8th LUMEN International Scientific Conference Rethinking Social Action. Core Values in Practice | RSACVP 2017 | 6-9 April 2017 | Suceava – Romania

Rethinking Social Action. Core Values in Practice

The Impact of Social Media Engagement Metrics on Purchase Intention: A Study on Brand Fan Page Followers

Zoha RAHMAN*, SUBERAMANIAN, MOGHAVVEMI

https://doi.org/10.18662/lumproc.rsacvp2017.61

How to cite: Rahman, Z., Suberamanian & Moghavvemi (2017). The Impact of Social Media Engagement Metrics on Purchase Intention: A Study on Brand Fan Page Followers. In C. Ignatescu, A. Sandu, & T. Ciulei (eds.), *Rethinking Social Action. Core Values in Practice* (pp.665-681). Suceava, Romania: LUMEN Proceedings https://doi.org/10.18662/lumproc.rsacvp2017.6 1

© The Authors, LUMEN Conference Center & LUMEN Proceedings.
Selection and peer-review under responsibility of the Organizing Committee of the conference

This is an Open Access article distributed under the terms of the Creative Commons Attribution-Noncommercial 4.0 Unported License, permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited

©LUMEN Proceedings

8th LUMEN International Scientific Conference
Rethinking Social Action. Core Values in Practice |
RSACVP 2017 | 6-9 April 2017 | Suceava – Romania

The Impact of Social Media Engagement Metrics on Purchase Intention: A Study on Brand Fan Page Followers

Zoha RAHMAN[1]*, SUBERAMANIAN[2], MOGHAVVEMI[3]

Abstract

Research on the impact of social media users' engagement action on purchase intention still remains in its infancy. It is necessary for a company to gauge whether or not its efforts to stimulate user activity on its fan pages are successful in generating output. This study utilized the Uses and Gratification (UGT) theory and Elaboration Likelihood Model (ELM) as a foundation to explore the social media engagement actions and examined the effect of users' engagement actions alongside their purchase intention. An online survey was carried out on four popular companies' fan page followers in various industries in Malaysia, and a total of 307 questionnaires were collected and analysed. The findings indicated a significant relationship between fan page engagement and Purchase intension. The results will help e-commerce marketers identify the importance of social media engagement on sales, while guiding e-marketers on their decision pertaining to e-marketing tools, particularly for engagement metrics in increasing sales. The study will also provide marketers with a descriptive idea on users' activities. Overall, the study serves as a basic fundamental guideline for academicians and researchers to interpret the concept of engagement metrics and its effect on purchase intention, as well opening a vast area of unexplored researches on the subject of social media.

Keywords: Social Media Marketing, Social Media Engagement, Engagement Metrics. Facebook Fan Page, Purchase Intention.

[1] University of Malaya, Kuala Lumpur, Malaysia, joha_du@yahoo.com.
[2] University of Malaya, Kuala Lumpur, Malaysia, kumaran@um.edu.my.
[3] University of Malaya, Kuala Lumpur, Malaysia, sedigheh@um.edu.my
* Corresponding author.

https://doi.org/10.18662/lumproc.rsacvp2017.61
Corresponding Author: Zoha RAHMAN
Selection and peer-review under responsibility of the Organizing Committee of the conference

This is an Open Access article distributed under the terms of the Creative Commons Attribution-Noncommercial 4.0 Unported License, permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited

1. Introduction

It is important for companies to know whether their efforts to inspire user activity on brand pages are effective [22] and successful. Moreover, marketers need to explore the actual impact of social media engagement activities on purchase intention, while also determining the consistency of sales with social media engagement metrics. Companies are using different ways to determine user engagements, their actions, and predicting user behaviour. N. Elliot reported that measuring engagement metrics data in social media (SM) is difficult, and in fact, their findings admitted that engagement metrics are not indicative of the success of a company [11]. Another research conducted by Wasupol showed that there was no evidence that high frequency visits to fan pages stimulates purchasing behaviour [48]. These contradictions emerge from empirical research on real participants' engagement and purchase intention, as there have been several calls for increased research on social media services [27], with huge demands from the business world for empirical research in this area [3].

In social media, users tend to partake in different types of activities (e.g. comment, like, share, view), which create Social Media engagement metrics and result in different outcomes. For example, users of different Facebook fan pages tend to engage with different pages differently. They can like, comment, share, and click on posts, which normally indicate how they feel about the content. This will affect their next action in turn. Taking into account this and the aforementioned literature, the main aim of this study is to identify the impact of users' engagement actions of fan pages (e.g., Like, share, read, comment, post) on followers purchase behaviour among the followers of the selected engaged fan pages in Malaysia (Fan pages that have engaged followers or high fan page growth rate, or a combination of both). The followers of fan pages are the real online community member of the pages, which makes up the real identifier for emotional/cultural engagement as auxiliary consumption and created co-production. The findings of this study will shed additional light on customer online behavior and engagement, which will help e-commerce marketers design their SM (social Media) strategy and generate contents in social media based on user behaviors. The study will also provide marketers with a descriptive idea on users' activities.

2. Background of the study and hypotheses development

Researchers used different theories and models to investigate individual online behaviour and the contents of the website, blog, Fan pages and other online platforms. User gratifications theory [23] and Elaboration Likelihood Model [25] are some examples that researchers used to measure behaviour related to new media like the internet, online communities, social networking, and blogs [44]. Uses and gratifications theory (UGT) is an audience entered approach to understanding mass communication [42] focusing on "what do people do with media?" [23]. It assumes that consumers are not passive members of the media and that consumers have an active role in interpreting and integrating media into their own respective lives [23]. We developed the measurement items of the engagement metrics according to the concept of UGT. From a theoretical perspective, U&G theory could be used to explain some elements of consumer behaviour through social media. Elaboration Likelihood Model (ELM) argues that when a person encounters some form of communication, they can process this communication with varying levels of thought (elaboration), ranging from a low degree of thought (low elaboration) to a high degree of thought (high elaboration) [25]. D. H. Park, J. Lee and I. Han applied the ELM for an improved knowledge on the understanding of the influence of online consumer reviews on purchasing intention [35]. An experimental study was conducted to examine the moderating role of involvement in persuasion level. They found that the quality and quantity of online reviews affect consumers' purchasing intention (PI), respectively. The results showed that low-involvement consumers are affected by quantity rather than quality of online reviews, while high-involvement consumers are affected mainly by review quantity when the review quality is high. Many research used these theories and others to investigate social media engagement and user on line behaviour in multiple contexts and settings. According to the ELM concept, we assume that high involvement or engagement with fan pages might lead users to have higher purchase intention.

Review of the literature shows that many research conducted on identifying factors of fan page content popularity [12]; purchase intention in social sites; the importance of fan page [18]; and fan page engagement [28][50]; the effect of the contents of Fan pages on online engagement [31][52][46]; consumers drive or motivations to engage on the Facebook page of the brands [43][32], strategy to engage consumers in fan page or social media [21][26][51], and discovering significant drivers of customer loyalty to social media or fan pages [2][39][19]. Limited researches were conducted on following/liking fan pages and its impact on brand loyalty,

awareness, and customer relationships [6][9]. Moreover, the concept of user engagement in online brand communities is still poorly understood, underscoring the need for theoretical-based research of user engagement [49], while research indicated that online participants' observation could provide a more in-depth explanation about how social media engagement model works [28].

2.1 Fan page Engagement

The first goal of a fan page is to get fans or followers engaged [47]. Poyry summarised two major types of online community membership; quiet membership and communicative membership. The former is characterised by members who regularly read others' posts but seldom post their own opinions, while the latter includes those who are actively interacting with the community [37]. Poyry also pointed out that members consume content produced by others and acquire and transfer informational and social values [37]. Linjuan analysed Chinese social media engagement through consuming and contributing. Consuming is related to watching videos, viewing pictures on companies' page, reading companies' posts and user comments or product reviews' and liking/joining (e.g., becoming a fan of or following) a company's page, while contributing is related to engaging in conversations on companies' pages (e.g., commenting, asking, and answering questions), sharing companies' posts on their own page (e.g., video, audio, pictures, and texts)', recommending companies' pages to their contacts' and uploading product-related video, audio, pictures, or images. According to Simply Measured (Global social analytics platform), engagement metrics include likes, comments, and shares; however, according to Facebook, it include likes, comments, and shares, as well as clicks on the post (e.g. opening a picture, clicking on 'play' on a video, clicking through a link). Within a Facebook brand page, fans can engage with a company by posting contents on the wall, commenting on the existing post shared by the moderator, indicating interest in an existing post by liking it, and sharing posts on their profile wall. Each action(s) generate a story, which appears on the wall of each of the fan's Facebook friends. In other words, social media engagement is what the public feel about its content and what they do about it.

2.2 Purchase Intension and Fan page engagement

Purchase intentions refer to the degree of perceptual conviction of a customer to purchase a particular product (or service) [2]. It is referred to as the subjective judgment by consumers reflected upon after the general evaluation of buying products or services [20]. This statement can be

indicative of several meanings, such as consumer willingness to consider buying, buying intention in the future, and decision repurchases [20]. When shopping for high purchase involvement goods, consumers seeks extensive information on it to help them decide [8], and many studies pointed out that information search is one the most reported motivational factor of using social media and fan pages [47][4]. In the case of low involvement products, consumers rarely searched for and assessed product information, and messaging by low involvement brands focus on rapid hedonic or otherwise effective appeals [17]. Previous studies revealed hedonic as one of the major motivations of using social media and fan pages [37][47]. The more transformational the messaging appeal, the higher consumer engagement will be in fan pages, and due to the hedonic nature of transformational messages in fan pages [8], consumers tend to be engaged in fan pages that might lead them to purchasing a product. The interactions in fan pages are vital from the perspective of companies, because such active customers build on the brand by increasing awareness, involvement, and engagement, therefore stimulating purchases [47] and also online reviews activities are related with sales output [5]. Besides, one recent study reveals that fan-page engagement metrics have a strong positive impact on online purchase intention [53][40].

High fan page usage intensity and regular contact with the brand have an effect on the brand relationship and should increase their likelihood of repurchasing. Prior studies have also shown a relationship between involvement and product purchase [38]. Moreover, studies have shown that engagement within online brand communities on social media has a positive effect on purchase intention. All the Likes, Comments, and Shares on Facebook Pages are subtle brand recommendations for consumers to purchase products [1]. In the current study, we regarded fan pages' "Engagement Metrics" as an independent variable, and "Purchase Intention" as a dependent variable. We assumed that trust, gender, age and employment status will moderate this relationship (See Fig.1). According to the aforementioned findings and assessments, we developed the following hypothesis:

H1: There is a positive relationship between Fan Page Engagement and purchase intention.

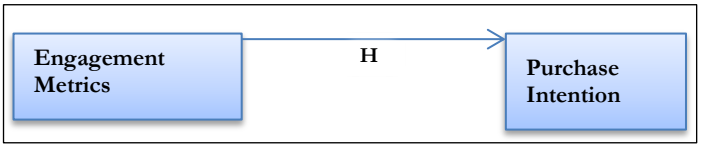

Fig 1: Research Model

3. Methodology of research

3.1 Sampling Framework

An ad-hoc survey on fan page was conducted to test the main hypothesis in our research framework. The study is concentrated on fan page engagement activities of users and their respective purchase intention. Four popular organisations in Malaysia that are active in fan pages with a large number of fan page followers or good growth rate were selected; Lenovo mobile Malaysia, Samsung Malaysia, Zalora Malaysia, and KFC Malaysia. We selected these firms based on judgment sampling [according to number of followers, PTA (people talking about) metrics, fan page growth rate] .These companies conduct business based on a hybrid model (doing business online and offline). The scales embody two constructs i.e. fan page engagement metrics and purchase intention. Each construct is explained via distinct sets of statements being measured on a common intensity based 5-point Likert scale [strongly disagree (1), strongly agree (5)].

The survey instrument was made accessible with a web-link to followers of the four sampled firms. We selected fan page followers as our respondents, because they can provide the most valuable information on fan page behavioural pattern and measure engagement metrics [9]. The respondents were selected according to their respective activities on the selected fan pages, and we selected 150 active users from each fan page. From 150 users, 100 respondents were selected randomly for the final survey. The web-link of the questionnaires was personally emailed to 100 followers from each selected fan page. Out of 400 questionnaires, 326 completed questionnaires were returned, out of which 307 responses were found to be valid, and thus used for the study.

3.2 Measurement Instruments

Our proposed model includes two latent constructs; Fan page engagement metrics and purchase intention (Fig 1). Fan page engagement construct comprise of thirteen self-administered items. The items were generated according to previous studies [18][28], while Purchase Intention comprises of six items adopted from previous study [6][3] (Appendix 1).

4. Descriptive statistics of engagement metrics:

According to the users' responses, we found that 77% fan page followers read/ watch posts of fan pages; about 43% users navigate in the brand applications of the fan pages; 77% users usually click "like" button on

contents of fan pages; 40% put "comments" on the brand posts, 67% users put "comment" on other followers post or comments; 99% followers write on their wall about their followed brand; 34% invite their Facebook friends to like their followed fan page;19% of the followers share brand posts from fan pages; 9% of users upload product image, video in their fan page; 81% of followers participate in fan page promotional campaign; 52% followers like to spread promotional offerings of fan pages to their friends via social media connections; 61% of the followers like to write on fan page walls; 96 % followers like to discuss issues with marketers through the fan page messaging option, and 58% like to consider fan page information prior to making purchases. Moreover, 68% of users are demotivated or not interested in sharing brand posts, 73% of users are not inspired to upload any image/video in fan pages; 50% of the followers do not invite others to join fan pages from their social media community; 58% of the users do not like to show their followed brand on their personal face book profile; 37 % do not like to comment on brand posts. However, 67% of users like to comment on other followers' posts. The results of the descriptive analysis show that Fan page followers tend to show medium level of engagement activities overall (M= 3.14, SD= 1.28, n=307). Table 2 details the descriptive statistics of users' engagement activities.

Table 2: Descriptive of engagement activities

Engagement action description	Mean	SD
1. Read and watch fan page posts	4.33	1.74
2. Navigate in the brand applications	2.98	1.32
3. Click "like" button	4.35	1.78
4. Commenting on brand post	2.87	1.29
5. Commenting on other users' post	3.98	1.43
6. Writing on Facebook profile about followed brand	1.07	1.67
7. Inviting Facebook friends to like the followed brand	2.68	1.22
8. Sharing brand post	1.12	1.45
9. Uploading product image , video in fan pages	1.04	1.87
10. Participating fan page promotional campaign	4.56	1.23
11. Spreading fan page offering via social media connections	3.21	1,56
12. Writing on Fan page wall	3.98	1,43
13. Discussing with the marketers through fan page chat option.	4.67	1.32

5. Data Analysis

5.1. Confirmatory Factor Analysis

5.1.1. **Construct Validity** :At least four fit indices is needed for construct validity of a measurement model: Root mean Square of error Approximation (RMSEA), Goodness of Fit Index (GIF), Comparative Fit Index(CIF), Chi Square/Degree of Freedom [RMSEA<.08, GFI>.90, CFI> .90, and CMIN/df <3] (Hair J. F., 2010)(See Table 3).

5.1.2 **Convergent validity**: Convergent validity refers to the degree to which multiple methods of measuring a variable provide the same results [34]. The following criteria must be satisfied towards ensuring convergent validity: CR > 0.7, CR > AVE, and AVE > 0.5 [16]. The beta value for all the items were found to exceed 0.7, and AVE of two constructs were found to be greater than 0.5 [15].

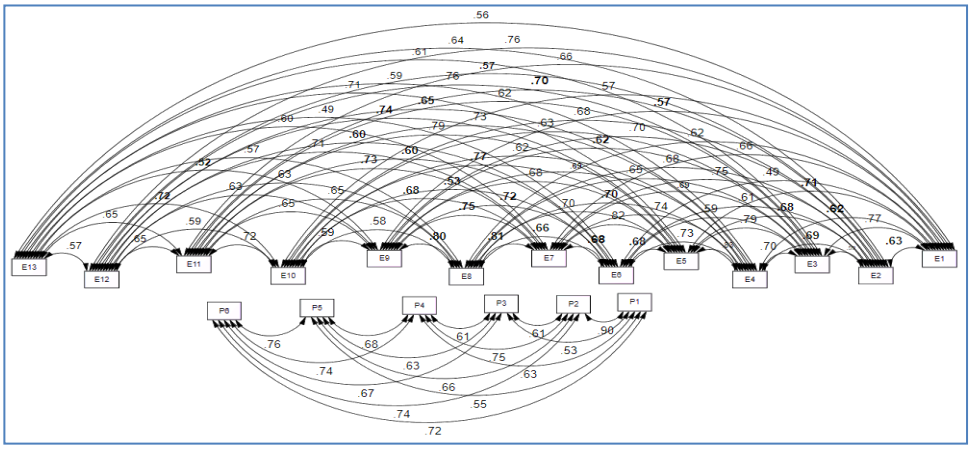

Fig 3: Item covariance

5.1.3 Discriminant validity: Discriminant validity is achieved when no redundant item in the model or the correlation between pairs of latent constructs is ≤ .85 [34][15]. The item covariance of each construct is shown in Fig 3. The correlation among two construct was less than 0.85 and shown in Fig 4. To further estimate discriminate validity, this study examined: (1) exploratory factor analysis confirm that each indicators loads highly with its own construct than others and (2) comparison of the square root of each construct's AVEs to its correlation with other variables [7]. Results show that all items loading significantly on their predefined constructs and construct correlations were all below the square root of AVE for each construct. These analyses provided evidence of discriminant validity. This study performs exploratory factor analysis to determine if the results indicate the existence of Common Method Variance. Results of EFA reveal no sign

of single-factor that account for the majority of variances, thus confirming that the data is free from CMV

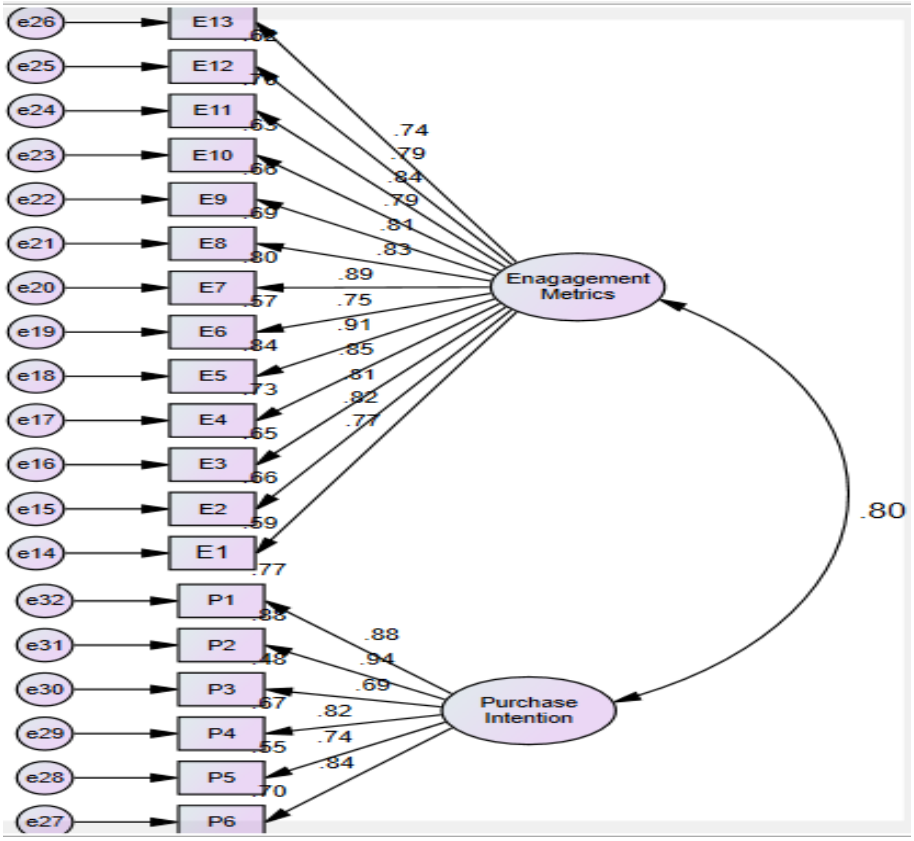

Fig 4: latent variable correlation

5.2 Structural model

The proposed structural model was tested for an overall model fit. The model's fit is assessed on the basis of Root mean Square of error Approximation (RMSEA), P-value, Goodness of Fit Index (GIF), Comparative Fit Index (CIF), Chi Square/ Degree of Freedom, Adjusted Goodness of Fit Index (AGFI), and P-close [16]. In this study, the Chi-square P-value turns out to be significant, but all other Model fit indices were acceptable. Chi-square is affected by sample size (it is always significant when N > 200) [33]. Model fit indices for all individual constructs were calculated, and the results tabulated in Table 3. All 19 measured variables loaded significantly onto their respective constructs with their respective estimates [36].

The structural model is assessed by examining the paths' coefficients (Beta weights), which represents the quality of the relationship between dependent and independent variables. Fan page engagement metrics positively influence user's Purchase Intention ($\beta = .81$, $p < 0.01$), and the result statistically supports *Hypothesis 1 (H1)*. In terms of the impact of followers' engagement actions on purchase intention, the study identified a strong positive effect of follower engagement actions on purchase intention. It was suggested that if followers positively engage in fan page's activities, they will positively react towards the purchase of that particular brand. The R^2 value also reflects the predictive power of the model ($R^2=0.66$). The results shows that the user engagement factors(reading/watching brand post, navigating brand application in the fan page, liking brand post, commenting on brand post, commenting on others followers' post, writing on Facebook profile about followed brand, inviting friends to like the followed brands, sharing, uploading product data in fan page, participating fan page promotional campaign, spreading product information to fan page online community, writing on fan page wall, messaging with marketers through fan page chatting option) are able to explain 66% of the variance in their purchase intention. This result supported our arguments that the users who are more active and interact have higher intention to purchase. The structural model is shown in Fig 5.

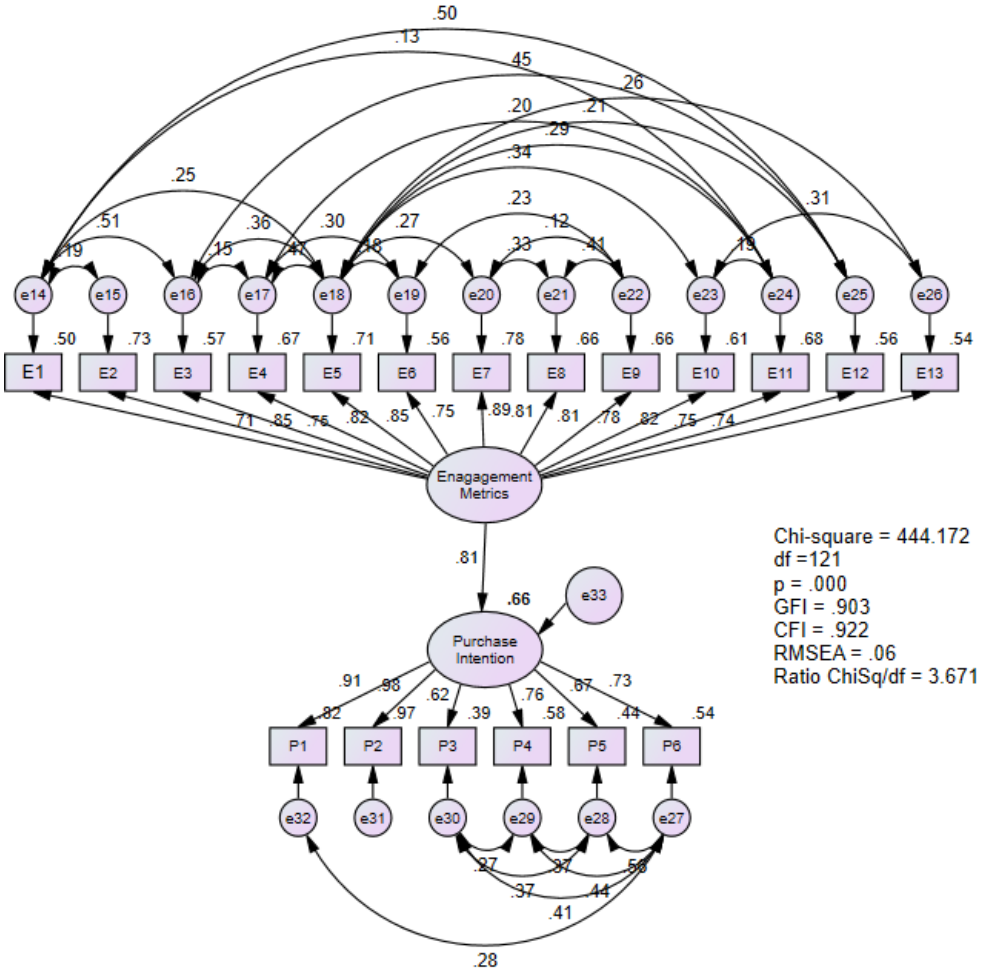

Fig 5: Structural Model

Table 1 : Model fit indices

Indices	Recommended Value (Hair J. F., 2010)	Model fit indices
GFI	> 0.9	0.903
CFI	> 0.9	0.922
Chisq/df	< 5.0	3.671
AGFI	> 0.9	0.901
RAMSEA	< 0.08	0.061

6. Discussions

The result of this study shows the significant and strong effect of user engagement on purchase intention. This suggests that when users engage and perform any action, the possibility that they purchase a product is higher. This result indicated that if the companies can increase user engagement in their Fan page, they can benefit from higher sales. The preliminary finding from respondents' answers reported that fan page followers are uninterested in producing contents, especially sharing posts, uploading any images/videos, or even commenting on fan page posts, while these types of user engagement is important towards the development of UGC (Users Generated Content) [30][45][24][47]. The survey was conducted on active fan page followers that will help marketers identify the preferred and unperformed actions of their active online users. The paper thus suggests that marketers be as quick and pre-emptive on these pages as possible. For an improved and emotive engagement with the followers, marketers are advised to use real time and content marketing strategies [12][29]. Marketers should follow 'interactive marketing' to engage with their audience via promotions and contents related to a particular current event or cultural occurrence. Also, if companies better understand the reason for fan page engagement, they can use this to interact with consumers and transform them from ordinary user to real "fans" of their brands [3]. The study is consistent with several previous studies emphasising social media engagement metrics for business improvement [13][14][41][6].

7. Conclusions

In the study, we empirically tested the engagement metrics related actions of actual active online participants and revealed their purchase intention of their respective followed brands. The study also established a theoretical framework on fan page engagement metrics and their relationship with engaged users' purchase intention. In the current study, user's actions' percentage on their fan page is identified, which will provide the marketers with a concise idea pertaining to the subject. The empirically-tested model would guide the marketers in understanding the impact of fan page engagement on their clients' purchase intention, and identify their targeted users' actions on their respective fan pages. Marketers should have an idea about users' preferred actions on fan pages, not only from their own fan pages, but also from the perspective of vast business areas. The study will help them design content strategies and social media marketing tools.

Acknowledgement

This research is funded and supported by University Malaya Research Grant-(Project no: RP 024-15HNE and PG182-2015A], Malaysia. We would like to give our special thanks and gratitude to the University of Malaya Research Grant Program for injecting financial support to have necessary research equipment, research-workers, research assistants associated with this research.

APPENDIX 1

Constructs and Measurement items

Fan page Engagement (adopted from (Linjuan, 2013; He´lia H. G., 2014)

- E1: I read/watch fan page's brand post(test/ image/video/updates) regularly
- E2: I navigate in the brand application of the fan pages.
- E3: I "like" the brand posts of fan pages
- E4: I "comment" on the brand post
- E5: I "comment" on other followers' posts and comments.
- E6: I write on my Facebook wall about my followed fan page
- E7: I "invite" friends to "like" my followed page
- E8: I "share" Brand posts from fan page
- E9: I "upload " product related images/ videos/ audio in fan page wall
- E10: I "participate" in fan page promotional campaign or contests
- E11: I like to spread Fan page promotional offerings to my Facebook communities.
- E12: I like to write on fan page Wall.
- E13: I like to consult with the marketers through fan page message option.

Fan page Purchase Intention (Adopted from (Chetna; Jhan, 2014; Angella, 2016)

- P1: I purchased the same brand when required as I like it on FB Page.
- P2: I buy its products directly from FB or Online portals when required.
- P3: I intend to purchase this product/brand in future as well.
- P4: I am loyal customer of the brand I 'like' on Facebook.
- P5: I would consider buying the promoted products on fan page.
- P6: The probability that I would consider fan page information before buying.

References

[1] Anderson TJ. Why Facebook Likes, Comments and Shares Are So Important. 2013. [cited 9 January]. 2016. Available from:

http://www.tylerjanderson.com/why-facebook-likes-comments-and-shares-are-so-important/
[2] Balakrishnan BKPD, Dahnil MI, Yi WJ. The Impact of Social Media Marketing Medium Toward Purchase Intention and Brand Loyalty Among Generation Y. Procedia - Social and Behavioral Sciences. 2014 Aug; 148: 177 – 185. Available from: http://www.sciencedirect.com/science/article/pii/S1877042814039366 Doi: https://doi.org/10.1016/j.sbspro.2014.07.032
[3] Benedikt JW. How to transform consumers into fans of your brand. Journal of Service Management. 2012; 23 (3): 344 - 361. Abailable from: DOI: http://dx.doi.org/10.1108/09564231211248444
[4] Smith BG, Derville Gallicano T. Terms of engagement: Analyzing public engagement with organizations through social media. Computers in Human Behavior. 2015 Dec; 53 (C): 82–90. Available from: DOI: 10.1016/j.chb.2015.05.060
[5] Chern CW, Wei CP, Shen FY, Fan YN. A sales forecasting model for consumer products based on the influence of online word-of-mouth. Information Systems and e-Business Management. 2015 Aug; 13 (3): 445–473. Available from: Doi: 10.1007/s10257-014-0265-0.
[6] Kudeshia C, Sikdar P, Mittal A. Spreading love through fan page liking: A perspective on small scale entrepreneurs. Computers in Human Behavior. 2016 Jan; 54: 257-270. Doi: http://dx.doi.org/10.1016/j.chb.2015.08.003
[7] Chin WW. Issues and Opinion on Structural Equation Modeling". MIS Quarterly. 1990; 22 (1): vii-Xvi.
[8] Constantinos KC. Informing brand messaging strategies via social media analytics. Online Information Review. 2016; 40 (1): 6 - 24.
[9] Damianos PS, Dimitrios NK, Kavoura A. (2015). The development of Facebook's competitive advantage for brand awareness. Proceedia Economics and Finance. 2015; 24: 589 – 597.
[10] Elliott N. Which Social Media Marketing Metrics Really Matter? (And To Whom?). 23 February, 2011. [cited 2 May, 2016]. Available from: http://blogs.forrester.com/nate_elliott/11-02-23-which_social_media_marketing_metrics_really_matter_and_to_whom
[11] Elliott N. Measure Facebook And Twitter Marketing Based On Business Outcomes Rather Than Audience Interactions. [Internet]. 2014 Dec. [Retrieved 2 April, 2016]. Available from: https://www.forrester.com/: https://www.forrester.com/report/Brief+Stop+Measuring+Social+Engagement/-/E-RES119922
[12] Ferran SJM. Factors influencing popularity of branded content in Facebook fan pages. European Management Journal. 2014; 32: 1001–1011. Available from: http://isiarticles.com/bundles/Article/pre/pdf/44973.pdf
[13] Hutter K, Hautz J, Dennhardt S, Fuller J. The impact of user interactions in social media on brand awareness and purchase intention: the case of MINI on Facebook". Journal of Product & Brand Management. 2013; 22

(5/6): 342 - 351. Available from: https://doi.org/10.1108/JPBM-05-2013-0299
[14] Guesalaga, R. (2016). The use of social media in sales: Individual and organizational antecedents, and the role of customer engagement in social media. Industrial Marketing Management, 71-79.
[15] Hair JF. Multivariate data analysis. Upper Saddle River, NJ : Prentice Hall; 1998.
[16] Hair Jr. JF, Black WC, Babin B, Anderson RE. Multivariate data analysis 7th edition. Upper Saddle River (NJ) : Prentice Hall Inc.; 2010.
[17] Hawkins DB, Best RJ, Coney KA. Consumer Behavior: Implications for Marketing Strategy. Plano, TX.: Business Publications Inc. 1983.
[18] Pereira HG, Salgueiro MdF, Mateus I. Say yes to Facebook and get your customers involved! Relationships in a world of social networks. Business Horizons. 2014; 57 (6): 695-702. Available from Doi: https://doi.org/10.1016/j.bushor.2014.07.001
[19] Hsu CL, Yu CC, Wu CC. Exploring the continuance intention of social networking websites: an empirical research. Information Systems and e-Business Management. 2014 May; 12 (2): 139–163. Doi:10.1007/s10257-013-0214-3
[20] Hsu SC. English of Management. Taiwan: Tunghua Publishing Co. LTD; 1987. Retrieved from http://www.amsreview.org/articles/mcquitty 102000.pdf.
[21] Jahn BK. How to transform consumers into fans of your brand. Journal of Service Management. 2012; 23(3): 344-361.
[22] Johannes HA. Stimulating user activity on Company fanpages in online socail networks. European Conference on Information Systems. USA: Association for Information Systems; 2012; 188 p.
[23] Katz EJ, Blumler JG, Gurevitch M. Uses and Gratifications Research. POQ. Winter 1973-1974; 37 (4): 509-523. Available from: http://jstor.org/stable/2747854
[24] Chai K, Potdar V, Dillon T. Content Quality Assessment Related Frameworks for Social Media. Computational Science and Its Applications – ICCSA. 2009; 791-805.
[25] Kruglanski AW, Van Lange PA. Handbook of theories of social psychology. London, England: Sage. 2012; 224–245 p.
[26] Kunal SB. Should tweets differ for B2B and B2C? An analysis of Fortune 500 companies' Twitter communications. Industrial Marketing Management. 2014; 873–881.
[27] Kunz W. Toward a deeper understanding of service marketing: the past the present, and the future. International Journal of Research in Marketing. 2011; 28: 231-47.
[28] Linjuan RMH. Beyond liking or following: Understanding public engagement on social networking sites in China. Public Relations Review. 2013; 39: 13-22.

[29] de Vries L, Gensler S, Leeflang PSH. Popularity of Brand Posts on Brand Fan Pages:An Investigation of the Effects of Social Media Marketing. Journal of Interactive Marketing. 2002 Apr; 26: 83–91.
[30] Liu XZ. An analytical approach to customer requirement satisfaction in design specification development". IEEE Transactions on Engineering Management. 2008; 35 (1): 94-102.
[31] Luarn P, Lin YF, Chiu YP. Influence of Facebook brand-page posts on online engagement. Online Information Review. 2015; 39(4): 505-519
[32] De Oliviera MJ, Huertas MKZ, Lin Zhibin. Factors driving young users' engagement with Facebook: Evidence from Brazil. Computers in Human Behavior. 2015; 54 (C) 54-61. Doi: 10.1016/j.chb.2015.07.038
[33] Moss S. Fit indices for structural equation modeling. 2016. [cited 2016 August 1]. Available from: http://www.sicotests.com/psyarticle.asp?id=277
[34] O'Leary-Kelly SW, Vokurta RJ. Empirical assessment of construct validity. Journal of Operations Management. 1998; 16(4), 387-405.
[35] Park DH, Lee J, Han I. (2007). The Effect of On-line Consumer Reviews on Consumer Purchasing Intention: The Moderating Role of Involvement. IJEC. 2007; 11(4): 125-1.
[36] Hinton PR, Brownlow C, McMurry I, Cozens B. SPSS Explained. London: Routlege Taylor & Francis Group; 2004.
[37] Poyry EP, Parvinen P, Malmivaara T. The Power of 'Like Interpreting Usage Behaviors in Company-Hosted Facebook Pages. IEEE. 2013; 2773-2782. Available from: doi 10.1109/hicss.2013.535
[38] Quester P, Lim AL. Product involvement/brand loyalty: is there a link. Journal of Product & Brand Management. 2003; 12 (1): 22-38. Available from: https://doi.org/10.1108/10610420310463117
[39] Curras-Perez R, Ruiz-Mafe C, Sanz-Bals S. Determinants of user behaviour and recommendation in social networks : An integrative approach from the uses and gratifications perspective". Industrial Management & Data Systems. 2014; 114 (9): 1477 - 1498. Doi: https://doi.org/10.1108/IMDS-07-2014-0219
[40] Agnihotri R, Dingus R, Hu MY, Krush M. Social media: Influencing customer satisfaction in B2B sales. Industrial Marketing Management. 2016; 53: 172–180. Available from: Doi 10.1016/j.indmarman.2015.09.003
[41] Schultz CD. Insights from consumer interactions on a social networking site Findings from six apparel retail brands.: Institute of Information Management, University of St. Gallen. 2016; 26: 203- 217. Available from: DOI 10.1007/s12525-015-0209-7
[42] Severin W, Tankard J. Communication theories: Origins, methods, and uses in the mass media. 4th edition. Boston: Addison Wesley Longman; 1997.

[43] Shao SW, Ross M. Testing a conceptual model of Facebook brand page communities. Journal of Research in Interactive Marketing. 2015; 9(3). Doi: https://doi.org/10.1108/JRIM-05-2014-0027
[44] Stafford TF, Schkade LL. Determining Uses and Gratifications for the Internet . Decision Sciences. 2004; 35 (2): 259–288.
[45] Stankov U, Lazic L, Dragicevic V. The extent of use of basic Facebook user-generated content by the national tourism organizations in Europe. European Journal of Tourism Research. 2010; 3 (2): 105-113.
[46] Traphagen M. Why Engagement DOES Matter As A Social Media Metric. [internet]. 2015 Jan. [Retrieved 2016 2, May]. Avaiable from: http://marketingland.com/engagement-matter-social-media-metric-114497
[47] Úblová T. Fashion brands on social media: Why consumers engage with companies via social media. Sweden: The swidish School of Textile; 2014.
[48] Wasupol TD. The process of consumer engagement on facebooh fanpage. Thailand: Srinakharinwirot University; 2015.
[49] Zheng X, Cheung CMK, Lee MKO, Lianf L. Building brand loyalty through user engagement in online brand communities in social networking sites. ITP. 2015; 28 (1): 90 - 106. Available from: https://doi.org/10.1108/ITP-08-2013-0144
[50] Zoha RK. Social Media Engagement metrics analysis: "study on Fan-page Contents" . Journal of Telecommunication, Electronic and Computer Engineering. 2016; 8 (8): 71-75. Available fom: Doi: http://journal.utem.edu.my/index.php/jtec/article/view/1322/802.
[51] Rahman Z, Suberamanian K, Zanuddin HB, Moghavvemi S, Nasir MH. (2016). Fanpage metrics analysis. "Study on content engagement". Proceedings of the international conference on applied science and technology 2016 (ICAST'16). AIP Conference Proceedings. 2016. Available from: http://dx.doi.org/10.1063/1.4960928.
[52] Rahman Z, Suberamanian K, Zanuddin HB, Moghavvemi S, Nasir MH. (2016a). Fanpage metrics analysis. "Study on content engagement". AIP Conference Proceedings. 2016; 1761 (1). Available from Doi: http://dx.doi.org/10.1063/1.4960928
[53] Rahman Z, Suberamanian K, Zanuddin H. SM Analytics: Impact of SM Engagement Metrics on Online Purchase Intention. Journal of Engineering and Applied Sciences. 2017; 12(2): 283-289.