asked to the respondents. A conceptual frame work helps the researcher to develop insights to the topic under study. Developing a conceptual frame work helps to strengthen the theoretical back ground of the researcher. A conceptual frame work saves time and effort of the researcher as it provides specific focus for study. A Conceptual lens is the starting point for qualitative data analysis. A conceptual frame work helps to reach a specific conclusion from a general premise – helps in deductive reasoning. Developing a conceptual lens helps to unravel the prospective variables influencing the process under study and tentative

relationships between these variables – these variables and relationships will be further tested in the area of research (Anderson and Krathwohl, 2001).

## 2. CONSTRUCTION METHOD

The Researcher has followed the below furnished method for the construction of Conceptual Lens/Preliminary Frame work. The first step is to do the Literature Review of relevant concepts/theories/models related to the topic under study. Subsequently the Transcript of these theories and models are to be made. The researcher has to read the transcript several times to get himself thoroughly familiarized with the theories or concepts. The next step is to perform a content analysis of the prepared transcript. The process of coding starts with open coding. A table of emerging open codes are made. These open codes are also to be properly defined. The researcher needs to revisit the table many times. If needed, the researcher needs to go through the transcript again. Now the patterns of relationship among these codes will start emerging in the mind of researcher. The researcher has to go for axial coding where the open codes are grouped to various categories of codes. Axial codes are also properly defined. Selective coding helps to connect these categories to a core category or concept. Selective coding results in the creating of tentative conceptual lens or preliminary frame work. The transcript is again read for any missing concept/code or variable or relationship. The researcher finalizes the conceptual lens or preliminary frame work for further testing. Codes are also fine-tuned - which serves as pre-defined codes for further analysis.





**Figure 1** Conceptual Lens Construction Method

### 3. CONCEPTUAL LENS CONSTRUCTION

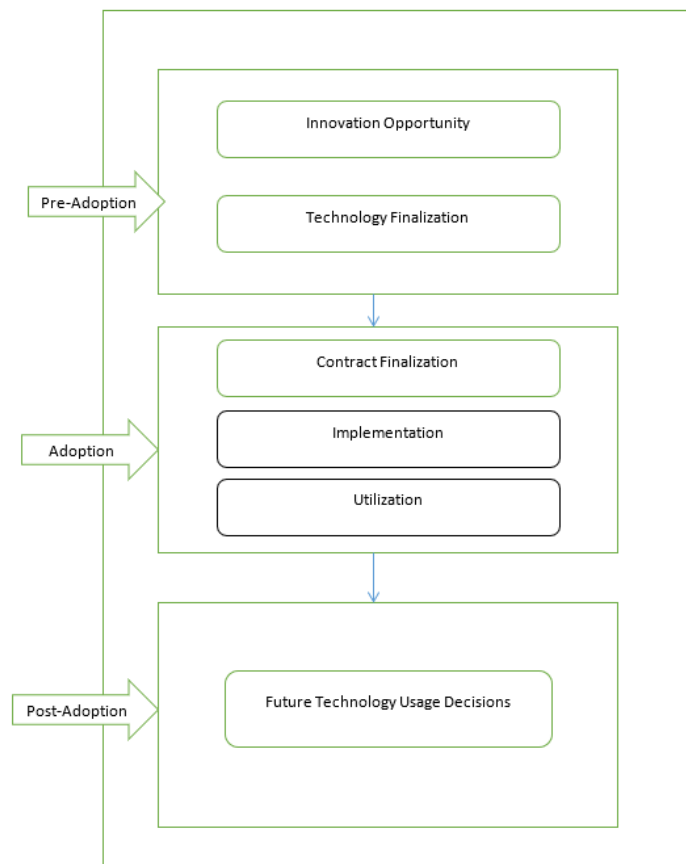
Construction of a Conceptual Lens starts with looking at process of adoption from an Organizational perspective. Organization should be always on the lookout for improvement opportunities. Organizations should encourage people to come up with betterment initiatives by appropriately rewarding them. This can be in the form of cash rewards/promotions/holidays or increments. The betterment opportunities can be either the introduction of a new process/routines or modification of the existing processes or it can be modification of an existing product or replacing the product with an innovation. Once the betterment opportunities are identified, the search for the solutions start. Anything new to the organization can be called as an innovation. So the organization decides to adopt a new product or service or technology to modify existing product or service or technology to exploit the innovation opportunity. This can be called as the First phase of adoption – Pre Adoption. The opportunities for improvement come from external parties as well. An innovator/channel can also suggest betterment opportunities. The pre-adoption phase ends with a decision to adopt an innovative product or technology.

The evaluation of alternatives is done at the pre-adoption stage. In most of the scenarios, the organizations zero down on a particular type of technology in the pre-adoption stage and the adoption stage starts with the selection of the vendor to provide the particular technology.

However, in this case, the researcher sticks on to the concept of Pre-adoption stage ending with the decision to go ahead with a particular innovation which can meet the requirement of the organization. In case of sophisticated technologies, the companies will not finalize unless and until they see a functioning prototype or only after gauging the result of prototype usage.

The Adoption stage starts with the Negotiation and Contract finalization. The scope of work is defined and finalized. Diverse departments/individuals are involved in this process and innovation should be customized to comply with the norms/procedures/systems of the organization. During the implementation stage, the organization has to enlist the support of all the relevant parties involved. Competent employees with the right attitude is the biggest asset an organization can have. For an organization to reap the benefits of an innovation, it is not only enough that the innovation is smoothly implemented, but the employees should use the innovation for what the innovation is meant to be. Employees have to use the innovation to solve their problems. Here comes the relevance of combining the both perspectives of innovation – Organizational and Individual. So the adoption process ends with the Employees utilizing the innovation with right skill set and attitude to achieve the objectives of the organization.

The utilization of innovation should yield favorable results to the organization. Favorable results lead to satisfaction and continued usage of innovation. If the innovation cannot yield favorable or desired results, organization abandons innovation and initiates the adoption process by scanning the market for appropriate innovation. Innovation adoption process is a continuous cycle. It has to be. Otherwise organizations cannot survive and prosper. At times, what happens is that, a superior innovation or governments regulations necessitates the replacement of innovations.



**Figure 2** Various Stages Involved in the Adoption Process

The Pre-adoption stage ends with Innovative Technology/Service Finalization. Adoption stage starts with Contract Finalization and end with Utilization of Innovation. Post adoption starts with the Future Usage of Technology/Service

Cooper and Zmud (1990) posit that the process stream of research should be combined with factor stream of research to get a holistic perspective of adoption. So to construct the conceptual lens, the researcher needs to fit the relevant variables to various stages of adoption. In general, most of the studies concentrate only on the Implementation stage of adoption. Some studies focus on Post adoption as well, but Pre-Adoption stages are often discarded. In this study, the researcher will be identifying the variables affecting the Pre-Adoption stage also along with Adoption and Post Adoption. Aforementioned method is followed for the construction of conceptual lens.

The Researcher has already done the literature review and published three papers (1) A Journey through the evolution of theories and models of adoption of innovations (Years: 1798 – 1980) (2) A Journey through the evolution of theories and models of adoption of innovations (Years: 1981 – 1999) (3) A Journey through the evolution of theories and models of adoption of innovations (Years: 2000 – 2018). So the researcher considers these three papers as the transcripts of theories and models of adoption and proceeds with the Content Analysis. The conceptual lens or the preliminary frame work and the codes are tentatively drafted or defined. In the due course of qualitative data analysis, the frame work or codes may get modified and in some extreme cases may change completely. Academically “Correct” concepts can be or will be considered as “Wrong” due to its practical implications/difficulties. Similarly, some of the variables used in Academic and Industry contexts may be different. So the variables have to be given an “Industry/Sector” specific explanation.

### 3.1. OPEN CODING

The coding process starts with open coding. The emerging open codes are tabulated. Identical or Similar codes are removed from or merged in the table (Strauss and Corbin, 1990).

S No	Variables/Factors	Author(s)
1	Geographical Proximity	Ratzel (1882), Frobenius (1898), Schmidt (1906), Graebner (1909)
2	Local Adaptations	Ratzel (1882), Frobenius (1898), Schmidt (1906), Graebner (1909)
3	Imitation	Wissler (1923), Kroebner (1940), Tarde (1886), Dixon (1928), Bass (1969), Bandura (1961), Bass (1969), Lindzey and Aronsson (1985), Turner and Killan (1987), Haunschild and Miner (1997), Teng, Grover and Gutter (2002), Aguiar and Reis (2008)
4	Number of Adopters	Malthus (1798), Granovetter, 1978)
5	Resources	Pearl (1920), Nowak (1992), Statnikova (2005)
6	Competition	Pearl (1920), Maidique and Zirger (1985), Kaun and Chau (2001), Slappendel (1996), Dasgupta, Agarwal and Gopalakrishnan (1999), Frambach and Schillewaert (2002), Modis (2003)
7	Organizational Readiness	Tylor (1922), Lacovou (1995)
8	Demonstration	Dixon (1928), Karahanna, Chervany and Straub (1999), Venkatesh and Davis (2000), Pignatti, Carli and Canavari (2015)
9	Fashion	Dixon (1928), Abramson (1991)
10	Organizational Culture	Dixon (1928), Linton (1936), Kluckhohn and Strodbeck (1961), Hauser and Wisniewski (1982), Dasgupta, Agarwal and Gopalakrishnan (1999)
11	Conformity	Dixon (1928)

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S No	Variables/Factors	Author(s)
12	Inertia	Dixon (1928), Linton (1936), Kluckhohn and Strodtbeck (1961), Hauser and Wisniewski (1982), Statnikova (2005),
13	Organizational Customs	Dixon (1928)
14	Personality	Dixon (1928)
15	Feedback	Dixon (1928), Homer (1987), Burkman (1987)
16	Information	Pyzalska (2018), Guseo and Mortarino (2015), Nkegbe and Shankar (2014), Pierpaolia, Carli and Pinattia (2013), Arnholt and Balte (2003), Gaudet (1930), Linton (1936), Wilkening (1953), Yapa and Mayfield (1978), Dodson and Muller (1978), Wilson (1981), Deng (1982), Daft and Lengel (1986), Roling (1988), Bhargava, Kumar and Mukherjee (1993), Strang and Soule (1998), Gladwell (2000)
17	Economic Benefits	Aizstruata, Ginters and Eroles (2015), Pierpaolia, Carli and Pinattia (2013), Hudson and Hite (2003), Linton (1936), Griliches (1957), Bandura (1961), Blackman (1971), Anderson (1971), Ogunlade (1979), Tani (1988), Ellis (1989), Lilen (1990), Tornatzky and Fleischer (1990), Besley and Case (1995), Nowak (1992), Karshenas and Stoneman (1993), Keller (1996), Gelb and Voet (2009)
18	Available Knowledge	Linton (1936),
19	Receptivity	Linton (1936),
20	Aftersales Service	Samuelson (1938), Tanner (1974), Lieberman and Paroush (1982), Bayus (1992), Hardie, Fader and Wisniewski (1998), Ruyters, Wetzels and Kleijnen (2001)
21	Price	Gillespie, Kim and Pandel (2007), Samuelson (1938), Wilkening (1953), Bass (1969), Grubler (1991), Kotler (1971), Tanner (1974), Jeuland and Dolan (1981), Lieberman and Paroush (1982), Thomas and Teng (1983), Feichtinger (1985), Kamakura and Balasubramaniam (1988), Biddle (1991), Schmidt and Porteus (2000), Venkatesh and Morris (2003), Paudel, Mishra and Segarra (2011), Pierpaolia, Carli and Pinattia (2013)
22	Purchasing Patterns	Samuelson (1938)
23	Company Size	Schumpeter (1942), Arrow (1962), Tani (1988), Henderson and Clark (1990), Slappendel (1996), Libertore and Bream (1997), Majumdar and Venkataraman (1998), Dasgupta, Agarwal and Gopalakrishnan (1999), Frambach and Schillewaert (2002)
24	Market Structure	Schumpeter (1942), Arrow (1962), Tani (1988), Henderson and Clark (1990), Slappendel (1996), Libertore and Bream (1997), Majumdar and Venkataraman (1998), Dasgupta, Agarwal and Gopalakrishnan (1999), Gruber and Verboven (2000)
25	Personal Network	Ryan and Gross (1940)
26	Mass Communication/Media	Ryan and Gross (1940), Coleman (1966), Mcquail and Blumer (1969), Rokeach and Defleur (1976),
27	Opinion Leaders	Lazarfeld (1944), Ngambi and Bozalek (2013)
28	Reference Group	Duessenberry (1949), Joshi and Sharma (2004)
29	Leadership	Wilkening (1953), Weber (1968), Norris and Soloway (2011), Ngambi and Bozalek (2013), Randall and Coakley (2007)
31	Seasonality	Wilkening (1953), Radas and Shugan (1998), Strang and Macy (2001)
33	User Experience	Wilkening (1953)
35	User Skills	Wilkening (1953), Coale (1973), Feder, Just and Zilberman (1982), Scherer (1986), Gustafson (1986), Francik (1991), Greenwood and

S No	Variables/Factors	Author(s)
		Yorokolgu (1997), Kennickell and Kwast (1997), Reichardt and Jurgens (2009)
37	Risk	Pavlou (2003), Wilkening (1953), Feder, Just and Zilberman (1982), Chatterjee and Eliashberg (1990), Arthur, Durlauf and Lane (1997), Eastlick and Lotz (1999), Ruyters, Wetzel and Kleijnen (2001), Diederren, Meijl and Wolters (2003)
39	Satisfaction with Old Practices	Wilkening (1953), Norris and Soloway (2011)
41	Objectives	Wilkening (1953)
43	Network Membership	Wilkening (1953), Neiman (1966), Drazen and Rao (1996), Frambach and Schillewaert (2002)
45	Alternatives	Greena and Mayo (1954), Botha and Atkins (2005)
47	Expectations	Festinger (1957), Robertson (1971), Vessey (1991), Taylor and Todd (1995), Goldenberg, Libai and Solomon (2000), Sun, Neslin and Srinivasan (2003)
49	R&D	Griliches (1957), Arnholt and Balte (2003)
51	Market Potential	Griliches (1957), Bass (1969), Norton and Bass (1987), Jain and Roa (1990), Horsky (1990)
52	Innovativeness	Watenabe (2006), Christia (2000), Porter and Donthu (2006)
53	Attitude	Turner and Killian (1957), Anderson (1971), Fishbein and Ajzen (1975), Yapa and Mayfield (1978), Thompson, Higgins and Howell (1991), Taylor and Todd (1995), Eastlick and Lotz (1999), Frambach and Schillewaert (2002), Statnikova (2005), Wang and Liu (2009), Tohidyan and Moghaddam (2015)
54	Norms	Turner and Killian (1957)
55	Investment	Mansfield (1961)
56	Ease of Use	Rogers (1962), Hauser and Wisniewski (1982), Davis, Bagozzi and Warshaw (1989), Tornatzky and Fleischer (1990), Goodhue and Thomson (1995), Karahanna, Chervany and Straub (1999), Malhotra and Galletta (1999), Venkatesh and Morris (2003), Pavlou (2003), Assael (1998), Carter and Weerakkody (2008), Collan (2007), Gelb and Voet (2009), Casalo, Flavian and Guinaliv (2012), Porter and Donthu (2006), Tohidyan and Moghaddam (2015), Pignatti, Carli and Canavari (2015), Boonsiritomachai and Pitchayadejanant (2017)
57	Ease to learn	Rogers (1962)
58	Word of mouth	Rogers (1962), Dodson and Muller (1978), Hauser and Wisniewski (1982), Mahajan, Muller and Kerin (1984), Thomas and Teng (1983), Kalish (1985), Harvey (2009)
59	Availability for Hands on	Rogers (1962), Kelly and Kranzberg (1978), Yapa and Mayfield (1978), Hauser and Wisniewski (1982), Karahanna, Chervany and Straub (1999)
60	Fit to Work Settings	Rogers (1962), Thompson, Higgins and Howell (1991)
61	Facilitating Conditions	Smelser (1963), Thompson, Higgins and Howell (1991), Taylor and Todd (1995), Venkatesh and Morris (2003), Statnikova (2005), Boonsiritomachai and Pitchayadejanant (2017), Mengesha and Garfiels (2018)
62	Quality	Vernon (1966), Lilen (1990), Delone and Mclean (1992), Venkatesh and Davis (2000)
63	Economies of Scale	Vernon (1966), Tani (1988), Shepard and Saloner (1995)
64	Last ditch effort	Ward (1967)

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S No	Variables/Factors	Author(s)
65	Timing	Hagerstrand (1967), Lehman and Weinberg (2000)
66	Channel	Hagerstrand (1967), Roling (1988), Ritz and Morgan (1991)
67	Product Features	Floyd (1968), Hughes (1983), Roberts and Urban (1988), Narasimhan, Sen and Neslin (1996), Marez (2006), Gelb and Voet (2009)
68	Performance	Grubler (1991), Tolbert and Zucker (1983), Francik (1991), Wang and Li (2010), Boonsiritomachai and Pitchayadejanant (2017)
69	Advertisement	Casetti (1969), Dodson and Muller (1978), Horsky and Simon (1983), Thomas and Teng (1983), Maidique and Zirger (1985), Kalish (1985), Simon and Sebastian (1987), Narasimhan, Sen and Neslin (1996)
70	Substitution	Fischer and Pry (1971), Srivastava and Leone (1981)
71	Market Share	Fischer and Pry (1971)
72	Legitimization	Robertson (1971), Tolbert and Zucker (1983), Wang and Li (2010)
73	Organizational Innovativeness	Kotler (1971), Feder, Horsky and Simon (1983), Frambach and Schillewaert (2002)
74	Individual Innovativeness	Kotler (1971), Frambach and Schillewaert (2002), Tohidyan and Moghaddam (2015)
75	Scientific Credibility	Kotler (1971)
76	Relative Advantage	Kotler (1971), Kelly and Kranzberg (1978), Arthur (1994), Taylor and Todd (1995), Ruyters, Wetzel and Kleijnen (2001)
77	Personal Influences	Kotler (1971), Scherer (1986)
78	Social Approval/Influence	Kotler (1971), Venkatesh and Morris (2003), Talukder, Harris and Mapunda (2012)
79	Willingness	Coale (1973), Hudson and Hite (2003)
80	Absorptive Capacity	Coale (1973), Levinthal (1990), Keller (1996)
81	Reversibility	Zaltman (1973), Kelly and Kranzberg (1978)
82	Realization (Duration for Result)	Zaltman (1973)
83	Customization	Zaltman (1973), Ram (1987)
84	Subjective Norms	Fishbein and Ajzen (1975), Tirandis (1977), Taylor and Todd (1995), Venkatesh and Davis (2000)
85	Motivation	Fishbein and Ajzen (1975), Tirandis (1977), Davis, Bagozzi and Warshaw (1992)
86	Beliefs of outcome	Fishbein and Ajzen (1975), Tirandis (1977), Oliver (1980), Parasuraman (2000)
87	Evaluation of outcome	Fishbein and Ajzen (1975), Tirandis (1977), Oliver (1980)
88	Normative beliefs	Fishbein and Ajzen (1975), Tirandis (1977)
89	Technological advances	Hernes (1976), Gruber and Verboven (2000)
90	Roles	Triandis (1977), Levinthal (1990), Francik (1991)
91	Frequency of Past Behavior	Triandis (1977)
92	Habit	Triandis (1977), Davis, Venkatesh and Morris (2003),
93	Compatibility	Kelly and Krantzberg (1978), Taylor and Todd (1995), Goodhue and Thomson (1995), Carter and Weerakkody (2008), Megesha and Garfield (2018)
94	Standards	Midgley and Dowling (1978), Ogunlade (1979), Kaniovski, Arthur and Ermoleiv (1987), Chau and Tam (1997), Harvey (2009)



S No	Variables/Factors	Author(s)
95	Statutory Compliance	Midgley and Dowling (1978), Lilien (1980), Slappendel (1996)
96	Social Media	Rangaswamy and Gupta (2000)
97	Re-Purchase	Dodson and Muller (1978)
98	Technology Steward	Ogunlade (1979), Gustafson (1986), Joshi and Sharma (2004), Wenger, White and Smith (2009), Perez, Popadiuk and Cesar (2017)
99	Marketing Strategies	Mahajan and Peterson (1980), Lieberman and Paroush (1982), Frambach and Schillewaert (2002)
100	Re-Invention	Rice (1980), Kaipa, 2012
101	History of Past purchases	Hauser and Wisniewski (1982), Scherer (1986), Venkatesh and Davis (2000)
102	Safety	Hauser and Wisniewski (1982)
103	Opinions	Hauser and Wisniewski (1982)
104	Convenience	Hauser and Wisniewski (1982)
105	Direct Email	Hauser and Wisniewski (1982)
106	Publicity	Hauser and Wisniewski (1982)
107	Budget allocation	Hauser and Wisniewski (1982)
108	Preference	Hauser and Wisniewski (1982), Scherer (1986)
109	Credit Availability	Feder, Just and Zilberman (1982), Besley and Case (1995)
110	Isomorphism	Dimaggio and Powell (1983)
111	Hype Cycles	Minsky (1986)
112	Exciting Benefits	Kano (1984)
113	Fear of Change	Sharif and Ramanathan (1984)
114	Market conditions	Hannan and Mcdowell (1984), Yates (1989)
115	Prevailing Wage Rates	Hannan and Mcdowell (1984), Tani (1988)
116	High Education Levels	Pignatti, Carli and Canavari (2015), Hudson and Hite (2003), Hannan and Mcdowell (1984), Kwon and Zmud (1987), Kennickell and Kwast (1997), Caselli and Coleman (2001), Gelb and Voet (2009), Paudel, Mishra and Segarra (2011), Pierpaolia, Carli and Pinattia (2013)
117	Management Support	Maidique and Zirger (1985), Teo (2008), Igarria, Parasuraman and Baroudi (1996), Statnikova (2005)
118	Cross functional teams	Maidique and Zirger (1985)
119	Network Externality	Farrel and Saloner (1985), Besley and Case (1995), Dekimpe, Parker and Sarvary (2000), Frambach and Schillewaert (2002)
120	ROI	Feichtinger (1985), Pignatti, Carli and Canavari (2015)
121	Perceived Behavioral Control	Ajzen (1985), Taylor and Todd (1995)
122	History of Past purchases	Boyd and Richerson (1985), Ellison and Drew (1991), Mahler and Roger (1999)
123	Innovator Support	Gustafson (1986)
124	Continuous monitoring of Output	Gustafson (1986)
125	Innovation policy	Ergas (1987), Yates (1989), Parmentola, Simoni and Tutore (2015)
126	Resistance to change	Kwon and Zmud (1987), Ram (1987), Levinthal (1990), Norris and Soloway (2011)
127	Job Tenure	Kwon and Zmud (1987)
128	Job Roles	Kwon and Zmud (1987)

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S No	Variables/Factors	Author(s)
129	Inter-organizational Dependence	Kwon and Zmud (1987)
130	Uncertainty	Kwon and Zmud (1987), Dixit and Pindyck (1994)
131	Organization Structure	Homer (1987), Levinthal (1990), Frambach and Schillewaert (2002)
132	Organizational Strategies	Homer (1987)
133	Perceived Innovation Characteristics	Ram (1987), Karahanna, Chervany and Straub (1999), Eastlick and Lotz (1999), Frambach and Schillewaert (2002)
134	Consumer Characteristics	Ram (1987)
135	Media Characteristics	Ram (1987)
136	Aftersales Service	Burkman (1987), Tornatzky and Fleischer (1990)
137	Brand Loyalty	Burkman (1987), Assael (1998), Harvey (2009)
138	Prototype	Burkman (1987)
139	Contingent Innovation	Bayus (1987), Gates (1998)
140	Intergenerational Competitions	Norton and Bass (1987), Kim, Chang and Shocker (1998)
141	Habit	Norton and Bass (1987)
142	Organizational Priorities	Yates (1989)
143	Perceived Usefulness	Davis, Bagozzi and Warshaw (1989), Arthur, Durlauf and Lane (1997), Lacovou (1995), Igbaria, Parasuraman and Baroudi (1996), Karahanna, Chervany and Straub (1999), Malhotra and Galletta (1999), Davis, Venkatesh and Morris (2003), Pavlou (2003), Tung and Rieck (2005), Talukder, Harris and Mapunda (2012), Casalo, Flavian and Guinaliv (2012), Porter and Donthu (2006), Tohidyan and Moghaddam (2015)
144	Purchasing Power	Lilen (1990), Horsky (1990)
145	Working Environment	Tornatzky and Fleischer (1990), Keller (1996)
146	Reputation of the Firm	Tornatzky and Fleischer (1990), Keller (1996), Christia (2000), Venkatesh and Davis (2000), Ruyters, Wetzel and Kleijnen (2001), Gelb and Voet (2009)
147	CEO Innovativeness	Thong (1999)
148	Knowledge of Technology	Thong (1999)
149	Government Regulation	Kaun and Chau (2001), Baker (2001), Cutler and McClellan (1996)
150	Utility	Horsky (1990)
151	Reduced Time	Horsky (1990)
152	Routines	Levinthal (1990)
153	Complimentary Infrastructure	David (1990), Gruber and Verboven (2001), Wareham, Levy and Shi (2004), Norris and Soloway (2011)
154	Long term consequences	Thompson, Higgins and Howell (1991)
155	Complexity	Thompson, Higgins and Howell (1991), Nowak (1992), Statnikova (2005)
156	Training	Francik (1991), Goodhue and Thomson (1995), Gelb and Voet (2009), Pignatti, Carli and Canavari (2015),

S No	Variables/Factors	Author(s)
157	Communication Channels	Francik (1991), Perez, Popadiuk and Cesar (2017)
158	Cost of adoption	Besley and Case (1995)
159	User Satisfaction	Delone and Mclean (1992)
160	Intention to use	Delone and Mclean (1992), Taylor and Todd (1995)
161	Government Support	Kumar and Kumar (1992)
162	Managerial Skills	Nowak (1992)
162	Pleasurable Experience	Davis, Bagozzi and Warshaw (1992)
163	Better Pay	Davis, Bagozzi and Warshaw (1992)
164	Enhanced Job Performance	Davis, Bagozzi and Warshaw (1992)
165	Herd Behavior	Banerjee (1992)
166	Self-Efficacy	Compeau and Higgins (1995), Taylor and Todd (1995), Boonsiritomachai and Pitchayadejanant (2017)
167	Management Myopia	Bower and Christensen (1995)
168	Organizational Readiness	Lacovou (1995)
169	Trading Partner Power	Lacovou (1995)
170	Compliances	Scott and Christensen (1995), Karahanna, Chervany and Straub (1999)
171	Market Share	Helper (1995)
172	Relationship	Helper (1995), Goodhue and Thomson (1995), Hubbard (1998), Pyzalska (2018)
173	Authority	Goodhue and Thomson (1995)
174	Production Timeliness	Goodhue and Thomson (1995)
175	System Reliability	Goodhue and Thomson (1995)
176	Social Pressure	Perez, Popadiuk and Cesar (2017), Igbaria, Parasuraman and Baroudi (1996), Tung and Rieck (2005)
177	Perceived Fun	Igbaria, Parasuraman and Baroudi (1996)
178	Re-Invention	Hays (1996)
179	Affordability	Golder and Tellis (1998), Norris and Soloway (2011)
180	Income	Kohli, Lehman and Pae (1999), Diederer, Meijl and Wolters (2003), Watcharaanantapong, Lambert and Roberts (2014)
181	Re-Organizing	Brynjolfsson and Hitt (1999)
182	Image enhancement	Karahanna, Chervany and Straub (1999)
183	Visibility	Karahanna, Chervany and Straub (1999)
184	Central Decision Maker	Dekimpe, Parker and Sarvary (2000)
185	Voluntariness	Venkatesh and Davis (2000)
186	Job Relevance	Venkatesh and Davis (2000), Gillespie, Kim and Pandel (2007)
187	Degree of Innovativeness	Schmidt and Porteus (2000)
188	Openness to Innovation	Caselli and Coleman (2001)
189	General Economic Conditions	Caselli and Coleman (2001)
190	Success Stories	Strang and Macy (2001)

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<b>S No</b>	<b>Variables/Factors</b>	<b>Author(s)</b>
191	Own Experiences	Strang and Macy (2001)
192	Trust	Ruyters, Wetzel and Kleijnen (2001), Pavlou (2003), Carter and Weerakkody (2008), Keller and Suzaki (1988), Casalo, Flavian and Guinaliv (2012)
193	Environmental Benefits	Silva, Lira and Pereira (2001)
194	Higher Resale Price	Luque (2002)
195	Status Levels	Tellis (2002)
196	End User Involvement	Perez, Popadiuk and Cesar (2017), Lynch (2002), Assael (1998), Statnikova (2005)
197	Internal Marketing	Frambach and Schillewaert (2002)
198	Peer Usage	Frambach and Schillewaert (2002)
199	Hedonic Motivation	Boonsiritomachai and Pitchayadejanant (2017), Venkatesh and Morris (2003), Lowry and Fienen (2013)
200	Profitability	Arnholt and Balte (2003)
201	Speed of Organizational Changes	Godinho and Fagerberg (2003), Bredillet, Yatim and Ruiz (2010), Norris and Soloway (2011)
202	Age	Pignatti, Carli and Canavari (2015), Watcharaanantapong, Lambert and Roberts (2014), Gelb and Voet (2009), D'Antoni, Mishra and Joo (2012)
203	Beliefs	Black and Gregersen (2003)
204	Organizational Climate	Statnikova (2005)
205	Job Characteristics	Statnikova (2005)
206	Work group Characteristics	Statnikova (2005)
207	Management Commitment	Statnikova (2005), Talukder, Harris and Mapunda (2012)
208	Time Budget	Kwan and Min (2008), Paudel, Mishra and Segarra (2011)
209	Environmental Benefits	Fraj and Matinez (2006), Zhang, Yu and Spil (2007)
210	Personal Values	Fraj and Matinez (2006)
211	Product Reviews	Clemon, Gao and Hitt (2006)
212	Switching Cost	Collan (2007)
213	Quality of Results	Harvey (2009)
214	Quality of Service	Harvey (2009)
215	Referrals	Harvey (2009)
216	Social Ties in Organization	Sykes, Venkatesh and Gosain (2009), Oster and Thornton (2010), Talukder, Harris and Mapunda (2012)
217	Proper Technology assessment	Norris and Soloway (2011)
218	Cost Savings	D'Antoni, Mishra and Joo (2012)
219	Security	Boonsiritomachai and Pitchayadejanant (2017), Porter and Donthu (2006)
220	Discomfort	Porter and Donthu (2006)
221	Optimism	Porter and Donthu (2006)
222	Curiosity	Lowry and Fienen (2013)
223	Familiarity	Pierpaolia, Carli and Pinattia (2013),

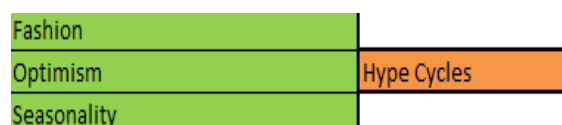
S No	Variables/Factors	Author(s)
224	Information Exposure	Hodas and Lerman (2014)
225	Licensing	Kekana, Aigbavboa and Thwala (2014)
226	Total acceptance	Aizstrauta, Ginters and Eroles (2015)
227	Decision Type	Perez, Popadiuk and Cesar (2017)

**Figure 3** Variables extracted from transcript

### 3.2. DEFINING CODES AND AXIAL CODING

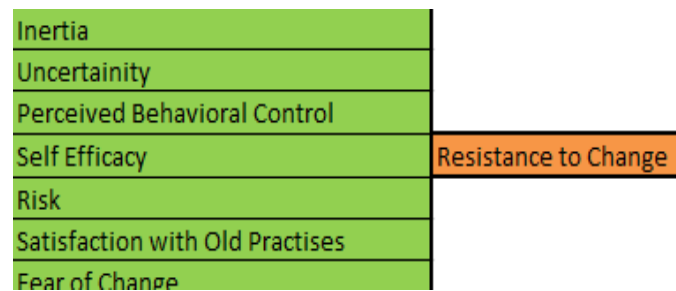
Open Codes are defined and axial coding is done to combine these Open codes to various Categories of codes (Strauss and Corbin, 1990).

Hype Cycle is the graphical representation of maturity, application and acceptance of emerging technologies. Hype cycles also overestimates the benefits of emerging technologies in the short run and underestimates the advantages in the long term. In fact, these inflated expectations lead to premature abandonment of innovative technologies without waiting for the long term benefits. Each Hype cycle goes through five phases (1) Technology Trigger: This is the phase where the news about the innovative technologies appears for the first time in the media (2) Peak of Inflated Expectations: The success stories about the innovation spread throughout the market and exaggerate the expectations about the innovation (3) Trough of Disillusionment: The technology will not be able meet the inflated expectations and end users get disappointed with the innovation (4) Slope of Enlightenment: The inflated expectations about the technology becomes realistic in this stage and the innovator learns his mistakes and make corrective actions to match the realistic expectations. The end user understands the advantages of the innovation (5) Plateau of Productivity: This is the stage where adoption really takes off in the market. The Researcher includes Hype cycle as a variable in the conceptual lens to study its impact on adoption. Optimism about the innovation creates inflated expectations. Fashion represents a “Particular manner” in which something is done or performed. Fashion embodies a particular style of doing things. Seasonality refers to “Repeating short term cycle in the series”. The demand for a particular product will keep on repeating after (equal) time intervals. The Researcher assumes that the Fashion and the Seasonality influence the Hype cycles (Nechully, Pokhriyal and Eappen, 2018a).



**Figure 4** Hype Cycles

Resistance to change or in other words Fear of change is caused due to many reasons. Most important of all is the confidence to master and use the innovation. Perceived Behavioral Control and Self efficacy refers to the same concept – one’s own confidence to perform a behavior successfully in a particular setting. Uncertainty about the performance of the innovation also contributes to the fear of change. This uncertainty is also the risk of embracing the innovation. There are also instances of reluctance to change due to satisfaction with the existing technology. Comfortableness with a particular technology encourages the end user to continue with the same technology despite of the benefits of the innovation. Inertia and Resistance to change refers to the same concept of propensity to continue with the existing technology (Nechully, Pokhriyal and Eappen, 2018c).



**Figure 5** Resistances to Change

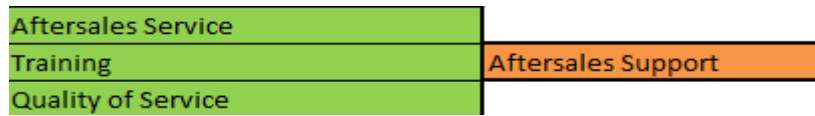
The relevant information about the innovation affects the adoption of innovation. In today’s scenario with the advent of internet and other social networking sites, the prospect is often overloaded with information and often gets confused. So, it is important that the relevant information about the innovation be imparted to the prospects, the relevant information which caters to their specific requirements. There are many sources of information like Advertisements, Word of mouth, Product reviews in Social media, Internal marketing, Feedback about the usage, Referrals, Social ties in organizations, Personal Networks etc. Opinion leaders – people having in-depth knowledge about a particular technology/product in an organization are often consulted for relevant information regarding innovation. The media selected for communicating information should not distort or omit information imparted by the innovator. Repeated exposure to information embeds the information in the minds of prospects (Nechully, Pokhriyal and Eappen, 2018a).



**Figure 6** Information

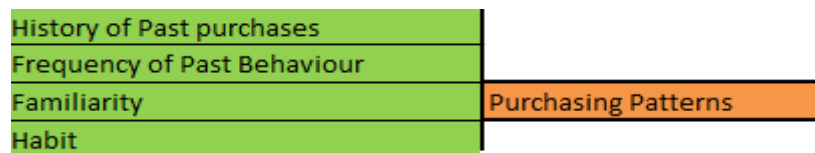
Aftersales support refers to the services provided by the company after the delivery and or installation of the innovation. The quality of aftersales services determines the continued usage or abandonment of the innovation. Training on the product usage is considered as one of the important aftersales services. Aftersales support enhances the customer satisfaction. It is an

important factor affecting the repeat business from the same users in the market (Nechully, Pokhriyal and Eappen, 2018c).



**Figure 7** After Sales Support

The purchasing patterns of an organization helps to understand what an organization buys and what it will not. History and Frequency of past purchases, Familiarity and the Organizational Habits affect the Purchasing patterns of an organization (Nechully, Pokhriyal and Eappen, 2018b).



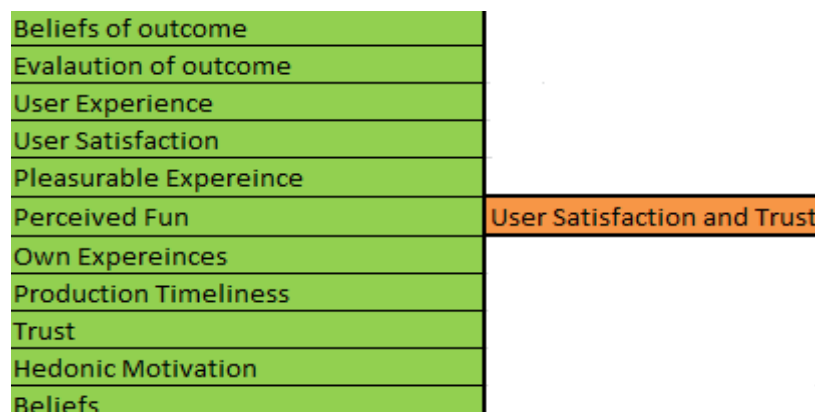
**Figure 8** Purchasing Patterns

Efforts required from the part of employees to learn and use the innovation affects the adoption decisions. The complexity or sophistication of the innovation enhances the perception of effort required from the end user to use the innovation (Nechully, Pokhriyal and Eappen, 2018a).



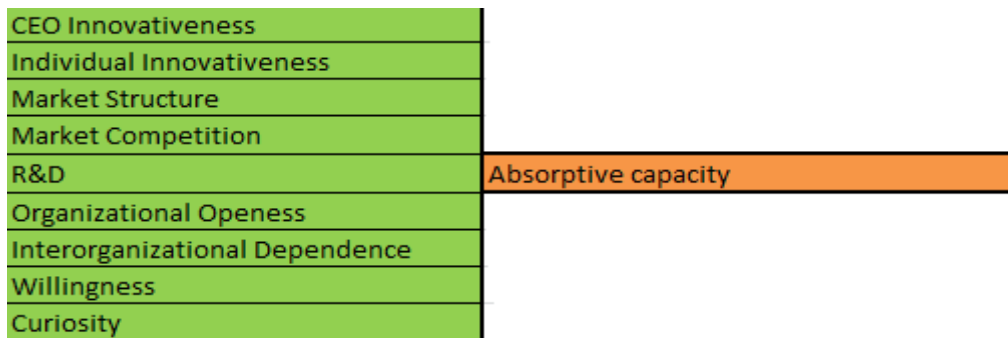
**Figure 9** Efforts

The customer satisfaction from the previous innovations of the innovator – whose product is under discussion, affects the adoption decisions. Dissonance is created when there is mismatch between Beliefs and Evaluations of the outcome and these dissonances creates dissatisfaction and lose of trust on the brand. “Actual” should be equal to or above the “Expected” to create satisfaction and subsequently trust on the brand. End User’s experiences – pleasant and pleasurable experiences enhance satisfaction and trust. Timely production and delivery of the ordered item also enhances satisfaction and trust (Nechully, Pokhriyal and Eappen, 2018b).



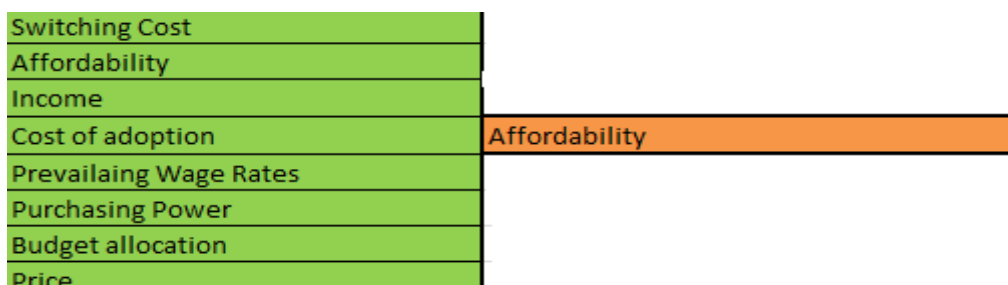
**Figure 10** User Satisfactions and Trust

Absorptive capacity refers to a firm’s ability to acquire relevant information and to exploit or use it to its advantage. Individual or CEO innovativeness or curiosity or openness of an organization to innovative ideas enhances the absorptive capacity. The organization should also be willing to make use of the newly acquired information. Research & Development enhances the knowledge base of the organization and enhances the absorptive capacity. Fierce Competition in the market forces companies to enhance its ability to search and use relevant information. Market structure also impacts innovation adoption. Especially when it is a monopoly market, organizations have no incentives to innovate (Nechully, Pokhriyal and Eappen, 2018c).



**Figure 11** Absorptive Capacity

Affordability of an innovation determines whether an organization can procure an innovation or not. Affordability depends on the Cost of innovation and Budget available to purchase the innovation. The budgets should be at least equal to the market price of innovation. Affordability is also influenced by the Revenues generated by the companies. Companies with huge profits will not confront shortage of funds for adopting innovations. The adoption of an innovation requires modification of existing procedures, investing on infrastructure for innovation and training employees on the innovation usage. These activities incur cost called Cost of adoption. In case of disruptive or radical innovations, organizations might not have the necessary skilled man power available inside the organization to handle it. So the necessary manpower is to be recruited from the market which incurs Cost of Manpower to operate Innovation. Prevailing wage rates refers to the Manpower cost. Switching cost can also become a cost of adoption if a company is replacing an existing technology with an innovation. Switching cost and Cost of adoption can be one and the same unless and until it is a disruptive innovation. Switching cost is defined as the cost incurred to change the supplier. Time and Effort invested to identify and master the alternative(s), Exit Fees, Financial Risk and Installation and Startup cost are the normal switching costs. In fact, the demarcation between cost of adoption and switching cost is a very thin line (Nechully, Pokhriyal and Eappen, 2018a).



**Figure 12** Affordability

Perceived Usefulness refers to the belief on the ability of a particular system to improve the performance of an organization. Benefits refer to “Something intended to help”. So the



Researcher clubs both Perceived Usefulness and Benefits as Perceived Usefulness and Benefits. A Benefit that can be quantified in terms of money generated or saved is called Economic Benefits. Cost Savings, Time budgets, Better pay, Enhanced Job Performance and Economies of scale can be considered as Economic Benefits. Economies of Scale lead to cost saving. The cost per unit of output decreases with increasing production levels. The expectations about the useful features of the innovation enhance the perceived usefulness. Security, Safety and Convenience to use the innovation enhances the Perceived usefulness. Relative advantages of the innovation and Exciting benefits that an innovation can deliver enhance the Perceived usefulness. Exciting benefits delights customers, subsequently enhances usefulness drastically. Nowadays all organizations are exploring ways to enhance its environmental commitments. So innovations delivering Environmental benefits increase the usefulness of innovations (Nechully, Pokhriyal and Eappen, 2018c).

Cost Savings	
Profitability	
Environmental Benefits	
Long term consequences	
Security	
ROI	
Convenience	
Perceived Innovation Characterisitcs	
Safety	
Time Budget	Percieved Usefulness and Benefits
Environmental Benefits	
Market Potential	
Better Pay	
Enhaced Job Performance	
Exciting Benefits	
Relative Advantage	
Economies of Scale	
Economic Benefits	

**Figure 13** Perceived Usefulness

Organizational and Technical infrastructure available to support innovation usage are called facilitating conditions. One more dimension of Government support also has to be added to the above definition of facilitating conditions. In case of Sophisticated Technologies, Government support also plays a vital role in adoption. Innovator support in terms of Flexible payment schemes and Credit facility helps cash deficient organizations to adopt innovations. Innovator support is also required during Installation and Commissioning stage. In case of sophisticated technologies, in most cases, a sale is considered as completed if the technology is successfully installed and commissioned at end user premises. Or the end users are to be trained on the installation and commissioning. Innovator support cultivates a healthy relationship between innovator and the end user which significantly impacts adoption decisions. A healthy relationship makes the Licensing procedures easy and less time consuming. Technology stewards are people who know very well the requirements of a particular market and are well versed with the innovative technologies best suited for that market. Technology stewards take initiatives to select and use the innovative technologies in an organization. Managerial skills are required to identity the benefits of innovations and to make necessary changes required in organization for innovation adoption. Management Support and Commitment is required at each stage of adoption. Proper Technology assessment/Knowledge of Technology/Degree of innovativeness helps an organization to anticipate the necessary infrastructure requirement for

innovation adoption. Degree of Innovativeness refers to whether an innovation is incremental/disruptive or radical. General Economic conditions like recession affects the budget allocations in the company and government funds. An efficient and effective Organizational leadership is required to coordinate all activities related to innovation adoption – without which the whole process goes astray. The Innovation opportunity in an organization should be aligned with the Organizational priorities. Otherwise the innovation opportunity gets discarded. Innovation policy refers to a general plan or method of action devised by an organization to adopt innovation. Organizational strategies refer to how these policies can be implemented with respect to specific innovations (Nechully, Pokhriyal and Eappen, 2018c).

Knowledge of Technology	
Complimentary Infrastructure	
Government Support	
Managerial Skills	
Relationship	
Degree of Innovativeness	
General Economic Conditions	
Proper Technology assessment	
Credit Availability	
Innovator Support	Facilitating Conditions
Licensing	
Technology Steward	
Innovation policy	
Leadership	
Management Support	
Organizational Strategies	
Organizational Priorities	
Management Commitment	

**Figure 14** Facilitating Conditions

Repurchase refers to repetitive buying by the end users, Substitution refers to replacement of an existing technology or obsolete technology by an innovation, new purchase refers to adoption of an innovation without replacement – for an entirely new innovation opportunity. In this study, the researcher merges these three concepts as these three concepts are closely related. Technological advances and speed of organizational changes necessitates Replacement/Substitution/New Purchase. Reversibility refers to opportunities/favorable conditions to switch back to the old ways of doing things. Availability of alternatives in the market encourages the organizations to constantly monitor the appropriateness of the existing technology in the changing contexts. As the number of alternatives and reversibility opportunities increases, the chances of organization to make Replacement/Substitution/New Purchase decisions increases. Last ditch efforts for survival from the innovator at the decline stage by modifying the features or by reinvention – finding new applications for the existing products results in Replacement/Substitution/New Purchase decisions. Sometimes these Re-Invention initiatives come from the end users by modification or introduction of new processes or reorganization of the existing processes in the organization. Marketing strategies/efforts of the innovator also affects adoption decisions. Brand loyalty explains why the organizations purchase innovative technologies from some innovators only. Brand loyalty in fact enhances the switching barrier. Intergenerational competitions of technologies also affect the Substitution decisions – which is very evident in Computer and Mobile Phone industries. Higher Resale

price of technology on the verge of obsolescence also affects the Replacement/Substitution/New Purchase decisions (Nechully, Pokhriyal and Eappen, 2018a).

Higher Resale Price	Re-Purchase/Substitution/New Purchase
Last ditch effort	
Substitution	
Intergenerational Competitions	
Objectives	
Reversibility	
Technological advances	
Speed of Organizational Changes	
Alternatives	
Brand Loyalty	
Re-Organizing	
Marketing Strategies	
Re-Invention	

**Figure 15** Re-Purchase/Substitution/New Purchase

The resources of an organization play an important role in adoption decisions. Skilled man power should be available in the organization to utilize the adopted innovation. Employee education levels and experience contributes a lot to acquiring the necessary skill sets. Some of the industries require the innovator to have a local presence and in these cases the distribution channels represent the innovator. All efforts of the innovator will be channeled through the distributor and the distributor plays a significant role to convince the end users. More over the distributor will be thorough with the local conditions or requirements. A good distributor is an important resource of an innovator (Nechully, Pokhriyal and Eappen, 2018b).

User Skills	Resources
High Education Levels	
Distribution Channel	

**Figure 16** Resources

An innovation should first prove its Scientific Credibility without which the organizations will be very reluctant to absorb innovation. System reliability refers to consistency of results from the innovation over a period of time. Quality of an innovation refers to the reliable bench mark performance an innovation can deliver over a period of time. System reliability and subsequently quality of results/performance affects the scientific credibility. Product features relevant to the organization and visibility of the results enhances the scientific credibility. Demonstration of the instrument with a prototype at the site and the subsequent results enhance the scientific credibility of the innovation. Prototypes are also given for Field trial to organizations – which also enhance the scientific credibility (Nechully, Pokhriyal and Eappen, 2018b).

System Reliability	Scientific Credibility
Quality of Results	
Visibility	
Product Features	
Prototype	
Demonstration	
Quality	
Performance	

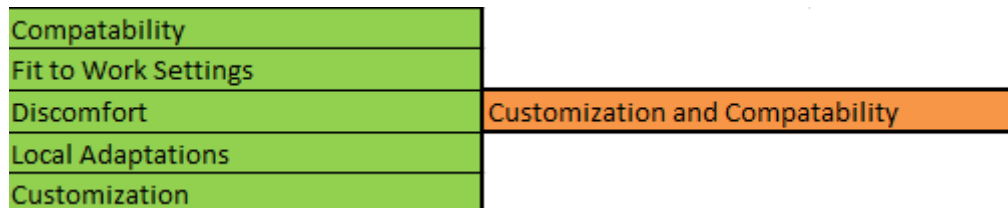
**Figure 17** Scientific Credibility

Organization adopts Innovation for want of Statutory or Group compliances. Reference group is a group which is considered as a standard for comparison and the behavior of the reference group is imitated for want of compliance. The organization or individual aspires to relate to this group by imitating their behavior. Reference group provides the comparison benchmarks. At times statutory regulations make an innovation adoption compulsory for survival in a particular market. Imitation is also done to preserve Membership in Industrial Network compliances. This concept is also called Legitimization. Legitimization is the process of making the organization acceptable to a particular Network or industry by Imitation. Social approval pressure also affects adoption decisions. Social approvals enhance the image or reputation of the firm. The intensity and speed of compliances are also influenced by the relevance of the compliances to the job. Compliances with Internationally accepted Industrial standards cannot be dispensed with. The presence of a central decision maker dispels all confusions regarding the compliances and make sure that all organizations with in a particular industry coming under the jurisdiction of central decision maker adheres to the stipulated compliances. Status levels are same as that of reputation. Geographical proximity to the network members, trading power of other network members and Number of network members already using innovation enhances the speed and intensity of compliances. Higher number of adopters'/Market share enhances the value of innovation – this concept is called network externality. Compliance due to Social and Industry pressures is called Isomorphism (Nechully, Pokhriyal and Eappen, 2018c).

Reference Group	
Conformity	
Government Regulation	
Status Levels	
Job Relevance	
Isomorphism	
Number of Adopters	
Network Externality	
Market Share	
Geographical Proximity	
Social Pressure	
Image enhancement	Statutory and Group Pressure Compliances
Central Decision Maker	
Herd Behaviour	
Imitation	
Trading Partner Power	
Legitimization	
Network Membership	
Social Approval/Influence	
Compliances	
Standards	
Statutory Complainece	
Reputation of the Firm	

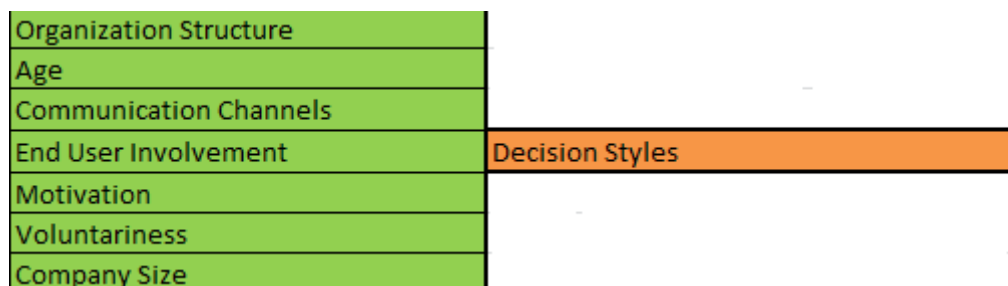
**Figure 18** Statutory and Group Pressure Compliance

The level of customization an innovation can offer to an organization enhances the compatibility with its existing systems and procedures. Organizational discomfort aggravates the need for customization and subsequent compatibility. The innovation should have the flexibility for Industry/Organization/Work settings specific adaptability (Nechully, Pokhriyal and Eappen, 2018a).



**Figure 19** Customization and Compatability

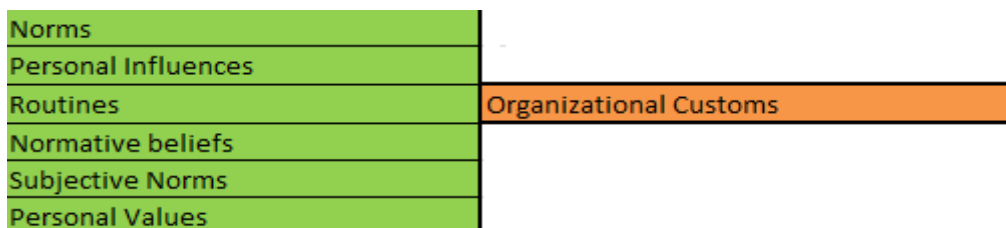
Market potential of an innovation viewed from an adopter perspective is nothing but perceived usefulness and benefits but from an innovator point of view is the market share the innovation can achieve with in a specific time period. Here Market potential was grouped as a variable affecting Decision types. The Researcher removes it from there and add it to Perceived usefulness and benefits. Objectives of the organization were wrongly grouped as a variable influencing decision type. In fact, the Objectives of the organization influence Replacement/Substitution/New Purchase decisions (Nechully, Pokhriyal and Eappen, 2018b). There are four different styles of decision making (1) Autocratic – Decisions ae made by the manager without consulting subordinates (2) Consultative – Manager seeks opinions from his colleagues but make the final decisions by himself (3) Team – The decision is made on the basis on consensus – even if you are personally against it you support the majority decision (4) Delegating – Subordinates are empowered to make appropriate decisions. The end user involvement is very important in decision making as it gives a sense of responsibility during implementation and utilization stages. The end user involvement is further affected by motivation levels, age and voluntariness. Motivation levels enhance the voluntariness to come forward and to give valuable inputs to the organization. Various studies confirm that Young employees actively take part in decision making process. The communication channels facilitate the smooth flow of suggestions for decision making and facilitate the communication of decisions to various levels in the organization. Organizational structure provides a representation of the shape of the organization. Organizational structure determines how a decision is made in an organization. For a Centralized Structure – the decision is made at the top and subordinates are made to obey. In a decentralized system – the decisions are made at various levels and are of participatory in nature. To accelerate the decision making process, nowadays organizations embrace a flat structure where bureaucratic levels are lesser in number and employees are given more autonomy to make decisions. As the size of the company becomes bigger, the time taken to make decisions also increases (Nechully, Pokhriyal and Eappen, 2018a).



**Figure 20** Decision Styles

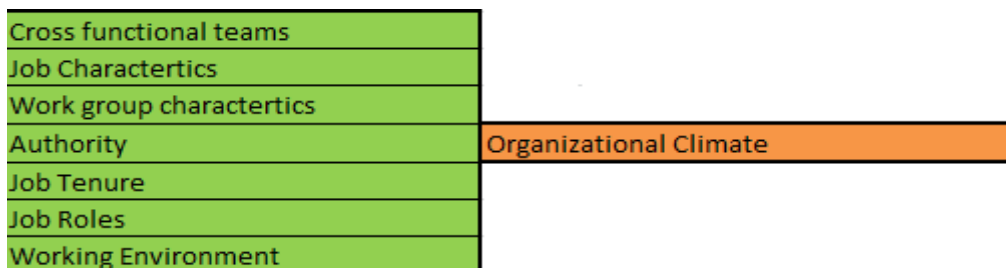
Organizational Customs dictate how a particular task is carried out in the organizational context. Organizational customs explain how the people should behave in the organization. To make it simple – Organizational customs defines how things are done in the organization. Each department or team with in an organization will have their own way of doing things – Team/Department Specific customs. Organizational routines are interaction patterns (between

employees) relevant for the coordination of organizational activities. Organizational routines help to save time and efforts in the decision making process. Organizational routines impact Organizational Customs. Organizational routines are interaction patterns developed over time for controlling and coordinating organizational activities. Routines are the standardized procedures or practices of an organization. Organizational norms refer to the set of rules governing the behavior of employees in an organization. It is in fact the accepted work place behaviors in an organization. Normative beliefs are perceptions about the acceptability about the behaviors either by the society or people relevant or close to the individual performing the behavior. Normative beliefs of the employees influence the compliance with Organizational customs. Subjective norms are pressures to perform or not perform a (set) of behavior(s). Values are principles or qualities or standards that are held in high regard by the organization or individuals. Values guide the operations in a particular environment. The personal traits of the employees also influence the compliance with organizational customs (Nechully, Pokhriyal and Eappen, 2018c).



**Figure 21** Organizational Customs

Organizational climate is the general feeling an employee has or the atmosphere employees experience in an organization on a day to day basis. Working environment significantly impacts the organizational climate. A conducive work environment ignites creativity in the minds of employees. Well defined Job roles, Delegation of decision making powers, stability of job and work group characteristics contributes to Organizational climate (Nechully, Pokhriyal and Eappen, 2018a).



**Figure 22** Organizational Climate

### 3.3. SELECTIVE CODING

Selective coding is the process of connecting the categories of codes to a core category or core concept (Strauss and Corbin, 1990).

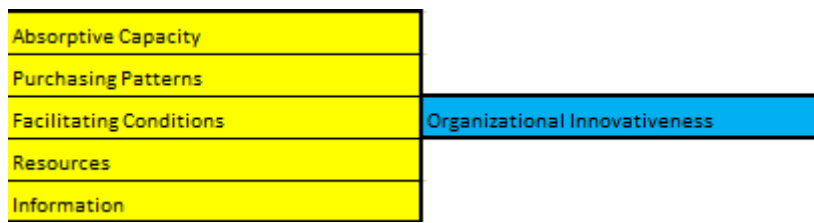
Organizational culture refers to a set of interconnected assumptions which have helped organizations to tackle internal and external challenges in the past and which are perceived to be useful to tackle current and future challenges (Schien, 1995). Organizational culture evolves over a period of time, out of experiences and learning. Both Organizational customs and Organizational climate contributes to Organizational culture. Theoretically Organizational culture and Organizational Climate influences each other. Organizational culture provides a holistic over view of the operations of the organization. Accumulation of the feelings about the actions complying with the organizational customs which have produced desired results

contributes to Organizational culture. An organizational climate can be temporarily created or modified by the company management where as an evolution of organizational culture is a long term process. Managers should focus on “Cultural Shift” rather than “Climate shift” for enhancing the performance of organizations (Nechully, Pokhriyal and Eappen, 2018a).



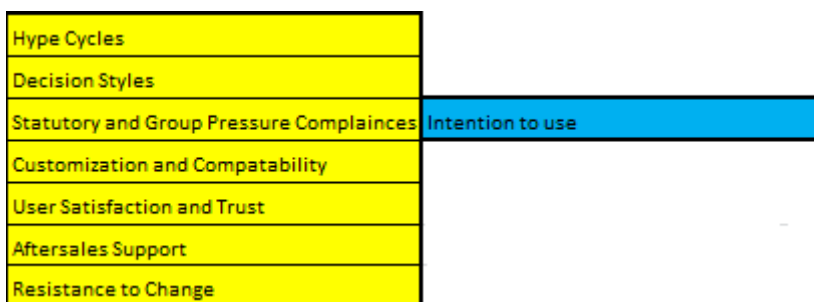
**Figure 23** Organizational Culture

Organizational Innovativeness is defined as the ability of an organization to search and find solutions for innovation opportunities either within or outside the organization. It can also be defined as the inherent capability and tendency of an organization to experiment with and procure the innovative technologies/services either developed by the R&D or by an external innovator. Purchasing patterns give us an indication of organizational innovativeness. Ability to learn about the new technologies – Absorptive capacity enhances the organizational innovativeness. Lack of proper facilitating conditions in the organization retards Innovativeness. Relevant Information about the various innovations available in the market enhances Organizational innovativeness. The availability of sufficient resources encourages organizations to search for innovations (Nechully, Pokhriyal and Eappen, 2018c).



**Figure 24** Organizational Innovativeness

The Intention to use signifies the “Ambition” or “Aspiration” to use an innovation. Inflated expectations influence the first time use. End User involvement in the decision making process gives them a sense of responsibility to put the innovation into use especially when the decision makes styles are Team, Delegating or Consultative. At times, the innovation is used due to compliance pressures. The flexibility of an innovation to get customized and compatible with the existing work settings enhances the propensity to utilize an innovation. Satisfaction received in the past from the products of the innovator enhances trust and ultimately intensify the aspiration to use a particular innovation from the same innovator. The record of aftersales service also affects the Intention to use. Fear of Technology or satisfaction with the old practices diminishes the ambitions to use an innovation (Nechully, Pokhriyal and Eappen, 2018b).



**Figure 25** Intentions to Use

Attitudes define the feelings for a particular product/person or some other things. Scientific credibility of an innovation develops a favorable attitude towards innovation. Affordability of

the innovation also enhances the favorable attitude. A sense of “Affordability” encourages the end users to explore more about the innovation. Usefulness and Effort required impacts the attitude. End users have a natural inclination towards innovation that is easy to learn and use. Perceived Benefits cultivate a favorable attitude towards innovation (Nechully, Pokhriyal and Eappen, 2018a).

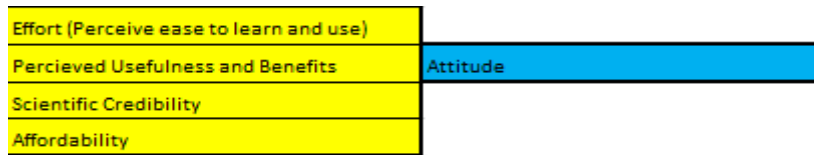


Figure 26 Attitude

Organizational Readiness refers to the collective ability and commitment of the employees to adopt innovations in an organization. To enhance organizational readiness, the organization should have an overall organizational environment (Organizational culture) which encourages innovation and the ability to procure the right innovation for the organization (Organizational Innovativeness). Organizational Innovativeness and Organizational culture impact Organizational readiness (Nechully, Pokhriyal and Eappen, 2018a).

Finding an Innovation opportunity in an organization requires commitment and ability from the part of organization and a favorable attitude towards opportunities for betterment within an organization. Innovation Opportunity is impacted by Attitude and Organizational Readiness. Selection of an appropriate technology for the innovation opportunity is also impacted by the same variables – Attitude and Organizational Readiness. These two stages constitute Pre-Adoption stage (Nechully, Pokhriyal and Eappen, 2018b).

Organizational ability and Commitment and Inclination towards a particular Innovation affects the Contract finalization stage. Implementation of an innovation depends on the Organizational readiness. Utilization of an innovation depends on the intention of employees to use it, their feelings towards the innovation and organizational readiness. Contract finalization, Implementation and Utilization constitutes adoption stage (Nechully, Pokhriyal and Eappen, 2018a).

Future Technology usage depends on the intention of the employees and Repurchase/Substitution/New Purchase decisions. Future Technology usage constitutes Post adoption phase.

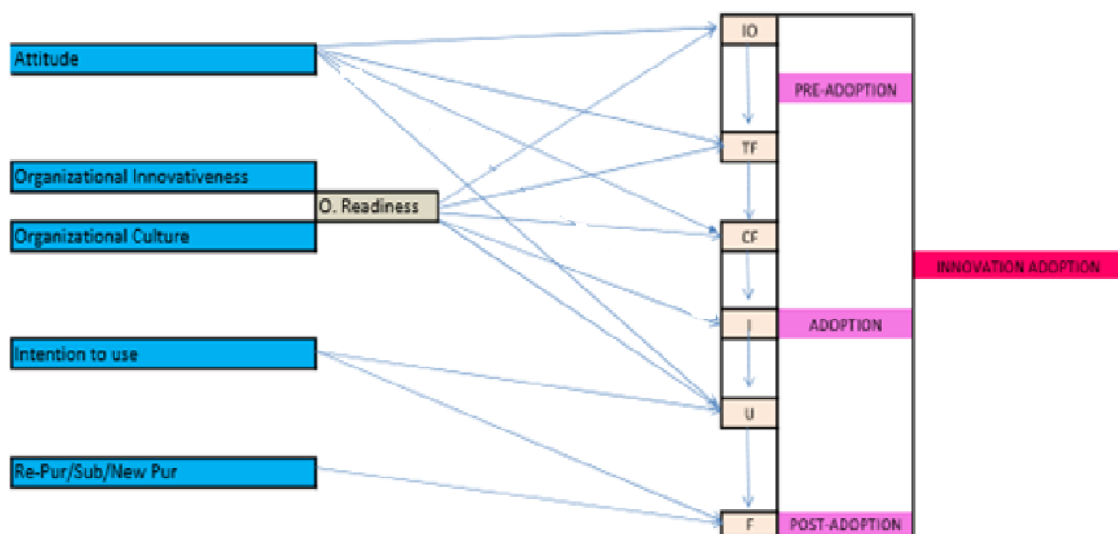


Figure 27 Conceptual Lens



In the above Figure 27, IO: Innovation Opportunity, TF: Technology Finalization, CF: Contract Finalization, I: Implementation, U: Utilization, F: Future Technology Usage

#### 4. CONCLUSION

Now that the Conceptual Lens/Preliminary Frame work is made, the direction or the focus required for the research is crystal clear. The Conceptual lens provides the basis for drafting the questions to be asked to the respondents. The Conceptual lens can be treated as the starting point for qualitative data analysis. The variables defined in the process of constructing conceptual lens will be used as “Pre-Defined Codes” for further qualitative analysis.

#### REFERENCES

- [1] Anderson, L. W. and Krathwohl, D. R. A taxonomy for learning, teaching, and assessing: A revision of Bloom’s taxonomy of educational objectives. New York: Longman, 2001.
- [2] Cooper, R. B. and Zmud, R. W., Information Technology Implementation Research: A Technological Diffusion Approach. *Management Science*, 36(2), 1990 pp. 123-139
- [3] Nechully, S. N., Pokhriyal, S.K. and Eappen, S. A Journey through Evolution of Theories and Models of Adoption of Innovations (Year: 1798-1980). *International Journal of Mechanical Engineering and Technology*, 9(10), 2018 pp. 1–36
- [4] Nechully, S. N., Pokhriyal, S.K. and Eappen, S. A Journey through Evolution of Theories and Models of Adoption of Innovations (Year: 2000-2018). *International Journal of Production Technology and Management*, 9(2), 2018 pp. 31-73
- [5] Nechully, S. N., Pokhriyal, S.K. and Eappen, S. A Journey through Evolution of Theories and Models of Adoption of Innovations (Year: 1981-1999). *Journal of Management*, 5(5), 2018 pp. 97-143
- [6] Schien, E, *Organizational Culture and Leadership*. San Francisco: Jossey-Bass, 1995.
- [7] Strauss, A. and Corbin, J. M. *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Thousand Oaks: Sage Publications, 1990.