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Digital disrupters: Decisiveness as an attribute driving business relations by using digital technologies

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Abstract

Strategic decisiveness is one attribute that drives growth. This study examines the effects of using information and communication technology (ICT) as digital disrupters by organizations to small retail businesses in Bangalore. There is a body of research, which highlights on factors causing digital divide and strategies used to bridge the gap. This study is limited to Bangalore as the city is known for its people being tech savvy, which gives a unique opportunity to carry out research into the small retail businesses. The research seeks to identify the differences and similarities among the kinds of retail businesses on using ICTs for decision making. Many studies indicate that high performance organizations are a result of manager's quality, speed, and execution of their decision making. ICTs boost these factors to drive strategic decisions, which demand organizations to rethink to build their relations with retailers to sustain business competitiveness. There is evidence of retailer's increased confusion in dealing with digital tools. It is hypothesized that the variable decisiveness has a direct effect on building business relations. The research approach is a quantitative study based on a questionnaire distributed in person to small retailers in Bangalore market. The intensity of the relation is measured using Technology Readiness Index (TRI) with multiple item scale. Based on the findings, the study concludes by discussing on the practical uses and derived satisfaction on the uses and gratification theory in communication.

Keywords: Decisiveness, digital disrupters, technology readiness

I. Digital disrupters: Driving future business relations

It is a busy weekday at Bangalore, Rithvik, age 21, needs a book, which supplements to complete his week's assignment, but feels it is uncomfortable to visit mall or the book stores in MG road or Avenue road due to the time consumption caused by traffic, to purchase the book. He is connected on the internet and engages into an online chat with oxfordBookstore.com and amazon.com and identifies the book in stock and toggles to another screen to search for the same title and finds that, Sapna Book House offers a better deal. He closes the transaction by swiping his purchase points offered by the Canara Bank Debit Card as well as Sapna Book house and

saves about 30 percent of the cost of the book. He is given an option to have the book delivered to him in 24 hours or to pick the book from the nearest Sapna book House. Radhika, his mother, is heading to Thiruvananthapuram, Kerala the weekend and knows she has to return to work by Monday. She logs on to makemytrip.com and cleartrip.com takes a look at the cheapest ticket available online and compares with the jetairways.com, airasia.com, airindia.in, spicejet.com, and books a ticket by her flying points and the credit card discounts at air.irctc.co.in and saves about 40 percent on the air ticket. Few years before both Rithvik and Radhika would have gone in person to the respective retail outlet to purchase the book or the air ticket. However, it is a fictional scenario, but this purchase process is executable in present day. Disruption in retail undergoes a feverish feeling for many retailers, who have adapted to technology and those who are yet adapted to technology in the retailing process.

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II. Decisiveness in business

Consumers take purchase decisions very fast and in order to stay in competition, the retailers need to match the speed of the consumer's decision-making process. The answers to the question whether technology would help in decision making in the retail process could be established by theories in communication. Today, e-commerce is progressing and establishing its contributions to the gross domestic product (GDP). E-commerce is now approaching \$200 billion in revenue in the United States and accounts for nine percent of total retail sales, which is up from five percent few years ago. Today digital retailing is profitable. Amazon's five-year average return on investment is about 17 percent whereas, traditional discount and department stores average is 6.5 percent [1]. The consumers are diffused by digital promotions through mass media in India. Many are victims to these digital products and have adapted to use the same. With the usage of mobile phone applications on the rise (instant messaging, social networking, gaming, entertainment, travel, banking, retailing, e-governance, and mass media), the traditional stores need to be more attractive for consumers to visit, though it would exist to enable competition to online retailers and stay ahead in the digital world.

Some of the popular mobile apps for online shopping in India are making their presence in many smart phones in Bangalore. E-retailers like redbus, makemytrip, flipkart, amazon, snapdeal, homeshop18, naaptol, ebay,groupon, ngpay, and aaramshop have over a million downloads under android platform [2], [3]. Retail business are building mobile apps knowing that, these tools can shape the instore experience, empower the purchasing process, and create interesting and dynamic ways to interact with the customers [4]. Many of these apps give varied experiences to the customer. There is not uniformity like the traditional retailing format in attracting customers to their stores.

There are studies focusing on cognitive aspects of decision making by entrepreneurs [5], but there are fewer literature with respect of decision making using ICTs. If ICTs are to be used then the behavioral aspect of businessman would be questioned. There

are behavioral oriented approaches highlighting on businessman's personality, backgrounds, and traits. In the trait approach the focus is on personal character of individuals [6], [7], [8], [9], [10], [11], [12] and [13].

III. Statement of the research problem

With digital disrupters being prominent in Bangalore city among sellers and buyers, made author wonder what underlying issues may have inhibited and what he perceives as an inevitable change in business. Are retailers interested in using digital technologies? What are the popular digital tools that disrupt traditional business process? Are retailers aware about these tools? Would they use these tools and what business benefits would they derive from using technologies for change? Can they make business decisions to foresee better business opportunities by using ICT tools?

The emergence of technology tools use both in the business to consumer and consumer to consumer commerce have evoked the interest of the consumers to make an attempt to transact over trading ICT tools. The Central Bank has shown clear leadership and decisiveness enabling Qatar banking and financial sector to be held in high regard in global financial markets. In normal scenario, people adopt to technology based on the theory of diffusion of innovation. But, the speeds at which the business people adopt are far higher than others in society in order to keep up to competition. Many studies have highlighted on the effects, digital divide, and economic growth. But, few studies have determined the use of ICTs boost in decisiveness. This study fills the gap by looking at the relationship between the factors of Technology Readiness (TR) and decisiveness. This study provides knowledge whether decisiveness as an attribute drives business for those who are using ICTs. This study investigates on the TR factors developed by [14] and relates to the index on decisiveness developed by the author

IV. Theory

A. Technology acceptance model (TAM)

The technology acceptance model (TAM) was designed explicitly to explain computer usage behaviour. It is an adaptation of Fishbein and Azjen's

theory of reasoned action (TRA), which has been successful in predicting and explaining behaviour in general. This study has incorporated the changes in the approach of taking decisions using ICTs in business.

Technology readiness index

TR refers to “people’s propensity to embrace and use new technologies to accomplish goals in home life and at work” [14]. It is a combination of positive and negative technology-related beliefs, which may vary among individuals. These beliefs put together determine an individual’s tendency to use technology [15], which are into four dimensions: optimism, innovativeness, discomfort, and insecurity [14].

A1. Uses and gratification theory

Uses and gratifications (U and G) research has its foundation in communications research [16]. The U and G assume media use is determined by a group of key elements such as people’s needs and motives to communicate and social environment [17]. In the TAM context, motives are classified to extrinsic and intrinsic motives [18] that are implied in consumer behavior. According to the authors, the two determinants perceived usefulness and perceived ease of use are expected to influence intentions to use a system, which in turn influence actual system usage. There are several gratifications from internet use such as search, email, personal chat, socialization, gaining information, and knowledge [19]. This study takes U and G approach to understand the TR constructs that motivates individuals to take decisions, thereby full filling their needs and wants. Following the theoretical basis of TRA and U and G, the hypothesis of this study is framed. TAM has undergone many changes and hence decisiveness as an attribute has been adjusted in this study.

A2. Research objectives

The main objective of this study was to establish the TR factors that influence decisiveness. The study had two purposes; a) to identify the TR dimensions by retailers and b) to find the relation of the TR factors to the attribute decisiveness.

A3. Statement of hypotheses

In order to achieve the stated purposes of the study in consistency with the framework of the study, null

hypotheses were tested. There are two hypotheses relating to TR and decisiveness.

- 1) H0: Factors of TR has no significant relationship with decisiveness.
H1: There is a significant relationship between factors of TR with decisiveness.
- 2) H0: TR factors are not the key drivers to decisiveness
H1: TR factors are the key drivers to decisiveness.

A4. Significance of the study

The results of the study are useful to the body of literature in management and communication. The management of businesses could see the various factors of TR by retailers such an optimism, innovativeness, discomfort, and insecurity and could gauge the level of uses and derived satisfaction of doing business upon using ICTs for business decisions.

A5. Scope of the study

The study is limited in investigating about four TR indexes on the factor decisiveness and only among people working at general merchandize retail outlets, but notes that there are other business communities as well in Bangalore.

A6. Review of literature

Communication is very important to the development of consumer-retailer relationships specially to impart information to the consumer. Today the consumer expects to be valued, nurtured, and often coddled [20]. Companies are better suited integrating consumer needs through communication to gain brand image [21] and [22]. By continual communication, there is a general consensus in literature that trust is of indisputable importance [23]. Market research indicates that store satisfaction contributes the most to an individual’s perception of store attitude, which results in positive or negative purchase intention [24]. Therefore, consumer loyalty is a direct result of the strategic efforts of a firm matching the consumer’s needs through their communication channels, satisfaction, trust, and store commitment [23].

The recent trend globally on digital technologies is such that mobile apps are used, to attract consumers

to their store [25]. Small retailers have begun to use mobile apps to promote incentive programs like mobile exclusive discounting, product transparency, and digital notification system [25] and [26]. Modern consumers are adaptive to touchtone screens and this has increased spontaneous purchasing and reduced decision deferment [27]. Studies also indicate that, software is most effective, if it is simple to use, thereby achieving the perceived usefulness [18]. It is suggested by [28] that, future research on digital technologies aside from usability testing should be conducted in order to determine their effect on consumer-retailer relationships.

Hence, it is apt to check, if retailers are primarily engaged in using ICTs for progressiveness in business. Studies indicate that TR refers to “people’s propensity to embrace and use new technologies to accomplish goals in home life and at work” [14]. However, these believe determine a person’s tendency to use technology [15], which can be categorized into four dimensions: optimism, innovativeness, discomfort, and insecurity [14] and tested on four dimensions with 36-item scale with Cronbach’s alpha ranging from 0.74 to 0.81. Out of which 10 items were tested on optimism with alpha 0.78. Optimism relates to a positive view of technology and a belief that it offers people increased control, flexibility, and efficiency in their lives. Innovativeness tested with five items on alpha 0.82 referring to early adopters as technology pioneer and thought leaders. Discomfort tested with

eight items on alpha 0.79 referring to perceived laggardness over technology and a feeling of being beset by it. The fourth-dimension, insecurity tested with five items on alpha 0.72 indicating distrust on technology and uncertainty about its capacity to work correctly. [15] extracted the same four-factor structure with Cronbach’s alpha ranging from 0.74 to 0.88. TR was used as a predictor of TAM [29]. Linkages between perceived usefulness, perceived ease of use, and actual use of technology are well established in [18], [30], and [31]. Figure 1 shows the research model including the hypothesized relationships between the dimensions of TRI, TAM, and actual use of technology [29] indicating, that adoption of new technologies involve individual as well as system specific factors.

Having reviewed the TRAM, it was necessary to identify studies based on how retailers take business decisions using ICTs. The success story of M-Pesa in Kenya amongst the diaspora citizens in the country [32] is an implication that technology use boosts the business. Tse [33] found that traditional cultural differences tend to diminish, when decision technology is used projecting a globalized scenario. Executives face challenging decision environments in the globalized scenario and success can be achieved only through committed and dedicated managerial actions. Hence, self-confidence managers are able to market their innovative products better [34]. The food security chain for urban poor can be streamlined

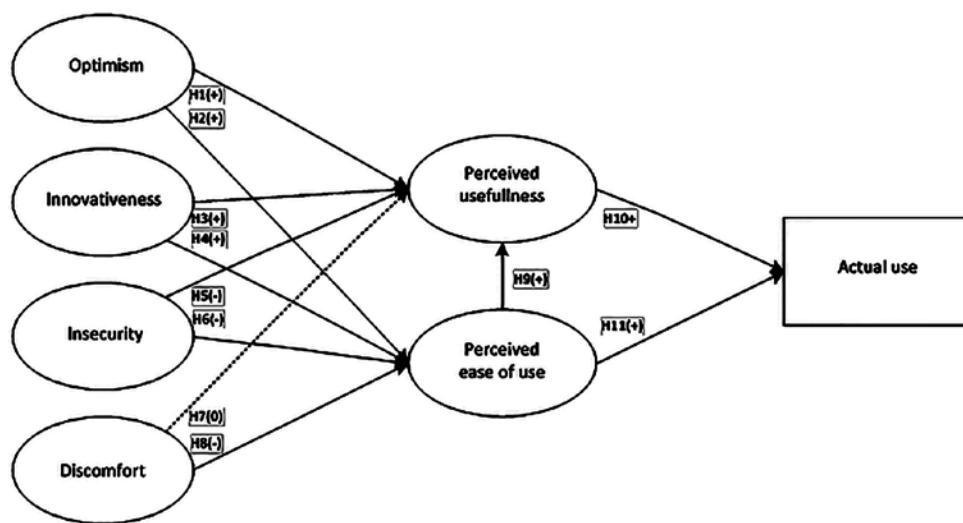


Figure 1: TR acceptance model [29]

with smart business network using GPS, RFID, UID, sensor networks, mobile, call centers, etc [35]. It is vital to use technology for strategic planning and implementation process in retail sector in India [36]. Retail chains can be viewed as new institutions in agriculture/agribusiness sector as they build business relations using ICTs [37]. The smaller markets need smart networks, value chain financing, leveraging networks and use of ICTs, which can promote efficiency and inclusiveness of the linkage [38]. Hari Shankar Bhatt says, "With an enterprise resource planning (ERP) system in place, we have saved a lot because of improved efficiency, better management, and lower manpower costs." Thamanna, a Bangalore-based designer store, adopts technology to manage and boost its business. Inventory control, finance and accounts management, management information system (MIS), security, and branding are some of the benefits on automation of the store [39]. The growth of modern formats in retail sector is slower than other countries due to skill set, structural, and regulatory constraints [40].

ICTs have become a driving force in the globalized era for conducting timely business transactions in the competitive market. In order to grow the business, timely decisions have to be taken by individuals supporting the business. Today in most retail outlets in Bangalore, it is noticed that the companies or proprietor businesses use ICTs to depend on information for decision making and maintain business relations.

The literature reviewed on the consumer-retailer relations enhanced by use of technology and on the concept of TR, TAM, and technology readiness acceptance model (TRAM) used to measure technology perception, use and adoption. The research gap reveals that majority of these concepts have been used for adoption of ICTs in varied business fields. There has been very less literature on decisiveness as an attribute to enhance the growth of business especially in the vibrant retail sector in Bangalore. This study bridges the gap by identifying how decisiveness as an attribute influences the TRI and TAM.

B. Conceptual model

The conceptual model consists of the independent, moderating, and dependent variables. Independent variables are the factors and with four indexes in each namely optimism, innovativeness, discomfort, and insecurity. The respondents profile of those, who represent the retail outlets are the moderating variables namely gender, age, and the highest qualification. The dependent variable is the attribute decisiveness with five four indexes. The variables have been identified by theoretical framework developed by previous studies. The dependent variable has been introduced by the author. The study expects results on TRI factors being influenced by decisiveness on use of ICTs.

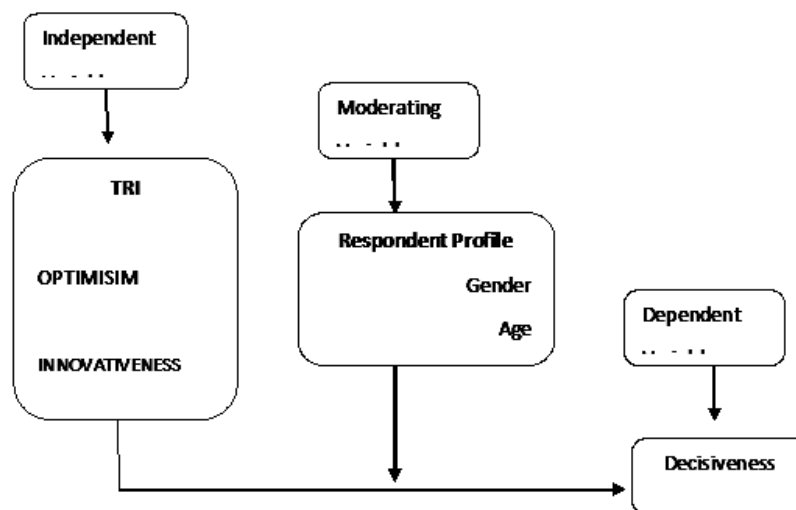


Figure 2: Conceptual model [41]

V. Methodology

The research methods include the explanations of the research design, target population, sample design, method of data collection, data analysis tools and presentation, unit of analysis and reliability, and validity test.

A. Research design

The research design for the study was a correlational survey. The correlation design defines the important variables associated with the problem [42]. The research used quantitative data, which are analyzed using tables, graphs, and statistics. The data was collected using a self-administered questionnaire.

B. Target population

The target population of the study consisted of general merchandize retailers in Bangalore city. India has about 11 shop outlets for every 1,000 people [43].

C. Sample design

The sampling methodology involved selection of the sample from the retail sector in Bangalore. The retail sector is classified as food retailers and traditional general merchandize. This study intervened only with the general merchandize retailers. The study used probability sampling technique. Stratified random sampling was applied to select 237 respondents. At 95percent degree of confidence level with 6.36 as confidence interval is good. The World Bank conducted a survey of 1,948 retail stores in 16 states (provinces) and 41 cities of India in 2006 finding that 27 percent of the respondents find labor regulation to be an obstacle for their business with significant variation in the figure across states.

D. Data collection

A survey using self-administered structured questionnaire on four technology readiness (TR) factors namely optimism, innovation, discomfort, and insecurity on 20 indexes was carried out with decisiveness as an attribute with four indexes to collectively correlate with the TR among 237

respondents. Surveys are often carried out in a limited area and at one point in time [44].

Data collection included completion of the questionnaires by respondents at retail outlets in parts of Bangalore City namely, Indiranagar 100 feet road, Jayanagar, Avenue Road, and surrounding area. The instruments were administered by the researcher with high accuracy in the field [45] during March to April 2015. Pilot testing of reliability and validity of instruments and administration of the research instruments was done. About 25 respondents were sampled from the population using convenient sampling. Gall et al. [46] attest that 20 respondents suffice for a pilot test. The pilot test results suggested that questionnaire had variables about facts that were already known in business. Hence, the changes were incorporated and only the required factors and indexes were included and again pilot tested with two respondents. The pilot testing fine-tuned the instruments from vagueness by checking reliability, validity, suitability, understanding, and the flow of questions [47] to meet the objectives of the study.

E. Data analysis and presentation

Data was analyzed largely using quantitative methods. Descriptive statistics such as frequency distribution and percentages were used and projected in diverging stacked bar chart. Cross tabulation was used to compare categorical data such as gender and education [47], which was a basis for measures of association and prepared data for further testing. Inferential statistics was applied using correlation analysis and logistic regression to test the hypothesis of the study. A principal component analysis developed by H. Hotelling transforms all the variables into a set of composite variables that are not correlated to one another [45]. Reduction of variables makes a vast number of variables more meaningful, interpretable, and manageable [42], [46]. Correlation inferences were based on Dancey and Reidy's [48] value scores and corresponding strengths (Table 2).

Table 2: The value of correlation coefficient and its corresponding strength [48]

Value of the correlation coefficient	Strength of correlation
1	Perfect
0.6-0.9	Strong
0.30-0.60	Moderate
0.1-0.3	Weak
0	Zero

F. Unit of analysis

The retail shops formed the unit of statistical analysis for this study. The problem statement focused on TR and use of technology for decision making among respondents and the results are reported.

G. Reliability and validity tests

Table 3: Cronbach's alpha test on the TR factors and decisiveness

Dimensions	No. of items	Cronbach's alpha
Optimism	5	0.601
Innovativeness	5	0.627
Discomfort	5	0.683
Insecurity	5	0.761
Total	20	0.608
Decisiveness	5	0.664

Reliability was evaluated by measuring the degree to which the instrument yielded consistent results after repeated trials. The researcher-made questionnaire was tested for internal consistency by use of Cronbach's coefficient alpha (α). The alpha determined the reliability of multi-item scales. A threshold of 0.50 and above checked for internal consistency among items [42]. The alpha threshold happened to be 0.60 in this study but the closer to one, the higher the reliability (Table 3). Pilot test results implied that the questionnaire was reliable.

VI. Results

The survey results demonstrate a statistical assessment of frequency on agreement using diverging stacked bar chart, correlation of TR dimensions with decisiveness attribute and ordered logistic regression analysis.

All the sampled 237 respondents' opinion was personally administered resulting 100percent response rate on a structured questionnaire using stratified sampling technique. This was possible as the respondents were contacted at the retail outlets and questions were asked verbally by reading and marking the response instantly by the researcher.

Results indicate that the employees and owners of retail outlets of the sample have begun to be dependent on information from the stored information on digital devices for taking decisions. The respondents developed to take quick decisions over communication by mobile devices and information over stored devices. The TR index indicates that they are prepared to use the digital gadgets for taking business decisions that enable them to stay competitive in the market. Quick decisiveness has been experienced by using appropriate software for their business and various other ICT tools that drives their business to growth.

Figure 3 to Figure 7 indicates a diverging stacked bar chart. The percentages of respondents who agree with the statements are shown to the right of the zero line; the percentages who disagree are shown to the left. The percentages for respondents who neither agree nor disagree are split down in the middle and are shown in a neutral color. The neutral category is omitted, when the scale has an even number of choices. In this situation, we are primarily interested in the total percent to the right or left of the zero line; the breakdown into strongly or not is of lesser interest so that, the primary comparisons do have a common baseline of zero.

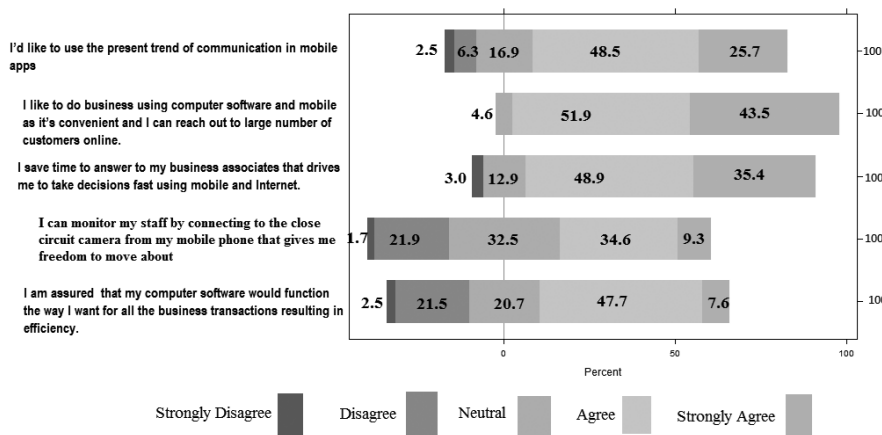


Figure 3: Diverging stacked bar graph of optimism dimension of TR

Figure 3 indicate a diverging stacked bar chart the ranking (strongly agree, agree, remaining neutral, disagree, and strongly disagree) in percentages for questions asked under optimism dimension of TR. It is observed that 25.7 percent of the respondents strongly agreeing and 48.5 percent of them agreeing that they would like to use present trend of communication in mobile apps (WhatsApp, Facebook, twitter, email, SMS, teleconference, and videoconference). Cumulatively, about 74 percent of respondents are positively for the above statement. On the other, 16.9 percent of respondents remained neutral, while a mere 6.3 percent of them disagree and another 2.5 percent strongly disagree that they would like to use present trend of communication in mobile apps in terms of optimism in using ICT tools. These results infer that the respondents are technologically connected. Almost 43.5 percent strongly agree and 51.9 percent agree that, they like to do business using computer software and mobile as it is convenient and can reach out to large number of customers online. About 25.7 percent strongly and 48.9 percent agree that they save time to answer to business associates that drives them to take decisions fast using mobile and internet. The respondents have begun to use close circuit camera and connect to their mobile phone for monitoring, allowing them to be free to go out of the shop as 9.3 percent strongly agree and 34.6 percent agree on this aspect. Those that have been using the computer to store and refer to computed information 7.6 strongly agrees and 47.7 agree that they are assured that,

their computer software would function the way they want for all the business transactions resulting in efficiency.

Figure 4 shows the TR dimension innovativeness. Descriptive statistics indicate that the majority of the respondents have adapted to technology and could manage/use new tools for better processes in business. The stacked bar graph indicates that, 66.2 percent agree and 16 percent agree that, new software tools help in taking quick business decisions. About 54.4 percent agree and 24.5 percent strongly agree that they keep looking for newer models of mobile phones and download new applications to their devices. However, only 36.7 percent agree and 12.7 percent strongly agree that they can find out by themselves appropriate software for their business, whereas others depend on professionals to do the same. But, 44 percent disagree that, they can install software, which helps them to control their business themselves and 38.4 percent disagree that their friends feel that they are more technology friendly than others.

Figure 5 indicates the TR dimension discomfort. About 33.8 percent disagree and 9.7 percent of respondents strongly disagree that the number of clicks in a software application is too many for them to use while taking a decision, whereas 38 percent agree and 0.8 percent strongly agree on the same. Amongst the sample 40.9 percent agree and 2.5 percent strongly agree that the problems related

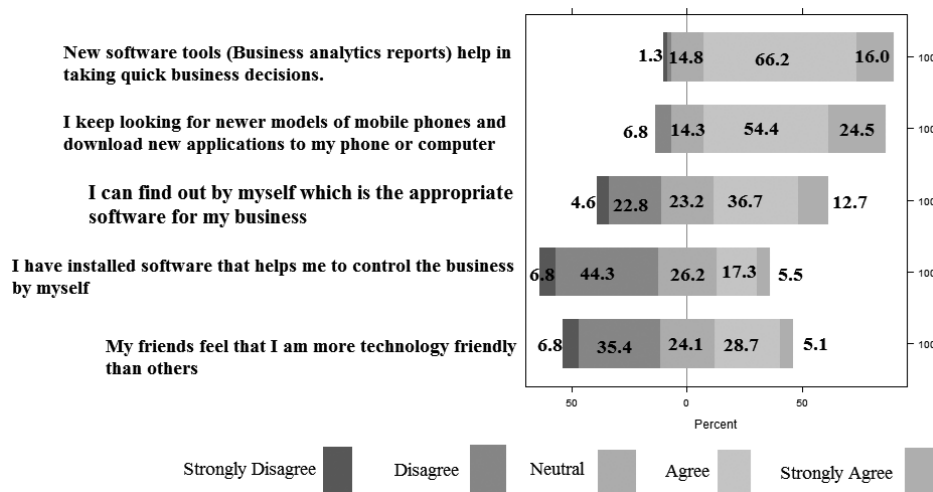


Figure 4: Diverging stacked bar graph of innovativeness dimension of TR

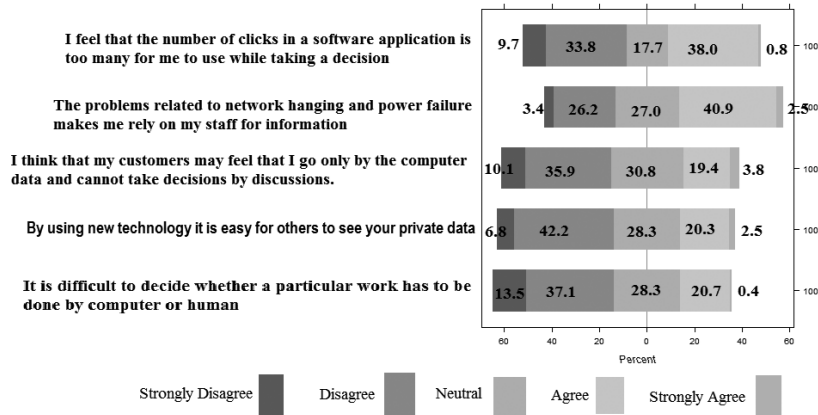


Figure 5: Diverging stacked bar graph of discomfort dimension of TR

to network hanging and power failure makes them rely on their colleagues for information. About 30.8 percent are neutral and 35.9 percent disagree that their customers would feel that they go only by the computer data and cannot take decision by discussion. It is surprising to note the trust level on stored information as 42.2 percent disagree and 28.3 percent are neutral to the statement: By using new technology, it is easy for others to see one's private data. Whereas, 37.1 percent disagree, 13.5 percent strongly disagree and 28.3 percent of the respondents are neutral on the statement: It is difficult to decide whether a particular work has to be done by the computer or by human.

percent strongly disagree of the respondents that information over the internet can be seen by other people. About 41.4 percent agree and 8.9 percent of the respondents strongly agree that it is not safe to do money transaction over computers or internet. Even 43 percent agree and 7.2 percent strongly agree that they are worried about entering password or debit or credit card numbers on the internet as the digital device may store their password. Most prefer to do in store retail and 35.9 percent agree and 32.9 percent of the respondents strongly agree that, the human touch is important when doing business than relying on computer data (online commerce). About 43.9 percent agree and 24.5 percent of the respondents strongly agree that they prefer to talk to a person than interacting with the computer, while taking business decisions.

Figure 6 shows the insecurity dimension of TR and the indexes show a mixed response on their beliefs or perceptions. Almost, 43 percent disagree and 9.7

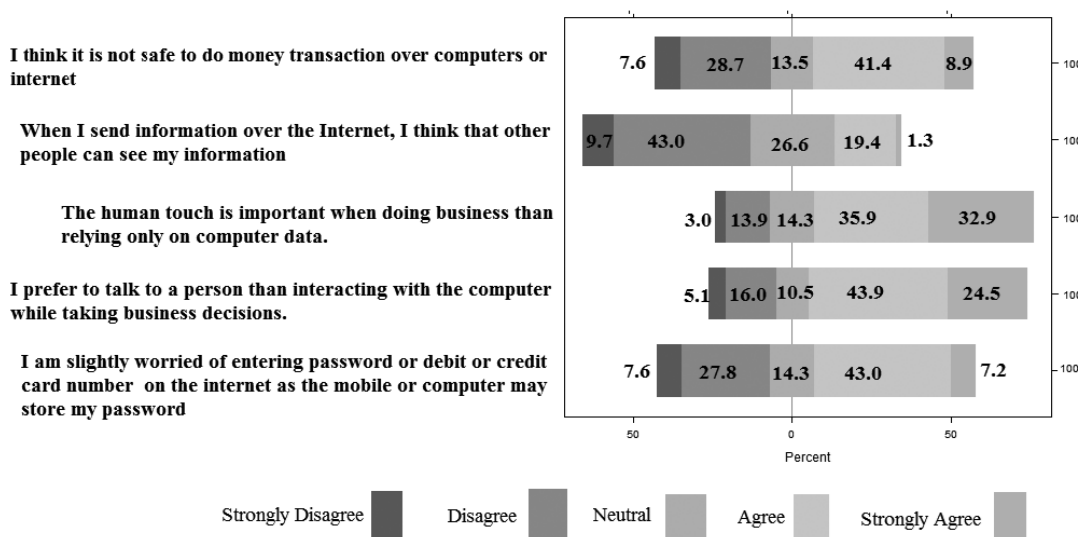


Figure 6: Diverging stacked bar graph of insecurity dimension of TR

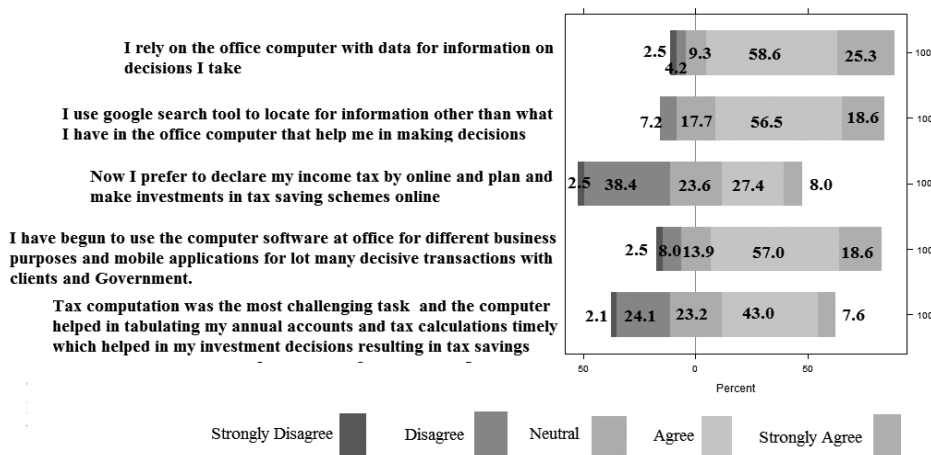


Figure 7: Diverging stacked bar graph of the attribute decisiveness

Figure 7 checks on the respondents for the attribute decisiveness. About 58.6 percent agree and 25.3 percent of the respondents strongly agree that they rely on the office computer with data for information on the decisions they take. Many use the internet as 56.5 percent agree and 18.6 percent of the respondents strongly agree that they use Google search tool to locate for information other than what they have in the office computer, which could help them make decisions. The respondents were checked on an instance of taking decision on using technology. About 43 percent agree and 7.6 percent of the respondents strongly agree that tax computation was the most challenging task and the computer helped in tabulating their annual accounts and tax calculations timely, resulting in smart investment planning decisions and tax savings. But, 38.4 percent disagree and 2.5 percent of the respondents strongly disagree that they prefer to declare their income tax by and make investment plans online. Nevertheless, 57 percent agree and 18.6 percent of the respondents strongly agree that they have begun to use the computer software at office for different business purposes and mobile applications for lot many decisive transactions with clients and Government.

The descriptive statistics though shows that optimism; innovations; and decisiveness have a positive feedback from the respondents of the study, it was necessary to test the hypothesis using inferential statistics.

The correlation matrix between dimensions of ICT tools with decisiveness of adapting the ICT tools

is provided in Table 4. Accordingly, we observe a moderate and significant correlation between OPTIMISM (OPT) and DECISIVENESS (DECISIVE) [with a correlation of 0.344]. This indicates that higher the optimism toward ICT tools, there is a higher chance of acceptance or determination to opt for ICT tools by the respondents. Similarly, there is also moderate and positive significant correlation between INNOVATIVENESS (INNOV) and DECISIVENESS (DECISIVE) (with a correlation of 0.475). This indicates that higher the innovativeness of ICT tools, there is a higher chance of acceptance or determination to opt for ICT tools by the respondents.

Table 4: Correlation matrix of dimensions of TR and decisiveness

	OPT	INNOV	DISCOM	INSEC	DECISIVE
OPT	1.0	-	-	-	-
INNOV	0.677*	1.0	-	-	-
DISCOM	-0.072	-0.163*	1.0	-	-
INSEC	-0.278*	-0.326*	0.424*	1.0	-
DECISIVE	0.344*	0.475*	-0.334*	-0.409*	1.0

* p<0.05 (Source: Author)
 OPT→OPTIMISM, INNOV→ INNOVATIVENESS, DISCOM → DISCOMFORT, INSEC → INSECURITY, DECISIVE → DECISIVENESS

On the other, as expected there is a moderate and negative significant correlation between DISCOMFORT (DISCOM) and DECISIVENESS (DECISIVE) [with a correlation of -0.334]. This indicates that more the discomfort in handling the ICT tools, there is a less chance of acceptance or determination to opt for ICT tools by the respondents. Pragmatically, this correlation result

reflects the attitude of respondents. A similar scenario is observed with respect to correlation between INSECURITY (INSEC) and DECISIVENESS (DECISIVE) [with a correlation of -0.409]. In other words, the increase of feeling insecurity in using ICT tools would result in lesser acceptance or determination to use ICT tools in a long run.

Further, the second null hypothesis H0: TR factors are not the key drivers to decisiveness. The key drivers (influencing factors) to decisiveness of ICTs were tested. To understand the influence of different variables on overall decisiveness of acceptance towards ICT tools, we have devised an ordered logistic regression model, where the dependent variable is the decisiveness that is captured through the structured questionnaire.

$$Pr (Y=1/X_1 = x_1, \dots, X_p = x_p) = \frac{e^{\beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \dots - \beta_p x_p}}{e^{\beta_0 - \beta_1 x_1 - \beta_2 x_2 + \beta_3 x_3 + \dots + \beta_p x_p} + 1 + e}$$

The model estimates the probability that the dependent variable be 1 (Y=1) i.e. the Variable's description.

Dependent variable: Degree of decisiveness towards ICT tools

Y_i =
 0 = Disagree (ratings scores with 3, 4, and 5)
 1 = Agree (rating score 1 and 2 combined)

Independent variables

Gender = {
 1 = Male
 2 = Female

Age = {
 1 = 15 to 24 yrs
 2 = 25 to 44 yrs
 3 = 45 to 64 Yrs

Qualification = {
 1 = PUC/Diploma
 2 = Graduate
 3 = Post Graduate
 4 = Others

The four dimensions of ICT tools such as optimism, innovativeness, discomfort, and insecurity.

Table 5: Binary ordinal logistic regression results

Independent variable	Co-efficient (B)	Odds Ratio	Robust Std. Error	Z	p-value
Gender	0.162	1.177	0.371	0.44	0.661
Age	-0.139	0.869	0.254	-0.55	0.583
Qualification	0.189	1.209	0.200	0.95	0.343
Optimism	0.027	0.964	0.091	0.30	0.765
Innovativeness	0.035	1.002	0.064	-0.55	0.580
Discomfort	-0.002	0.990	0.060	0.05	0.963
Insecurity	-0.009	0.990	0.050	-0.20	0.845

(Source: Author)

As can be seen from Table 5 that none of the independent variables—both socio demographic and dimensions of TR have no significant (statistically) influence on the level of decisiveness (disagree to agreeing) of respondents under the study. In other words, we can conclude that there is statistical evidence to say that higher the optimism and innovativeness, it would influence positively on the decisiveness of intending to use ICT on a day to day basis accepting the hypothesis. Likewise, although discomfort and insecurity has a negative coefficient, yet the p-value is greater than 0.05 level of alpha. This also indicates that there is no statistical evidence to conclude that higher the discomfort and insecurity, this will not reduce the level of acceptance or decisiveness of the respondents towards using ICT tools for taking decisions in business process.

VII. Discussions and conclusions

The TR factors based on retailers including organized and kiranas indicate significant agreement and disagreement in this study. The agreements shown in the divergent stack bar graph indicate that the readiness to use technology for driving their business. Factors such as optimism and innovativeness project that the respondents are also agreeable that the ICT tools help in smart and quick decision making in the process of their business. They are agreeable on the factor's discomfort and insecurity with regards to the complexity in using the software, others intruding into their private data and network hanging problems. Further on the

insecurity factor, the respondents were agreeable that entering password, plastic card pin numbers, and transacting money over internet are not safe. They are also agreeable that the human interaction is more important than computer dependent interactions, while doing business in store. The disagreement pertains in confidence to identify the software they need for the business and install it by self and confidence that the software they use, does exactly what they want. Well, this requires good education and experience in using digital tools for better management information system.

On the decisiveness attribute, the respondents are agreeable that they depend on the office computer for data for decision making process and for the information that is required externally; they collect it from the internet. A vital instance of calculating and declaring income tax online and making investment plans and decisions were disagreeable. However, it is noticed as the individuals are used to applying software for their business process, they have a tendency and likeness to use more tools that may support easiness to the process in business.

Despite the male dominance in the ownership and management of retail sector, it is noticed that there are many women, who assist in retail business process and they are all very well-versed and ready to use technology for taking decisions. There were 68 percent male respondents against 32 percent female. Education also plays a vital role in building confidence to trust and use digital applications for making smart decisions in business. About 58 percent of the respondents were graduates and 23 percent had a school leaving certificate, while 15 percent had a diploma. About 62 percent of the respondents were in the age group of 25 to 44 and showed their readiness to use technology in their business; however, the study shows that there are other factors that would enable one to take decisions using technology, which can be carried out in future studies.

The TRI has been useful to assess the TR of people working at the retail sector in Bangalore city. Employees who responded that they are readier to use technology are likely to be much more effective

in tech-support roles in the business. Hence, decisiveness can be a driving force for these tech savvy people is what can be derived from this study. The study though does not show implication that decisiveness is a driving force by using technology for growth in retail sector. People feel it supports, but the human touch is a core aspect for taking decisions in business in Bangalore city among *kirana* and organized retailers. With the limitation of the data collection, the results of this study cannot be generalized, but requires more interventions to identify what factors could enable decisiveness by using ICT tools. Presently there is a mixed consensus about taking decision using digital tools. However, the Western countries are looking at interactive digital tools for in store purchase decisions by consumers.

The retail sector is male dominated in Bangalore city and the TR factors are favoring the respondent's willingness to use ICTs in their business process. Lot of girls in this sector has either completed school or are working or studying for evening degree course.

TRI has effect on the respondent's willingness to use ICTs in business. However, to take business decisions just by depending on digital data is yet to be identified. Future research can ponder on the implications for taking smart decisions in retail outlets in order to stay in competition with the e-business and technology enabled in store purchasing trend. However, business relations are being enhanced by using new mobile phone applications to communicate with stakeholders at the right moments for business decisions.

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