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Analyzing the Critical Success Factors of Contactless Businesses: A Post COVID-19 Panorama in Pakistan

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Abstract

There has been a drastic change in the ways of doing business after COVID-19. Business world has been shifted from traditional to contactless ways and digitalization has been increased during and after COVID-19 all over the world including Pakistan. So, there has been a need to study the factors that affect the success of contactless businesses, specifically in the context of Pakistan. The aim of the study is to generate the comprehensive list of critical success factors of contactless businesses in Pakistan and to analyze their interpersonal relationships and to classify them. This study is exploratory by its nature and the methodology used for this study is Interpretive Structural Modelling (ISM) along with Multiple Cross Impact Matrix (MICMAC) analysis that corroborate the results of ISM. Data has been collected primarily from the panel of experts on the topic. Results of the study show that the most important factor that contributes towards the success of contactless businesses in Pakistan is creativity and innovation which lies at the bottom of the model. This research is useful for all the stakeholders of contactless businesses since it contributes generates the list of critical factors, their hierarchical model, their classification model and lot of new information on interaction of these critical success factors.

Keywords: ISM, MICMAC, COVID-19, Critical Success Factors, Contactless Businesses, Pakistan.

Introduction

In a very short time period, COVID-19 crisis brought a drastic change in the ways of doing business all over the world. Margherita (2021) asserted that the companies have accelerated the digitization of their internal and external business operations as well as the customer and supply-chain interactions. Companies have increased funding for their digital initiatives and improved the digital systems. Hence, business systems experienced a shift in doing business during this period to stay competitive (Knight, 2021). After COVID-19, due to increased health risks, more immediate contact-free business protocols are needed. Huang, (2022) argued that the web access rates, use of digital technologies and automated procedures have been increased all over the world during pandemic. While many parts of the U.S. economy have now resumed following the pandemic, retailers have taken in a significant illustration: customers really want quicker, more secure, and better in-store encounters that hold and upgrade the significant components of closeness and intuitiveness with items, specialists, and the store environment. Here, cutting expenses can have a huge effect, empowering new type of "contactless trade" (Chen, 2021). The need is more in restaurants, café's, retail stores, coffee shops, shopping malls, shopping brands even and other service providing businesses that are considered as the highly interactive ones.

The industry of Pakistan has also been adversely affected by the pandemic and the traditional shopping habits have been replaced by the shopping habits that minimize the physical/human contact i.e., online shopping trends have increased (Bhatti, 2020). Therefore, it can be said that contactless businesses along with already existing contactless payment systems are going to be more popular and the advanced version of the physical businesses in future. Being contactless can have many forms (Dalevska, 2019) for example, Online ordering system, E-gaming, Vending Locations, Robot

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services, Self-Checkouts, using QR code technologies, Digital wallets, Virtual gift cards, Mobile wallets etc. Aryani, (2021) concluded that ATMs, self-services at petrol pumps and hospitality industry, digital invoicing, guest engagement apps etc. are also different forms of contactless businesses. Now, like every business, contactless businesses also have some key factors that contribute towards their success or failure. Those factors are considerable to be successful in the contactless business and to survive in the competitive world under the special situation of pandemic and even afterwards (Sarfraz, 2017). Success factors are the important elements for a company to survive and compete in the target market as well as help businesses to achieve their goals efficiently and effectively (Anwar, et al. 2012). By doing research and reading literature by Sharma, (2019), Naqvi, (2020) it was realized that the factors of success are not clearly defined and illustrated for the contactless business worldwide and in Pakistani context specifically. By doing research and reading literature by Sharma, (2019), Naqvi, (2020) it was realized that the factors of success are not clearly defined and illustrated for the contactless business worldwide and in Pakistani context specifically. Hence, the research gap that needs to be addressed is to ascertain the recipe of success and long-term sustainability of contactless businesses in Pakistan (Bhatti, 2020). It has become more important, relevant and serious concern of stakeholders of Pakistan, in the context of COVID-19 pandemic. Factors of success of born contactless businesses of Pakistan are not clearly defined and ascertained (Naqvi, 2020). The problem that needs to be addressed in the following research is to identify those key factors and to analyze, prioritize and categorize them, so that the Pakistani businessmen can incorporate them into their contactless businesses in Pakistan and complete their journey towards success as identified by the literature of Naqvi (2020); Bhatti (2020) and Raza et al., (2022). The transition from physical to contactless is not trouble-free, especially in a developing country like Pakistan. Pakistani community in contactless business is not completely aware of all the critical success factors that are contributing towards the success of the contactless businesses. Therefore, it is unlikely to sustain without determination of critical success factors of contactless businesses in Pakistan (Bhatti, 2020; Raza, et al. 2022). The study aims to identify, hierarchicalize and categorize the critical success factors of contactless businesses in Pakistan. To be more specific, this study answers following research questions:

1. What are the factors that contribute towards the success of contactless businesses in Pakistan?
2. What are the contextual relationships between those factors?
3. What are the key factors to be taken care of, on priority basis, in order to ensure long-term survival and sustainability of contactless businesses in Pakistan?

Keeping in view the important research questions aforementioned, the study has following objectives in precise:

- To review relevant literature and to prepare a comprehensive list of factors critical to success of contactless businesses in Pakistan.
- To hierarchichalize/prioritize, analyse and classify the factors and prepare a structural model of those factors in the context of Pakistan.
- To discuss the results qua reality.

The methodology that has been used for achieving these objectives is Interpretive Structural Modelling (ISM) devised by Warfield (1973), along with Matriced' Impacts Croise's Multiplication Appliquée a UN Classement (Cross Impact Matrix Multiplication Applied to Classification) popularly known as MICMAC analysis introduced by Godet and Bourse (1986). ISM as a methodology has the capability to simplify the conundrum and complex phenomena using elementary concepts of Boolean algebra, set theory and directed graph theory. It has the capability to partition the binary matrices into hierarchies. Whereas, the MICMAC analysis is capable of corroborating and/or verifying the results of ISM. In addition to it, MICMAC also classifies the factors on their driving-dependence power. ISM has been used to make a visualized hierarchical structure to identify, analyze, prioritize and summarize the factors and to define the complex relationships between the factors. It has been a widely used research methodology in this type of studies e.g., Warfield, (1973); Shen et al., (2016) etc. The purpose of choosing this technique is to study "whether and how" relationships and to provide a logical explanation to all the above-mentioned procedure and to make the decision making of Pakistani businessmen easy in the journey of success. MICMAC analysis has been used to develop a graph which has classified the factors under study on the basis of their driving and dependence power and also to validate the results of

interpretive structural model and to reach the discussion and conclusion. Therefore, ISM and MICMAC have helped the author to answer the research questions, achieve the objectives and provide the meaningful understanding of the subject under study.

Literature Review

Literature has been explored from the well-known data bases and journals i.e., Science Direct, Tylor and Francis, JStor, Sage, Springer, Emerald, Google Scholar and a few more. Around 350-400 research articles concerning e-businesses, e-commerce, virtual businesses, contactless businesses or online businesses etc. were found, out of which around 50-70 articles were considered to be the relevant that are reported to set out the context of the study. Literature review method has been used for factor extraction, as suggested by Lu, et al., (2019). The keywords used for search include businesses after COVID-19, impact of COVID-19 on business environment, importance of digitalisation, need for digitalisation, change in business trends after COVID-19, success of businesses, contactless businesses, virtual businesses, online businesses, contactless payments, success stories of virtual businesses, success factors for virtual and online businesses, factors impacting the performance and success of amazon, daraz, olx, online banking, businesses using self-service facilities etc., impact of COVID-19 on these different contactless businesses and similar keywords were used to find out the relevant literature. Long before the COVID-19, new technologies were already letting us some contactless exchanges like any zoom call to the one's doctor, ordering Starbucks via their mobile application or paying our groceries with the digital wallets etc. but after COVID-19, due to increased health risks, more immediate contact-free business protocols are needed. The need is more in restaurants, café's, retail stores, coffee shops, shopping brands even and other service providing businesses that were considered as the highly interactive ones. Kotkowski, (2021) asserted that after COVID-19 pandemic, under the current constraints, rapid digitalization and ability to adapt provide an advantage for markets that are already able to get benefit from digital revolution and move more conclusively in this area (Nandal, 2021). Samad et al., (2022) carried a comprehensive study that affirmed the customer experience can be crucial to build brand equity and try to capture succeeding loyalty, and profound customization is the best way to improve the digital experience. Fei, (2021) revealed that the business can increase customer engagement through numerous broadcast platforms with personalized services; use client information to make marketing and distribution, sales prices, and reward system. Long in short, businesses need to and have scope to shift themselves on contact-free ways to deal with their customers, in order to sustain/survive in pandemic as well as in longer run. Business can become contactless by implementing the right tools and practices (thanks to the technology that continuously is keeping up because it is never easy to make your retail business easy). The unnecessary interactions between staff and customers can be eliminated by those tools and the efforts turn out to be more profitable, efficient and up-to-date (Nandal, 2021). Now, Contactless businesses can have many forms or types. Various type of businesses which operate in a virtual way can be included in the category of contactless business. Few of the examples of contactless businesses are online businesses (Evans, 2001), Self-checkouts (scanners in supermarkets such as Tesco and Asda) (Samad, 2022), RFID and QR code scanners at different places like grocery stores (Nando's accepts payments via QR scanners, cards, and RFID tags (Tao et al., 2022), businesses using mobile wallets , home delivery and e-commerce, ATM machines (Aryani, 2021), hospitality industry using robots for checkout services (Stienmetz, 2021) etc. and check-in and checkout mobile applications are also used by different business (Kim, 2021). Contactless payments play a vital role in any business generally and contactless businesses particularly. Contactless payment is an ability to perform a non-cash payment transaction disregard of any physical connection between the buyer and seller at the sale-point during transaction (Sarfraz, 2017). Awais, et al. (2022) expounded that Pakistani business industry also shifted instantly to contact-free modes of interaction as maximum as possible. Few of them were already common and the rest became popular during COVID-19 (Naqvi, et al. 2020). It brought a scope for Pakistani businessmen to consider contactless modes of business as a preference to survive (Awais, et al. 2022). Critical success factors are extraordinary important to every organization and these are needed to guarantee the accomplishment of a venture, organization or an association (Moody et al., 2014). Critical Success Factors (CSF) are referred to the explicit activities, techniques or tactics that are fundamental for an association or task to accomplish its central goal and to proceed with consistent survival. Industry elements of a venture or organization's mission result from explicit industry

qualities (Banihashemi, 2017). Success factors are the important elements for a company to survive and compete in the target market as well as help businesses to achieve their goals efficiently and effectively (Anwar, et al. 2012). These key variables mirror the current business and future objectives of an association and can be recognized by applying business analysis. These variables result from large scale ecological impacts of an organization (Chen, 2021) and result from the particular serious technique picked by a specific organization. From the above discussions we can say that contactless businesses are becoming a trend after COVID-19. It can be clearly understood that they are the future of Pakistan, looking for customers and business proprietors and their success and survival is as important as of anyother business of Pakistan. From the thorough review of the literature (global in general and related to Pakistan in particular), authors concluded that there are total twenty-eight factors (critical to success of contactless business) noteworthy and worth studying in the context of Pakistan. There are total 28 factors extracted from literature: Developing Trust (Imtiaz et al. 2020), Customer Awareness (Servaes, 2013), Easy to Use Solutions, (Ray et al. 2018), Reliability (Sarfraz, 2017), Quality of Service (Oni et al., 2016), Securing the Delivery (Grandzol, 2006), Credibility of Procedures (Muqtadir, 2022), Differentiation, Multiple Features (Ndong et al., 2020), Analyzing user Experiences (Ullah, 2016), Regulatory Compliance (Sarawa, 2020), Safety and Security (Yildirim et al., 2011), Multiple Touch Points (Boerdonk et al., 2021), Consistent Experience (Margherita, 2021), Speedy Transactions (Ehimare, 2012), Amusing Consumer Interaction (Williams, 2006), Operational Efficiency (Lim, 2021), Minimal Transaction Cost (Standifird et al., 2000), User Usability (Neb et al., 2021), Employee Assistance (Mainardes, 2011), Creativity and Innovation (Hameed et al., 2021), Analyzing Performance (Magal et al., 2009), Marketing Strategy (Varadarajan, et al., 2010), Minimum Proceeding Time (Zhu, et al., 2021), Scam and Theft Prevention (Khan et al.,2021), Regular Customer Communication (Fairchild, 2014), Educate the Staff (Žáčok, 2008) and Be Proactive (Asghar et al., 2021).

Methodology

There are four different types of research philosophies namely positivism, realism, interpretivism and pragmatism. This research follows interpretivism as a research philosophy. There are two common approaches of research i.e., inductive and deductive. This study follows the inductive research approach. From the different strategies of research, this study follows primary data collection through field survey. Overall design of the study comprises of literature review, collection of data through field survey of focus group and qualitative analysis. It uses the mixed method as a choice of methodology (ISM as primary method and MICMAC analysis as a secondary method). The mixing of primary and secondary method provides two advantages, firstly, it provides valuable additional information and secondly corroborates the results of primary methodology. It is a cross sectional explanatory study that could be categorized both in pure and applied dimensions. Population under study is the folks of stakeholders of contactless businesses in Pakistan i.e. businessmen doing contactless business, employees, customers, government/policy makers, researchers, technology experts, environmental agencies promoting green management and society at large. Following the spirit of stakeholder's theory, the stakeholders of the phenomenon understudy are determined as a step towards specification of population. According to Ackermann's stakeholder theory (2011), organizational or business decisions should consider the interests of all these stakeholders and advance the overall corporation and this theory takes into account, the priorities of stakeholders, either they are internal or external. Therefore, envisaged on stakeholders of the contactless businesses of Pakistan, it provides foundations for taking set of representative respondents (i.e., to formulate a heterogeneous panel of experts). The stakeholders of contactless businesses in Pakistan are businessmen (preferably doing partly or wholly contactless business) etc. as aforementioned. Since population is unknown and frame of population is not available, therefore, any option of probability sampling could not be exercised. Therefore, options from non-probability sampling have been evaluated. Purposive sampling seems to be the most appropriate choice because the purposive sampling, being judgmental, can give better representativeness of all the stakeholders. Since, the research on phenomenon under study is in process of crystallization and the exploratory studies are currently taking place including the current study therefore expert opinion based/focused-group based data collection is more appropriate than the statistical data. Keeping in view the context, this study opted for constitution for panel of experts for data collection. Panel of experts is constituted for the study on the basis of pre-determined criteria (Clayton, 1997; Nishant et al., 2017). Reason for choosing the panel of experts over statistical population is that they have in depth understanding of the phenomenon and they are able to outperform in eliciting the relationships regarding factors

(Sushil, 2017). The experts are recruited on panel from authoritative organizations of Pakistan having expert knowledge about contactless businesses. The principle of selecting the experts is "quality outweighs quantity" (Shen et al., 2016).A heterogenous panel has been constituted that consists of 16 experts, all experts recruited on the panel are well-versed with theoretical and practical knowledge of the domain. Criteria (Sushil et al. 2012) for recruiting respondents on panel is: i) businessmen having experience of at-least five years concerning the online/contactless business, ii) minimum qualification of experts on panel is said to post-graduation from reputable universities, iii) researchers of the particular respective field having minimum 5-10 years of experience in research, iv) technological experts having experience of 5-8 years of making contactless solutions for businesses, v) customers of contactless businesses in Pakistan, vi) experts having some acumen towards research, and vii) willing to participate as respondent/expert. Twenty respondents were initially invited to participate in the study considering their expertise, theoretical, educational and practical knowledge and experience. It was tried to select minimum 2 representatives from each category of stakeholders aforementioned. In this way, panel consisted of sixteen experts. Panel of experts were approached four times during whole procedure. Out of twenty stakeholders, sixteen respondents participated. First interaction was at the time of introducing the study and their participation for rapport development. Seventeen respondents, in total, agreed to participate in voting. Secondly, they were approached for the factor verification (to check whether factors are logical, contributing, reasonable and representative i.e., to get the factors approved by them). Their participation and results of participation are discussed in coming sections. The third time they were approached during the process of data elicitation and the last face to face interaction with them was after model development, for the model verification. For classical ISM Studies, a matrix type questionnaire is commonly used therefore, it was found appropriate to use matrix type questionnaire. It is pertinent to mention that it is a type of questionnaire that do not necessitate articulation of formal questions rather it's a matrix to be filled according to rules of ISM, therefore, formal statistical testing of psychometric properties of the instrument of the measurement are not required. The questionnaire (instrument of data collection) measured the paired relations among the critical success factors using classical symbols of VAXO. The data has been collected on *ij* part of the matrix, whereas, *ii* part and *ji* part of the matrix has been logically and/or mathematically calculated. In this study, the technique of face-to-face, one-on-one semi-structured interview has been used as method of data collection. Since the author have already prepared a list of factors and according to norms of ISM, a matrix specifying the frame of research, was possible and there were in fact four natural options on each paired relation therefore, to some extent, the data collection is a structured effort. But at the same time the respondents (particularly not familiar with ISM) need support in form of interview (semi-structured). Following the objectives along with the research gap identified, the appropriate methodology which has been used in this research, to address the problem and analyse the critical success factors in the context of Pakistan, is ISM technique, proposed by (Attri et al., 2013; Beyari, 2021), along with MICMAC analysis developed by Michel Godet and Francois Bourse in 1986. This research, after using ISM and MICMAC, is considered as a theory building (arrow originating) research rather than theory confirmation. Being theory building research, it doesn't require any priori theory as a base theory, to conduct the auxiliary research during data analysis, as asserted by (Ahmad and Qamash, 2021). For classical ISM Studies, a matrix type questionnaire is commonly used therefore, it was found appropriate to use matrix type questionnaire. The questionnaire (instrument of data collection) measured the paired relations among the critical success factors using classical symbols of *VAXO*. The data has been collected on *ij* part of the matrix, whereas, *ii* part and *ji* part of the matrix has been logically and/or mathematically calculated.

Analysis

Before moving towards data collection or analysis, it is important to extract the factors from literature and get verified by experts. Critical success factors of contactless business have been extracted from review of relevant literature (Li, et al., 2022). Total twenty-eight factors are found and processed for verification from experts. The experts were asked: i) to confirm the relevance, importance and sufficiency, ii) delete if irrelevant, iii) add the factor(s) if any factor is ignored or iv) merge/modify if necessary. Based on this process, approval vote for including the factors in the study is attained from the experts (details omitted here for brevity). 2 factors were merged on expert opinion and 26 were hence retained for further analysis. Data collection was proceeded using VAXO based questionnaire, with rapport development, briefing of the questionnaire and background of the study to the experts. A

VAXO based matrix type (n (n-1)/2) questionnaire was used to do a field survey by face to face, one-on-one interviews, in field setting, that is usually used in the ISM studies (Liao & Yang, 2014). ISM procedure is applied step-wise on the data collected. As a first step, Structured Self Interaction Matrix (SSIM) is prepared. This SSIM matrix is used further for analysis in ISM. The next step was to convert this SSIM matrix into initial reachability matrix. Initial reachability matrix was made by removing the names of factors and keeping the codes, then filling zeros and ones in the place of VAXO, as per rules devised by Warfield (1973) and used by Niazi et al. (2020). Initial reachability matrix was formed; Initial reachability was filled up by zeros and ones on the upper diagonal and the reflective responses of those zeros and ones in the lower diagonal as per rules. The next step was to find out the transitivity of the initial reachability matrix. Transitivity was checked by checking all zeros on scientific basis using MS excel and all the transitive relations were incorporated in the initial reachability matrix. In a result, following matrix named as Final Reachability Matrix was formed. The driving and dependence power for each row and column was calculated respectively by counting the number of ones in each row and column. Next is the transitivity matrix, which contains all the transitive relations in the initial reachability along with the driving and dependence power. The next step in ISM is to generate the iterations, as proposed by Warfield (1973) in order to find out the level of each factor, one level per iteration. The level-by-level iterations were then derived by making the reachability and antecedent sets by following thirteen iterations. By producing above mentioned thirteen iterations, author was able to derive thirteen levels for the total twenty-six factors. Those all the factors were placed at different levels according to their iterations and the conical matrix. Transitivity binary matrix was apportioned according to iteration method (Warfield, 1973) and then converted into conical method representing the different levels for all factors (the grey cells on diagonals are representing the extraction of levels for ISM model). The summary table (Table 1) was also made for the abridged representation of ISM model as following.

Table 1. Abridged Representation of ISM Modelling

														Reachability Set													
Levels	Code	1	4	23	6	7	15	3	5	13	16	17	2	8	12	10	14	18	24	9	11	26	19	21	22	25	20	
Level I	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Level II	4	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	23	1	1	1	1*	1	1	0	1	0	1*	1*	0	1*	1*	1*	1	1	1*	0	0	0	0	0	0	0	0	15
Level III	6	1	1*	1*	1	1*	1*	0	1	0	1*	1*	0	1*	1*	1*	1	1	1*	0	0	0	0	0	0	0	0	15
	7	1	1*	0	1	1	1*	0	1	0	1*	1*	0	1*	1*	1*	1*	1	0	0	0	0	0	0	0	0	0	13
	15	1	1*	1*	1*	1	1	1*	1	1	1*	1*	1*	1*	1	1*	0	1*	1*	1*	0	0	1*	1*	0	1*	0	21
Level IV	3	1	1	0	0	1*	1	1	1	1*	0	0	0	0	1*	0	0	0	0	0	0	0	0	0	0	0	0	8
	5	1	1	1*	1*	1*	1*	1*	1	0	1	1	1*	1*	1	1	1*	1	1*	1*	1*	0	1*	0	0	1*	0	21
Level V	13	1	1	1	1	1	1*	1	1	1	1	1*	1	1	1	1*	1*	1*	1	1	1*	1*	1*	1*	1*	1	0	25
	16	1	1	1	1	1	1	1	1*	1*	1	1	0	1*	1*	0	1	1	1*	0	0	0	0	0	0	0	0	16
	17	1*	1*	1*	1*	1	1*	1*	1*	1*	1	1	0	1*	1*	0	1*	1	0	0	0	0	0	0	0	0	0	15
Level VI	2	1	1*	1*	1*	1*	1*	1	1*	1*	1	1*	1	0	0	0	1*	1*	0	0	1	0	0	0	0	0	0	15
Level VII	8	1*	1*	1*	1*	1*	0	1*	1*	1	1*	0	1*	1	1	0	0	0	1*	1*	0	0	1*	1*	0	1*	0	17
	12	1	1*	1	1*	1	1*	1*	1*	1*	1	1*	1	1	1	0	1*	1*	1	1	1*	1*	1	1	1*	1*	0	24
Level VIII	10	1	1	1*	1	1*	1*	1*	1	1*	1*	1*	1*	0	1*	1	1*	1*	1*	1*	1	1*	0	0	0	1	0	21
	14	1	1*	1	1	1	1*	1*	1	1*	1*	1	1*	1*	1	1*	1	1*	1	1*	1*	1*	1*	1*	1*	1*	0	25
	18	1	1	1*	1*	1	1	0	1	1*	1*	1	0	1	1*	1*	1	1	1*	0	0	0	0	0	0	0	0	16
	24	1	1*	1	1	1	1	1	1	1*	1	1*	1	1*	1*	1*	1	1	1	1	1*	1*	1	0	0	0	0	22
Level IX	9	1*	1	1*	1*	1*	1	1*	1	1	1	1	1*	1	1	1*	1*	1*	1*	1	1*	1	1*	1*	0	1*	0	24
	11	1	1	1*	1	1	0	1*	1	1	1*	1*	1*	1*	1*	1*	1*	1*	1*	1*	1	0	0	0	0	1*	0	20
	26	1	1	1	1*	1	1	1	1	1*	1	1	1*	1	1*	1*	1*	1	1	1*	1	1	1*	0	0	0	0	22
Level X	19	1	1*	0	1*	1	1	1*	1	1*	1*	1*	1	1*	1*	1*	1*	1	0	1	1	1*	1	0	0	0	0	20
Level XI	21	1	1*	1	1*	1	1	1	1	1*	1	1	1*	1*	1*	1*	1*	1	1	1*	1	1	1	1	1	1	0	25
	22	1	1*	1	1*	1	1	1	1	1*	1	1	1	1*	1	1*	1*	1	1	1*	1	1	1*	1*	1	0	0	24
Level XII	25	1	1*	1	1*	1	1	1	1	1*	1	1	1	1*	1	1*	1	1	1	1	1	1	1*	1*	0	1	0	24
Level XIII	20	1	1*	1	1*	1	1	1	1	1*	1	1	1*	1*	1*	1*	1*	1	1	1	1*	1	1	1*	1	1	1	26
		26	25	22	23	24	22	20	24	20	23	22	17	21	23	18	21	22	19	16	15	12	14	10	6	12	1	

Antecedent set — Driving

Dependence

Above-mentioned representation clearly shows the results generated through procedure of ISM as mentioned and recommended by Warfield (1973) and used by Niazi et al. throughout in recent researches regarding similar topics. The summary table contains level, factors (codes), transitivity matrix with transitive relations, driving and dependence power and highlighted levels on diagonals that was further converted in to a structural model.

Interpretive Structural Model

As a result of level partitioning and re-arrangement of final reachability matrix, model appeared on diagonals of the matrix highlighted grey in the table. The model appearing on diagonal is converted

into directed graph (diagraph) as suggested by Warfield (1973). The nodes of the diagraph are replaced with description of factors alongwith their code. Level-to-level arrows are drawn in order to represent the hierarchy that factors occupy in the model whereas, at-level arrows are drawn according to the relations appearing in sub-matrices in the model extracted on diagonals of summary matrix. ISM model (Figure 1) is drawn on graphic interface of software EdrawMax.

ISM Model

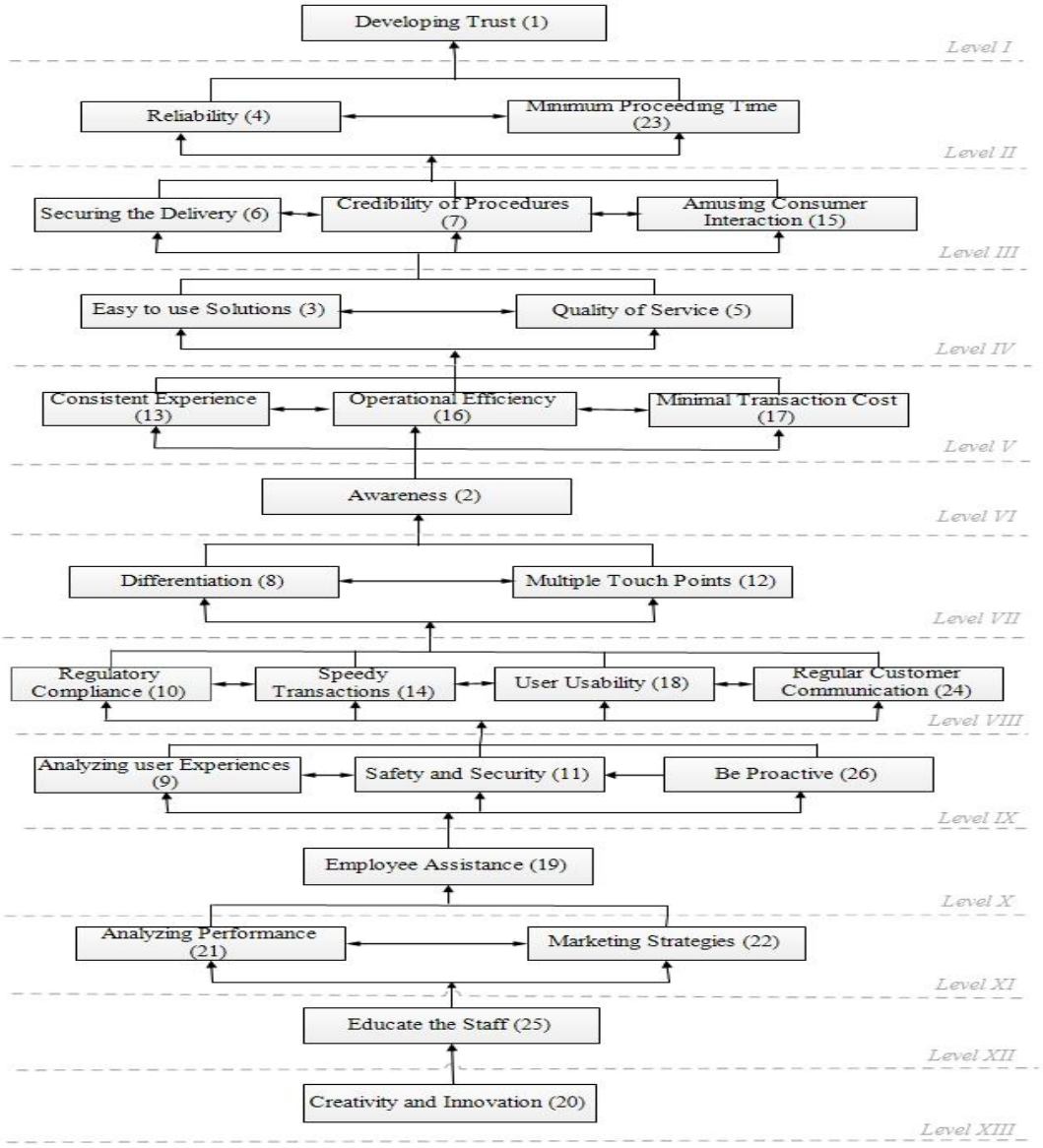

Figure 1. ISM Model

From the close observation of Figure 1. we get to know that the model has thirteen levels. Factor 20 is the most important factor, at *Level XIII*, factor 25 is at *Level XII*, factor 21 and 22 are at *Level XI*, factor 19 is at *Level X*, factor 9, 11, and 26 are at *Level IX*, factor 10, 14, 18 and 24 are at *Level VIII*, factor 8 and 12 are at *Level VII*, factor 2 is at *Level VI*, factor 13, 16, and 17 are at *Level V*, factor 3 and 5 are at *Level IV*, factor 6, 7 and 15 are at *Level III*, factor 4 and 23 are at *Level II* and factor 1 is at *Level I* (bottom), that is the least important factor.

MICMAC Analysis

MICMAC analysis was performed by dividing the Cartesian plane into four quadrants (independent, autonomous, dependent and linkage) using scale centric approach. This diagram helped us to determine relevance of the factors, agility/ambivalence or corroborate the results of ISM. After the model, MICMAC analysis was made from final reachability, to reconfirm the ISM model and to convert the structural model into a graphical form, to make it more understandable and to find out that which factor is independent, dependent, autonomous and linkage by nature. Following is the

pictorial/graphical representation of results, by using graph theory, to fulfil above mentioned objectives.

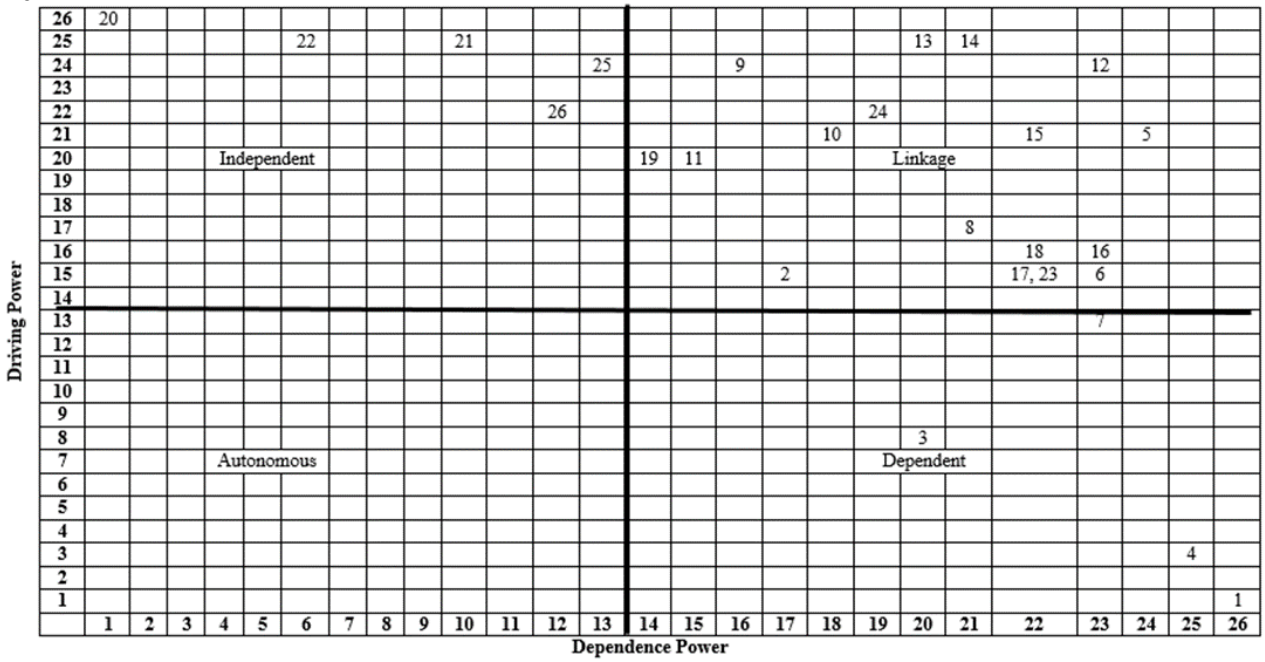

Figure 2. MICMAC Analysis

In this study, according to MICMAC analysis, factor 20, 21, 22, 25, and 26 lie in Independent cluster. Factor 2, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 23 and 24 lie in Linkage cluster. Factor 1, 3, 4 and 7 lie in the dependent cluster. There is no factor in the Autonomous cluster.

Results:

Results for above analysis are summarized as following:

Table 2: Literature, MICMAC and ISM- Results Juxtaposed

Literature Review		MICMAC				ISM	Comments
Code	**Issue**	**Driving**	**Dependence**	**Effectiveness**	**Cluster**	**Level**	
1	Developing Trust	1	26	-25	Dependent	*I*	
2	Awareness	15	17	-2	Linkage	*VI*	
3	Easy to use Solutions	8	20	-12	Dependent	*IV*	
4	Reliability	3	25	-23	Dependent	*II*	
5	Quality of Service	21	24	-3	Linkage	*IV*	
6	Securing the Delivery	15	23	-8	Linkage	*III*	
7	Credibility of Procedures	13	24	-11	Dependent	*III*	
8	Differentiation	17	21	-4	Linkage	*VII*	
9	Analyzing user Experiences	24	16	8	Linkage	*IX*	
10	Regulatory Compliance	21	18	3	Linkage	*VIII*	
11	Safety and Security	20	15	5	Linkage	*IX*	
12	Multiple Touch Points	24	23	1	Linkage	*VII*	
13	Consistent Experience	25	20	5	Linkage	*V*	
14	Speedy Transactions	25	21	4	Linkage	*VIII*	
15	Amusing Consumer Interaction	21	22	-1	Linkage	*III*	
16	Operational Efficiency	16	*23*	*-7*	*Linkage*	*V*	
17	Minimal Transaction Cost	15	22	-7	Linkage	*V*	
18	User Usability	16	22	-6	Linkage	*VIII*	
19	Employee Assistance	20	14	6	Linkage	*X*	
20	*Creativity and Innovation*	*26*	*1*	*25*	*Independent*	*XIII*	*Key Factor*
21	*Analyzing Performance*	*25*	*10*	*15*	*Independent*	*XI*	*Key factor*
22	*Marketing Strategies*	*25*	*6*	*19*	*Independent*	*XI*	*Key factor*
23	Minimum Proceeding Time	15	22	-7	Linkage	*II*	
24	Regular Customer Communication	22	19	3	Linkage	*VIII*	
25	*Educate the Staff*	*24*	*13*	*11*	*Independent*	*XII*	*Key factor*
26	Be Proactive	22	12	10	Independent	IX	

Above-mentioned is a summary describing the key factors (most important factors) that lie at the lowest levels of the model and at the same time categorized in the independent cluster of MICMAC. Levels and categories of each factor are written in front them. Key factors are italicized and highlighted as grey and the comment "Key factor" is also added in front of them. They all are independent factors and have the highest effectiveness as well.

Discussion

It is also divided into two parts i.e., practical implication and theoretical implications.

Practical implications of the study for

Researchers: The study provides insights, framework, unique and new information and framework for further studies related to businesses. It will become base study for new studies regarding new business trends after COVID-19. Contactless business is a new concept so different concepts related to it can be studied in future as well.

Customers: The study will be helpful for the customers who are conscious regarding buying from a business that is concerned about them, their needs, its own long-term economic sustainability.

Business men: This study provides the businessmen, insights, new information and framework for decision making, a full fledge recipe of success, the importance of the factors that are involved in the success of their business, for the existing and new comers to follow the steps, inculcate these factors and proceed towards a successful business.

Government and policy makers: Policy makers and regulators will get an insight to generate effective rules, regulations and standards to promote such businesses and facilitate the new comers for competition.

Technological experts: Technological experts will be able to get good insights regarding stakeholders' perception and their definition of successful contactless business and will be able to make the practical solutions for contactless businesses. practical problems if detected.

Theoretical implications of the study: This study not only has practical implications but also has some theoretical implications as well. It contributes a structural model of factors and their inter relations as well as the relations that are indicative of independent, dependent and mediating or moderating variables in first and second order. This will be a useful study for future researchers that want to explore this kind of businesses, their scope and related theories and models.

Limitations and future directions of the study

There are certain limitations of the study also e.g. firstly, this research study is qualitative in nature using two different methodologies to overcome the limitations of these, methodologies future studies should use quantitative methods say SEM, GMM, Wavelet analysis etc. Secondly, this study is built on a limited number of factors from literature review that is not claimed to be exhaustive list, therefore, future studies should prepare rather a comprehensive list of factors and replicate the scheme of study. Thirdly, the study is based on responses of a focus group of sixteen experts from Pakistan. Therefore, the future researches should be envisaged on relatively larger group of respondents that should include experts from other countries as well.

Recommendations based on the results of the study

On the basis of the results of the study, following are the recommendations for different stakeholders of the phenomenon.

- It is recommended for the entrepreneurs of virtual/contactless businesses to focus on the key factors (Table 2) and understand the interaction among the factors from ISM model. They are also recommended to carefully handle the linkage factors since they are agile.
- It is recommended for the regulators to adjust the policies of virtual/contactless businesses in the light of findings of this study since it indicates key factors, interaction among them and set the priorities for handling the factors.
- It is recommended for the researchers to testify the relations proposed in the model through statistical methodologies.
- It is recommended for the technological experts that they should account-for the factors identified through this study and their inter-relations while advancing solutions for contactless businesses.

Conclusion

After COVID_19, the businesses from all over the world, including Pakistan, has been drastically shifted towards digital/contactless ways to avoid/minimize physical interaction and the traditional shopping habits have been replaced by the contact-free practices. To be successful in such kind of businesses for long-term sustainability and survival during and afterwards COVID-19 pandemic doesn't depend on any single formula rather there is a mixture of different factors that collectively make a recipe of success for any business. Now, when the businesses transformed towards the digitalization and especially in the direction of contactless means, it suited to study the factors that can assure the long-term success, survival and sustainability of the contactless businesses. Initial literature review revealed a research gap of limited research on those factors, specifically in the context of Pakistan. This research aims to find out those factors, analyze their relationships and hierarchiclize them in a meaningful manner to identify the most and least important factors contributing towards the success of contactless businesses. This research is a qualitative study and ISM with MICMAC analysis has been used as methodology to address the research gap and to fulfil the objectives of the research. Findings of the literature review and expert opinion resulted into total twenty-six factors critical for success of contactless businesses. Findings of ISM show that the most important factor is 'creativity and innovation'. Findings of MICMAC show that the independent factors include 'creativity and innovation', 'analyzing performance', 'marketing strategies', 'educate the staff' and 'being proactive'. This research is highly useful for all the stakeholders of contactless businesses i.e., for businessmen, technological experts, government/policy makers, researchers and customers etc. The study contributed following towards the existing literature: i) a verified/refined and comprehensive list of factors that are critical to the success of contactless businesses, ii) ISM model, iii) MICMAC diagram, iv) indication on driving/dependence power of each success factor (i.e. intra-model relationships) and v) discussion on the model or analysis qua reality. However, there are some methodological, data and resources limitations that future researchers can overcome by using quantitative methodological choices, collecting data from different panel or in different contexts with a more comprehensive literature review.

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