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Organization
-A Boon or Bane"

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About the Conference

The National Conference entitled *'The rise of Digitization in Business/Organization: A Boon or Bane'* aims to make a platform for academicians, professionals, research scholars and students to foster their knowledge and analytical skills in their core and non core domain. This event provides an opportunity to make networks and to share their knowledge to a world wide community. Digitization has been a force that is sweeping the current structure and transforming how people interact whether professionally or informally, in business, academic or the overall socio-economic superstructure. In observation, digitization has acted as a boon. But a coin always has two sides and so do this. It has also acted as a bane for us at moments. We look forward that this conference will shed light on us about the current scenario in business/organization digitization. The discussions on the new trends, innovation and challenges in the field of Finance, Marketing, Human Resource, Entrepreneurship, IT etc are also encouraged to enhance the knowledge and analytical skills in these areas.

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ROLE OF E-GOVERNANCE IN DISTRICT JUDICIARIES DURING THE COVID-19 PANDEMIC

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ABSTRACT

The outbreak of the Covid-19 pandemic had pushed a severe challenge to every people across the globe. It has rapidly disrupted trade, travel, education, employment and all the other things of our day to day life. Indian justice delivery system is no exception. The emergence of e-governance and information and communication technology (ICT) services acted as the savior in this time of crisis. During the nationwide lock-downs caused by the Covid-19 pandemic, the litigants and the advocates faced many challenges visiting the Courts. The legal system was facing a huge challenge to perform the task of justice delivery. Considering the situation, the Hon'ble Courts had decided to implement Covid-19 guidelines inside courtrooms, and the district judiciaries started virtual courtrooms. The main objective of the decision was to eliminate the gatherings of the litigants outside the court premises. Court proceedings such as bail matters, injunctions, production of the accused, taking evidence of the witnesses conducted using video conferencing platforms. This paper evaluates how various e-governance initiatives helped the Judiciary accomplish justice delivery during the entire pandemic situation. The paper highlights significant applications such as a case information system (CIS), effective crowd management, special e-pass, Covid-19 SMS facilities, e-filing, virtual hearings, video Conference platforms, electronic cause lists. Data for the analysis were collected from various district judiciaries of Assam through an online questionnaire. The outcome of the analysis reveals how the e-governance based applications have significantly improved the justice delivery system. The paper summarizes that courts' functioning was not paralyzed during the nationwide lock-downs with the help of various e-governance initiatives.

Keywords: e-governance, e-courts, district judiciaries, Covid-19 pandemic.

INTRODUCTION

e-Governance in the district judiciaries or the district judicial Courts has been mainly implemented through the e-Courts Project in India. The e-Courts project, which is a central mission mode project, was conceptualized under the "National Policy and Action Plan for Implementation of Information and Communication Technology (ICT) in the Indian Judiciary-2005" (E-committee, Supreme Court of India, 2005, August 1). The e-Courts project is a pan India project monitored and funded by the Department of Justice, Ministry of Law and Justice, Government of India with a vision to transform the country's judicial system by ICT enablement of courts (ECourts Mission Mode Project). Like other sectors, judicial Courts and establishments are affected by the Covid-19 pandemic, and the entire system has been disrupted like never before. Various precautionary measures, social distancing and lock-

down directives have led the judicial courts to shut down the premises to the citizens. At the same time, shutting off the courts hampering the justice-delivery system is not in the public interest. The various citizen-centric services such as court proceedings through video conferencing, virtual courts, e-filing, e-payment, e-courts mobile app, SMS pull and push services available under the e-Courts project emerged as a powerful tool during the Covid-19 pandemic for the litigants to communicate with the Courts throughout the country. Before Covid-19 Pandemic, court proceedings were held offline mode. Once summoned, Litigants or their Learned Advocates had to appear before the concerned Court on the hearing date physically. After the emergence of Virtual Court and court proceedings through video conferencing, litigants are no longer required to visit the court premises. They can opt for video conferencing from any remote place and attend the court proceedings when called. With the development of the e-Filing application, parties can now file cases online mode and pay the court fees instantly, making the Justice Delivery System more robust and transparent. Also, Litigants can query the case-related information and the next hearing date through the e-Courts website and e-Courts Mobile App available for Android or iOS based smartphones.

VIRTUAL COURT

Virtual Courts aimed to eliminate the presence of litigants or lawyers within the Court and adjudicate cases on a virtual platform (VIRTUAL COURTS). The concept has evolved to efficiently utilize court resources and provide litigants with an efficient avenue to settle petty disputes.

A Judge administers the virtual Court over a virtual electronic platform. Neither litigant nor Judge would wish to visit a court for effective adjudication and case decision physically. Communication would only be in electronic form, and sentencing and payment of fine or compensation would even be accomplished online (VIRTUAL COURTS).

Presently, in Assam, Offences under Motor Vehicle Act (Traffic Challan Cases) are tried in virtual courts.

The Virtual Court for the State of Assam, the 1st Virtual Court of North-East India, was inaugurated on November 12 2020 (E-committee, 2020, November). On December 1 2021, 29259 cases were received by the virtual Court, and the proceeding was completed for 28931 cases and fines amounting to Rs. 4145402.00 are collected (E-committee, 2021, November). The Entire process is completed online without any physical court visit.

ONLINE COURT PROCEEDING SERVICES

The Gauhati High Court, Guwahati, has launched an online platform, 'Online Court Proceeding Services' for virtual hearings (Network, L. N., 2021, June 2). This service was introduced for the Principal Seat of the Hon'ble Gauhati High Court. While the paper discusses the role of e-governance within the district judiciaries of Assam, this particular service is worth mentioning because the same could also be studied, improved and replicated

within the district judiciaries. Moreover, this service played an essential role in the functioning of the Hon'ble High Court through video conferencing.

Online Court Proceeding Services is a simple yet robust software platform that gives extensive functionality to manage Court proceedings online. It enables video conferencing with the assistance of any video conferencing tool like Google Meet, Webex, Zoom, together with the provision of case files for the Hon'ble Judges and other Court staff in downloadable PDF format (Network, L. N., 2021, June 2). This unique platform offers a customised dashboard for Hon'ble Judges, Court staff and registered Learned Advocates for smooth conduct of Court proceedings in a very virtual model. With this standardised platform, all the learned Advocates having cases within the Principal Seat of the High Court can argue their cases virtually, without physically coming to the Court premises (Network, L. N., 2021, June 2).

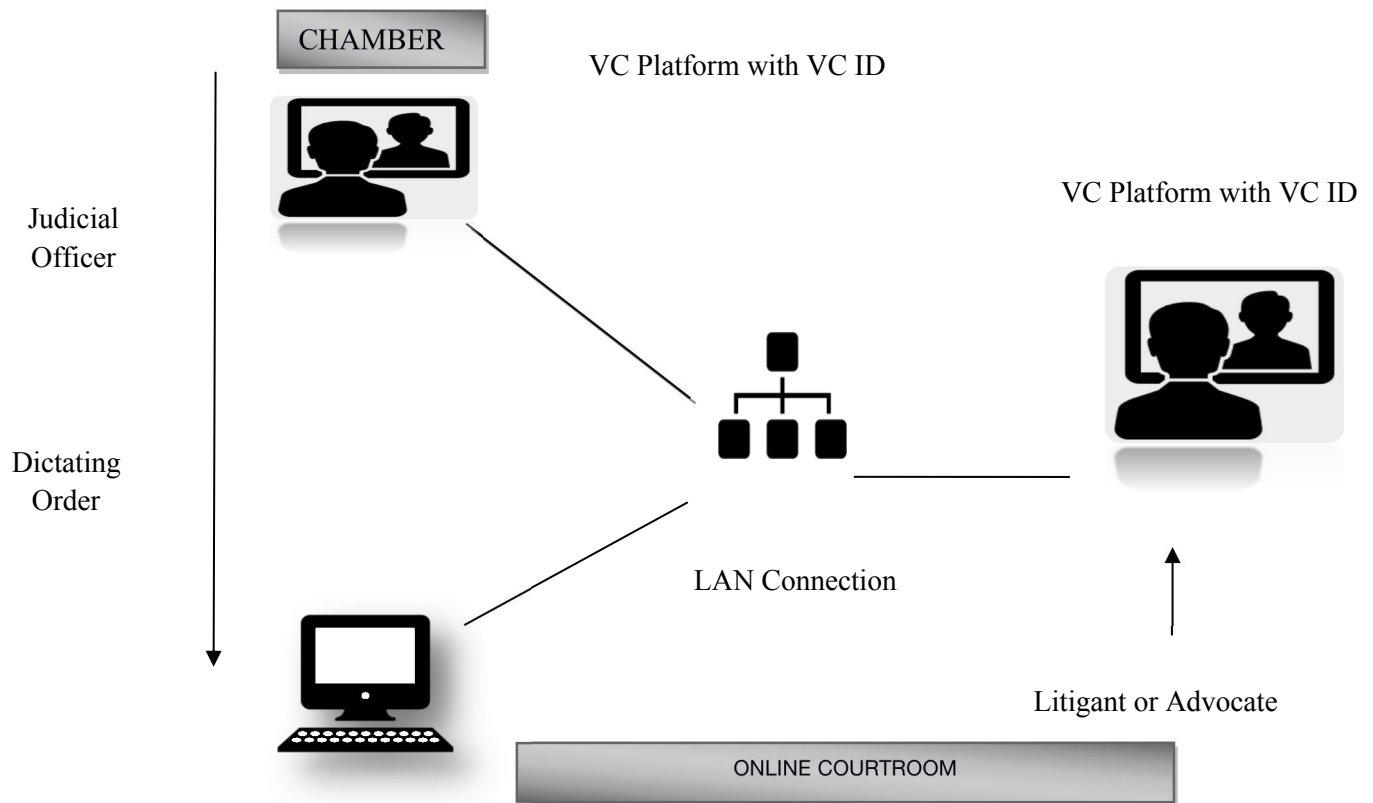
The platform was created to reduce the footfall in Court premises during the COVID-19 pandemic and conduct court proceedings smoothly through video conferencing. The platform was built using Open Source Technologies as per the rules of the eCourts project phase-II policy document of the e-Committee, Hon'ble Supreme Court of India (Network, L. N., 2021, June 2).

COURT PROCEEDINGS THROUGH VIDEO CONFERENCING

The virtual Court deals only with traffic challan cases in Assam, but all other court proceedings were conducted online through video conferencing, which emerged as the primary interface for court case hearings in the pandemic time. Moreover, it helped the court proceedings and the judges to communicate with jails, litigants, and the Appellate courts.

Following the directions passed by the Hon'ble Supreme Court of India, on April 6 2020, for the conduct of court proceedings across the country via Video Conferencing (VC), during the period of the outbreak of the Covid-19 pandemic, the Gauhati High Court had also framed rules and mentioned suitable platforms to conduct video conference for the subordinate courts. The various notifications in this regard can be seen on the website of the Gauhati High Court.

Visiting court premises for the hearing was made restricted or optional by the Courts during lock-downs. However, litigants could remotely connect to the Courts via Video Conferencing. The workflow for conducting court proceedings via Video Conferencing is illustrated in the figure below.



Computer Typist/Bench Assistant uploading Orders and next date in CIS

Figure I: Court proceedings through video conferencing

The litigant was assigned a time slot from the special cause list prepared by the concerned Court on the hearing date. Upon reaching there, the litigant and the advocate appear before the Court through a video conferencing system with corresponding video conferencing Ids. Before appearing, the advocate and litigant must submit the necessary documents to the Court online. Court staff was trained to conduct the video conferencing sessions. The Network's Quality of Service (QoS) is considered for choosing a suitable video-conferencing application. QoS or Quality of Service is the network's capacity to provide better data (video+ audio) traffic over the various network technologies (Sahana et al., 2018). Some of the primary goals of QoS are bandwidth, controlling latency and improved loss characteristics (Sahana et al., 2018).

CASE MANAGEMENT

A huge pendency and situation that arose due to the Covid-19 pandemic have given a considerable challenge for the courts to manage the cases effectively. Specific software updates were performed, which helped manage the cases effectively during the pandemic, and courts could work through video conferencing, preventing a complete halt of court works.

Furthermore, for effective case management, separate time slots were generated by a particular Covid-19 management module and were communicated to the concerned parties. Furthermore, e-passes were provided with a specific time slot for urgent personal appearances, preventing gatherings.

The particular Covid-19 management patch was integrated into the case information system where the next date of hearings can be advanced to prepare a special cause list. The workflow of the module can be summarised in the figure below:

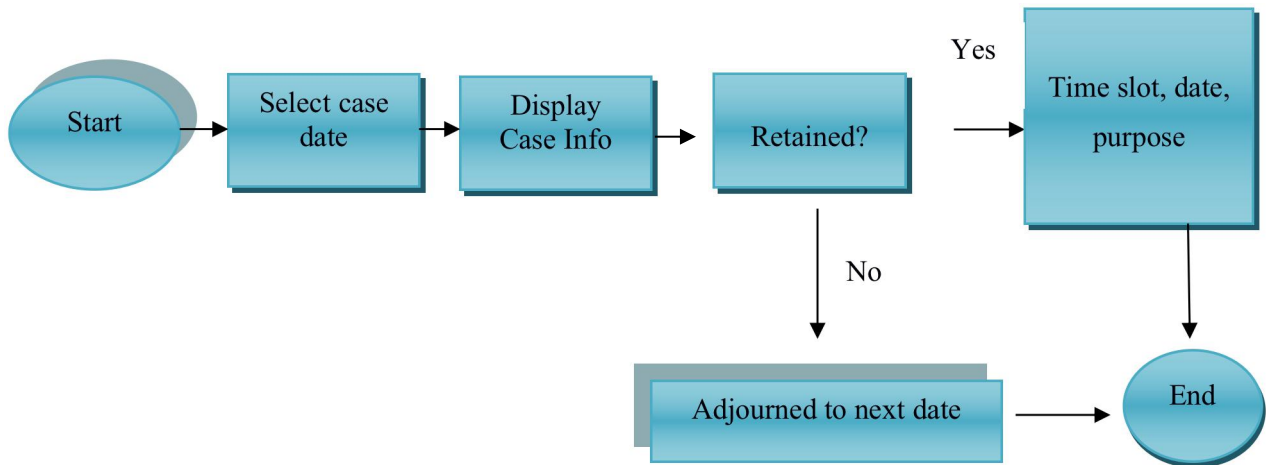


Figure II: Case management during Covid-19 pandemic using a particular module

E-Filing cases aimed at promoting paperless filing of Court cases also helped eliminate the physical presence of litigants and advocates during the pandemic. The process is an affordable, speedy facility to file remotely without visiting the Court premises.

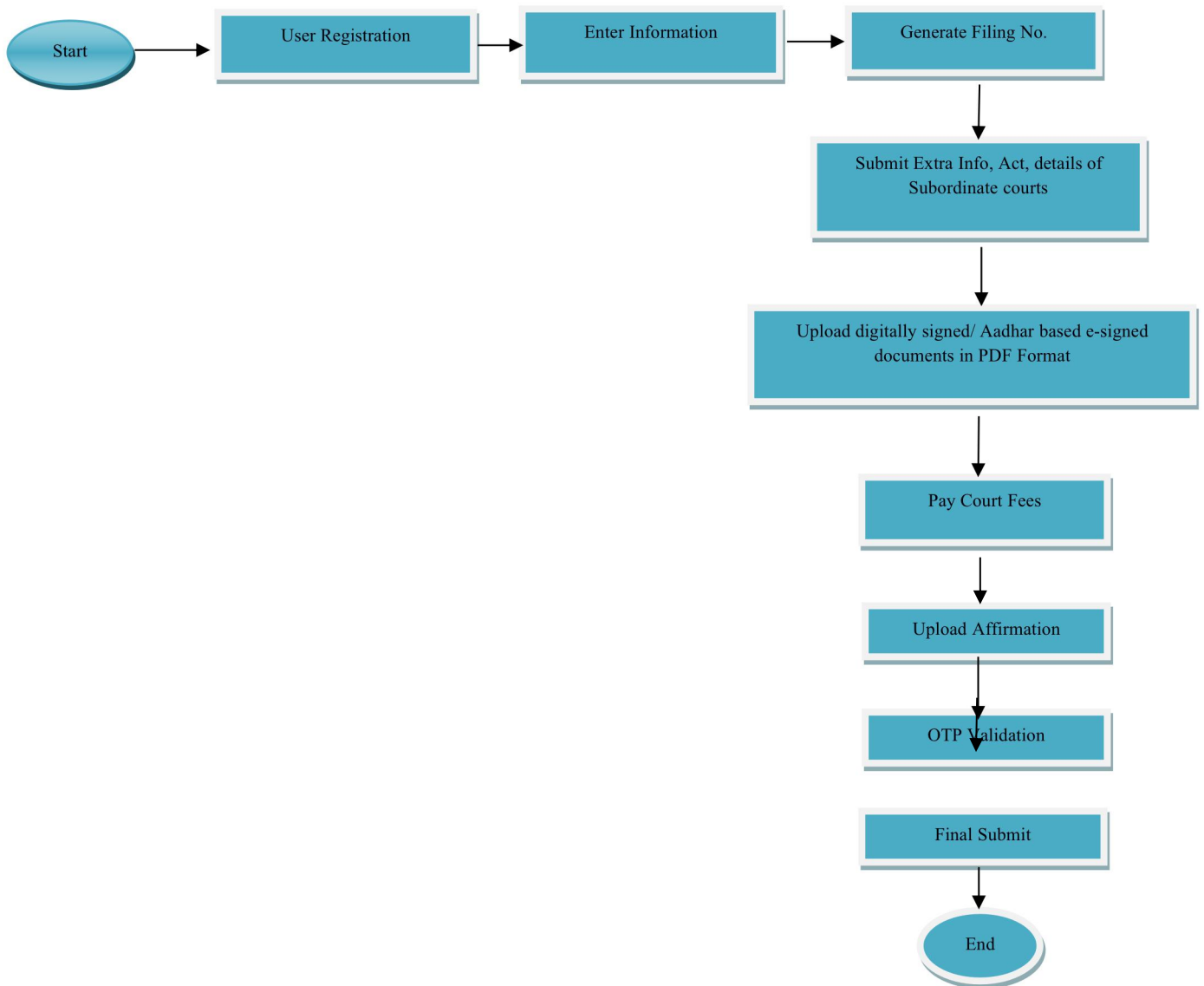


Figure III: Case e-filing procedure

RESEARCH METHODOLOGY

The Covid-19 pandemic has given an enormous challenge for workplaces of every kind, and also, the Judicial Courts are not any exception. e-Governance initiatives within the Judiciary played an essential role in continued justice delivery within the hours of the pandemic. Therefore, the study is intended to search out the role of e-governance within the District Judiciaries of Assam during the pandemic period.

Due to the continued Covid restrictions and enforced protocols, an online questionnaire was selected as the primary data collection method. Such questionnaire was selected as primary data collection method because it is inexpensive, less time consuming and has the flexibility to supply both quantitative scale and qualitative data from an outsized research sample (Cornford and Smithson, 1997; Miles and Huberman, 1994). Questions were compiled from IT adoption literature to suit the current study, and the wording of the questionnaire was

modified accordingly. In addition, specific background information was also collected from various informal interviews.

Seventeen closed-ended questions were used, limiting individual responses to multiple choice answers, like, ranking using Likert scale (5-point scale) and 'yes' or 'no' answers (Hall and Hall, 1996; Saunders et al., 2002). This enabled the data to be grouped and analysed statistically (Leung, 2001; Hall and Hall, 1996) using SPSS V23.

The state of Assam was chosen as the area for the study. Assam comprises 33 Administrative Districts. Out of 33 Administrative Districts, there are 30 Judicial Districts. The survey questionnaire was circulated online among the advocates and litigants having litigations in the District Courts in January 2022, where participation was purely voluntary. A total of 107 usable responses were obtained. Therefore, the respondents are taken as a representative sample for the study.

ANALYSIS AND RESULTS

Out of the 107 respondents, 32.7% were females, while 53.3% were males. 14% preferred not to disclose their gender.

The results revealed that 32.7 %, which was the majority of respondents, were found in the age group of 21-30, followed by the age group of 31-40 constituting 28%, then age group of 41-50, which was 24.3, then the age group of 51+ constituting 10.3% and finally age group of 18-20 composing 4.7% of the total respondents.

The majority of the respondents, 48.6%, hold a bachelor's degree level educational qualification, 45.8% hold other higher degrees, 3.7% have diploma level qualifications, and 1.9% have studied till high school or below.

During the survey, it is found that 40.2% of the respondents have excellent general computer knowledge, 42.1 people are good in their general computer knowledge, 15.9% as having moderate computer knowledge and 0.9% have feeble general computer knowledge.

The majority of the respondents, 43%, have excellent knowledge of the Internet, followed by 40.2% respondents with good Internet knowledge and 15% having moderate knowledge of the Internet.

Finally, the study showed that the majority of the respondents, that is 70.1%, strongly agreed, and 23.4% agreed that the e-courts services appeared as a boon during the Covid 19 pandemic.

The frequency tables showing the distribution of responses on the questionnaires are tabulated below.

Table I: Gender

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Female	35	32.7	32.7	32.7
	Male	57	53.3	53.3	86.0
	Prefer not to say	15	14.0	14.0	100.0
	Total	107	100.0	100.0	

Table II: Age

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	18-20	5	4.7	4.7	4.7
	21-30	35	32.7	32.7	37.4
	31-40	30	28.0	28.0	65.4
	41-50	26	24.3	24.3	89.7
	51+	11	10.3	10.3	100.0
	Total	107	100.0	100.0	

Table III: Education level

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Any other higher degree	49	45.8	45.8	45.8
	Bachelor degree	52	48.6	48.6	94.4
	Diploma	4	3.7	3.7	98.1
	High school or below	2	1.9	1.9	100.0
	Total	107	100.0	100.0	

Table IV: How do you describe your general computer knowledge?

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Good	45	42.1	42.1	42.1
	Moderate	17	15.9	15.9	57.9
	Poor	1	.9	.9	58.9
	Very good	43	40.2	40.2	99.1
	Very poor	1	.9	.9	100.0
	Total	107	100.0	100.0	

Table V: How would you describe your Internet know-how?

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Good	43	40.2	40.2	40.2
	Moderate	16	15.0	15.0	55.1
	Poor	1	.9	.9	56.1
	Very good	46	43.0	43.0	99.1
	Very poor	1	.9	.9	100.0
	Total	107	100.0	100.0	

Table VI: How long have you been using the Internet?

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	1-3 years	7	6.5	6.5	6.5
	3 years and above	96	89.7	89.7	96.3
	Less than 1 year	4	3.7	3.7	100.0
	Total	107	100.0	100.0	

Table VII: How often do you use the Internet per day?

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	1-2 hours	3	2.8	2.8	2.8
	2-3 hours	9	8.4	8.4	11.2
	Less than 1 hour	2	1.9	1.9	13.1
	More than 3 hours	93	86.9	86.9	100.0
	Total	107	100.0	100.0	

Table VIII: Have you ever heard about e-Courts Services?

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Maybe	9	8.4	8.4	8.4
	No	3	2.8	2.8	11.2
	Yes	95	88.8	88.8	100.0
	Total	107	100.0	100.0	

Table IX: Have you used e-Courts Services?

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Maybe	14	13.1	13.1	13.1
	No	8	7.5	7.5	20.6
	Yes	85	79.4	79.4	100.0
	Total	107	100.0	100.0	

Table X: During the pandemic, using e-Courts Services enabled me to accomplish my needs from the District Court more quickly and more efficiently.

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Agree	21	19.6	19.6	19.6
	Neutral	12	11.2	11.2	30.8
	Strongly agree	73	68.2	68.2	99.1
	Strongly disagree	1	.9	.9	100.0
	Total	107	100.0	100.0	

Table XI: Learning to use the e-Courts Services system is easy.

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Agree	25	23.4	23.4	23.4
	Neutral	13	12.1	12.1	35.5
	Strongly agree	68	63.6	63.6	99.1
	Strongly disagree	1	.9	.9	100.0
	Total	107	100.0	100.0	

Table XII: Using the e-Courts Services system is easy.

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Agree	30	28.0	28.0	28.0
	Neutral	13	12.1	12.1	40.2
	Strongly agree	63	58.9	58.9	99.1
	Strongly disagree	1	.9	.9	100.0
	Total	107	100.0	100.0	

Table XIII: The Judiciary encourages citizens to use the e-Courts Services system.

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Agree	31	29.0	29.0	29.0
	Neutral	8	7.5	7.5	36.4
	Strongly agree	67	62.6	62.6	99.1
	Strongly disagree	1	.9	.9	100.0
	Total	107	100.0	100.0	

Table XIV: I have the resources necessary to use e-Courts Services.

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Agree	29	27.1	27.1	27.1
	Neutral	11	10.3	10.3	37.4
	Strongly agree	66	61.7	61.7	99.1
	Strongly disagree	1	.9	.9	100.0
	Total	107	100.0	100.0	

Table XV: Most of my case related information search is done through e-Courts Services.

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Agree	29	27.1	27.1	27.1
	Neutral	11	10.3	10.3	37.4
	Strongly agree	66	61.7	61.7	99.1
	Strongly disagree	1	.9	.9	100.0
	Total	107	100.0	100.0	

Table XVI: Courts' websites are always up and available 24/7 during the pandemic and lock-down period.

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Agree	33	30.8	30.8	30.8
	Disagree	1	.9	.9	31.8
	Neutral	7	6.5	6.5	38.3
	Strongly agree	64	59.8	59.8	98.1
	Strongly disagree	2	1.9	1.9	100.0
	Total	107	100.0	100.0	

Table XVII: e-Courts Services appeared as a boon during the Covid-19 pandemic period.

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Agree	25	23.4	23.4	23.4
	Neutral	6	5.6	5.6	29.0
	Strongly agree	75	70.1	70.1	99.1
	Strongly disagree	1	.9	.9	100.0
	Total	107	100.0	100.0	

The study revealed that the score of respondents' feedback on the role of e-Courts Services during pandemic ranged from 4.439 to 4.617, which is enumerated in table XVIII. The descriptive statistics show that these scores are pretty high.

	Mean	Std. Deviation
Demographic details		
Gender	1.607	.7237
Age	3.028	1.0856
Education level	3.383	.6537
Computer, Internet and e-Courts knowledge		
How do you describe your general computer knowledge?	4.196	.8061
How would you describe your Internet know-how?	4.234	.8077
How long have you been using the Internet?	3.860	.4440
How often do you use the Internet per day?	3.804	.5736
Have you ever heard about e-Courts Services?	1.196	.5736
Have you used e-Courts Services?	1.336	.6996

Role of e-Courts Services during the pandemic		
During the pandemic, using e-Courts Services enabled me to accomplish my needs from the District Court more quickly and more efficiently.	4.542	.7682
Learning to use the e-Courts Services system is easy.	4.486	.7814
Using the e-Courts Services system is easy.	4.439	.7792
The Judiciary encourages citizens to use the e-Courts Services system.	4.523	.7183
I have the resources necessary to use e-Courts Services.	4.486	.7569
Most of my case related information search is done through e-Courts Services.	4.486	.7569
Courts' websites are always up and available 24/7 during the pandemic and lock-down period.	4.458	.8159
e-Courts Services appeared as a boon during the Covid-19 pandemic period.	4.617	.6819

Table XVIII: Descriptive Statistics

RELIABILITY TEST

For examining the measure's internal consistency, Cronbach's coefficient alpha values were chosen (Hinton et al., 2004). As shown in table XIX, Cronbach's results showed the point of reliability as .969. Hinton et al. (2004) suggested four different reliability points. Excellent ranges from 0.90 and above, high from 0.70- 0.90, a high moderate from 0.50-0.70 and low from 0.50 and below.

The mentioned value shows that the constructs got high reliability which implies that constructs were internally consistent, and therefore, the reliability measures the identical construct.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.969	.970	8

Table XIX: Reliability of Measurements

FUTURE SCOPE

The present study focused only on e-governance in the District Judiciaries during the covid-19 pandemic. The study was mainly focused on Citizen's perspectives on the e-governance services rollout by the District Judiciaries in Assam to cope with the challenge faced by various restrictions and lock-down during the pandemic period. However, during the study, it is realised that there is a vast scope for in-depth study and research on various e-governance initiatives taking place in the Judiciary for the Citizens. Soon, studies may be conducted to analyse and find out the role of e-governance in the District Judiciaries from Citizens and the Judiciary's perspectives. The various challenges and bottlenecks in implementing these technologies provide a vast area for study and research. The study was conducted in District Judiciaries of Assam. The same may be replicated and studied in order Districts in the North-Eastern States for getting a better idea of the diffusion of various e-governance initiatives undertaken by the Judiciary in this part of the Country.

CONCLUSIONS

The outbreak of the Covid-19 pandemic (Ukraine) has been one of the most significant challenges for the world community. It has also left an unprecedented impact on the justice delivery system. During this pandemic, the most significant challenge the judicial system came across was developing ways to ensure courts' effective functioning. To cope with the new situation, the Courts framed a mechanism for using e-governance and information and communication technology, including electronic filing of cases, cases hearing through video-conferencing and virtual courts. All these measures were to minimise the impact of Covid-19 on litigants and advocates. This study revealed that most of the litigants and advocates found the e-Courts services a boon during the Covid-19 pandemic. The study also showed that the Citizens are primarily satisfied with the e-governance facilities provided by the Judiciary.

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Home Baking and Craft Designing Business On The Rise On Instagram In Shillong, Meghalaya

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Abstract

Many small home businesses are promoting and marketing their products online through social media sites like Instagram. This study aims to provide an insight on how such businesses flourish when they promote and market their unique products online and how they contribute to the online community of local businesses in Shillong. From home cooks and home bakers to jewelry and craft designers, Instagram is helping the young and independent generation of entrepreneurs to showcase their talents and to create such talents into a business of its own. These local businesses have a good customer connection and they have also been able to maintain customer loyalty and satisfaction. A search on the growth of businesses in Instagram shows countless sites offering potential clients on how to grow their businesses online. It is interesting to see how the popularity of these online home businesses is gaining momentum in Shillong.

Keywords: Small home business, Local business, Instagram, Customer satisfaction.

Introduction

We live in a digital age culture where access to technology and digitization have made our lifestyles more convenient. Whether we are working or non-working individuals, we have clearly benefitted from the new wave of digitization and digitalization. It is here and we have accepted it as an essential part of our day-to-day lives.

Social media sites like Facebook and Instagram are now household names. Instagram has gained popularity among its users not only for the networking it provides but also for its convenience among the new generation of shoppers.

A search of the meaning of Instagram leads one to various sites explaining what it means. Brian Holak, site editor of techtaraget.com in an article on the definition of Instagram, defines it as a free, online photo-sharing application and social network platform which allows users to edit and upload photos and short videos through a mobile app. Users can add a caption to each of their posts and use hashtags and location-based geotags to index these posts and make them searchable by other users within the app. Each post by a user appears on their followers' Instagram feeds and can also be viewed by the public when tagged using hashtags or geotags. Users also have the option of making their profile private so that only their followers can view their posts.

Furthermore, we also learn that Instagram is not only a tool for individuals, but also for businesses. It is emerging as a new marketplace for start-ups and medium-sized businesses.

The photo-sharing app offers companies the opportunity to start a free business account to promote their brand and products. Companies with business accounts have access to free engagement and impression metrics. According to Instagram's website, more than 1 million advertisers worldwide use Instagram to share their stories and drive business results. Additionally, 60% of people say they discover new products through the app. (Holak,2017).

While marketing on Instagram is a phenomenon started by high-end fashion or fitness brands, today, from education to toys and plants, all sorts of brands are investing on Instagram. (Verma,2019)

Within a span of two years, the Covid-19 pandemic have brought in new purchasing alternatives among walk-in customers and more home businesses are coming up and offering their products online. Normally, we would see many shops located in the localities of Shillong and stocked up with products and items waiting to attract customers. Recently, ready-made, and custom-made garment shops have had to suffer from the restrictions imposed due to the pandemic. Similarly, pastry and cake shop owners fear they may run out of business if the baked items go stale. We have all observed this situation firsthand and we understand the threat and the shop owners' pain when there was a slow movement of walk -in customers.

The digitization of small home- businesses in Instagram, Shillong

The year the lockdown started in the year 2020, we noticed the increasing presence of local businesses promoting a range of products online. The presence of social media apps like Instagram are indeed a boon as they are making way for small home businesses to flourish and to attract customers through the digitization of their products, giving them an edge to create visually appealing and unique products and accessories.

Digitization simply means the process of converting information into a digital format (Wikipedia) and it is understood that digitization of product information have largely enabled businesses to have an online and digital presence.

A blog post on the growth of online ordering and food delivery indicates that the growth “can largely be attributed to the digital age culture. Millennials and Gen Zers are accustomed to ordering most of their products online and waiting for their delivery. As more people in these and older generations jump into the online orders and food delivery bandwagon, the market size continues to increase. Businesses are realizing the evolution and adjusting according to the market. Consequently, more players are entering this food industry segment bring new trends”.

This paper highlights the use of Instagram as an effective digitization tool among small home businesses of home bakers and craft designers who are based in Shillong. A case study survey was conducted with four local businesses who have launched their unique products on Instagram. Two of these are home- based bakers and the other two are promoting and marketing hand-made jewelry and custom-made children's dresses and accessories.

The main objective of the case study survey was to get an insight into the role of digitization of the small home businesses in Instagram and to understand the business owner's motivation, challenges and satisfaction towards the promotion and marketing of their products . A questionnaire was shared with the respondents via google forms. The survey had a total of ten question items which had both close and open -ended questions.

Findings and observation

Profile of the small home -businesses

A background information about the businesses indicated that they were launched by young local women entrepreneurs who have individual proprietorship of their online business. Their interest and passion in their different talents enabled them to venture into this online business without any formal learning or background in business and marketing. They were able to connect to their customers and clients simply through the process of digitization of their products ranging from different types of breads, pastry and savoury food items to handmade dresses and accessories. They relied on building their products and brand through their customers feedback and support from relatives and friends. Their product and brand-building was supported by Instagram as they were able to digitize and to capture convincing and attractive photos and to create short stories and reels. This resulted in a fan following of consumers who further added support through their feedback for the business network to grow.

Motivation to promote online business

On enquiring about their motivation and enthusiasm to digitize and promote their products online, one home-baker's response was *"to earn some extra money"* and that there was an opportunity to promote healthy food as the other baker commented that she observed *"a lack of healthy and diabetic friendly bread in the Shillong Market"* so she came up with a healthier option.

From the jewelry and garment makers, it was understood that the business was founded during the Covid-19 pandemic and there was no other option but to digitize and sell the products online using Instagram. The respondent remarked that she wanted to start selling the products in-store, but she was still completing her studies and therefore was not able to do it.

Challenges faced while promoting the business online

To understand the challenges the business owners faced towards promoting their business online, the home bakers commented that the issues were mainly with the *"Instagram know-how"* and that there was a *"public's lack of awareness of healthy bread and sourdough being an acquired taste"* was a bigger challenge.

From the jewelry and dress designer's view, one felt that not all potential customers use social media sites like Instagram and the other respondent expressed that *"the most challenging part of online business was finding followers and credible customers. This was especially difficult as at the time, as no one had heard of the brand and so, there were very few shoppers. Another challenge was that most people wanted to shop in-store to see and try*

the products themselves. Since I do not have a store yet, most shoppers are hesitant on purchasing the items”.

Satisfaction on the presence of online customers

On enquiring about the business owner’s satisfaction towards the presence of their online customers in their Instagram handle, the responses showed that seventy five percent of the respondents were satisfied, however twenty-five percent remained neutral.

Customer satisfaction and customer loyalty

To understand how the businesses maintain customer satisfaction and customer loyalty, the jewelry designer mentioned that she provides *“good quality products, discounts for return customers, new product launch”* and the other said that she tries her *“best to maintain customer satisfaction by ensuring that buyers are provided with high quality products at an affordable rate, and timely delivery of the products”*. Among the home bakers’ responses, it was found that they get to know their customers and cater to their individual needs. They take feedback very seriously and try their best to match what their customers demand.

Promotion of products in other function and events

Besides digitization and online marketing of products on Instagram, it was found that the home-bakers have promoted their products at other social events like birthdays and wedding parties and other social gatherings. The responses from the jewelry and dress designers showed more participation in special events particularly at birthday parties.

Mode of delivery of the products

It was also found out that the mode of delivery of these products were mainly done by outsourcing the delivery through a local delivery partner.

In a way this business model has also benefitted the other local delivery party who is dependent on such home-based business.

Mode of payment

For the preferred mode of receiving payment, it was found out that 50 per cent of the entrepreneurs have opted for UPI-Gpay and the other 50 percent prefer to receive payment through cash on delivery.

To gain a better understanding about their take on digitization in the online business community in Instagram, one respondent commented that *“it’s growing”* and another believed that *“it’s a great opportunity to connect, advertise, and network with customers and fellow entrepreneurs. It has its own challenges but it’s a great way to start a business with inadequate monetary and social capital”*.

Conclusion

It is encouraging to see the increasing presence of digitization in the work of home-bakers and self-trained craft designers, among many others, in social media sites like Instagram.

The groundwork of these local talents and entrepreneurs was perhaps not an easy task, as they not only have to make their products from scratch at the little space that they were able to occupy in their homes. They also have had to master the art of digitization and time-management while providing customer satisfaction through the feedback received. They have made the best out of their small business set-up where they were able to showcase their creativity in digitization using Instagram's features of product visualization, story and reels creation, besides other features, to get their customer's attention. Their confidence and purpose in digitization on the online business community have gained momentum and influence as they have been consistent in catering to their customer's satisfaction and earning them the customer loyalty that they deserved.

However, we must also realize that the flipside of digitization is that it only allows one to visualize the product and to tempt customers to buy-in without testing, tasting, and getting a real feel of the product. As a participant had pointed out that "*that most people wanted to shop in-store to see and try the products themselves*".

Despite these challenges of digitization in many aspects of the digital businesses, this is just one of the many examples of young local entrepreneurs who are contributing to the new market and growth of digitization.

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Digitization and the Informal Economy: Opportunities and Challenges in Post-COVID-19 Era

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ABSTRACT

The Post- pandemic world saw a rapid rise in the adoption of digital practices by small businesses. The pandemic triggered challenges, severity of which was mostly felt by the workers of the informal sector who are engaged in small businesses characterised in terms of low income generation and productivity. Although, several studies have highlighted and debated the impact of usage of digital tools on growth of small businesses, this paper specifically compares the status of digitization and its associated challenges between two informal groups- (i) Informal garment manufacturing enterprises (ii) Informal enterprises engaged in bakery, cosmetics and custom printing business. The economic uncertainty due to the pandemic has pushed the informal sector workers to adopt changes in their production process in terms of enhancing their digital capacities and this paper has attempted to analyse the same across these groups. The results have been drawn from a primary survey through the use of questionnaires and informal interviews in areas of Guwahati and Dimapur. The sample of workers interviewed has been taken in consideration with the number of workers engaged in the business. The paper elucidates how the process of digital transition hasn't been the same across the informal groups in terms of digital payment methods, use of social media platforms for promotion of finished products, to name a few. The conclusion sheds important light on how digitization has a long way to go keeping in mind the differences in the challenges and opportunities across the informal groups being studied.

Keywords: Pandemic, Digitization, Informal sector, Challenges.

INTRODUCTION

No country has been left unscathed by the havoc caused by covid-19. In addition to the loss of life, the pandemic has also brought about an economic upheaval. The outbreak of this pandemic led to full scale and/or partial lockdowns in different parts of the world, bringing the world economy to a grinding halt. During the peak of the lockdowns in 2020, IMF revealed that the world economy shrunk by 3.1 percent. Fall in demand led to production cuts which further escalated investments and income (Siddiqui, 2020). The pandemic has resulted in millions of people being unemployed; especially leaving a large part of the informal economy to fend for itself. A vast majority of workers in developing countries are in the unorganised/informal sector. Lockdowns led to a decline in economic activities which

critically affected around 1 billion people directly dependent on the informal economy (Destefanis, Sonobe, Rahut & Aryal, 2021). Over 90 percent of the employment in low income economies are in the informal sector (ILO, 2018). The informal workers are vulnerable due to their low rate of productivity, income and savings which makes them vulnerable to economic shocks (ILO, 2020). With majority of the informal sector workers earning minimal income, a predicament ensued for them, whereby they were forced to choose between going to bed hungry or working for survival and risking covid infections. According to the Centre for Monitoring Indian Economy, an estimated 122 million people lost their jobs in April 2020 alone and a majority of them were small traders and wage labourers mainly in the informal sector (Thomas, 2020). Aum, Lee & Shin (2020) have also found that low skilled work is correlated with higher risk of covid infections and a lower probability of being able to work-from-home. Reduced demand resulting in employment layoffs further put a strain on informal workers, which clearly shows that they have been disproportionately affected by the pandemic.

Caught in the throes of a global economic crisis, economies have been compelled to innovate and adjust to the new normal which was enforced to curb the spread of the virus. As a result, different activities have shifted from offline to online, resulting in accelerated use of digital technologies (Vargo, Zhu, Benwell & Yan, 2020). According to Mckinsey's Global survey, covid-19 has led to an increase in the use of digital technologies by leaps and bounds at both the organisational and industry level during the pandemic. However the inherent problems of micro and small enterprises (which usually falls under the informal sector) like lack of digitization, technology adoption, and limited online presence have made it difficult for them to cope up during the pandemic (Bai, Quayson & Sarkis, 2021). Digitization is the process of converting information into a digital format through the use of digital technologies.

Digitization can help to make business operations have a digital presence through online stores, social networks and corporate pages (Pardo, 2018). It also improves efficiency and productivity of enterprises. Use of digital technologies can be broadly categorised into hardware and software technologies. This paper focuses on the latter and mainly deals with the use of social media, and digital payment methods by small businesses in the informal sector in the conduct of their business activities.

Given the heterogeneity of the informal sector, two sub groups have been studied and compared, based on education as a determining factor affecting digitization of business. These two sub groups are (i) Informal garment manufacturing enterprises and (ii) Informal enterprises engaged in bakery, cosmetics and custom printing business. The first group comprising of garment enterprises are typically run by less educated entrepreneurs with no or low profitability. Their lack of infrastructure and obsolete machines prevents them from achieving any high growth rate. The second group comprises of new age entrepreneurs who

take advantage of digitization to increase their profitability and reach of business. These educated and tech-savvy entrepreneurs in addition to physical stores, have also started using online stores to add to their income pool. These online stores are mostly run with the help of social media which helps to promote, advertise and sell their products online. For our study we have specifically focused on small scale enterprises selling bakery products, cosmetics and custom printed items. This group comprises of self-employed entrepreneurs which in some cases are run with the help of one or two workers. They usually use modern machines and equipment in the process of production, are innovative and creative in their operations.

REVIEW OF LITERATURE

As documented by literature (Onvima & Ojiagu, 2017; Swaminathan,1991; Olomi and Urassa, 2016), the gradual shift from informal sector to formal sector has been one of the foremost priority of many policy makers over the years. However, it's also vital to point out that the sector acts as a hub for generating employment opportunities for a huge section of unskilled or semi- skilled labour force especially in the developing economies; thus a transformation might not be the best efficient solution. Therefore, it has been argued that the emphasis can be instead put into narrowing down the gap between the sectors in terms of getting access to resources and digital technology. The study also points out that digitization can bring significant positive changes in an informal business but its implementation has been slow due to its limited reach.

Palmer (2018) states that the informal economy is a continuum of different activities; ranging from the survivalist lower productivity economic activities on one end to the dynamic higher productivity activities on the other end. Bhattacharya (2019) also highlights the presence of both opportunity driven entrepreneurs and necessity driven entrepreneurs in the informal sector especially focusing on how the attitude to digital information and technology is different in both the cases. For opportunity driven entrepreneurs, digital technology can be a means to increase the reach of business, diversify products and increase the scale of operation. However for other small scale business, adoption of digital technology may have a less appeal due to lack of talent or less enthusiasm to take risks for expanding their business. As such, for such enterprises adoption of digital technology may be income protecting instead of income enhancing. The study also argues that digitalization is more likely to be taken up firstly by higher productivity informal enterprises. Chen (2016) also documented the difficulties of informal enterprises in incorporating new technologies in their business. It was brought to notice that new digital technologies are mostly use by higher income traders in the informal sector. Adoption of digitization can also lead to increase in informality by increasing productivity gaps when access to digitization is unequal (Chacaltana, Leung & Lee, 2018). Esselaar, Stork, Ndiwalana and Deen-Swarray (2007) have found that use of sophisticated digital technologies is limited in informal enterprises due to high costs and low expected returns to investment businesses. They are usually restricted to the use of mobile phones

while the wider use of internet, fax etc were likely to be used by formal or semiformal enterprises.

In another study by Krichewsky-Wegener (2020, pg; 9), three divisions have been laid out among the small enterprises to explain how the usage of digital technology varies across groups. The first group comprises of the ‘Survival entrepreneurs’, who mostly are unwilling to capitalize on digital tools. Their goal is not to expand their business but earn enough income for bare subsistence. The other group comprises of the ‘Gazelles’, whose main motive is to generate profits by expanding their business: facilitating communication through digital technologies, maintaining a dynamic social networking profile for advertising their products etc. The third group includes the ‘Top performers’ who fully utilizes digital technologies to their advantage. The present study attempts to highlight the extent of digitization among the first two groups. The informal garment manufacturing enterprises fall in the category of ‘survival entrepreneurs’ and Informal enterprises engaged in bakery, cosmetics and custom printing business fall in the category of ‘Gazelles’. The second group will be collectively called as other small scale enterprises for the rest of the paper. As already mentioned in the introduction, these two groups fall in different spectrum of the informal sector with their distinct sets of challenges to digitization.

For small scale business in the informal sector, bouts of economic instability pose a big challenge as they are unable to diversify risks due to economies of scale. OECD biennium policy paper (2021) stated that the covid-19 outbreak brought to notice the need for digitization in small scale enterprises. However, most small scale enterprises are ill equipped for a thorough digital transformation. As such there is an increasing gap in opportunities between those businesses that have a ‘digital profile’ and the ‘digital laggards’. Many scale businesses may not have the ability to innovate and upgrade digital capacities, which challenges their long term growth. The post pandemic world has brought with it new challenges which compels the economy to innovate and adapt quickly to changing scenarios. E-commerce is one of the sectors which has seen a massive growth spurt post pandemic (Bhatia et al, 2020). Social media as a marketing tool has also soared after the pandemic (Moorman & McCarthy, 2021). Online purchase makes for a convenient and time saving option for customers especially during the lockdowns. On one hand, the enterprises in the second category have been quick to jump to the bandwagon and realise the benefits of digitizing their business by way of opening online stores, using social media and adopting digital payment options. Social media platforms like Instagram, Whatsapp and digital payment methods like Gpay, Paytm are widely used for advertisement and payment purposes respectively. On the other hand, the garment enterprises have been slow to adapt to the changes. One of the reasons for difference between the two groups in digitizing their business can be attributed to the level of education. Digitization calls for some level of digital literacy which is enhanced by the level of education. Higher levels of education whether vocational or

mainstream helps to enhance creativity, increase problem solving ability and adapt modern communication techniques (Gauthier, 2006)

In light of the literature review, this paper is an attempt to understand the scenario of digitization in the production operations of the informal enterprises/ businesses. The two sub-groups of the informal sector have been studied to draw a comparison on how the pandemic has increased the usage of digital tools in the operations of the enterprises. In addition, this paper has made an attempt to provide a glimpse into the opportunities and challenges faced by the enterprises to ensure a digital transformation.

The following are the research questions we seek to explain:

How has the pandemic caused a surge in the use of digital technologies in the informal economies?

What are the differences in the usage of digital technologies across informal groups?

What are the on-going challenges faced by these enterprises / businesses to a digital future?

Has the process of digitization a bane or a boon for these enterprises?

In this backdrop, the following are the objectives of the paper:

To identify the differences across the informal enterprises in terms of their digital transition.

To understand the challenges faced by these enterprises to achieve a more efficient digitization in their business.

METHODOLOGY

We have obtained the data set through a primary field survey using questionnaires. First-hand information was attained from a sample of 50 respondents comprising of 25 garment manufacturing enterprises and 25 other small scale enterprises. For the former, a semi structured questionnaire was prepared in addition to informal conversations with the entrepreneurs who are operating in Guwahati which helped in understanding how they have coped up and strategized themselves in a post pandemic world. For the latter, respondents were selected through the help of snowball sampling. After which the questionnaires were sent via emails. Since our paper has focused on the use of social media and digital payment methods, questions were asked keeping in mind the advantages as well as challenges posed by them. Questions were framed in a simple and precise manner to gauge the views of the respondents and to further make the quantification and analysis possible.

DIGITIZATION IN THE INFORMAL SECTOR

The heterogeneous nature of the informal sector implies that it covers a wide range of economic activities which differ in terms of its productivity, size, employment etc. The present study targets two such sub-groups 1) Low productive economic activity comprising of garment enterprises 2) High productive economic activity comprising of other small scale enterprises.

As have been documented by various literature, a workforce which is well educated has a positive relationship with the productivity of the enterprise. On similar grounds, this paper addresses how levels of educational attainment has a positive relation with the use of digital tools in different business undertakings. Here, data of education level of the entrepreneurs involved in both the categories of work has been collated and presented in Table 1. It is interesting to observe how higher levels of educational attainment is seen mostly in case of other small scale enterprises.

Table 1: Education qualification of entrepreneurs working in informal enterprises

		Educational qualification				Total
		Illiterate	Up to primary	Up to secondary	Above secondary	
Category of work	Garment worker	9	12	3	1	25
	Other small scale enterprises	0	0	2	23	25
Total		9	12	5	24	50

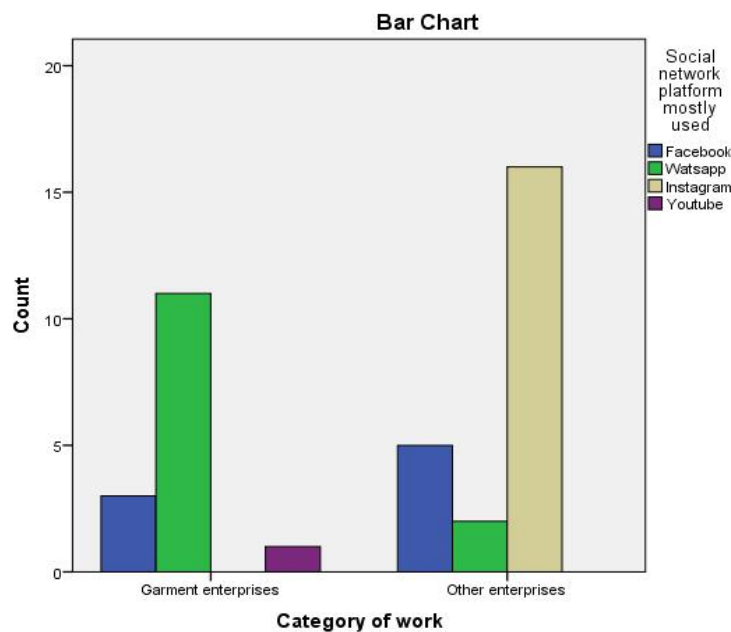
Source: Primary survey

Our analysis further points out that the shift towards a digital transformation after the global pandemic have frequently occurred in the enterprises which deals with higher value products such as that of bakery, cosmetics and custom printing. The survey results shows that a significant portion of the enterprises have increased their usage of digitization, which is around 72 percent. However, among them, the garment enterprises account for only 28 per cent share, which is low compared to a higher share of 44 per cent within the other businesses. Analysing more into our survey data, we also found out that there is similarity of opinion in both category of work as regards to reason for investing in digital technologies for their business. The reason for engagement in the business shows that 58 per cent share of

respondents were not satisfied with serving only the local customers and wanted to move ahead to get a wider audience through digital media; it was followed by 20 percent of respondents who opined that investing in digital technology is a cost effective solution and the rest 22 percent ventured into it for their advertisement needs.

Moving ahead, we have also analysed how social network platforms such as Whatsapp, Instagram, Facebook and Youtube has been utilised across these informal groups. As evidence portrays, among the respondents interviewed from both the category of work, 76 per cent use social network platforms to promote and advertise their products. The higher percent share might give the idea that there is considerable progress towards digitization, however, our further research analysis shows otherwise. Before delving into the questions of our findings, Figure 1 shows what kind of digital media platforms are commonly used by different enterprises for their business operations

Figure 1: Social network platform mostly used by informal enterprises



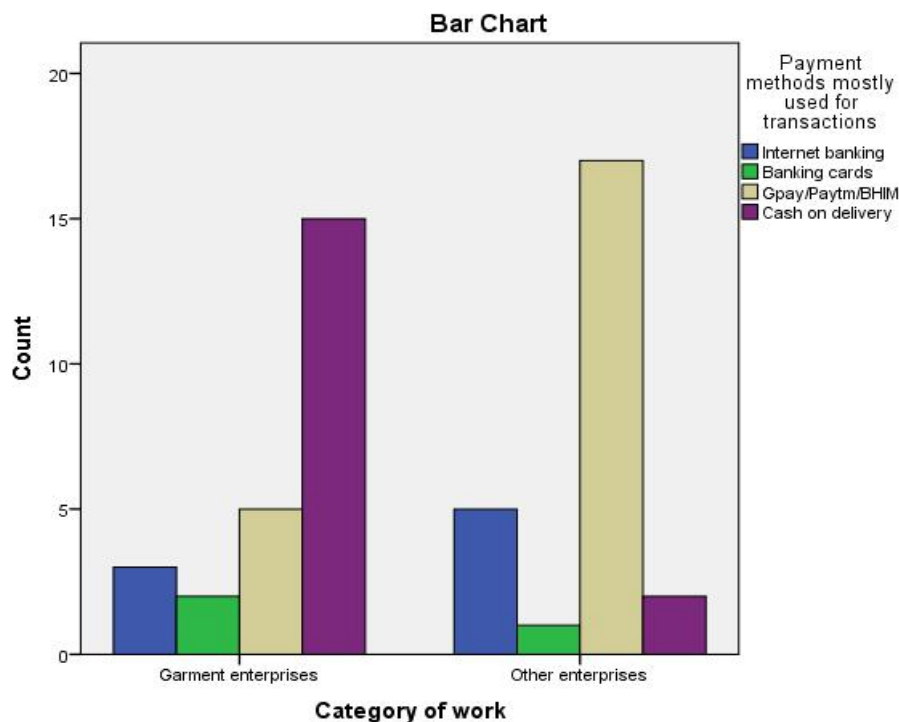
Source: Primary survey

One vital point that emerges from this result is that platforms like Instagram, Facebook are widely popular among the other small scale enterprises however, the same doesn't seem to be applicable for the garment enterprises. The figure shows among the 39.5 percent enterprises from the garment sector, 28.9 percent use Whatsapp for their business purposes whereas among the 60.5 percent enterprises from other businesses who use social media, 42 percent use Instagram for their promotional needs. One explanation for the finding can be due to the

fact that Whatsapp as a marketing channel is more accessible to people of various backgrounds because of its easy usability. Even though it has the disadvantage of having limited coverage, it is commonly used among these garment enterprises for advertisement and promotion of their products. Moreover, it was observed that even though they have their personal accounts in these networking sites, they struggle to operate it for their business purposes. On the contrary, social networking platforms such as Instagram and Facebook are more popular among the other small scale enterprises mostly because it provides an opportunistic platform for them to grow and promote their business. Put differently, these entrepreneurs are well acquainted and connected to these platforms to acquire the maximum benefits.

Coming to the end of the discussion, an analysis on the percentage share of enterprises using digital payment methods was conducted and it was found that around 66 percent of enterprises have resorted to digital payment methods for their transactions. Additionally, to get a better insight on the digitization status, Figure 2 shows the type of payment methods provided by the enterprises and mostly used by customers.

Figure 2: Payment methods mostly used for transactions by customers



Source: Primary survey

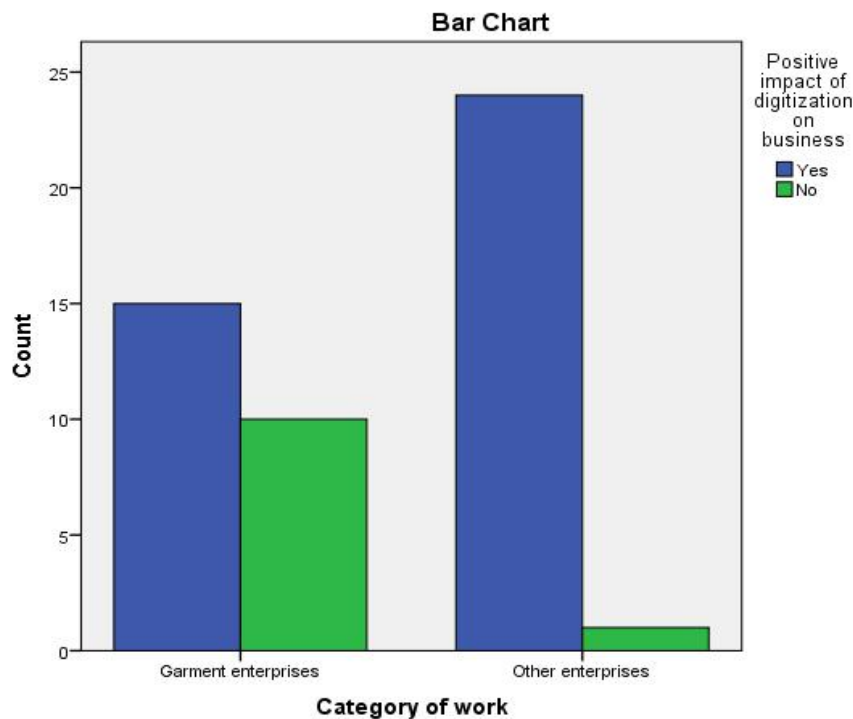
A clear demarcation is observed from the figure which supports our previous results. Around 30 percent of the customers mostly go for cash on delivery option for making transactions in garment enterprises whereas a higher number of other small scale enterprises (34 percent) provide options for making payments using Gpay/ Paytm/ BHIM along with other digital payment methods. The findings clearly suggest the smaller role of digital tools for their production operations among the garment enterprises.

CHALLENGES AND OPPORTUNITIES IN DIGITAL TRANSITION: A WAY FORWARD

The smooth transition to a digital enabled world brings a wide range of issues and challenges especially for the small scale enterprises which are disadvantaged at various levels in acquiring access to digital resources. On one hand, we observe that the majority of the other small scale enterprises are operated by entrepreneurs who are educated and have the skills to increase their customer base. On the contrary, the informal garment enterprises falls in the category of low productive economic activity which to an extent explains the disparity across the groups in terms of digitization. It is of vital importance to recognise that for these enterprises, the entrepreneurs don't possess any formal training or quality skills to expand their marketing potential or facilitate technological innovations in their daily functioning. Most of these enterprises still resort to traditional methods and the dependence on the digital tools doesn't play a big role. Therefore, the switch to a digital transformation will not be a rapid process but instead an on-going process to evolve, develop and strengthen its existing potential.

In continuation of the above, our survey results (Figure 3) further shows the differences in opinion as regard to whether there is a positive impact of digitization on their business operations. Out of the 25 respondents interviewed among the garment workers, 60 percent of them agreed that digitization has a positive impact on their business operations as against 96 percent of the respondents from the other small scale enterprises.

Figure 3: Positive impact of digitization on business operations



Source: Primary survey

One possible reason for the above result might be due to the fact that the informal garment enterprises operate on traditional forms of production organization which are highly dependent on local resources for survival. Their motivation for adopting digital tools is low due to the lack of both knowledge and interest in bringing substantial changes to their production operations. Their primary purpose for engaging in the business is just to earn enough for bare subsistence rather than to adapt to the technical needs of the business.

Moving to the positive impact of digitization on the business operations in table 2, we observe that around 44 percent of the respondents argued that through the appropriate use of digital tools, they have been able to expand and sell their products to a wider audience. It is followed by 28 percent of respondents agreeing to the fact that a move to digitization has offered them flexible working hours. This has been observed true in case of almost all the businesses engaged in other small scale enterprises. Most of these entrepreneurs are well aware of the digital technologies in terms of access to several social media platforms to promote their products along with a fair knowledge about digital payment methods. The operation of both an online and offline store have enabled them to get hold of more customers instead of being dependent on just the local customers so that they are just one click away from ordering their preferred choice of items. Selling of products online also has its immediate perks of making it easier to advertise their products.

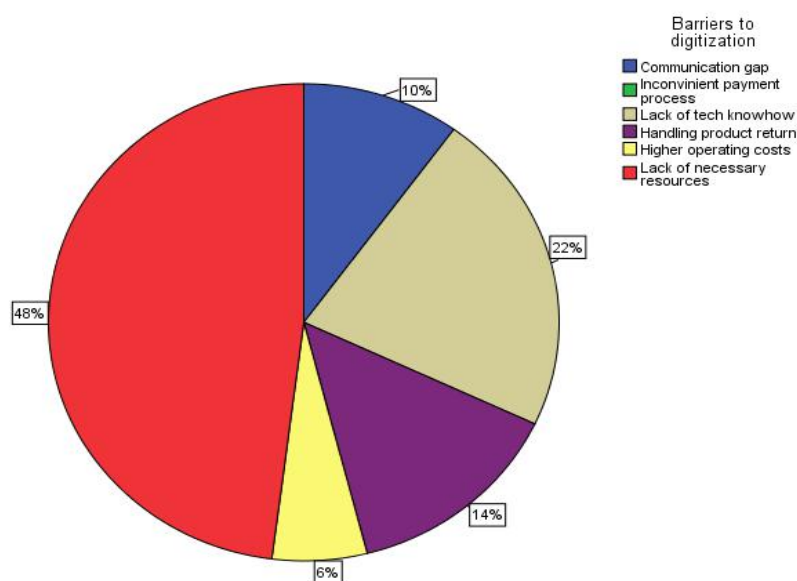
Table 2: Kind of positive impact on informal enterprises

Kind of positive impact	Frequency	Percent
Flexible working hours	11	28.2
Wider reach	17	43.6
Supply on demand	2	5.1
Easier to advertise	7	17.9
Higher sales	2	5.1
Total	39	100.0

Source: Primary survey

We now move forward to discuss some of the constraints and challenges faced by these enterprises for digital transformation as shown in Figure 4. Two of the major issues concerning them are lack of necessary resources (48 percent) and lack of technological knowhow (22 percent). These problems are generally true for majority of the informal enterprises. The diverse resources required for any successful business undertaking is absent in enterprises which still rely on traditional forms of production such as that of the garment enterprises. There is also the added concern of lack of digital skills to achieve any digital transformation. For other small scale enterprises handling product return, communication gap and higher operating costs are crucial problems faced in the process of digitization.

Figure 4: Barriers to digitization in informal sector enterprises



Source: Primary survey

Keeping in mind the differences across the informal groups, there is also dissimilarity in opinions regarding whether there is a need for a complete digitalization in their business operations. Out of 54 per cent respondents who argued that their business will soar high if there is complete digitalization: around 46 percent of them belong to other small scale enterprises, as against 8 percent of them belonging to the garment enterprises.

Finally, to sum up the discussion, Table 3 shows the percentage of respondents who agree to the fact that digital transformation has been a boon for their business operations. As can be clearly seen from the table that the higher percentage share of respondents who agree to the statement are from the higher productivity small scale enterprises as against a lower percentage share from the garment enterprises. Around 6 percent respondents from garment enterprises strongly agreed that digitization has been a boon for their business as against a higher percentage share of 20 percent of respondents from the other enterprises.

			Digitization a boon for business					Total
			Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree	
Category of Work	Garment enterprise	Frequency	2	1	7	12	3	25
		% of total	4.0%	2.0%	14.0%	24.0%	6.0%	50.0%
	Other enterprise	Frequency	0	0	1	14	10	25
		% of total	0.0%	0.0%	2.0%	28.0%	20.0%	50.0%

Table 3: Whether digitization a boon for their business

Source: Primary survey

CONCLUSIONS

There is no denying of the fact that the post- pandemic period has witnessed changes in the production processes of industries all over the world. The pandemic has kick-started the use of digital tools which has now become an inherent part of business operations. However, the path to a digital transformation has not been easy and this paper in addition to examining the differences in digital transition across different informal groups has also tried to discuss the identified issues and challenges faced by the informal sector enterprises to a digital evolution. The informal sector enterprises are more susceptible to the vagaries of economic downturns, as with meagre resources they find it extremely hard to bounce back to normal. Digitization can be an important tool in this regard, and help to mitigate the loss of business caused by

covid-19, by way of providing an affordable alternative for promotion of products to a wider audience, sale and purchase of items, and over all efficient and smooth functioning of the enterprise.

Given the unprecedented times, it is imperative to bridge the gap between the different informal enterprises as regards to the digital divide that we have perceived so far. The results have pointed out the need to address the concerning issues differently across the sub-groups. Therefore, any kind of benefits or assistance depends on the context and the specific sub-group being directed at. The main conclusions that can be drawn from the study are summarised as follows. Firstly, it is clear that a sharp disparity has been observed across the informal groups in terms of extent of digital tools used, the social media platforms used for a wider reach of customers and the different digital methods of payment adopted. The observation so far has indicated that only a small percentage share of the garment enterprises have access to these resources. This implies a clear need to educate them about different forms of digital teaching along with engaging them in capacity building programmes specifically focused on building up their technical skills. The other small scale enterprises with higher levels of education make more use of digital tools in the conduct of their business, which shows that they are more in tune with the advantages offered by the same. Secondly, the issues and challenges being discussed show that the areas that are of concern are related to the lack of availability of resources along with the lack of knowledge to use technology in their production operations to the maximum benefit. This shows a requirement for facilitating funds for access to digital resources in addition to introducing schemes for narrowing the knowledge gap among the informal sector groups.

The giant leap to digitalization hasn't been a smooth ride for majority of the informal sector enterprises. However, with appropriate measures and strategy a successful digital transition can no longer be a distant dream for them in the future.

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Role of Digitization in Transforming Universities to Become More Relevant and Effective

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ABSTRACT

One of the major responsibilities of universities is to offer the best courses of education for youth in the 21st century. This requires great vision and planning for relevant educational programmes, effective advertisement, calling for applications, screening and selection of the right students, ensuring success in graduation and job placements. Manual methods for handling these critical processes are time consuming and often inefficient with explosive increases in student population, their varied backgrounds and financial capabilities. Digitization, if implemented properly, enables these phases successfully. Further, digitization can monitor progress, take corrective actions, make interim and final assessments, fee collection, students' services, counselling and mentorship.

In this paper, we present how digitization can not only help in routine administration, but offer opportunities to match the interests, background, financial and sociocultural needs of youth seeking university education. Some areas discussed are: identification of vulnerable students to provide better scholarship or financial support; counsel students choose the best courses to maximize learning and graduate sooner with better grades; help universities to become more efficient in providing newer and more modern educational choices and e-learning; and help in faculty re-orientation and transform universities to recruit the right faculty to become an ideal university. The technologies underlying digitalization are evolving rapidly, unlocking new thinking and approaches for increased productivity. Digitization is an entry point for both students and the university authorities to work together to generate ideas through research and practice. Digitization leads to digitalization and digital transformation enabling better education, upgradation of student community, youth and society.

INTRODUCTION

Digitisation is a process of converting and translating information from a physical form into a digital format. When this process is adopted to improve organisation processes, it is called digitalisation. The results of this process are called digital transformation (Bloomberg, 2018). For example, converting signature to an electronic format for signing documents online. Scanning paper document into a digital document, such as Portable Document Format (PDF). When these basic functions get integrated into the routines of an organizational structures, they invariably impact all the stakeholders in multiple and varied ways, most often desirable but occasionally unfavorable.

UNIVERSITIES AND DIGITIZATION

Therefore, is rise of digitization and digital transformation a boon or a bane?

In my paper, I will provide some examples of how digitization spectacularly transforms universities to function more effectively in carrying out its responsibilities, and prove to be more efficient, relevant and effective (Verhoef et al 2021). I will end with some caution needed to prevent it becoming a bane (WHO, 2019).

A university can be considered a business organization supplying knowledge and skills to students, faculty and administrators in a cost-effective manner raising up generations of youth to develop able societies for welfare of people. As such, this requires optimal business practices using the best available resources and technologies, one of which is digitization. The two major activities of a university will be discussed in this paper:

Using digitization in purveying knowledge through educational programmes

One important activity of a university is offering the best undergraduate, post graduate courses and research studies. To be progressive, the university must offer newer and socially relevant courses to attract the best students to be gainfully employed ushering prosperity and development. So, how does digitization help?

Firstly, in building a knowledge base of what educational courses of study are now available and what additional courses would be needed but not being offered. Digitization facilitates conducting in an efficient manner various online baseline surveys using electronic systems to establish a strong foundation for decision-making, such as available courses at other universities, their lacunae or gaps, demand and performances, successes in job placements, costs and resources needed. Digitization helps in preparing a template which is time saving and easy to fill in, analyze and prepare reports. Many computer softwares are available, free to download and use, with instructions e.g. Survey Monkey, Epi-info, Epi-Map, Tableau and Python are just a few examples. Google can help in identifying such software and also websites catering to educational resources. Communication and feedback becomes possible through such devices in a relatively short time, so that more time is spent in discussing rather than data collection. Of course, planning is crucial in any business venture, and the university must decide what it needs for future actions, commensurate with its capacities and finances. Digitization can also identify how more can be done with less.

Of course, one could have used manual methods such as written communications, postal services, telephones, personal interviews for collecting this information but often they are very time consuming, labour intensive and result in not only poor but incomplete responses. No comparison to digitized methods. Of course rapport building is necessary. The baseline survey would also include a needs assessment for new courses, feedback and expectations from prospective students, parents and other stakeholders. Digitization techniques help in preparing reports in no time and in a form that can be electronically shared with university boards or committee members.

Using selective websites or search engines such as Scholar-google, ERIC and SSRN one identify universities that are offering specific newer courses, and do another computer based e-survey on obtain relevant details on demands, cost, difficulties and responses. While physical meetings are possible, today such interactions that are necessary can be more easily done through zoom, google meet, Microsoft or other electronic media.

Secondly, the university administration with a panel of experts will scrutinize the baseline data to take decisions on their implementation, taking into account their financial and other resource constraints. A SWOT type of analyses can be done and there are many tools of digitization that are available to analyse and take realistic decisions. Digitization will help in carrying out discussion with subject matter experts, alumni, and other stakeholders to make wise decisions on new courses, using special computer software for designing course work. Today, computer programs for linear and dynamic programming and other operations research methods, are available to prepare an optimal mix of old and new educational courses. Most new courses have to pass through an experimental phase where close follow up and feedback are obtained before regularizing them. Thirdly, preparing the brochures, advertisement, etc. can be the next phase of implementation. Digitization is used in each of the above stages using internet capabilities, cloud processing and many of the social media including WhatsApp, YouTube, Instagram, LinkedIn etc.

Extensive data can be condensed through a variety of communication softwares in the form of tables, images, flowcharts to help in two ways: one, in modifying existing courses and two, in introducing new courses. Both require serious and intensive work of experts, faculty and final decision making. Detailed protocols are needed and digitization technology can facilitate and speed up the process, including simulation exercises and pilot studies. In this process, the perspective of students and faculty on the extent to which Universities should proceed in digital transformation would also be essential as part of planning. Students understand digitalization primarily as the digital provision of lecture notes as study aids and online interaction possibilities with the university (i.e., registration for examinations, communication with lecturers and fellow students).

They may not immediately demand a digital revolution in teaching or a fundamental

reform of the academic studies (e.g., in form of mandatory online lectures). However, most students would welcome new learning formats such as lecture recordings or interactive elements, and generally appreciate a significantly stronger degree of digitalization, essentially in form of minor improvements of the core university information (IT) services. Studies have shown that three service categories clearly dominate the students' wishes for IT support: study organization, online literature and software provision (Thoring et al 2018; Scholkmann 2020; Kolikant 2010; Brink et al 2020).

Using digitization in assessments of students and faculty and evaluation of educational programmes of the university

A second important activity of a university is in evaluating its students, faculty, pedagogy, and courses of study, public relations, finance, cost-benefits, research outputs and accreditation. Apart from testing knowledge acquisition which is discussed later, digitization of student records, their profiles, courses chosen, their socioeconomic status and financial limitations would help the university authorities to offer suitable scholarships and other financial aid, especially for many students who hail from indigenous populations or backward communities. Many such students also would require appropriate counselling both in their career choices and matching courses the university offers. Digitization and digitalization thus help in a more humane, just administration benefitting deserving students.

Digitization through use of various computer softwares has already revolutionized routine student evaluation through self-assessments, peer reviews, competitive examinations and objective structured assessment systems.

Generally, student evaluation is based on knowledge gained, knowledge retained, applied, and practiced. Digitization has led to formatting of the question paper and its assessment using computer templates, resulting in faster, transparent and economical methods of ascertaining progress. Digitalization also helps in providing the steps and tips for solving problems and the correct answers to questions almost automatically and in a student-friendly manner. Programmed instruction has come a long way since its introduction several decades ago due to better use of computer capabilities and advances both in hardware and software.

E-learning is actually a self-assessment and custom made educational tool that allows students to learn at their own pace and according to their needs. At some stage, an external mechanism is required for more objective and standardized form for purposes of accreditation and comparability across several universities. Again, digitization is necessary part of this process.

Digitization becomes a convenient tool for evaluation of faculty as well. This can be planned as self-assessment, peer review, students' feedback and a common external certification examination. The value of digitization lies in its ability to make evaluation transparent, objective, economical and feasible for large numbers.

Evaluation of research outputs of a university is an important part of its accreditation. Here, digitization enables profiles of a wide range of researches in a standard formats for presentation and reviews. Use of audiovisual and other nonverbal methods through imaging and scanning techniques can be employed for better evaluation that leads to better research activities. Research in universities is progressive, hierarchical, and contagious to enable a favorable research environment and research culture. Every professional is expected to contribute to the body of his discipline, needing direction, encouragement and support. Use of digitization for such building processes enables a healthy and productive research environment in university, a hallmark or gateway to learning, moving on from knowledge to wisdom.

One more critical area of evaluation where digitization can help is in clarifying and establishing the role of university as an integral part of society contributing to its socioeconomic cultural development. Digitization helps in drawing a wider and more representative sample of stakeholders, offer better tools for gathering needed information in a more objective, transparent, faster and economical manner through mobile phones, WhatsApp, Face book, Twitter, home pages, websites, etc., beyond manual methods such as snail mail, telephones, etc.

CONCLUDING REMARKS

Being a top university and maintaining its role, offering the best possible education is a challenging task. Success depends on staff cooperation and commitment using available digitalization tools for seamless transformation. There may be problems of correct linkages, interconnectivity, computer glitches, but all are preventable and can be overcome. Confidentiality and security are paramount. Anonymity if honest responses are needed. Transparency should not be compromised. In a competitive world, plagiarism and cyber frauds must be guarded against. University is a business organization. To be productive, efficient and successful, it must adopt the best business practices that are also ethically sound.

Digitization is merely a tool and a means to an end. Digitization does not replace initiative, commitment, vision or mission of an institution. But it is a powerful tool and a motivational device to help achieve university's goals. Like any other tool, digitization has to be used in order to improve its sharpness and capabilities. It can also inevitably bring in its own problems through abuse, misuse, shortcuts and corrupt practices. Thus a responsible use becomes imperative.

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Household Income, Human Development and the Technological Divide: A Case Study among School Students in Shillong and Jowai, Meghalaya.

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ABSTRACT

Human Development is the fundamental objective of every society or country. The path to ever increase human development in terms of good health and an educated workforce for better economic conditions can be achieved foremost if the general population is adequately literate. There are investments involved that goes into these components of human development, that is, education and health and not everybody have the capacity to invest even modestly in education or health to enjoy a decent standard of living. This is especially alarming in terms of parents not having the capability to invest in their children's education and health due to income constraints. In the contemporary world of cyber connections with its concomitant gadgets, almost all traditional conventions of transmitting and receiving information have fundamentally changed. In the educational sphere, these changes, especially of the online classes with the requirement of an internet connection and a phone or laptop/computer will affects low income households more than the high income households. In the more technical subjects of Mathematics and Science, students from poor households lacking access to modern learning tools will lag behind their peers who are better equipped to learn the ever increasing pace of developments in science and technology. In the test that was administered, students from low income households scored relatively poorer than students form higher income group and the income of the household, siblings as well as other related variables are significantly related to the total scores scored by the students.

Keywords: household income, learning outcomes, human development, technological divide

INTRODUCTION

Human Development in terms of good health and an educated workforce for better economic conditions can be achieved foremost if the general population is adequately literate. When Col. Perry landed in Edo Bay in Japan with his steams ships the Japanese were terrified and at the same time were awed by the technology (Sen, 2002). The Meiji Restoration of 1868 happened and the rest is history. The main point is that the Japanese moves towards mass literacy. Anywhere else in the world and at any time, human development is through education and learning to ever improve upon the arts, science, literature and culture of a nation. To achieve ever higher human development in terms of being literate, healthy and

enjoying a decent standard of living, which is invariably a manifestation of being educated and healthy, there are investments involved that goes into these components of human development, that is, education and health. And not everybody have the capacity to invest even modestly in education or health to enjoy a decent standard of living. This is especially alarming in terms of parents not having the capability to invest in their children's education and health due to income constraints. In most cases, there is intergenerational transmission of poverty and ignorance among generations in a single family. Many generations would have gone in a typical poor family until a first generation learner(s) moves the family towards better socio-economic conditions.

In the contemporary world of cyber connections with its concomitant gadgets, almost all traditional conventions of transmitting and receiving information have fundamentally changed. Even in schools and colleges, besides the traditional books, access to a computer/laptop with an internet connection is sine-qua-non to the learning process and outcomes. This is especially true when the Covid-19 pandemic happened and the changes that the pandemic demands people to adapt to. These changes will become the new normal in times to come. In the educational sphere, these changes, especially of the online classes with the requirement of an internet connection and a phone or laptop/computer will affects low income households more than the high income households. Transactions costs in the form of a mobile phone or a laptop/computer will be a burden for low income households and consequently the learning process of the respective students will be affected. The situation is even dire for low income households with many siblings with no rooms to share. The changes that the pandemic has brought in the educational sphere through online classes will result in a technological divide in the learning process compounded by the income divide that already exists, especially in Meghalaya. And this technological divide will be a wedge in the mechanics to improve upon human development in terms of literacy which is the first principle for a human being to be able to take care of oneself and to earn a decent standard of living.

In the subjects of Science, Technology, Engineering and Mathematics (STEM), the need for such learning tools such as a computer with an internet is more important. Most of the scientific concepts from Spacetime to a Double-slit experiment can be made comprehensible much more effectively if students have access to computers and phones, connected to the web and explore the millions of videos on such abstract concepts. Such natural phenomena that happen every day can be easily grasp by the students and eventually, they will draw knowledge and understand more about their environment and ultimately be able to direct their own course in life making informed decisions. But this thinking does not apply to most students from poor households. They are disadvantaged by the fact that they do not have the luxury to learn more freely and creatively owing to poverty. And most likely, the learning process for them is not happening in a conducive environment with many shortcomings, like, not having books and other related materials, or not having a supportive family with parents themselves being unable to help them intellectually or even worse, parents not motivating enough to learning or have no time to help their children in the learning process as most parents from poor households are caught up in wage earning activities almost all day. This

also leaves room for students after they reached home from school to spend time in other activities besides school works because of lack of parental supervision.

In the more technical subjects of Mathematics and Science, students from poor households lacking access to modern learning tools will lag behind their peers who are better equipped to learn the ever increasing pace of developments in science and technology. This will therefore put such students in a disadvantage position when it comes to higher educational level attainment or in the future job markets where understanding and skills of technical subjects is a must. This paper aims to examine how income level of the households and the role of transaction costs in the form of mobile phones, laptop/computers, books, etc., affects the learning outcomes of students on Mathematics, English reading and Picture-Vocabulary tests.

The rest of the paper is organized as follows: Section 1.2 briefly discusses Human Development and Inequality in Economics, Section 2.1 discusses the data and methodology, Section 2.2 examines the technological divide and human development and Section 3 discusses some policy recommendation and concludes the paper.

HUMAN DEVELOPMENT AND INEQUALITY IN ECONOMICS

Human Development in economics is a broad concept and it is rather a recent development that took shape and substance after the writings of Amartya Sen which culminated ultimately in the construction of the Human Development Index (HDI) by UNDP in 1991. Traditionally, the study of welfare economics deals with improving the human condition whether one adopts the Paretian or Pareto optimal or even Rawlsian conditions. Sen (1979) in his Tanner Lectures gave a new way to approach human development through the Capability Approach. Sen defines 'functions' and 'capabilities' as new dimensions to the analysis of human development. Traditional welfare economics tend to identify a person's well-being with the person's command over goods and services and naturally, this leads to the focus on income. Welfare is represented by utility which is a function of income. Accordingly, social welfare is represented by aggregating the utility levels of all the individuals in a society. An alternative route to this is the capability approach which replaces the traditional concern for commodities and utility with, respectively, functionings and capabilities. According to Sen's terminology, a 'functioning' is what an individual chooses to be or do, in contrast to a 'commodity' which is an instrument which enables a person to achieve different functionings. While functioning is central to the notion of human well-being, it is not merely the achieved functionings that matter but the freedom that a person has in choosing from the set of feasible functionings, which is referred to as the person's capability (Atemnkeng, 2010).

Sen (1979) has criticized the approach to analyze wellbeing based on the Utilitarian approach focusing extensively on utility which is interpersonally comparable, thus enabling the comparison of human welfare or the Rawlsian approach with the focus on primary goods. Sen dismissed these notions and suggested using the capability approach as it "has certain clear advantages over other types of equality". He conveyed that, "Basic capability equality is a partial guide to the path of moral goodness that is associated with the idea of equality."

Though Sen acknowledged the many difficulties with using “basic capability equality” but it is flexible enough to adapt to “whatever partial ordering” based on the uniformity of preferences and the “idea of relative importance” are according to the nature of society. Now, with such flexibility, one can argue to use the basic capability equality even on the opportunity to learn without hindrance brought about by many factors and also to address such hindrances because society at large will benefit if its young citizens are learning in a conducive, safe and equal environment. Coming to “functionings” and “capabilities” inequality in the learning process due to poverty will affect a student’s ability to attain his/her potential to be what he/she wants to be and to do the things he/she wants to do.

Sen (1999) discussed the types of “unfreedom” that a person is shackled to, like the unfreedom to be well-nourished or sheltered. Other types do exist that are commonly overlooked like the unfreedom of illiteracy, especially in the matter of science illiteracy that fundamentally deals with everyday experiences and which affects the worldview of the particular person in general. This particular unfreedom is severely dire in its effects when it comes to students who are still in the development stage and in the process of making sense of the world around them. For such illiteracy to take place in students will subsequently result in a generation who believe in superstitions and who are easily gullible to misinformation and to spread them. To Sen, development is a “process of expanding the real freedoms that people enjoy.” Although Sen argued that income is an important variable for expanding the freedoms enjoyed by a person or a family but he also emphasized that other determinants such as “social and economic arrangements” like having facilities for health and education to be important too. In the contemporary world with such “opulence”, Sen found that many “elementary freedoms” are denied to most people and this is a direct consequence of poverty which “robs the people of the freedom to satisfy hunger...” Poverty also robs the children from such households from the freedom to be educated, well-nourished and to have a happy home. Sen also conveyed that unfreedoms are closely linked to the lack of social care, besides other things like public facilities for health and education. In poor households, social care for children rarely goes beyond the adolescent stage where in most cases children by that age would have gone for work to supplement household income. Development as freedom then would be influenced by economic opportunities, political liberties, social powers, and the enabling conditions of good health and basic education. Sen also conveyed the “empirical connection” between the different kinds of freedom such as political freedom to promote economic security and social opportunities in terms of good health and education to promote economic participation and these different kinds of freedom “strengthened one another”. Sen (2006) has further reiterated the importance to achieve these basic freedoms for human development and to address inequality in a diverse population. No matter how diverse the population is, basic freedom is universal for human development like “economic empowerment, political freedoms, social opportunities, protective security and transparency guarantees”. There are also “interrelations between these distinct kinds of freedom- how they can assist as well as complement each other” as Sen has noted. The freedom to be literate unshackled by income inequality is an important link to achieve the other kinds of freedom no matter how different the political and social arrangements are between different countries as Sen has noted from empirical studies about east Asian economies. These studies have

identified a number of policies which include the role of economic competition, high level of literacy and school education, health care and others for economic and human development.

After Independence, India's education policy was the one designed by Macaulay during the British Raj which served the interest of the British Raj itself and not particularly Indians. But that very education system produced leaders for the Independence movement as education empowers people, anywhere and anytime. After two decades after Independence the Kothari Commission (1966) laid down the objectives of education for a free India in terms of "aspirations of the people and thereby make it a powerful instrument of social, economic and cultural transformation necessary for the realization of the national goal." Sen et al (1991) noted the emphasis on modernization of the report. The National Policy on Education (1986) noted that education is essential for all and is important for all-round development, material and spiritual. The policy also noted the role of education for national cohesion, the scientific temperament and independence of mind. Education develops the necessary manpower for the different sectors of the economy and the development of research which is ultimately the guarantee of self-reliance. Kingdon (2007) conveyed the mixed results of the education system in India showing a large absolute numbers of well-computing graduates while also contributing to nearly one-half of the world's illiterates. The analysis of the school system also paints a similarly mixed picture with near universal primary and secondary education enrollment however access to quality learning is different based on gender and family income. The rise of private schools has contributed significantly to education and is more effective in the learning process for their students. The author noted that this development will tend to increase the gap in literacy and educational inequality. Khanam et al (2017) studied the association of income and children learning outcome. They conveyed that the understanding of socio-economic gradients in child development is necessary for uncovering the mechanisms through which intergenerational transmission of poverty takes place. Gong et al (2015) noted the association of mother's educational level with school attendance in China and rural school children lagged behind their urban peers in school readiness. They also found income to be associated with the probability of a child attending pre-school in China. Miller et al (2021) found that wealth is associated with children overall behavior and academic development. Wealth is positively related with mathematics and reading scores. Gracia (2015) found that economically disadvantaged children exhibit lower academic and behavioral skills at the start of kindergarten. With low income levels, there is intergenerational transmission of lower academic performance (Duncan et al, 2007). Gennetian et al (2015) found that income instability have negative associations with adolescents' school behavior. They found that the odds of high school engagement are reduced by 3% for each additional income shock and a 28% increase in school engagement for each percentage point increase in average income. Behrman et al (1999) found a considerable association between household income and children's school success. Higher income households have greater school expenditures in part because of higher quality schooling and other related expenditures. Family dynasties will be reinforced if children from higher income households are most likely to receive more and better schooling, and thus reap greater gains from schooling in the future than children from lower-income households. Genoni et al (2019) used conditional regressions and found that children living in households

with fewer resources and with less-educated adults are significantly more likely to be out of school. Results using the Human Opportunity Index indicated that children from households with educated parents and more resources are more likely to attend school. Das (1999) found that states in India are marked with widespread disparity in terms of socio-economic development. The factors which are most important for the overall development process relates to basic needs like education, availability of food, minimum purchasing power and facilities like safe drinking water, health care infrastructure, etc. The author also found that enrollment ratios cannot be raised if minimum needs of the people are not met. Therefore, true development requires action to improve elementary education, safe drinking water facilities and health care and to remove social barriers, especially for women. The role of social development, especially women literacy, is a prerequisite to overall development. Palanithurai (2014) conveyed that many students come to study social sciences not out of passion but because of financial constraints to study technical programs and hence have no choice but to join the social sciences even though the students knew that technical programs have more scope in employment. Subsequently many students opted for any government jobs and have no fixed goals. The gap between demand and supply of workforce in India is due to the failure in preparing the youth for the labour market. Mehrotra et al (2012) pointed out that the states were converging on important indicators of human development but low absolute values of various social indicators among the SC/ST continued. States that perform better on health and education outcomes are also states with higher HDI and thus, have higher per capita income, which is reflected in high human functioning.

Education fosters the growth of human capital which can help a country in the process of nation-building and in achieving economic growth. The human capital theory focuses on the relationship between the functions of education and economic growth. Education is recognized as a human right since the adoption of the Universal Declaration of Human Rights (1948).

DATA AND METHODOLOGY

The study is based on primary data collected randomly from 15 schools from Shillong and Jowai together, two urban centres of the state of Meghalaya in the Republic of India with the former being the state capital. In all, a sample of 407 students mostly from classes 9 and 10 were administered the tests designed by the authors, which includes a Mathematics test based on Class 7 Meghalaya Board of School Education (MBOSE) syllabus, English reading test and a Picture-Vocabulary test designed around STEM (Science, Technology, Engineering and Math) concepts. The focus on the Picture-Vocabulary test is to evaluate the students on their comprehension of STEM terminologies and such understandings of these terms have been made easy in the forms of pictures and videos that are available freely in the internet. And with the advent of online classes brought about by Covid-19, applications of such learning materials through phones and computers have become ubiquitous. The paper's objective is to examine the difference in total scores secured by students from households with low to high incomes.

On the nature of a particular household, the data collected is based on face to face interviews with several parents or by contacting the parents and data on the characteristics of the household such as the education level of the parents, income level per month, age of the parents, number of siblings, number of rooms, whether having a laptop/computer or personal phones and several others were collected by the researcher. Descriptive statistical analysis is adopted to bring into focus the difference in total marks secured by students from different household income levels and students' accessibility to phones, laptops/computer and books. Further, regression analysis is used with the total scores as the dependent variable and log of the mid-point of income is taken as the independent variable (Anderson, Humlum & Nandrup, 2016; Kidron & Lindsay, 2014; Hertog et al, 2021) along with other variables such as the parents' educational level, dummies for having own phone, own laptop or computer, own room and the number of siblings. Thus, the regression model is as follows:

$$\text{Total Score}_i = \alpha + \beta_1 \text{LnIncome}_i + \beta_2 \text{MaEduLvL}_i + \beta_3 \text{FaEduLvL}_i + D_1 \text{OwnPhone}_i + D_2 \text{OwmCmp}_i + D_3 \text{OwnRoom}_i + D_4 \text{HavingAllBooks}_i + \delta \text{NoSiblings}_i + u_i$$

The findings are presented in the following section.

HOUSEHOLD INCOME, TECHNOLOGICAL DIVIDE AND WHAT IT MEANS FOR HUMAN DEVELOPMENT

The HDI is a robust measure of a society's well-being though is neglects some fundamental aspects of learning in its education component. The standard variables used are school enrollment and adult literacy. But school enrollment does not capture the dynamics of the learning process among students from various income groups, especially those coming from poor households. Being enroll in a school for a student from a poor household does not automatically mean that that particular student will be able to learn effectively and efficiently. Many psychological and socio-economic factors inhibit the process of learning for such students.

Income of the household is one important variable that determines the dynamics of a household besides the age and educational level of the parents. Students from high income households have better opportunities to learn effectively with the needs associated with learning easily having been met, like books, phones, laptops, internet, personal room, etc. They are unburdened by chores or absent parental support in matters of homework or in intellectual discussions as most parents themselves are intellectually engaged with their children. This invariably translates to better learning outcomes. Form the data collected, the households are grouped into different income levels with low income households having 100,000-300,000 INR in annual income to those belonging to high income level with more than 700,000 INR per annum along with the economic profile of the parents (Table 1)

Table 1: Household Economic Profile

HH Income	%	Mother's economic profile				Father's economic profile	
		Working mothers (%)	Salaried (%)	Wage Earner (%)	Housewife (%)	Salaried (%)	Wage Earner (%)
100k-300k	54.05	68.63	7.27	63.18	29.54	6.81	92.72
301k-500k	19.16	67.94	23.07	46.15	30.76	43.58	56.41
500k-700k	18.18	68.91	47.29	21.62	31.08	63.51	36.48
>700k	8.59	68.57	62.85	8.57	28.57	71.42	28.57

As can be seen from Table 1, the proportion of students from low income households is more than 54 per cent. Students from such households also have parents who are mostly wage earners, like daily labourers, small shopkeepers, famers and household maids. Parents from low income group earn their living through wages with more than 60 per cent of mothers engaging in such economic activities with the highest being the father at more than 90 per cent. These proportions are in deep contrast with parents from high income group with more than 62 per cent and 71 per cent are salaried mothers and fathers respectively. From the interviews conducted, it is also learnt that those parents from low income groups who are receiving salary are those working as local school teachers, muster roll employees in various government departments or attendees in private offices and petrol pumps unlike most parents from the medium and high income group who are mostly engage in medical, academic, government and MNCs.

Students from low income households also have parents who are themselves not adequately literate to help them in matters of education. Parents from low income household barely have time to help their children in matters of education as most of them are wage earners and living from hand to mouth with no luxury of time to spare for learning together with their children. Besides schools and teachers, students from low income households barely have the support or opportunity to learn in an intellectually stimulating environment. Parents from low income group have the highest proportion of them not attending school when they were young at 40 per cent and 28 per cent for fathers and mothers, respectively (Table 2).

Table 2: Parents' Educational Profile

	Father's Education Level (%)					
HH Income	Never Attended	Primary	Secondary	Higher Secondary	Graduate	Post Graduate
100k-300k	40	21	25.5	11.4	1.4	0
301k-500k	16.7	24.4	32	16.7	9	1.2
500k-700k	6.7	12.1	25.6	20.2	31	4
>700k	2.8	0	22.8	14.2	48.5	11.4
	Mother's Education Level (%)					
HH Income	Never Attended	Primary	Secondary	Higher Secondary	Graduate	Post Graduate
100k-300k	28.1	25.9	33.6	10	2.2	0
301k-500k	8.9	19.3	34.6	26.9	10.2	0
500k-700k	1.3	10.8	21.6	28.3	35.1	2.7
>700k	2.8	2.8	22.8	20	42.8	8.5

In matters of online classes, students from low income group will be affected the most when students face problems in the technicalities of an online class as many parents from low income group have commented on how ignorant they are to such online classes or the way they are conducted and the process of evaluation. Further, the added cost of buying a smart phone in times of restrictions of economic activities because of the pandemic is too much a cost for most of the parents from the low income group. Therefore, most of the parents are unable to help. There then arises the transmission of ignorance when parents themselves are unable to help their children intellectually and materially or to stimulate or inspire their offspring in matters of learning. As compared to students from higher income groups, most of the parents are highly educated with more than 30 per cent of them being college graduates and are not affected by such economic restrictions. Parents from high income group having the luxury of time and income during the restriction have even participated even more so in their children's education and this can be argued to immensely help in the child's learning process and development thus translating to significant improvement in the child's learning outcomes.

Students from low income households will naturally be disadvantaged from being in an environment which is not conducive to learning or sharing ideas and knowledge, especially in science and math. They are oblivious to the workings or meanings of common natural

phenomena as most students from low income households failed to identify what the International Space Station or the Water cycle is. With no help from their parents and lacking the learning tools necessary to learn effectively, most students from low income household scored relatively poorer than their peers from high income households. The difference in the scores is very large, in Mathematics it is by almost 20 per cent, in English by more than 42 per cent and PVT by almost 30 per cent between students from low income households and students from the high income households (Table 3).

Table 3: PVT, Mathematics and Reading scores of students between different income groups

HH Income	Average Score (%)			Own phones (%)	Laptop/computer (%)	Books (%)	Own room (%)
	PVT	Math	English				
100-300k	44	2.45	23.04	50	6.8	92.7	36.8
301-500k	55	7.48	38.2	42.3	25.6	96.1	44.8
5001-700k	60	12.64	51.21	59.5	47.2	98.6	62.1
>700k	67.5	20.85	65.5	57.1	68.5	97.1	68.5

From Table 3, students from low income households do not have a personal room to study and only 6.8 per cent of them have either a laptop or computer at home. Attending an online class without proper internet connection, phones, laptop/computer and importantly a private room will inevitably make the learning process not effective and efficient. And most of the students from low income households do not have the luxury for all the mentioned requirements and this is reflected in their scores. Compounded with parents with low educational levels and absent parental support at home whether intellectually or materially, the situation is dire for students coming from low income households. Even though 50 per cent of students from low income households have a personal phone, much higher than the students from the 2nd highest income group, without parental guidance, misused of the device is prevalent as most of these students will end up spending more time in social media sites like Instagram, TikTok and others rather than learning about various subjects. Being in social media is common among students from all income groups but the lack of educated parents to talk and guide, spend time and console will steer most students to misusing the internet to absorb and spread misinformation resulting in poor decision making later on in life and ultimately be victims of ignorance and cyber frauds. Further, not being proficient in matters of important technological developments and the skills that the modern economy demands, students from low income households will lose out to competition in the future job market. It is also learnt from the interviews that parents from higher income groups participated with their children during online classes using their phones for better monitoring and using the laptop/computer was a common thing. This is not so for students coming low income households with only 6.8 per cent of them having a laptop/computer. From the regression

analysis, it is also found that income of the household and having laptop/computer are statistically significant in relation to the total scores secured by the students (Table 4).

Table 4: Results of Regression Model on the Total Scores

Independents Variables	Co-efficient
Constant	-204.79 (-19.28)**
LnIncome	18.06 (20.45)**
MotherEduLvL	-0.193 (-0.05)
FatherEduLvL	0.120 (0.33)
OwnPhone	-0.243 (0.329)
OwnComputer	2.284 (2.17)*
OwnRoom	0.22 (0.278)
HavingAllBooks	0.71 (2.49)*
NoOfSiblings	-0.374 (2.215)*

R-Squared: 0.68

Adjusted R-Squared: 0.67

F-Test: 122.296**

Figures in () indicates the t-score

** Statistically significant at 1 per cent confidence level

* Statistically significant at 5 per cent confidence level

From the OLS regression results, it is observed that the number of siblings is statistically significant in influencing learning outcomes and the co-efficient takes a negative sign. This can be argued that given the level of income, having more siblings to share the limited resources affects the learning process in a particular household. One or the other have to make sacrifices and in a typical Khasi household, it is the eldest siblings that have to give up

study time to take care and look after the younger siblings. Having a personal computer is beneficial to the learning process in the contemporary education environment as can be seen from the significance of it from the regression results. The results show that having books is still very important to learn besides having a personal computer. In this day and age, students must learn to use and implement both the traditional and modern sources of information for better academic outputs. Parents' education level is found to be insignificant which shows the fact that parents' education levels matter little if the students are coming from poor households unable to access the necessities to learn effectively and efficiently. Nevertheless, with R^2 equal to 0.68, the model explain 68 per cent of the variation in the total scores of the students and the F-score being statistically significant at the 1 per cent confidence interval, the regression model is overall, statistically significant.

The inequality that exist in the form of a conducive learning environment and accessibility to modern learning tools between students from low income households and higher income households will further push the gap in inequality that exist in society that the Covid-19 has illuminated and beyond the times to come, when students with poor learning outcomes affected by household dynamics like poverty, inaccessibility to phones, laptops, etc., and illiterate parents being at a disadvantaged position to “do what they want to do and be what they want to be” as Sen (1999) has noted. Marx (1846) had remarked about “replacing domination of circumstances and chance over individuals by the domination of individuals over circumstances and chance” and this is unlikely to happen if income put restrictions on students from low income households to access modern learning tools with a conducive environment to learn as to be literate to be who they want to be and do what they want to do. Poor chance and circumstances (the technological divide) will eventually lead to the transmission of poverty and ignorance between many generations.

POLICY RECOMMENDATION

As can be noted from the findings, some policy recommendations are necessary to address the gap in the opportunities to learn efficiently and in equal settings especially for students from poor households. One of those policies had actually been implemented during the forgone government administration, that is, the distribution of so-called M-Tabs to class 10 students preloaded with learning materials in science, mathematics and technology. During the pandemic and with online classes, these M-Tabs could have significantly reduced the transaction costs of participating in an online class for students coming from poor households. Nevertheless, the government initiative stopped with nobody predicting that the Covid-19 could happen and such initiatives could partially address the gap in opportunities of learning brought about by unprecedented changes in the academic environment if it were to continue. Besides tabs, with the advent of online classes, the government can distribute laptops/computer and books besides the various scholarship scheme. Giving away laptops/computers, tabs (preloaded with learning materials especially in science and mathematics) and books will have a significant impact on learning or the continuation of learning to students from low income households than a scholarship has.

Schools can also implement mentoring programs to address the mental and emotional states of students coming from households troubled by strain relationships and parental conflicts. Students coming from broken families brought about by poverty or several factors like alcoholism will be mentally and emotionally affected when it comes to learning effectively and efficiently. Schools management can address this by having consoling sessions between a counselor and the parents along with their children. Schools management can also educate parents about the important effects that participating in their children's learning process has on their overall development.

CONCLUSION

Learning is a human right no matter the political or social arrangements. Every human has the right to learn about his/her environment and to understand the natural phenomena that enrich his/her existence, free from ignorance and superstitions. Science education should be accessible to every child employing various and novel methods to disseminate the scientific concepts by the teachers or parents. As it normal in an unequal world, the learning process to understand and comprehend scientific ideas does not happen equally or effectively between various individuals. The Human Development Index (HDI) captures three aspects to measure human development, that is, education, health and Income. In the education component, school enrollment and adult literacy captures the performance of this component. But as can be seen from the findings of the study, simply being enrolled in a school does not mean the students are actually learning effectively or efficiently about the various subjects, especially in science and mathematics. The case is particular dire for students from low income households having not a conducive environment to learn compounded by the inaccessibility to the modern learning tools and absent parental support whether intellectually, emotionally or materially. This condition has further been exacerbated with the Covid-19 and students learning outcomes have been severely affected, especially students from low income households.

In matters of intervention or “nudge” as Thaler (2008) would have put it, to address the gap in the learning process, to make it accessible to students from low income households, to enthuse them about learning, to make them learn effectively and efficiently, the government can address the needs of the learning process by giving free laptops, tablets and books. This will put a relief on parents whose income is already low where transaction costs of learning for their children are unbearable. School management can have mentoring programs to address the mental and emotional state of their students especially in times of uncertainty brought by Covid-19.

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Information Technology Role in the Rise of Digitalization and Economic Growth in India

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ABSTRACT

“The Rise of Digitization in Business / Organisations” in India is directly related to Information Technology (IT). In the past question were raised whether IT industry can contribute to the economic development in a fundamental way and thereby accelerate the economic growth. The paper seeks to understand how IT revolution, which is said to have started early 1970s is having a major role to play in the Indian Economy since then. This paper evaluates the performance of the IT/IT enabled Services (ITeS) industry. More specifically the paper looks at contribution of ITeS industry in the productivity of IT industry, role of IT sector in distribution of service export, rate of growth of service sector and share to GDPs. The latter two parameters help us to indirectly understand the role of IT sector because of its dominance presence of the IT industry in the service sector. From the analysis it has been found that India’s ITeS industry has been performing at steady pace in most of these parameters. And there are projections that with further assistance from the government and change in labour law, the performance of IT industry to the Indian economy will continue to grow.

Keywords: India, service sector, Information Technology (IT), IT/IT enabled Services (ITeS) industry

INTRODUCTION

The latest Economic Survey (2021-22) says a lot about the performance of service sector in general and IT/IT enabled Services (ITeS) industry. The COVID-19 pandemic had an adverse impact on all the sectors of an economy like any other nations. The share of service sector which rapidly increased from 30.5 percent in 1950-51 to 55.2 percent in 2009-10, excluding construction and continues to contribute over 50 per cent of India GDP (The Department of Economic Affairs, 2022). What is even more interesting to see the revival of the service sector surpassing pre-pandemic level in fourth quarter of 2020-21 itself. At a global level, India continues to have a dominant presence with the share of world commercial services export increase from 3.4 percent in 2019 to 4.1 percent in 2020. More specifically India’s software export share is close to 50 per cent in total service exports (The Department of Economic Affairs, 2022). These facts reveal the resilience of the service sector growth and foundation of this sector.

Service sector constitutes of range of services such as trade, hotels, restaurants, transport, storage, communication, financing, insurance, real estate, business services, information

technology (IT) services etc. According to Central Statistical Organization (CSO), these services can broadly be classified into four types (Economic Survey, 2010-11). They are a) trade, hotels, and restaurants b) transport, storage, and communication c) financing, insurance, real estate, and business services; and d) community, social, and personal services. Among these, type 'c' and type 'a', accounts for the largest share. During 2009-10, it represented 16.7 percent of the national GDP. And within the type 'c', the computer-related services accounts for 3.26 percent share in the GDP. The computer related services are broadly called Information Technology (IT).

The IT industry service constitutes of spectrum of services such as software, hardware, communications technologies, and other related services. This paper focuses on ITeS industry. Commonly (NASSCOM, Economic Survey) classifies ITeS industry into four broad segments. These are i) IT services ii) business process outsourcing (BPO) iii) engineering services and R&D, and iv) software products.

ITeS industry performance can be seen in terms of share in GDP which has steadily increased from 1.2 percent in 1997-98 then to 4.1 percent in 2004-05 and further increased to 6.1 percent in the year 2009-10 (ES, 2010-11 and RBI Annual Report, 2007-08). The contribution of this industry also expands to generation of employment, exports, foreign exchange, Foreign Direct Investment (FDI) and others. These implication makes ITeS industry the engine for the economy as "oil is for Saudi Arabia and electronics and engineering are for Taiwan" (NASSCOM, 2005). The comparative advantage that India enjoys also give brand identity as a 'knowledge economy' (Economic Survey, 2010-11).

The question of sustainability of performance of ITeS industry have been raised frequently in the past and despite its performance in the past the question of sustainability continues to prevail because of nature of the industry and country. So, in the next section the paper reviews some of the important literature and continue to investigate how ITeS industry continue to thrive despite some challenges.

LITERATURE REVIEW, OBJECTIVES AND RESEARCH METHODOLOGY

Literature Review

Post 1990 the performance in the service sector has been marked with a new phase because of various factors (Eichengreen & Gupta, 2009). India's economic reform and the reform that followed which greatly integrated India to the global economy accompanied with increasing trend in services across countries and India's advantage in demographic dividend skilled with knowledge of IT and English-speaking (Chandrasekhar, 2001). It can be said that the from 1990-91 service sector-led growth took place if we look in terms of percent of GDP which was 41 per cent (Rakshit, 2007).

The success of service sector and more specifically the IT industry can be characterised to its nature such as low investment and resources which are knowledge based and universally available (Chandrasekhar, 2001). According to World Bank (2005) "India's IT industry is

expected to grow at a compounded annual rate of 38 percent to reach \$77 billion by 2008—contributing to 20 percent of India’s anticipated GDP growth in this period and 30 percent of its foreign exchange earnings”. Uniquely the contribution of IT industry in the service sector is not only great but it also has a multiplier effect on the other sector there by having a greater role in the economic performance of India (Reserve Bank of India, 2008a). The scope of expansion of IT industry has been there since 2000 with increasing flow of FDI. The flows of FDI to India has been increasing by 24 percent between 2002 and 2003, the credit of this change also goes to the performance of IT industry because of improving economic performance, continued liberalization, and the growing competitiveness of Indian IT industries (IBRD, 1995).

The literature on service sector also discusses at length on the sustenance of the performance of ITeS industry, which accounts for a major share of service sector. The question of sustenance of ITeS industry was there from the beginning when India started to providing contract programmers to perform low-level work called “body shopping” or “manpower contracts” (Schware, 1992; Swan, 1985). In 1989, according to Schware (1992), this service accounted for 80-90% of the total value of the software sector production. And concern was raised as to whether India’s IT industry will be limited only to “body shopping”. The author raises few limitations for the future prospect of IT industry development such as low presence of computers in the domestic market, little investment in research and development (R&D), absence of up-to-date hardware and software engineering tools, and limited scope of growth and development of the domestic software market.

There were various factors into play which silence these speculations. India’s service got further extended to other areas, the introduction of the Computer Policy of 1984, slow presence of foreign IT firm in India (Texas Instruments of USA in Bangalore in 1985) and other development IT had a great role to play.

Singh (2002) has been very cautious in his finding for some important question raised with respect to continuation of IT industry performance in his paper. Question such as “whether IT can do more than fuel an enclave- based export boom” and whether “IT contribute to India’s economic development in a broader, more fundamental way?”. If so, then what are means through which this will happened. A very similar question has been reemphasised by Basu (2010) in his edited book which also included Singh (2002) as one of the chapter.

In the recent literature of IT industry, the question of ITeS industry sustainability has again appeared. Agrawal et al. (2011) explicitly states that the “sustaining this impressive growth is not possible always as these companies are facing continuous challenges in terms of competition, global slowdown, scarcity of talent, attrition of employees, and many other HR and technology related issues.” Another Asian Development Bank Economics Working Paper Series by Mukherjee (2013) levy similar level of pessimism. The author raises concern over employment which “has not kept pace with the share of the sector in gross domestic product and has not produced the number or quality of jobs needed.” The author draws this perception because absence of policy which are not inclusive and suffer from coordination problem from

governing bodies which will eventually hinder the growth this industry. The limitation also extends to outdated regulations lack of reform in FDI.

There are also some literature which not only highlights the limitation that India faced but also finds out how India has overcome these challenges (Dossani, 2005, 2010; Varma, 2005). Dossani (2010) in his paper list out the challenges for the future sustainability of ITeS industry. These were

“the absence of domestic markets from which to acquire domain skills, lack of intellectual property (IP) protection, small firm sizes, migration of skilled IT professionals to developed countries, lack of R&D in universities and industry, limited involvement of a skilled diaspora, and the lack of clusters”.

According to him, even during the period before reform, when the economy was closed and restrictive, the ITeS industry has thrived. The success of this is greatly attributed to the role played by private enterprise. During this period when tariffs on import was high the industry survived by exporting programmers to the US and maintained the quality and compete with other developing countries. And when economy liberalized, the work station was shifted back to India. Since 2004, the industry has also expanded its services to other higher valued services. This has been possible with the reform in telecommunications and ventures capital. These reform further allowed to access to overseas market and the dynamics of services provided has also greatly changed to “higher-value services such as managed services, software product development, and R&D”.

Very similarly, World Bank (2004) report has also highlights five critical challenges if India wants to sustain services sector growth and to achieve 8 per cent growth rate as per the Tenth Plan target. These critical challenges are (i) Barriers to Indian service providers abroad; (ii) Barriers to foreign service providers in India; (iii) Domestic constraints and policy distortions (iv) Weakness in the regulatory framework; (v) Achieving social objectives in a liberalized environment.

Joshi (2009) have done a similar study with similar result. The basic question raised in this paper is “Can IT and ITES be an engine of growth?” The focus of paper was on employment and total value added. The study uses micro-level data of 100 households of 20 IT and ITES firms besides secondary data. The paper finds that ITES industry only contributes about 0.34 percent of the total works force but contributes 20.19 percent to the value added through the consumption expenditures.

It is from this literature review, the of sustainability of ITeS industry is still a valid question, given the nature of economic limitation and pace at which technology is changing.

Objectives

The above literature clearly highlights the challenges that India’s ITeS industry has been experience since its inception and despite consistence performance from the industry, the challenges seem to still be there and some new ones too. The paper further tries to highlight the performance of ITeS industry under the different limitations.

Methodology

For this paper we look at the productivity of IT industry, role of IT industry in distribution of service export, rate of growth of service sector and share to GDPs. The latter two parameters help us to indirectly understand the role of IT sector because of its dominance presence of the IT industry in the service sector. For the analysis, the paper uses data from RBI Annual Report, Ministry of Electronics & Information Technology, Planning Commission and NASSCOM.

INDIAN IT INDUSTRY- BACKGROUND

India's service industry boom and IT contribution has been discussed extensively in the literature of Indian economic growth and development. The initial seed to IT revolution was sowed back in late 1960s when the government discovered the strategic importance of IT and its future scope and environment then were closed, and protectionist policy followed by the government (Brunner, 1991; Taganas & Kaul, 2006). To meet the rising demand in the sector, the government handed the responsibility to a public sector enterprise, Electronics Corporation of India Limited (ECIL) in 1971, to produce indigenous computer.¹ And what followed created difficult situation for India then. First, ECIL, when it first set off, promised to meet the domestic demand by 1976 but they struggled to deliver the promise (Brunner, 1991). Second, the only private companies that were in the IT business then were Tata Consulting Services (TCS) and Tata Burroughs Limited (TBL), both part of I.T.C. Limited (now ITC). Third, the multinational companies, IBM (International Business Machine) and ICL (International Computers Ltd.) which supplied the basic software and hardware need, met with controversy for supplying under graded technology (Subramanian, 2006). And because of this, it was decided to "expel" IBM and ICL from India in year 1976 and this added another problem to the existing under performance of ECIL. Also, the layoff of more than 1,200 IT professionals in IBM and more in ICL was something that the government was not prepared for (Kumar & Seith, 2005).² It was under such circumstances New Computer Policy (NCP) and New Electronics Policy (NEP) were announced in 1984 and finally decide to opt for a policy shift from 1986 onwards (Taganas & Kaul, 2006). This change in policy allowed the existing private enterprise and new enterprise to finally enter the IT market with many relaxations in the domestic functioning and on the external front in terms of import of capital goods. It can be said that the coming of Tata Consulting Services (TCS) in 1968, Patni Computer Systems (PCS) in 1978 and other private IT entrepreneurs that followed stirred up set off the IT revolution.

But the path to the course were not smooth because of infrastructure problem and high level of bureaucratic interference added to the complication. For instance, the basic requirement of

¹ Though ECIL existed since 1967 under the Department of Atomic Energy (DAE). It was only from 1971 that it started to produce computers.

² And also state here that among the layoffs, few managed to get jobs overseas and some got recruited into "Computer Maintenance Corporation Ltd." (new public sector company) and other software engineers who could did not get jobs teamed up and set up their own software operations.

finance (e.g., loan and raising capital from the market) and raw material (e.g., iron or coal) required dependence on government enterprise. This would mean building relationship with bureaucrats or a periodical visit to government departments (mostly in Delhi) (Nilekani, 2008)³. Even starting a new business or expansion of business required undergoing the same problems because of government's dominance in finance and raw material sectors, and stringent rules.

It was under such an environment during the 1980s, where every aspect of business of the IT sector, was controlled by the government and continuing difficulties in obtaining hardware and software, along with the rising costs, that led to difficult circumstances. It was under such desperate circumstances that some entrepreneurial companies and computer professionals set up their own business to meet domestic demand and tap the future potential of software industry (Kumar & Seith, 2005). And it was during this period that Tata Consultancy Services (TCS) and TBL⁴ were joined by several other companies like Hinditron, Patni Computer System, Datamatics, Infosys and Wipro to exploit the opportunities in domestic and foreign markets. The only saving grace during that time was the very nature of service sector (specifically IT sector) characterised by less dependence on capital, labour and infrastructure compared to other sectors and “universally available knowledge-base for innovation” which made establishment of IT business much easy (Chandrasekhar, 2001). So the circumstances under which private players ventured and dominated the IT service was not only a matter of coincidence or accident but a product of frustration, desperation and desire for an alternative (Bhatnagar, 2006). A little relief also came in the form of reform, starting with internal deregulation in 1980s and liberalization trade in services from 1991s (Panagariya, 2004). Government initiatives (discussed later) and the leadership of young Prime Minister Rajiv Gandhi also mattered in path of development of the IT industry.

IT INDUSTRY CONTRIBUTION TO INDIAN ECONOMY

The success of the ITeS industry has had wide-ranging effects across the Indian economy, both qualitatively and quantitatively. In the process, the Indian diaspora has played a crucial role in building bridges between the Indian software companies in India and the IT industry abroad and in setting the standard of Indian IT industry (Bhatnagar, 2006; Kapur, 2002). India's image in the world changed quite substantially with the success of Indian diaspora in the Silicon Valley. All this has created a brand name, wherein “India or Indian” is directly associated with software programmer quality just like “Japan or Japanese” are labelled for consumer electronics. This brand image of India's IT talent has not just touched the US but has also spread in countries across the world wherever Indians have gone (UK, Germany, Finland, Japan and South Korea).

³ Also expressed by others (Murthy, 2000) (Cheng, 1996) etc.

⁴ From the early 1970s till the time of the computer policy liberalization, the India software export market was dominated by TCS and TBL, who accounted for 67 percent of India's software exports (cited Subramanian 2006: 39)

The NASSCOM (2010) study on the impact of IT-BPO alone highlights five areas of impact of IT-BPO. They are i) contributing to India's economy ii) Driving balanced regional development iii) empowering the diverse human assets iv) creating an innovation platform v) putting India on the global map. This paper limits the impact of ITeS industry to few important areas discuss below.

Productivity of Service

The estimation of productivity in general is a difficult task because of presence of wide varieties of method and particularly difficult in the case of service sector. This is because of difference in quality of output and nature of skilled used, unlike in the case of good (World Bank, 2004). The performance of ITeS industry in India can be explain to a great extent by the productivity performance. According to World Bank (2004) study, there is sharp increase in the productivity of the Indian economy after 1990-91. And the source of this increase in productivity is greatly attributed due to increase in inflow of FDI and international trade. Beside this, within the different subsector of service sector, the report also cites Mc Kinsey & Co. finding that the software industry is of the highest productivity level. Goldar & Mitra (2008) study also states how high Total Factor Productivity (TFP) of some services in the service sector had a great role to play in the post 1980 period.

The data on productivity indicator in terms of TFP provided by RBI (Reserve Bank of India, 2010b) also helps to explains how the IT sector is growing since 1980 (Table 1). The Report uses the productivity measure under the KLEMS project which estimates productivity in the Capital, Labour, Energy, Material and Services (KLEMS) which is also applied in many countries across the world to enable database which helps to compare across country and sectors.⁵ Except for two period 1986-1991 and 1992-1997 the productivity of service sector was lower than that of the economy's TFP otherwise the TFP have been very impressive above the national average both in terms of TFP and GDP. The overall GDP for the period 1980-2005 also shows 2.1 and 7.0 for TFP and GDP, respectively both above the national average.

Table 1: Total Factor Productivity (TFP) and GDP Growth

	1980-1986		1986-1991		1992-1997		1997-1995		1980-2005	
	TFP	GDP	TFP	GDP	TFP	GDP	TFP	GDP	TFP	GDP
Total	2.2	5.3	1.6	5.9	2.6	6.5	1.7	5.7	1.9	5.7

⁵ The about the framework of productivity estimates are given in RBI Annual Report 20009-10.

Economy										
Agriculture	2.5	3.7	2.4	3.8	3.0	4.8	-0.2	2.2	1.6	3.4
Industry	-0.3	6.2	1.6	7.2	3.1	7.3	1.4	5.1	1.4	6.0
Services	3.4	5.8	1.0	6.9	2.0	7.3	2.2	7.9	2.1	7.0

Source: RBI Annual Report

Further, more recently the study by Goldar, et al., (2017) for the period of 35 years from 1980 to 2014 also indicates the dominant performance of service sector productivity in the overall productivity growth of the economy for the period. The productivity performance explains the share of service sector in GDP, rate of growth of IT industry and share of IT industry in the export (discussed below).

Contribution in terms of Exports

The most recent Economic Survey (2021-22) very clearly states how India has become a dominant player in the global export. India is among the top ten service exporting countries in 2020 with the share of export increasing from 3.4 percent in 2019 to 4.1 percent in 2020.

Since the economic liberalisation post-1991, service sector has been the driving force behind the high economic growth (Table 6). This demand for service sector is predominantly from the external sector (Chandrasekhar et al., 2006). Due to the tremendous increase in the number of IT companies in and outside India which led to the increasing demand for Indian IT services and software export. And a very great share of export in the service sector is coming from IT industry. Export from the IT industry is growing at an average rate of 40% from 1995-96 and this to great extent explains the performance of service sector (Table 2). In 2005-06, the share of exports of software and services is at \$17.7 billion, which is a fifth of India's merchandise exports and this is higher than export of textile and textile products (including carpets), the principal commodity of exports (Chandrasekhar et al., 2006).

Table 2: Indian Services and Software Exports (US \$ million)

Year	IT Services Exports	ITES-BPO Exports	Total Software and Services Exports	Growth over previous year (percent)
1995-1996	754	-----	754	NA
1996-1997	1,100	-----	1,100	46%
1997-1998	1,759	-----	1,759	60%
1998-1999	2,600	-----	2,600	48%
1999-2000	3,397	565	3,962	52%
2000-2001	5,287	930	6,217	57%
2001-2002	6,152	1,495	7,647	23%
2002-2003	7,045	2,500	9,545	25%
2003-2004	9,200	3,600	12,800	34%
2004-2005	13,100	4,600	17,700	38%
2005-2006	17,300	6,300	23,600	33%
2006-2007	22,900	8,400	31,300	33%

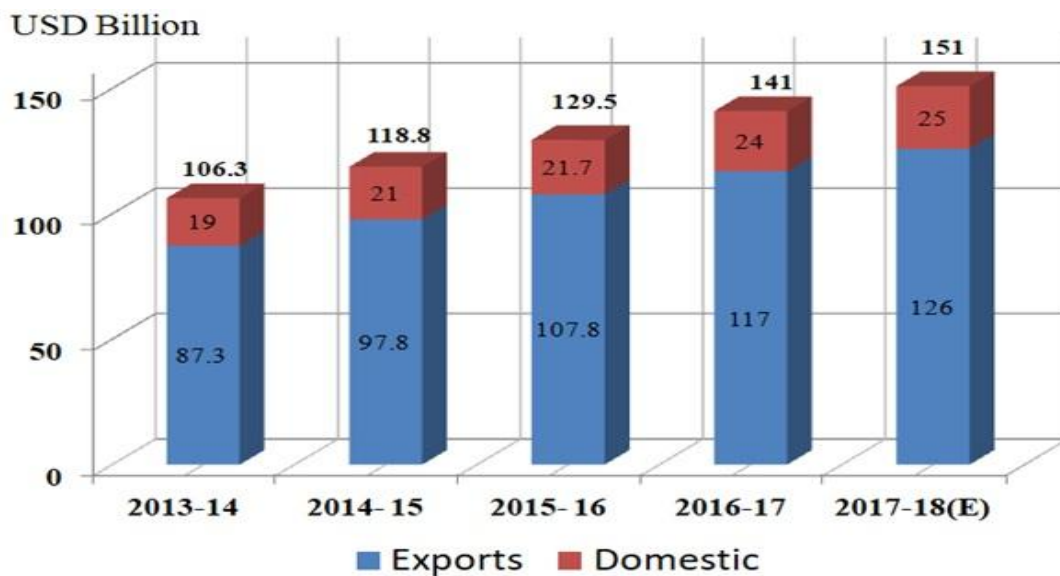
Source: Compilation from various RBI Annual Report

Note: ITES: IT Enabled Services

BPO: Business Process Outsource

From the Figure 1 below shows the consistency of performance of IT industry in terms of revenue generated even most recently. For the year 2017-18E the revenue generated from the export is US\$ 126 billion which is more than 80% of total revenue generated. We can also see a steady increasing growth in the revenue generation since 2013-14. More specifically, the most recent growth rate has been 7.7 in the year 2017-18 when compared to 2016-17.

Figure 1: Distribution of IT industry revenue generations.



Source: Secondary from Ministry of Electronics & Information Technology (E= Estimated)

And within the software sector exports, the ITeS and BPO industry recorded an even higher growth over the period. Such high growth in IT service and software export are driven by demand by firms in America and Europe.

Distribution of Service Export

The Table below (Table 3) provides the distribution of service exports. The software export which includes services such as financial services including banks, insurance companies and securities firms constitutes the largest share (around 40%) of the total services export for period the data is available. Not only are the IT industry growing at a great pace but the has constituted the highest and major share of service export.

Table 3: Structure of Indian IT sector Exports I (US \$ million)

Year	Amount (US \$ m)	Share in Total Services Exports (per cent)					
		Travel	Transp ortation	Insurance	G.N.I.E	Software	Miscellaneous *
1970-71	292	16.8	49.7	5.5	13.7	-----	14.4
1980-81	2,804	43.5	16.3	2.3	4.0	-----	33.9
1990-91	4,551	32.0	21.6	2.4	0.3	-----	43.6
2000-01	16,268	21.5	12.6	1.7	4.0	39.0	21.3
2003-04	26,868	18.7	11.9	1.6	0.9	47.6	19.2
2004-05	46,031	14.1	10.4	2.0	0.7	37.4	35.4
2005-06	60,610	12.9	10.4	1.7	0.5	38.9	35.6

Source: Compilation from various Annual Report, RBI.

* Excluding software services

More recently, the IT Service share in export in IT-ITeS sector is increasing since 2013-14. The share of IT service is more than 55% for all the years from 2013-14 to 2017-2018 (Table 4). The CAGR for this period is more than 10 per cent. The ITeS-BPO holds the second largest share after IT service with CAGR of more than 9 percent.

Table 4: Structure of Indian IT industry Exports II (US\$ billion)

Year/ Segment	2013-14	2014-15	2015-16	2016 - 17	2017-18 (E)	CAGR % (2013-18)
IT Service	49.2	55.3	61.0	66.0	69.3	10.07
ITeS-BPO	20.4	22.5	24.4	26.0	28.4	9.19
Software Products, Engineering Services, R&D	17.7	20.0	22.4	25.0	28.3	13.09
Total IT-ITeS	87.3	97.8	107.8	117.0	126.0	10.32

Source: Secondary from Ministry of Electronics & Information Technology

CAGR: compound annual growth rate

The evidence of strength of service led growth is very evident from the Covid-19 pandemic experience. The lockdown impact on the service export has been less severe (Economic Survey, 2021-22). Table 5 show how growth in the service export in 2020-21 has fallen by 3.3 percent which is less severe than decline in goods export which was 7.5 percent. The impact on the Software service export similarly has also been resilient with only small dip in the growth rate. During the first half of 2021-22 the growth rate of service export increased from negative growth rate of 7.8 in the previous first half of 2020-21 to positive growth rate of 21.6. The growth of software services had a great role to play.

The share of software exports share in the total services exports has also been very high at 48.5 percent this consistence performance of software export is attributed to “higher demand for digital support, cloud services and infrastructure modernisation catering to the new pandemic challenges” (ES 2021-22).

Table 5: Services Trade Performance by sub- sector

Commodity Group	Share (per cent)		Value (US\$ Billion)				Growth (per cent YoY)			
	2010-11	2020-21	2019-20	2020-21	2020-21 (Apr-Sep)	2021-22 (Apr-Sep)	2019-20	2020-21	2020-21 (Apr-Sep)	2021-22 (Apr-Sep)
Total Services Exports	100	100	213.2	206.1	96.8	117.6	2.5	-3.3	-7.8	21.6
Travel	12.7	4.1	30.0	8.5	4.0	3.7	5.5	-71.7	-72.5	-6.6
Transportation	11.4	10.6	21.0	21.9	10.2	14.3	7.8	4.1	-3.3	40.7
Insurance	1.6	1.2	2.4	2.4	1.2	1.6	-8.7	-2.2	-3	35.9
GNIE*	0.4	0.3	0.7	0.6	0.3	0.4	8.0	-4.5	-8.8	43.7
Software Services	42.6	48.5	93.1	100	47.4	57.6	11.5	8.6	2.9	21.4
Business Services	19.3	23.9	45.7	49.2	22.9	26.8	16.9	7.5	2.5	17.1

Financial Services	5.2	2.1	4.7	4.3	2.0	2.5	-2.6	-8.3	-20.3	24.4
Communication	1.3	1.4	2.7	2.8	1.4	1.6	6.3	2.9	2.4	15.0

Source: RBI.

Note: *: Government not included elsewhere

Rate of Growth of service sector and share to GDP

And finally, the increasing rate of growth of service sector and its increasing participation in the growth rate of GDP since the 1990s reveal significantly that the Indian IT industry contributes immensely to the growth of service sector and eventually to the growth of GDP (Table 6). Service sector contribution to GDP for 1990s decade stands a little more than 40 per cent. For the decade starting 2000, it is steadily increasing from 50 per cent to nearly touching 60 per cent share in GDP. And for most of the year after 1990-91 the rate of growth of service sector is much higher to than the GDP growth rate also indicating that despite non-performance from the other sectors (agriculture and manufacturing), the good service growth record maintained a good GDP growth rate.

Table 6: GDP growth rate, service sector growth rate and service sector share to GDP at 2004-05 price (Rs. Crore)

Financial Year	GDP growth rate	Service growth rate	Share to Total GDP at Current Prices (%)
1989- 1990	6.13	8.88	42.58
1990-1991	5.29	5.19	42.55
1991-1992	1.43	4.69	43.91
1992-1993	5.36	5.69	44.05
1993-1994	5.68	7.38	44.05
1994-1995	6.39	5.84	44.52
1995-1996	7.29	10.11	45.69
1996-1997	7.97	7.53	45.51
1997-1998	4.30	8.93	47.53
1998-1999	6.68	8.28	48.24
1999-2000	8.00	12.05	50.05
2000-2001	4.15	5.07	50.49
2001-2002	5.39	6.61	51.07
2002-2003	3.88	6.74	52.48
2003-2004	7.97	7.89	52.44
2004-2005	7.05	8.28	53.05
2005-2006	9.48	10.91	53.74
2006-2007	9.57	10.06	53.98

2007-2008	9.32	10.27	54.45
2008-2009	6.72	9.98	56.11
2009-2010	8.59	10.50	57.09
2010-2011	9.32	9.75	57.32
2011-2012	6.21	8.20	58.39
2012-2013	4.99	7.11	59.57

Source: Data Book, Planning Commission (2014)

Note: GDP and Service sector growth rate are at factor cost at constant price (2004-05 prices)

CONCLUSION- THE CHALLENGES AND WAY FROWARD

Given the list of advantages that India enjoys which greatly contributes to the success of IT industry, there still lies some challenges. The challenges are from intense competition, innovation, patent right, supply of skills, labour law, infrastructure, financial constraints etc. The paper by Singh (2002) and more recently by Dhar & Joseph (2019) highlights some of these challenges in detail. Most important of the challenge of patenting computer programmes. Since the inception of Patents Act, 1970, the India's patent law has not been able to change the existing system which would have great boost to the innovations. But lately, the Controller General of Patents, Designs and Trademarks and new Court ruling are helping to clarify the nature of computer programme for patent according to Dhar and Joseph.

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Social Media and Decision Making of Restaurant and Café consumers

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ABSTRACT

With the ubiquitous smartphones and social networking , consumers readily seek information from the web. Digital and social media have changed the way people consume. Consumers become more dependent on social media when they want to buy something. Even in context of hospitality sector such as restaurants and cafés, the use of social media has become indispensable. The aim of this paper is to examine whether social media is influential in the decision making process of consumers when deciding on a restaurant or a café in Shillong . It also seeks to find out what factors and social media tactics are important to consider when creating an effective social media strategy by restaurant and cafés. Qualitative research using semi-structured questions were sent to 28 respondents via google forms . Thematic analysis was then adopted . The findings of this study revealed that social media is indeed influential in the decision making process when it comes to choice of restaurants or cafés. Based on the findings of this study, it was identified that customers want to see pictures or videos of high quality that show the restaurant's atmosphere, food and best services that they have to offer so that they know what to expect before visiting the restaurant. Consumers also want restaurateurs to update their social media content more often ,be more active online and respond more to queries. E-WOM is equally credible in generating positive word of mouth . Therefore, besides positive traditional word of mouth ,restaurant and café marketers must build positive word of mouth online by connecting to consumers through their social media pages.

Keywords: social media, E-WOM, restaurants, cafes, consumer decision making

INTRODUCTION

The popularity of the Internet has reshaped the way consumers search for, collect and exchange information as well as purchase products and services. Smartphones and various social media sites such as Instagram and Facebook , allow customers to readily seek information on the web. This has reduced the cost and time for information research . Social media has become a means of consumer's decision making, sharing of information about products, giving opinion, and

evaluating their experiences. Digital and social media have changed the way people consume. Consumers become more dependent on social media when they want to buy something (Aprilia, 2018). Even in context of hospitality sector such as restaurants and cafes, the use of social media has become indispensable. Digital platforms and social media are now widespread in tourism and hospitality sectors and their diffusion enables the development of digital ecosystems where firms and consumers can virtually meet, share knowledge, influence each other and co-evolve (Doseenna & Mochi, 2020). Social media is a matchless platform on which users can share their own experiences and thoughts online in various forms, such as text, photographs and videos via social networking sites, online review sites, blogs and media sharing sites. With these features, social media has a strong potential to affect consumers' decision-making processes, especially in the tourism and hospitality sector (Hwang et al., 2021). In the age of social media, Electronic word of mouth (EWOM) has become equally credible as traditional word of mouth (WOM). According to Hennig-Thurau et al., (2004), E-WOM is defined as any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet (Fox & Longart, 2016). While traditional WOM occurs normally in a face-to-face or one-on-one fashion, with participants in close proximity, e-WOM takes place in a more complex technologically mediated context. According to Cheung and Thadani (2012), e-WOM communications have unprecedented scalability and speed of diffusion (Ibid). There is an increasing consumer reliance on e-WOM when choosing restaurants and cafes. E-WOM defines how customers can get information about a restaurant from its social media or website. It works when some customers share the food photos and give positive reviews about a restaurant they have just visited (Aprilia, 2018).

With the large penetration of internet services and a smartphone, most consumers are using their smartphones to gather information and previous reviews of past customers play a major role in that decision making (Hwang & Park, 2015). Pictures, videos and text posted by other customers on social media page assures the customer that is still found in the decision making phase to either become a customer of the brand or business or not. Customers trust other users' experiences more than the brand's photos, videos or words (Malbasa, 2018). Hence, it has been suggested that the power of marketing has shifted from producers to consumers as a result of the internet and social media. Audiences are no longer just receivers of media content but are simultaneous co-producers of the content through engagement with social media and other Internet-based platforms (Fox & Longart, 2016). Consumers' social media usage does not stop, even while they are eating food at a restaurant. Their experiences regarding a restaurant visit can be uploaded and shared with other followers on social media platforms and/or their acquaintances with the aid of technology in the digital era. Therefore, restaurant practitioners need to carry out dining service with care at all points of providing service to consumers. Consumers' restaurant choice can change depending on the information obtained during the purchasing process, implying increased chances of affecting consumer behaviours by offering personalised information via the proper technology platform (Hwang et al., 2021).

The aim of this paper is to examine whether social media is influential in the decision making process of consumers when deciding on a restaurant or a café in Shillong . It also seeks to find out what factors and social media tactics are important to consider when creating an effective social media strategy by restaurant and cafes . The rest of the paper is structured as follows. In the next section, that is section two, we discuss the sources of data and methodology. In section three we have the findings and discussions . Section four concludes the paper.

DATA AND METHODOLOGY

An online semi-structured questionnaire was used to gather information from participants. Open-ended questions helped the researcher collect a large and diverse amount of information from participants. The questions were predetermined, but the researcher left room for participants to add any information that they felt was important. The questionnaire were sent via google forms .

A snowball sampling technique was adopted to recruit respondents.. Once participants are interviewed, they are asked to forward the questionnaire to other people they know of who frequently visit restaurants and cafes and who are social media users . People who utilise social media actively are likely to know others who are familiar with the use of social media, as there is a strong possibility that they are in the same group. The sampling criteria of selecting participants was limited to people who frequently visit cafes and restaurants and who were tech-savvy and social media users. There were 28 respondents in the age group 15 to 35 years old.

From the data ,the authors created codes by highlighting the most important information that was tied to answering the research question. Based on the codes, themes about the most common information stated by the participants were created.

FINDINGS AND DISCUSSION

This section focuses on participants' experiences of using social media when visiting cafes or restaurants and their perspectives on what type of posts and social media tactics would motivate them to visit cafes/restaurants in the future . In this section the researcher presented the results found from the collected interview data through themes that were detected during the coding process.

Themes identified

Six themes were identified in the study .These are :

- 1.Convenience and minimal risk
- 2.Quality of restaurant-generated content
- 3.Personal touch
- 4.User generated content

5. Word of mouth

6. Marketing and promotion

Convenience and minimal risk

Smartphones and various social media site such as Instagram, allow customers to readily seek information on the web. This has reduced the cost and time for information research . Traditional ways of marketing are now slowly disappearing due to the low cost and high effectiveness of social media marketing(Malbasa,2018). It is found that all respondents use Instagram to gather information before going to cafes or restaurants. According to respondents in this study, it is natural that they utilise social media on smartphones to search for information regarding a cafe, as they would like to choose a café or restaurant serving delicious dishes. Location, food menu and price were essential in the customers' evaluations. In this regard ,respondent 12 said :

“ I use Instagram since most of the restaurants/ cafés have their own account on Instagram. I look for the food menu, location and price. I do so in order to know exactly what I'll be receiving.”

Information searching via social media is done to reduce uncertainty and anticipate the risks such as bad food quality, bad food taste, expensive price and wastage of money .One of the respondents (Respondent 21) said :

“I use Google and instagram. I look for food menu, price and reviews of customers. This helps me decide whether it's worth spending money on that place.”

Quality of restaurant generated content

Quality visual content ,especially photos and videos, are also an important factor in attracting the respondents to be interested in visiting a café/restaurant.They are a clear and simple way to communicate a message and grab the users' attention.For example ,respondent 5 said :

“Videos and photos of food catch my eye .I am able to see how appealing the food is and it's embellishment.”

All 28 respondents agreed that photos and videos of food posted on Instagram can influence customers to be interested in visiting a café /restaurant. For example ,respondent 23 said :

“After seeing the photo and videos, it makes me wanna try out the restaurant or café.”

All 28 participants opined that cafes need to posts and update more visual content on their social media pages.

Social media platforms is used by respondents to search for information before deciding to visit a café /restaurant .15 out of 26 respondents mentioned that cafes and restaurants need to update their food menu on social media more often. Respondent 11 said :

“Cafés need more posts and updates of their food menu . This is because sometimes they have a menu online and when you go there, the item isn't available anymore. Such a disappointment.”

Personal Touch

According to Fox and Longart (2016) ,restaurants’ social media strategy must have a personal touch. Communications must be distinctive, and restaurants must be able to transmit their own character through their social media content. According to Rowe (2016), five ways restaurants can be noticed on Instagram are using the best photos that the restaurant has, sharing an insider's look (menu items, events, chef, staff, behind the scenes magic), having a social media content plan, following people and using hashtags. By communicating to customers that the restaurant is not just selling, but wants to provide an experience to its customers, a sense of value is created and users feel like the visit to the restaurant would be worthwhile(Malbasa, 2018).

Some participants mentioned that there should be a balance when posting photos or videos. The ideal balance is to post photos of food and the atmosphere so that they can get a feel of what the café is like . For example , respondent 24 said :

“I only see photos most of the time .Maybe videos of the food and the ambience will give a clearer idea of the place .”

One of the respondents (Respondent 25)wanted restaurants and cafes to also post behind the scenes process that goes on while preparing the food .Respondent 25 said :

“ Cafes should also post videos of how the food is prepared in the kitchen .This would make the experience unique .”

Restaurants should encourage communication with customers online It is important to have developed relationships with customers rather than just advertising (Fox 2016). According to Weintraub (2012), answering messages on social media and communicating with customers on a daily basis is very important (Malbasa,2018).According to Fox and Longart (2016), many users resort to social media for further information such as, price, reservations, offers and online reviews . Users search for fast answers and dedicated brands. to them. Hence it is important for restaurant and café firms to be more available ,active on social media and responding to customer queries.According to one respondent (Respondent 8), cafes do not always actively respond to customer queries .Respondent 8 said :

“Café owners/managers/staff need to be more available on their social media page when people DM them .”

User generated content

The use of social media and smartphones has increased the chances of sharing consumers' real-time experiences with others, and others' café decision-making processes can also be influenced and affected through these activities . 23 of the 28 respondents would usually use their smartphones to take pictures of the food .The respondents revealed that sharing content was the result of finding the content to be interesting, otherwise it would not be shared .If they liked the food and had a great time in the café , they would upload the pictures on Instagram and also give their comments and reviews. Usefulness of information seemed to be another theme, and a key driver for sharing information appeared to be content that may benefit other online friends.For example ,respondent 2 said :

“Mostly when I visit a café/restaurant and if I really enjoyed the food. I'll make sure to tag the café/restaurant on Instagram so others can discover and enjoy the food as well.”

Pictures, videos and text posted by other customers on social media page assures the customer that is still found in the decision making phase to either become a customer of the brand or business or not .Customers trust other users' experiences more than the brand's photos,videos or words (Malbasa,2018). Entertaining content does generate e-WOM (Fox & Longart, 2016) . Followers are more likely to purchase something if they see that others have been satisfied. Uploading pictures and reviews on Instagram creates curiosity and can affect restaurant/café decision making of others as well . In this regard , respondent 7 said :

“Yes, uploading pictures on Instagram will affect others. My followers will start asking about the place, the food, the quality etc.”

According to respondent 12 ,more posts by people on Instagram about a café can really motivate one to visit the place rather than just liking the posts. Respondent 12 said:

“When the café goes viral and more people post about it, that would motivate me to actually

Word of mouth

In the evaluation process , customers also look for information from their closest people such as friends and acquaintances before visiting a café/restaurant , besides the social media content. Generally, traditional word of mouth has a more powerful impact. 13 respondents feel that traditional word of mouth has more impact on their café decision making. For example , respondent 21 said:

“Traditional word of mouth has more impact on my decision of dining. I get clear information from the person and that helps me acquaint information about the food. This makes it easier to decide what i should and shouldn't order from the menu.”

According to Cutrone(2015), user-generated content in social media is tied to trust because it is easier for people to trust another person's experience rather than what the brand is trying to sell to them. In other words, pictures, videos and text that other customers have posted to the brand's

social media page are used as confirmation to other users' that these customers were satisfied with the brand, service, product and/or experience(Malbasa, 2018). 7 respondents felt that online word of mouth or e-WOM has more impact in their café decision making . In this regard ,respondent 28 said :

“Social media has more impact as I can see how's the place like from more people's perspective.”

Respondents 10 and 23 depend on both traditional word of mouth and online word of mouth for their café decision making process.

Marketing and Promotion

The modern world moves forward in terms of getting information and sharing information about a certain place. According to Kim et al.,(2015)and Bennett (2017), restaurants can benefit from social media because it is a low-cost advertising tool and is used to increase market share, generate brand awareness, easily connect and communicate with customers and help boost restaurant sales . Positive consumer reactions to a firm's social media activity can improve the firm's value in financial markets. This is because positive reviews lead to positive word of mouth through social media . Word of mouth can then increase sales and brand awareness (Fox & Longart, 2016).

3 out of 28 respondents opined that regardless of whether restaurants or cafes have good social media content or not , they can still thrive and succeed .For example , respondent 4 said:

“If the place is worth the rave then it will fly high regardless of social media influence. The good word will surely spread like wildfire even by word of mouth.”

However, 25 respondents felt that in the modern day ,social media is one such tool which can be used to promote a restaurant or café and can have an influnetial role in the success of restaurants and cafes .

According to 7 respondents , special price offers and special events would be an appealing content to promote on social media and would motivate them to visit a restaurant and café . Respondents 20 and 28 suggested hiring influencers to promote restaurant and cafes on social media so as to have more customer outreach.

CONCLUSION

The purpose of this study was to examine whether social media is influential in the decision making process of consumers when deciding on a restaurant or a café in Shillong . It also seeks to find out what social media tactics, marketing approaches and factors are most important to consider when creating an effective social media strategy to attract customers to visit restaurants and cafes . By using open-ended questions, participants were able to share their experiences and their perspectives on how social media can or cannot influence their restaurant/café decision

making. This study highlights what participants would like to see from the social media pages of restaurants and cafes .

The findings of this study reveals that social media is indeed influential in the decision making process when it comes to choice of restaurants or cafes .The easy access of information about the contents of a restaurant/ café on social media platforms like Insatgram gives the consumer options in selecting the ones to visit as the quality and environment of such a place is getting evaluated in real time through social media . This study also sheds light on the current approaches that is adopted by restaurant and café marketers in utilizing social media to attract customers and create brand awareness From the practical contribution perspective, based on the findings of this study, restaurant and café marketers can adopt certain social media tactics to meet the diverse needs of their consumers.It is essential to be innovative and customer centric when it comes to social media strategy because it can reflect on the restaurant's character and practices . Based on the findings of this study, it was identified that customers want to see pictures or videos of high quality that show the restaurant's atmosphere, food and best services that they have to offer so that they know what to expect before visiting the restaurant. Consumers also want restaurateurs to update their social media content more often ,be more active online and respond more to queries . Therefore, this study shows that more efforts are needed by restaurant and café maerketers to make their social media content more engaging and responsive to customer needs .

The findings of the study showed that consumers' experiences regarding a restaurant visit can be uploaded and shared with other followers on social media platforms .This generates e-WOM which can be influential for potential customers still in the decision making process . Positive word of mouth is essential to promote sales and brand awareness. Besides traditional word of mouth , E-WOM is equally credible in generating positive word of mouth . Therefore, besides positive traditional word of mouth ,resataurant and café marketers must build positive word of mouth online by connecting to consumers through their social media pages.

While the current research identified interesting findings, there were a few limitations. First ,the interview was done through google forms which hindered face to face intercation with the respondents and which could have led to more interesting replies .Second, the study used a qualitative research approach , with a limited number of informats and hence the results cannot be generalized to the population.Third ,this study only focused on the consumer side.If information was also obtained about restaurant characteristics and practices ,the results woud have been more interesting .This can be an area for future research .

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