



AN EMPIRICAL STUDY ON WHETHER FACEBOOK PROMOTION CAN DELIVER VALUE TO INDIAN START-UPS?

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ABSTRACT

Startups face challenges in investing large amounts of money in business promotion due to resource constraints and operational size. Hence, business promotion strategies like advertising, public relations, sales promotions, billboards, and event sponsorship are generally avoided by startup companies. Instead, Startups tend to employ social media strategies to run promotional campaigns on platforms like Facebook, Twitter, Instagram, and YouTube, among others. However, there is a paucity of research to understand whether such promotional campaigns are delivering the desired value and able to achieve the objectives set by the startups. The present study makes an endeavor to explore whether promotions through social media are effective in delivering significant outcome to startups. Therefore, this study aims to empirically investigate whether Facebook Promotion is delivering value to Indian startups. To conduct the research, cross-sectional data has been collected from 100 startup located in different cities in India. The data has been analyzed following the “Partial Least Squared-Structural Equation Modelling (PLS-SEM)” technique. The findings from this study may contribute towards the literature on understanding the importance of social media strategies in marketing campaigns for startups. Furthermore, this study may enhance clarity about the value obtained by startups, particularly during the early stage of their existence. Consequently, the study findings may help startups plan their investments in promoting their products and services on social media, in general, and Facebook, in particular.



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1. INTRODUCTION

A startup is a company that is in the inception stage of business. As the company has just started, access to funds is limited and the company is constrained in its

budget for promotion. While large scale companies would mostly go for traditional advertising like print media advertising, electronic media advertising, sponsorships, events and outdoor advertising, startups prefer growth hacking strategies using digital

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marketing. Digital marketing promotion majorly encompasses two kinds of outreach --- either through Google or through Social Media Marketing tools like Facebook, YouTube, Twitter, LinkedIn, Snapchat, Pinterest and Tumblr.

The following table 1 gives the active users of the social media marketing channels.

Table 1. Active users of the social media marketing channels

Sl No	Social Media Marketing Channel	Active Users In World	Active Users In India
1	Facebook	2.8 billion	320 million
2	YouTube	2 billion	265 million
3	Twitter	353 million	19 million
4	LinkedIn	260 million	71 million
5	Snapchat	397 million	75 million
6	Pinterest	459 million	67 million

Source: Statista.com

While the cost of advertising through print media and electronic media can run into lakhs and crores of rupees, the social media offers a viable and cost effective medium. In Facebook, there are different bidding models like “CPC (Cost-Per-Clock), CPM(Cost-per-thousand-impressions), CPL (Cost-Per-Like) and CPA (Cost Per Acquisition)”.

The cost of promoting through Facebook is also reasonable. The CPC rates in India varies from fifty-one paise to two and a half rupees. The rates of different tools of Facebook Promotion is given as below (table 2).

Table 2. Cost of Facebook Ad Promotion

Facebook Promotion Tools	Facebook Promotion Cost
Cost-per-click (CPC)	Rs 2.50/-
Cost-per-thousand-impressions (CPM)	Rs 9.95
Cost-per-download (CPA)	Rs 2.95
Cost-per-Lead (CPL)	Rs 54

Source: Facebook.com

Facebook is mostly used by start-up companies for creating visibility, generating leads and aiding in conversions. The visibility is done by creating Facebook Pages. The Facebook Page can be promoted organically or inorganically. In the inorganic route, Facebook gives the option to promote the page through several options like “Get Started With Your Automated Ads”, “Promote Your Page”, “Get More Leads”, “Boost A Post”, “Get More Messages”, “Get More Calls” and “Get More Website Visitors”.

“The minimum daily budget that Facebook allows is around Rs.40 per day (i.e., the minimum daily budget). If you’ve chosen to get charged for engagement (like for clicks, video views, likes, etc.), around Rs.167 would be the required daily (minimum) budget in India. And if you’ve chosen harder objectives such as users claiming

offers, joining events, or installing apps, then the advisable minimum daily budget is around Rs.1329”.

Running marketing campaigns through Facebook is a cost effective and viable options for startups. However, the question that comes up is whether startups are gaining in business volumes and profitability due to campaigns being run through Facebook. Our research work focuses on the constructs like perception about a startup, and interest about a startup due to Facebook promotions to understand whether that translates into monetary gains for the startup companies.

2. RESEARCH QUESTIONS

The following research inquiries were intended to be addressed by this study.:

- RQ1: Are people developing a good perception about a startup from viewing Facebook Ads about the startup?
- RQ2: Are people showing interest to know more about the products and services offered by the startup from viewing the Facebook Ads?
- RQ3: Are people actually buying the products and services from the startup from viewing the Facebook Ads?

3. RESEARCH OBJECTIVES

- a) To understand how Facebook Promotion Campaigns help in getting visibility and traction for Startup Companies.
- b) To understand the relationship between Facebook Promotion Campaigns and increase in buying behavior of potential customers.
- c) Literature Review

There are different studies on how advertising works and what kind of effect advertising has on purchase behaviour. Market Response Models try to understand how sales, market share, and brand choice is influenced by advertising (Vakratsas& Ambler, 1999). Market Response Models are of two types. They are Aggregate Market Response Model (Bass and Clarke, 1972) and Individual Level Market Response Model (Deighton, Henderson, and Neslin, 1994). Aggregate Market Response Model uses data such as advertising expenditures, market share or actual sales (Blattberg and Jeuland, 1981). Individual Level Market Response Model uses data such as number of impressions and individual brand choices (Pedrick and Zufryden, 1991). Drawing upon the individual level market response model and aggregate market response model, Vakratsas & Ambler (1999) have given the framework for studying how advertising works, which is illustrated below (figure 1).

The market for online advertising was valued at USD 304.0 billion in 2019 and is projected to grow at a CAGR of 21.6% between 2020 and 2025 to reach USD 982.82 billion. (Malureanu, Lazar, & Malureanu, 2021).

There are billions of dollars being spent in online advertising, yet there is no clear understanding about Return-On-Ad-Spend (ROAS).

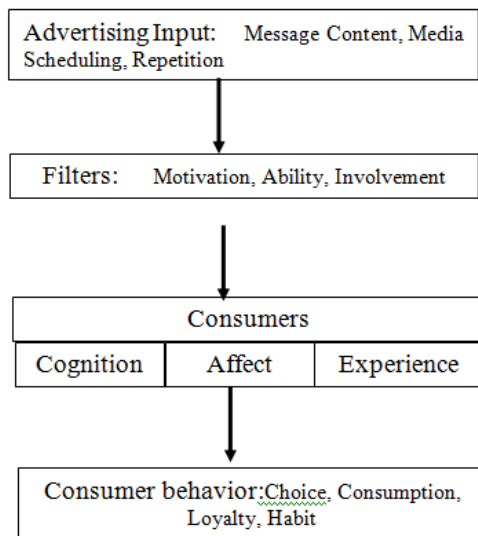


Figure 1. Framework for Studying How Advertising Works

Source: Vakratsas & Ambler (1999)

Facebook has been a major tool of online promotions for startup companies. Paper Boat, a brand of Hector Beverages, has created a storm in social media by launching an online campaign titled ‘Drinks and Memories’ with the hashtag #drinksnad memories. Under these campaign, social media users were asked to share happy memories of childhood (Pathak, P, 2019). This campaign was mainly run on social media sites like Facebook and Instagram and was a runaway hit for Hector Beverages and Paper Boat, gaining a lot of popularity and mindshare (Source: <https://inception.net.in/case-study-paper-boat>).

Measuring the effect of Facebook Promotional Campaign on buying behavior is challenging task (Gordon, et.al, 2018). To understand the effect and accurately measure the impact, Brett Gordon and his team of researchers at Kellogg School of Management have used randomized control trials (RCT). In a study known as a randomized control trial (RCT), participants are randomly allocated to one of two groups: the experimental group, which is given the intervention under study, and the comparison group or control, which is given an alternative (standard) treatment (figure 2).

RCT has become more significant as a result of advancements in causal inference techniques (Imbens and Rubin, 2015). RCT estimates and results from observational approaches (comparing exposed to unexposed users and regression) were compared by Lewis, Rao, and Reiley in 2011.

According to Yaqoob (2018), perceived value refers to multiple value characteristics such as “functional value, economic value, emotional value, and social value” that are positively perceived by a consumer through the use of a particular good or service. One of the ways to measure the value derived from advertising is purchase intention. Several studies have been done to measure the impact of advertising on purchase intention (Kotler, 1989; Helm and Evans, 2016).

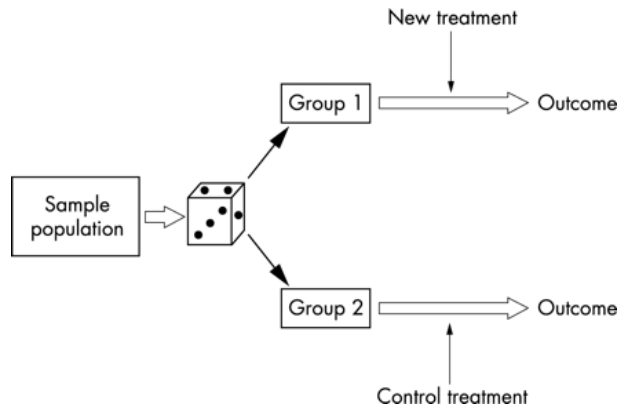


Figure 2. Randomized Control Trial

Source of Data: Gordon, et.al, 2018

4. CONCEPTUAL MODEL

In digital marketing, quality of ad plays a key role in influencing the purchase decision. With the advancement of technology, we now have many software like Adobe Photoshop, CorelDraw, Canva and many others that can make stunning ad banners and videos. Companies that make poor quality ads often end up with fewer quantity of likes, comments and shares in Facebook.

Therefore, after through study of extant literature, we propose the following alternate hypothesis (table 3).

H1: Perceived Quality of Facebook Ad by Startups has a positive influence on Purchase Intention of Consumers

There is an issue of credibility when it comes to running promotions on digital marketing and social media channels (Johnson & Kaye, 2015). Credibility is defined as “the extent to which the consumer perceives claims made about the brand in the advertisement to be truthful and believable” (MacKenzie & Lutz, 1989). It is important to understand whether credibility plays a key role in influencing the purchase decision (Chetioui, Butt & Lebdaoui, 2021). Therefore, after through study of extant literature, we propose the following alternate hypothesis:

H2: Credibility of Facebook Ad by Startups has a positive influence on Purchase Intention

The impact of a Facebook Ad is measured in terms of likes, comments and shares (Brettel, et al., 2015). When the ads are inorganically boosted, the impact can be measured in terms of number of people reached, number

of leads acquired, number of messages or number of calls received (Gordon, et al., 2019). The question that arises is whether a strong impact can lead to a higher purchase intention (Scissors, Burke&Wengrovitz, 2016). Therefore, after through study of extant literature, we propose the following alternate hypothesis:

H3: Impact of Facebook Ad by Startups has a positive influence on Purchase Intention

The recent research that is being carried out aims at understanding whether purchase intention created by Facebook Ads actually leads to actual purchase done by consumers. To understand the relationship between purchase intention and actual purchase, Brett Gordon and his team of researchers at Kellogg School of Management have used randomized control trials (Gordon, et al., 2019). It is important for startup companies to understand whether they are getting Return-On-Ad-Spend (ROAS) by measuring whether the purchase intention of customers get converted into actual sales. Therefore, after through study of extant literature, we propose the following alternate hypothesis:

H4: Purchase Intention of Consumers positively affects actual purchase done from Startup Companies.

Table 3. Definition of the Constructs

Constructs	Definitions	Authors
Perceived Quality of Ad	“Consumer’s judgement about an advertisement’s overall excellence or superiority”	Zeithaml (1988)
Credibility of Ad	“The extent to which the consumer perceives claims made about the brand in the advertisement to be truthful and believable”	MacKenzie& Lutz(1989)
Impact of Ad	“The influence of ad on a consumer, either in positive or negative manner that compels the subject to take some tangible action”	Homer & Yoon(1992)
Purchase Intention (PI)	“Purchase intention reflects consumer’s intention to purchase a product or service using their subjective assessment”	Blackwell et al (2001)

5. RESEARCH FRAMEWORK & METHODOLOGY

The main objective of the research work is to find out the effectiveness of Facebook Ads used by Startups to

promote their products and services. This can be done by evaluating two constructs- Purchase Intention (PI) and Actual Purchase (AP).

Based on the literature review, we can say that the effect of Facebook Advertising on PI and AP can be measured using two approaches – Randomized Control Trials (RCT), which has been used by Brett Gordon and his team of researchers at Kellogg School of Management (Gordon, et.al, 2018) and the Partial Least Square – Structural Equation Modelling (PLS-SEM) used by Youssef Chetioui and his team of researchers at School of Business Administration, Al Akhawayn University in Ifrane, Morocco.

The subjects are randomly assigned to one of two groups in a randomized control trial (RCT), with one group (the experimental group) receiving the intervention under study and the other (the comparison group or control group) receiving a different (conventional) course of treatment (Lewis, Rao, and Reiley, 2011). Using a combination of component analysis and multiple linear regression analysis techniques, the Partial Least Square - Structural Equation Modelling (PLS-SEM) method is utilized to build numerous cause effect relationships between the constructs (Hair et al., 2017). Though the RCT Approach gives a higher level of accuracy (Imbens and Rubin, 2015), we have chosen the PLS-SEM Approach as there was a constraint in getting a larger sample size and there was a hesitation among startups to take part in RCT Trials.

From the extant literature, our research study has proposed a conceptual model to analyze Purchase Intention (PI) from Facebook Advertising with the three constructs: Perceived Quality of Ad (AQ), Credibility of the Ad (AC) and Impact of Ad (AI). We have also tried to find whether Purchase Intention (PI) leads to Actual Purchase (AP) of the product or service (figure 3).

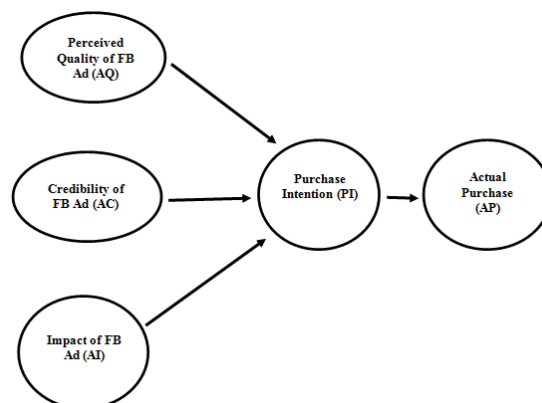


Figure 3. Proposed Conceptual Model

The research was conducted from online customers situated in different parts of India. Data was collected through Google forms only for the purpose of maintaining the social distancing in this pandemic

situation. The data for this study collected during the month of September to December 2020. Data includes the responses of customers who have been exposed to Facebook Ads by Startups.

We have used purposive sampling to reach out to the relevant respondents. The questionnaire was sent to 500 targeted respondents who have been exposed to Facebook Ads. Among these 500 respondents, 137 respondents were chosen with a filtering criterion ‘those who have seen ads posted by Startups’.

A widely used multivariate analytical technique called PLS-SEM in SmartPLS was used to adjust the questionnaire to include constructs that could be evaluated by reflective modeling (Hair et al., 2017; Hair et al., 2019).

16 survey items were used to evaluate the four constructs of the suggested model in the survey instruments (listed in Appendix A). Items from earlier research were adopted, however they underwent content changes to make them more applicable to the current study. A seven-point Likert scale, ranging from 1 for "Strongly disagree" to 7 for "Strongly Agree," was used to evaluate the four constructs. The core work of this paper is to determine the effect of Facebook ad quality, ad credibility and ad impact on purchase intention whether purchase leads to actual purchase.

The respondents belong to major cities like Delhi NCR, Mumbai, Chennai, Kolkata, Chandigarh, Bengaluru and Hyderabad. The demographic profile of the respondents is given as below (table 4):

Table 4. Demographic Profile of Respondents

Gender	
Male	57%
Female	43%
	100%
Age Group	
20-30	11.70%
30-40	24.20%
40-50	27.80%
50-60	23.80%
Above 60	12.50%
	100.00%
City	
Delhi	13.60%
Mumbai	12.30%
Chennai	10.80%
Kolkata	12.70%
Chandigarh	12.30%
Bengaluru	12.30%
Hyderabad	13.70%
Pune	12.30%
	100.00%

6. STRUCTURAL MODEL ASSESSMENT

Partial Least Square – “Structure Equation Modelling (PLS-SEM) technique is used for model assessment. It starts from the analyzing the reliability of the items. It

can be done through standardized loadings analysis (Table 4). Each item scored loading above than 0.728 and hence each item retained in the model. The convergent and discriminant validity is checked. The next step is assessing the composite reliability for checking the internal consistency of the construct which in turn indicate the internal consistency reliability (Shashi K. Shahi, Atul Shiva and Mohamed Dia, 2020)” (table 5).

Table 5. Assessment Results of the measurement model for the constructs

Construct	Item	Loading	CR	AVE	CR²
Ad Quality (AQ)	AQ1	0.813	0.797	0.882	0.715
	AQ2	0.872			
	AQ3	0.832			
	AQ4	0.815			
Ad Credibility (AC)	AC1	0.772	0.852	0.834	0.767
	AC2	0.863			
	AC3	0.693			
	AC4	0.736			
Ad Impact (AI)	AI1	0.802	0.843	0.811	0.635
	AI2	0.864			
	AI3	0.842			
	AI4	0.898			
Purchase Intention (PI)	PI1	0.871	0.872	0.821	0.752
	PI2	0.849			
	PI3	0.873			
	PI4	0.738			
Actual Purchase (AP)	AP1	0.834	0.825	0.813	0.762
	AP2	0.743			
	AP3	0.822			
	AP4	0.871			

Utilizing the average variance explained (AVE) and composite reliability index (CR), the convergent validity is confirmed. All constructs have an average variance excess (AVE) greater than 0.50, which is a prerequisite for validity (Hair et al., 2017).

According to Fornell and Larke (1981), the Fornell-Larcker criterion is used to assess discriminant validity. If the variance among the constructs is less than the variance that each construct shares with its items, then the discriminant validity will meet the Fornell-Larcker criterion. When the square root of the AVE is greater than the correlation index, we believe there to be discriminant validity. According to Table 6, every construct meets the Fornell-Larcker criterion.

Table 6. Discriminant Validity – Fornell-Larcker Criterion

	AQ	AC	AI	PI	AP
AQ	0.732				
AC	0.874	0.835			
AI	0.738	0.798	0.732		
PI	0.832	0.821	0.791	0.813	
AP	0.823	0.754	0.811	0.758	0.823

Note: AQ: Advertising Quality, AC: Advertising Credibility, AI: Ad Impact, PI: Purchase Intention, AP: Actual Purchase

By using HTMT, discriminant validity is also examined. Henseler, Ringle, and Sarstedt (2015) created a novel method for evaluating discriminant validity called the HTMT method. Applying a stricter requirement, the indices produced by the HTMT ratio should be below

0.85 (Kline, 2011). According to Gold et al.'s work from 2001, the HTMT can reach 0.90. All of the relationships, according to Table 7, have scores below 0.90.

Table 7. Discriminant Validity –Heterotrait Monotrait Ratio (HTMT)

	AQ	AC	AI	PI	AP
AQ					
AC	0.782				
AI	0.562	0.637			
PI	0.642	0.525	0.734		
AP	0.517	0.643	0.628	0.721	

Note: AQ: Advertising Quality, AC: Advertising Credibility, AI: Ad Impact, PI: Purchase Intention, AP: Actual Purchase

After the measurement model's validity and reliability have been established, the relationship between the constructs of advertising quality, advertising credibility, advertising impact, purchase intention, and actual purchase is ascertained by estimating the coefficient of multiple regression equation.

In order to guarantee the objectivity of the regression results, the variance inflation factor (VIF) analyzed the collinearity between the exogenous variables using the latent variable scores of the PLS-SEM results. There are no collinearity problems among the predictor variables if the VIF value is less than 5 (Kock and Lynn, 2012). The VIF value in our study ranges from 1.214 to 3.297, falling below the 3.33 threshold value (Diamantopoulos and Sigouw, 2006). As long as a variable's VIF is less than 5, collinearity is not a problem.

“After investigating collinearity issue, the significance and relevance of the path coefficients should be checked (Chetioui, Butt & Lebdaoui, 2021)”.

Hypothesis	Original Sample (Beta)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Decision
H1: AQ -> PI	0.322	0.321	0.061	4.373	0.00	Supported
H2: AC -> PI	0.343	0.415	0.073	2.941	0.00	Supported
H3: AI -> PI	0.645	0.441	0.087	6.745	0.00	Supported
H4: PI -> AP	0.657	0.542	0.053	7.457	0.00	Supported

The result found six hypotheses are supported at 1 percent level of significance (Table 8).

Table 8. Hypothesis testing using PLS structural Model for effectiveness of Facebook Ads

Hypothesis	Original Sample (Beta)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Decision
H1: AQ -> PI	0.322	0.321	0.061	4.373	0.00	Supported
H2: AC -> PI	0.343	0.415	0.073	2.941	0.00	Supported
H3: AI -> PI	0.645	0.441	0.087	6.745	0.00	Supported
H4: PI -> AP	0.657	0.542	0.053	7.457	0.00	Supported

Ad Quality ($\beta=0.322$, p value=0.00), Ad Credibility ($\beta=0.343$, p value=0.00), Training and Development ($\beta=0.674$, p value=0.00), Performance Appraisal

($\beta=0.671$, p value=0.00), Ad Impact ($\beta=0.645$, p value=0.00) has a significant positive influence on the Purchase Intention. Purchase Intention ($\beta=0.657$, p value=0.00) has a significant positive influence on the actual purchase done.

The bootstrapping approach, which examines the significance of the path coefficient and their confidence intervals, is used to test the hypotheses in the structural model. In the structural equation model, the coefficient of determination, or R2 value, is also calculated for each regression equation. R2 values, also known as in-sample predictive power, assess the variance in each of the endogenous constructs that is explained by the explanatory variables and is a measure of the model's explanatory power (Hair et al., 2017).

Although low values of R2 are regarded suitable in the PLS-SEM analysis, the minimal threshold acceptable value of R2 value depends on the context (Raiathe et al., 2012). In this investigation, the R2 values ranged from 46.2% to 86.2%. The proposed model is able to explain 73.2% of Facebook Ad Quality, 65.2% of Facebook Ad Credibility, 64.3% of Facebook Ad Impact, 86.2% of Purchase Intention and 66.8% of Actual Purchase (table 9).

Ad quality, ad credibility and ad impact have a significant bearing on the purchase intention. The alternate hypotheses H1, H2 & H3 were duly supported by the result. Purchase intention has a significant bearing on actual purchase as Beta (β) is 0.657 and p value is 0.00 which indicated that alternative hypothesis H4 was duly supported.

Table 9. Predictive Power of the Model

Constructs	R ²	Adj-R ²	Q ²
Ad Quality (AQ)	0.732	0.726	0.547
Ad Credibility (AC)	0.652	0.511	0.649
Ad Impact (AI)	0.643	0.627	0.642
Purchase Intention (PI)	0.862	0.731	0.661
Actual Purchase (AP)	0.668	0.535	0.561

7. DISCUSSIONS AND MANAGERIAL IMPLICATION

Startup companies are normally constrained in resources and also have very limited budget for running ad campaigns. Hence, most of the startup companies are now trying to run ads on social media platform which are more cost effective and deliver higher return-on-ad-spend (ROAS). In the case of ads on digital platforms, the advertiser has a better control over the ads, can actually ensure that the ad reaches the right target group and also measure the impact of the ad. Among the digital marketing platforms, Facebook has a higher reach and accounts for a higher volume of business (Source: Statista.com). However, the main question that most of the startup companies are asking is whether

Facebook Ads are creating purchasing intention among the target consumer group and whether the target consumers are actually doing purchase after getting influenced by the ad.

The objective of this research study was to find whether factors like ad quality, ad credibility and ad impact had a significant bearing on the purchase intention and whether the purchase intention actually got converted to real purchase resulting in revenues for the startup companies. Our study shows that ad quality, ad credibility and ad impact does have a significant bearing on the purchase intention and the purchase intention does get converted to real purchases. This will help to convince the startup companies to use Facebook as a platform for running ad campaigns to a large extent.

8. CONCLUSION, LIMITATIONS AND FUTURE RESEARCH

John Wanamaker famously said, 'I know half of my ads are a waste, but I don't know which half'. It is indeed quite challenging to measure the impact of a print or

electronic ad campaign and billions of dollars are spent with just smart guesswork and estimates. However, in the case of digital marketing, it is possible to gather accurate data through Google Analytics, Facebook Insights, YouTube Analytics, Twitter Analytics, Hootsuite and other web analytics tools. This study was about understanding the Facebook campaigns being run by startup companies and whether they were deriving value from the Facebook Marketing campaigns.

This study has some limitations. We understood from the literature study that Random Control Trial (RCT) was a better tool to analyze the impact of a social media ad campaign. However, due to the Covid-19 situation and reluctance of the startup companies to participate in a RCT Test, we had to settle for the second-best option, i.e, conduct the research using the Partial Least Square (PLS) technique. Our research was focused on a few limited factors like ad quality, ad credibility and ad impact. Bigger research encompassing more factors need to be conducted to understand whether Facebook Ads are really delivering value-for money for the startup entrepreneurs.

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Appendix

A. Measurement Scales Used

Variables	Items	Measurement Items	Sources
Ad Quality (AQ)	AQ1	I believe Facebook Ads are of better quality than Print Ads	Zeithaml (1988)
	AQ2	I believe Facebook Ads are of better quality than Electronic Ads	
	AQ3	Facebook Ads are informative and help to make proper buying decisions	
	AQ4	Facebook Ads are interactive and more interesting than Print and Electronic Ads	
Ad Credibility (AC)	AC1	I believe that Facebook Ads are convincing	Martins et al.(2019)
	AC2	I do believe that Facebook Ads are credible	
	AC3	I do believe that Facebook advertising is a good reference for purchasing products	
	AC4	I would like to purchase product/service advertised on Facebook	
Ad Impact (AI)	AI1	I consider Facebook Ads a good advertising channel	Boateng and Okoe (2015)
	AI2	Facebook Ads are interactive and help in two-way communication	
	AI3	Facebook Ads are personalized and offer exactly what I need	
	AI4	Facebook Ads are high in value because they map consumer behaviour	
Purchase Intention (PI)	PI1	I believe I should buy products/services advertised on Facebook	Martins et al.(2019)
	PI2	My buying decisions/choices are highly influenced by Facebook advertisements	
	PI3	I search for ads in Facebook to decide on buying the right product/service	
	PI4	I use Facebook Ads to compare offerings by different companies to make a buying decision	
Actual Purchase (AP)	AP1	I like to buy products/services advertised on Facebook	Martins et al.(2019)
	AP2	I actually buy products/services advertised on Facebook	
	AP3	Facebook Ads help me to buy the right kind of products/service	