Accountancy Business and the Public Interest
ISSN: 1745-7718

Special Issue
Theme 1 May 2025

ORGANIZATIONAL AGILITY – DIGITAL TRANSFORMATION – CASE STUDY OF SELF-HELP GROUPS THROUGH IMPLEMENTATION OF PAYSE FATEHBAD HARYANA

Dr. NISHI MALHOTRA

Assistant Professor, IIM Sambalpur.

Abstract

During the recent pandemic COVID 19, with the imposition of social distancing norms and COVID-19 restrictions technology played a critical role in ensuring that people at the bottom of the pyramid have access to financial services. Micro borrowers lack physical collateral, and the lender does not know their creditworthiness. Technology can help reduce information asymmetry and provide local access to financial services at lower transaction costs. There is a need to change the behaviour and attitudes of the poor toward adopting technology. In this study, the theoretical lens encompassing the Technology Acceptance Model, Enterprise Agility Model, and Dynamic Punctuated Equilibrium was deployed to study the technological transformation of the self-help groups in Fatehabad Haryana, India. During COVID-19, the technological transformation enhanced the performance of these groups. Moreover, agile groups were better able to adopt the technology. However, to improve agility and technology acceptance, there is a need for social intermediation.

Keywords: Case Study, Technology, Organizational Learning, Change Management.

1. INTRODUCTION

Used by many, online banking mainly aims to provide access to financial services via technology to the individual customer at their doorsteps (McKechnie et al., 2006). The COVID-19 pandemic started as a cluster of pneumonia in Wuhan, China, in December 2019. This pandemic impacted the financial community in myriad ways, and perhaps the most significant was the change in the operation of the community initiatives like group lending.

In a semi-formal organization like a self-help group that caters to the poorest of the poor and requires regular meetings, COVID-19 heralded a halt in usual operations, impacting the sustainability of the self-help groups. The modern world in the wake of COVID-19 poses various challenges, and within this landscape, the ability of IT to enable has increased tremendously (Sambamurthy et al., 2003), (Alfadda and Mahdi, 2021). Digital technology creates new channels of engagement, relationship building and democratic participation. It helps to reduce the operational risk and further provides benefits like inclusion, efficiency, and innovation, (Seela subba rao , 2023)

The primitive society poses various challenges to technology acceptance in terms of the need for proper change management, social intermediation, and capacity building. During contingencies and crises, technology adoption becomes even more difficult due to resistance to change. TAM posits that the perceived intention to use technology is impacted by the perceived usefulness (PU) of technology and perceived ease of use (PEoU) (Fishbein & Ajzen., 1975). And social intermediation and infrastructure building helps to improve the technology acceptance. In Rural India, the banks situated at distance of 10 to 12 km. And women members had to spend a lot of time to visit the banks.

The solution to the problem is use of technology to deposit and monitor money operations for the group, during COVID-19. One of the key problems faced by women workers aligned to groups is lack of vocational training and inappropriate infrastructure.

The study argues that organizational agility or technological readiness as digital literacy and infrastructure leads to technology acceptance, and agile organizations are better prepared to respond to contingencies during the period of revolution or pandemics, (Zain et al., 2005)., Organizational agility refers to the readiness of organizations and the ability of the organizations to adapt to internal changes like technology adoption (Lu & K, 2011).

Each self-help group differs in terms of ethics, philosophy, norms and literacy levels. However, the groups in Fatehabad, Haryana have been able to seamlessly adopt technology due to competencies and strategic initiatives such as role plays, nukad nataks, counselling by the bank sakhis, Didi's, trainings and business correspondents by the Government under the aegis of DAY NRLM (Deen Dayal Antodaya National Rural Livelihood Mission) to build technological capabilities with Payse, (Chung, Lee & Kim, 2014; Cepeda & Arias-Pérez, 2019).

There is a gap in the literature addressing the importance of organizational agility and technology acceptance in meeting the contingencies like COVID-19, (Omoush et al., 2020) Due to the change in the environment, the context of technology implementation has changed drastically.

The relationship between deployment and adoption of technology is a "Black Box" that is not much studied, (Aurélio de Oliveira et al., 2021; Conforto et al., 2016; Tan, Pan, & Zuo, 2019; Tan et al., 2010). This study proposes that organizational agility or readiness facilitated through trainings, intermediation, counselling enables adoption of technology through attitude change and leads to performance improvements. (McAfee et al., 2008)... The main reason for lack of agility among the groups is that groups are formed by women who are socially excluded and discriminated and are reluctant to change or adopt technology as they fear cultural deprivation and loss of jobs.

Lack of any handholding agency also leads to exclusion of the members leading to lack of organizational readiness. There is no research study on how various competencies and strategic alignments in an agile group enable it to adopt technology successfully and sustain themselves technologically and financially.

By examining how social intermediation by self-help promoting agencies under SRLM helps resolve the "Black Box" of the relationship between the technology readiness or organizational agility and use of technology and organizational performance in case of groups in Fatehabad Haryana, (Tan et al., 2019) this case study seeks to highlight the need for technology and strategy alignment, (Tan et al., 2010) Corresponding to this knowledge gap, the research questions that this study aims to answer are (1) how organizational agility leads to technology acceptance in case of self-help groups in Fatehabad, Haryana during COVID-19? (2) how technology enhances organizational performance during the crisis and revolution. Through the lens of the Dynamic Punctuated Equilibrium model, this study aims to understand the impact of organization agility on technology adoption and performance during COVID-19.

2. LITERATURE REVIEW

(Tuckman & Jensen , 1977) gave the famous theory of group formation comprising four stages forming, norming, storming, and performing; (Gersick, 1984) gave the theory of dynamic punctuated equilibrium that includes 3 stages, i.e., co-evolutionary, evolutionary, and revolutionary stages. To study the evolution of the organization, (Tushman et al., 1985) suggested the framework of dynamic punctuated equilibrium.

Every organization undergoes organizational changes. These organizational changes can take the shape of business innovation, such as technology deployment, legal changes, such as demonetization and the passage of the Microfinance Act, or environmental changes, such as the COVID pandemic (Gersick, 1991). It is similar to Darwinian evolution, where mutations are forced by the environment, upsetting the status quo or static equilibrium. These mutations can be equated to dynamic "Punctuations" of fast Change. The author claims that an organization's dynamic capabilities respond to organizational changes through incremental adjustments such as the reorganization or the deployment of newer technologies. In addition to this, our study highlights that an individual's performance of behavior depends on subjective standards, attitudes, and perceived behavioral control (Vallerand et al., 1992). The adoption of organizational change is influenced by various factors such as social intermediation, capacity building, and social changes, and these changes can take the form of changes in the structure, strategy, or power distribution.

Self-help group bank linkage is a social innovation through which a homogeneous group of individuals comes together to avail credit from formal financial institutions like banks through social capital. Banks are wary of lending money to the poor due to the lack of physical collateral. But in a group, by leveraging the social capital and ties, the bank can extend loans to the poor (Radu ban et al., 2015) Within the equilibrium periods, the organization system remains the same, that is, there is no change, but during the economic crisis, it changes drastically. This study explores how acceptance of technology and proactive initiatives to manage change result in organizational agility for agricultural self-help groups during COVID-19... In their research article (Goncalves & Goncalves , 2012) addressed how the introduction of information technology in an organization is greeted with opposition from its members. To manage the change, the author propagates that there is a need for revolutionary transformation. Revolutionary transformation is taught through the changes in the structure and strategy of the group. With the advent of a pandemic like COVID-19, the environment has changed drastically, and there is a need to train the organization's employees regarding the changes to be adopted. Over the past 2 years, there has been an environmental change with the imposition of social restrictions during COVID-19.

Perspectives on Technology Acceptance Model

The theory of Planned behaviour (Fishbein & Ajzen, 1975; Azjen & Fishbein, 1980) discusses the importance of attitudinal changes in technology adoption. Through an interpretive paradigm based on a single case study framework we highlight the importance of affective factors and attitude-building through social intermediation in adopting technology, (Stella Maris Juhar Baptista, 2021). In the case of organizations and institutions like self-help groups, users are the poorest of the poor who lack any physical collateral, credit history, or financial literacy capability (Cohen & Levinthal, 1990). As per the author, the adoption of technology by an individual is impacted by perceived difficulty, adaptive experiences, computer efficacy, perceived benefits, compatibility, and perceived values. The article highlights that difficulty in the implementation of the technology could also be due to the perceived difficulty in learning and lack of perceived behavioral changes required to implement digital literacy programs. (Alavi & Henderson, 1981) their research study has highlighted the importance of various factors such as actual system usage, user attitude, and organizational learning in ensuring the adoption and seamless integration of the technology in an organizational setting, (Bailey & Pearson, 1983). Thus, organizational agility in the form of skills and capabilities impacts technology acceptance during a crisis. In this case study, we discuss the case of the self-help group in Fatehabad, Haryana, India, which implemented the technology in the form of a PaySe

payment intermediary to facilitate online deposition of savings by the organization members or the self-help groups. One of the major issues facing Self-help groups in India is the lack of adherence to the group norms. (Swanson, 1974) their research study has highlighted two stakeholders in this system – the manager from the state rural livelihood mission and the users. (Ginzberg, 1981), their research study has highlighted that the success of the systems primarily depends on the users' expectations. (Schultz, 1987; Schlesinger et al., 2013) in their research paper has highlighted the implementation of organizational change from the project implementation perspective. The author argues that project implementation has two phases, i.e., "Planning" and "Tactical" strategies. As per the author, the factors that impact successful project implementation are goal definition or planning; the other factors are resource allocation, top management support, and project planning.

As per the author, continuous personnel training would be required to adapt and implement the organizational changes. (Park & Park, 2020) his research study has highlighted the importance of technology type, educational satisfaction, usage enjoyment, and user experience as the important factors impacting perceived ease of use. The authors further argue that within the theory of reasoned action, perceived usefulness and ease of use of a product and service are two important cognitive factors that impact the intention to use technology for banking (Fazio 1986; Igbaria, et al., 1995; Bajaj, 1998 ;Fenech, 1998). (Agarwal Karahanna, 2000) (Chan & Storey, 1996) in their research study have highlighted the importance of learning in the spread of information technology in an organization. (Romm, Pliskin & Rifkin, 1996). (Larsen & Wetherbe, 1999) their research study have highlighted the importance of frequency of use in the adoption of IT.. There are two dimensions of how organizational Agility impacts technology acceptance. In this context, "Theory E" discusses the importance of economic value in promoting the usage of technology, and "Theory O" emphasizes the importance of social factors such as the culture of an organization and human capability to promote the ease of use of technology. And the self-help group operates in the social environment, where how the members perceive the usage of technology becomes important.

Social intermediation or training helps in adoption of technology. (Doob, 1947) in their research paper have tried to relate the concept of attitude to behavioral theory. The TAM (Technology Acceptance Model) states that the perceived utility of technology determines its utilization, (Park & Park, 2020. It enables smooth linkage with centralized systems, effective feedback collection, and virtual community development, and lowers organizational costs. This is also true that technology is useful as it helps to increase organizational agility, (Mrugalska & Ahmed, 2021). But at the same time, we argue that agile organizations are better able to adopt the technology. Sensing change implies the institution's understanding of the value of technology. Technology adoption depends on the user's attitude and the members' emotive, cognitive, and behavioral inclinations. And change management plays an important role in building positive dispositions toward technology acceptance. Agile organizations that invest in capacity building and change management reap the rewards of technological acceptance.

Perspectives on Organizational Agility

The ability to recognize the change in the internal and external environment, as well as the ability to adapt effectively and efficiently in a cost-effective manner, are two components of organizational capability (Seo & Paz, 2008). Organizational agility is defined in the literature as a combination of sensing and responding capabilities (Tallon, 2019). To survive and succeed, the literature emphasizes the important role of being able to detect and respond to risks and opportunities (Lucas, 2012).

Research studies highlight the importance of agile organizations and promote the idea that they must be constantly undergoing significant transformations, (Teece, 2016). This involves implementing new IT changes and restructuring the organizational structure (IT). (Conboy and Fitzgerald, 2004) in their research study have discussed organizational agility as the continual readiness of the entity to change rapidly. (Lyytinen, 2006) define organizational agility as how and why the organizations sense and respond swiftly to change. (March, 1991) in their study have highlighted the importance of organizational agility in exploring new possibilities and exploiting old certainties.. Their study work (March 1981; March, Cyert and, 1963; Ashby, 1960) discusses organizational change as the adaptive quest for new technologies as a means of adaptation.. It highlights the importance of experience & innovation in promoting organizational change. (Simon, 1958) in their book asserts that organizations are a system of interrelated behaviors.

The study highlights that organizational behavior can be changed through organizational learning or memory. (Lee & Xia, 2010) their research study has defined organizational agility as the ability of an organization to respond to changes in the external and internal environment. (Sambamurthy, Bhardwaj and Grover , 2003) in their research study highlight that organizations can sense the environment and capitalize on their resources to leverage the opportunities. (Davis, 1989) their research study highlights that seamless technology integration through interface leads to a helpful attitude towards technology. (Venkatesh et al., 2003) their research study highlights the importance of locational independence, habitual technology use, characteristics of an organization, perceived job performance on organizational agility, and organizational performance. (Cyr et al., 2006) According to the author, task characteristics are significant for successful operations and organizational agility.

Task characteristics refer to the perceived easiness and difficulty of the job. (Eisenstat, 2000) their research study highlights the importance of leadership commitment and involvement in ensuring organizational change. The study discusses six barriers to strategy implementation and learning in an organization. The authors argue that ineffective senior leadership, conflicting priorities, poor vertical communication, and coordination across businesses are the main obstacles to the functioning of an organization. (Gersick, 1991) their research study highlights that the System orientation works by adapting to organizational changes as the organization moves from the equilibrium to the revolutionary change stage. The author has discussed three different components of punctuated equilibrium, namely the deep structure, equilibrium, and revolutionary periods. The equilibrium period is defined as the set of organizational systems and processes that remain the same.

The literature also mentions the various barriers to change, such as the pain of loss, uncertainty, and the fear of failure in an organization. The study highlights the revolutionary changes as the period during which the deep structures were dismantled, leaving the system disorganized. Considering these factors, we have deployed the Technology acceptance model in the context of our case study – agricultural self-help groups in Fatehabad, Haryana, India, and its impact on organizational agility.

The agricultural self-help groups in Haryana, Fatehabad, have adopted a personalized web application by PaySe for collecting savings, depositing money into accounts and record keeping. Table 1 provides an overview of how through the technology acceptance model, the groups ensure enterprise agility. In the aftermath of COVID-19, the groups sense change using the *Analyzer* strategy to estimate the perceived usefulness and ease of use of technology and to build an attitude toward technology adoption. X

Table 1: Overview TAM (Technology Acceptance Model) and Organizational Agility

Enterprise Agility	Perceived Usefulness	Perceived Ease of Use	Attitude towards Use	Attitude towards Change	Behavioural Intention to use	Use of technology
Sensing Change	1) Locational independence 2) Seamless integration with a centralized system 3) Transparency 4) Improve business processes 5) Improves competitive advantage 6) Facilitate Audit 7) Enable organizations to diversify, expand and implement various strategies 8) Effective means to gather feedback 9) Autonomous 10) Knowledge sharing 11) Ensures timeliness of information for the organization 12) Develops virtual community 13) Reduces organization expenditure 14) Team learning 15) Flexibility 16) Cost 17) Design	1) Operational through personalized platforms such as Mobile 2) Operational through simple PaySe Cards 3) No need for additional equipment's 4) Collective ownership of results	**Affective**: Emotions, predispositions, and perceptions of an individual impact the use of technology **Cognitive:** Knowledge level, Education and Learning of a person impacts use of technology **Behavioural:** Personal traits & characteristics of a person impacts the use of technology	1) Predispositions of the users regarding change play an important role in technology adoption 2) Rigid opinions 3) Past habits and affiliations with manual methods might obstruct the use of technology	1) Motivation 2) Time Saving 3) Efficient 4) Effective 5) Perceived Security 6) Perceived Cost Savings 7) Perceived ubiquity 8) Perceived reachability 9) Social Value 10) Perceived value 11) Perceived Self Efficacy 12) Perceived compatibility 13) Subjective Norms 14) Innovation experience 15) Self–Efficacy 16) Perceived Risk 17) Compatibility	1) Adoption of technology 2) Task feedback 3) Task Significance
Responding Change	Digitization	1) Sensitization 2) Awareness 3) Attention seeking 4) Developing Interest 5) Autonomous use	1) Positive reinforcement 2) Leveraging 3) Virtual communities 4) Leadership 5) Promoting self-learning 6) Team learning	1) Commitment to change 2) Communicating Change 3) Training 4) Adoption of Change 5) Change Management 6) Appointing Change Agents	1) Actual Adoption of Technology 2) Sustainability	The technology used by the members

This was followed by a response to changes in social intermediation and technology adoption. Our model within the findings confirmed our assumptions within the interpretive TAM framework (Azjen & Fishbein, 1980) that technology change needs attitude building. The adoption of PaySe has led to improvement in financial outcomes for the members of the agricultural self-help groups in Fatehabad, Haryana, India. The success of organizational agility in a turbulent environment includes dynamic capabilities (Teece et al. , 1997), to integrate, build and reconfigure internal and external competencies, market orientation or intelligence regarding the market conditions (Kohli et al. , 1990) and the absorptive capacities including the routines and processes by which firms acquire, assimilate and transform information. (Porter Me, 1987) also, highlight the importance of strategic flexibility. So overall, the Haryana State level mission that runs these self-help groups is highly agile to have adopted technology swiftly during a crisis through social intermediation.

Perspectives on Dynamic Punctuated Equilibrium Model

Every Information Technology project goes through phases such as the Definition stage, System design, physical design, and implementation stage. (Abernathy & Utterback., 1978) Through the theoretical lens of Dynamic Punctuated Equilibrium, their research paper has highlighted the importance of incremental innovations and change. The author argues that sudden business innovation leads to instability, highlighting the need for change. (Romanelli, 1985) highlights in the wake of disruptions or externalities in the form of the pandemic, there is a need for social intermediation to ensure radical innovations (Mokyr, 1990). (Loch et al., 1997) in their research study argue that technology adoption depends on the rate of incremental improvement, organizational learning, and the system's resistance to switching between the equilibrium. (Robinson, Scott., 2007) in their research paper, have highlighted the problem of Punctuated Equilibrium using the Normal Distribution. Table provides a glimpse of strategies deployed by groups to manage change.

Table 2: Models of Punctuated Equilibrium

	Exploitative	**Exploratory**
Punctuated Equilibrium	The long period of Exploitative changes	The brief period of Exploratory Radical changes
Ambidexterity	Simultaneous Exploitative changes	Simultaneous Exploratory changes

Through the lens of the Dynamic Punctuated Equilibrium model, strategic management needs to respond to the challenges and ensure seamless integration and IT alignment during the revolutionary periods.

Table 3: Punctuated Equilibrium & Snow and Miles typology for IS Alignment

Environment	**Snow & Miles Typology**	**Evolutionary**	**Revolutionary Periods**
Internal Environment	*Deep Structures*	1) Mechanistic & Centralized structures	1) Structure reconfigures & disassembles 2) Semi structure hybrid forms 3) Decentralized
	Strategy	1) Defender Strategy 2) Differentiation strategy	**Business Strategy** 1) Analyzer Strategy 2) Prospector Strategy 3) Reactor strategy **Adaptation** IS, IM, IT strategy

	Processes	1) Stable 2) Risk of not being able to adapt to changes 3) Product Engineering 4) Communication & Awareness	1) Innovation 2) Creative Imitators 3) Efficiency 4) Planning 5) Noncentralized control 6) Lack of Experience curve
	Ideology	**Organizational Adaptation** 1) The short period of Metamorphic changes 2) Highly durable order 3) Equilibrium for an extended period **Goal Alignment**	**Organizational Agility** 1) Rapid & Radical spurts in change 2) Change is incremental 3) Resistance to Change 4) The crisis that breaks the systemic inertia 5) Opportunity to learn 6) Development of new structures 7) Incremental adaptations **Transformational Leadership** **Innovation** **Strategic Alignment**
External Environment	*Environment Characteristics*	Stable	Complex environment Turbulence in the task environment
	Strategy	Exploitation Incremental Exploration	Exploration Incremental exploitation is not sufficient

Table 1 discusses the Strategic Alignment through the theoretical lens of dynamic punctuated equilibrium. (Hirschheim and Klein, 1989) in their research paper, they have addressed the issue of Strategic IS Alignment using the theoretical lens of Dynamic Punctuated Equilibrium. The author has analyzed the alignment between the business and Information systems using Snow & Miles typology. The author argues that organizations undergo evolutionary changes during long periods of relative stability. This phase is followed by brief periods of revolutionary changes during which the revolutionary changes occur. Business strategies differ according to the phase of organizational change. (Sabherwaal et al., 2001) in their research paper argue that the business strategies can be classified as Defenders, Prospectors & Analysers. These pertain to business strategy attributes such as Defensiveness, Risk Aversion, Aggressiveness, Proactiveness, Analysis, and Futurity. As per the literature, the Defender strategy is suitable for defensive businesses, risk-averse and low on aggressiveness, proactiveness, analysis & futurity, and Prospectors & Analyzer strategies are suitable for players who are low to medium on defensiveness, risk aversion, and high to medium on aggressiveness, proactiveness, analysis, and futurity. (Gersick, 1988) in their research study have highlighted that groups follow a punctuated equilibrium model of development through alternating between inertia and revolution.. (Uotila, 2017) in their research study, they have discussed how the task environment, which comprises complexity and turbulence, impacts organizational change. In turbulent and complex environments, punctuated equilibrium is replaced by a dynamic equilibrium of ambidextrous nature. (Huberman, Loch and, 1997) in their research paper, have used the Dynamic Punctuated Equilibrium approach to discuss the issue of technology diffusion. The author argues that during incremental shifts, organizations adopt new technology and maintain the old technology. The long period of gradual changes is characterized by business strategies that are more akin to Innovators. Thus, this stage is marked by continuous business innovation.

3. RESEARCH METHODOLOGY

For our study, we have adopted the case study approach as we wish to study the research questions on "how" the self-help groups in Haryana, Fatehabad district have accepted technological changes in the form of implementation of the E Shakti and PaySe to improve the organizational performance, (Walsham, 2006). The case of agricultural self-help groups in Fatehabad, Haryana, is apt for our research study as IT-based banking solutions have been used to facilitate the implementation of business strategies that transform the domain of SHG Bank Linkage into a sustainable banking solution to ensure financial inclusion of the marginalized poor at the bottom of the pyramid. The phenomenon is sufficiently complex and warrants a more subjective interpretation of the problem for the benefit of different stakeholders (Meyers, 1999). The main stakeholders are women who are marginalized and from very backward background, who show resistance to change. Despite benefits of digitization, the groups are unable to adopt technology due to lack of training, financial literacy, motivation and weak infrastructure. As per various studies, the collection of savings from the members and deposition in the bank is the biggest bottleneck for the self-help groups members, due to distance from the banks which are 10 to 12 kms. There is no study on how the agile infrastructure deployment, social intermediation and capacity building by the State Rural Livelihood Mission, under the Government can enable technology deployment and usage to ensure sustainability of self-help groups. Thus, the overall research design adopted for the case study is exploratory case study (Siggelkow, 2007). To derive inductive theories from the exploratory research design, a case study has been used (Eisenhardt, 1989).

Two criteria were used for the selection of the organizations. First, the selected organization must be a group that has leveraged the ICT (Information Communication Technologies) based interface PaySe for conducting the financial transaction in the context of an Indian Self-help group. The adopted technology must have been used in the group-based semi-formal lending organization to enhance the business environment. The case of the self-help groups in Fatehabad, Haryana district, is particularly appropriate for the purpose, as technologies have been used to facilitate the implementation of business strategies.

A (Structured Pragmatic Situational) approach was used for conducting a case study. This involved various steps (1) access negotiation (2) conceptualizing the phenomenon (3) collecting and organizing data (4) constructing & extending theoretical lens (5) confirming and validating the data (6) selective coding (7) theory – data alignment (8) case study report, (Pan, 2011) Research access was negotiated through the gatekeepers and granted access in September 2021 and a total of 11 interviews were conducted. Due consideration was given to the principal rights, and ethical considerations were kept in mind while interviewing the individual respondents. The approvals were solicited from the IRB (Institutional Review Board). To collect data the semi structured interviews were conducted. The interviews were conducted with a State Level Banking Committee member, members of the NABARD E Shakti implementation unit and District Level Rural Livelihood Mission in Fatehabad, Haryana, India. The interviews were placed over three months, and a longitudinal method was used for analysis. It aimed to study past activities and observe the opportunities in current practices, strategy formulation, and implementation. 3 interviews with non-SHG members were aimed to get a fair and unbiased picture of the group task environment. Interviews conducted have been transcribed manually. To validate the data triangulation approach has been used for data analysis. These sources include brochures, publications, videos, websites, and magazines or chroniclers. The research begins with the access negotiation, and then the process enters the framing cycle. The background information is gathered on the organization and phenomena of

interest (Corbin, 1998). Data was collected and analyzed simultaneously, and potential theories were shortlisted for analysis (G, Walsham, 2006). Using initial theory as a sensitizing device, the theoretical lens was constructed using the constructs from the initial theory of *Dynamic Punctuated Equilibrium* and *Snow and Miles* Typology. This *sensitizing* theory was used as a guide for subsequent data collection and analysis. (Klein & Myers, 1999) While interpreting the data, the principle of multiple interpretations, contextualization, and the hermeneutic circle were kept in mind. (Langley, 1999) the narrative strategy was used for the temporal analysis of the data. Data collection and analysis were continued till *Theoretical Saturation* was achieved.

4. CASE DESCRIPTION

The case study pertains to the digitization of the agricultural self-help groups covered under the Self-help group bank linkage program, Haryana State Rural Livelihood Mission to provide access to financial services at the doorstep of the citizens of the nation.

Social Innovation - SHG Bank Linkage Programme

Microfinance is a way to give the poorest of the poor access to finance. Until the 1980s, most self-help groups were subsidized. During the 1990s financial crisis, the Government could not sustain the donor-based microfinance programme through self-help groups. NABARD and MYRADA launched the SHG Bank Linkage initiative in 1987. The Reserve Bank of India piloted the SHG Bank Linkage initiative in 1991 and 1992. The Government of India formed a Working Group in 1995, headed by Sh. SK. Kalia, Managing Director of NABARD. In addition, the Union Budget announced that NABARD would credit link 2 lakh self-help groups in 5 years.. Self-help group bank linkage has evolved as a prominent model due to more excellent loan recovery, savings, and transaction costs (Srivastava, 2005). The temporal evolution of the SHG Bank Linkage initiative in India is shown below:

Table 4: Surviving Financial Crisis - Business Innovation as Business Correspondent Channel

Typology	**Task Environment**
Uncertainty & Financial resource constraints	"*In the 1990s, financial depression took place, and the Priority sector lending program run by the Government became infeasible. Donor-based funding to the poor became impossible."*
	Key Objectives
• Organizational Survival and Stability • Need to include the poor financially • Need for new credit products for the poor	"*The key objective of the Government in this phase was to achieve the objective of sustainable finance. Joint Liability Groups by Social Capital aimed at providing access to finance for the poor people at the bottom of the pyramid were formed under the aegis of the self-help group bank linkage programme"* *"After the adoption of UN Sustainable Developmental Goal of Poverty reduction, financialization of the poor became crucial."*
	Key Strategies Adopted
Structure • New institutional forms adopted to ensure the financialization of the Poor *Business Strategy* • Business Innovation & Restructuring	The Reserve Bank of India took action: 1) **SHG Bank Linkage program** was started to provide credit to a group of homogenous people based on profession, domicile, or geography 2) "*SHG Bank Linkage has emerged as a landmark model in Microfinancing, as it provides access to finance to people at the bottom of the pyramid."*

	3) **NABARD entered into a partnership** with the MYRADA NGO
	Market Orientation
Credit Linkage to provide access to finance	1) SHG Bank Linkage aimed at providing access to the poor at the bottom of the pyramid 2) Groups through Social capital were eligible to raise capital from the banks 3) Marginalized poor became eligible to access formal finance

Precedent for Self-help Group Bank Linkage Model

The Swarn Gram Jayanti Yojana (SGJY) was launched to provide for the financial inclusion of the poor at the bottom of the pyramid. Credit was provided using savings as collateral in two districts in 2015.

It penetrated 75 more Indian communities in 2017. E Shakti worked for the PM Jan Dhan Yojana in 2018. PaySe launched in 2019 to provide online personal banking for the underprivileged. PaySe software improved the lives of self-help group members.

The Pradhan Mantri Jan Dhan Yojana encourages people to save money. In 2016, digital transactions got a considerable boost. The NABARD Financial Inclusion initiative promoted technology in Rural Cooperative Banks. Promoting financial literacy in rural India has become a priority.

RQ1: How organizational agility leads to technology acceptance?

Process map for self-help groups through theoretical lens of punctuated equilibrium

Process for self-help group comprises of forming, storming, norming and performing stage. In traditional model with manual operations the process is without any strategic IT alignment.

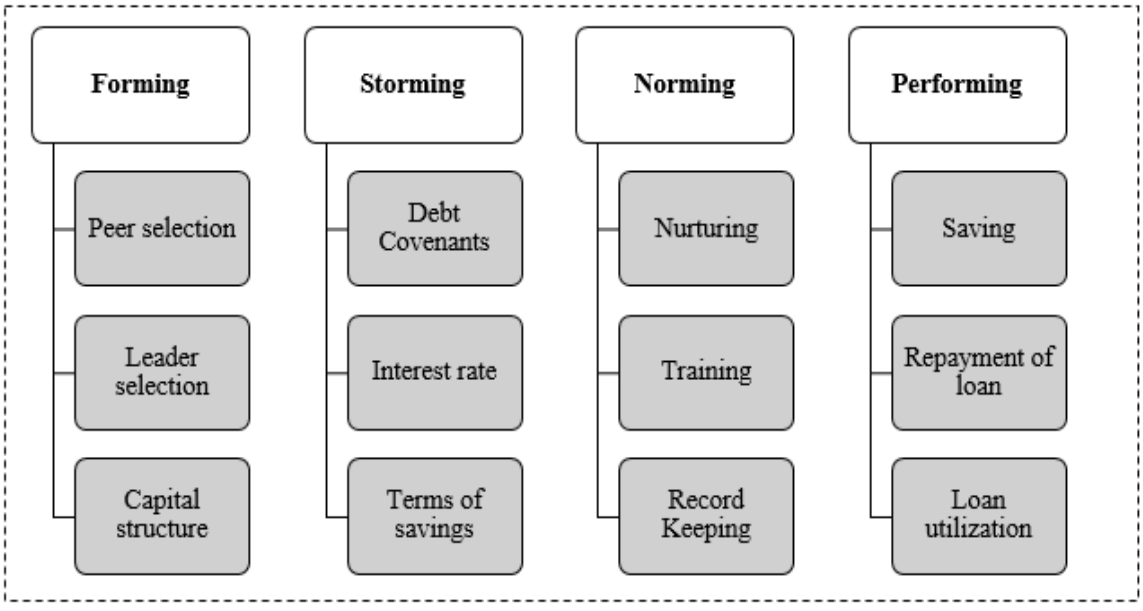

Figure 1(a) – Manual operational processes of self-help group (Evolutionary period – 2018-19)

Strategic alignment through technology deployment

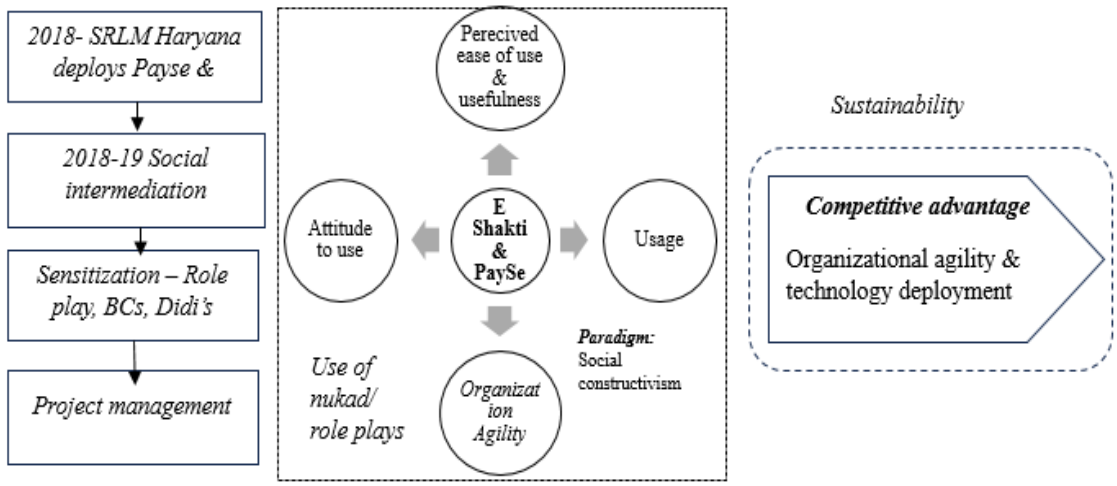

Figure 1(b): Dynamic Equilibrium, Technology Acceptance Model, Enterprise Agility (Revolutionary period since 2019)

Figure 1 discusses the technology acceptance in a Group and its impact on organizational agility. During the group formation and storming stage, self-help groups are in a state of equilibrium. However, after the norming and performing background, the groups undergo punctuated revolutionary changes. During these bursts of changes, organizations, as per the Technological Acceptance Model, change and develop intention and then actual usage of the system. This leads to organizational agility.

Evolutionary Period 1: Since the start of the E Shakti initiative in 2018, NABARD has been highly proactive. Self-help groups are semi-formal institutions with no formal structure or form. As discussed in Figure 1(a) Individual Self-help organizations are responsible for maintaining the books of account, including the Savings, Loans, and Attendance registers. In 2018, the State Level Rural Mission in Fatehabad district, Haryana, introduced the PaySe application, giving users a personal interface. In one of the interviews the group member responded that "There is no bank in the village and the villagers have to travel approximately 10 to 12 kms to access banking". Thus, the banking remains the biggest bottleneck for the women, besides book keeping. Moreover, to adopt technology, the State rural livelihood mission appointed Nucleus software for Payse web solution for banking, a third-party vendor. From 2018 to 2019 SRLM Haryana conducted training sessions through business correspondents to train SHGs (Self-help groups). This helped to improve the technological readiness of the self-help groups. *Thus, the first hypothesis that organizational agility leads to technology readiness and adoption is accepted.*

RQ2: How technology enhances organizational performance during the crisis and revolution?

Revolutionary Period: Following the Covid 2019 pandemic, Haryana Livelihood Rural Mission adopted PaySe for self-help group members. Members get a personal card with savings loaded on it. Members can deposit savings with a representative or at a PaySe. E shakti was quickly deployed to ensure online MIS preparation and update loan, savings, and attendance registers. It eliminated the need to meet or deposit cash at the bank. PaySe IT initiatives bring revolutionary improvements and ensure organizational resilience. As in Fig 1 (b) It saved time traveling to the bank and negotiating with members, taking loans, and depositing money. Users

or the members of the group are counselled by PaySe to understand the relevance of this technology. Some members initially resisted the adoption of technology, but with social intermediation, counselling by Didis and bank sakhis, role plays, nukad nataks and cultural plays the technology was seamlessly integrated into the system leading to organizational agility. This helped the poor borrowers improve their lives through technology and helped the self-help groups in Haryana, Fatehabad, India emerge as more agile informal organizations.

Strategic Management of Change: These community organizations improvised the change through business process reengineering and deploying the process-oriented IT capabilities through social intermediation and training. The groups gained competitive advantage in terms of access to markets and banks through technology at reduced cost. Strategic alignment by SRLM Haryana helped groups at Fatehabad Haryana to become operationally and financially sustainable. *Thus, the second research question that technology acceptance enhances the financial and organizational sustainability of self-help groups is accepted.*

Organizational agility and technology acceptance

SRLM Haryana has contributed immensely to capacity building through bank Sakhis, Didi's, business correspondents. These people act as agent of change through trainings, capacity building and monitoring. Table 5 depicts the many characteristics of technology acceptance and organizational agility as seen through the theoretical lens of Dynamic Punctuated Equilibrium. This helped us achieve data theory alignment and theory model alignment. While generating the theory, care was taken that the theory is parsimonious (Warren Thorngate, 1976). The emergent model was found to conform to the principles of interpretative research (Klein & Meyers , 1999).

Table 5: Organizational Agility through IT Alignment through theoretical lens of Dynamic Punctuated Equilibrium Model

Paradigm	Task	Structure	Technology	Organizational Agility
Resource-Based View	***Group-specific*** 1) Leader selection 2) Literacy 3) VRIF 4) Resource allocation	1) Semi-formal group 2) Social Cohesion 3) Collaborative 4) Organisational capabilities	1) Digital Proficiency 2) Technological capabilities	Competitive Advantage
Resources → **Capabilities** → **Competitive**				
	"*Dynamic alignment of Business and Information Systems in a complex and ever-changing business environment, to ensure appropriate leveraging of the resource capabilities in an organization. It leads to the emergence of the Dynamic Capabilities*"			
Dynamic Alignment	**Business** 1) eBooks 2) Transactional data 3) Grading 4) Reports 5) MIS	**Structure** 1) Business Process Reengineering 2) IS Alignment 3) IM Alignment 4) IT Alignment **IT Capabilities** **Business Capabilities** Differentiator	**Technology** 1) Web-based technologies 2) MIS 3) IT-based business ecosystem	Sensing ↓ Responding

Strategy Evolutionary ↓ Revolutionary	Prospector ↓ Analyzer Proactive ↓ Reactive	Mechanistic, Centralized	1) Low cost 2) Differentiation 3) Alliance 4) Innovation	

Table 5 highlights that the groups at Fatehabad, Haryana could sense and response proactively to challenges of Covid-19 as social distancing. The differentiating factor is IT alignment and change management. At the block level and district level SRLM Haryana deployed vendor who provided infrastructure and provided trainings to the members of the self-help groups.

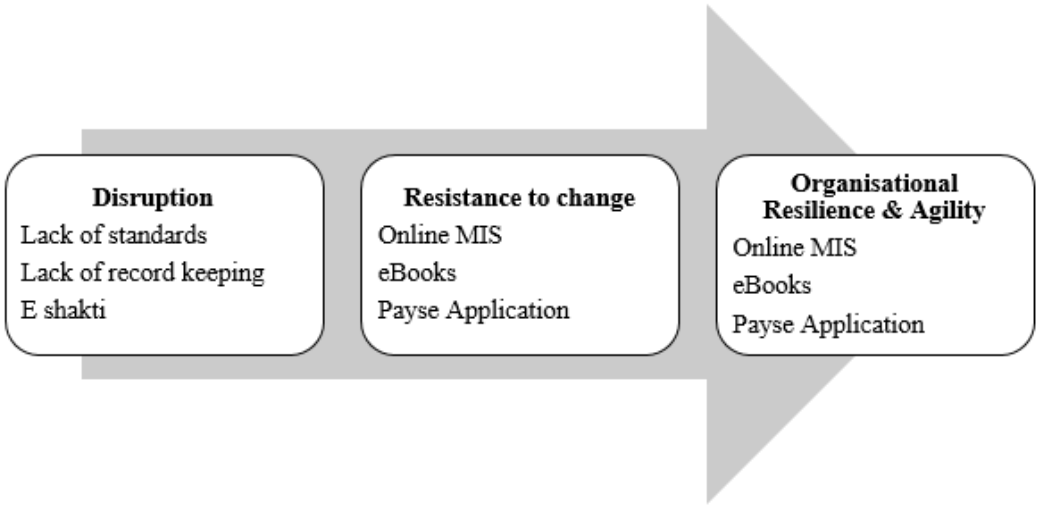

Figure 2: Technology Acceptance Model for Self-help groups within the framework of Dynamic Punctuated Equilibrium

Figure 2 describes the technology acceptance model for the Self-help group within the framework of Dynamic Punctuated Equilibrium. From the RBV (Resource Based View) framework, the organization has various functional capabilities such as financial capabilities, and technological capabilities that are valuable, rare, and cannot be imitated. Self-help groups in Haryana with a well-honed sensing capability responded by implementing PaySe Web applications. Technological capabilities lead to organizational agility. Dynamic alignment through the lens of punctuated equilibrium refers to a proactive approach to technology adoption during a crisis period. It involves sensing and responding, and technological capabilities comprise eBooks, transactional data, Grading, and MIS. As the business ecosystem changes from evolutionary to revolutionary the business strategy changes from prospector to the analyser. This process of transformation leads to business innovation, differentiation, and alliance.

5. CONCLUSION

E Shakti and PaySe have emerged as strategic capabilities for Joint Liability Groups or Self-help groups. These groups provide a strategic advantage in the form of Core competency and competitive advantage. Various externalities in the form of resources and organizational capabilities impact the success of the self-help group linkage program. These capabilities lead to core competency and then to competitive advantage for an organization. During the evolutionary period, that is during the period of stability; the organizations undergo incremental

changes and evolution in an organization. And during the revolutionary period, the Self-help groups have undertaken Information Technology implementation in the form of E Shakti and PaySe to leverage the organization's technological capabilities.

References

1) Abernathy, W. J., J. Utterback., 1978 . Patterns of Industrial Innovation. *Technology Review* .

2) Agarwal Karahanna, E., 2000. Time flies when you're having fun: Cognitive absorption and beliefs about information technology usage. *MIS Quarterly,* Volume 24, pp. 665-694.

3) Alfadda and Mahdi, 2021. Measuring Students' Use of Zoom Application in Language Course Based on the Technology Acceptance Model (TAM). *Journal of Psycholinguistic Research,* Volume 50, pp. 883-900.

4) Ashby, W. R., 1960. *Design for the Brain.* New York: Wiley.

5) Azjen & Fishbein, 1980. *Understanding attitudes and predicting social behavior.* Englewood Cliff : Prentice - Hall .

6) Bajaj, A. a. N. S. R., 1998. A feedback model to understand information system usage.. *Information Management,* 33(4), pp. 213-224.

7) Chan, Y.E.; Storey, V.C, 1996. The use of spreadsheets in organizations: Determinants and Consequences.. *Information Management,* 31(3), pp. 119-134.

8) Cohen W.M. and Levinthal, 1990. Absorptive capacity : a new perspective on learning and innovation. *Administrative Science Quarterly,* pp. 28-52.

9) Conboy and Fitzgerald, 2004. *Toward a Conceptual Framework of Agile Methods..* Verlag : Springer .

10) Corbin, A. S. a. J., 1998. *Basics of qualitative research: Techniques and procedures for developing grounded theory.* CA : Sage.

11) Cyr et al., 2006. Design asethetics leading to m loyalty in mobile commerce. *Information Management,* Volume 43, pp. 950-963.

12) Davis, F., 1989. Perceived Usefulness & Perecived Ease of Use and user Acceptance of Information Technology. *MIS Quarterly,* Volume 13, p. 319.

13) Dias et al., 2021. Predicting Market Acceptance of Autonomous Vehicles.. *International Journal of Business Innovation and Research.*

14) Doob, L. W., 1947. The behavior of attitudes.. *Psychological Review,* 54(3), pp. 135-156.

15) Eisenhardt, K., 1989. Building theories from case study research. *Academy of Management Review,* 14(4), pp. 532-550.

16) Eisenstat, B. a., 2000. The Silent Killers of Strategy IMplementation and Learning. *Sloan Management review* .

17) Fazio, R.H., 1986. On the Power and Functionality of Attitudes: The Role of Attitude Accessibility. *In A. R. Pratkanis , S. J. Breckler , & A. G. Greenwald (Eds.),Attitude structure and function,* pp. 153-179.

18) Fenech, T., 1998. Using perceived ease of use and perceived usefulness to predict Acceptance of the World Wide. *Computer Netwrok ISDN System,* Volume 30, pp. 629-630.

19) Fishbein, M., & Ajzen, I., 1975. Belief, attitude, intention, and behavior: An introduction to theory and research. *Action Control - Fromm Cognition to Behavior.*

20) G, Walsham, 2006. Doing Interpretative Research. *European Journal of Information Systems.*

21) G. Lee, W Xia, 2010. Toward Agile : an integrated analysis of qualitative and quantitative field data on siftware development. *MIS Quarterly,* 34(1), pp. 87-114.

22) Gersick CG, 1984. *The lifecycle of adhoc task groups : Time transition and learning in teams,* New Haven: Unpublished doctoral dissertation, Yale University, New Haven, Connecticut.

23) Gersick, 1988. Time and Transition in Work teams : Towards a new model of group development. *Academy of Management Journal,* 31(1), pp. 9-41 .

24) Gersick, C. J., 1991. Revolutionary Change Theories : A multilevel exploration of Punctuated Equilibrium. *Academy of Management Review* .

25) Ginzberg, M. J., 1981. Early diagnosis of MIS implementation Failure: Promising results and unaswered questions. *Management sciences,* 27(4), pp. 459-478.

26) Goncalves & Goncalves , 2012. Overcoming Resistance to Changes in Information Technology Organizations. *Procedia technology* , pp. 293-301.

27) Heck, Baalen, Meulen , 2012 . Acheiving high performance in a mobile and green workplace. *MIS Quarterly* .

28) Hirschheim, R.A. and Klein, H.K, 1989. "Four Paradigms of Information Systems Development. *Communications of the ACM* , 9(4), pp. 1199-1217.

29) Huberman, Loch and, 1997. A Punctuated Equlibrium Model of Technology Diffusion. *Management Sciences.*

30) Igbaria, M., Guimaraes, T. & Davis, G., 1995. Testing the determinants of microcomputer usage via a structural equation model. *Journal of Management Information System,* 11(4), pp. 87-114.

31) James E. Bailey and Sammy W. Pearson, 1983. Development of a Tool for Measuring and Analyzing Computer User Satisfaction,. *Management Sciences* , 29(5), pp. 530-545.

32) Joel Mana Gonçalvesa, *. R. P. d. S. G., 2015. Overcoming resistance to changes in information technology. *Procedia Technology.*

33) KS. Al Omoush et al., 2020. The impact of social capital and collaborative knowledge creation on e-business proactiveness and organizational agility in responding to Covid crisis. *Journal of Innovation and Knowledge,* pp. 279-288.

34) Klein & Meyers , 1999. A set of principles for conducting and evaluating interpretive field studies in information systems. *MIS Quarterly* , 23(1), pp. 67-94.

35) Klein, H. K., & Myers, M. D, 1999. A set of principles for conducting and evaluating interpretive field studies in information systems. *MIS Quarterly,* 23(1), pp. 67-88.

36) Kohli et al. , 1990. Market orienatation : the construct, research propositions and managerial implications. *Journal of Marketing* , 54(2), pp. 1-18.

37) Langley, 1999. Strategies for theorizing from process data. *Academy Management Review* , pp. 691-710.

38) Larsen, T. & Wetherbe, J., 1999. An Exploratory Field Study of Differences in Information Technology Use Between more and less innovative middle managers. *Information Management,* 10(2), pp. 155-176.

39) Levinthal & March, 1981. A model of adaptive organizational search. *Journal of Economic Behaviour and Organization,* pp. 307-333.

40) Loch et al., 1997. A punctuated Equlilibrium Model of technology Diffusion. *Management Sciences,* 45(2), pp. 160-177.

41) Lu, Y. and Ramamurthy, K. (2011) Understanding the Link between Information Technology Capability and Organizational Agility: An Empirical Examination. *MIS Quarterly*, 35, 931-954. https://doi.org/10.2307/41409967

42) Lucas, H., 2012 . *The search for survival: Lessons from disruptive technologies.*. s.l.:Praeger, Westport .

43) Lyytinen, K. a. G. M. R., 2006. Information System Development Agility as Organizational learning. *European Journal of Information Systems,,* Volume 15, pp. 183-199.

44) March, Cyert and, 1963. *Behaviorial Theory of Firms.* New Jersey : Prentice Hall .

45) March, D. A. L. &. J. G., 1981. A Model of Adaptive Organizational Search. *Journal of Economic Behaviour and Organization* , 2(4), pp. 307-333.

46) March, J. G., 1991. Exploration and Exploitataion in Organizational Learning. *Organization Sciences* .

47) Maryam Alavi and John C Henderson, 1981. An Evolutionary Strategy for Implementing a Decision Support System. *Management Science,* 27(11), pp. 1309-1323.

48) McAfee et al., 2008. Investing in the IT that makes a competitive differences. *Harvard Business Review,* Volume 33, pp. 98-107.

49) McKechnie et al., 2006. Applying the technology acceptance model to the online retailing of financial services. *International Journal of Retail & Distribution Management,* 34(4), pp. 388-410.

50) Meyers, K. a., 1999. A set of principles for conducting and evaluating interpretative field studies in information systems. *MIS Quarterly* .

51) Mokyr, 1990. *The Lever of Riches: Technological Creativity and Economic Progress.* New York : Oxford University Press .

52) Mrugalska, B., & Ahmed, J. (2021). Organizational agility in industry 4.0: A systematic literature review. *Sustainability,* 13(15), 8272.

53) Pan, S. T. B., 2011. Demystifying case research: A structured–pragmatic–situational (SPS) approach to conducting case studies. *Information and management,* 21(3), pp. 161-176.

54) Park, E. S., & Park, M. S., 2020. Factors of Technology Acceptance Model for Construction IT. *Applied Scinces MDPI,* 10(22).

55) Porter Me, 1987. From competitive advantage to corporate strategy.. *Harvard Business Review,* 65(3), pp. 43-59.

56) Radu ban et al., 2015. Self-Help Groups, Savings and Social Capital: Evidence from a Field Experiment in Cambodia. *Journal of Economic Behavior and Organization* .

57) Radu ban et al., 2020 . Self-help groups, savings and social capital: Evidence from a field experiment in Cambodia. *Journal of Economic Behavior and Organization* , pp. 174-200.

58) Robinson, Scott., 2007. *Puntcuated Equilibrium Model in organizational Decision Making.* s.l.:s.n.

59) Romanelli, T. a., 1985. Organizational evolution : Metamorphosis Model of Convergence and reorientation. *Research in Organizational Behavior.*

60) Romm, C.T.; Pliskin, N.; Rifkin, W.D, 1996. Diffusion of e-mail: An organizational learning perspective. *Information Management* .

61) Sabherwaal et al., 2001. Alignment Between Business and IS Startegies : A Study of prospectors, Analyzers & Defenders. *Information Systems Research,* 12(1), pp. 11-33.

62) Sambamurthy et al., 2003. Shaping agility through digital options: Reconceptualizing the role of information technology in contemporary firms. *MIS Quarterly* , Volume 27, pp. 237-263.

63) Sambamurthy, Bhardwaj and Grover , 2003. Shaping agility through digital options reconceptualizing the role of Information technology in contemporary firms. *MIS Quarterly* .

64) Schlesinger et al., 2013. Choosing strategies for change. *Harvard Business Review,* Volume 57.

65) Schultz, S. a. P., 1987. Strategy and Tactics in a Process Model of Implementation. *Interface* .

66) Seo, D., and La Paz, A.I., 2008. Exploring the dark side of IS in achieving organizational agility. *Communications of the ACM,* Volume 51:11 , pp. 136-139.

67) Siggelkow, N., 2007. Persuasion of case studies. *Academy of Management Journal* .

68) Simon, J. G. M. a. H., 1958. *Organization.* New York : John Wiley and Sons.

69) Srivastava, P. B. a. P., 2005. Scale up microfinance for rural poor. *World Bank Policy Research Working Paper No. 3646.*

70) Stella Maris Juhar Baptista, 2021 . The Influence of Financial Attitude, Financial Literacy, and Locus of Control on Financial Management Behavior (Study Case Working-Age of Semarang). *International Journal of Social Science and Business,* 5(1).

71) Swanson, E. B., 1974. Management Information Systems: Appreciation and Involvement. *Management Sciences,* 21(2), pp. 178-188.

72) Tallon, 2019. Information technology and the search for organizational Agility: A systematic review with future research. The journal of strategic information systems, 17(28), pp. 218-237.

73) Tan, et al. (2019). Realising platform operational agility through information technology–enabled capabilities: A resource-interdependence perspective. Information Systems Journal, 29(3), 582-608.

74) Tan, B., Pan, S. L., Chou, T. C., & Huang, J. Y. (2010). Enabling agility through routinized improvisation in IT deployment: The case of Chang Chun Petrochemicals.

75) Teece et al. , 1997. Dynamic capabilities and strategic management. *Strategic Management Journal* , 18(7), pp. 509-533.

76) Teece, D. P. M. L. S., 2016. Dynamic capabilities and organizational Agility: Risk, uncertainty,. *California Management Review.*

77) Tuckman & Jensen , 1977. Stages of small group development. *Group and organizational studies* , pp. 419-427.

78) Tushman et al., 1985. Organizational evolution : A metamorphosis model of convergence and reorientation. *Research in organizational behaviour,* pp. 171-222.

79) Uotila, J., 2017 . Punctuated Equlibrium or Ambidexterity : Dynamics of Incremental and Radical Organizational Change over time. *Industrial and Corporate Change* .

80) Vallerand et al., 1992. Ajzen and fishbein‟s theory of reasoned action as applied to moral behavior : A confirmatory factor analysis. *Journal of Personality and Social Psychology* , 62(1), pp. 98-109.

81) Venkatesh et al., 2003. User Acceptance Information Technology towards a unified view. *MIS Quarterly,* Volume 25, pp. 425-478.

82) Walsham, G., 2006. Doing Interpretive Research. *European Journal of Information Systems,* 15(3), pp. 320-330.

83) Warren Thorngate , 1976 . In General" vs. "It Depends": Some Comments of the Gergen-Schlenker Debate.. *Personality and Social Psychology Bulletin.,* pp. 404-410.